Projections of National Expenditures for Treatment of Mental and Substance Use Disorders, 2010-2020

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U.S. Department of Health and Human Services
Substance Abuse and Mental Health Services Administration

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ORIGINATING OFFICES

Substance Abuse and Mental Health Services Administration, 1 Choke Cherry Road, Rockville, MD 20857. HHS Publication No. SMA-14-4883. Printed in 2014.

Executive Summary

The Substance Abuse and Mental Health Services Administration (SAMHSA) Spending Estimates (SSE) initiative was created to provide policymakers with essential information about treatment service expenditures for mental and substance use disorders (M/SUDs), sources of financing, and spending trends over time.[1] The SSEs have helped to document past disparities through their ability to compare spending and financing sources for M/SUD treatment with those for all-health spending. Such comparisons can be performed because the SSEs were designed to closely align with the National Health Expenditure Accounts (NHEA), which are produced annually by the Centers for Medicare & Medicaid Services (CMS). This report presents new analyses and projections from 2010 through 2020. These forecasts are anchored in recent historical SSEs (Levit et al., 2013; SAMHSA, 2013). They incorporate recent legislative changes that impact coverage and eligibility expansions and include spending changes that are anticipated from the Affordable Care Act.

Six policy questions are addressed in this report:

- How much money is projected to be spent in the United States for treatment of M/SUDs during the targeted period?
- Who is expected to pay for mental health and substance use disorder treatment, and how much will they spend?
- How much money is forecasted to be spent on services from various providers, such as hospitals, physicians, and specialty mental health and substance abuse centers?
- What is the anticipated spending change over time among providers and payers?
- How are trends in MH and SUD treatment expenditures expected to compare with those for all health care spending?

Spending for M/SUD treatment services measured in these accounts are defined by diagnostic codes found in the International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) as "mental disorders" (i.e., codes in sections 290 through 319; see Appendix Table B.2). A subset of these mental disorders, including dementia, tobacco use disorders, developmental delays, and intellectual disabilities, is excluded as being outside the scope of this project. M/SUD spending projections in this report focus on expenditures for treatment and not disease burden. They include only spending for the direct treatment of M/SUDs and exclude other substantial comorbid health costs that can result from M/SUDs (e.g., trauma and liver cirrhosis). Other costs of patient care such as job training and subsidized housing are also excluded, as are indirect costs such as lost wages and productivity.

Major findings include:

- M/SUD treatment spending from all public and private sources is expected to total $280.5 billion in 2020, which is an increase from $171.7 billion in 2009. These amounts include the effects of the Affordable Care Act.
- M/SUD treatment spending growth is likely to slow from recent trends and lag behind growth in all-health spending. M/SUD treatment spending is expected to average annual growth of 4.6

[1] Throughout the report, we use the traditional labels of mental health (MH), substance use disorders (SUD), or combined mental and substance use disorders (M/SUD) for services, treatments, or spending. We also use these terms for individuals when we refer to their problems, illnesses, or disorders for all levels of severity (Institute of Medicine, 2006).

percent from 2009 through 2020, compared with an all-health spending growth of 5.8 percent each year.

- One major reason for the slower spending growth for M/SUD treatment is expected to be the large number of prescription drugs used to treat M/SUDs that will lose patent protection through 2020. Loss of patent protection will allow entry of generic drugs, with an anticipated rapid switch by consumers to these lower-cost medications. In addition, few if any new innovative drugs are expected to enter the market. Together, these factors are predicted to slow spending growth, most notably for mental health treatment.
- Closure of state psychiatric hospital beds is also contributing to slower M/SUD spending growth. Nine state hospitals and nine percent of state hospital beds closed between 2009 and 2012. Although the closure of state psychiatric hospitals is a long-run trend going back to the 1950s, closures accelerated in recent years as a result of state financing pressures stemming from the recession.
- As a result of slower growth in M/SUD treatment spending compared with all-health spending, M/SUD treatment spending as a share of all-health spending is expected to fall from 7.4 percent in 2009 to 6.5 percent in 2020.
- The implementation of the Affordable Care Act is expected to add 2.7 percent, or $7.3 billion, to the level of M/SUD spending in 2020, as an expected 25 million people who were previously uninsured gain health insurance coverage.
- The Affordable Care Act and other recent legislation are predicted to increase all-health spending for Medicaid and private insurance and to slow the rate of increase in out-of-pocket and Medicare spending. Similar trends are expected for M/SUD spending.
- Even with increased spending for Medicaid because of the Affordable Care Act, the share of Medicaid budgets spent on treating M/SUD is expected to decline. In 2009, 10.4 percent of Medicaid spending went for MH treatment; by 2020, that share is expected to fall to 7.9 percent. Similarly, Medicaid spent 1.4 percent on treatment SUDs in 2009—a share that is expected to be 1.3 percent in 2020.

All projections, including those shown in this report, have some degree of uncertainty. Nevertheless, projections are useful tools for envisioning future spending and understanding the drivers of potential changes in spending.

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APPENDICES

Introduction

The Substance Abuse and Mental Health Services Administration (SAMHSA), an agency of the U.S. Department of Health and Human Services, strives to reduce the impact of substance use disorders and mental illness on America's communities. The SAMHSA Spending Estimates (SSE) initiative was created to provide policymakers with information on expenditures for treatment of people with mental and/or substance use disorders (M/SUDs).

SAMHSA's strategic initiatives aim to "help people with mental and substance use disorders, support the families of people with mental and substance use disorders, build strong and supportive communities, prevent costly behavioral health problems, and promote better health for all Americans."[2] Through these initiatives, SAMHSA looks for emerging opportunities that allow it to work in partnership with national, state, territorial, tribal, and local agencies in various ways. In addition to responding to urgent needs, SAMHSA works with these organizations and others to capitalize on the new opportunities created by the Patient Protection and Affordable Care Act and the Mental Health Parity and Addictions Equity Act (MHPAEA) to improve the nation's behavioral health. SAMHSA also increases public understanding of behavioral health disorders and of prevention and treatment services. SAMHSA seeks to achieve the full potential of prevention and to enable people to recognize and seek treatment for these conditions with the same urgency as they would for other health conditions.

To support and guide policy initiatives, SAMHSA establishes measurement and reporting systems, tracks national trends, and develops and promotes standards to improve delivery of services to people with M/SUDs. Historical measurements of health care spending provide valuable information to SAMHSA and other policymakers, providers, consumers, and researchers. However, no matter how informative the latest historical spending reports are, there is always a demand for information on current spending and expected trends as organizations plan for the future. To fill one piece of that demand, SAMHSA establishes projections of future national spending for M/SUD services. These projections demonstrate what the nation is expected to spend on mental health (MH) services and SUD treatment, which payers are anticipated to fund that treatment, which providers are projected to deliver treatment, and how these expenditures might change over time. The results are valuable for policy, planning, and budgeting purposes. The projections in this report provide a possible scenario for national spending on M/SUD treatment through 2020.

Over the longer run, projections help policymakers, consumers, and other interest groups anticipate levels of spending. Use of projections may help inform policies or programs so that organizations can avert negative consequences and better prepare for those that may occur. Earlier estimates of the Medicaid share of state MH treatment spending helped call attention to the importance of this growing component, and they triggered a number of activities designed to adapt to this trend and/or to better integrate Medicaid and non-Medicaid decisions within states. Previous SSEs documented the accelerating growth in prescription drug spending in the late 1990s and early 2000s and the slowdown in spending growth from this source in the next decade.

The present report of new M/SUD projections adds to the information provided in previous estimates by focusing attention on (1) the effects of recent legislation on M/SUD treatment

[2] SAMHSA. About Us. Updated May 13, 2013. Retrieved from www.samhsa.gov/About/strategy.aspx. Accessed December 10, 2013.

spending patterns among various payers, (2) the projected slowdown in spending for hospital treatment, mostly in state psychiatric hospitals, and (3) the expected continued slowdown in spending for prescription drugs because of patent expirations for major categories of medications. The latter findings will allow major payers of prescription medications to anticipate changes in the trajectory of spending for this major component of behavioral health spending.

ORGANIZATION OF THE REPORT

This report presents the latest projections of expenditures on M/SUD treatment services, covering the period of 2010 through 2020. It continues a series of prior reports and related journal articles of national mental health and substance use disorder spending estimates and projections produced by SAMHSA since the inception of this project in 1996 (Coffey et al., 2000; Levit et al., 2013; Levit, Kassed, Coffey, Mark, McKusick, et al., 2008; Levit, Kassed, Coffey, Mark, Stranges, et al., 2008; Mark et al., 2000; Mark et al., 2007; Mark and Coffey, 2004; Mark, Coffey, McKusick, et al., 2005; Mark, Coffey, Vandivort-Warren, et al., 2005; Mark, Levit, Vandivort-Warren, Buck, and Coffey, 2011; Mark, McKusick, King, Harwood, and Genuardi, 1998; McKusick et al., 1998; SAMHSA, 2010; SAMHSA, 2013).

The spending projections are presented first for M/SUD combined, followed by MH, and then by SUD. This organization is used because expenditure patterns differ in some important ways by condition. The organization of the report is:

- Overview of mental health and substance abuse spending
- Treatment spending on mental health by payer
- Treatment spending on mental health by provider and specialty type
- Treatment spending on substance use disorders by payer
- Treatment spending on substance use disorders by provider and specialty type
- Appendix A—Tables
- Appendix B—Definitions
- Appendix C—Methods
- Appendix D—Abbreviations

These forecasts are designed in conjunction with the latest historical M/SUD treatment spending estimates for 1986 through 2009 (Levit et al., 2013; SAMHSA, 2013) to create a seamless time series of past and expected future expenditures. They are also designed to be consistent with and to integrate with all-health spending estimates from the National Health Expenditure Accounts (NHEA), released by the Centers for Medicare & Medicaid Services (CMS) in 2011 (Keehan et al., 2011).

To achieve the integration of M/SUD treatment spending with the NHEA all-health spending, the definitions, design, and methods used in the report on historical estimates and projections of expenditures closely follow those used in the NHEA. The NHEA framework for estimates of spending for all health care is a two-dimensional matrix. Health care providers or products that constitute the U.S. health care industry are along one dimension. The other dimension is comprised of sources of funds used to purchase this health care. M/SUD projections presented in this report expand on the NHEA framework by including an additional dimension of spending: MH and/or SUD diagnosis.

Projections are intended to provide a reasonable estimate of future spending for MH and SUD treatment, based upon trends that have existed in the past and laws and regulations known to have been enacted for the future. This includes legislative changes that impact coverage and eligibility expansions and spending changes anticipated from the Patient Protection and Affordable Care Act. In addition, these projections of spending will incorporate developments in treatment and technology (including development of prescription drugs) and changes in laws and regulations at rates similar to those in the historical estimates. However, these projections cannot account for extraordinary changes in the methods of treatment of mental illness or substance use disorders that may take place because of changes in medical technology or because of changes in laws and regulations that may be enacted in the future. Some uncertainty is inherent in any projection, and this uncertainty increases as the years extend beyond the latest historical estimate.

FOCUS OF THE REPORT AND DEFINITIONS

The estimates and projections in this report provide ongoing information about national spending on health care services related to the diagnosis and treatment of M/SUD. These projections focus on expenditures for M/SUD treatment rather than on the illness burden of mental or substance use disorders. Burden-of-illness studies include costs not directly related to treatment, such as the impact of mental illness on productivity, societal costs linked to drug-related crimes, or housing and other subsidies to assist clients with M/SUD disorders. Also, the scope of the report does not include the physical consequences of M/SUD disorders. For example, physical consequences of M/SUD problems include cirrhosis, trauma, HIV, and other infectious diseases. The report does not include expenditures for mental retardation services or for the diagnosis and treatment of related disorders that are normally (or historically) covered by general medical insurance, such as dementias and tobacco addiction. Services through self-help groups such as Alcoholics Anonymous are not included in these estimates, because these programs are free to the participants. Finally, the expenditures reported do not include spending to prevent SUDs or mental illnesses.

As in the NHEA, the physical location of services provided determines the provider category for health care spending. In other words, the M/SUD expenditures by specific providers are categorized not by the spending for a specific service, but by spending for services of a particular establishment. For example, home health care may be provided by freestanding home health agencies, but it also may be provided by home health agencies that are part of a hospital. In the former case, home health care spending would be classified as home health care; in the latter case, it would be classified as part of hospital care.

The following is a list of abbreviated definitions of provider, payer, and setting categories used in the SSE. They borrow extensively from those used in the NHEA.[3,4] More comprehensive descriptions can be found in Appendix B.

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[3] Centers for Medicare & Medicaid Services, Office of the Actuary, National Health Statistics Group. *National Health Expenditure Accounts: Methodology paper, 2011. Definitions, sources, and methods*. Retrieved from http://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/NationalHealthExpendData/Downloads/dsm-11.pdf. Accessed December 26, 2013.

[4] Centers for Medicare & Medicaid Services, Office of the Actuary, National Health Statistics Group. *Quick definitions for National Health Expenditure Accounts (NHEA) categories*. Retrieved from http://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/NationalHealthExpendData/Downloads/quickref.pdf. Accessed December 26, 2013.

Payers

Private payments: Any payments made through private health insurance or other private sources or payments made out-of-pocket by the consumers.

> **Private health insurance:** benefits paid by private health insurers (including behavioral health plans) for provision of service, prescription drugs, or the administrative costs and profits of health plans. Private health insurance benefits paid through managed care plans on behalf of Medicare and Medicaid are excluded.
>
> **Out-of-pocket payments:** direct spending by consumers for health care goods and services including coinsurance, deductibles, and any amounts not covered by public or private insurance.
>
> **Other private:** spending from philanthropic and other nonpatient revenue sources.

Public payments: Any payments made on behalf of enrollees in Medicare or Medicaid or through other programs run by the federal or individual state government agencies.

> **Medicare:** the federal government program that provides health insurance coverage to eligible aged and disabled persons. It includes payments made through fee-for-service and managed care plans.
>
> **Medicaid:** a program jointly funded by the federal and state governments that provides health care coverage to certain classes of people with limited income and resources. Medicaid includes funding by federal and state governments. It includes payments made through fee-for-service and managed care plans.
>
> **Other federal:** programs other than Medicaid and Medicare provided through federal payers, including the Department of Veterans Affairs, Department of Defense, block grants administered by SAMHSA, and the Indian Health Service, among others.
>
> **Other state and local:** programs other than Medicaid that are funded primarily through state and local MH and SA agencies.

Providers

Hospital care: all billed services provided to patients by public and private hospitals, including general medical or surgical hospitals and psychiatric and SA specialty hospitals.

> **General hospitals:** community medical or surgical and specialty hospitals other than MH and SA specialty hospitals providing diagnostic and medical treatment, including psychiatric care in specialized treatment units of general hospitals, detoxification, and other MHSA treatment services in inpatient, outpatient, emergency department, and residential settings.
>
> > **General hospital specialty unit:** designated unit of a general medical or surgical hospital (other than a MH and SA specialty hospital) that provides care for diagnosed mental illness, SUDs, or detoxification.
> >
> > **General hospital nonspecialty unit:** medical or surgical units of general hospitals (other than in MH and SA specialty hospitals) that provide treatment for a diagnosed mental illness, SUD, or detoxification.
>
> **Specialty hospitals:** hospitals primarily engaged in providing diagnostic, medical treatment, and monitoring services for patients with mental illness or substance use diagnoses.

Physician services: independently billed services provided by Doctors of Medicine (M.D.) and Doctors of Osteopathy (D.O.), plus the independently-billed portion of medical laboratory services.

> **Psychiatrists:** independently billed services of private or group practices of health practitioners having the degree of M.D. or D.O. who are primarily engaged in the practice of psychiatry or psychoanalysis, plus the independently-billed portion of medical laboratory services.
>
> **Other Physicians:** independently billed services of private or group practices of health practitioners having the degree of M.D. or D.O. who are primarily engaged in practices other than psychiatry or psychoanalysis, plus the independently-billed portion of medical laboratory services.

Other professional services: care provided in locations operated by independent health practitioners other than physicians and dentists, such as psychologists, social workers, and counselors. (Spending for services provided in doctors' offices by nurses, nurse practitioners, and physician assistants would be classified with the spending by their supervising physician.)

Home health care: medical care provided in the home by private and public freestanding home health agencies.

Nursing home care: services provided in private and public freestanding nursing home facilities.

Specialty MH centers: organizations providing outpatient and/or residential mental health services and/or co-occurring mental health and substance abuse treatment services to individuals with mental illness or with co-occurring mental illness and substance use diagnoses.

Specialty SA centers: organizations providing residential and/or outpatient substance abuse services to individuals with substance use diagnoses.

Prescription drugs: psychotherapeutic medications sold through retail outlets and mail order pharmacies. Excluded are sales through hospitals, exclusive-to-patient health maintenance organizations (HMOs), and nursing home pharmacies. See Appendix B for specific medication classes. Spending on methadone dispensed for the treatment of drug abuse is captured as part of spending for specialty SA centers where methadone is dispensed, rather than with SA prescription drug spending. (Methadone prescribed for pain management by physicians and other practitioners and sold through retail pharmacies is not included in the MHSA spending estimates.)

Insurance administration: spending for the cost of running various government health care insurance programs, as well as the administrative costs and profit of private health insurance companies.

METHODS

This section provides a high-level overview of methods used in preparing projections of M/SUD treatment expenditures. (Extensive detail on the methods can be found in Appendix C at the end of this report.) In general, the forecasts are prepared in two steps:

- Baseline projections forecasted using historical trends from 1986 through 2009
- Projections of Affordable Care Act impacts

To create the baseline projections of M/SUD treatment spending for each provider, one of three techniques is used. The first technique is a **five-factor model** that allocates spending growth to changes in population, utilization, general inflation, net price increases specific to the service (net of general inflation), and residual changes in remaining influences. The second technique is typically employed when suitable utilization and service-specific price measures required for the five-factor model are not available. This technique, called the **production model**, develops projections from estimates of the input costs used to produce services. For both the five-factor and production models, each factors' growth is modeled using regression or other actuarial techniques; the results are multiplied together in each year to forecast annual spending growth. These annual growth rates are then applied to spending in the previous year to produce the forecast. When possible, both models are used to develop projections. One of these two methods is used as the source of the projections, and the other as a reasonableness check. For some providers, neither the five-factor model nor the production model is used to forecast spending. In these cases, M/SUD growth is modeled using **regression or other actuarial techniques** that also incorporate the trends in all-health spending for that provider. Forecasted spending is then partitioned for each payer and for MH and SUD for 2010 through 2020 based on relationships or trends found in historical estimates.

Documents prepared by the CMS and the Congressional Budget Office (CBO) that explain their assumptions or provide enrollment information formed the basis of many assumptions used to simulate the effects of the Affordable Care Act. However, there are inherent differences in the assumptions and models used by both organizations, including basic assumptions of enrollment, counts of uninsured, and number of aliens ineligible for coverage. In addition, CMS estimates that take into account states that chose not to expand Medicaid were only recently released (Cuckler et al., 2013). The NHEA used for comparison purposes in this report was published earlier (Keehan et al., 2011) and will show faster initial growth than the M/SUD projections that take nonexpansion states into account.[5] As much as possible, the CBO enrollment estimates were used as a guide, but detailed assumptions from CMS reports that were not available from CBO were also consulted.

To model the impacts of the Affordable Care Act on projected spending, two methods that reflect some of the techniques used by CMS were employed. First, we estimated the health care costs of users moving from one insurer to another because of the expansion of Medicaid and the introduction of insurance Marketplaces in 2014. The effect of individuals moving from being uninsured to insured were also modeled. This method is used for simulating the effects on spending by private health insurance and Medicaid and for out-of-pocket costs. The second method was used to project the effects of the Affordable Care Act on Medicare, other federal payers, and other private payers. In this method, the effects of the Affordable Care Act were modeled based on trends exhibited in the NHEA all-health spending projections by payer and provider.

LIMITATIONS

[5] We assumed that uninsured individuals in states that have announced that they are not expanding Medicaid would not be eligible for enrollment in Medicaid. As of August 2013, these nonexpansion states were Alabama, Alaska, Florida, Georgia, Idaho, Kansas, Louisiana, Maine, Mississippi, Missouri, Montana, Nebraska, North Carolina, Oklahoma, South Carolina, South Dakota, Texas, Utah, Virginia, Wisconsin, and Wyoming.

By their very nature, projections have some degree of uncertainty. That degree of uncertainty is greater when projecting spending for legislation whose full implementation has not yet occurred, such as the Affordable Care Act.

There has been no attempt to factor in shortages of professionals available to treat M/SUDs or to model the effects that potential shortages might have on the price of services. Assumptions regarding enrollment will be influenced by outreach efforts, ease of enrollment, and other factors that may alter spending trends. Also, M/SUD use rates may vary from expectations, and states that currently decline to expand Medicaid may change that decision in the future. In addition, specific provisions of the Affordable Care Act may change as the effects of implementation become known, changing the potential trajectory of spending.

Nevertheless, projections are useful tools for envisioning future spending and understanding the drivers of those potential changes. They provide information for policymaking and can be adapted as initial information about actual effects becomes known. The forecasts provided in these projections are not expected to reflect actual spending once it is known, but they are expected to reflect the broad trends in spending by payer and provider. As such, these projections should be used as tools to guide thinking about the amount and type of impact that the Affordable Care Act is likely to have on spending.

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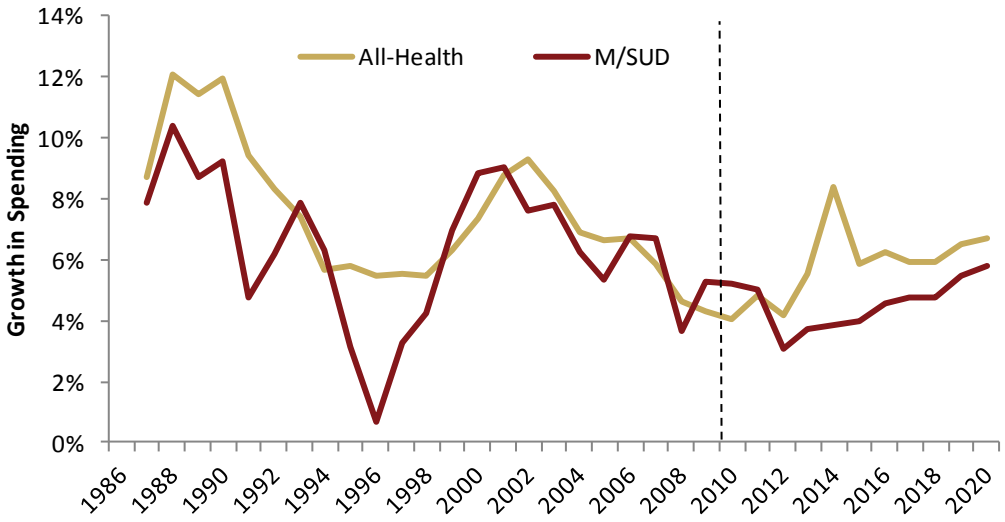
Overview of Treatment Service Expenditures for Mental and Substance Use Disorders

Growth in M/SUD Treatment Spending Is Expected to Slow and Lag Behind All-Health Spending Growth Through 2020

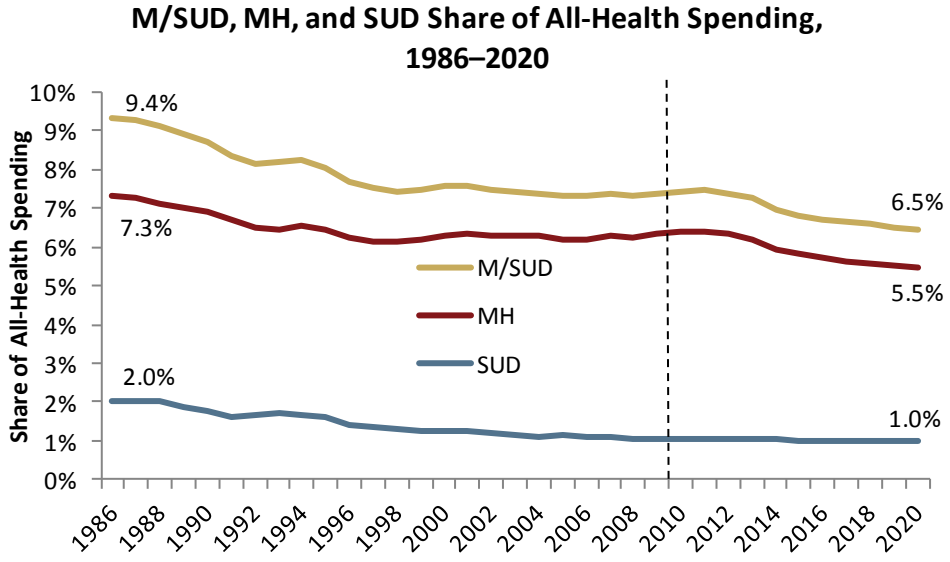
Growth in M/SUD and All-Health Spending, 1986–2020



Source: SAMHSA Spending Estimates; Centers for Medicare & Medicaid Services, Office of the Actuary, National Health Statistics Group.

- In the first half of the historical period (1986–1998), M/SUD treatment spending increased at an average of 6.0 percent, compared with 8.1 percent for all-health spending. Slow M/SUD growth is linked to closures of M/SUD specialty hospitals and shorter lengths of stay in community and specialty hospitals.
- From 1998 through 2009, M/SUD treatment spending growth averaged 6.7 percent, which is similar to the 6.8-percent rate for all-health spending. This similarity was driven by rapidly rising spending for a large number of new MH prescription drugs that came into widespread use.
- During the projection period (2010–2020), the average annual growth in M/SUD treatment spending is expected to slow to 4.6 percent, compared with 5.8 percent for all-health spending. This disparity in growth is linked again to MH prescription drugs that are scheduled to go off patent and will be replaced by lower-cost generic medicines, and to the slowdown in spending growth in specialty psychiatric hospitals.

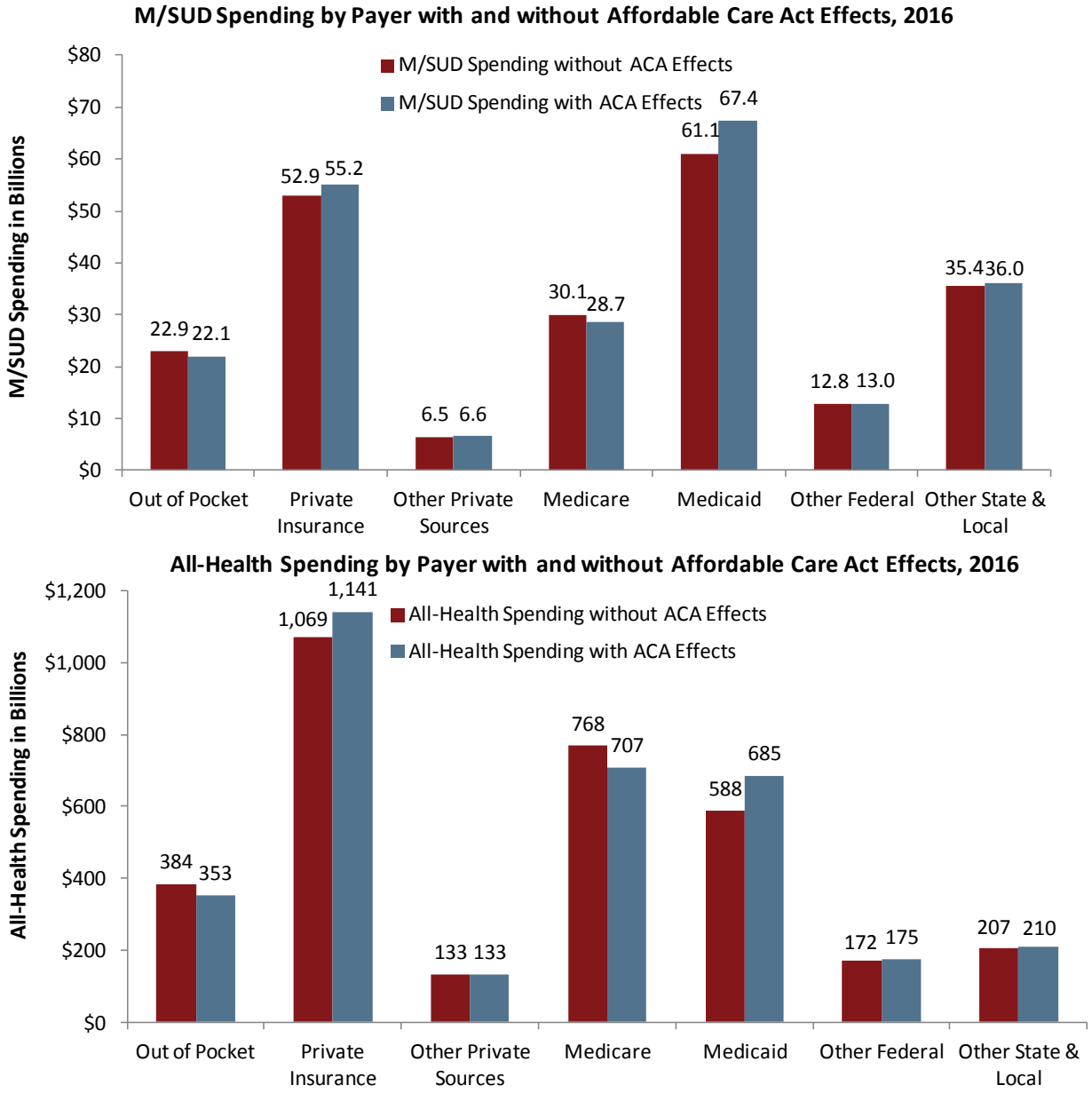
The Mental Health Share of All-Health Spending Is Expected to Fall Through 2020, as a Result of Slowing Mental Health Spending Growth



Source: SAMHSA Spending Estimates; Centers for Medicare & Medicaid Services, Office of the Actuary, National Health Statistics Group.

