



# **Medicaid Managed Care Cost Savings - A Synthesis of 24 Studies**

*Prepared for:*  
**America's Health Insurance Plans**

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## EXECUTIVE SUMMARY

In 2004, America's Health Insurance Plans engaged The Lewin Group to synthesize existing research on the savings achieved when states have implemented Medicaid managed care programs. This report is an update of the 2004 report, and includes both studies from the previous report and studies that have been released since 2004. In all, The Lewin Group reviewed 24 studies.<sup>1</sup> The studies reviewed were identified and selected by America's Health Insurance Plans and Lewin and include federally required independent assessments, studies commissioned by the federal and state governments, private foundations, and researchers, and one health plan-funded study. Studies are grouped into three categories:

1. State studies, which examine states' cost savings in their overall Medicaid managed care programs
2. Targeted Medicaid managed care studies, which assess savings in Medicaid managed care programs targeted to specific populations
3. Specific service studies, which analyze Medicaid managed care program savings for specific services.

Appendix A lists the studies reviewed.

It is worth noting that, although not a focal point of this engagement, many of the studies reviewed addressed the impact of managed care on access and continuity of care as well as on costs. In the overwhelming majority of cases, the state Medicaid managed care programs were found to have improved Medicaid beneficiaries' access to services, and both the programs and individual managed care organizations (MCOs) have earned high satisfaction ratings from enrollees.

The studies present compelling evidence that Medicaid managed care programs can yield savings. The studies also suggest that certain populations or services are especially likely to generate savings in a managed care delivery system. We summarize these findings below.

- **First, the studies strongly suggest that the Medicaid managed care model typically yields cost savings.** While percentage savings varied widely (from half of 1 percent to 20 percent), nearly all the studies demonstrated a savings from the managed care setting
- **Second, the studies provide some evidence that Medicaid managed care savings are significant for the Supplemental Security Income (SSI) and SSI-related population.** In Arizona, 60 percent of the \$102.8 million savings achieved from 1983 to 1991 is from the SSI population. In the Kentucky Region 3 Partnership, the SSI population made up 25 to 34 percent of total enrollment and accounted for 53 to 61 percent of the savings achieved from 1999 to 2003. An analysis of a subset of the entire Oklahoma aged, blind, and disabled (ABD) population who were enrolled in a particular Medicaid health plan

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<sup>1</sup> This total includes two reports on Michigan Medicaid, two reports on Maryland's HealthChoice's program, two on Ohio's program, and two reports on the Texas STAR+PLUS program.

and who were among the highest 10 percent of service users found that overall costs per member per month (PMPM) were four percent lower in managed care than in fee-for-service (FFS). The Texas STAR+PLUS program, which focuses on SSI enrollees, achieved PMPM savings of \$4 in the first waiver period and \$92 in the second waiver period. In addition, Pennsylvania HealthChoices, which relies heavily on capitation for its disabled population, experienced average annual per capita costs that were \$6,800 lower for its beneficiaries with disabilities than the average of surrounding states. These savings are notable even if they can not be solely attributed to managed care.

- **Third, various studies demonstrated that states' Medicaid managed care cost savings are largely attributable to decreases in inpatient utilization.** A study of preventable hospitalizations in California found that the rates of preventable hospitalization were 38 and 25 percent lower in managed care than in FFS for the Temporary Assistance for Needy Families (TANF) and SSI populations, respectively. In Ohio's PremierCare program, inpatient costs decreased 27 percent under capitated Medicaid managed care, from \$76 PMPM to \$55 PMPM. Furthermore, a study of inpatient utilization for alcohol-related treatment in Pennsylvania found that costs per person decreased by approximately 26 percent at the managed care site in Philadelphia County, while costs per person increased by approximately 32 percent at the FFS site in Allegheny County
- **Finally, pharmacy was also an area where Medicaid managed care programs yielded noteworthy savings.** A comparison of drug costs under FFS vs. Medicaid managed care, using FFS and MCO drug cost and utilization data for the TANF population from multiple states, found that the PMPM cost of drugs in the managed care setting was 10 to 15 percent lower than in the FFS setting. Arizona's PMPM for prescription drugs for the ABD Medicaid population, which are delivered and paid for within Arizona's Medicaid managed care model, were found to be far lower than the PMPM drug costs for the ABD population under any state Medicaid FFS. Pennsylvania's annual PMPM prescription cost increase of 14.4 percent under its FFS system fell to 9.1 percent during the 3 years following implementation of the HealthChoices program, the Commonwealth's Medicaid managed care program

The reports summarize the cost savings experience of just some of the states that have implemented managed care for their Medicaid populations. Since the early 1990s, state Medicaid programs have turned increasingly to managed care to improve access to care and contain costs. Many states have enrolled sizable portions of their Medicaid beneficiary populations in some form of managed care—most often in managed care plans that provide comprehensive services to their members on a coordinated, prepaid basis.<sup>2</sup> However, there is still substantial opportunity for states to expand Medicaid enrollment in managed care plans.

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<sup>2</sup> This report deals exclusively with savings from the comprehensive, prepaid managed care plan model in which health plans are paid a capitation rate and are responsible for providing and/or arranging for the provision of all or a majority of Medicaid covered services for their enrollees. The primary care case management (PCCM) model is also used by a large number of states, often in conjunction with the prepaid, comprehensive managed care plan model. Under the PCCM model, each Medicaid recipient is linked with a primary care physician who receives a per capita management fee to coordinate a patient's care. However, all medical services provided to the recipient are paid on a fee-for-service basis. References in this report to "Medicaid managed care," "managed care model," and "Medicaid managed care model" are references to the comprehensive prepaid managed care model only and are not inclusive of the PCCM model. The PCCM model is not the subject of this report.

According to the Centers for Medicare and Medicaid Services (CMS), 45.6 percent of the Medicaid population was enrolled in comprehensive prepaid managed care as of June 2007. A number of states, though, have “carved out” some of the highest-cost services from their managed care programs, and most states have excluded entire eligibility categories – generally the high-cost disabled populations – from their managed care initiatives. As a result, while more than half of all Medicaid beneficiaries are enrolled in some form of managed care, more than 80 percent of national Medicaid spending remains in the FFS setting.<sup>3</sup>

Given the adverse budget pressures currently confronting states, policymakers are understandably interested in assessing whether such Medicaid managed care expansion might ease these fiscal pressures. Within the Medicaid budget, the alternative paths to fiscal savings seem much more troublesome – cutting eligibility, eliminating benefits, or reducing already-low provider payment levels.

The findings from this study demonstrate that the managed care model achieves access and quality improvements while at the same time yielding Medicaid program savings. Further, it is clear that – through carefully crafted managed care program design that is tailored to the state’s Medicaid populations and geographic landscape – real opportunities exist for states to benefit from expanding the Medicaid managed care model to eligibility categories and services heretofore largely excluded from managed care.

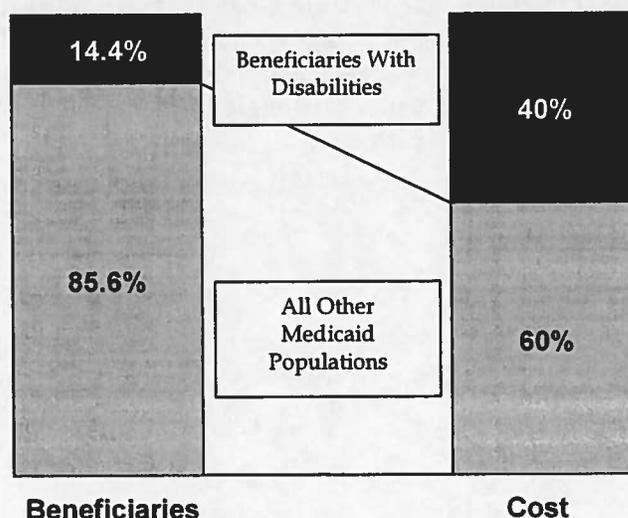
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<sup>3</sup> 2005 Medicaid Quarterly Statement, Centers for Medicare and Medicaid Services, <http://msis.cms.hhs.gov/>

## I. INTRODUCTION AND CONCEPTUAL OVERVIEW

Since the early 1990s, state Medicaid programs have turned increasingly to the managed care model<sup>4</sup> because of its potential to contain rapidly rising Medicaid program costs, while improving access to care and bringing more mainstream providers into play. However, although a substantial proportion of Medicaid beneficiaries nationwide are enrolled in managed care, a large proportion of Medicaid expenditures – indeed 80 percent<sup>5</sup> – remain in the FFS system. This is largely because most states have not yet embraced the managed care model for people with disabilities enrolled in Medicaid. These subgroups, though comprising a relatively small percentage of Medicaid beneficiaries overall, represent the highest-need, highest-cost categories of eligibility, and thus a disproportionate share of total Medicaid expenditures.<sup>6</sup>

Exhibit 1. Distribution of Population and Costs, FY2004



In addition, a number of states “carve out” certain services, such as prescription drugs and mental health, from their existing managed care programs and pay for these services on a FFS basis.

<sup>4</sup> This report deals exclusively with savings from the comprehensive, prepaid managed care plan model in which health plans are paid a capitation rate and are responsible for providing and/or arranging for the provision of all or a majority of Medicaid covered services for their enrollees. The Primary Care Case Management (PCCM) model is also used by a large number of states, often in conjunction with the prepaid, comprehensive managed care plan model. Under the PCCM model, each Medicaid recipient is linked with a primary care physician who receives a per capita management fee to coordinate a patient’s care. However, all medical services provided to the recipient are paid on a fee-for-service basis. References in this report to “Medicaid managed care,” “managed care model,” “Medicaid managed care model,” and “capitated managed care” are references to prepaid managed care model only and are not inclusive of the PCCM model.

<sup>5</sup> 2005 Medicaid Quarterly Statement, Centers for Medicare and Medicaid Services, <http://msis.cms.hhs.gov/>.