- Spending on M/SUD treatment is expected to account for 6.5 percent of the $4.3 trillion spent on all-health spending in 2020. This share is down from the 7.4 percent of all-health spending exhibited in 2009.
- From 1986 through the late 1990s, the M/SUD share of all-health spending fell, driven by slow growth in MH and SUD treatment spending. From the late 1990s through 2011, the M/SUD share of all-health spending was stable, primarily because of the rapid growth in MH prescription drug spending as new, higher-priced medications with fewer side effects became available.
- From 2011 through 2020, MH treatment spending is expected to slow once again. Spending deceleration will be driven by medications used to treat MH conditions that became available in the late 1990s and will go off patent and lower-cost generic equivalents become available. In addition, growth in spending for treatment in specialty psychiatric hospitals is expected to slow. Throughout the projection period, the SUD share of all-health spending is predicted to continue a slight but steady decline in share, from 1.04 percent in 2009 to 0.97 percent in 2020.

Affordable Care Act Coverage Expansion Is Expected to Increase M/SUD and All-Health Medicaid and Private Insurance Spending, and Decrease M/SUD and All-Health Out-of-Pocket and Medicare Spending



Source: SAMHSA Spending Estimates.

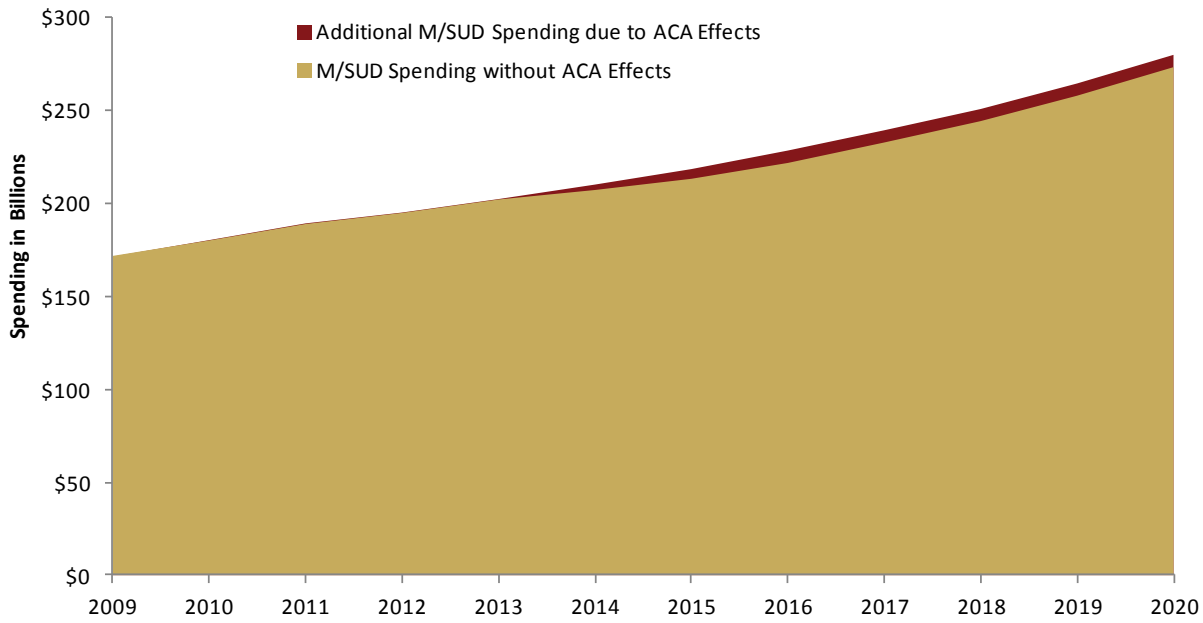
The Affordable Care Act is designed to increase health insurance coverage for the uninsured, mainly through expanded enrollment in Medicaid and through access to subsidized health insurance in the health care Marketplace for individuals with low income. It will also lower spending from Medicare as payments to providers are reduced. These changes are expected

to alter spending among payers. This chart shows the extent of this change among payers in 2016—the year when full implementation of the legislation is expected to occur.

- Medicaid expansions in many states will increase access to services mainly for adults with low income and spending. Medicaid M/SUD treatment spending is predicted to increase from $61.1 billion without the impact of the Affordable Care Act to $67.4 billion with the impact in 2016. Medicaid spending for all-health services is expected to change in the same direction.
- Similarly, the level of private health insurance spending for M/SUD and all-health services is expected to increase slightly. The increase is anticipated from a combination of employers who experience additional enrollment among previously uninsured workers, the drop in employer-sponsored coverage by some employers, and an increase in spending for health insurance through the health insurance Marketplace.
- The level of spending from out-of-pocket sources for M/SUD and all-health spending is likely to fall. This is the result of a decline in direct spending by the uninsured who move into Medicaid or who purchase private insurance through the Marketplace.
- The share of M/SUD and all-health spending financed by Medicare is expected to fall compared with spending without the effects of the Affordable Care Act and other recent legislative changes as measures to contain Medicare spending, including reduction in payments to providers, are implemented..

The Affordable Care Act Is Likely to Add 2.7 Percent to M/SUD Treatment Spending in 2020

Spending for M/SUD with and without Affordable Care Act Effects, 2009–2020

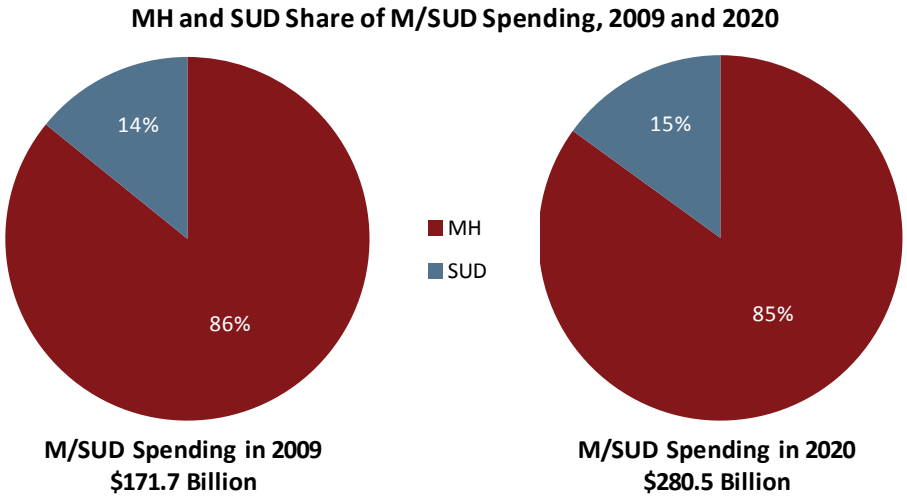


Source: SAMHSA Spending Estimates.

- The Affordable Care Act and other legislation implemented after 2009 is predicted to increase spending for treatment of M/SUDs by 1.6 percent in 2014 and by 3.2 percent in 2016, when the full impact of coverage changes are expected to peak.
- In 2020, spending on M/SUD is likely to be 2.7 percent higher than it would have been without the Affordable Care Act. This translates into increases of $3.4 billion in 2014, $7.2 billion in 2016, and $7.3 billion in 2020 that are due to this legislation.
- The increase is mainly driven by an estimated 25 million previously uninsured people who are expected to gain M/SUD coverage as a result of the insurance expansions under the Affordable Care Act by 2016.[6]

[6] Congressional Budget Office. (May 2013). *Table 1. CBO's May 2013 estimate of the effects of the Affordable Care Act on health insurance coverage*. Retrieved from http://www.cbo.gov/sites/default/files/cbofiles/attachments/43900-2013-05-ACA.pdf. Accessed February 26, 2014.

Substance Use Disorder Treatment Spending Is Likely to Increase Slightly as a Share of All M/SUD Treatment Spending Over the Next Decade



Source: SAMHSA Spending Estimates.

- M/SUD treatment spending is forecasted to reach $280.5 billion in 2020, rising from $171.7 billion in 2009.
- MH treatment spending is expected to account for 85 percent of that total in 2020—a slightly smaller share than the 86 percent registered in 2009.
- SUD spending accounts for the remainder: 15 percent in 2020 and 14 percent in 2009. The slight increase in the SUD share of M/SUD spending was linked to the slowing rate in MH spending growth during a period when the rate of increase in SUD spending was projected to remain stable.

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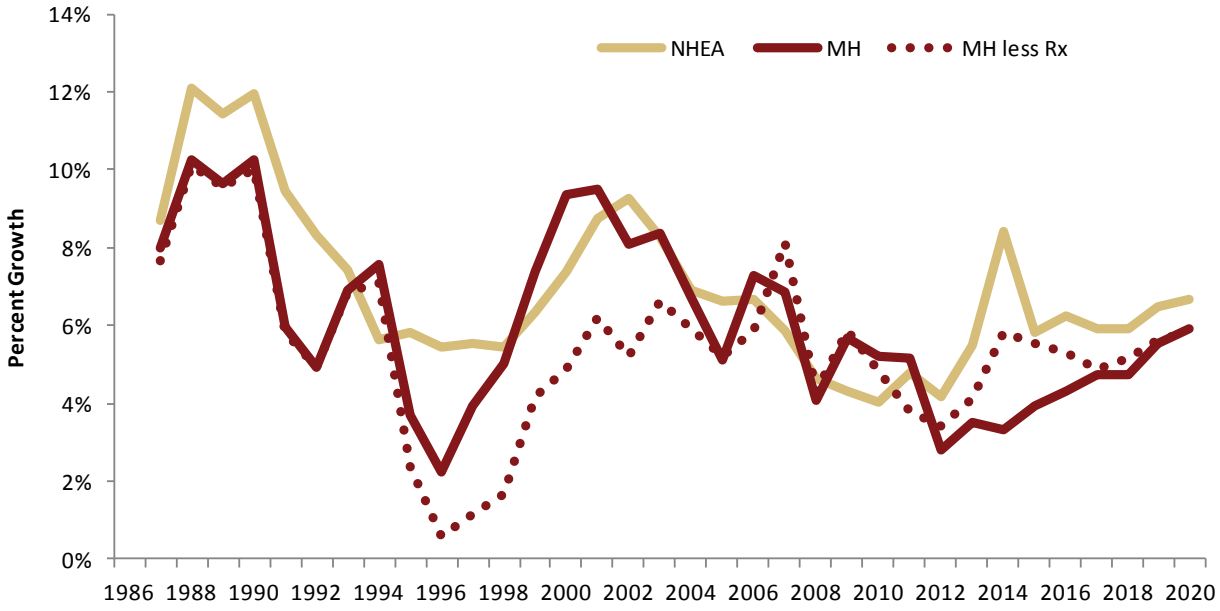
Mental Health Treatment Expenditures, Total and by Payer, 2010–2020

Growth in Mental Health Treatment Spending Is Predicted to Slow as Drugs Introduced in the Late 1990s Lose Patent Protection

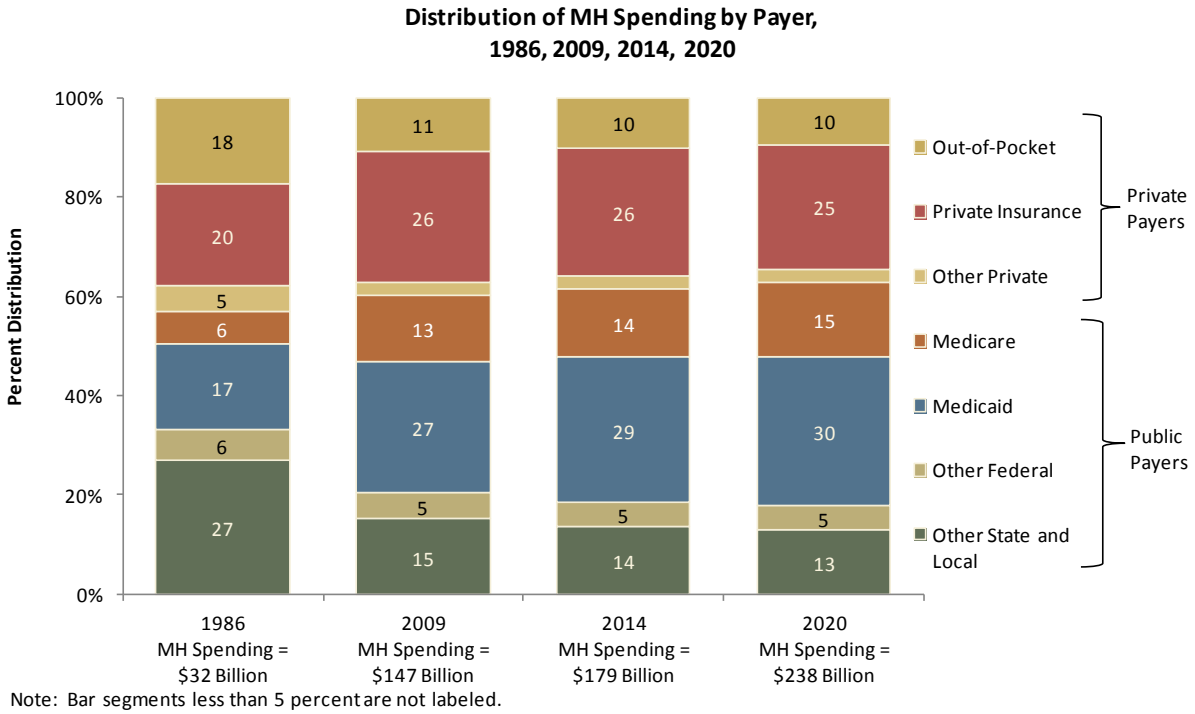
Average Annual Growth of Spending on MH and All-Health Treatment, Including and Excluding the Effects of Prescription Drug Spending, 1986–2020



Source: SAMHSA Spending Estimates; Centers for Medicare & Medicaid Services, Office of the Actuary, National Health Statistics Group.

- Spending on MH treatment is projected to increase from $147 billion in 2009 to $239 billion in 2020. An additional 14 million people are expected to gain health insurance coverage in Medicaid and private health insurance through the Affordable Care Act in 2014, rising to 25 million by 2020 when the full effects are expected to be realized. Of those newly enrolled, about 10 percent are predicted to use MH treatment services, amounting to more than 2.5 million users in 2020.
- MH treatment spending is expected to increase at a 4.5-percent average annual rate between 2009 and 2020, which is slower than the rate of 5.8 percent for all-health spending. If spending on prescription drugs is excluded, MH treatment spending is expected to increase at a 4.8-percent average annual rate.
- The expectation is that growth in prescription drug spending that drove spending growth from 1998 through 2009 will slow in 2012 and beyond as a large number of medications used to treat M/SUD conditions lose patent protection and are replaced by low-cost generics. In 2012 through 2016, the slowdown in MH drug spending is also predicted to temper most of the impact of the Affordable Care Act on MH treatment spending.

Medicaid Is Expected to Finance a Large and Growing Share of Mental Health Treatment Spending

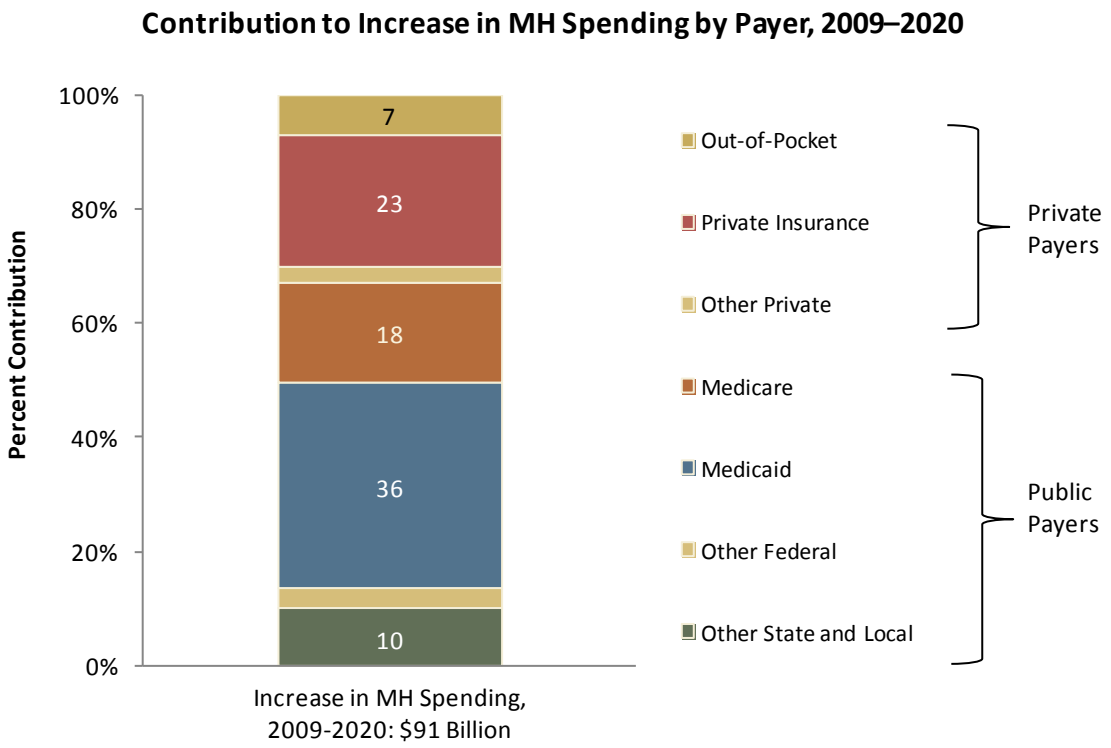


Note: Bar segments less than 5 percent are not labeled.

Source: SAMHSA Spending Estimates.

- From 2009 to 2020, the public share of MH treatment spending is expected to increase from 60 percent to 63 percent. The public share is estimated to remain higher for MH treatment spending than for all-health spending, which is projected to increase from 49 percent to 53 percent over the same period.
- In 2009, the major financers of MH treatment were Medicaid (27 percent) and private health insurance (26 percent). Other state and local programs financed 15 percent, Medicare 13 percent, and out-of-pocket payments 11 percent.
- The 11-year projection period includes an increasing share of spending from Medicaid (from 27 percent to 30 percent) and Medicare (from 13 percent to 15 percent) and a decreasing share from other state and local governments (from 15 percent to 13 percent) and private sources (private insurance from 26 percent to 25 percent and out-of-pocket spending from 11 percent to 10 percent).

Medicaid Expansion Under the Affordable Care Act Is Likely to Drive Mental Health Treatment Spending Increases Through 2020



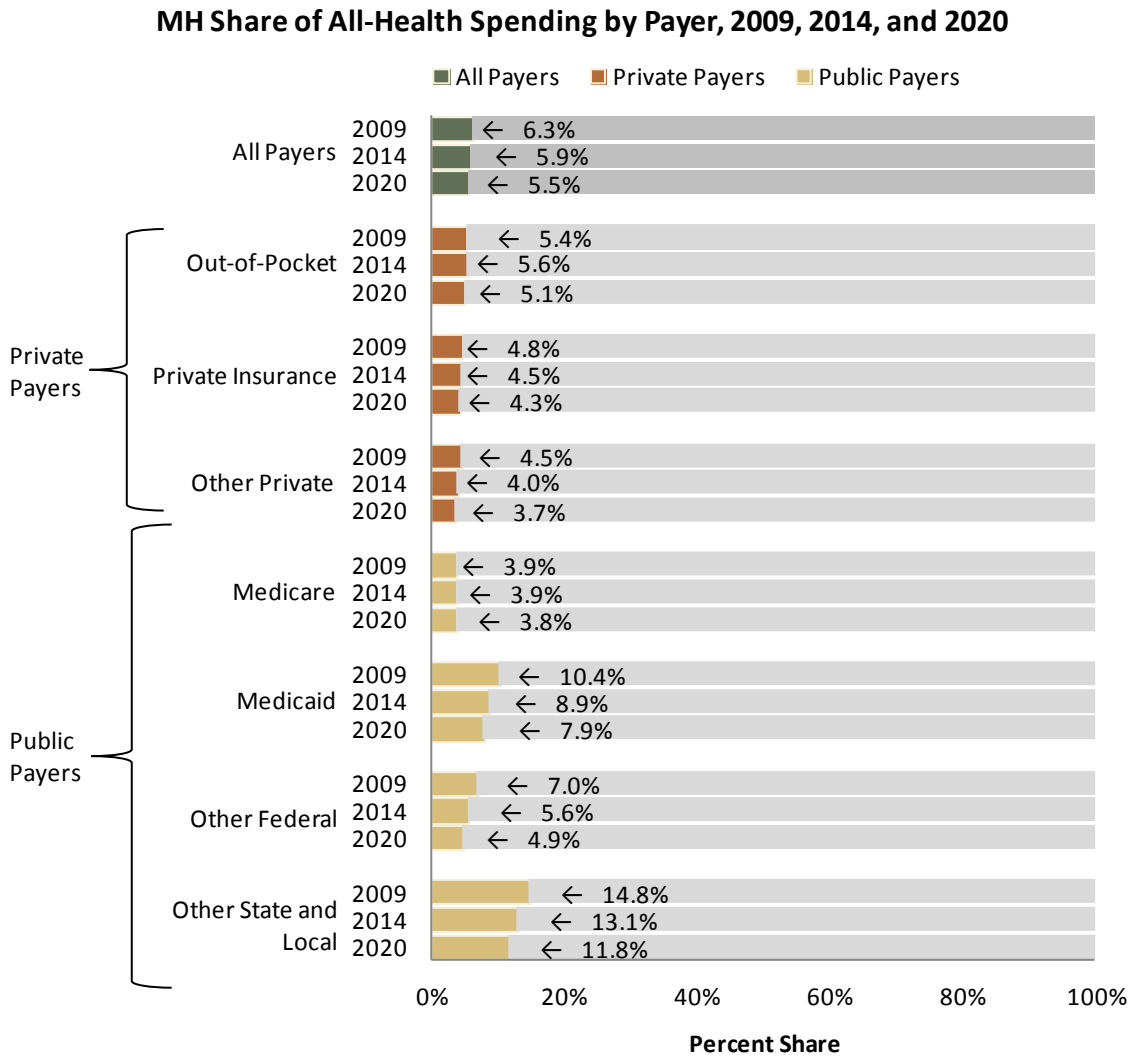
Note: Bar segments less than 5 percent are not labeled.

Source: SAMHSA Spending Estimates.

This graph depicts the portion each payer contributed to the projected $91 billion increase in MH treatment spending from 2009 through 2020. The contribution to spending increases is a function of the payer share of total MH spending as well as the projected rate of growth in spending.

- Of the 62 percent or $91 billion increase in MH treatment spending between 2009 and 2020, Medicaid is expected to account for the largest share—36 percent or $33 billion. This large contribution to the increase is a direct result of Medicaid expansions under the Affordable Care Act in the states that have agreed to expand their program.
- Private insurance also is likely to be an important contributor to the increase in MH treatment spending. It is expected to be responsible for 23 percent or $21 billion of the increase.
- Forecasts show that Medicare will be responsible for 18 percent of the increase in MH treatment spending, or $16 billion—driven largely by baby boomers who will become eligible by 2020.

Medicaid Mental Health Treatment Spending Is Predicted to Be a Smaller Share of All Medicaid Spending in 2020 Than in 2009



Source: SAMHSA Spending Estimates; Centers for Medicare & Medicaid Services, Office of the Actuary, National Health Statistics Group.

This graph depicts anticipated spending on MH treatment as a share of all-health spending over all payers combined and for each payer, in 2009, 2014, and 2020.

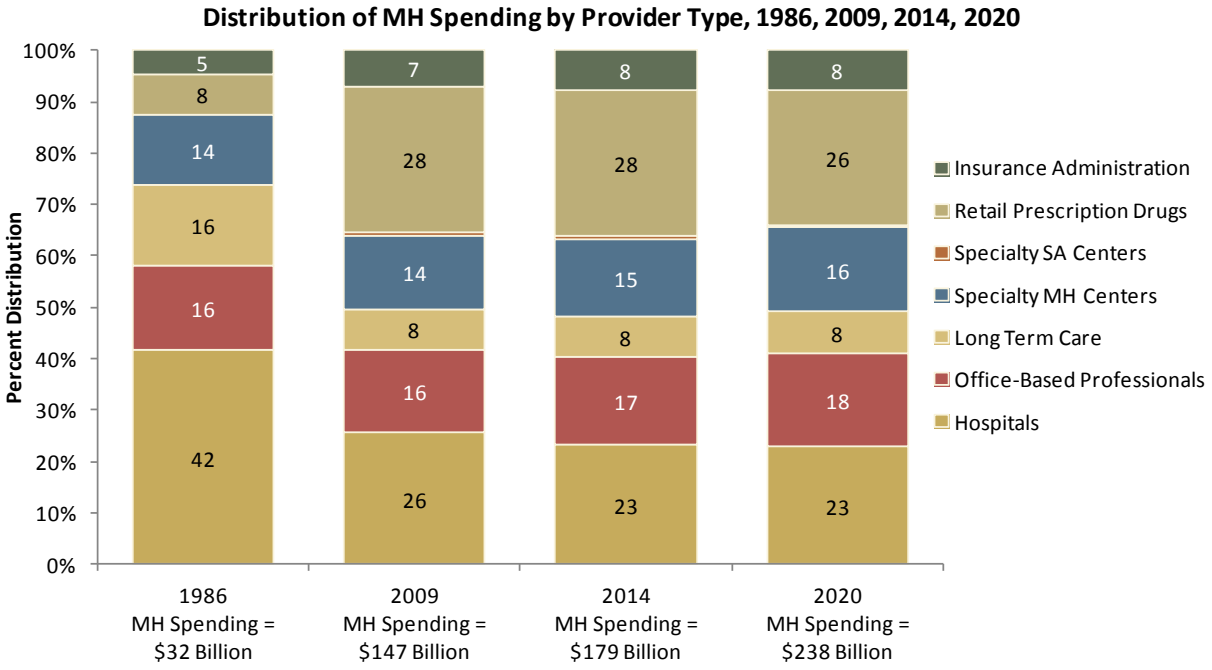
- The MH share of all-health spending across all payers is projected to decrease between 2009 and 2020 (from 6.3 percent to 5.5 percent of all-health spending).
- The largest anticipated decrease among payers is for other state and local governments, where the MH share of spending is expected to fall from 14.8 percent in 2009 to 11.8 percent in 2020. Although falling as a share, actual spending is projected to increase by

40 percent between 2009 and 2020. For Medicaid, the MH share of all-health spending is projected to decrease from 10.4 percent in 2009 to 7.9 percent in 2020.

- The share of private health insurance spending devoted to MH treatment is expected to decrease from 4.8 percent in 2009 to 4.3 percent in 2020. Part of this reduced share is related to falling prices for prescription drugs used to treat mental health conditions.

Expenditures for Mental Health Treatment by Provider, 2010–2020

Prescription Drug and Hospital Spending Is Expected to Be a Smaller Share of Mental Health Treatment Spending in 2020 Than in 2009

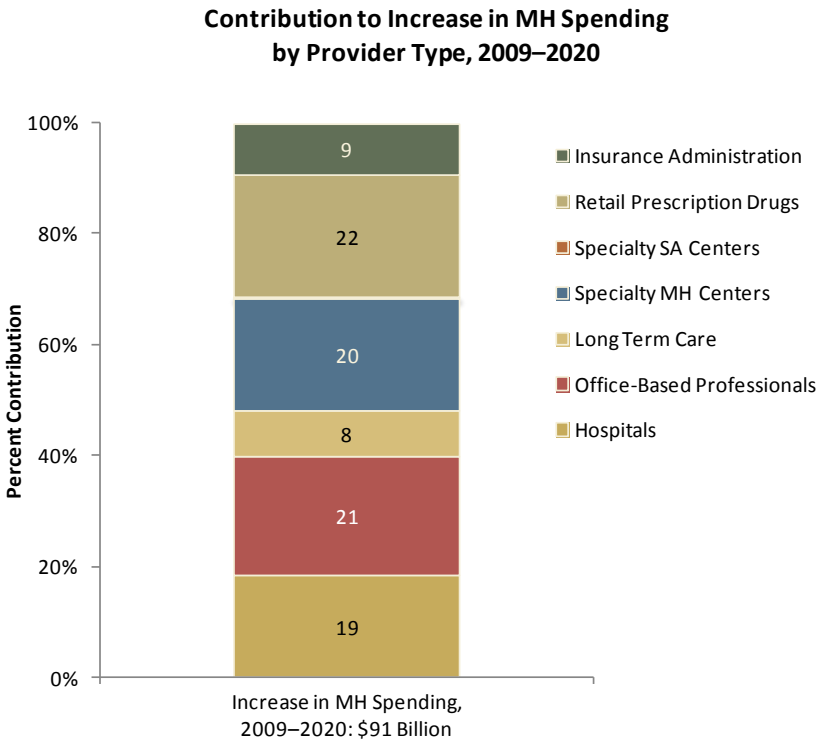


Note: Bar segments less than 5 percent are not labeled.

Source: SAMHSA Spending Estimates.

- The share of MH treatment spending attributed to prescription drugs is expected to increase from 28 percent in 2009, peak at 29 percent in 2011–2013, and then begin to fall as a share to 26 percent in 2020 as many MH medications lose patent protection and lower-cost generic versions become available.
- MH treatment spending for hospital services is expected to decline between 2009 and 2020, from 26 percent to 23 percent. This decline is primarily due to closure of (or funding reductions for) state-owned psychiatric hospitals that has led to closure of some beds.
- Specialty MH centers accounted for 14 percent of MH treatment spending in 2009 and are projected to account for 16 percent of MH treatment spending in 2020.
- In 2009, 16 percent of MH treatment spending was for office-based professionals. This share is forecasted to increase to 18 percent of MH treatment spending in 2020, driven by increases in spending for treatment from psychologists, social workers, and counselors.

Lower Prescription Drug Prices Are Expected to Reduce the Contribution of Drug Spending to Mental Health Treatment Spending Increases



Note: Bar segments less than 5 percent are not labeled.

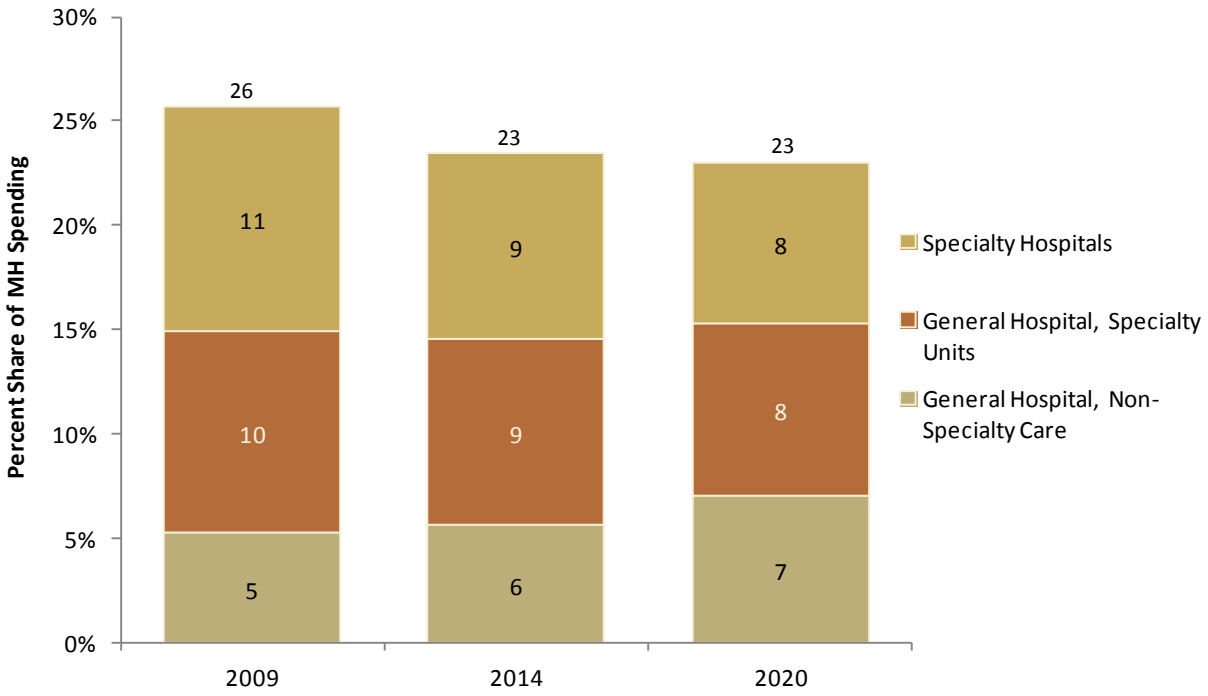
Source: SAMHSA Spending Estimates.

This graph identifies important drivers of MH treatment spending between 2009 and 2020 by showing the percent contribution of each provider type to the anticipated $91 billion increase in MH spending. The contribution to spending increases is a function of the payer share of total MH spending as well as the projected rate of growth in spending. Four provider types are responsible for more than 80 percent of the 62-percent MH spending increase between 2009 and 2020.

- Spending on prescription drugs is predicted to contribute 22 percent to overall MH spending. Although the largest single source of increased spending, its expected contribution is substantially lower than the 48 percent increase experienced from 1998 to 2004 (SAMHSA, 2013).
- Office-based professionals are expected to account for 21 percent of the increase in MH treatment spending.
- Similarly, specialty MH centers are predicted to be important contributors to the increase in MH treatment spending between 2009 and 2020. These centers are responsible for 20 percent of the increase.
- Hospitals are expected to account for 19 percent of increased MH treatment spending.

Lingering Effects of the Recession Are Projected to Slow Growth in State-Owned Psychiatric Hospitals Through 2014

Share of MH Spending for Hospital Care by Hospital Type, 2009, 2014, 2020



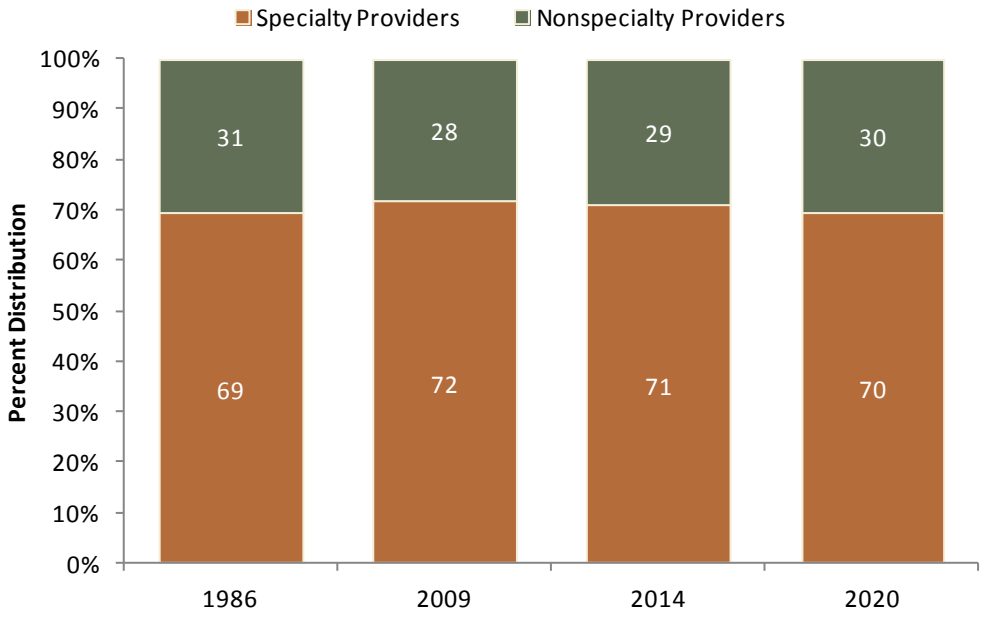
Source: SAMHSA Spending Estimates.

- Spending on hospital treatment as a share of MH treatment spending is projected to decline from 26 percent in 2009 to 23 percent in 2020.
- This trend comes from the projected small decline in the spending share for general hospital specialty units (from 10 percent in 2009 to 8 percent in 2020), a 2-percentage point increase in general hospital nonspecialty units that include the emergency department (from 5 percent in 2009 to 7 percent in 2020), and a 3 percentage point decrease in the share of spending in specialty hospitals (from 11 percent in 2009 to 8 percent in 2020).
- The decline in the specialty hospital share mainly comes from closure of state-owned psychiatric hospitals and reduced funding that led to bed closures in these facilities in many states through 2012.[7] This effect is projected to continue through 2014.

[7] Correspondence with Ted Lutterman of the National Association of State Mental Health Program Directors, National Research Institute, July 31, 2013.

Specialty Mental Health Providers Are Expected to Remain the Main Recipients of Mental Health Treatment Spending

Distribution of MH Treatment Spending by Specialty and Nonspecialty Providers, 1986, 2009, 2014, 2020*



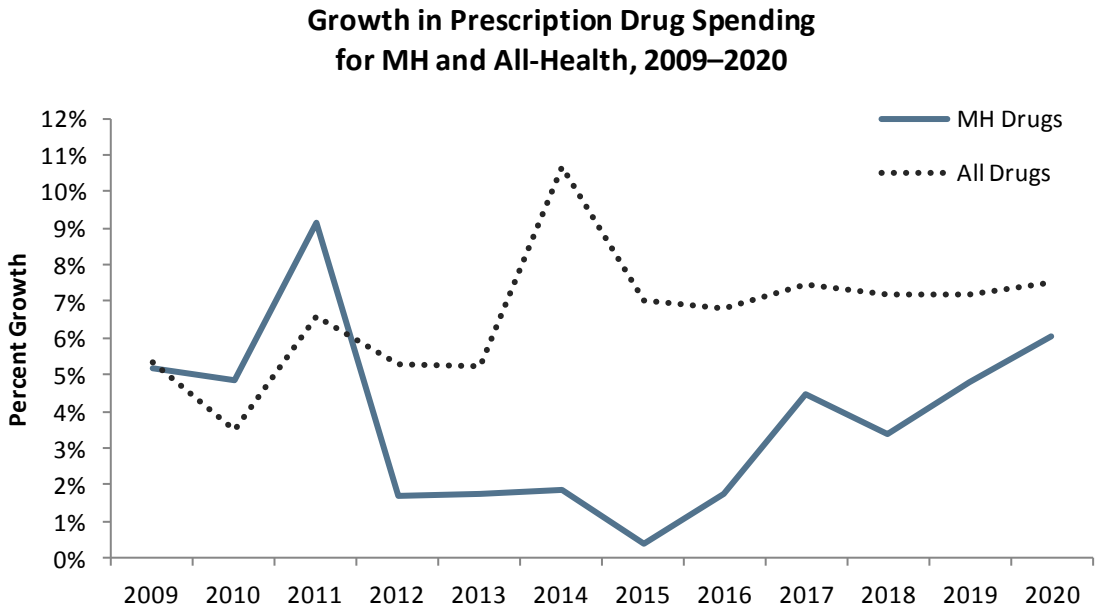
*Spending on prescription drugs and insurance administration excluded from the total MH spending represented by the distributions shown here.

Source: SAMHSA Spending Estimates.

Specialty providers include psychiatric units of general hospitals, specialty psychiatric hospitals, psychiatrists, other MH professionals such as psychologists, social workers, and counselors, and specialty MH and SUD centers providing mostly outpatient and residential treatment services. All other providers are considered to be nonspecialty, including nonpsychiatric physicians, medical or surgical units and outpatient departments of general hospitals, home health, and nursing homes.

- Specialty providers are projected to account for the majority of MH treatment spending between 2009 and 2020, as they have historically. The share of specialty provider MH treatment spending is expected to decline slightly from 2009 to 2020, from 72 percent to 70 percent.
- The anticipated decline in specialty providers' share of MH treatment spending is attributed to declining shares of MH treatment spending in specialty psychiatric hospitals and psychiatric units of general hospitals.
- The share of spending for nonspecialty units of general hospitals is expected to increase during the projection period, contributing to the overall increase in nonspecialty providers' share of MH treatment spending.

Patent Expirations and a Dry Drug Pipeline Are Expected to Produce Slow Spending for Mental Health Prescription Drugs

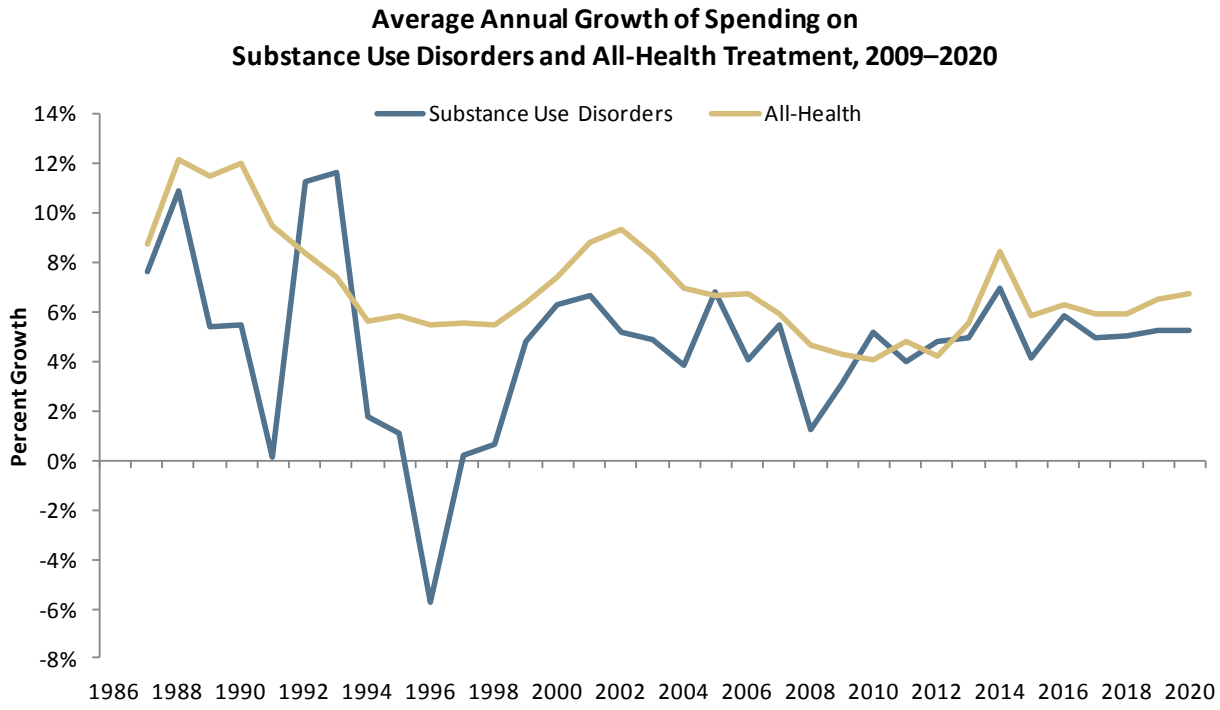


Source: SAMHSA Spending Estimates; Centers for Medicare & Medicaid Services, Office of the Actuary, National Health Statistics Group.

- The anticipated slowdown in growth in MH prescription drug spending beginning in 2012 is attributed to several frequently used psychotropic medications that are losing patent protection (Hodgkin et al., manuscript submitted for publication). Projections of national spending on psychotropic medications, 2013–2020.). These medications include specific antipsychotics, serotonin–norepinephrine reuptake inhibitors (SNRI antidepressants), analeptics (stimulant attention deficit hyperactivity disorder [ADHD] treatments), and newer-generation psychotherapeutic agents (nonstimulant ADHD treatments).
- The slowdown in spending growth for MH prescription drugs is also predicted to be a result of a "dry" MH drug pipeline. In other words, no new psychotropic medications are expected to enter the market during the projection period (O'Brien, Thomas, & Hodgkin, 2014).
- After patients switch to generic versions of the aforementioned drugs, spending growth is expected to resume at slightly higher rates; these rates are expected to approach those of all-health drug spending after 2015.

Expenditures for Substance Use Disorder Treatment, Total and by Payer, 2010–2020

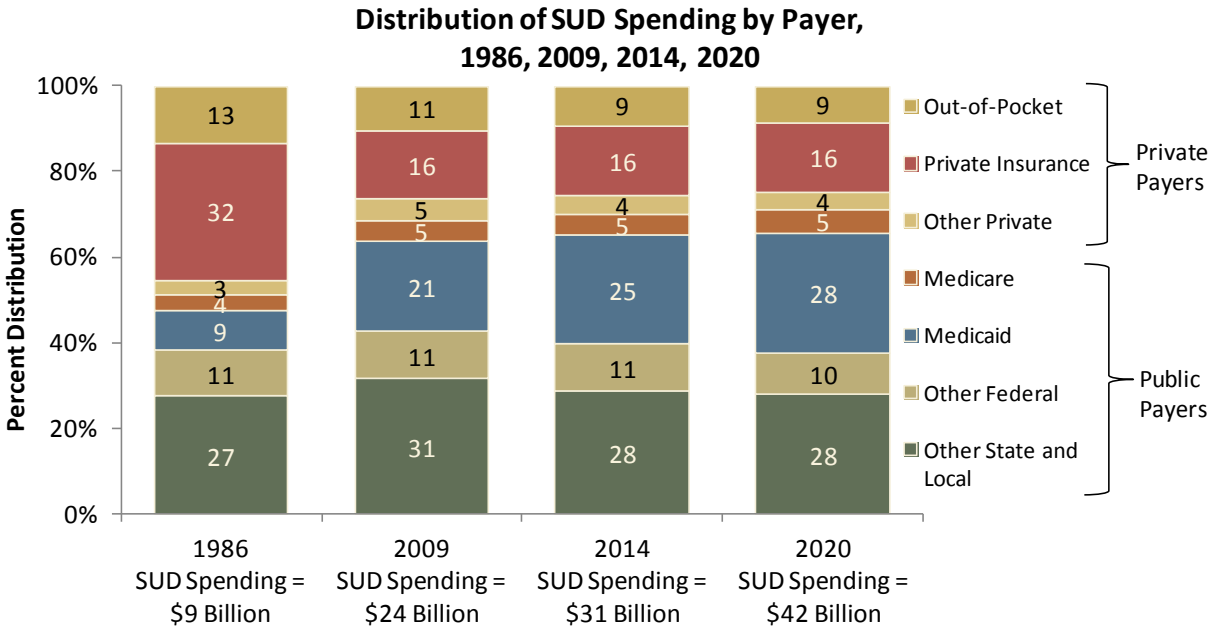
SUD Treatment Spending Is Expected to Grow as Uninsured Adults Gain Insurance Coverage From the Affordable Care Act



Source: SAMHSA Spending Estimates; Centers for Medicare & Medicaid Services, Office of the Actuary, National Health Statistics Group.

- SUD treatment spending is predicted to grow from $24.3 billion in 2009 to $42.1 billion in 2020. An additional 25 million people are expected to gain health insurance coverage through the Affordable Care Act by 2020. Of those, slightly more than 2 percent, or more than 500,000 users, are expected to access SUD treatment services in 2020.
- The growth in all-health spending has, on average, outpaced the growth in SUD treatment spending for many years, and this trend is expected to continue through 2020. SUD treatment spending is estimated to increase at an average of 5.8 percent between 2009 and 2020 for all-health spending and 5.1 percent for SUD treatment spending.
- Buprenorphine/naloxone (Suboxone) will lose patent protection in 2013 and naltrexone (Vivitrol) in 2017, making these prescription drugs for the treatment of drug and alcohol abuse much less expensive to obtain. Lower prices will likely result in declines in drug spending in 2014 and 2015. Slowing growth in prescription medicines used to treat SUDs is not expected to have much impact on spending for SUD treatment, because prescription medicines account for only a small share (4 percent) of that spending.
- Full implementation of the Affordable Care Act is expected to produce a spike in SUD spending growth from 4.9 percent in 2013 to 6.9 percent in 2014. The growth rate will then likely decline in 2015, after the initial impact of insurance enrollment by the uninsured, and plateau from 2017 through 2020 at about 5 percent.

Medicaid Is Projected to Become a Larger Share of SUD Treatment Spending as Medicaid Eligibility Expands

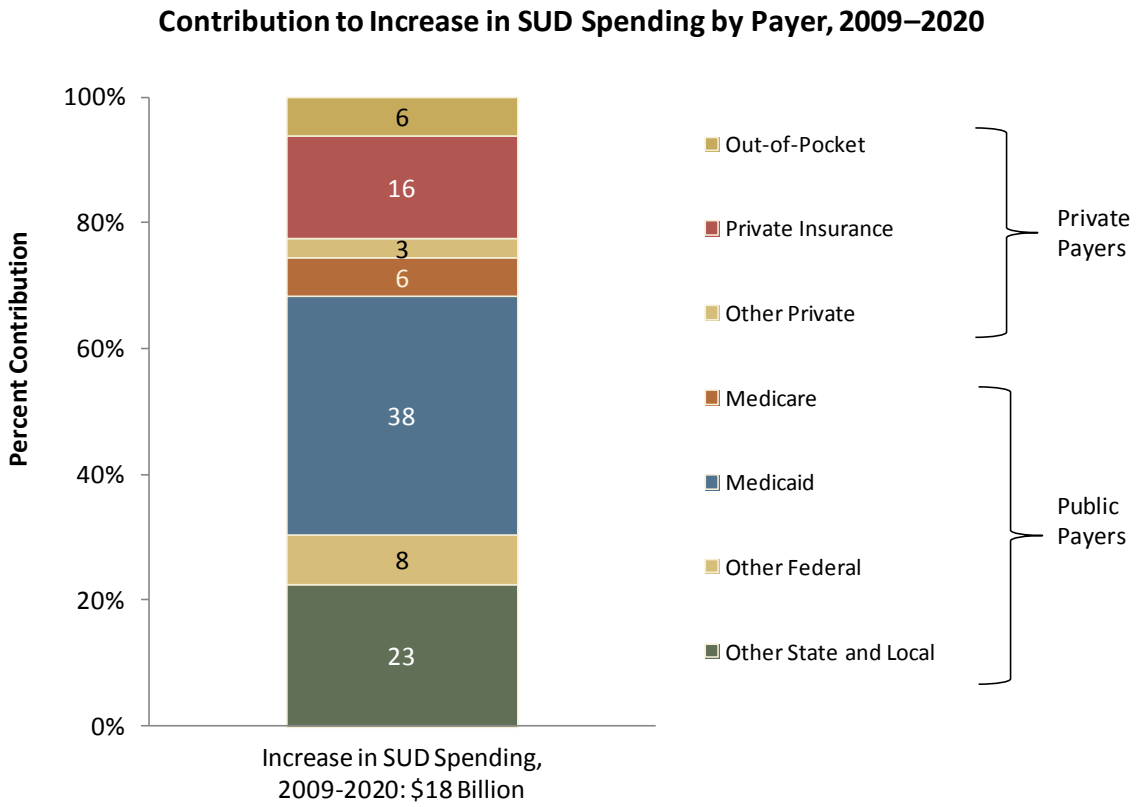


Note: Percentages may not add to 100 due to rounding.

Source: SAMHSA Spending Estimates.

- The share of SUD spending coming from public sources is predicted to increase to 71 percent for SUD treatment spending by 2020—up from 69 percent in 2009. This share is substantially larger than public all-health spending; public sources are expected to pay for 53 percent of all-health spending in 2020.
- In large part, the rising share of SUD public spending results from the Affordable Care Act that permitted expanded enrollment (and therefore spending) in Medicaid in those states that chose to expand eligibility. The Medicaid share of SUD spending is expected to rise from 21 percent in 2009 to 28 percent in 2020. More than 7 million people are expected to gain Medicaid coverage through the Affordable Care Act in 2014, increasing to more than 11 million by 2020. Of those eligible, about 3 percent are predicted to use SUD treatment services paid by Medicaid, amounting to an additional 350,000 Medicaid SUD users in 2020.
- The increase in the share of Medicaid spending on SUD treatment will be accompanied by a decrease in the share spent by other state and local programs from 31 percent to 28 percent, which largely finance treatment for individuals without insurance. In addition, the out-of-pocket spending share by consumers is expected to fall from 11 percent in 2009 to 9 percent in 2020, because many individuals gain new coverage through Medicaid and private insurance.

Medicaid and Other State and Local Payers Are Projected to Account for Largest Increases in SUD Treatment Spending

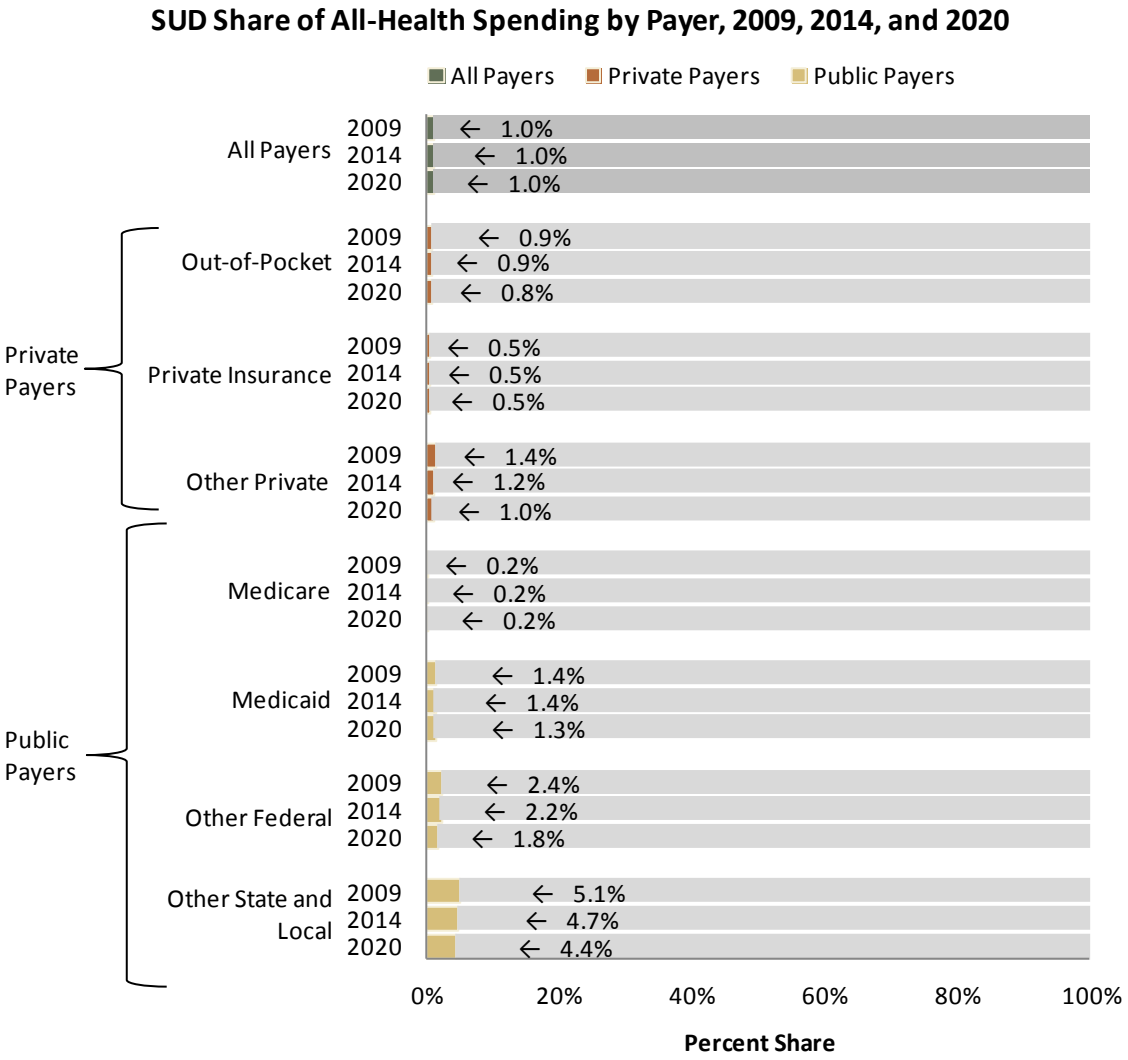


Source: SAMHSA Spending Estimates.

This graph depicts the portion each payer contributed to the projected $18 billion increase in SUD treatment spending from 2009 through 2020. The contribution to spending increases is a function of the payer's share of total SUD spending as well as the projected rate of growth in spending.

- Medicaid is expected to be responsible for 38 percent, or $6.8 billion, of the increase in SUD treatment spending between 2009 and 2020.
- Other state and local payers are expected to account for the next largest share of the increase in SUD treatment spending during the projection period—23 percent, or $4.1 billion.
- Private insurance spending is forecasted to account for 16 percent ($2.8 billion) of the increase in SUD treatment spending from 2009 through 2020. This is a substantial increase in spending compared with 1986–2009, when private insurance contributed only 6 percent to SUD treatment spending increases (SAMHSA, 2013). The low contribution by private insurance to SUD spending growth in the historical data was heavily influenced by significant managed care restrictions on reimbursement for SUD inpatient treatment between 1992 and 1998, which caused a substantial slowdown in SUD private insurance spending growth.

Medicaid SUD Treatment Spending Is Predicted to Be Only 1.3 Percent of All Medicaid Spending in 2020



Source: SAMHSA Spending Estimates; Centers for Medicare & Medicaid Services, Office of the Actuary, National Health Statistics Group.