<sup>6</sup> Kaiser Family Foundation State Health Facts, Distribution of Medicaid Enrollees by Enrollment Group and Distribution of Medicaid Payments by Enrollment Group, FY2004, <http://www.statehealthfacts.org>.

Thus, for state policymakers dealing with Medicaid budget woes, Medicaid managed care expansion emerges as a particularly attractive alternative to the other primary options available, including reductions in eligibility, benefits, or still deeper cuts in already low provider payment rates that further undermine Medicaid's ability to avoid being perceived as a "second class" system of coverage.

As states consider expansion of Medicaid managed care, it is useful to understand both the reasons the comprehensive, prepaid managed care model would be expected to save money and the challenges to such programs in yielding savings. This knowledge can help guide states not only in their broad decisions regarding implementation or expansion of Medicaid managed care, but perhaps more importantly in designing the specifics of managed care initiatives – including eligible populations to target, geographic areas to include, and whether enrollment is voluntary versus mandatory. Below we briefly outline some of the theoretical cost-savings opportunities and challenges associated with the managed care model in Medicaid, and then set the stage for the body of our report, which summarizes the research on Medicaid managed care.

### **A. Savings Potential of the Managed Care Model**

Savings opportunities in Medicaid managed care are largely created by the inherent structural challenges of coordinating care and containing costs in the FFS setting. The FFS model is an unstructured system of care that creates incentives to provide as many services as possible, while doing little to encourage providers to manage the mix and volume of services effectively. Managed care organizations (MCOs), on the other hand, combine within one entity the responsibility for both the financing and delivery of health care and thus have strong incentives – and means – to coordinate care and, in turn, reduce the costs of inpatient and other expensive categories of health care services, where Medicaid spending is concentrated.

Initiatives to generate savings in the Medicaid FFS setting have predominantly focused on price controls, whereby states cut their payments to providers. While this approach may result in savings, it is not without risks. Low payments drive mainstream physicians out of the Medicaid program, impeding Medicaid beneficiaries' access to primary, preventive and specialty care services and funneling Medicaid care toward more expensive institutional-based services.

Medicaid managed care plans have opportunities to achieve savings through a number of mechanisms, including but not limited to the following:

- Improving access to preventive and primary health care by requiring participating doctors and hospitals to meet standards for hours of operation, availability of services, and acceptance of new patients
- Investing in enrollee outreach and education initiatives designed to promote utilization of preventive services and healthy behaviors
- Providing a "medical home" to an individual and utilizing a physician's expertise to refer patients to the appropriate place in the system (as opposed to relying on the patient's ability to self-refer appropriately)
- Providing individualized case management services and disease management services

- Channeling care to providers who practice in a cost-effective manner
- Using lower cost services and products where such services and products are available and clinically appropriate (in lieu of higher-cost alternatives)
- Conducting provider profiling and enhancing provider accountability for quality and cost-effectiveness

## **B. Challenges Faced by the Medicaid Managed Care Model**

Collectively, the above mechanisms create strong savings opportunities for the Medicaid managed care model. At the same time, there are also some factors working against the model's ability to achieve savings in Medicaid. These challenges are outlined below.

**Transitory Enrollment.** A unique challenge in the Medicaid managed care arena is the volatile eligibility in the Transitional Assistance to Needy Families (TANF) population. Most Medicaid MCO enrollees are TANF beneficiaries, and by definition these persons have short-term enrollment duration. This poses a substantial administrative burden in continually processing a large volume of enrollments and disenrollments, including new member orientation activities and materials. The volatile nature of TANF enrollment also obviously inhibits the MCOs' ability to influence these persons' longer-term health status and cost trajectory.

**Poverty-Related Enrollee Characteristics.** Medicaid beneficiaries often face a number of barriers to health care that are related to their impoverished status. These include low educational attainment, language and literacy barriers, homelessness, lack of reliable transportation, and inadequate child care options, to name a few. Such barriers may challenge MCOs' efforts to manage and coordinate enrollee care and often require them to make additional investments to accomplish those goals.

**Prescription Drug Rebates.** The Omnibus Budget Reconciliation Act of 1990 established the Medicaid Drug Rebate Program, designed to ensure that Medicaid did not pay "list" prices for prescription drugs, but was able to take advantage of discounts that were available to manufacturers' most favored purchasers (the "best price"). Drug manufacturers participating in the drug rebate program provide quarterly rebates to states for drugs dispensed to state Medicaid beneficiaries. These rebates result in "best price" to Medicaid, i.e., Medicaid pays the lowest price paid for a prescription product by any purchaser, other than federal discount programs and state pharmaceutical assistance programs. However, the law excludes drugs paid for by Medicaid MCOs (on behalf of their Medicaid enrollees) from being counted toward manufacturers' rebate requirement. As private purchasers, Medicaid managed care plans are not entitled to the rebates mandated by the Medicaid Drug Rebate Program. Medicaid MCOs must enter into separate negotiations with drug manufacturers, either directly or through their contracting pharmacy benefits managers. Because MCOs do not have the same most favored status as Medicaid, they are not able to negotiate discounts as large as those realized by the state Medicaid agencies through the rebate program.

**Rural Barriers.** Rural settings pose daunting challenges to the managed care model in Medicaid (as well as for other payers). The limited number of providers can make development

of a network problematic, and the market may be unable to provide the economies of scale that are achievable in more metropolitan areas.

**Limited Price Discount Strategies.** One avenue for savings that exists for MCOs outside of Medicaid, price discounts, generally is not available in the Medicaid managed care arena. Outside the Medicaid arena, MCOs are often able to negotiate "discount for volume" arrangements with participating providers, whereby patients are channeled to providers who are willing to accept an MCO's payment terms. Given the low level of Medicaid unit prices versus other payers, and the corresponding low levels of Medicaid participation among physicians, it is not realistic or appropriate from a network development perspective - to drive down Medicaid prices. Savings instead must occur predominantly through truly "managing care" as opposed to managing price.

**Capitation Rate-Setting.** An overarching issue that determines the level of Medicaid savings that will be achieved through the capitated model is the capitation rates themselves. It is by no means an automatic process for states to pay a capitation rate that builds in savings and is also sufficient to cover MCOs' medical costs, administrative costs, and profit/operating margin needs. A delicate balance often exists. Capitation rates set unnecessarily high can obviously result in states having greater expenditures under their managed care program than in their FFS programs. Rates set too low will make it difficult to attract or retain health plans and could violate the federal requirement that rates must be actuarially sound.

### C. Objectives of This Report

Given both the potential of and challenges for managed care to yield savings to state Medicaid programs, as well as federal requirements that states report on the savings their Medicaid managed care programs have achieved, state and federal governments, private foundations, and health plans have commissioned numerous studies on the fiscal impacts of capitated Medicaid managed care initiatives. To better understand the findings of the research to date, America's Health Insurance Plans has asked The Lewin Group (Lewin) to objectively summarize a sample of the body of research.

In total, Lewin reviewed 24 studies<sup>7</sup>, including federally-required independent assessments of state Section 1915(b) waiver programs targeting specific types of services or populations, and general reports on the impact of Medicaid managed care. Some of the studies were conducted by states, while others such as the independent assessments were conducted by entities such as academic research institutions or consulting or actuarial firms. Other studies were conducted under contract with the federal government or private foundations. One study was health plan funded. Studies were identified and selected by America's Health Insurance Plans and Lewin with the goal of providing a balanced overview of cost savings that have been achieved under Medicaid managed care.

Section II of this report presents findings from the research, including an overview of each of the 24 studies that were reviewed followed by a summary of findings by topic area. The

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<sup>7</sup> This total includes two reports on Michigan Medicaid, two reports on Maryland's HealthChoice's program, and two reports on the Texas STAR+PLUS program.

assessment summarizes the basic structure of programs (e.g., eligibility, benefits, and enrollment), as well as cost savings. Cost savings generally are presented as a percent of estimated FFS costs or difference in per member per month (PMPM) costs between the FFS and prepaid Medicaid managed care settings. The second portion of Section II groups the study findings into selected areas (TANF/Supplemental Security Income [SSI], medical service category, etc.) and discusses the specific areas where savings appear to have been most substantial.

Section III summarizes the key findings from our syntheses and describes some potential policy implications.

## II. FINDINGS FROM THE RESEARCH

This section summarizes each of the 24 studies reviewed. Studies are grouped into those that examined states' overall capitated Medicaid managed care programs, those that looked at state capitated Medicaid managed care programs targeted to specific populations, and those that analyzed specific aspects of Medicaid managed care, such as the model's impact on pharmacy services. A summary of savings achieved under Medicaid managed care as reported in the studies is provided in Appendix B and detailed summaries of the studies are included in Appendix C. The section below also provides brief summaries of quality and access to health care outcomes of the capitated managed care programs, if the information was provided in the studies.

In considering the savings associated with Medicaid managed care reported in the studies reviewed, a few caveats are necessary. The savings data from the studies cannot be compared directly to one another because of differences in state programs and study methodologies for which no adjustments were made. The assessment of savings from Medicaid managed care programs is predicated on what Medicaid program costs would have been under FFS. As states expand their Medicaid managed care programs and gain more experience with managed care, they also erode the FFS baseline data used to determine cost-effectiveness.

It is also important to point out that assessments of savings from Medicaid managed care generally are comparing what *claims* costs would have been under FFS to the state's payments to MCOs within the managed care program for the health care and administrative services they are required to provide. That is, cost effectiveness is measured by *net savings*, after taking into account:

- Claims savings under managed care
- The administrative expenses MCOs incur as a result of their efforts to coordinate care and achieve savings
- Allowance for an operating surplus

MCO administrative activities typically include health care-related services such as case management, quality management, disease management, and utilization management. Payments to MCOs also incorporate a profit/operating margin. Health plans must have a realistic opportunity to achieve a favorable operating margin, particularly considering the downside financial risk that these organizations bear.