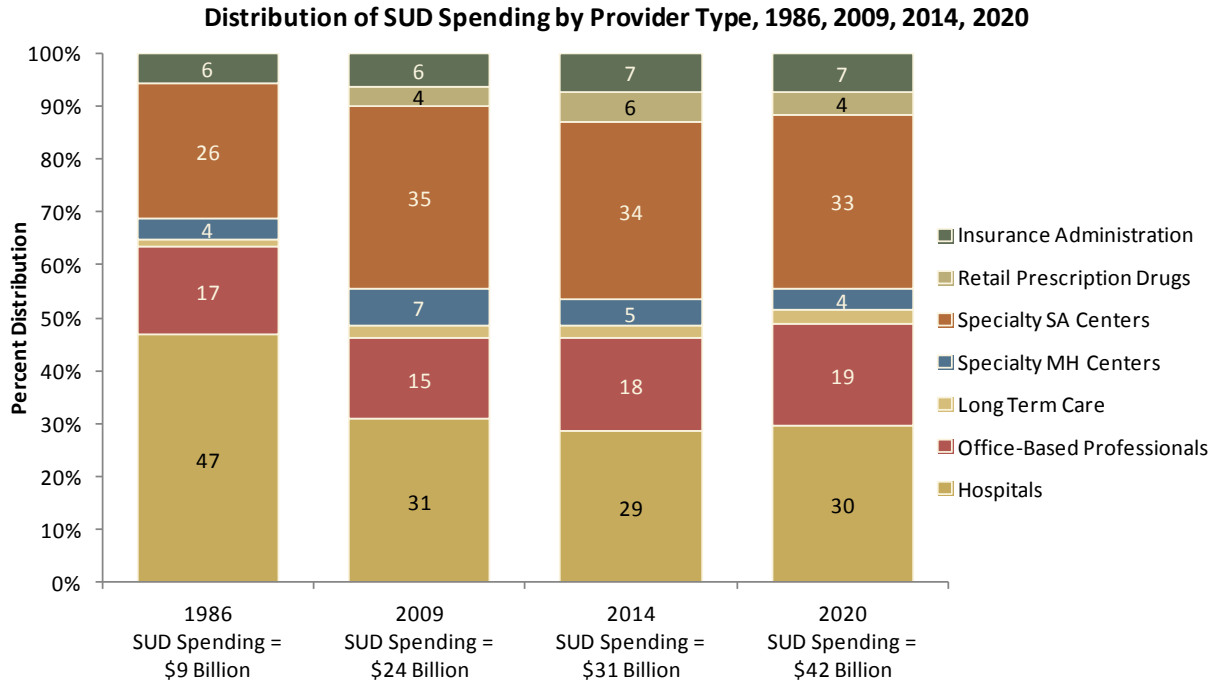
This graph depicts anticipated spending on SUD treatment as a share of all-health spending over all payers combined and for each payer in 2009, 2014, and 2020.

- Across payers, just 1.0 percent of all-health spending went to or is expected to go to SUD treatment in 2009, 2014, and 2020.
- Only 1.4 percent of Medicaid spending went for SUD treatment in 2009. This share is expected to fall to 1.3 percent by 2020.

- Although a major payer of all-health treatment, private insurance is expected of pay only 0.5 percent of its total spending on SUD treatment. This share is expected to remain unchanged throughout the projection period.
- In 2009, the share of all-health spending dedicated to SUD treatment by other state and local governments was much higher (5.1 percent) than the SUD all-payer share (1.0 percent). It is expected to fall to 4.4 percent of other state and local spending by 2020, even though the actual level of spending is predicted to increase. The falling share of other state and local treatment spending for SUD treatment reflects the expanded coverage of previously uninsured individuals through Medicaid and private insurance.
- For out-of-pocket and Medicare, the share of all-health spending devoted to SUD treatment is expected to remain lower than the all-payer share in 2020 (0.8 percent and 0.2 percent, respectively)—an indication that these funding sources have less demand for or more restrictions on SUD treatment than other payers.

Expenditures for Substance Use Disorder Treatment by Provider, 2010–2020

Private Insurance and Medicaid Enrollment Expansion Is Projected to Drive an Increasing Spending Share for Office-Based Professionals

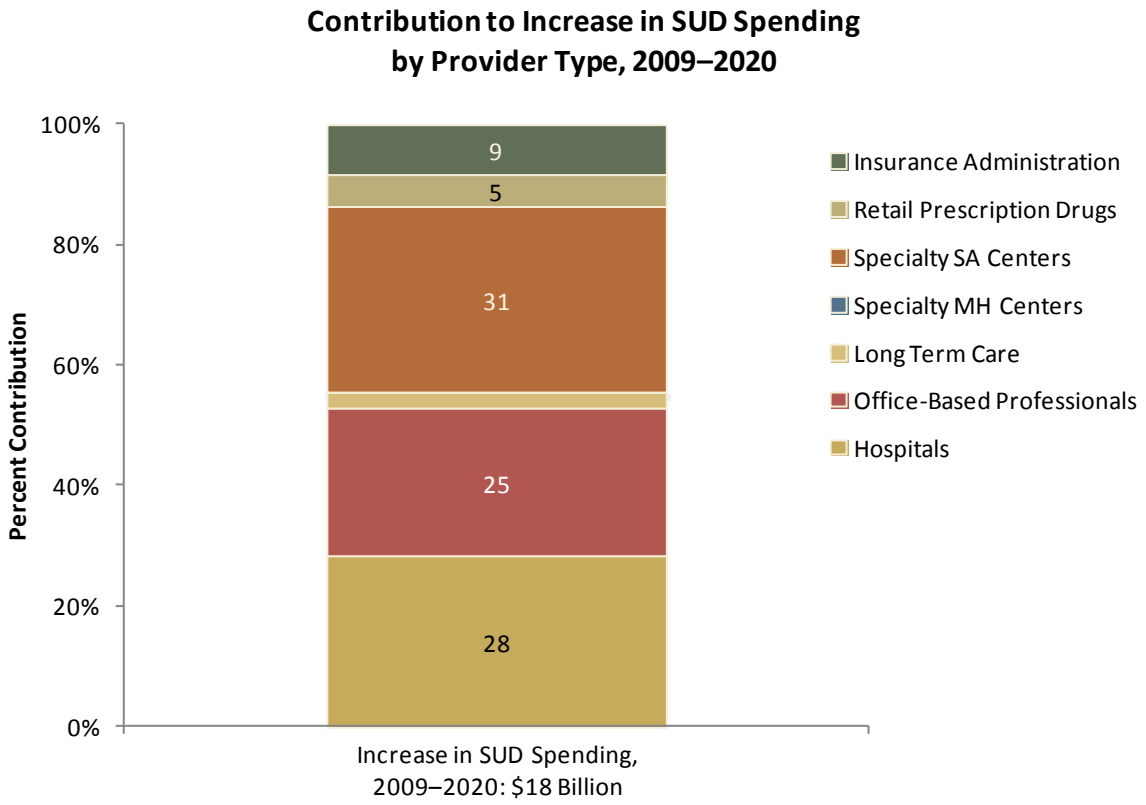


Note: Bar segments less than 3 percent are not labeled.

Source: SAMHSA Spending Estimates.

- Office-based professionals, including physicians, psychologists, social workers, and counselors, are expected to increase their share of SUD treatment spending from 15 percent in 2009 to 19 percent in 2020. Expansion of private insurance and Medicaid coverage, the main payers for office-based professionals, is expected to drive this trend. This increase in SUD treatment is expected to come from other professional services, which include psychologists, social workers, and counselors. Physicians provide only a small portion of SUD treatment—about 1 percent.
- Specialty SA and MH centers will likely experience a reduction in spending share between 2009 and 2020, from 42 percent to 37 percent. These centers treated a large number of individuals without insurance. As Medicaid and private insurance enrollment expands, treatment options for previously uninsured individuals expand to include physicians, psychologists in private practice, social workers, and counselors, who are less likely to treat people without insurance coverage or the ability to pay out of pocket.
- Almost one-third of SUD treatment spending (31 percent) was for hospital care in 2009. This share is expected to remain about the same through 2020. Unlike hospital-based MH treatment, very little SUD treatment occurs in state-owned psychiatric hospitals.

Specialty Substance Abuse Centers and Hospitals Are Anticipated to be Largest Contributors to the Increase in SUD Treatment Spending



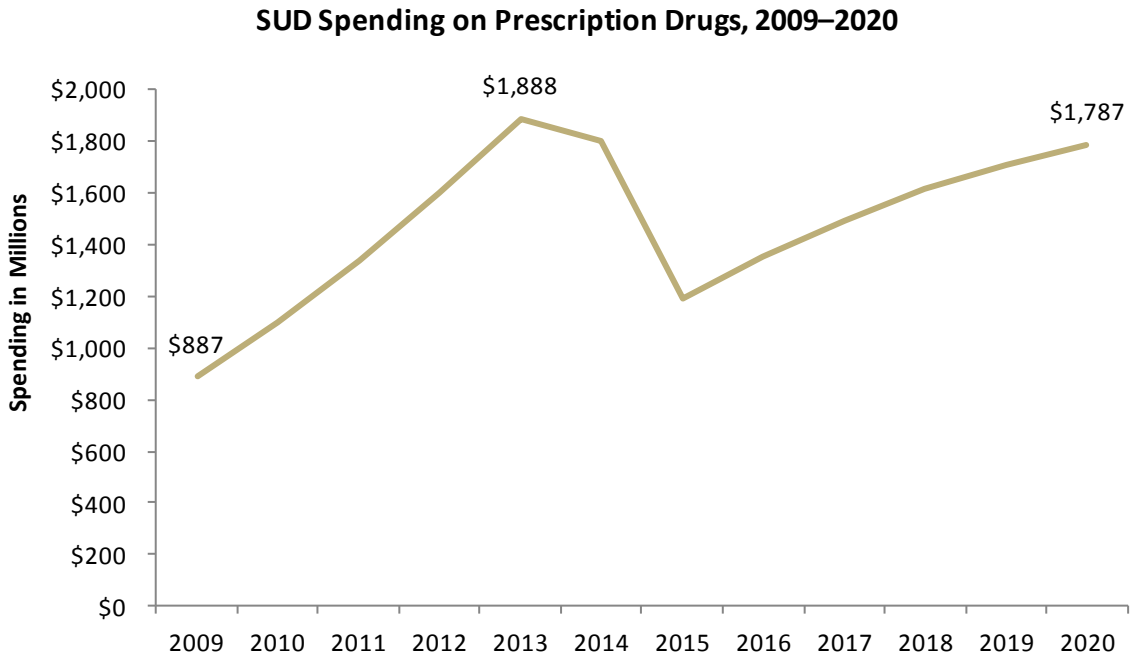
Note: Bar segments less than 5 percent are not labeled.

Source: SAMHSA Spending Estimates.

This graph identifies important drivers of SUD treatment spending between 2009 and 2020 by showing the percent contribution of each provider type to the anticipated $18 billion increase in SUD treatment spending. The contribution to spending increases is a function of the payer share of total SUD spending as well as the projected rate of growth in spending.

- The largest contributors to the increase in spending on SUD treatment are expected to be specialty substance abuse centers and all hospitals.
- Spending on care in hospitals is forecasted to account for 28 percent, or $5 billion, of the increase in SUD treatment spending through 2020.
- Specialty substance abuse centers are projected to account for 31 percent, or $5.5 billion, of the increase in total SUD treatment spending from 2009 through 2020.

Buprenorphine-Naloxone Goes Off Patent in 2013, Driving Lower Spending on Medications to Treat SUDs

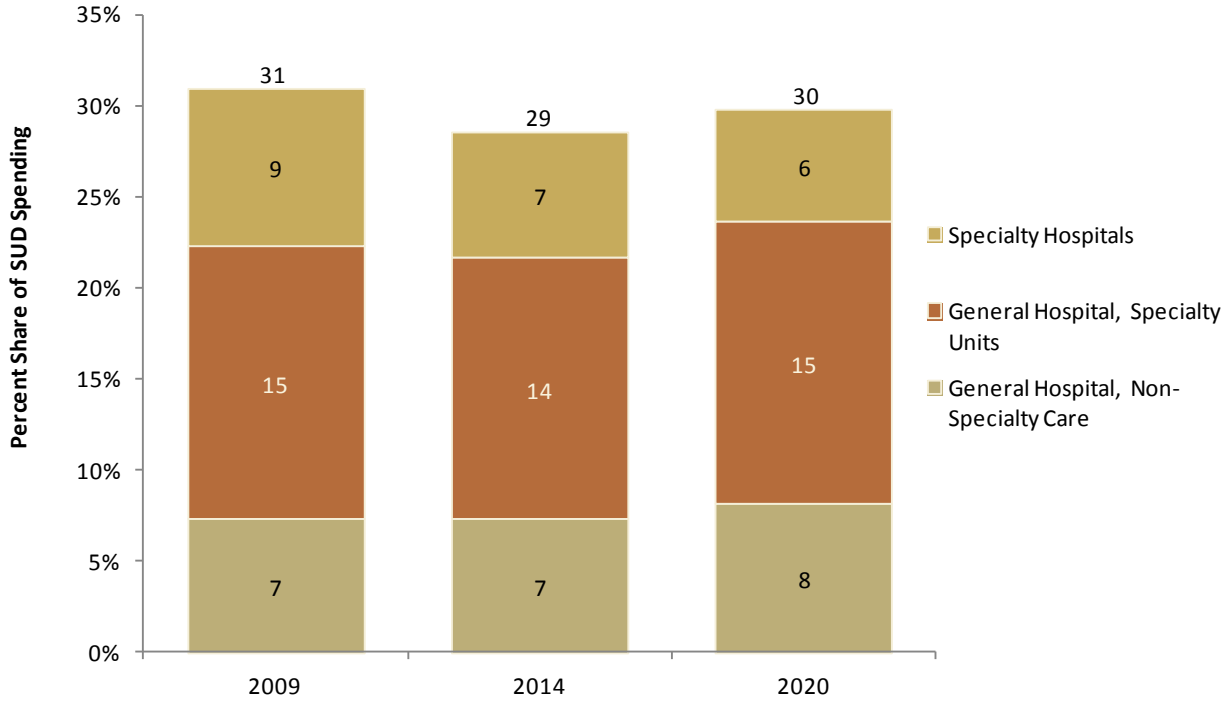


Source: SAMHSA Spending Estimates.

- In 2009, SUD treatment spending on prescription drugs reached $887 million, which was a significant increase from prior years. This increase stemmed from growth in the use of buprenorphine (Subutex) and buprenorphine-naloxone (Suboxone). These medications are used to treat opioid addiction, which is a growing epidemic in the United States because of the abuse of opioid pain killers (Centers for Disease Control and Prevention, 2011).
- In 2013, SUD prescription drug spending is expected to peak at $1.9 billion, followed by a decline in spending through 2015 to about $1.2 billion, as buprenorphine-naloxone (Suboxone) goes off patent and the price per prescription falls. Spending will then continue to increase through the remainder of the projection period.
- By 2020, spending on prescription drugs for SUDs is estimated to be $1.8 billion, which is below the peak spending of $1.9 billion in 2013.

Specialty Hospital Share of SUD Treatment Spending Is Projected to Decline by 2020

Share of SUD Spending for Hospital Care by Hospital Type, 2009, 2014, 2020

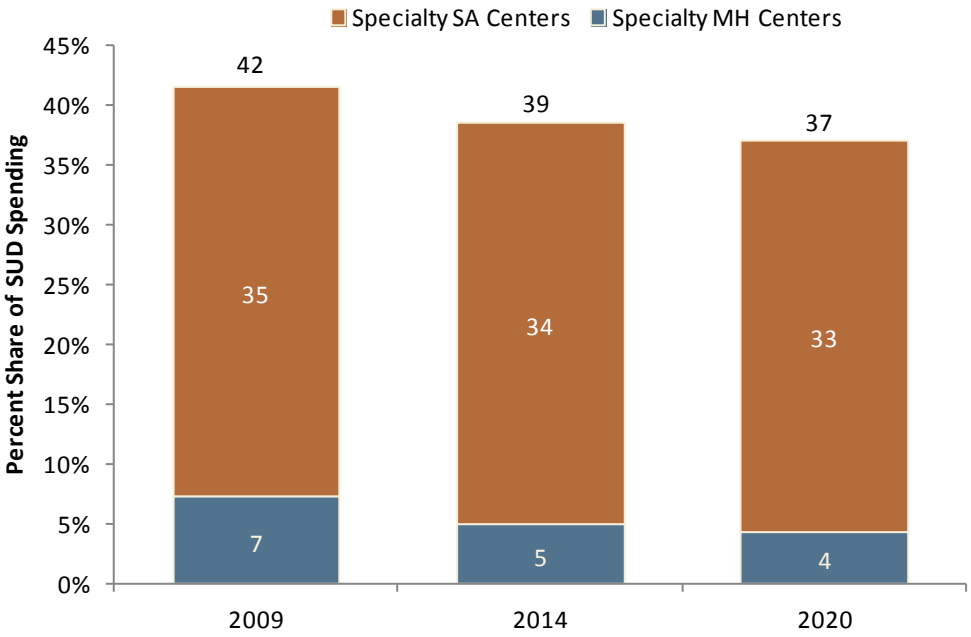


Source: SAMHSA Spending Estimates.

- General hospitals, including specialty and nonspecialty care units, will likely see a slight increase in the share of SUD treatment spending from 2009 through 2020. Assuming that historical trends will continue, specialty hospitals are projected to decline in their share of spending, from 9 percent to 6 percent.
- Between 2009 and 2020, the share of general hospital specialty units is expected to remain the same, while general hospital nonspecialty care will increase an estimated 1 percentage point to account for 8 percent of the share of SUD spending. Nonspecialty spending in general hospitals includes spending for treatment in emergency departments, as well as in medical and surgical inpatient units.

Move of Treatment to More Integrated M/SUD Facilities Is Expected to Reduce Spending Share in Specialty Substance Abuse Centers

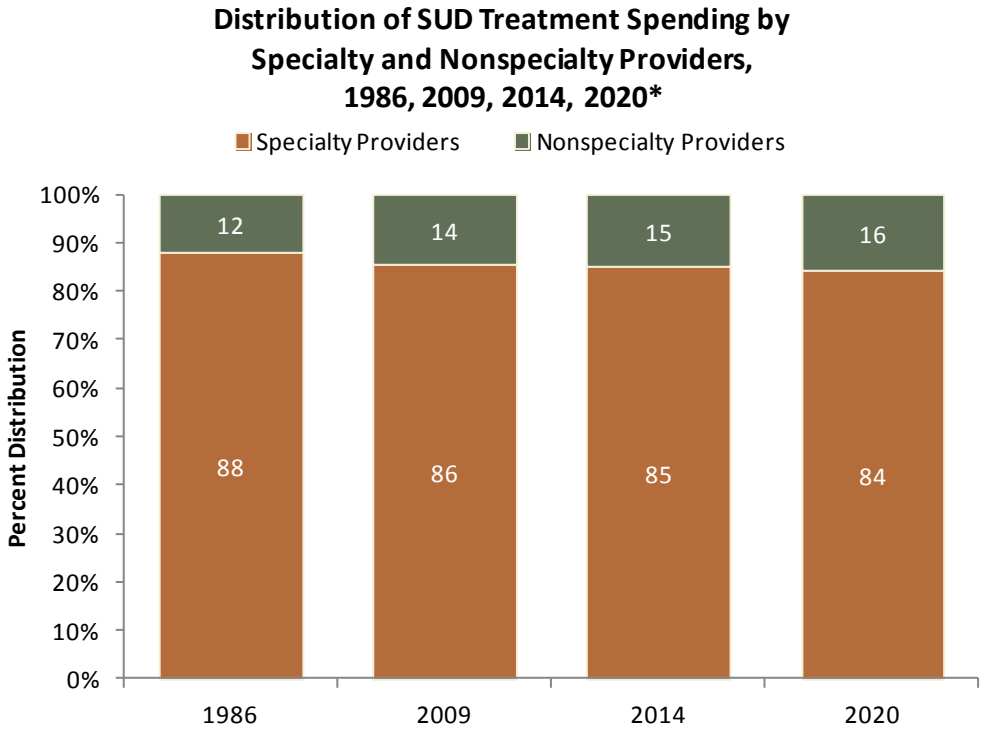
Share of SUD Spending for Center-Based Providers, 2009, 2014, 2020



Source: SAMHSA Spending Estimates.

- Center-based providers are expected to experience a decline in the share of SUD treatment spending from 2009 through 2020—from 42 percent to 37 percent of SUD treatment spending. Part of the reason for this expected trend is that a larger share of treatment for individuals with co-occurring mental and substance use disorders will take place in integrated facilities that specialize in treating both of these conditions. SUD diagnoses often co-occur with mental health conditions, and providers of co-occurring treatment may identify a primary diagnosis of MH for patients that present with both conditions.
- The share of SUD treatment spending for specialty center services (mostly outpatient and residential) is expected to decline between 2009 and 2014, dropping from 35 percent of spending to 34 percent. In 2020, specialty center services are expected to account for 33 percent of SUD treatment spending.
- The share of SUD spending on treatment services in specialty MH centers is projected to decline from 7 to 4 percent by 2020.

Specialty Providers Are Expected to Continue Receiving the Vast Majority of Spending for SUD Treatment



*Spending on prescription drugs and insurance administration excluded from the total SUD spending represented by the distributions shown here.

Source: SAMHSA Spending Estimates.

- In 2009, 86 percent of SUD provider spending was dedicated to specialty providers. This share is expected to decline slightly over time to 84 percent by 2020. The predicted decline in the specialty providers' share of SUD treatment spending is attributed to the declining share for specialty hospitals and specialty MH and SUD centers.
- In contrast, nonspecialty providers are projected to experience a slight increase in their share of SUD treatment spending, from 14 percent in 2009 to 16 percent in 2020. An anticipated increase in the SUD treatment spending share for hospitals is expected to contribute to the overall increase in the nonspecialty providers' share of SUD treatment spending.

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APPENDIX A: DETAILED TABLES

Table A.1. Treatment Spending, Share of All Health Spending, Growth, and Spending Distribution for All Health, Mental and Substance Use Disorders, Mental Health, and Substance Use Disorders, 2009–2020

Diagnosis	Historical	Projections										
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Spending (billions$)												
All-health total	2,330.1	2,424.3	2,540.8	2,646.9	2,792.6	3,027.6	3,204.4	3,404.1	3,605.3	3,818.2	4,065.6	4,337.7
Mental and substance use disorders	171.7	180.6	189.6	195.5	202.7	210.5	218.9	228.9	239.8	251.3	265.0	280.5
Mental Health	147.4	155.0	163.0	167.6	173.5	179.3	186.3	194.4	203.6	213.3	225.1	238.4
Substance use disorders	24.3	25.6	26.6	27.9	29.3	31.3	32.6	34.5	36.2	38.0	40.0	42.1
Share of all-health (%)												
Mental and substance use disorders	7.4	7.5	7.5	7.4	7.3	7.0	6.8	6.7	6.7	6.6	6.5	6.5
Mental health	6.3	6.4	6.4	6.3	6.2	5.9	5.8	5.7	5.6	5.6	5.5	5.5
Substance use disorders	1.0	1.1	1.0	1.1	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Annual growth (%)												
All-health total	4.3	4.0	4.8	4.2	5.5	8.4	5.8	6.2	5.9	5.9	6.5	6.7
Mental and substance use disorders	5.3	5.2	5.0	3.1	3.7	3.9	4.0	4.6	4.8	4.8	5.5	5.8
Mental Health	5.7	5.2	5.2	2.8	3.5	3.3	3.9	4.3	4.7	4.7	5.5	5.9
Substance use disorders	3.1	5.1	4.0	4.8	4.9	6.9	4.1	5.9	4.9	5.0	5.2	5.2
Share of mental and substance use treatment spending (%)												
Mental and substance use disorders	100	100	100	100	100	100	100	100	100	100	100	100
Mental health	86	86	86	86	86	85	85	85	85	85	85	85
Substance use disorders	14	14	14	14	14	15	15	15	15	15	15	15

Source: SAMHSA Spending Estimates - Projections for 2010-2020

Table A.2. Treatment Spending by Provider for All Health, Mental and Substance Use Disorders, Mental Health, and Substance Use Disorders, 2009–2020

Provider	Historical	Projections in Billions ($)										
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
All health	2,330.1	2,424.3	2,540.8	2,646.9	2,792.6	3,027.6	3,204.4	3,404.1	3,605.3	3,818.2	4,065.6	4,337.7
Total all service providers and products	2,167.1	2,247.5	2,353.1	2,446.1	2,578.7	2,783.5	2,944.1	3,129.4	3,315.8	3,517.2	3,745.3	3,995.2
Total all service providers	1,839.0	1,908.8	1,994.4	2,071.0	2,185.6	2,350.1	2,482.3	2,638.2	2,790.8	2,956.6	3,147.2	3,355.1
All hospitals	759.1	794.3	831.4	873.1	919.1	985.2	1,041.3	1,111.4	1,173.4	1,239.1	1,319.6	1,410.4
All physicians	505.9	517.8	538.4	542.9	573.5	624.3	654.1	692.8	731.4	772.6	818.9	867.7
Dentists	102.2	102.4	105.7	109.6	114.7	121.7	128.8	133.9	140.8	149.0	158.3	167.9
Other professionals	66.8	70.2	74.0	75.8	79.7	88.2	94.5	101.0	107.3	114.1	121.2	128.7
Free-standing nursing homes	137.0	140.6	145.6	150.7	157.3	164.5	171.8	179.6	188.2	197.7	207.7	218.4
Free-standing home health	68.3	71.9	75.7	80.2	85.7	92.0	97.7	103.5	109.7	117.6	126.5	136.1
Other residential, personal, and public health	199.8	211.6	223.8	238.7	255.5	274.3	294.1	316.0	340.0	366.5	395.0	425.9
Retail prescription drugs	249.9	258.6	275.7	290.2	305.3	337.9	361.6	386.2	415.0	444.9	476.8	512.6
Durable/other nondurable medical products	78.1	80.1	83.0	84.9	87.8	95.4	100.2	105.0	110.1	115.7	121.4	127.4
Insurance administration	163.0	176.7	187.7	200.8	214.0	244.1	260.3	274.7	289.5	301.1	320.3	342.5
Mental and substance use disorders	171.7	180.6	189.6	195.5	202.7	210.5	218.9	228.9	239.8	251.3	265.0	280.5
Total all service providers and products	159.9	167.7	175.8	181.0	187.5	194.1	201.5	210.7	220.9	231.6	244.4	258.6
Total all service providers	117.0	122.5	126.5	130.5	135.9	141.7	149.5	157.7	165.4	174.2	184.2	194.8
All hospitals	45.3	47.2	48.1	48.8	49.8	50.9	53.2	55.6	57.8	60.4	63.6	67.3
General hospitals	27.4	28.7	29.8	30.6	31.7	32.8	34.8	36.9	38.6	40.8	43.4	46.3
General hospitals, specialty units	17.9	18.7	19.3	19.6	20.1	20.5	21.4	22.3	23.0	23.9	24.9	26.1
General hospitals, nonspecialty units	9.5	10.0	10.5	11.0	11.6	12.4	13.4	14.5	15.6	16.9	18.4	20.2
Specialty hospitals	18.0	18.5	18.3	18.1	18.1	18.1	18.4	18.8	19.1	19.6	20.2	21.0
All physicians	17.0	17.7	18.3	18.7	19.7	20.9	21.8	23.1	24.3	25.7	27.2	28.7
Psychiatrists	8.6	9.0	9.3	9.6	10.1	10.7	11.3	11.9	12.7	13.5	14.4	15.3
Nonpsychiatric physicians	8.4	8.7	9.0	9.1	9.6	10.2	10.6	11.1	11.6	12.2	12.8	13.4
Other professionals	10.5	11.2	11.9	12.6	13.3	15.1	16.4	17.9	18.9	20.0	21.3	22.5
Free-standing nursing homes	9.4	9.7	10.1	10.4	10.8	11.1	11.6	12.1	12.7	13.3	14.0	14.7
Free-standing home health	2.8	3.0	3.2	3.4	3.6	3.7	4.0	4.2	4.5	4.8	5.2	5.6
Other residential, personal, and public health	32.0	33.6	34.9	36.7	38.7	40.0	42.5	44.8	47.2	50.0	53.0	56.0
Specialty mental health centers	22.8	24.1	25.1	26.4	27.9	28.6	30.4	32.2	34.0	36.2	38.6	41.1
Specialty substance abuse centers	9.2	9.5	9.8	10.3	10.8	11.5	12.1	12.6	13.2	13.8	14.4	15.0
Retail prescription drugs	42.9	45.1	49.4	50.4	51.6	52.4	52.0	53.0	55.5	57.4	60.2	63.8
Insurance administration	11.8	13.0	13.8	14.5	15.2	16.4	17.4	18.2	19.0	19.7	20.7	21.9

Source: SAMHSA Spending Estimates - Projections for 2010-2020

Table A.2. Treatment Spending by Provider for All Health, Mental and Substance Use Disorders, Mental Health, and Substance Use Disorders, 2009–2020, Continued