## **A. Summary of Key Studies**

### **1. Cost Effectiveness Studies of Specific State Programs**

This section describes general studies of states' overall Medicaid managed care programs. This analysis included a review of 11 studies conducted in 9 states along with 2 independent assessments. Of these, Arizona, Kentucky, Michigan, New Mexico, Ohio, Washington, Pennsylvania, and Wisconsin all enroll both TANF and SSI beneficiaries into their capitated managed care initiatives. Only Kentucky, New Mexico, and Pennsylvania include children in foster care in their Medicaid managed care programs. Common state carve-outs include long-term care, pharmacy, mental health and substance abuse services, and school-based health services. MCO enrollment is mandatory in Arizona, Kentucky, Michigan, New Mexico, and Wisconsin, while Ohio, Pennsylvania, and Washington operate mixed mandatory/voluntary programs. Exhibit 2 summarizes selected components of states' Medicaid managed care programs.

Exhibit 2. Summary of Select Medicaid Managed Care Programs

State	TANF children	TANF adults	Foster Care	Pregnant Women	SSI, SSI-Related	Mandatory/Voluntary	Carve-Outs (As Of Year Evaluation Was Conducted)
AZ	✓	✓		✓	✓	M	Arizona capitates all services. Mental health services and long-term care services are provided through specialized capitated MCO programs, separate from the "acute" capitated program. Select drug classes or specific drugs.
KY	✓	✓	✓	✓	✓	M	Long-term care, mental health, and school-based services
MD	✓	✓	✓	✓	✓	M	Specialty mental health services, nursing facility services after the first 30 continuous days of care, LTC HCBS, physical therapy, speech therapy, occupational therapy, audiology services, and select drug classes or specific drugs
MI	✓	✓		✓	✓	M/V	Long-term care, dental, behavioral, school-based health services, select classes or specific drugs
NM	✓	✓	✓	✓	✓	M	Behavioral Health, select classes or specific drugs, long-term care
OH	✓	✓		✓	✓	M	Long-term care, mental health, substance abuse services, non-emergency transportation
PA	✓	✓	✓	✓	✓	M/V	Behavioral health, long-term care
WA	✓	✓		✓	✓	M/V	Vision (glasses only), long-term care
WI	✓	✓		✓	✓	M	Long-term care, transportation, family planning, prenatal care coordination, targeted case management, dental, chiropractic, school-based services, TB-related services, employer sponsored coverage wrap-around services, pharmacy

Notes: In Michigan's Medicaid program, managed care enrollment is mandatory for AFDC, SSI, and Aged, Blind and Disabled (ABD) populations in all but 19 counties where it is voluntary. In Wisconsin, most Medicaid beneficiaries are served in a mandatory enrollment model, which has been implemented in 47 counties; voluntary enrollment is used in 21 more rural counties. In Pennsylvania, HealthChoices is mandatory in the Southeast, Southwest, and Lehigh/Capital Zones, while the remainder of the Commonwealth is FFS or voluntary capitated managed care. Washington State's Medicaid program is mandatory for its' TANF beneficiaries. The State currently operates a voluntary program, the Washington Cost Offset Pilot Project, for its' SSI/SSI-related beneficiaries.

a. Arizona

The level of cost savings achieved by states' Medicaid managed care programs is presented primarily on a percentage or PMPM basis, given that the states all have different enrollment

levels. The Arizona study yielded the largest percentage costs savings among the states evaluated. In FY1991, total savings in the Arizona Health Care Cost Containment System (AHCCCS) were \$52 million, representing a 19 percent savings versus what FFS costs were estimated to have been absent Medicaid managed care. To calculate the FFS equivalent, researchers used cost data from states with similar programs.

Throughout the period of 1983 to 1993, AHCCCS achieved cost savings of 11 percent for medical services and seven percent in total cost savings once the MCOs' allocations for administrative costs and operating margins were factored in. AHCCCS slowed the growth rate in Medicaid expenditures between 1983 and 1991 to 6.8 percent under Medicaid managed care from an estimated 9.9 percent under FFS.<sup>8</sup> In March 1997, more than 450,000 AHCCCS beneficiaries were mandatorily enrolled in capitated MCOs. Enrollment as of February 2004 is above 750,000, resulting from coverage expansions. It can be inferred that the cost-effectiveness of the Medicaid managed care program has been at least partially responsible for enabling Arizona to finance such-large scale enrollment growth in the AHCCCS program.

*b. Wisconsin*

In Wisconsin, AFDC children and adults, pregnant women, children, and families are enrolled in the capitated managed care program on a mandatory basis in all regions where a sufficient MCO presence exists. In 2001 and 2002, it was estimated that Wisconsin's managed care programs achieved cost savings of 7.9 and 10.7 percent of what costs would have been under FFS.<sup>9</sup> These savings were driven in part by reductions in emergency room visits through use of a 24-hour nurse line that is available to all MCO members; decreased annual hospital admissions and days through utilization management techniques such as concurrent review, coordination of long-term care services, chronic disease management, prior authorization for certain services, discharge planning, and prescription drug management. During the study period, 283,207 individuals were enrolled in MCOs. Per member per month savings are shown in Exhibit 3.

**Exhibit 3. Wisconsin MCO Per Member Per Month Savings**

Coverage Category	2001 PMPM Savings	2002 PMPM Savings
BadgerCare	\$3.87	\$23.57
AFDC-Related/Healthy Start Children	\$11.37	\$11.26
Pregnant Women	\$111.83	\$152.39

The study also reports that Wisconsin Medicaid MCOs outperform FFS Medicaid on quality measures. MCO enrollees were more likely to have at least one primary care visit and were more likely to receive mental health/substance abuse evaluations. Inpatient admission rates were lower among MCO enrollees than those in FFS.

<sup>8</sup> U.S. General Accounting Office, *Arizona Medicaid - Competition Among Managed Care Plans Lowers Program Costs*, October 1995.

<sup>9</sup> Milliman USA, *Wisconsin HMOs' Success in Medicaid and BadgerCare: Government Cost Savings and Better Health Care Quality*, February 2002.

c. *Kentucky*

The prepaid Medicaid managed care program in Kentucky operates in the Commonwealth's largest urban area, which includes Jefferson County (Louisville) and 15 neighboring counties. About 20 percent of the Commonwealth's Medicaid population lives in this area, known as Region 3. Enrollment in an MCO is mandatory in the Region 3 Partnership and one MCO, Passport Health Plan, a provider-run Medicaid health plan, currently operates in the region. In FY2000, total Region 3 enrollment in Passport Health Plan was 97,255 individuals, and in CY2003, enrollment was about 126,524.<sup>10</sup>

From 1999 to 2003, the largest program cost savings have occurred in the SSI population. From year to year the SSI population accounted for 25 to 34 percent of Region 3 Medicaid managed care enrollment, but 53 to 61 percent of program savings were attributable to this subgroup.<sup>11</sup> The savings calculations account for start-up costs and costs related to Health Insurance Portability and Accountability Act (HIPAA) compliance requirements. Since 1999, program savings have grown as shown in Exhibits 3 and 4.

**Exhibit 4. Savings in the Kentucky Partnership Program**

<b>Fiscal Year</b>	<b>Total Dollar Savings (millions)</b>	<b>Savings as a Percent of Estimated FFS Costs</b>
1999	\$7.9	2.8%
2000	\$16.1	5.4%
2001	\$32.6	9.5%
2002	\$35.8	9.5%
2003*	\$17.7	4.1%

\* Calendar Year

**Exhibit 5. Per Member Per Month Savings by Population in the Kentucky Partnership**

<b>Population</b>	<b>FY2000</b>	<b>FY2001</b>	<b>FY2002</b>	<b>CY2003*</b>
TANF	\$8.25	\$15.08	\$15.09	\$6.69
Foster Care	\$7.72	\$14.27	\$14.39	\$15.17
Pregnant Women	\$11.58	\$18.47	\$15.59	\$4.60
SSI/Medicare	\$11.09	\$28.25	\$38.00	\$19.41
SSI/No Medicare	\$27.92	\$54.79	\$59.79	\$31.91
Composite	\$13.75	\$25.74	\$26.53	\$11.67

\*Calendar Year

The Kentucky Partnership has demonstrated favorable performance with respect to quality of care and access to services. Since 1997, Passport Health Plan has made improvements in several key performance indicators, including adolescent immunizations, well child visits in the first 15

<sup>10</sup> Milliman USA, Kentucky Region 3 Partnership Program, December 2003.

<sup>11</sup> Lewin analysis of data contained in Milliman 2003, Kentucky Region 3 Partnership Program, December 2003.

months of life, prenatal care in the first trimester or within 42 days of enrollment, well-child (i.e., EPSDT), and enrollee satisfaction. Additionally, the Passport Health Plan scored above the National Commission of Quality Assurance Quality (NCQA) Compass mean.<sup>12,13</sup>

*d. Ohio*

Multiple cost-effectiveness studies have been performed on Ohio's Medicaid managed care program. These evaluations have been conducted by Mercer Government Human Services Consulting, with whom the State of Ohio has contracted to perform Independent Assessments of the capitated model's financial performance relative to the State's fee-for-service (FFS) coverage setting.

The most recent Mercer study, completed in 2006 and evaluating FY2004 outcomes, found that Ohio's capitated programs created \$72.4 million in FY2004 savings, a percentage savings of 4.2% relative to expected FFS costs in the absence of the capitation initiative.<sup>14</sup> As shown in Table 6, savings were found to occur relative to FFS in the medical services arena as well as for administrative costs.

**Exhibit 6. Savings From Ohio's Capitated Medicaid Program, July 2003 - June 2004**

<b>Expenditures</b>	<b>Upper Payment Limit (estimated FFS costs in absence of capitated program)</b>	<b>Costs Under the Capitated Managed Care Program</b>	<b>Savings</b>
Medical Services	\$1,551,922,277	\$1,497,108,886	\$54,813,391
Administrative	\$54,456,231	\$36,902,780	\$17,553,451
<b>Total Program</b>	<b>\$1,606,378,508</b>	<b>\$1,534,011,666</b>	<b>\$72,366,842</b>

In an earlier assessment completed in August 2004, Mercer estimated that Ohio's capitation programs achieved Medicaid savings of \$26.4 million (4.2%) in FY2002 and \$55.1 million (7.0%) in FY2003. Ohio's FY2002 savings were derived by medical service category and are primarily attributed to a 27 percent decrease in PMPM costs for inpatient hospital services.<sup>15</sup>

Ohio's capitation programs at the time of these assessments predominantly included TANF populations. In several counties (primarily the State's largest urban areas), the TANF population was mandatorily enrolled into MCOs; whereas in several other counties enrollment into MCOs occurred on a voluntary basis. More recently, Ohio has begun mandatorily

<sup>12</sup> Passport Health Plan presentation, transmitted to Lewin on February 27, 2004 from AmeriHealth Mercy staff.

<sup>13</sup> Quality Compass is a database of health plan quality performance and enrollee satisfaction, as measured using HEDIS and CAHPS.

<sup>14</sup> Independent Assessment of Cost-Effectiveness for the Ohio Medicaid Managed Care Program, Mercer Government Human Services Consulting, March 2006.

<sup>15</sup> Independent Assessment for the Ohio Medicaid Managed Care Program, Mercer Government Human Services Consulting, August 2004.

enrolling its ABD population (with the exception of certain sub-populations)<sup>16</sup> into the 8-region system.

*e. Michigan*

Michigan's Medicaid managed care program is implemented statewide and is a mix of mandatory and voluntary enrollment. The State has implemented the State plan option to require Medicaid enrollees in rural areas to enroll in a single MCO. As of 2007, there were 937,815 individuals enrolled in a Michigan Medicaid MCO.<sup>17</sup>

A Michigan Department of Community Health presentation included data demonstrating historic savings in the Medicaid managed care program in terms of PMPM costs. From FY2001 to FY2004, the Medicaid PMPM costs have been lower in the managed care program than in FFS. Each year the savings surpassed the savings achieved in the preceding year.<sup>18</sup> Exhibit 7 below summarizes the savings achieved in the Medicaid managed care program.

**Exhibit 7. Michigan Medicaid Per Member Per Month Costs - FFS versus MCO**

Fiscal Year	FFS	Medicaid MCO	Percent Difference*
2001	\$177	\$161	-9%
2002	\$188	\$162	-14%
2003	\$199	\$167	-16%
2004	\$210	\$170	-19%

\* Lewin calculation

The presentation provided little detail about the source of savings, however it is reasonable to assume that some of the savings comes from the enrollment of the SSI and SSI-related population. While the presentation did not provide total program savings data, it demonstrates that the Medicaid managed care program is experiencing growing annual savings by virtue of the annual MCO payment rate increases being lower than what FFS PMPM cost increases were estimated to be.

A 2005 Center for Health Program Development and Management (University of Maryland, Baltimore County [UMBC]) report found that although total spending increased in the Michigan Medicaid program by almost \$550 million for FY2004 (primarily due to caseload growth), the state would continue to save between \$28 million and \$129 million in state funds in FY2006 if the state used a capitated managed care model (the model currently in place under Michigan's Medicaid program) over a FFS model.<sup>19</sup>

<sup>16</sup> Individuals are first classified as ABD by the SSA, then must meet certain criteria (e.g. income level) to be classified by the state.

<sup>17</sup> Michigan Department of Consumer and Industry Services, Michigan HMO Enrollment Information, [http://www.michigan.gov/documents/hmo\\_enrl\\_25290\\_7.html](http://www.michigan.gov/documents/hmo_enrl_25290_7.html).

<sup>18</sup> Michigan Department of Community Health, Presentation - Michigan Medicaid: New Direction, July 23, 2003.

<sup>19</sup> University of Maryland, Baltimore County, Center for Health Program Development and Management, Michigan Medicaid: Relative Cost Effectiveness of Alternative Service Delivery Systems, April 2005.

Michigan operates the Quality Assurance Assessment Program (QAAP), a unique program that assesses a fee of 6 percent on all non-Medicare premiums. All contracted MCOs pay the assessed fee to the State, which then becomes additional revenue to the State. Note that QAAP is not assessed on the State's FFS program; and therefore, results in higher costs to MCOs.

Exhibit 8 compares estimated State costs for MCOs and FFS. UMBC modeled 4 scenarios to find the impacts that different delivery systems would have on State funds. The baseline model included:

- A 6 percent premium assessment fee under QAAP
- A 12.4 percent MCO rate increase for FY2006 (to achieve actuarial soundness)<sup>20</sup>

The modeling included assessments with and without the 12.4 percent MCO rate increase for FY2006 because, at the time of the report, funding for the FY2006 rate increase was uncertain. If the rate increase did not occur, the State's program would encounter two problems:

- Operating the program below actuarial sound rates, thereby the State would have to seek a federal waiver
- The quality of care the MCOs provide, in addition to the MCOs financial solvency could suffer

**Exhibit 8. Comparison of Estimated State Costs - MCO vs. FFS  
Cumulative Data (FY2004-2006)<sup>21</sup>**

	MCO	FFS	Difference*
Without FY2006 MCO Rate Increase/QAAP	\$1,952	\$2,281	-16%
Without FY2006 MCO Rate Increase/Without QAAP	\$2,129	\$2,281	-7%
With FY2006 MCO Rate Increase/With QAAP	\$2,035	\$2,281	-12%
With FY2006 Rate Increase/Without QAAP	\$2,219	\$2,281	-2%

\*Lewin calculation

As noted above, a Medicaid managed care model without the QAAP produces lower savings for managed care. For example, although the State will still see a savings of \$152 million over a 3-year period without a 12.4 percent increase in capitation rates and without the use of QAAP, this savings is still half of what would be realized if QAAP were in place. Additionally, savings will still be met when the State implements an increase of capitation rates by 12.4 percent for FY2006 (for the State to meet actuarial soundness).

<sup>20</sup> This 12.4% rate increase was not implemented by the State.

<sup>21</sup> The State of Michigan operates a premium assessment fee, otherwise known as the Quality Assurance Assessment Program (QAAP). At the time of the evaluation, all operating MCOs were required to pay an assessed fee of six percent on all non-Medicare premiums. The fee is paid to the state and therefore becomes incoming revenue. QAAP is not applied to FFS and therefore results in higher costs to managed care.

*f. Maryland*

Maryland's Medicaid managed care program, HealthChoice, was implemented in 1997 under an 1115 demonstration waiver, which requires state demonstrations to be budget neutral over the five year waiver period.<sup>22</sup> Maryland has used savings from its prepaid Medicaid managed care initiative to finance an expansion in Medicaid eligibility and coverage. The Maryland Department of Health and Mental Hygiene projects individual Medicaid eligibility group costs on a PMPM basis; therefore, the State is at-risk if costs exceed the approved amount. The primary expenditures for the program include capitation payments made to participating MCOs in addition to FFS payments for carved-out services.<sup>23</sup>

The Maryland Department of Health and Mental Hygiene published an evaluation of HealthChoice in January 2002, which found the program to be budget neutral over the course of the evaluation period.<sup>24,25</sup> The report states that during the first two years of the waiver, the State exceeded its budget neutrality cap.<sup>26</sup> Budget neutrality means that any expansion programs or services funded through the HealthChoice waiver are financed through savings achieved as a direct result of the HealthChoice program. However, in the third year, waiver spending fell to about two percent under the cap and fourth year spending also was on target to stay under the cap. HealthChoice is a mandatory program. Enrollment has grown from 381,000 in CY2000 to almost 491,800 in CY2006.<sup>27</sup>

According to the evaluation, the HealthChoice program has improved access to health care services. The evaluation reports that the percentages of children who had a well-child visit, individuals who had accessed an ambulatory service, and children's access to dental services increased from 1997 to 2002.<sup>28</sup>

Beginning in FY2005, HealthChoice implemented expansion programs (e.g., family planning, primary adult care, and therapeutic rehabilitation services) to the existing program. Expenditures for these expansion programs have increased annually, and expenditures have also increased annually as a percent of total expenditures for each fiscal year beginning in 2005.

A December 2007 report on the budget neutrality of the HealthChoice program found that budget neutrality was met for FY2000 through FY2007. By the end of FY2000, HealthChoice was finally operating on a positive cumulative margin between the program's actual and maximum allowable expenditures, at approximately 1.2 percent under the budget cap. On a

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<sup>22</sup> To be budget neutral, the state must demonstrate over a five-year period that it did not spend more than it would have in the absence of the waiver.

<sup>23</sup> University of Maryland, Baltimore County, Center for Health Program Development and Management, Status Report on the Budget Neutrality Calculation for the Maryland HealthChoice Program, December 2007.

<sup>24</sup> Maryland Department of Health and Mental Hygiene, HealthChoice Evaluation Final Report & Recommendations, January 2002.

<sup>25</sup> The HealthChoice evaluation began in January 2001, during its fourth waiver year.

<sup>26</sup> Initially, Maryland experienced a problem in setting appropriate capitation payment rates, effectively overpaying MCOs for SSI recipients and driving up total program costs.

<sup>27</sup> Maryland HealthChoice Program Factsheet, January 2007, <http://www.dhnh.state.md.us/mma/pdf/FINALHealthChoiceFactSheet.pdf>

<sup>28</sup> Maryland Department of Health and Mental Hygiene, HealthChoice Evaluation Final Report & Recommendations, January 2002 and HealthChoice Evaluation Update, January 2004.

cumulative basis, HealthChoice was 10 percentage points under the budget cap as of FY2007, or about \$2 billion under the cap. Even with the existence of the aforementioned expansion programs, HealthChoice's budget neutrality has remained between 12.2 and 15.1 percentage points under the budget cap for each Fiscal Year (2005-2007).<sup>29</sup>

*g. Mathematica Study of Savings Experience In Five States*

A 2001 Mathematica Policy Research, Inc. study examined the research on the early experiences of Medicaid managed care programs implemented through 1115 waivers in Hawaii, Maryland, Oklahoma, Rhode Island, and Tennessee.<sup>30</sup> Researchers targeted these states because they were among the first states to turn to statewide Medicaid managed care programs to curtail growing program costs, among other program goals. Prior to implementing the demonstration programs, the states had varying levels of experience with managed care in their Medicaid programs; some had implemented capitated programs, Primary Care Case Management (PCCM) programs, or had no Medicaid managed care. All states covered the poverty-related eligibility groups (AFDC and AFDC-related) in their capitated Medicaid managed care programs, but differed in their coverage of the SSI and SSI-related population. The 1115 waiver programs in Hawaii, Oklahoma, and Rhode Island did not include the SSI populations or the medically needy aged and disabled populations. Maryland, Oklahoma, and Rhode Island excluded the medically needy children and adult populations.