Provider	Historical	Projections in Billions ($)										
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Mental health	147.4	155.0	163.0	167.6	173.5	179.3	186.3	194.4	203.6	213.3	225.1	238.4
Total all service providers and products	137.1	143.8	151.0	155.0	160.2	165.1	171.3	178.8	187.3	196.4	207.3	219.5
Total all service providers	95.1	99.7	103.0	106.1	110.6	114.5	120.5	127.1	133.3	140.6	148.8	157.5
All hospitals	37.8	39.4	40.1	40.6	41.3	42.0	43.7	45.6	47.2	49.3	51.8	54.8
General hospitals	22.0	23.0	24.0	24.6	25.4	26.1	27.5	29.1	30.4	32.1	34.1	36.4
General hospitals, specialty units	14.3	14.9	15.4	15.6	15.9	16.0	16.6	17.2	17.6	18.2	18.9	19.6
General hospitals, nonspecialty units	7.7	8.1	8.5	9.0	9.5	10.1	10.9	11.9	12.8	13.9	15.2	16.8
Specialty hospitals	15.9	16.3	16.1	16.0	15.9	15.9	16.2	16.5	16.8	17.2	17.7	18.4
All physicians	15.9	16.6	17.1	17.5	18.4	19.5	20.4	21.5	22.7	24.0	25.4	26.8
Psychiatrists	8.3	8.7	9.0	9.3	9.8	10.4	10.9	11.6	12.3	13.1	13.9	14.8
Nonpsychiatric physicians	7.6	7.9	8.1	8.2	8.6	9.1	9.5	10.0	10.4	10.9	11.5	12.0
Other professionals	7.8	8.4	8.8	9.3	9.8	10.9	11.8	12.8	13.6	14.4	15.4	16.3
Free-standing nursing homes	9.0	9.3	9.6	9.9	10.3	10.5	11.0	11.5	12.0	12.6	13.3	13.9
Free-standing home health	2.7	2.9	3.0	3.2	3.4	3.5	3.8	4.0	4.3	4.6	4.9	5.3
Other residential, personal, and public health	21.9	23.3	24.3	25.7	27.3	28.0	29.8	31.6	33.5	35.7	38.0	40.4
Specialty mental health centers	21.1	22.5	23.5	24.9	26.4	27.1	28.9	30.7	32.5	34.6	36.9	39.3
Specialty substance abuse centers	0.8	0.8	0.8	0.9	0.9	0.9	0.9	1.0	1.0	1.0	1.1	1.1
Retail prescription drugs	42.0	44.0	48.0	48.8	49.7	50.6	50.8	51.7	54.0	55.8	58.5	62.0
Insurance administration	10.3	11.3	12.0	12.6	13.2	14.2	15.0	15.6	16.3	16.9	17.8	18.9
Substance use disorders	24.3	25.6	26.6	27.9	29.3	31.3	32.6	34.5	36.2	38.0	40.0	42.1
Total all service providers and products	22.8	23.9	24.8	26.0	27.2	29.1	30.2	32.0	33.5	35.2	37.1	39.0
Total all service providers	21.9	22.8	23.5	24.4	25.4	27.3	29.0	30.6	32.1	33.6	35.4	37.2
All hospitals	7.5	7.8	8.0	8.2	8.5	8.9	9.5	10.1	10.5	11.1	11.7	12.5
General hospitals	5.4	5.7	5.8	6.1	6.3	6.8	7.3	7.8	8.2	8.7	9.3	9.9
General hospitals, specialty units	3.7	3.8	3.9	4.0	4.2	4.5	4.8	5.1	5.4	5.7	6.1	6.5
General hospitals, nonspecialty units	1.8	1.9	1.9	2.0	2.1	2.3	2.5	2.6	2.8	3.0	3.2	3.4
Specialty hospitals	2.1	2.2	2.2	2.1	2.2	2.2	2.2	2.3	2.3	2.4	2.5	2.6
All physicians	1.1	1.1	1.2	1.2	1.3	1.4	1.5	1.5	1.6	1.7	1.8	1.9
Psychiatrists	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.5
Nonpsychiatric physicians	0.8	0.9	0.9	0.9	1.0	1.0	1.1	1.1	1.2	1.3	1.3	1.4
Other professionals	2.6	2.9	3.1	3.4	3.6	4.2	4.6	5.0	5.3	5.6	5.9	6.2
Free-standing nursing homes	0.4	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.7	0.7	0.7
Free-standing home health	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3
Other residential, personal, and public health	10.1	10.3	10.6	11.0	11.4	12.1	12.6	13.2	13.7	14.3	14.9	15.6
Specialty mental health centers	1.7	1.7	1.6	1.6	1.5	1.5	1.5	1.5	1.5	1.6	1.7	1.8
Specialty substance abuse centers	8.4	8.7	9.0	9.4	9.9	10.6	11.1	11.7	12.2	12.8	13.3	13.9
Retail prescription drugs	0.9	1.1	1.3	1.6	1.9	1.8	1.2	1.4	1.5	1.6	1.7	1.8
Insurance administration	1.5	1.7	1.8	1.9	2.0	2.2	2.4	2.5	2.6	2.8	2.9	3.0

Source: SAMHSA Spending Estimates - Projections for 2010-2020

Table A.3. Percent Distribution of Treatment Spending by Provider for All Health, Mental and Substance Use Disorders, Mental Health, and Substance Use Disorders, 2009–2020

Provider	Historical	Projections Percent Distribution (%)										
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
All health	100	100	100	100	100	100	100	100	100	100	100	100
Total all service providers and products	93	93	93	92	92	92	92	92	92	92	92	92
Total all service providers	79	79	78	78	78	78	77	77	77	77	77	77
All hospitals	33	33	33	33	33	33	32	33	33	32	32	33
All physicians	22	21	21	21	21	21	20	20	20	20	20	20
Dentists	4	4	4	4	4	4	4	4	4	4	4	4
Other professionals	3	3	3	3	3	3	3	3	3	3	3	3
Free-standing nursing homes	6	6	6	6	6	5	5	5	5	5	5	5
Free-standing home health	3	3	3	3	3	3	3	3	3	3	3	3
Other residential, personal, and public health	9	9	9	9	9	9	9	9	9	10	10	10
Retail prescription drugs	11	11	11	11	11	11	11	11	12	12	12	12
Durable/other nondurable medical products	3	3	3	3	3	3	3	3	3	3	3	3
Insurance administration	7	7	7	8	8	8	8	8	8	8	8	8
Mental and substance use disorders	100	100	100	100	100	100	100	100	100	100	100	100
Total all service providers and products	93	93	93	93	92	92	92	92	92	92	92	92
Total all service providers	68	68	67	67	67	67	68	69	69	69	69	69
All hospitals	26	26	25	25	25	24	24	24	24	24	24	24
General hospitals	16	16	16	16	16	16	16	16	16	16	16	17
General hospitals, specialty units	10	10	10	10	10	10	10	10	10	9	9	9
General hospitals, nonspecialty units	6	6	6	6	6	6	6	6	7	7	7	7
Specialty hospitals	10	10	10	9	9	9	8	8	8	8	8	7
All physicians	10	10	10	10	10	10	10	10	10	10	10	10
Psychiatrists	5	5	5	5	5	5	5	5	5	5	5	5
Nonpsychiatric physicians	5	5	5	5	5	5	5	5	5	5	5	5
Other professionals	6	6	6	6	7	7	8	8	8	8	8	8
Free-standing nursing homes	5	5	5	5	5	5	5	5	5	5	5	5
Free-standing home health	2	2	2	2	2	2	2	2	2	2	2	2
Other residential, personal, and public health	19	19	18	19	19	19	19	20	20	20	20	20
Specialty mental health centers	13	13	13	14	14	14	14	14	14	14	15	15
Specialty substance abuse centers	5	5	5	5	5	5	6	6	6	5	5	5
Retail prescription drugs	25	25	26	26	25	25	24	23	23	23	23	23
Insurance administration	7	7	7	7	8	8	8	8	8	8	8	8

Source: SAMHSA Spending Estimates - Projections for 2010-2020

Table A.3. Percent Distribution of Treatment Spending by Provider for All Health, Mental and Substance Use Disorders, Mental Health, and Substance Use Disorders, 2009–2020, Continued

Provider	Historical	Projections Percent Distribution (%)										
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Mental health	100	100	100	100	100	100	100	100	100	100	100	100
Total all service providers and products	93	93	93	92	92	92	92	92	92	92	92	92
Total all service providers	65	64	63	63	64	64	65	65	65	66	66	66
All hospitals	26	25	25	24	24	23	23	23	23	23	23	23
General hospitals	15	15	15	15	15	15	15	15	15	15	15	15
General hospitals, specialty units	10	10	9	9	9	9	9	9	9	9	8	8
General hospitals, nonspecialty units	5	5	5	5	5	6	6	6	6	7	7	7
Specialty hospitals	11	11	10	10	9	9	9	8	8	8	8	8
All physicians	11	11	10	10	11	11	11	11	11	11	11	11
Psychiatrists	6	6	6	6	6	6	6	6	6	6	6	6
Nonpsychiatric physicians	5	5	5	5	5	5	5	5	5	5	5	5
Other professionals	5	5	5	6	6	6	6	7	7	7	7	7
Free-standing nursing homes	6	6	6	6	6	6	6	6	6	6	6	6
Free-standing home health	2	2	2	2	2	2	2	2	2	2	2	2
Other residential, personal, and public health	15	15	15	15	16	16	16	16	16	17	17	17
Specialty mental health centers	14	14	14	15	15	15	16	16	16	16	16	16
Specialty substance abuse centers	1	1	1	1	1	1	1	1	0	0	0	0
Retail prescription drugs	28	28	29	29	29	28	27	27	27	26	26	26
Insurance administration	7	7	7	8	8	8	8	8	8	8	8	8
Substance use disorders	100	100	100	100	100	100	100	100	100	100	100	100
Total all service providers and products	94	93	93	93	93	93	93	93	93	93	93	93
Total all service providers	90	89	88	87	87	87	89	89	89	88	88	89
All hospitals	31	31	30	29	29	29	29	29	29	29	29	30
General hospitals	22	22	22	22	22	22	22	23	23	23	23	24
General hospitals, specialty units	15	15	15	15	14	14	15	15	15	15	15	15
General hospitals, nonspecialty units	7	7	7	7	7	7	8	8	8	8	8	8
Specialty hospitals	9	8	8	8	7	7	7	7	6	6	6	6
All physicians	4	4	4	4	4	4	4	4	4	4	4	4
Psychiatrists	1	1	1	1	1	1	1	1	1	1	1	1
Nonpsychiatric physicians	3	3	3	3	3	3	3	3	3	3	3	3
Other professionals	11	11	12	12	12	13	14	15	15	15	15	15
Free-standing nursing homes	2	2	2	2	2	2	2	2	2	2	2	2
Free-standing home health	1	1	1	1	1	1	1	1	1	1	1	1
Other residential, personal, and public health	42	40	40	39	39	39	39	38	38	38	37	37
Specialty mental health centers	7	7	6	6	5	5	5	4	4	4	4	4
Specialty substance abuse centers	35	34	34	34	34	34	34	34	34	34	33	33
Retail prescription drugs	4	4	5	6	6	6	4	4	4	4	4	4
Insurance administration	6	7	7	7	7	7	7	7	7	7	7	7

Source: SAMHSA Spending Estimates - Projections for 2010-2020

Table A.4. Growth in Treatment Spending by Provider for All Health, Mental and Substance Use Disorders, Mental Health, and Substance Use Disorders, 2010–2020

Provider	Projections Annual Growth (%)											Average Annual Growth (%)		
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2009-2014	2014-2020	2009-2020
All health	4.0	4.8	4.2	5.5	8.4	5.8	6.2	5.9	5.9	6.5	6.7	5.4	6.2	5.8
Total all service providers and products	3.7	4.7	4.0	5.4	7.9	5.8	6.3	6.0	6.1	6.5	6.7	5.1	6.2	5.7
Total all service providers	3.8	4.5	3.8	5.5	7.5	5.6	6.3	5.8	5.9	6.4	6.6	5.0	6.1	5.6
All hospitals	4.6	4.7	5.0	5.3	7.2	5.7	6.7	5.6	5.6	6.5	6.9	5.4	6.2	5.8
All physicians	2.4	4.0	0.8	5.6	8.9	4.8	5.9	5.6	5.6	6.0	6.0	4.3	5.6	5.0
Dentists	0.2	3.2	3.7	4.7	6.1	5.8	4.0	5.2	5.8	6.3	6.0	3.6	5.5	4.6
Other professionals	5.0	5.5	2.4	5.2	10.7	7.1	6.9	6.2	6.4	6.2	6.2	5.7	6.5	6.1
Free-standing nursing homes	2.6	3.5	3.5	4.4	4.6	4.5	4.6	4.8	5.1	5.1	5.1	3.7	4.8	4.3
Free-standing home health	5.3	5.3	6.1	6.8	7.3	6.2	5.9	6.1	7.2	7.5	7.6	6.1	6.8	6.5
Other residential, personal, and public health	5.9	5.7	6.7	7.0	7.4	7.2	7.5	7.6	7.8	7.8	7.8	6.5	7.6	7.1
Retail prescription drugs	3.5	6.6	5.3	5.2	10.7	7.0	6.8	7.5	7.2	7.2	7.5	6.2	7.2	6.7
Durable/other nondurable medical products	2.5	3.7	2.2	3.4	8.7	5.0	4.8	4.8	5.2	4.9	5.0	4.1	4.9	4.5
Insurance administration	8.4	6.2	7.0	6.5	14.1	6.7	5.5	5.4	4.0	6.4	6.9	8.4	5.8	7.0
Mental and substance use disorders	5.2	5.0	3.1	3.7	3.9	4.0	4.6	4.8	4.8	5.5	5.8	4.2	4.9	4.6
Total all service providers and products	4.8	4.9	2.9	3.6	3.5	3.8	4.6	4.8	4.9	5.5	5.8	4.0	4.9	4.5
Total all service providers	4.7	3.2	3.2	4.1	4.3	5.5	5.5	4.9	5.3	5.7	5.8	3.9	5.4	4.7
All hospitals	4.1	1.9	1.4	2.1	2.3	4.4	4.6	3.8	4.5	5.3	5.8	2.3	4.8	3.7
General hospitals	4.8	3.8	2.7	3.5	3.5	6.0	6.0	4.8	5.5	6.4	6.7	3.7	5.9	4.9
General hospitals, specialty units	4.4	3.4	1.6	2.4	1.7	4.6	4.4	3.1	3.7	4.4	4.6	2.7	4.1	3.5
General hospitals, nonspecialty units	5.6	4.7	4.8	5.6	6.7	8.3	8.4	7.5	8.2	9.2	9.6	5.5	8.5	7.1
Specialty hospitals	3.1	-1.2	-0.9	-0.3	0.2	1.6	2.1	1.9	2.4	3.2	3.9	0.2	2.5	1.4
All physicians	4.2	3.2	2.3	5.5	6.1	4.5	5.6	5.4	5.8	5.7	5.5	4.2	5.4	4.9
Psychiatrists	4.2	3.8	2.8	6.1	5.7	5.0	6.1	6.1	6.5	6.4	6.2	4.5	6.1	5.4
Nonpsychiatric physicians	4.1	2.5	1.7	4.8	6.5	3.9	5.0	4.6	4.9	5.0	4.7	3.9	4.7	4.3
Other professionals	7.5	5.9	6.1	5.5	13.3	8.9	8.6	5.9	6.0	6.3	5.9	7.6	6.9	7.2
Free-standing nursing homes	3.5	3.6	3.1	4.2	1.9	4.7	4.6	4.5	5.0	5.1	5.0	3.3	4.8	4.1
Free-standing home health	7.3	6.1	5.4	6.7	3.6	7.3	6.3	6.3	7.2	7.7	7.4	5.8	7.0	6.5
Other residential, personal, and public health	5.0	3.7	5.2	5.4	3.5	6.1	5.5	5.4	5.8	5.9	5.8	4.6	5.8	5.2
Specialty mental health centers	5.8	3.9	5.3	5.7	2.3	6.4	5.8	5.8	6.4	6.6	6.4	4.6	6.2	5.5
Specialty substance abuse centers	3.1	3.3	4.7	4.8	6.6	5.3	4.7	4.5	4.4	4.2	4.1	4.5	4.5	4.5
Retail prescription drugs	5.2	9.4	2.2	2.2	1.6	-0.8	2.0	4.6	3.5	4.8	6.0	4.1	3.3	3.7
Insurance administration	9.8	6.6	5.0	5.0	7.6	6.0	4.3	4.4	3.7	5.3	5.9	6.8	4.9	5.8

Source: SAMHSA Spending Estimates - Projections for 2010-2020

Table A.4. Growth in Treatment Spending by Provider for All Health, Mental and Substance Use Disorders, Mental Health, and Substance Use Disorders, 2010–2020, Continued

Provider	Projections Annual Growth (%)											Average Annual Growth (%)		
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2009-2014	2014-2020	2009-2020
Mental health	5.2	5.2	2.8	3.5	3.3	3.9	4.3	4.7	4.7	5.5	5.9	4.0	4.9	4.5
Total all service providers and products	4.9	5.0	2.6	3.4	3.0	3.8	4.4	4.8	4.8	5.5	5.9	3.8	4.9	4.4
Total all service providers	4.9	3.2	3.1	4.2	3.5	5.3	5.5	4.9	5.4	5.8	5.9	3.8	5.5	4.7
All hospitals	4.1	1.8	1.1	1.9	1.7	4.0	4.4	3.6	4.3	5.2	5.7	2.1	4.5	3.4
General hospitals	4.9	4.0	2.5	3.4	2.6	5.5	5.8	4.7	5.4	6.3	6.7	3.5	5.7	4.7
General hospitals, specialty units	4.5	3.5	1.2	1.9	0.4	3.7	3.8	2.5	3.1	3.8	3.9	2.3	3.5	2.9
General hospitals, nonspecialty units	5.7	4.9	4.9	5.8	6.3	8.3	8.7	7.8	8.7	9.6	10.1	5.5	8.9	7.3
Specialty hospitals	3.0	-1.2	-0.9	-0.4	0.1	1.4	2.0	1.8	2.3	3.1	3.8	0.1	2.4	1.4
All physicians	4.1	3.2	2.2	5.5	5.9	4.4	5.6	5.4	5.8	5.8	5.5	4.2	5.4	4.9
Psychiatrists	4.2	3.8	2.8	6.1	5.6	5.0	6.1	6.1	6.5	6.4	6.2	4.5	6.1	5.4
Nonpsychiatric physicians	4.0	2.5	1.5	4.9	6.3	3.7	5.1	4.6	4.9	5.0	4.7	3.8	4.7	4.3
Other professionals	6.7	5.1	5.5	5.5	11.8	8.2	8.5	5.9	6.0	6.6	6.3	6.9	6.9	6.9
Free-standing nursing homes	3.5	3.6	3.1	4.1	1.8	4.7	4.6	4.5	5.0	5.1	5.0	3.2	4.8	4.1
Free-standing home health	7.3	6.1	5.4	6.7	3.2	7.2	6.3	6.4	7.2	7.7	7.4	5.8	7.0	6.4
Other residential, personal, and public health	6.4	4.4	5.8	6.1	2.4	6.7	6.0	6.0	6.4	6.5	6.3	5.0	6.3	5.7
Specialty mental health centers	6.5	4.5	5.9	6.2	2.5	6.8	6.1	6.0	6.5	6.6	6.4	5.1	6.4	5.8
Specialty substance abuse centers	1.6	2.0	3.3	3.7	1.1	4.0	3.5	3.3	3.2	3.0	2.8	2.3	3.3	2.9
Retail prescription drugs	4.8	9.1	1.7	1.7	1.9	0.4	1.7	4.5	3.4	4.8	6.1	3.8	3.5	3.6
Insurance administration	9.6	6.7	4.8	4.8	7.3	5.9	4.1	4.4	3.6	5.4	6.0	6.6	4.9	5.7
Substance use disorders	5.1	4.0	4.8	4.9	6.9	4.1	5.9	4.9	5.0	5.2	5.2	5.2	5.1	5.1
Total all service providers and products	4.7	3.9	4.7	4.8	6.7	3.9	5.8	4.9	5.1	5.2	5.2	5.0	5.0	5.0
Total all service providers	4.0	3.0	3.8	4.0	7.5	6.4	5.5	4.7	4.9	5.2	5.3	4.5	5.3	4.9
All hospitals	4.2	2.1	2.6	3.2	5.4	6.8	5.6	4.7	5.1	6.0	6.5	3.5	5.8	4.7
General hospitals	4.3	3.2	3.7	4.3	7.0	8.0	6.6	5.4	5.8	6.7	7.1	4.5	6.6	5.6
General hospitals, specialty units	3.9	3.0	3.5	4.1	6.4	7.8	6.4	5.1	5.5	6.5	6.8	4.2	6.3	5.4
General hospitals, nonspecialty units	5.2	3.7	4.0	4.6	8.2	8.5	7.0	6.0	6.3	7.2	7.6	5.1	7.1	6.2
Specialty hospitals	3.8	-0.8	-0.2	0.2	0.9	3.0	2.5	2.2	2.8	3.5	4.2	0.8	3.0	2.0
All physicians	4.9	3.1	3.5	4.8	8.5	5.6	4.8	4.9	5.2	5.3	5.2	4.9	5.2	5.1
Psychiatrists	6.5	3.8	3.6	5.1	9.9	5.5	5.2	5.3	5.9	6.1	6.3	5.8	5.7	5.7
Nonpsychiatric physicians	4.4	2.9	3.5	4.7	8.0	5.7	4.6	4.7	5.0	5.0	4.8	4.7	5.0	4.8
Other professionals	10.0	8.2	7.5	5.6	17.3	10.7	8.9	5.8	5.8	5.5	4.9	9.7	6.9	8.1
Free-standing nursing homes	3.5	4.3	3.6	4.7	5.0	6.1	4.8	4.7	5.1	5.1	5.1	4.2	5.1	4.7
Free-standing home health	7.7	5.3	5.4	6.8	10.3	9.9	5.9	6.0	6.8	7.4	7.0	7.1	7.1	7.1
Other residential, personal, and public health	2.1	2.2	3.7	3.9	6.0	4.7	4.3	4.2	4.4	4.3	4.5	3.5	4.4	4.0
Specialty mental health centers	-3.1	-4.5	-3.0	-2.3	-1.3	-0.1	0.3	1.4	3.3	4.9	6.5	-2.8	2.7	0.1
Specialty substance abuse centers	3.2	3.4	4.8	4.9	7.1	5.4	4.8	4.6	4.5	4.3	4.2	4.7	4.6	4.7
Retail prescription drugs	24.0	21.5	19.8	18.0	-4.5	-34.1	13.8	10.6	7.9	5.8	4.7	15.2	-0.2	6.6
Insurance administration	11.0	5.8	6.4	6.6	10.1	6.7	6.1	4.7	4.3	5.0	5.2	8.0	5.3	6.5

Source: SAMHSA Spending Estimates - Projections for 2010-2020

Table A.5. Treatment Spending by Provider as a Share of Total Health Spending for Mental and Substance Use Disorders, Mental Health, and Substance Use Disorders, 2009–2020

Provider	Historical	Projections Share of All Health Spending (%)										
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Mental and substance use disorders	7.4	7.5	7.5	7.4	7.3	7.0	6.8	6.7	6.7	6.6	6.5	6.5
Total all service providers and products	7.4	7.5	7.5	7.4	7.3	7.0	6.8	6.7	6.7	6.6	6.5	6.5
Total all service providers	6.4	6.4	6.3	6.3	6.2	6.0	6.0	6.0	5.9	5.9	5.9	5.8
All hospitals	6.0	5.9	5.8	5.6	5.4	5.2	5.1	5.0	4.9	4.9	4.8	4.8
All physicians	3.4	3.4	3.4	3.4	3.4	3.3	3.3	3.3	3.3	3.3	3.3	3.3
Other professionals	15.7	16.0	16.1	16.7	16.7	17.1	17.4	17.7	17.6	17.5	17.6	17.5
Free-standing nursing homes	6.9	6.9	6.9	6.9	6.9	6.7	6.7	6.7	6.7	6.7	6.7	6.7
Free-standing home health	4.1	4.2	4.2	4.2	4.2	4.0	4.1	4.1	4.1	4.1	4.1	4.1
Other residential, personal, and public health	16.0	15.9	15.6	15.4	15.1	14.6	14.4	14.2	13.9	13.6	13.4	13.2
Retail prescription drugs	17.2	17.4	17.9	17.4	16.9	15.5	14.4	13.7	13.4	12.9	12.6	12.4
Insurance administration	7.2	7.3	7.4	7.2	7.1	6.7	6.7	6.6	6.5	6.5	6.5	6.4
Mental health	6.3	6.4	6.4	6.3	6.2	5.9	5.8	5.7	5.6	5.6	5.5	5.5
Total all service providers and products	6.3	6.4	6.4	6.3	6.2	5.9	5.8	5.7	5.6	5.6	5.5	5.5
Total all service providers	5.2	5.2	5.2	5.1	5.1	4.9	4.9	4.8	4.8	4.8	4.7	4.7
All hospitals	5.0	5.0	4.8	4.6	4.5	4.3	4.2	4.1	4.0	4.0	3.9	3.9
All physicians	3.1	3.2	3.2	3.2	3.2	3.1	3.1	3.1	3.1	3.1	3.1	3.1
Other professionals	11.7	11.9	11.9	12.2	12.3	12.4	12.5	12.7	12.7	12.6	12.7	12.7
Free-standing nursing homes	6.6	6.6	6.6	6.6	6.6	6.4	6.4	6.4	6.4	6.4	6.4	6.4
Free-standing home health	3.9	4.0	4.0	4.0	4.0	3.8	3.9	3.9	3.9	3.9	3.9	3.9
Other residential, personal, and public health	11.0	11.0	10.9	10.8	10.7	10.2	10.1	10.0	9.9	9.7	9.6	9.5
Retail prescription drugs	16.8	17.0	17.4	16.8	16.3	15.0	14.1	13.4	13.0	12.5	12.3	12.1
Insurance administration	6.3	6.4	6.4	6.3	6.2	5.8	5.8	5.7	5.6	5.6	5.6	5.5
Substance use disorders	1.0	1.1	1.0	1.1	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Total all service providers and products	1.1	1.1	1.1	1.1	1.1	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Total all service providers	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.1	1.1	1.1	1.1
All hospitals	1.0	1.0	1.0	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
All physicians	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Other professionals	3.9	4.1	4.2	4.4	4.5	4.7	4.9	5.0	5.0	4.9	4.9	4.8
Free-standing nursing homes	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Free-standing home health	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Other residential, personal, and public health	5.1	4.9	4.7	4.6	4.5	4.4	4.3	4.2	4.0	3.9	3.8	3.7
Retail prescription drugs	0.4	0.4	0.5	0.6	0.6	0.5	0.3	0.4	0.4	0.4	0.4	0.3
Insurance administration	0.9	1.0	1.0	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9

Source: SAMHSA Spending Estimates - Projections for 2010-2020

Table A.6. Treatment Spending by Payer for All Health, Mental and Substance Use Disorders, Mental Health, and Substance Use Disorders, 2009–2020

Payer	Historical	Projections in Billions ($)										
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
All health	2,330.1	2,424.3	2,540.8	2,646.9	2,792.6	3,027.6	3,204.4	3,404.1	3,605.3	3,818.2	4,065.6	4,337.7
Private - Total	1,188.8	1,221.2	1,260.6	1,310.1	1,372.1	1,458.6	1,539.9	1,626.7	1,718.1	1,804.1	1,909.4	2,020.2
Out-of-pocket	299.3	304.9	312.1	322.0	334.6	330.3	340.9	353.2	375.4	400.1	421.2	443.8
Private insurance	801.2	822.3	850.3	884.4	926.9	1,013.7	1,076.7	1,141.0	1,200.3	1,251.0	1,324.7	1,402.0
Other private	88.3	94.1	98.2	103.7	110.6	114.6	122.3	132.5	142.4	153.1	163.5	174.4
Public - Total	1,141.3	1,203.0	1,280.2	1,336.8	1,420.5	1,569.0	1,664.5	1,777.4	1,887.3	2,014.1	2,156.3	2,317.5
Medicare	502.3	525.0	556.1	565.6	599.5	636.8	668.1	707.4	751.2	801.3	857.4	922.0
Medicaid	376.8	400.7	428.1	456.8	487.8	586.8	630.9	684.6	732.2	783.8	841.9	908.1
Other Federal	112.0	125.1	135.3	145.0	153.8	157.7	166.7	175.1	182.6	194.5	208.3	223.8
Other State and local	150.1	152.2	160.6	169.4	179.4	187.6	198.9	210.2	221.4	234.5	248.6	263.7
Mental and substance use disorders	171.7	180.6	189.6	195.5	202.7	210.5	218.9	228.9	239.8	251.3	265.0	280.5
Private - Total	66.6	69.5	72.9	74.8	77.3	78.4	80.6	83.8	87.7	91.3	95.8	101.1
Out-of-pocket	18.8	19.6	20.5	20.9	21.5	21.3	21.4	22.1	23.0	24.0	25.1	26.4
Private insurance	42.6	44.8	47.2	48.5	50.1	51.2	53.0	55.2	57.6	59.9	62.9	66.4
Other private	5.2	5.1	5.2	5.4	5.7	5.9	6.2	6.6	7.0	7.4	7.8	8.3
Public - Total	105.1	111.1	116.8	120.7	125.5	132.1	138.3	145.1	152.2	160.0	169.2	179.4
Medicare	20.5	21.8	23.6	24.5	25.8	26.5	27.4	28.7	30.6	32.5	34.8	37.6
Medicaid	44.2	47.2	50.0	52.1	54.5	59.9	63.6	67.4	70.9	74.8	79.2	84.0
Other Federal	10.5	11.3	11.9	12.2	12.4	12.3	12.5	13.0	13.2	13.7	14.3	15.0
Other State and local	29.9	30.9	31.2	31.8	32.7	33.4	34.8	36.0	37.4	39.1	40.9	42.8

Source: SAMHSA Spending Estimates - Projections for 2010-2020

Table A.6. Treatment Spending by Payer for All Health, Mental and Substance Use Disorders, Mental Health, and Substance Use Disorders, 2009–2020, Continued