To measure the impact of Medicaid managed care on total program costs, the States' annual growth rate of Medicaid medical costs were compared to the national average. The researchers hypothesized that the rate of growth of program costs would be reduced under managed care. The study authors concluded that the waiver programs had little impact on State expenditures. Maryland's Medicaid managed care program experienced a slight decrease in growth of Medicaid medical costs. Oklahoma, Rhode Island, and Hawaii had growth rates that were slightly higher than the national average. State expenditure growth rates generally were close to the national average (Exhibit 9).

**Exhibit 9. Growth Rate in Medicaid Medical Costs per Enrollee  
(includes all Medicaid beneficiaries)**

State	Average Annual Growth Rate (%)	National Average Growth Rate (%)	Years
HI	3.0	2.9	1993 – 1998
MD	- 0.2	2.6	1996 – 1998
OK	2.8	2.4	1995 – 1998
RI	3.4	2.9	1993 – 1998
TN	2.8	2.9	1993 – 1998

This study included a health outcomes analysis of shifting from FFS to managed care for the

<sup>29</sup> University of Maryland, Baltimore County, Center for Health Program Development and Management, Status Report on the Budget Neutrality Calculation for the Maryland HealthChoice Program, December 2007.

<sup>30</sup> Mathematica Policy Research, Inc., Reforming Medicaid: The Experiences of Five Pioneering States with Mandatory Managed Care and Eligibility Expansion, April 2001.

TennCare program. The analysis was not conducted for the other State programs because of data quality issues. The study reports that perinatal outcomes and the number of physician visits per beneficiary remained steady in the shift from FFS to managed care. The study analyzed the experience of SSI beneficiaries who were enrolled in TennCare and found that they had relatively high levels of access to care and satisfaction. The report states that most of these individuals had a usual source of care and received preventive care services.

*h. Pennsylvania*

In 1997, Pennsylvania implemented HealthChoices, a capitated Medicaid managed care program. At the time, enrollment into the program was mandatory in the more urban counties of the Commonwealth, while the remaining counties remained FFS or participated in a voluntary enrollment capitated managed care program. In 2003, the Commonwealth terminated planned expansion of the mandatory managed care program in the FFS counties in favor of an enhanced primary care case management (EPCCM) program. In response to this policy change, a coalition of the seven MCOs administering HealthChoices commissioned The Lewin Group to conduct a comparative evaluation of HealthChoices and FFS. One area of assessment was cost-effectiveness.<sup>31</sup>

HealthChoices has performed exceedingly well financially, serving as a national model. The HealthChoices MCOs have consistently controlled rates of medical cost escalation, collectively holding average annual medical cost escalation to 7.4 percent, compared to an average annual cost escalation of 10.4 percent under FFS. Based on data analysis, it appears that HealthChoices has saved Pennsylvania more than \$2.7 billion from 1999-2004.

**Exhibit 11. Pennsylvania's Comparisons of Annual Rates of Cost Escalation**

Medicaid Population Group	Years Assessed	Dept. Annual PMPM Cost Escalation*	MCO Annual PMPM Medical Cost
Pennsylvania FFS Medicaid**	1999 – 2002	10.4%	n/a
MCO Average***	2001 - 2004	7.4%	7.9%

\* Reflects Department of Public Welfare's increase in cost of health plan premiums.

\*\* 2002 was the most recent available for FFS data

\*\*\* Averages are first calculated for each health plan by assessing PMPM cost escalation in each rate cell across a fixed set of enrollment numbers (to ensure that the cost trend is not being driven by changes in enrollment mix). The average rates of increase for each health plan are then averaged together weighted by each plan's 2003 enrollment level.

Year after year, the financial status of HealthChoices has remained in balance.

A number of states have seen health plans exit the Medicaid market due to inadequate rates. In Pennsylvania, the collective medical loss ratio of the HealthChoices health plans is approaching 90 percent, and while there is some variability in operating margins across plans, in the aggregate the MCOs are holding administrative costs to approximately 8 percent of revenue and achieving an operating margin of about 3 percent.

<sup>31</sup> The Lewin Group, Comparative Evaluation of Pennsylvania's HealthChoices Program and Fee-for-Service Program, May 2005.

Furthermore, the cost-effectiveness that is occurring under HealthChoices is predominantly attributable to coordination of care. The HealthChoices program has served as a vehicle for propping up - rather than ratcheting down or discounting - unit prices paid to safety net providers vis-à-vis FFS rates.

*i. New Mexico*

The New Mexico Medical Review Association retained Lewin to conduct an independent assessment of the quality, access, and cost-effectiveness of health care services delivered under New Mexico's Managed Care program, Salud!<sup>32</sup> The Salud! Program was implemented on July 1, 1997. Prior to that, the State used a FFS program coupled with a PCCM called Primary Care Network (PCN). Though PCN managed to improve access and contain costs, the need for a more rigorous risk-based managed care model was evident.

To determine the cost-effectiveness of Salud!, Lewin estimated the FY2006 savings achieved relative to FFS costs. The savings fell between three and five percent. This percentage range was based on the following information:

- The initial 5 percent savings built into the program's capitation rates
- An earlier Lewin study estimating savings to be between 1 and 2 percent during FY2000 and FY2001, but growing between these two years
- The fact that Salud! capitation rates have increased, on average, 8.6 percent per year between 2003-2006, a trend line that closely parallels national Medicaid per capita cost norms
- The CY2005 program-wide medical loss ratio of 85.3 percent, which is well-matched with industry-wide Medicaid managed care norms, but is 2 to 3 percentage points below the average medical loss ratio typically occurring in other states with mandatory enrollment for both TANF and SSI subgroups

This savings range is translated into a total dollar savings estimate in Exhibit 12. In situations where a single savings estimate is needed, it is recommended that the midpoint range is used, or a four percent savings. During FY2006 Lewin estimated that Salud! created savings of \$33 million to \$56 million with the midpoint estimate being a savings of \$44 million. These figures include both the State and federal share of Medicaid expenditures.

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<sup>32</sup> The Lewin Group, Independent Assessment of New Mexico's Medicaid Managed Care Program - Salud!, February, 2007.

**Exhibit 12. Estimated Salud! Savings**

Salud PMPM Weighted Average Capitation Rate, FY2006	\$359.51
<b>Approximate Average Enrollment</b>	245,000
<b>Approximate member months, FY2006</b>	2,940,000
<b>Estimated Salud! Costs, Total Dollars, FY2006</b>	\$1,056,959,400
<b>Savings Percentage Versus FFS</b>	
Low Estimate	3%
Midpoint Estimate	4%
High Estimate	5%
<b>Estimated FFS Costs in Absence of Salud!</b>	
Low Estimate	\$1,089,648,866
Midpoint Estimate	\$1,100,999,375
High Estimate	\$1,112,588,842
<b>Estimated Salud! Savings, FY2006</b>	
Low Estimate	\$32,689,466
Midpoint Estimate	\$44,039,975
High Estimate	\$55,629,442

Note: Figures assume percent savings accrue to both physical and behavioral health cost components. All figures represent both State and federal share of Medicaid expenditures.

*j. Washington*

The State of Washington retained The Lewin Group to provide an analysis of possible new cost containment and revenue enhancement strategies for the State.<sup>33</sup> Washington's Medicaid program has already been successful in reducing and containing costs by working "smarter" and more efficiently than virtually all other states. As one of its efforts to contain costs, Washington established the Medicaid Utilization and Cost Containment Initiative (UCCI), which is designed to find efficiencies and lower expenditures in the State's Medicaid program, without reducing benefits or eligibility. In addition to UCCI, the State is also exploring other avenues for potential savings in its Medicaid program. It has also been estimated that between \$25.4 million and \$30.2 million in cost avoidance and recovery is attributable to UCCI (exclusive of additional administrative expenses associated with UCCI). The UCCI program savings were generated as a result of increasing coordination of benefits as well as provider audits and quality reviews.

<sup>33</sup> The Lewin Group, Medicaid Cost Containment: Report No. 3, January 2003.

## 2. *Studies of Medicaid Managed Care Programs Involving Population Subgroups*

The studies previously mentioned describe state experiences with Medicaid managed care programs that cover broad populations typically the TANF and TANF-related<sup>34</sup> children and adults, and in some cases the SSI and SSI-related children and adults, and pregnant women; and provide comprehensive Medicaid services, with noted carve-outs. Several states have also implemented targeted Medicaid managed care programs available only to specific Medicaid populations. This review of research included studies of the Texas STAR+PLUS program, a study of the impact of Medicaid managed care on the urban ABD population in Oklahoma, a prospective analysis of estimated savings achievable under Medicaid managed care for Hennepin County in Minnesota, and an evaluation of New Mexico's behavioral health program.

### *a. An Independent Assessment of the STAR+PLUS Program*

The State of Texas also conducted independent assessments of its 1915(b) waiver program, known as STAR+PLUS. STAR+PLUS provides integrated primary, acute, and long-term care services to the SSI and SSI-related<sup>35</sup> population residing in Harris County (Houston), including those who are dually eligible for Medicaid and Medicare.<sup>36</sup> Medicaid managed care enrollment is mandatory for the large majority of the SSI and SSI-related population; most STAR+PLUS eligible individuals choose between enrolling in one of two MCOs, while a smaller number (SSI clients under age 21) may choose between the HMOs and the PCCM program. Prescription drugs are carved-out of the capitated program. As of February 2004, there were 62,782 individuals enrolled in STAR+PLUS. During the period of the first independent assessment (February 1998 to January 2000), 55,000 were enrolled. During the second independent assessment period (September 1999 to August 2002), 57,000 were enrolled.<sup>37</sup> (This represents the large majority of the SSI and SSI-related population in Harris County, as enrollment is mandatory for all except approximately 5,000 who are allowed to participate voluntarily.)

Savings achieved in each year of the STAR+PLUS program have grown annually, suggesting that a ramp-up phenomenon exists as the health plans, enrollees, and provider community become increasingly accustomed to the managed care setting over time. During the first waiver period, Texas experienced additional costs of \$1.97 million or \$2.68 PMPM in Year 1 due to

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<sup>34</sup> TANF-related beneficiaries may include those individuals who do not qualify for cash payments under TANF but who are medically needy, pregnant women and children for whom the state's financial criteria for Medicaid eligibility may not be as strict, etc.

<sup>35</sup> Many Medicaid programs do not require receipt of cash assistance for eligibility under the Aged, Blind, and Disabled (ABD) program. A person may qualify even if his or her income and resources are too high for SSI. Thus, the SSI-related category includes those aged, blind, and disabled individuals who are medically needy but do not qualify for cash payments under SSI.

<sup>36</sup> Not all SSI and SSI-related beneficiaries are eligible for Medicare. SSI-related Medicaid beneficiaries are not eligible for Medicare because their income and resources are too high to qualify for SSI and, in turn, for Medicare. In addition, SSI beneficiaries are not eligible for Medicare until after 24 months of continuous disability benefits.

<sup>37</sup> Texas A&M Public Policy Research Institute, STAR+PLUS Medicaid Managed Care Waiver Study: An Independent Assessment of Access, Quality, and Cost-Effectiveness, October 1999. Of the 57,000 Medicaid beneficiaries participating in STAR+PLUS in the second independent assessment period, 44 percent received Medicaid benefits only and 56 percent were dually eligible. Dually eligible enrollees continued to receive acute care services from the Medicare provider of their choice and received only Medicaid long-term care services from their STAR+PLUS HMO.

implementation costs, and savings of \$7.57 million or \$10.22 PMPM in Year 2. Combined savings in Years 1 and 2 were \$6.05 million or \$4.11 PMPM.<sup>38</sup>

Waiver period one savings were less than one percent of the program cost for the entire waiver period. In the second waiver period, total savings were \$66 million or \$100.95 PMPM in Year 1 (February 2000 to January 2001), and \$56 million or \$82.71 PMPM in Year 2 (February 2001 to January 2002).

Combined savings in waiver period two were \$123 million or \$91.67 PMPM.<sup>39</sup> Waiver period two savings represent an almost 17 percent reduction in State Medicaid costs as compared to projected FFS costs for this population. In addition, it is worth noting that in the first waiver period, three MCOs participated in STAR+PLUS, while in the second waiver period, two participated.

The first assessment evaluated enrollee satisfaction and found that STAR+PLUS enrollees had satisfaction levels that were about the same as FFS enrollees. The STAR+PLUS evaluation indicated that the program had an inpatient discharge rate and average length of stay that was similar to the FFS baseline and decreased the number of emergency room visits. STAR+PLUS MCOs also assigned care coordinators to enrollees in an appropriate manner. The second assessment found that STAR+PLUS continued to reduce the number of inpatient discharges and average length of stay.

The State has sought to expand STAR+PLUS to several new market areas. A State slide presentation<sup>40</sup> explaining the State's approach contained some additional performance-related information. Member satisfaction ratings are consistently high across a series of specific access issues, inpatient stays have been lowered by 28 percent, the number of members accessing community-based adult day care services has increased 38 percent and the number of members accessing personal assistant services has increased 32 percent.

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<sup>38</sup> Ibid.

<sup>39</sup> Texas A&M Public Policy Research Institute, Medicaid Managed Care Waiver Study: An Independent Assessment of Access, Quality, and Cost-Effectiveness of the STAR+PLUS Program, June 2002.

<sup>40</sup> "Medicaid Managed Care Expansion" slide presentation, which state staff are currently using to describe the state's intended broadening of STAR+PLUS.

*b. Serving the Aged, Blind, and Disabled in Oklahoma Medicaid Managed Care*

Until the end of 2003, the aged, blind, and disabled (ABD) population in Oklahoma was mandatorily enrolled in the State's Medicaid managed care program known as SoonerCare.<sup>41</sup> In more urban areas of the State, Medicaid beneficiaries, including the ABD population, were enrolled in fully prepaid MCOs, while in more rural parts Medicaid beneficiaries received health care services through a partially prepaid PCCM delivery system. The Center for Health Care Strategies commissioned a study of Oklahoma's experience in providing prepaid health care services to the ABD population in the State's urban managed care service areas, i.e., Oklahoma City, Tulsa, and Lawton. The study focused on the 583 beneficiaries enrolled in the Heartland Health Plan of Oklahoma (HHPO) who also were among the top 10 percent of service users from among this urban ABD population.<sup>42</sup> The study analyzed enrollment and medical claims data from the 12 months before and following each member's enrollment into managed care, during the time period from February 1998 to December 2000.

The study found that average managed care claims PMPM were 15 percent lower than the cost of caring for those individuals in FFS in the 12 months prior to their enrollment in the MCO, even though the MCO benefit package was more comprehensive. When the study assessed the full managed care payment cost in relation to the FFS claims costs, overall PMPM costs were 4 percent lower under managed care.<sup>43</sup> In considering these savings estimates, it is important to remember that this study only looked at the subgroup of the Oklahoma Medicaid ABD population living in the State's urban Medicaid managed care region and that enrolled in a single MCO.

The study also summarized findings from a focus group and surveys related to access to care, continuity of care, and satisfaction. The focus group was conducted in October 2001 and surveys were fielded from September to December 2001. Focus group participants noted that HHPO provided access to a fuller range of services than were previously provided and that care coordination had improved in comparison to FFS Medicaid. They also felt that the overall quality of services for individuals with disabilities enrolled in HHPO had improved. Satisfaction survey results indicated that enrollees had a high level of satisfaction with managed care - 80 percent of respondents described their satisfaction as "very good" or "good," the two highest ratings.

*c. Medicaid Managed Care in Hennepin County, Minnesota*

A third study attempted to prospectively estimate the level of savings that could be achieved under Medicaid managed care for a study population of adult women in Hennepin County,

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<sup>41</sup> This report provides information regarding Oklahoma's experience enrolling the aged, blind, and disabled individuals into capitated Medicaid managed care, although effective January 2004, Oklahoma discontinued its capitated Medicaid managed care program. Following the November 2003 decision of one of the state's three MCOs to not renew its contract, the state decided to end its capitated program. Individuals who were enrolled in a Medicaid MCO are being transitioned into the PCCM program. Oklahoma Health Care Authority Press Releases on November 6 and 12, 2003, <http://www.ohca.state.ok.us/general/media/newpress/>.

<sup>42</sup> Center for Health Care Strategies, *Serving the Special Program/ Aged, Blind, and Disabled Population*, April 2002.

<sup>43</sup> *Ibid.*

Minnesota.<sup>44</sup> Hennepin County includes Minneapolis and is the State's largest county. Researchers used 1987 ambulatory care cost data from Maryland's AFDC Medicaid program to approximate cost of care because when the Minnesota data was originally collected as part of a related study, cost data were not collected. Researchers also assessed Minnesota's inpatient hospital payment rates (using data for 1985). The study estimated savings associated with moving to Medicaid managed care from FFS to be about 10 percent, taking into account the initial effects of switching to managed care.

*d. Assessment of HUSKY, Connecticut's Medicaid Managed Care Program*

Connecticut's mandatory capitated Medicaid managed care program began in 1995 as a 1915(b) waiver, and became known as Hhealthcare for UninsUred Kids and Youth (HUSKY) in 1997. HUSKY is mandatory for the TANF population (HUSKY A) and SCHIP (HUSKY B) throughout the entire State. As of December 2006, over 309,000 beneficiaries were enrolled in either HUSKY A or B through one of four MCOs. The Lewin Group studied the HUSKY program to assess the program's cost performance.<sup>45</sup> Lewin looked at the following Medicaid managed care models:

- Managed Care Organizations (MCOs)
- Primary Care Case Management (PCCM)
- Disease Management (DM)
- Complex Case Management (CCM)

Lewin found that the HUSKY population's per capita cost escalation has been below both the national rate of TANF cost escalation as well as the rate of inflation in selected non-HUSKY Medicaid subgroups (i.e., disabled eligibles, adults). Under the capitated HMO/MCO model that HUSKY operates, MCOs have held their medical loss ratios (between 90 and 91 percent) and administrative cost ratios (below 10 percent) at favorable levels when compared to their respective national averages.

Expenditures under HUSKY are at least 5 percent below what any newly implemented non-capitated Medicaid managed care model would be able to deliver, translating to an annual Medicaid spending differential of at least \$37 million (5 percent of the 4 MCOs' collective CY2005 Medicaid premium revenues of \$740 million).

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<sup>44</sup> Freund, D., Kriesner, T., LoSasso, A., How Managed Care Affects Medicaid Utilization A Synthetic Difference-in-Difference Zero-Inflated Model, April 1996.

<sup>45</sup> The Lewin Group, Assessment of HUSKY, Connecticut's Medicaid Managed Care Program, January 2007.

**Exhibit 15. Estimated Overall Percentage Savings by Model, TANF Population**

Medicaid Managed Care Model	Overall Savings (Loss) Percentage Versus FFS
HMO/MCO	6.7%
PCCM/DM	2.0%
CCM	4.0%
PCCM/DM/CCM	4.2%

Source: Percentage savings estimates of each model prepared as part of Lewin Group report, "Assessment of Medicaid Managed Care Expansion Options in Illinois," May 2005. Savings percentages shown depict the region that is deemed most comparable to Connecticut, and represent percentage savings during the first implementation year.