Payer	Historical	Projections in Billions ($)										
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Mental health	147.4	155.0	163.0	167.6	173.5	179.3	186.3	194.4	203.6	213.3	225.1	238.4
Private - Total	58.9	61.5	64.6	66.1	68.1	69.0	71.1	73.7	77.1	80.2	84.2	88.9
Out-of-pocket	16.2	16.9	17.8	18.1	18.5	18.4	18.5	19.0	19.8	20.6	21.6	22.7
Private insurance	38.7	40.6	42.8	43.8	45.2	46.1	47.8	49.7	51.9	53.8	56.5	59.7
Other private	4.0	4.0	4.0	4.2	4.4	4.5	4.8	5.1	5.4	5.8	6.1	6.5
Public - Total	88.5	93.5	98.5	101.5	105.4	110.3	115.2	120.7	126.5	133.1	140.8	149.5
Medicare	19.3	20.5	22.3	23.1	24.3	24.9	25.8	27.0	28.7	30.5	32.7	35.3
Medicaid	39.1	41.6	44.2	46.0	48.0	52.0	54.9	58.0	61.0	64.2	68.0	72.1
Other Federal	7.8	8.4	8.9	8.9	9.0	8.8	9.1	9.3	9.5	9.9	10.4	11.0
Other State and local	22.2	23.0	23.2	23.5	24.1	24.5	25.4	26.3	27.3	28.4	29.7	31.2
Substance use disorders	24.3	25.6	26.6	27.9	29.3	31.3	32.6	34.5	36.2	38.0	40.0	42.1
Private - Total	7.7	7.9	8.3	8.7	9.2	9.4	9.5	10.1	10.5	11.0	11.6	12.2
Out-of-pocket	2.6	2.6	2.7	2.8	3.0	3.0	2.9	3.1	3.2	3.4	3.5	3.7
Private insurance	3.9	4.2	4.4	4.7	5.0	5.1	5.2	5.5	5.8	6.0	6.4	6.7
Other private	1.2	1.2	1.2	1.2	1.3	1.3	1.4	1.5	1.6	1.6	1.7	1.8
Public - Total	16.7	17.6	18.3	19.2	20.1	21.9	23.0	24.4	25.6	27.0	28.4	29.9
Medicare	1.2	1.3	1.3	1.4	1.5	1.6	1.6	1.7	1.8	2.0	2.1	2.3
Medicaid	5.2	5.6	5.9	6.2	6.5	7.9	8.7	9.4	9.9	10.5	11.2	11.9
Other Federal	2.7	2.9	3.1	3.3	3.4	3.5	3.4	3.6	3.7	3.8	4.0	4.1
Other State and local	7.6	7.9	8.0	8.3	8.6	8.9	9.3	9.7	10.2	10.6	11.1	11.7

Source: SAMHSA Spending Estimates - Projections for 2010-2020

Table A.7. Percent Distribution of Treatment Spending by Payer for All Health, Mental and Substance Use Disorders, Mental Health, and Substance Use Disorders, 2009–2020

Payer	Historical	Projections Percent Distribution (%)										
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
All health	100	100	100	100	100	100	100	100	100	100	100	100
Private - Total	51	50	50	49	49	48	48	48	48	47	47	47
Out-of-pocket	13	13	12	12	12	11	11	10	10	10	10	10
Private insurance	34	34	33	33	33	33	34	34	33	33	33	32
Other private	4	4	4	4	4	4	4	4	4	4	4	4
Public - Total	49	50	50	51	51	52	52	52	52	53	53	53
Medicare	22	22	22	21	21	21	21	21	21	21	21	21
Medicaid	16	17	17	17	17	19	20	20	20	21	21	21
Other Federal	5	5	5	5	6	5	5	5	5	5	5	5
Other State and local	6	6	6	6	6	6	6	6	6	6	6	6
Mental and substance use disorders	100	100	100	100	100	100	100	100	100	100	100	100
Private - Total	39	38	38	38	38	37	37	37	37	36	36	36
Out-of-pocket	11	11	11	11	11	10	10	10	10	10	9	9
Private insurance	25	25	25	25	25	24	24	24	24	24	24	24
Other private	3	3	3	3	3	3	3	3	3	3	3	3
Public - Total	61	62	62	62	62	63	63	63	63	64	64	64
Medicare	12	12	12	13	13	13	13	13	13	13	13	13
Medicaid	26	26	26	27	27	28	29	29	30	30	30	30
Other Federal	6	6	6	6	6	6	6	6	6	5	5	5
Other State and local	17	17	16	16	16	16	16	16	16	16	15	15

Source: SAMHSA Spending Estimates - Projections for 2010-2020

Table A.7. Percent Distribution of Treatment Spending by Payer for All Health, Mental and Substance Use Disorders, Mental Health, and Substance Use Disorders, 2009–2020, Continued

Payer	Historical	Projections Percent Distribution (%)										
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Mental health	100	100	100	100	100	100	100	100	100	100	100	100
Private - Total	40	40	40	39	39	38	38	38	38	38	37	37
Out-of-pocket	11	11	11	11	11	10	10	10	10	10	10	10
Private insurance	26	26	26	26	26	26	26	26	25	25	25	25
Other private	3	3	2	3	3	3	3	3	3	3	3	3
Public - Total	60	60	60	61	61	62	62	62	62	62	63	63
Medicare	13	13	14	14	14	14	14	14	14	14	15	15
Medicaid	27	27	27	27	28	29	29	30	30	30	30	30
Other Federal	5	5	5	5	5	5	5	5	5	5	5	5
Other State and local	15	15	14	14	14	14	14	14	13	13	13	13
Substance use disorders	100	100	100	100	100	100	100	100	100	100	100	100
Private - Total	31	31	31	31	31	30	29	29	29	29	29	29
Out-of-pocket	11	10	10	10	10	9	9	9	9	9	9	9
Private insurance	16	16	16	17	17	16	16	16	16	16	16	16
Other private	5	4	4	4	4	4	4	4	4	4	4	4
Public - Total	69	69	69	69	69	70	71	71	71	71	71	71
Medicare	5	5	5	5	5	5	5	5	5	5	5	5
Medicaid	21	22	22	22	22	25	27	27	27	28	28	28
Other Federal	11	11	12	12	12	11	11	10	10	10	10	10
Other State and local	31	31	30	30	30	28	29	28	28	28	28	28

Source: SAMHSA Spending Estimates - Projections for 2010-2020

Table A.8. Growth in Treatment Spending by Payer for All Health, Mental and Substance Use Disorders, Mental Health, and Substance Use Disorders, 2010–2020

Payer	Projections Annual Growth (%)											Average Annual Growth (%)		
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2009-2014	2014-2020	2009-2020
All health	4.0	4.8	4.2	5.5	8.4	5.8	6.2	5.9	5.9	6.5	6.7	5.4	6.2	5.8
Private - Total	2.7	3.2	3.9	4.7	6.3	5.6	5.6	5.6	5.0	5.8	5.8	4.2	5.6	4.9
Out-of-pocket	1.8	2.4	3.2	3.9	-1.3	3.2	3.6	6.3	6.6	5.3	5.4	2.0	5.0	3.6
Private insurance	2.6	3.4	4.0	4.8	9.4	6.2	6.0	5.2	4.2	5.9	5.8	4.8	5.6	5.2
Other private	6.6	4.4	5.6	6.7	3.6	6.7	8.3	7.4	7.6	6.8	6.7	5.4	7.2	6.4
Public - Total	5.4	6.4	4.4	6.3	10.5	6.1	6.8	6.2	6.7	7.1	7.5	6.6	6.7	6.7
Medicare	4.5	5.9	1.7	6.0	6.2	4.9	5.9	6.2	6.7	7.0	7.5	4.9	6.4	5.7
Medicaid	6.3	6.8	6.7	6.8	20.3	7.5	8.5	6.9	7.1	7.4	7.9	9.3	7.5	8.3
Other Federal	11.7	8.2	7.1	6.0	2.6	5.7	5.1	4.2	6.6	7.1	7.4	7.1	6.0	6.5
Other State and local	1.4	5.5	5.4	5.9	4.6	6.0	5.7	5.3	5.9	6.0	6.0	4.6	5.8	5.3
Mental and substance use disorders	5.2	5.0	3.1	3.7	3.9	4.0	4.6	4.8	4.8	5.5	5.8	4.2	4.9	4.6
Private - Total	4.3	4.9	2.6	3.3	1.5	2.8	3.9	4.6	4.1	5.0	5.5	3.3	4.3	3.9
Out-of-pocket	4.2	4.5	2.0	2.9	-0.9	0.6	2.9	4.4	4.1	4.6	5.1	2.5	3.6	3.1
Private insurance	5.2	5.4	2.8	3.4	2.2	3.5	4.0	4.5	3.9	5.1	5.6	3.8	4.4	4.1
Other private	-2.0	2.1	3.5	4.5	3.9	5.0	6.6	6.2	6.1	5.7	5.8	2.4	5.9	4.3
Public - Total	5.7	5.1	3.4	3.9	5.3	4.6	4.9	4.9	5.2	5.7	6.0	4.7	5.2	5.0
Medicare	5.9	8.4	3.9	5.3	2.6	3.4	4.9	6.3	6.3	7.2	7.9	5.2	6.0	5.6
Medicaid	6.7	6.0	4.2	4.6	9.8	6.1	6.0	5.3	5.4	6.0	6.0	6.3	5.8	6.0
Other Federal	7.8	5.6	2.4	1.3	-0.6	1.7	3.4	2.1	3.8	4.3	4.9	3.3	3.4	3.3
Other State and local	3.4	1.1	2.0	2.8	2.2	4.0	3.7	3.9	4.3	4.6	4.8	2.3	4.2	3.3

Source: SAMHSA Spending Estimates - Projections for 2010-2020

Table A.8. Growth in Treatment Spending by Payer for All Health, Mental and Substance Use Disorders, Mental Health, and Substance Use Disorders, 2010–2020, Continued

Payer	Projections Annual Growth (%)											Average Annual Growth (%)		
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2009-2014	2014-2020	2009-2020
Mental health	5.2	5.2	2.8	3.5	3.3	3.9	4.3	4.7	4.7	5.5	5.9	4.0	4.9	4.5
Private - Total	4.4	5.0	2.3	3.1	1.4	3.1	3.7	4.6	4.0	5.0	5.5	3.2	4.3	3.8
Out-of-pocket	4.5	4.7	1.7	2.7	-1.0	0.8	2.6	4.4	4.0	4.6	5.1	2.5	3.6	3.1
Private insurance	4.9	5.3	2.4	3.1	2.1	3.8	3.8	4.4	3.8	5.1	5.6	3.6	4.4	4.0
Other private	-0.8	1.9	3.6	4.5	3.5	5.2	6.9	6.5	6.5	6.1	6.2	2.5	6.2	4.5
Public - Total	5.7	5.3	3.1	3.8	4.6	4.5	4.7	4.9	5.2	5.8	6.2	4.5	5.2	4.9
Medicare	5.9	8.6	3.8	5.3	2.5	3.4	4.8	6.3	6.2	7.1	8.0	5.2	6.0	5.6
Medicaid	6.5	6.1	4.1	4.5	8.2	5.7	5.6	5.2	5.3	5.9	6.0	5.9	5.6	5.7
Other Federal	7.5	5.6	1.0	0.4	-1.5	2.6	2.8	1.9	3.9	4.9	5.7	2.5	3.6	3.1
Other State and local	3.5	0.7	1.5	2.3	1.8	3.8	3.4	3.7	4.2	4.6	4.8	2.0	4.1	3.1
Substance use disorders	5.1	4.0	4.8	4.9	6.9	4.1	5.9	4.9	5.0	5.2	5.2	5.2	5.1	5.1
Private - Total	3.8	4.3	5.3	5.4	2.3	1.3	5.5	4.8	4.7	5.0	5.3	4.2	4.4	4.3
Out-of-pocket	2.3	3.0	4.3	4.5	-0.2	-0.3	4.6	4.5	4.7	4.6	4.9	2.7	3.8	3.3
Private insurance	8.0	5.5	6.4	6.2	3.2	1.5	6.0	4.8	4.8	5.3	5.7	5.8	4.7	5.2
Other private	-6.0	3.1	3.4	4.5	5.0	4.2	5.3	5.2	4.7	4.5	4.5	1.9	4.7	3.5
Public - Total	5.7	3.9	4.6	4.7	9.0	5.3	6.0	5.0	5.1	5.3	5.2	5.6	5.3	5.4
Medicare	5.1	4.7	5.4	6.5	5.3	4.1	6.1	6.6	7.1	7.3	7.6	5.4	6.5	6.0
Medicaid	8.4	4.9	5.2	5.9	21.6	9.1	8.2	6.1	5.8	6.4	6.0	9.0	6.9	7.9
Other Federal	8.9	5.7	6.4	3.7	1.7	-0.7	4.7	2.8	3.5	2.9	2.8	5.2	2.7	3.8
Other State and local	3.0	2.3	3.3	4.0	3.1	4.5	4.5	4.4	4.6	4.7	4.8	3.1	4.6	3.9

Source: SAMHSA Spending Estimates - Projections for 2010-2020

Table A.9. Treatment Spending by Payer as a Share of Total Health Spending for Mental and Substance Use Disorders, Mental Health, and Substance Use Disorders, 2009–2020

Payer	Historical	Projections Share of All Health Spending (%)										
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Mental and substance use disorders	7.4	7.5	7.5	7.4	7.3	7.0	6.8	6.7	6.7	6.6	6.5	6.5
Private - Total	5.6	5.7	5.8	5.7	5.6	5.4	5.2	5.2	5.1	5.1	5.0	5.0
Out-of-pocket	6.3	6.4	6.6	6.5	6.4	6.5	6.3	6.2	6.1	6.0	6.0	5.9
Private insurance	5.3	5.4	5.5	5.5	5.4	5.1	4.9	4.8	4.8	4.8	4.7	4.7
Other private	5.9	5.4	5.3	5.2	5.1	5.1	5.0	5.0	4.9	4.8	4.8	4.8
Public - Total	9.2	9.2	9.1	9.0	8.8	8.4	8.3	8.2	8.1	7.9	7.8	7.7
Medicare	4.1	4.1	4.2	4.3	4.3	4.2	4.1	4.1	4.1	4.1	4.1	4.1
Medicaid	11.7	11.8	11.7	11.4	11.2	10.2	10.1	9.8	9.7	9.5	9.4	9.2
Other Federal	9.4	9.0	8.8	8.4	8.1	7.8	7.5	7.4	7.2	7.1	6.9	6.7
Other State and local	19.9	20.3	19.4	18.8	18.2	17.8	17.5	17.1	16.9	16.7	16.4	16.2
Mental health	6.3	6.4	6.4	6.3	6.2	5.9	5.8	5.7	5.6	5.6	5.5	5.5
Private - Total	5.0	5.0	5.1	5.0	5.0	4.7	4.6	4.5	4.5	4.4	4.4	4.4
Out-of-pocket	5.4	5.6	5.7	5.6	5.5	5.6	5.4	5.4	5.3	5.2	5.1	5.1
Private insurance	4.8	4.9	5.0	5.0	4.9	4.5	4.4	4.4	4.3	4.3	4.3	4.3
Other private	4.5	4.2	4.1	4.0	4.0	4.0	3.9	3.8	3.8	3.8	3.8	3.7
Public - Total	7.8	7.8	7.7	7.6	7.4	7.0	6.9	6.8	6.7	6.6	6.5	6.5
Medicare	3.9	3.9	4.0	4.1	4.1	3.9	3.9	3.8	3.8	3.8	3.8	3.8
Medicaid	10.4	10.4	10.3	10.1	9.8	8.9	8.7	8.5	8.3	8.2	8.1	7.9
Other Federal	7.0	6.7	6.5	6.2	5.8	5.6	5.4	5.3	5.2	5.1	5.0	4.9
Other State and local	14.8	15.1	14.4	13.9	13.4	13.1	12.8	12.5	12.3	12.1	12.0	11.8
Substance use disorders	1.0	1.1	1.0	1.1	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Private - Total	0.6	0.7	0.7	0.7	0.7	0.6	0.6	0.6	0.6	0.6	0.6	0.6
Out-of-pocket	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.8	0.8	0.8
Private insurance	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Other private	1.4	1.2	1.2	1.2	1.2	1.2	1.1	1.1	1.1	1.1	1.0	1.0
Public - Total	1.5	1.5	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.3	1.3	1.3
Medicare	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Medicaid	1.4	1.4	1.4	1.3	1.3	1.4	1.4	1.4	1.4	1.3	1.3	1.3
Other Federal	2.4	2.3	2.3	2.3	2.2	2.2	2.1	2.1	2.0	2.0	1.9	1.8
Other State and local	5.1	5.2	5.0	4.9	4.8	4.7	4.7	4.6	4.6	4.5	4.5	4.4

Source: SAMHSA Spending Estimates - Projections for 2010-2020

APPENDIX B: DEFINITIONS

This appendix presents the structure used in the Substance Abuse and Mental Health Services Administration (SAMHSA) Spending Estimates (SSE) to forecast treatment spending for mental health (MH) and substance use disorders (SUD). It also describes the classification system used as a basis for that structure and defines many of the concepts used in the SSE. It draws heavily on the definitions used for the National Health Expenditure Accounts (NHEA) that are posted on the Centers for Medicare & Medicaid Services (CMS) NHEA website.[8]

SAMHSA Spending Estimates Structure

The SSEs measure aggregate spending on the treatment of M/SUDs. Projections are constructed in three dimensions:

- Diagnosis
  - MH
  - SUDs
- Providers and products
  - Hospital care: general and specialty hospitals[9]
  - Physician services: psychiatrists and other physicians
  - Other professional services: psychologists, clinical social workers, and other nonphysician medical professionals
  - Nursing home care
  - Home health care
  - Center-based providers
    - Specialty MH centers
    - Specialty SA centers
  - Prescription drugs
  - Insurance administration
- Payer
  - Private insurance
  - Out-of-pocket
  - Other private: foundation, charity, and other funding sources
  - Medicare

[8] Centers for Medicare & Medicaid Services. *National health expenditure accounts: Methodology paper, 2010*. Retrieved from www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/NationalHealthExpendData/Downloads/dsm-10.pdf. Accessed February 26, 2014.

[9] Hospital care is estimated separately for "specialty" psychiatric and chemical dependency hospitals and, within general hospitals, separately for "specialty unit" and nonspecialty unit care.

- Medicaid, both state and federal share; includes State Children's Health Insurance Program (SCHIP) that is run through Medicaid programs
- Other federal: Department of Defense (DoD), Department of Veterans Affairs (DVA), and SAMHSA MH and Substance Abuse Block Grants
- Other state and local: state and local general revenue; includes SCHIP operated as a program separate from Medicaid.

Expenditures in the SSE measure the amounts spent to (1) provide services to specific individuals who have MH and SUD principal diagnoses, (2) pay for prescription medications with indications for treatments related to those diagnoses, (3) cover the costs of insurers to administer various public and private insurance programs, and (4) cover the costs of philanthropic organizations to administer their programs. There is currently no measure of M/SUD research or investment in structures or equipment that is used in providing treatment, which is unlike the CMS NHEA.

Classification System for Providers

As in the NHEA, the type of establishment providing the service determines the provider category for health care spending. In other words, the M/SUD expenditures are not categorized by the spending for a specific service; rather, they are categorized by spending in a particular establishment. For example, home health care may be provided by freestanding home health agencies, but it also may be provided by home health agencies that are part of a hospital. In the latter case, home health care spending would be classified as part of hospital care.

The classification system for private establishments is laid out in the North American Industrial Classification System (NAICS) by the federal government. Sector 62 defines establishments in the Health Care and Social Assistance area (Table B.1). Each establishment is assigned a code that identifies the main nature of its operation within the broader industrial classification scheme.

In the NHEA, only those facilities providing medical care are included in the projections; establishments providing social assistance are excluded. The M/SUD estimates, however, take a somewhat broader approach by counting spending at certain facilities that may not be included in the NHEA, such as some clinics employing counselors rather than medical personnel to provide treatment for SUDs. These facilities may appear to provide little "medical care" in the traditional sense used in the NAICS definitions; therefore, some may fall outside of traditional "medical care" facility definitions used in the NAICS. These facilities provide therapeutic services—including assessments and group and individual counseling services—and a structured, protective environment that is removed from people, places, or situations that contribute to the patient's dysfunction.

Table B.1. North American Industry Classification System for Health Care Services Crosswalk to the MHSA Expenditure Accounts and the National Health Expenditure Accounts

NAICS Code	NAICS Industry Title	MHSA Expenditure Account Category	NHEA Category
6211	Office of Physicians	Physician Services	Physician and Clinical Services
621111	Offices of Physicians (except Mental Health Specialists)	Nonpsychiatric Physician Services	
621112	Offices of Physicians, Mental Health Specialists	Psychiatrists	
6213	Offices of Other Health Practitioners	Other Professional Services	Other Professional Services
62133	Offices of Mental Health Practitioners	Other Professional Services	Part of Other Professional services
6214	Outpatient Care Centers	Physician Services, except Outpatient MH and SA Centers	Physician and Clinical Services
62142	Outpatient Mental Health and Substance Abuse Centers	Specialty Mental Health Centers—part; Specialty Substance Abuse Centers—part	
6216	Home Health Care Agencies	Home Health Care	Home Health Care
6221; 6223	General Medical/Surgical Hospitals; Specialty Hospitals (except Psychiatric and Substance Abuse Hospitals)	General Hospitals	Hospital Care
6222	Psychiatric and Substance Abuse Hospitals	Specialty (Psychiatric and Substance Abuse) Hospitals	
6231	Nursing Care facilities	Nursing Home Care	Nursing Home Care
623311	Continuing Care Retirement Communities (with onsite nursing home facilities)		
62322	Residential Mental Health and Substance Abuse Facilities	Specialty Mental Health Centers—part; Specialty Substance Abuse Centers—part	Other Health, Residential, and Personal Care

Definitions

This section provides definitions of diagnoses, provider, and payer categories used in the SSE.

Diagnoses

Spending for M/SUD treatment services measured in these accounts are defined by diagnostic codes found in the International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) as "mental disorders" (i.e., codes in sections 290 through 319; see Table B.2). A subset of these mental disorders is excluded as being outside the scope of this project: dementias (290), transient mental disorders caused by conditions classified elsewhere (293), persistent mental disorders caused by conditions classified elsewhere (294), nondependent use of drugs-tobacco abuse disorder (305.1), specific delays in development (315), and intellectual disabilities (317–319). Also excluded are cerebral degenerations (e.g., Alzheimer's disease, 331.0) and psychic factors associated with disease classified elsewhere (316). Two pregnancy-related complications are included: complications mainly related to pregnancy—drug dependence (648.3) and mental disorders (648.4).

The identification of M/SUD spending for services is based on principal or primary diagnosis and does not include spending associated with secondary diagnoses. The diagnostic categories selected generally reflect what payers (insurers) consider as M/SUDs. They exclude costs not directly related to treatment, such as those stemming from lower productivity, missed workdays, and/or drug-related crimes. They also exclude expenditures on non-M/SUD conditions that are caused by M/SUDs, such as liver cirrhosis.

Drugs administered for the treatment of M/SUDs are generally identified differently—that is, not based on diagnosis. Rather, an indication for use of the drug for treatment of an M/SUD is required, regardless of the associated diagnosis.

The following classifications of psychotherapeutic drugs are used in this study:

- Antianxiety agents
- Sedatives and hypnotics
- Antipsychotics and antimanics
- Antidepressants
- This classification of M/SUD drugs includes spending for drugs whose main indication for use is M/SUDs, but these drugs may also be used to treat other conditions.

Two other classes of drugs—central nervous system (CNS) stimulants and anorexiants/miscellaneous CNS drugs—plus specific anticonvulsant medications are included if they have an associated mental or substance use diagnosis.

Two medications used to treat opioid addiction are also incorporated:

- Buprenorphine
- Buprenorphine/naloxone

Medications used in treating alcoholism are also captured:

- Acamprosate
- Disulfiram

- Naltrexone

Drugs whose main indication for use is not M/SUDs may be used to treat these conditions, but spending on these drugs is not included in the SSE. Spending on methadone is captured as part of spending for the provider where methadone is dispensed, rather than with SA prescription drug spending.

Table B.2. ICD-9 Codes Included in Mental Health (MH) and Substance Abuse (SA) Diagnosis

ICD-9 Code	ICD-9 Disease Category	Included in MH/SA
290–319	MENTAL DISORDERS	
290–299	Psychoses	
291	Alcohol-induced mental disorders	SA (Alcohol)
292	Drug-induced disorders	SA (Drug)
295	Schizophrenic disorders	MH
296	Episodic mood disorders	MH
297	Delusional disorders	MH
298	Other nonorganic psychoses	MH
299	Pervasive developmental disorders	MH
300–316	Neurotic disorders, personality disorders, and other nonpsychotic mental disorders	
300	Anxiety, dissociative and somatoform disorders	MH
301	Personality disorders	MH
302	Sexual and gender identity disorders	MH
303	Alcohol dependence syndrome	SA (Alcohol)
304	Drug dependence	SA (Drug)
305.0	Nondependent abuse of alcohol	SA (Alcohol)
305.2–305.9	Nondependent abuse of drugs—except tobacco abuse disorder	SA (Drug)
306	Physiological malfunction arising from mental factors	MH
307	Special symptoms and syndromes, not elsewhere classified	MH
308	Acute reaction to stress	MH
309	Adjustment reaction	MH
310	Specific nonpsychotic mental disorders due to brain damage	MH
311	Depressive disorder, not elsewhere classified	MH
312	Disturbance of conduct, not elsewhere classified	MH
313	Disturbance of emotions to childhood and adolescence	MH
314	Hyperkinetic syndrome of childhood	MH
648.3	Complications mainly related to pregnancy—drug dependence	SA (Drug)
648.4	Complications mainly related to pregnancy—mental disorders	MH

PROVIDERS

Providers of service are classified according to the major type of services they furnish. These services are listed in Appendix Table 1. In addition to the major type of services they deliver, providers often perform other functions. For example, a hospital primarily provides inpatient health care services, but it also may operate a home health agency or nursing home wing and provide physician services through staff physicians in clinics and outpatient departments. The classification of spending is made based on the primary services provided, even though the provider may also fill other functions. The reason for this classification scheme is that providers often furnish the data used to estimate spending. These providers seldom break apart spending by function—information that would be necessary to produce a "functional" display of spending. The NAICS codes referenced in these definitions can be found in Table B.1.

General hospitals are establishments classified as general medical and surgical hospitals and specialty hospitals (other than mental health and substance abuse hospitals) that provide diagnostic and medical treatment (both surgical and nonsurgical) to inpatients with any of a wide variety of medical conditions or, in the case of specialty hospitals, for a specific type of disease or medical condition (except psychiatric or substance abuse). These hospitals are general community hospitals (general medical and surgical hospitals) and other types of nonpsychiatric and nonsubstance abuse specialty hospitals such as those concentrating on cancer care and treatment; obstetrics; ears, nose and throat; orthopedics; or physical rehabilitation.

General hospital nonspecialty care is any general medical/surgical hospital or nonpsychiatric and nonsubstance abuse specialty hospital that provides MH or SUD treatment or detoxification in general units (i.e., other than "specialty units" specifically designated for the treatment of patients with MH, chemical dependency, and SUD diagnoses). For purposes of these projections, only spending for patients with MH and SUD primary diagnoses is counted in this category.

General hospital specialty units are any general medical/surgical hospital or nonpsychiatric and nonsubstance abuse specialty hospital that provides MH or SUD treatment or detoxification in a "specialty unit" specifically designated for the treatment of patients with MH, chemical dependency, and SUD diagnoses. For purposes of these projections, only spending for patients with MH and SA primary diagnoses is counted in this category.

Home health care covers medical care provided in the home by private and public freestanding home health agencies (HHAs). The 'freestanding' designation means that the agency is not facility-based—that is, based out of a hospital, nursing home, or other type of provider whose primary mission is something other than home health services. Medical equipment sales or rentals billed through HHAs are included. Nonmedical types of home care (e.g., Meals on Wheels, chore-worker services, friendly visits, or other custodial services) are excluded. These freestanding HHAs are establishments that fall into NAICS 6216—Home Health Care Agencies.

Hospital care covers all services provided to patients by public and private general medical/surgical, psychiatric and substance abuse, and other specialty hospitals. Services include room and board, ancillary charges, services of resident physicians, inpatient pharmacy, hospital-based nursing home and home health care, and any other services billed by hospitals. The value of hospital services is measured by total net revenue, which equals gross patient revenues (charges) less contractual adjustments, bad debts, and charity care. It also includes government tax appropriations as well as nonpatient and nonoperating revenues. Hospitals fall into NAICS 6221–6223 (Hospitals). Estimates are made separately for "specialty" psychiatric/substance abuse hospitals (NAICS 6222) and for all other hospitals (general medical/surgical hospitals [NAICS 6221] and specialty hospitals other than psychiatric/substance abuse hospitals [NAICS 6223]).

Insurance administration covers spending for the cost of running various government health care insurance programs. It also covers the net cost of private health insurance (the difference between premiums earned by insurers and the claims or losses incurred for which insurers become liable). The net cost of private insurance includes claims processing costs, reserves to cover future liabilities, advertising costs, premium taxes, investor dividends, and profits of insurance companies, among other things.

Specialty mental health centers are organizations providing outpatient and/or residential services to individuals with MH and SUD diagnoses. In most of these facilities, a physician would provide medical assessments and prescribe and manage medications, usually with the assistance of a registered nurse. Most of the services provided by these facilities, however, are therapy, counseling, rehabilitation, and case management services delivered by psychologists, counselors, and social workers.

Outpatient treatment centers and clinics include establishments with medical personnel and other therapeutic staff primarily engaged in providing outpatient diagnostic and treatment services related to mental health disorders. They may provide counseling staff, information on a wide range of mental health issues, and referral services for more intensive treatment programs, if necessary. These organizations are covered under NAICS 621420 (Outpatient Mental Health and Substance Abuse Centers). Establishments in this category include facilities such as psychiatric outpatient clinics.

Residential facilities provide mental rehabilitation, social and counseling services, and supervision. These organizations are covered under NAICS 623220 (Residential Mental Health and Substance Abuse Facilities). Establishments in this category include residential mental health facilities, homes for emotionally disturbed children and adults, and residential group homes.

Other outpatient and residential treatment centers may also be captured in MSMHOs. These establishments may include halfway homes and other types of residential facilities. In addition, the M/SUD expenditures may also include spending in establishments whose main function is something other than those specified in these NAICS classifications. Examples include treatment centers that are part of schools, jails or prisons, or religious organizations.

Nursing home care covers services provided in private and public freestanding nursing home facilities. The 'freestanding' designation means that the nursing home is *not* based out of a hospital or other type of provider whose primary mission is something other than nursing home care. These facilities include nursing and rehabilitative services generally provided for an extended period of time by staffs of registered or licensed practical nurses with physician consultation or oversight. Services provided in nursing facilities operated by the U.S. Department of Veterans Affairs are also included. These establishments are classified in NAICS 6231 (Nursing Care Facilities) and NAICS 623311 (Continuing Care Retirement Communities with on-site nursing care facilities).

Other professional services cover services provided in establishments operated by health practitioners other than physicians and dentists. These professional services include those provided by private-duty nurses, chiropractors, podiatrists, optometrists, and physical, occupational, and speech therapists. Professionals who specialize in the treatment of MH and SUD problems, including psychologists, psychoanalysts, psychotherapists, clinical social workers, professional counselors, substance abuse counselors, and marriage and family therapists, are also included in this category. For the SSE, these establishments are classified as a subset of NAICS 6213 (NAICS 62133 Offices of Mental Health Practitioners) and cover establishments of independent mental health practitioners (except physicians) primarily engaged in the diagnosis and treatment of mental, emotional, and behavioral disorders and/or

the diagnosis and treatment of individual or group social dysfunction brought about by such causes as mental illness, alcohol and substance use disorders, physical and emotional trauma, or stress.

Physician services include services provided in establishments operated by Doctors of Medicine (M.D.) and Doctors of Osteopathy (D.O.), outpatient care centers (except specialty mental health and substance abuse clinics), plus the portion of medical laboratory services that are billed directly by the laboratories. This category also includes services rendered by a physician in hospitals, if the physician bills independently for those services. Clinical services provided in freestanding outpatient clinics operated by the U.S. Department of Veterans Affairs, U.S. Coast Guard Academy, and U.S. Indian Health Service are also included. The establishments included in Physician and Clinical Services are classified in NAICS 62111 (Offices of Physicians), NAICS 6214 (Outpatient Care Centers, except outpatient MH and substance abuse clinics [NAICS 62142], which are separate entries in these estimates), and the independently-billed portion of NAICS 62151 (Medical and Diagnostic Laboratories).

Prescription drugs include the sales of prescription drugs through retail outlets such as community pharmacies; pharmacies in mass merchandise stores, grocery stores, and department stores; and mail-order pharmacies. Sales through hospital, exclusive-to-patient health maintenance organization (HMO), and nursing home pharmacies are excluded and are counted instead with the establishment (hospital, physicians' offices, HMOs, or nursing home) where the pharmacy is located. There are four classifications of psychopharmacologic drugs used in this study:

- Sedatives and hypnotics
- Anti-anxiety medications
- Anti-psychotics
- Anti-depressants

In addition, two other classes of drugs are used if they also have an associated MH or SUD diagnosis: (1) central nervous system (CNS) stimulants and anorexiants and (2) miscellaneous CNS drugs. Adjustments are made to this spending for rebates. This adjustment measures rebates that are returned to the insurer directly from the manufacturer after the pharmacy transaction takes place, thereby reducing the true cost. These rebates serve as incentives for insurers to include particular drugs on a pharmacy's formulary, thus helping the manufacturer increase its volume of sales.

Psychiatrists include establishments of health practitioners having the degree of M.D. (Doctor of Medicine) or D.O. (Doctor of Osteopathy) primarily engaged in the independent practice of psychiatry or psychoanalysis. These practitioners operate private or group practices in their own offices (e.g., their own centers, clinics) or in the facilities of others, such as hospitals or HMO medical centers. To be included in this category, they must bill independently. These establishments are classified under NAICS 621112 (Offices of Physicians, Mental Health Specialists).

Specialty hospitals are establishments primarily engaged in providing diagnostic, medical treatment, and monitoring services for inpatients who have mental illness or SUDs. Psychiatric, psychological, and social work services predominate at the facilities. These establishments are classified under NAICS 6222 (Psychiatric and Substance Abuse Hospitals).

Specialty substance abuse centers are organizations providing either residential or outpatient services (or both services) to individuals with a SUD diagnosis. Residential facilities include those primarily treating patients with SUDs by providing residential care, detoxification, and

other treatment. These establishments provide rehabilitation, social and counseling services, supervision, room, and board, but only incidental medical services. Outpatient treatment centers and clinics, which generally do not provide residential care, include establishments with medical and/or nonmedical staff primarily engaged in providing outpatient diagnostic, detoxification, and treatment services related to substance use disorders. They may provide counseling staff, information on a wide range of substance abuse issues, and referral services for more intensive treatment programs, if necessary. These organizations are covered under part of NAICS 623220 (Residential Mental Health and Substance Abuse Facilities) and NAICS 621420 (Outpatient Mental Health and Substance Abuse Centers). In addition, the M/SUD expenditures may also include spending in establishments whose main function is something other than the provision of health or social services; therefore, these facilities fall outside of the NAICS health and social services classifications. Examples include treatment centers that are part of schools or religious facilities. Currently, the SSEs do not include treatment in jails or prisons, unless these services are contracted to community providers.

PAYERS

Private health insurance refers to the premiums earned by private health insurers, including behavioral health plans, for health care coverage. In the M/SUD spending estimates, private health insurance is represented in two pieces: (1) benefits paid by private insurance to providers of service or for prescription drugs, or (2) the net cost of private insurance—the difference between health premiums earned and benefits incurred—that is included in the category of "insurance administration." The net cost of private insurance includes costs associated with bill processing, advertising, sales commissions, other administrative costs, net additions to reserves, rate credits and dividends, premium taxes, and profits or losses, among other items.

Out-of-pocket payments include direct spending by consumers for all health care goods and services, including coinsurance, deductibles, and any amounts paid for health care services that are not covered by public or private insurance. Health insurance premiums paid by individuals are not covered here, but are counted as part of private health insurance.

Other private includes spending from philanthropic sources and from nonpatient revenues. Nonpatient revenues are monies received for nonhealth purposes, such as from the operation of gift shops, parking lots, cafeterias, and educational programs, or returns on investments.

Medicare is a federal government program that provides health insurance coverage to eligible aged and disabled individuals. It is composed of four parts: Part A (coverage of institutional services, including inpatient hospital services, nursing home care, initial home health visits, and hospice care), Part B (coverage for physicians and other professional services, outpatient clinic or hospital services, laboratory services, rehabilitation therapy, and home health visits not covered by Part A, among other services), Part C (Medicare Advantage program providing coverage through private plans), and Part D (coverage for prescription drugs, starting in 2006).

Medicaid is a program jointly funded by the federal government and various state governments that provides health care coverage to certain classes of individuals with limited income and resources. Within federal guidelines, state governments set eligibility standards, determine services provided, set reimbursement rates, and administer the program. Income and resources are only two factors in determining eligibility; therefore, some individuals with low income in a state are not covered by this program.

Other federal includes programs provided through the U.S. Department of Veterans Affairs and the U.S. Department of Defense; for all providers, through block grants administered by the Substance Abuse and Mental Health Services Administration (SAMHSA) and through the Indian Health Service, among other federal payers.

Other state and local includes programs funded primarily through state and local offices of mental health and substance abuse, but may also include funding from other state and local sources such as general assistance or state and local hospital subsidies. In estimates of other state and local spending for individual providers, SAMHSA block grants are included as other state and local spending because providers who supply the data upon which estimates are based do not have the ability to separate block grant monies from other state and local revenue streams. In the all provider estimates, however, these block grant amounts are moved from "other state and local" spending to the "other federal" payer category.

APPENDIX C: METHODS

Forecasts of mental and substance use disorder (M/SUD) spending began with the historical estimates of spending published earlier.[10] The M/SUD historical and projected expenditures were prepared in the context of the historical estimates and projections of the Centers for Medicare & Medicaid Services (CMS) National Health Expenditure Accounts (NHEA) published in 2011 and the 2011 Medicare Trustees Report.[11,12] The CMS NHEA and the Medicare Trustees Report provide growth rates for basic economic and demographic projections of items such as all-health spending, disposable income, economy-wide price inflation, gross domestic product, and population. Advice from experts was also used to help guide the projection process and confirm the trends that were developed.

Using similar procedures as used in the CMS NHEA projections, the baseline growth (that is, without the impact of important laws that affected spending after 2009, such as the Affordable Care Act and legislative changes in Medicare payments) was established. The impact of these laws was estimated separately and added to the baseline to get our final projections. Techniques used to project baseline spending and legislative effects will be discussed separately in the following sections.

Baseline Projections for Services

The baseline projections are created separately for each provider in the SSE. Four broad steps or processes were used in creating most of the baseline projections for all service providers:

- Disaggregating *historical* spending into growth factors responsible for the increase in treatment spending for mental health (MH) and substance use disorders (SUDs)
- Projecting growth factors responsible for M/SUD increases through 2020
- Developing forecasts of provider spending from projected factors through 2020
- Partitioning projected provider spending into M/SUD diagnoses, payers, and subproviders.

The methods for forecasting prescription drug spending will be discussed separately below.

When completed, the baseline projections were compared to all-health baseline spending projections produced by CMS in the NHEA to ensure that the baseline projections were reasonable.

Each of these steps will be discussed in turn.

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[10] Substance Abuse and Mental Health Services Administration. (2013). *National expenditures for mental health services and substance abuse treatment, 1986–2009*. HHS Publication No. SMA-13-4740. Rockville, MD: Substance Abuse and Mental Health Services Administration.

[11] Keehan, S. P., Sisko, A. M., Truffer, C. J., Poisal, J. A., Cuckler, G. A., Madison, A. J., … Smith, S. D. (2011). National health spending projections through 2020: Economic recovery and reform drive faster spending growth. *Health Affairs*, 30(8), 1594–1605.

[12] Boards of Trustees of the Federal Hospital Insurance and Federal Supplementary Medical Insurance Trust Funds. (May 13, 2011). *The 2011 Annual Report of the Boards of Trustees of the Federal Hospital Insurance and Federal Supplementary Medical Insurance Trust Funds*. Retrieved from http://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/ReportsTrustFunds/downloads/tr2011.pdf. Accessed August 17, 2013.

Disaggregate Historical Spending Into Growth Factors for Baseline Projections

The first step in the baseline projection process was to split growth in historical spending into growth factors. The approach used two separate methods, depending on the provider sector: the five-factor model (consumption model) and the provider model (production model).

The five-factor consumption model breaks historical spending into specific factors accounting for growth: (1) population growth, (2) increases in use per person, (3) increases in gross domestic product prices (economy-wide inflation), (4) increases in additional inflation specific to the medical sector (excess medical inflation), and (5) a residual, which is typically interpreted as a measure of growth in intensity of services, including intensity that comes from the introduction of new technology.

Mathematically, this can be summarized by an identity:

$$\Delta \text{ expenditures} = \Delta P * \Delta Q$$

where Δ means growth represented by 1 plus the percent change (example: 5.1 percent growth = 1.051), P represents price of services, and Q represents quantity of services.

This identity can be broken down further:

$$\Delta Q = \Delta \text{ use/population} * \Delta \text{ population} * \Delta \text{ residual (all other factors)}$$

$$\Delta P = \Delta \text{ general economy-wide inflation} * \Delta \text{ additional service-specific price inflation.}$$

The five-factor consumption model was the preferred model because it can explain more of the factors underlying growth. However, for some providers, use-per-population statistics were not available. In those cases, the production model was used that looked at growth in factors of production, namely changes in aggregate wages that are used to produce provider-specific services and changes in a residual, which would capture changes in other costs of production (e.g., rent payments, equipment, and utilities). As a practical matter, wages dominate the cost of nearly all health care services—especially treatment of M/SUD conditions—because of the degree of provider interaction with a patient. Therefore, the influence of the growth of nonlabor costs on overall cost growth is usually small.

Mathematically, the production model can be represented by an identity:

$$\Delta \text{ expenditures} = \Delta \text{ labor costs} * \Delta \text{ nonlabor costs (residual)}$$

where Δ means growth represented by 1 plus the percent change (example: 5.1 percent growth = 1.051).

Labor costs can be further decomposed into:

$$\Delta \text{ labor costs} = \Delta \text{ number of workers} * \Delta \text{ hours/worker} * \Delta \text{ wages/hour.}$$

Project Historical Growth Factors

Based on the historical growth rate for each factor in the consumption or production model, each factor's growth rate into the future was forecasted. For two factors, growth in economy-wide inflation and population, existing projections developed by the Medicare Trustees were used to maintain consistency with assumptions used by the CMS NHEA all-health projections.

For all other growth factors in the consumption and production models, the projection is divided into short-term and long-term periods. The **short-term period** may cover different years, depending on the factor, but usually it represents 2010 through 2011 or 2012. For the short–term period, any data that might be available beyond 2009—the last year of historical spending on M/SUD treatment spending—was assembled to accurately reflect any recent short-term

trends. In most cases, measures of utilization though 2010, a provider-specific price index, and wage data through 2012 were available. Using actual data rather than forecasts of the factors accounting for growth improves the accuracy of the short-term projections. This is particularly important in capturing the trends as the economy emerges from the recession.

The next step was to forecast the growth for the remaining years for each factor in the model through 2020 (the **long-term period**). Two methods to project each factor were employed. In the first method, called the target growth method, a historical average annual growth rate for the factor was estimated, and this average rate was established as the target growth rate for 2020. From there, either a straight-line or geometric formula was used to taper the growth rate from the last historical point (usually 2009, 2010, 2011, or 2012) to the target growth rate in 2020. The second method used regression to establish a relationship between the historical growth in a factor and in a related time series. For example, the provider-specific price growth rate was modeled on the 2011 Old Age, Survivors, and Disability Insurance (OASDI) Trustees Report consumer price index growth rate, which was available for both the historical and projected periods.

Forecast Baseline Provider Spending Through 2020

Once the growth factors were projected across total national expenditures, one of two methods was used to forecast baseline provider spending. The **first method** was to take the forecasted growth rates and multiply the factors together to produce the projected growth in total spending for each provider sector for each year. The growth rate for 2010 was applied to the last historical level of spending in 2009 to produce spending for 2010; the 2011 growth rate was applied to the 2010 projected spending to produce projected spending in 2011; and so on through 2020.

The **second method** was multiple linear regression. The multiple regression models were run to establish the statistical relationship between the growth in the historical M/SUD treatment spending and growth in the factors within the five-factor consumption model, the provider model, or in CMS all-health spending estimates. The different regression models examined by provider type are outlined below:

> Expected Δ M/SUD expenditures = $\beta_0 + \beta_1$*(Δ use/population) + β_2*(Δ population) + β_3*(Δ general economy-wide inflation) + β_4*(Δ additional service-specific price inflation)
>
> Expected Δ M/SUD expenditures = $\beta_0 + \beta_1$*(Δ number of workers) + β_2*(Δ hours/worker) + β_3*(Δ wages/hour)
>
> Expected Δ M/SUD overall or service-specific expenditures = $\beta_0 + \beta_1$*(Δ all-health overall or service-specific expenditures)

where Δ is the growth rate represented by 1 plus the percent change, β_0 is the intercept of the model, and $\beta_{1\text{-}x}$ represents coefficients to the predictor or independent variables.

The intercept and coefficient for the growth rate was estimated for each provider using ordinary least squares methodology. Once the regression parameters were established for each of the models using historical data, the regression coefficients were used to forecast the change in M/SUD expenditures through 2020 by applying the coefficients to the projected factors accounting for growth. The benefit of using multiple linear regression instead of using the target growth rate method is that this regression technique estimates the independent impact of each of the factors, potentially improving the accuracy of the projections.

Within each of the service categories, the results between the five-factor and provider models were compared, and the results of both of these models using the target growth and regression

techniques were evaluated. In determining whether to use regression or target growth model results, the following items were considered:

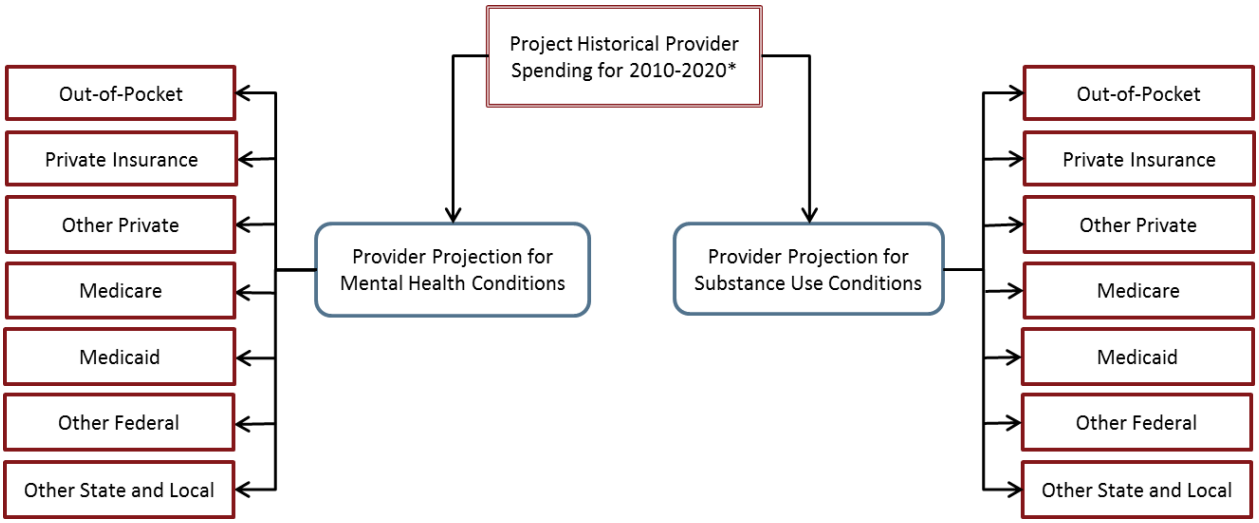
- The significance of the regression outputs (intercept and coefficients)
- The presence, if any, of inconsistencies when transitioning from historical estimates to projections
- The reasonableness of the projected values compared with the historical trends and all-health projected trends from the CMS NHEA.

For a few sectors (e.g., inpatient hospital, home health, and nursing homes), trends in CMS NHEA projections were used to establish trends in treatment spending for M/SUDs. In part, the NHEA projection trends were default trends because M/SUD spending for treatment in nursing homes and home health accounted for less than 7 percent of all M/SUD spending in 2009; for hospitals, using the CMS trends produced a more reasonable transition through the recession.

Partition Spending Into Diagnoses, Payer, and Subproviders

Once the level of spending for M/SUD treatment overall and by provider type was established using the processes described above, that spending was decomposed by diagnosis and payer as depicted in Figure C.1. For certain specialty providers, an additional step (not shown in Figure C.1) to decompose spending into more specific specialty and nonspecialty providers, such as differentiating psychiatrists from other physicians, was performed.

Figure C.1. Projection Process for Each Type of Provider



* Providers include: Specialty substance abuse centers, specialty mental health centers, physicians, other professionals, specialty hospitals, general hospitals, nursing home, home health, and insurance administration.

General hospitals are further decomposed into specialty and nonspecialty units and physicians into psychiatrists and all other physicians.

The projected aggregate spending for each provider for 2010 through 2020 was decomposed into MH and SUD diagnoses. This was accomplished by first calculating the historical distribution of M/SUD treatment spending by diagnoses. The year-to-year differences in this distribution were calculated separately for MH and SUD treatment spending. The average of these changes over the historical years became the target average difference in share for 2020. Between the last historical year and 2020, the year-to-year differences in distribution were forecasted using either a geometric or straight-line formula. This provided a continuation of trends and made the percentage shares change smoothly over the forecast period. For each

year, the projected year-to-year percentage difference was added to the preceding year's distribution to project the share of MH and SUD treatment spending for each diagnosis, with the shares ultimately applied to the projected aggregate provider spending to produce spending levels for MH and SUD for each year in the projection period. This method assumes that the general pattern and rate of change in the distribution over the historical years will continue into the future.

Next, total spending by diagnosis was split into seven payer groups: out-of-pocket payments, private insurance, other private, Medicare, Medicaid, other federal, and other state and local. For this step, ordinary least squares regression was used to compare growth in all-health spending by each payer within a specific provider group (the independent variable) to the growth in MH and SUD treatment spending for each payer in the same MH or SUD provider group.

$$\Delta \text{ M/SUD expenditures}_{PS} = \beta_0 + \beta_1 * (\Delta \text{ NHEA expenditures}_{PS})$$

where Δ is the growth rate represented by 1 plus the percent change, β_0 is the intercept of the model, β represents coefficients to the predictor or independent variables, P represents the provider and S represents the payer.

In some cases a year was added as an independent variable to the model to capture strong linear trends over time. If these regression models were significant, then they were used to projected growth in spending for each payer and deflate or inflate the payer amounts by a constant factor so that that they all summed to the expected total. When these regression models were not significant, a target growth method was used to project either payer distribution or the year-to-year differences in payer distribution. For many providers, this was the last step in the projection process, as shown in Figure C.1.

For some providers, however, further decomposition of spending was necessary to create all of the spending categories required in the SSE. These disaggregations may have included creation of specialty spending estimates within providers, such as psychiatrist spending within the broader category of physician spending and spending for services in general hospital specialty units within the more inclusive category of spending for general hospital services.

As a final step in the projection process, the projections by major provider types and payers were assessed for consistency by reviewing the percent distribution among payers and among providers for the continuous historical and projection periods. Trends in the M/SUD projections as a share of the CMS NHEA projections by provider and payer were also evaluated in order to verify the plausibility and validity of our results.

Provider-Specific Baseline Projection Models and External Data Sources

The previous section provided a generalized description of the projection techniques used in the current forecasts of M/SUD spending. This section furnishes provider-specific information on the data sources and models used to create baseline projection of M/SUD treatment spending for all service providers.

For each provider, projections were prepared using the five-factor model, the production model, and sometimes an alternative model using regression to bring in trends from the CMS NHEA provider sector. As discussed earlier, the model results were compared and the results from one model were chosen for our forecast.

In Table C.1, the details of the projection models and data sources used to project the growth in spending for each provider sector are displayed. The first column lists the provider sector. The second column indicates the target growth, regression, or alternative technique used to project spending for that sector. The third and fourth columns list the data sources for utilization and

price used to measure growth in the five-factor model. The last column specifies the data used to measure growth in employment and wages in the production model. In all of the five-factor models, population and gross domestic product (GDP) price projections that were used in the CMS NHEA all-health spending projections and in the 2011 OASDI Trustees Report for two of the five factors within the model were used; these are not separately listed within Table C.1.

Table C.1. Summary of Projection Models and External Data Sources Used to Project Expenditures

Setting or Service	Projection Model Used: Regression (R) or Target Growth (T)	External Sources[a] for:		
		Five-Factor Model Utilization[b]	Five-Factor Model Price	Production Model Employment and Wages
General hospitals—inpatient	CMS NHEA all-health projections for hospitals (R)	• American Hospital Association Annual Survey, inpatient M/SUD days per capita • Healthcare Cost and Utilization Project, Nationwide Inpatient Sample, inpatient M/SUD days per capita	PPI for general medical and surgical hospitals	• BLS CES for NAICS, 6221 General Medical and Surgical Hospitals • OASDI Trustees Report Projections of economy-wide employment and work hours
General hospitals—outpatient	Five-factor model (R)	American Hospital Association Annual Survey, outpatient visits	CPI for outpatient hospitals	OASDI Trustees Report Projections of economy-wide employment and work hours
Psychiatric hospitals	Five-factor model (T)	American Hospital Association Annual Survey, inpatient M/SUD days per capita	PPI for psychiatric and substance abuse hospitals	BLS QCEW NAICS 6222 Psychiatric and Substance Abuse Hospitals, economy-wide employment and work hours
Physicians	Five-factor model (T)	National Ambulatory Medical Care Survey, M/SUD physician outpatient visits per capita	CPI for physician services	QCEW NAICS 62112 Offices of Mental Health Physicians, economy-wide employment and work hours
Other professionals	Five-factor model (T)	N/A	CPI for services by other medical professionals	QCEW, NAICS 62133 Offices of Mental Health Practitioners, economy-wide employment and work hours
Home health	CMS all-health projections (T)	N/A	N/A	N/A

Setting or Service	Projection Model Used: Regression (R) or Target Growth (T)	External Sources[a] for:		
		Five-Factor Model Utilization[b]	Five-Factor Model Price	Production Model Employment and Wages
Nursing homes	CMS all-health projections (T)	N/A	N/A	N/A
Specialty mental health centers	Five-factor model (R)	N/A	GDP price index for ambulatory health care	CES NAICS 62142 Outpatient MH and SA Centers and NAICS 62322 Residential MH and SA Facilities, economy-wide employment and work hours
Specialty substance abuse centers	CMS NHEA all-health projections combined with production model (R)	• Treatment Episode Data Set–Admissions (TEDS-A) 1993–2010 for states that supplied data each year over this timeframe	• GDP price index for health care and social services • PPI for substance abuse hospitals	CES NAICS 62142 Outpatient MH and SA Centers and NAICS 62322 Residential MH and SA Facilities, economy-wide employment and work hours

[a] Factors for population change and inflation are from the 2011 Medicare Trustee Report; residual growth (intensity and other factors) for historical estimates are calculated by dividing aggregate spending growth by growth in population, overall inflation, net medical inflation, and use per capita.

[b] This was a modified version of the five-factor model because utilization was included as a part of the residual factor rather than a separate factor. The provider model was not used because it produced an unusual trend in growth that was not seen in the five-factor model or the all-health CMS projections for other practitioners.

Abbreviations: BLS, Bureau of Labor Statistics; CES, Current Employment Statistics; CMS, Centers for Medicare & Medicaid Services; CPI, consumer price index; GDP, gross domestic product; M/SUD, mental and substance use disorder; N/A, not available; NAICS, North American Industrial Classification System; NHEA, National Health Expenditure Accounts; OASDI, Old Age, Survivors and Disability Insurance; PPI, producer price index; QCEW, Quarterly Census of Employment and Wages.

Baseline Projections of Prescription Drug Spending

In this section, details are provided about the new methods developed to project prescription drug spending. Prescription drugs were an important driver of mental health spending trends during the late 1990s and early 2000s, when many new psychotropic drugs became available. They also played an important role in the subsequent slowdown of M/SUD spending growth through 2009, with the loss of patents for many psychotropic medications leading to less expensive generic versions becoming available. Because prescription drugs comprised one-quarter of all spending on M/SUD treatment in 2009, and because significant changes are

expected to occur in the prescription drug market over the forecast period, a special approach was developed to forecast spending for M/SUD prescription drugs.

One factor that can contribute significantly to increased prescription drug expenditure growth is the emergence of new medications. The development of new drugs is very costly, with new medications taking 9 to 15 years from preclinical trials to Food and Drug Administration (FDA) approval and requiring $1.2 billion to bring a new drug to market.[13] Because only 1 of 5,000 products is ultimately approved by the FDA, pharmaceutical manufacturers must be judicious in supporting the development of new medications. To help recoup the investment in new drug development, manufacturers are granted patents and the exclusive right to market the product for a limited period of time. This market exclusivity allows manufacturers to charge prices that are substantially higher than manufacturing costs alone. As a result, new medications are often much more expensive than the ones they replace. Because of the high cost of new drug development, pharmaceutical manufacturers often extend their ability to recoup costs by developing reformulations of existing products that expand the use of existing medications and new delivery mechanisms that will allow manufacturers to apply for new patents on existing medications.

One factor that can substantially slow the growth of prescription drug spending is loss of patent protection. When patent and marketing exclusivity expire, competitors who filed with the FDA for the right to enter the market with a bioequivalent product provide a substitute product at a greatly reduced price. Although many psychotropic medications used to treat M/SUDs have generic equivalents, many other psychotropic medications are poised to lose patent exclusivity over the next few years.

Brandeis University researchers explored the extent to which new psychotropic products were expected to enter the market (i.e., the "pipeline" of new medications) and, in conjunction with the Truven Health Analytics projection team, they developed methods for projecting the effect of patent expiration on the spending for psychotropic medications.

First study

Brandeis University researchers examined peer-reviewed literature, industry reports, and media articles to learn about the potential for innovative M/SUD drugs that could come to market between now and 2020. Based on this investigation, they created a structured interview format to systematically explore drug developments for psychiatric disorders, SUDs, and insurance and payment issues with experts involved in specific drug development and use. Through the use of this structured interview format, Brandeis researchers documented the slowdown in development of new psychotropic drug development since the 1990s, attributing this slowdown primarily to high development costs and FDA approval risk. Interviewees noted that most new developments are versions of existing medications (e.g., new delivery mechanisms or new dosages for new uses, which are sometimes called "me-too" drugs). They also stated that other factors, including population growth, epidemiological and clinical change, scientific advances, legislative changes, and reimbursement practices could also affect spending on drugs to treat M/SUDs.[14]

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[13] PhRMA. (2012). *2012 Report: Medicines in development for mental illnesses*. Washington, D.C: PhRMA. Retrieved from http://www.phrma.org/research/medicines-development-mental-illnesses. Accessed February 26, 2014.