Note also that the figures shown in Exhibit 15 depicted savings during the initial implementation year. The capitated HMO/MCO model is expected to yield growing savings over time, and as shown above, yields rough one and a half times more savings than the next closest model (PCCM/DM/CCC).

*e. New Mexico's Behavioral Health Program*

The Lewin Group conducted an independent assessment of the access, quality, and cost effectiveness of health care services delivered under New Mexico's Behavioral Health Collaborative (the Collaborative).<sup>46</sup> The Collaborative chose a capitated behavioral health plan to implement a new behavioral health system after a 2002 report found the previous behavioral health system to be fragmented, and saw costs for psychiatric inpatient services double from \$17 to \$38 million between FY1997-2001.

The cost-effectiveness of New Mexico's behavioral health initiative is extremely difficult to assess for several reasons. First, by many accounts there was an under-utilization of services under Salud! which prompted the switch to a behavioral health carve-out model. Against this baseline, Medicaid behavioral health care costs were presumed to need to increase. Second, additional services were added in the behavioral health plan's contract that were not covered under Salud!, which creates commensurate cost increases. Third, the program is in its first year of implementation. It is far too early to obtain sound data on the impacts of the newly redesigned system, and the carve-out approach requires years to evolve (rather than months) before its true impacts can be discerned.

Exhibit 16 presents the State's estimated Medicaid behavioral health costs during State FY2005 (under Salud!) and during State FY2006 under the carve-out initiative implemented by the capitated behavioral health plan. These figures estimate that behavioral health costs increased by 26 percent in total dollars, and by 33.6 percent on a PMPM basis from FY2005 - FY2006. This is clearly a large-scale, intentional increase designed to strengthen the behavioral health services delivery system and improve patient outcomes, yet it is not possible to make a determination as to whether these investments will prove to be cost-effective.

<sup>46</sup> The Lewin Group, Independent Assessment of New Mexico's Behavioral Health Program. March 2007

**Exhibit 16. Behavioral Health Cost Comparisons, FY2005 versus FY2006**

	Member months	MCO Behavioral Health Expenditures	Costs Including 15% Administration Allocation
<b>State FY2005</b>			
Total Dollars, MCOs, FY2005	3,139,978	\$131,693,246	\$151,447,233
PMPM, MCOs, FY2006		\$41.94	\$48.23
<b>State FY2006</b>			
Total Dollars, Value Options, FY2006	2,967,182	\$166,312,611	\$191,259,502
PMPM, Value Options, FY2006		\$56.05	\$64.46

**3. Studies of Medicaid Managed Care Program Impacts On Specific Services**

Several studies examine the impact of state Medicaid managed care programs on certain types of services. The following section describes the findings of studies of prescription drug use, preventable hospitalizations in California, and alcohol treatment and cost in Medicaid FFS versus Medicaid managed care.

*a. Comparison of Medicaid FFS and Capitated Pharmacy Costs and Usage*

The Center for Health Care Strategies funded 2 studies related to the impact of Medicaid managed care on prescription drug cost and utilization. Both of these studies were conducted by The Lewin Group. The first study examined FFS drug spending and usage data from 5 states compared to similar data from 13 Medicaid health plans in ten states,<sup>47</sup> specifically for the TANF population.<sup>48</sup> The study examined the key factors influencing prescription drug costs: prices, mix of drugs prescribed, and utilization. The study concluded that for the TANF population, PMPM prescription drug costs were 10 to 15 percent lower in capitated Medicaid managed than in the FFS setting, although MCOs initially started at a 15 percent price disadvantage largely due to Medicaid drug rebates rules. Once factors such as MCOs' lower dispensing fees, their ability to influence the mix of lower cost drugs used (including generics), and the lower number of prescriptions due to greater management of the pharmacy benefit are considered, drug expenditures in Medicaid MCOs become lower than in FFS.<sup>49</sup> According to Lewin's calculations, post-rebate average drug costs were \$20.46 PMPM in the FFS programs and \$17.36 PMPM in Medicaid managed care.

The second CHCS/Lewin study analyzed the option of carving-out prescription drugs from the prepaid managed care setting of Arizona's AHCCCS program, using a simulation based on

<sup>47</sup> States were requested to provide data from CY2001.

<sup>48</sup> Center for Health Care Strategies, Comparison of Medicaid Pharmacy Costs and Usage between the Fee-for-Service and Capitated Settings, prepared by The Lewin Group, January 2003.

<sup>49</sup> Lewin has documented in a series of studies, including the CHCS-funded studies referenced herein and additional studies that can be downloaded at no charge from Lewin's website ([www.lewin.com](http://www.lewin.com)) that the generic fill rate in the capitated setting is roughly ten percentage points higher than in the Medicaid FFS environment. Prescriptions filled per member per month are also considerably lower in the capitated setting.

Federal FY2002 cost data. Currently, prescription drugs are included in the AHCCCS MCO payment rate. Lewin assessed the effectiveness of the AHCCCS pharmacy benefit by comparing prescription drug cost and utilization data from AHCCCS to the data from other Medicaid programs, and prepared cost estimates of carving-out prescription drugs from AHCCCS.<sup>50</sup>

The study found the AHCCCS program to be exceptionally cost-effective in providing prescription drugs. The PMPM cost of providing pharmaceuticals to the ABD population in the AHCCCS program in Federal FY2002 was \$112.21, the lowest figure in the nation and 38 percent below the national average PMPM cost of \$181.01. The next nearest State was Michigan, whose PMPM costs were 11 percent higher than Arizona's. The difference in PMPM cost is particularly compelling because Arizona fully capitates prescription drugs costs, while nearly all other states pay for ABD persons' pharmacy claims under FFS.

Another important study finding is that carving out prescription drugs from the Medicaid managed care setting and paying for drugs on a FFS basis would result in a net cost to the state, not generate savings. The estimated net additional cost to the state of providing prescription drugs under FFS would be \$3.7 million. While Arizona would gain \$40 million in rebate savings, the administrative costs associated with carving out prescription drugs, such as developing and maintaining a preferred drug list and claims processing and changes in the drug mix and volume, would negate any savings and ultimately result in added costs.

#### *b. Preventing Unnecessary Hospitalization in Medi-Cal*

A study conducted by the Primary Care Research Center at the University of California and funded by the California HealthCare Foundation, compared Medi-Cal (California's Medicaid program) preventable hospitalization rates between 1994 and 1999 under managed care to FFS.<sup>51</sup> The study found that TANF and TANF-related enrollees in Medi-Cal managed care had 38 percent lower rates of preventable hospital admissions (7.1 per thousand) than in FFS (11.4 per thousand). Between 1994 and 1999, the Medi-Cal program experienced an average decrease in preventable admissions of 7,000 per year, resulting in a \$66 million reduction in inpatient hospital costs as compared to what would have been incurred in FFS.

The SSI-population enrolled in Medi-Cal managed care experienced a decrease of 25 percent in the rate of preventable hospitalizations. SSI-eligible Medi-Cal enrollees were required to enroll in managed care plans in 8 counties. The preventable hospitalization rates were 57.5 per thousand in managed care and 76.4 per thousand in FFS. While the actual rates of hospitalization were understandably higher among the SSI population, the difference in admission rates between managed care and FFS were similar between the TANF and SSI groups. This finding would seem to support the argument that the higher need SSI population would benefit, both in terms of care management and cost savings, from broader enrollment in managed care.

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<sup>50</sup> Center for Health Care Strategies, *Analysis of Pharmacy Carve-Out Options for the Arizona Health Care Cost Containment System*, prepared by The Lewin Group, November 2003.

<sup>51</sup> California HealthCare Foundation, *Preventing Unnecessary Hospitalizations in Medi-Cal: Comparing Fee-for-Service with Managed Care*, prepared by Primary Care Research Center, University of California, San Francisco, February 2004.

c. *Comparison of Alcohol Treatment and Costs between FFS and Medicaid Managed Care*

The National Institute on Alcohol Abuse and Alcoholism<sup>52</sup> funded a study on the two most populated counties in Pennsylvania, Allegheny and Philadelphia, to examine the differences between utilizing managed care with a behavioral health carve-out (Philadelphia) and serving persons entirely in the FFS setting (Allegheny) on the utilization and cost of alcohol-related treatments for high-risk beneficiaries being treated for alcohol abuse or other dependency problems. The study looked at the two populations between 1995 (before managed care-implementation) and 1998 (after managed care-implementation).

Over the study period, per person costs for those treated decreased from \$7,662 to \$5,664 at the managed care site in Philadelphia. Included in this decline was a \$1,200 reduction for alcohol abuse treatment, and a decrease of \$900 for drug abuse treatment per person. Length of stay and daily bed costs were also reduced at the managed care site in Philadelphia County. In contrast, the costs at the Allegheny County FFS site increased from \$4,871 to \$6,449 throughout the study period. The FFS site did, however, show a decline of \$400 in alcohol costs and \$250 for drug costs per person, although there was a significant increase of \$2,000 per person in psychiatric inpatient costs due to longer lengths of stay and more psychiatric co-morbidities.

A regression analysis of both sites showed that managed care did not significantly lower treatment costs, but the difference in costs were impacted by other variables. The FFS site in Allegheny County had increased costs due to psychiatric hospital inpatient stays in addition to increased psychiatric co-morbidities. The managed care site in Philadelphia County also showed a marked increase in co-morbid psychiatric problems, but managed care programs like the one in Philadelphia County are able to keep costs to a minimum by contracting with inpatient facilities and negotiating lower per diem rates. The managed care site was also able to lower costs by treating alcohol and drug dependencies at non-hospital facilities.

**B. Findings by Topic Area**

Earlier, this report described some assumptions that could be made about savings under a prepaid Medicaid managed care program. It was expected that savings under managed care for the Medicaid population would be greater in urban settings, among the SSI and SSI-related populations, and that certain services would be more amenable to savings. Based on the studies reviewed, it is generally difficult to isolate the specific sources of Medicaid managed care savings because the studies do not provide sufficient detail or did not include such an analysis. However, some observations about source of savings can be made.