[14] O'Brien, P., Thomas, C. P., & Hodgkin, D. (2014). The diminished pipeline for medications to treat mental health and substance use disorders. Psychiatric Services. Advance online publication. doi: 10.1176/appi.ps.201400044

Second study

With the expectation of no innovative drugs emerging over the forecast period, a second study was begun to project spending. This study focused on patent expirations that could dramatically change the prices and spending for psychotropic medications. Patent expirations, which allow less expensive generic equivalents to enter the market, have a dampening effect on spending as pharmacy benefit management promotes the use of generic medications over more expensive branded alternatives with incentives of lower consumer costs. Benefit managers do this by structuring their formularies in multiple tiers with different cost-sharing requirements for each tier. The largest consumer cost-sharing requirements occur in the highest tier that usually contains the most expensive branded products. Generic products typically occupy the lowest tier and require more modest cost sharing.

To project spending, the Brandeis-Truven Health team used information from IMS Health Inc (IMS) for 2012 to identify classes of medications in which less than 70 percent of the spending was for generic drugs. These low generic-share therapeutic classes included antipsychotics (other than combinations and the phenothiazine derivative), serotonin-norepinephrine reuptake inhibitors (SNRI antidepressants), analeptics (stimulant attention deficit hyperactivity disorder [ADHD] treatments), newer generation psychotherapeutic agents (nonstimulant ADHD treatments), and specific antagonists (addiction treatment medications). For these therapeutic classes with a relatively high proportion of branded drugs relative to other classes, patent expirations could significantly alter the rate of spending growth as less expensive generics enter the market.

First, the team identified specific products and their patent expiration dates using the Food and Drug Administration Orange Book.[15] The prescription drugs identified as losing patent protection during the projection period (2010–2020) and the dates when the expiration occurred or is expected to occur are shown in Table C.2.

[15] U.S. Food and Drug Administration. (Updated May 17, 2013). *Orange book: Approved drug products with therapeutic equivalence evaluations.* Retrieved from http://www.accessdata.fda.gov/scripts/cder/ob/default.cfm. Accessed August 19, 2013.

Table C.2. Medications for Treatment of Mental and Substance Use Disorders Losing Patent Protection After 2008

Therapeutic Class and Brand or Branded Generic Name (Brand Products in Italics)	Generic Name	Expiration Date
Antipsychotics		
Abilify	aripiprazole	2014
Fanapt	lurasidone HCL	2016
Fazaclo	clozapine ODT	2012
Geodon	ziprasidone HCL	2012
Invega	paliperidone	2010
Invega Sustenna	paliperidone	2017
Latuda	lurasidone HCL	2018
Risperdal Consta	risperidone	2020
Risperdal M-Tab	risperidone ODT	2009
Saphris	asenapine	2015
Seroquel	quetiapine fumarate	2011
Seroquel XR	quetiapine fumarate	2016
Zyprexa	olanzapine	2011
Zyprexa Intramuscular	olanzapine	2011
Zyprexa Relprevv	olanzapine	2018
Zyprexa Zydis	olanzapine ODT	2011
Serotonin–norepinephrine reuptake inhibitors (SNRIs)		
Cymbalta	duloxetine	2013
Effexor	venlafaxine	2010
Effexor XR	venlafaxine	2010
Pristiq	desvenlafaxine	2022
Analeptics		
Focalin	dexmethylphen HCL	2012
Focalin XR	dexmethylphen HCL, XR	2016
Nuvigil	armodafinil	2016
Provigil	modafinil	2012
Ritalin LA	methylphenidate ER capsules	2012
Ritalin LA	metadate CD	2012
Ritalin LA	methylphen HCL CD	2012
Vyvanse	lisdexamfetamine	2023
Adderall XR	amphetamin salt ER	2009
Concerta	methylphenidate ER - tablets	2012
Daytrana	methylphenidate–film; ER; transdermal	2018
Metadate CD	methylphenidate ER capsules	2012
Methylin	methylphenidate (oral)	2010

Therapeutic Class and Brand or Branded Generic Name (Brand Products in Italics)	Generic Name	Expiration Date
Newer generation psychotherapeutic agents		
Strattera	atomoxetine	2017
Intuniv	guanfacine HCL ER	2015
Kapvay	clonidine hydrochloride ER	2013
Substance abuse medications		
Campral	acamprosate	2020
Suboxone	buprenorphine + naloxone	2013
Subutex	buprenorphine HCL sublingual	2010
Vivitrol	naltrexone	2017

Source: Hodgkin, D., Thomas, C. P., O'Brien, P., Levit, K., Richardson, J., & Mark, T. L. (2014). Projections of national spending on psychotropic medications, 2013–2020. Manuscript submitted for publication.

Abbreviations: ER, extended release; HCL, hydrochloride; ODT, orally disintegrating tablets; XR, extended release.

With IMS data for 2012 as a starting point, baseline expenditures were predicted using the formula (described earlier):

$$\Delta \text{ expenditures} = \Delta P * \Delta Q$$

where Δ means growth represented by 1 plus the percent change (example: 5.1 percent growth = 1.051), P represents price of services, and Q represents quantity of services. Spending was projected at the *molecular level* for those products expected to lose patent protection or at the *therapeutic class level* for all classes where the generic share was higher than 70 percent.

Prices were set at the 2012 value and adjusted to nominal terms using the growth in CPI for pharmaceuticals. The CPI for pharmaceuticals was projected using the "target growth" method described in the baseline projection section. In addition, patent expiration dates were used to determine points in time when branded medicines lost market exclusivity. The assumption was made that prices for specific products would drop to 60 percent of the branded price in the first year after patient expiration and to 30 percent in the second year after patent expiration, based on expert advice and peer-reviewed literature. These rates were set at levels somewhat lower than those observed in the literature, based on consultation with experts and on evidence in the IMS data used for this study of the branded price in the 2 years following patent expiration. The 2-year step-down price assumption reflects (1) time-limited marketing "exclusivity" often granted by the FDA to the initial generic entrant into the market, (2) midyear entrance of generics when lower prices would only be available for a portion of the year, and (3) time for patients to consume existing medications before a new generic version is prescribed or authorized by a physician.

For quantity of prescriptions, growth in the number of prescriptions for each therapeutic class was projected using the "target growth" technique described in the baseline projections section above. This method uses average growth over 2009–2012 and, in one case, over the longer time period of 2002–2012 to establish the growth rate at the end of the period. An assumption that the growth in volume will change gradually from 2012 to 2020 to hit that target growth rate was used. In addition, patent expiration dates were used to determine points in time when

branded medicines lost market exclusivity and would lose volume. The assumption was also made that most consumers would switch from a branded to the generic version, with 70 percent of the switching occurring in the first year after patent expiration and 95 percent in the second year after patent expiration. This switch by consumers is prompted by many cost-saving techniques used by pharmacy management programs, including lower out-of-pocket costs for generic products, prior authorization requirements for more expensive branded products, "fail-first" strategies,[16] and other cost-management strategies associated with their pharmacy benefit designs.

The introduction of new branded products was not modeled, reflecting expert opinion that innovative medications in any of the psychotropic classes were not expected to emerge in the period from 2013 through 2020.

To use these results in the SSE projection of prescription drugs, the growth rates from this study were applied to the 2009 historical spending for medications used to treat M/SUD. The growth rates from this study, rather than the level of spending, were used because the levels of predicted spending based on the IMS data does not take into account any manufacturer rebates that are returned to insurers on many branded drugs. However, removal of those rebates from the spending estimates is included in the 2009 estimate of prescription drug spending in the SSE. It is expected that the rebates will decline in importance, especially after 2013 when a large proportion of psychotropic drugs go off patent. This reduction in spending will impact spending for Medicare, Medicaid, and private insurance.

Projecting Legislative Impacts on Spending

In this section, the methods and assumptions used to predict the impact of legislative changes on spending for treatment of M/SUDs are discussed, the most important of which are the effects of the Affordable Care Act.

Impact of the Affordable Care Act

The Affordable Care Act was signed into law in 2010. Its main purpose was to provide insurance coverage (and thus access to care) for a large portion of the uninsured, beginning in 2014. There are several provisions of the Affordable Care Act that will produce significant impacts on M/SUD spending as coverage of the uninsured is expanded:

- Expansion of Medicaid in certain states to all individuals under age 65 who are not eligible for Medicare (e.g., children, pregnant women, parents, and adults without dependent children) with incomes up to 138 percent of the federal poverty level (FPL)
- The creation of state-based and federal health insurance marketplaces, administered by a governmental agency or nonprofit organization, through which individuals and small businesses with up to 100 employees can purchase coverage
- The requirement for most uninsured individuals who can afford it to obtain health insurance, either through their current employer, the Marketplaces, or Medicaid.

The law has additional provisions to address many other issues of financing and insurance coverage for Americans, some of which have impacts on health spending as early as 2010. Many of these provisions are small and may have very little direct impact on spending for

[16] Fail-first strategies require the patient to be unsuccessful in symptom management using a generic version first before a more expensive version can be purchased.

M/SUD treatment. For that reason, two separate approaches to projecting the impacts of the Affordable Care Act were developed: one approach for the majority of the legislative impacts that affect Medicaid, private insurance, and the uninsured and a second approach for impacts that affect Medicare, other federal, and other private spending.

The two approaches are:

1. Simulating the health care costs of users moving from one insurer to another, due to the expansion of Medicaid and the introduction of insurance Marketplaces beginning in 2014. The effects of individuals moving from being uninsured to insured were also modeled. This method is used for simulating the impacts of the Affordable Care Act on private health insurance, Medicaid, and out-of-pocket spending. This approach is discussed in the *Modeling Impacts of the Affordable Care Act on Medicaid, Private Insurance, and Out-of-Pocket Spending* section below.
2. Calculating the differences in growth in the NHEA all-health spending with and without the effects of the Affordable Care Act and applying these differences to the growth rates for spending in the baseline M/SUD spending by payer and provider. This method is used for payers other than private health insurance, Medicaid, and out-of-pocket spending. This is discussed in the *Modeling Impacts of Affordable Care Act on Medicare, Other Federal, and Other Private Spending* section below.

The CMS NHEA did not measure any impact on the payer category of other state and local government. M/SUD spending relies heavily on other state funding through state mental health and substance abuse authorities to provide treatment services for low income and uninsured individuals. Therefore, discussions were held with the National Association of State Mental Health Program Directors National Research Institute and the National Association of State Alcohol and Drug Abuse Directors to determine if any cutbacks were anticipated as a result of increased coverage of the uninsured anticipated under the Affordable Care Act.[17] These discussions revealed little expected impact on state and local financing of M/SUD treatment services, in part because funding in many states is still rebounding to prerecession funding levels and because demand continues to outstrip the authorities' ability to finance treatment, especially for substance use disorders, as has been documented in states that have already expanded coverage.[18]

Modeling Impacts of the Affordable Care Act on Medicaid, Private Insurance, and Out-of-Pocket Spending

The most significant effects of the Affordable Care Act will primarily impact out-of-pocket, Medicaid, and private health insurance spending from 2010 through the end of our forecast horizon. To simulate this impact, the number of users of mental health treatment and of substance use treatment making the following shifts in insurance coverage was estimated for those:

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[17] Conversations with Rick Harwood of the National Association of State Alcohol and Drug Abuse Directors and Ted Lutterman of the National Association of State Mental Health Program Directors—National Research Institute on November 20, 2013. Neither organization is expecting to see cuts in state funding for the state behavioral health authorities.

[18] The National Association of State Alcohol and Drug Abuse Directors (NASADAD). (March 2010). *The effects of health reform on access to, and funding of, substance abuse services in Maine, Massachusetts, and Vermont.* Washington, D.C.: NASADAD. Retrieved from http://nasadad.org/resources/Final%20revisions%20HCR%20508%20compliant.pdf. Accessed December 12, 2013.

Switching to Medicaid in Medicaid expansion states—

- Individuals who previously had employer-sponsored insurance and have income up to 138 percent of the federal poverty level (FPL)
- Individuals who were uninsured and have income up to 138 percent of the FPL
- Individuals who previously purchased nongroup insurance individually and have income up to 138 percent of the FPL

Switching to coverage through the Marketplace—

- Individuals who previously had employer-sponsored insurance and have income greater than 138 percent of the FPL
- Individuals who were uninsured and have income greater than 138 percent of the FPL in states that are not expanding their Medicaid program
- Individuals who previously purchased nongroup insurance individually and have income greater than 138 percent of the FPL

Switching to coverage through employer-sponsored insurance—

- Individuals who were uninsured and have income greater than 138 percent of the FPL.

A detailed model was used to measure the legislative impacts for these payers. In broad terms, the model estimates the number of users by multiplying the number of eligible individuals in each switch group by a percentage of eligible individuals who were assumed to enroll (known as the *take-up rate*) and by a percentage of users of M/SUD services among enrollees (known as the *M/SUD use rate*). In the case of some uninsured individuals who are assumed to become insured, the number of users was increased by a small factor to account for increased use once they gained coverage for M/SUD treatment—a factor known as the *moral hazard of insurance*. The moral hazard of insurance assumes that when people become insured, they will use more services than when they were uninsured. Because this is an effect applied predominantly to the uninsured who gain insurance, this factor is only used when the uninsured move from being uninsured to being insured.

A generalized formula for this model is:

> Spending = number eligible * number enrolled/number eligible * number users/ number enrolled * spending/user * increased spending rate (moral hazard of insurance applied to uninsured only)

This generalized formula is used not only to estimate new spending for individuals obtaining coverage from a new payer (employer-sponsored insurance, Medicaid, Marketplaces), but is also used to estimate the reduction in spending from the original payer source (employer-sponsored insurance, nongroup insurance, and Medicaid). In addition, to capture changes in out-of-pocket spending, additions to and subtractions from out-of-pocket spending in the form of copayments (deductibles and coinsurance) for each payer as individuals leave one insurance group and join another were estimated. For each payer and the uninsured, the changes in spending due to the Affordable Care Act are summed with the subtractions from baseline expenditures as people leave their current insurance status. The “net” spending by payer is then added to the baseline SSE projections described earlier.

Assumptions for this model are based primarily on published studies from CMS, the Congressional Budget Office (CBO), tabulations from various claims and survey datasets, and articles in peer-reviewed literature. The assumptions, their values, and their sources are listed in Table C.3.

Table C.3. Medicaid, Private Insurance, and Out-of-Pocket Projection Model Assumptions

Assumption, Payer, and Income Range	Value	Projection Method Through 2020	Source
Eligibility Assumptions (Number Eligible)			
Number of individuals eligible to enroll by payer and income level in 2011 (American Community Survey)			
Payers and income levels:[1]	47,504,152	Growth in enrollment estimates from the CBO	American Community Survey in 2011; CBO estimates of insurance coverage, May 2013[3]
Uninsured[2]	21,262,262		
<139% FPL	21,004,710		
139–399% FPL	5,237,180		
>399% FPL	148,306,483		
Employer-sponsored insurance	12,271,970		
<139% FPL	60,193,366		
139–399% FPL	75,841,147		
>399% FPL	16,254,577		
Nongroup insurance	3,452,037		
<139% FPL	6,558,075		
139–399% FPL	6,244,465		
>399% FPL	45,332,898		
Medicaid	29,332,766		
<139% FPL	13,878,583		
139–399% FPL	2,121,549		
>399% FPL			
Enrollment Assumptions (Take-up rate)			
Percentage (or number) of eligible individuals with employer sponsored insurance that will enroll in:			
Medicaid			
<139% FPL	23.5%	Held constant	Fifty percent of American Enterprise Institute estimate[4]
Marketplaces			
139–399% FPL	5,358,783	2019 CMS estimate prorated to income groups based on CBO	CMS Actuarial Memo;[5] CBO estimates of Insurance Coverage, May 2013[3] to
>399% FPL	6,751,845		

Assumption, Payer, and Income Range	Value	Projection Method Through 2020	Source
		change in enrollment estimates	trend enrollment from 2019 to earlier and later years.
Percentage of eligible people with nongroup insurance that will enroll in:		CBO estimates of Insurance coverage to trend enrollment rate from 2014–2016	CBO estimates of insurance coverage, May 2013.[3]
Medicaid <139% FPL	2014: 8% 2015: 12% 2016: 20%	Held constant after 2016 at the 2016 rate	
Marketplaces 139–399% FPL >399% FPL	2014: 17% 2015: 25% 2016: 34%	Same percentage for both FPL groups	
Percentage (or number) of eligible uninsured individuals that will enroll in:			CMS, Office of the Chief Actuary estimate.[6] CMS cites a 70% enrollment rate for those eligible but not enrolled and a 95% enrollment rate for the newly eligible. Analysis only applied this rate to counts of eligible individuals in states that were expanding Medicaid. CBO estimates of insurance coverage, May 2013,[3] used to trend enrollment rate from 2014–2016.
Medicaid in states that have not excluded coverage expansion: <139% FPL	2010–2013: 1,000,000 new enrollees in early expansion states 2014: 60% 2015–2020: 80%	CBO enrollment	
Percentage of eligible uninsured individuals that will enroll in:			
Marketplaces 139–399% FPL >399% FPL	2010–2013: 1.8% 2014: 26% 2015: 36% 2016: 48% 2017–2020: Held constant at 2016 rate	CBO enrollment	CMS Actuarial Memo;[5] CBO estimates of insurance coverage, May 2013,[3] used to trend enrollment rate from 2014–2016.

Assumption, Payer, and Income Range	Value	Projection Method Through 2020	Source
Users of Mental and/or Substance Use Disorder Services Assumptions			
Percentage of users with any MH treatment			
Uninsured			
<139% FPL[2]	8.9%	Held constant for all years	National Survey on Drug Use and Health, 2008–2011, average by state[7]
139–399% FPL	9.0%		
>399% FPL	10.8%		
Private insurance			
<139% FPL[2]	12.2%	Held constant for all years	
139–399% FPL	13.2%		
>399% FPL	14.1%		
Percentage of users with any SA treatment			
Uninsured			
<139% FPL[2]	2.9%	Held constant for all years	National Survey on Drug Use and Health, 2008–2011, average by state[7]
139–399% FPL	2.8%		
>399% FPL	2.8%		
Private insurance			
<139% FPL	2.0%	Held constant for all years	
139–399% FPL	1.2%		
>399% FPL	0.9%		
Medicaid			
<139% FPL	4.7%	Held constant for all years	
139–399% FPL	3.9%		
>399% FPL	5.5%		
Increased Use Assumption			
Percentage increase in the use rate when uninsured individuals receive insurance coverage.	25%	Held constant for all years	CMS, Office of the Chief Actuary estimate[6]

Spending Per User of M/SUD Services Assumptions			
Medicaid Mental health Substance use disorders	 2011: $2,584 2011: $3,993	Based on 2008 nondual tabulations from MAX Medicaid claims database; extrapolated total spending to later years using growth in SSE Medicaid baseline spending; divided by CBO estimates of current law enrollment * NSDUH Medicaid percent users	2008 Max tabulations; CBO May 2013 enrollment;[3] National Survey on Drug Use and Health, 2008–2011, average by state[7]
Employer-sponsored insurance Mental health Substance use disorders	 2011: $770 2011: $3,206	Projected expenditures using baseline SSE private insurance expenditure growth	Truven Health MarketScan® Research Databases for 2011; SAMSHSA spending baseline projections
Individually purchased insurance; Marketplace insurance Mental health Substance use disorders	 2011: $600 2011: $2,498	2011 ESI spending per user divided by .86 (to calculate total spending with OOP copayments based on MarketScan OOP rates) and multiplied by .67 to account for higher average copayments for nongroup and Marketplace policies (assume 1/3 of costs are paid OOP); held constant for all years	MarketScan 2011, OOP share of total spending; estimated weighted OOP share of various "metal" plans
Uninsured Mental health Substance use disorders	 2011: $1,525 2011: $2,356	Fifty-nine percent of Medicaid spending for all years	Hadley et al.[8] OOP share of uninsured costs as a share of Medicaid average costs in 2008
Cost-sharing Assumptions			
Employer-sponsored insurance Mental health Substance use disorders	 2011: 20% 2011: 13%	Held constant for all years	Truven Health MarketScan Commercial Claims Database: OOP M/SUD expenditures share of total M/SUD expenditures
Exchanges/nongroup insurance Mental health	 2011: 33%	Held constant for all years	Estimated OOP share of various "metal" plans weighted by expected

Substance use disorders	2011: 33%		enrollment[9]
Medicaid		Held constant for all years	Tabulations from the Medical Expenditure Panel survey
Mental health	2011: 1%		
Substance use disorders	2011: 5%		

[1] The number enrolled or uninsured can be counted in different ways. A hierarchical method that identifies the primary payer was used. First, anyone without any health insurance coverage was counted as uninsured. Next, anyone with Medicare was classified with Medicare as their primary payer, which eliminated any people with secondary insurance through a private employer-sponsored plan, nongroup plan, or Medicaid. Next, remaining Medicaid enrollees were assumed to have Medicaid as a primary payer. Any remaining people with employer-sponsored insurance were assumed to have that insurance as primary. Any remaining individuals covered by nongroup insurance were classified with nongroup insurance as primary. Any remaining individuals were classified as other, which included Tricare, Veterans Administration, and Indian Health Service.

[2] Includes all uninsured individuals. However, for some calculations in this model (such as switches from uninsured to Medicaid), uninsured individuals in states that have announced that they are not expanding Medicaid were not included. States not expanding Medicaid as of August 2013 were Alabama, Alaska, Florida, Georgia, Idaho, Kansas, Louisiana, Maine, Mississippi, Missouri, Montana, Nebraska, North Carolina, Oklahoma, South Carolina, South Dakota, Texas, Utah, Virginia, Wisconsin, and Wyoming.

[3] Congressional Budget Office. (May 2013). *Table 1. CBO's May 2013 estimate of the effects of the Affordable Care Act on health insurance coverage*. Retrieved from http://www.cbo.gov/sites/default/files/cbofiles/attachments/43900-2013-05-ACA.pdf. Accessed February 26, 2014.

[4] Garthewaite, C., Gross, T., & Notowidigdo, M. J. (2013). *Public health insurance, labor supply, and employment lock.* (No. w19220). National Bureau of Economic Research.

[5] Foster, R. S. (2010). *Estimated financial effects of the "Patient Protection and Affordable Care Act," as amended*. (Page 7). Retrieved from http://www.cms.gov/Research-Statistics-Data-and-Systems/Research/ActuarialStudies/Downloads/PPACA_2010-04-22.pdf. Accessed February 26, 2014.

[6] Centers for Medicare & Medicaid Services. (2012). *Medicaid program; eligibility changes under the Affordable Care Act of 2010 (CMS-2349-F): Final regulatory impact analysis*. Retrieved from http://www.medicaid.gov/AffordableCareAct/downloads/CMS-2349-F-RegulatoryImpactAnalysis.pdf. Accessed February 26, 2014.

[7] Substance Abuse and Mental Health Services Administration, Office of Applied Studies. *National survey on drug use and health*. (Updated December 30, 2008). http://www.oas.samhsa.gov/nhsda.htm. Accessed February 26, 2014.

[8] Hadley, J., Holahan, J., Coughlin, T., & Miller, D. (2008). Covering the uninsured in 2008: Current costs, sources of payment, and incremental costs. *Health Affairs, 27*(5), w399–w415.

[9] Day, R. (April 12, 2012). *Health Insurance Exchanges: Lessons learned in Massachusetts*. Retrieved from http://www.carecorenational.com/healthcaresummit/powerpoints/RosemarieDay.pdf. Accessed January 6, 2014.

Abbreviations: CBO, Congressional Budget Office; CMS, Centers for Medicare & Medicaid Services; ESI, employer-sponsored insurance; FPL, federal poverty level; MH, mental health; M/SUD, mental and/or substance use disorder; NSDUH, National Survey on Drug Use and Health; OOP, out of pocket; SA, substance abuse; SSE, SAMHSA Spending Estimates.

Modeling Impacts of Affordable Care Act on Medicare, Other Federal, and Other Private Spending

The impact of the Affordable Care Act by payer that was projected by CMS in the NHEA was used to model its additional impacts outside of insurance coverage expansion for the remaining payers. The simplifying assumption was that the Affordable Care Act would have similar impacts by provider for other private, Medicare, and other federal payers on M/SUD treatment spending growth rates as it would on all-health spending growth rates. The aggregate impacts, however, would be slightly different because the spending distribution by provider and payer is different for M/SUD treatment spending than for all-health spending.

For this method, the annual difference was calculated in the projected NHEA all-health spending growth with and without the Affordable Care Act impacts for each provider for Medicare, other federal, and other private spending by provider category in the NHEA. The percentage-point difference was then added to the baseline M/SUD spending projection growth rate by provider and payer category. The adjusted growth rates were applied to the 2009 historical spending by provider and payer to produce 2010 and so on through 2020 to create the final forecasts of spending for Medicare, other federal expenditures, and other private sources for each provider.

These changes in growth were designed to pick up the many impacts beyond the expanded Medicaid and the establishment of the Health Insurance Marketplace in 2014 through 2020 that will affect M/SUD spending. Table C.4 outlines some of the key provisions of the law that will influence spending by private and public payers. There are many other provisions not listed in this Table. The Medicare Trustees Report identifies 165 provisions affecting the Medicare program alone, through reducing costs, increasing revenues, improving benefits, combating fraud and abuse, and initiating major research programs to examine ways to improve payment mechanisms and the quality of care.[19] Many of these provisions are projected to affect NHEA all-health and M/SUD spending into the future.[20]

[19] Boards of Trustees of the Federal Hospital Insurance and Federal Supplementary Medical Insurance Trust Funds. (May 31, 2013). *The 2013 Annual Report of the Boards of Trustees of the Federal Hospital Insurance and Federal Supplementary Medical Insurance Trust Funds*. Washington, D.C. Retrieved from http://downloads.cms.gov/files/TR2013.pdf. Accessed February 26, 2014.

[20] Foster, R. S. (2010). *Estimated financial effects of the "Patient Protection and Affordable Care Act," as amended*. (Page 7). Retrieved from http://www.cms.gov/Research-Statistics-Data-and-Systems/Research/ActuarialStudies/Downloads/PPACA_2010-04-22.pdf. Accessed February 26, 2014.

Table C.4. Key Provisions of the Affordable Care Act by Year

2010
• Reviewing rates for plans with excessive premium increases • Changing Medicare provider rates • Prohibiting denial of coverage of children based on pre-existing conditions • Eliminating lifetime dollar limits on essential health care benefits • Reducing the use of annual dollar limits on insurance coverage • Providing certain preventive care free of cost sharing for new health plans • Extending dependent coverage for young adults up to age 26 • Increasing payments for rural health care providers • Reducing fraud and waste in Medicare, Medicaid, and the Children's Health Insurance Program • Providing access to insurance for individuals with pre-existing conditions that have been uninsured for at least 6 months
2011
• Providing certain preventive care free of cost sharing for those in Medicare • Requirement that at least 85% of premiums be spent on health care services for large employer plans and 80% in small employers and individually purchased plans
2012
• Establishing a hospital Value-Based Purchasing program in Medicare • Establishment of Accountable Care Organizations • Reducing paperwork and administrative costs through standardized billing and health information exchange rules
2013
• Expanding authority to bundle payments • Increasing Medicaid payments for primary care doctors • Reducing Medicare and Medicaid disproportionate share hospital payments

2014
• Requiring issue and renewability of health insurance without regard to pre-existing conditions or individual's sex • Eliminating annual dollar limits on insurance coverage • Expanding Medicaid eligibility to individuals under age 65 with low incomes • Establishing the Health Insurance Marketplace • Requiring all citizens and legal residents to have health insurance coverage • Establishing essential health benefits that plans must include in their benefit package
2015
• Paying physicians based on value not volume in Medicare (Physician Value-Based Payment Modifier program) • Increasing federal match for Children's Health Insurance Program
2018
• Imposing a tax on employer-sponsored health plans that have excessive expenses (e.g., high benefits paid to enrollees)

Sources: Department of Health and Human Services. (2013). *Key features of the Affordable Care Act by year*. Retrieved from http://www.hhs.gov/healthcare/facts/timeline/timeline-text.html. Accessed February 26, 2014. Kaiser Family Foundation. (2013). *Health reform implementation timeline*. Retrieved from http://kff.org/interactive/implementation-timeline/. Accessed February 26, 2014.

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APPENDIX D: ABBREVIATIONS

Abbreviation	Meaning
ADHD	Attention Deficit Hyperactivity Disorder
CBO	Congressional Budget Office
CMS	Centers for Medicare & Medicaid Services
CNS	Central Nervous System
HHS	U.S. Department of Health and Human Services
D.O.	Doctor of Osteopathy
DoD	Department of Defense
DVA	Department of Veterans Affairs
FPL	Federal Poverty Level
HHAs	Home Health Agencies
HMO	Health Maintenance Organization
ICD-9-CM	International Classification of Diseases 9th Revision, Clinical Modification
MHPAEA	Mental Health Parity and Addictions Equity Act
M/SUD	Mental and/or Substance Use Disorder
M.D.	Medical Doctor
MH	Mental Health
NAICS	North American Industrial Classification System
NHEA	National Health Expenditure Accounts (CMS)
NIMH	National Institute of Mental Health
SUD	Substance Use Disorder
SAMHSA	Substance Abuse and Mental Health Services Administration
SCHIP	State Children's Health Insurance Program
SSE	SAMHSA Spending Estimates

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APPENDIX E: AUTHORS AND ACKNOWLEDGMENTS

Authors

Truven Health Analytics

Katharine Levit

John Richardson

Sasha Frankel

Tami Mark

Tracy Yee

Clifton Chow

Lauren Hughey

Anne Pfuntner

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