**1. The SSI and SSI-Related Population**

The studies provided some evidence that Medicaid managed care savings could be significant for the SSI and SSI-related population because they typically are high users of services and are the most costly group to cover. In some states, most of overall Medicaid managed care savings

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<sup>52</sup> Comparison of Alcohol Treatment and Costs After Implementation of Medicaid Managed Care, Rothbard, A. and Kuno, E., *The American Journal of Managed Care*, May 2006.

achieved is attributable to this population. In Arizona, 60 percent of the \$102.8 million achieved from 1983 to 1991 was from the SSI population. In the Kentucky Region 3 Partnership, the SSI population made up 25 to 34 percent of total enrollment and accounted for 53 to 61 percent of the savings achieved from 1999 to 2003. Oklahoma also provided Medicaid services to the ABD population through MCOs. An analysis of a subset of the entire ABD population who were enrolled in a particular health plan and who were among the highest 10 percent of service users found that average claims PMPM were lower in managed care than in FFS based on data from February 1998 to December 2000.

The STAR+PLUS program in Texas is targeted to the urban SSI population of Harris County. The independent assessments reviewed indicate that the enrollment of this Medicaid population into managed care has yielded savings and that the level of savings has grown over time. Savings during the first waiver period (February 1998 to January 2000) was \$6.05 million or \$4.11 PMPM, and \$123 million or \$91.67 PMPM in the second waiver period (September 1999 to August 2002). In addition, Pennsylvania HealthChoices, which relies heavily on capitation for its population with disabilities, experienced average per capita costs that were \$6,800 lower for its beneficiaries with disabilities than the average of surrounding states. These savings are notable even if they can not be solely attributed to managed care.

## **2. Inpatient Services**

The studies demonstrated that cost savings are largely attributable to decreases in inpatient utilization. The study of preventable hospitalizations in California found that the TANF and TANF-related populations had 38 percent lower rates of preventable hospitalizations, saving the state an estimated \$66 million between 1994 and 1999. The SSI and SSI-related population had 25 percent lower rates of preventable hospitalizations.

Hospital care was also a key factor in the savings attained by Ohio's PremierCare. Inpatient costs decreased 27 percent under Ohio's Medicaid managed care program, from \$76 PMPM before implementation of the program (in CY2000) to \$55 PMPM once the program was implemented (in State FY2002). Furthermore, a study of inpatient utilization for alcohol-related treatment in Pennsylvania found that costs per person decreased by approximately 26 percent at the managed care site in Philadelphia County, while costs per person increased by approximately 32 percent at the FFS site in Allegheny County.

## **3. Prescription Drugs**

Pharmacy was also an area where Medicaid managed care programs yielded noteworthy savings. The Center for Health Care Strategies' comparison of FFS and Medicaid managed care drug costs (CY2001), using FFS and MCO drug cost and utilization data for the TANF population from multiple states, found that the PMPM cost of drugs in a capitated setting was 10 to 15 percent lower than in the FFS setting (even after taking into consideration the larger rebates state agencies receive under FFS).

In a related study of prescription drug costs in Arizona's AHCCCS program, which currently carves in prescription drugs, it was determined (based on Federal FY2002 data) that retaining the benefit in the prepaid MCO model was more cost-effective when compared to carving it out.

This study also found that Arizona's PMPM pharmacy costs are well below those of any other state's Medicaid program - an important finding given that Arizona is the only State that fully capitates the Medicaid pharmacy benefit. For example, Arizona's PMPM pharmacy costs for the aged/blind/disabled population were found to be 38 percent below the national average. Additionally, Pennsylvania Medicaid's annual PMPM prescription annual cost increase of 14.4 percent under its FFS system dropped to 9.1 percent during the 3 years following the implementation of HealthChoices.

#### **4. Quality Impacts**

Access to care and quality under Medicaid managed care were not the main focal points of this review of the research but the reviews of the studies yielded information on some access and quality data. Some studies<sup>53</sup> reported on analysis of utilization data and findings from consumer surveys. In most cases, state Medicaid managed care programs have improved Medicaid beneficiaries' access to services, and both the programs and individual MCOs have earned high satisfaction ratings from enrollees. We provide examples below.

In Wisconsin, HMOs members are more likely to have at least one primary care physician (PCP) visit than those in FFS. In 1997, 56.6 percent of HMO members had a PCP visit compared to 44.7 percent of those in FFS; in 1998, 57.3 percent of HMO members had a PCP visit compared to 42.3 percent of those in FFS.<sup>54</sup>

Connecticut's HUSKY population has been found to obtain a large volume of office visit services. Aggregating each MCO's utilization reports for CY2005 shows that more than 1.7 million visits occurred, split 54 percent between primary care and 46 percent specialist care. On average, HUSKY enrollees obtained 2.9 primary care visits during 2005 and 2.5 specialist visits.<sup>55</sup>

In the Pennsylvania HealthChoices program, the MCOs have significant experience monitoring and improving quality for their members. The Commonwealth plays a strong role in requiring a broad array of quality assurance and quality improvement components of all the HealthChoices MCOs. In addition to the required monitoring, the MCOs and their staff have a strong commitment to quality care, quality service, to monitoring themselves, and planning improvement initiatives, across every aspect of their business.

New Mexico's Salud! program has been successful providing and improving quality care to Medicaid members across the State. Although quality improvement is a continuous process, New Mexico and the MCOs are actively striving to provide quality services to members. In areas that score below national benchmarks, each MCO has internal procedures in place to ensure that these areas are addressed. Each MCO also performed well on HEDIS® and CAHPS® measures.

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<sup>53</sup> Wisconsin, Kentucky, Maryland, Tennessee, Texas, New Mexico, Connecticut, Pennsylvania, and Oklahoma.

<sup>54</sup> Milliman USA, Inc. Wisconsin HMOs' Success in Medicaid and BadgerCare: Government Cost Savings and Better Health Care Quality, February 2002.

<sup>55</sup> As a comparison, low risk children in Colorado's Medicaid program utilized primary care services at a rate of 1.2 visits per year and high risk children in Colorado's Medicaid program utilized services at a rate of 3.7 visits per year in 2002.

These types of findings are important because they demonstrate that Medicaid managed care can maintain or increase enrollees' ability to obtain necessary health care services while generating program savings.

### III. CONCLUSION

Studies indicate that Medicaid managed care has been successful in achieving cost savings in a variety of states for a variety of populations, although the level of savings varies. Savings in the states included in the studies reviewed ranged from half of 1 percent to 20 percent of what costs would have been under FFS and the research indicates that the level of savings grows over time as states gain more experience with their programs. According to the studies reviewed, Medicaid managed care enrollees have provided high ratings of the programs and their MCOs.

Based on the review of cost effectiveness studies of Medicaid managed care programs, there are several policy implications to be considered. First, states may want to consider including the SSI and SSI-related population in a Medicaid managed care program. While many Medicaid managed care initiatives have generated savings when focused on the TANF population, the savings that can be achieved in the SSI subgroup appear to exceed those available through serving TANF. The population of Medicaid beneficiaries with disabilities makes up 14.4 percent of total Medicaid enrollment, but accounts for 40 percent of total Medicaid expenditures.<sup>56</sup> The studies reviewed demonstrated very strong savings can be achieved by capitated health plans in SSI beneficiaries' inpatient and pharmacy costs.

Second, some states with Medicaid managed care programs are revisiting their carve-in/ carve-out decisions. Pharmacy carve-outs enable states to obtain higher rebates through the federal rebate program, whereas capitating (or "carving in") the pharmacy benefit offers superior benefits management with regard to the mix and volume of medications.

In summary, while it is difficult to accurately predict the level of cost savings that will be achieved in any given Medicaid managed care program, our synthesis of findings from a large body of research on the topic clearly illustrates that Medicaid managed care typically saves money and represents a highly attractive alternative to reductions in eligibility and benefits and/or provider payment cuts. There have been instances where states have not achieved savings from their Medicaid managed care program in a given year, and other instances where health plans have exited the program. There is obviously always going to be a point below which the state's managed care payment rates are no longer viable for MCOs. However, the preponderance of the research evidence is that prepaid managed care partnerships between state Medicaid agencies and MCOs can produce substantial program cost savings without forcing the health plans to operate at a financial loss. The federal requirement for actuarially sound rates is a critical building block for successful program. As states consider expanding their Medicaid managed care programs and as other states implement new Medicaid managed care programs, they may wish to include certain populations (e.g., SSI) and services (e.g., pharmacy and mental health services) that have often been excluded from Medicaid managed care due to quality and access to care concerns. Some of the studies included in this report addressed quality and access to care and their findings demonstrated positive results from Medicaid managed care.

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<sup>56</sup> Kaiser Family Foundation State Health Facts, Distribution of Medicaid Enrollees by Enrollment Group and Distribution of Medicaid Payments by Enrollment Group, FY2004, <http://www.statehealthfacts.org>

## Appendix A. Bibliography of Studies Reviewed

### Cost Effectiveness Studies of Specific State Programs

- Arizona Medicaid – Competition Among Managed Care Plans Lowers Program Costs, U.S. General Accounting Office, October 1995
- Wisconsin HMOs' Success in Medicaid and BadgerCare: Government Cost Savings and Better Health Care Quality, Milliman USA, Feb. 2002
- Kentucky Region 3 Partnership Program, Milliman USA, December 2003
- Independent Assessment for the Ohio Medicaid Managed Care Program, Mercer Government Human Services Consulting, March 2003
- Independent Assessment for the Ohio Medicaid Managed Care Program, Mercer Government Human Services Consulting, April 2004
- Independent Assessment of Cost-Effectiveness for the Ohio Medicaid Managed Care Program, Mercer Government Human Services Consulting, March 2006
- Michigan Medicaid: New Directions Presentation by the Michigan Department of Community Health, July 23, 2003; and Michigan Medicaid: Relative Cost Effectiveness of Alternative Service Delivery Systems, April 2005
- HealthChoice Evaluation, Maryland Department of Health and Mental Hygiene, January 2002; and Status Report on the Budget Neutrality Calculation for the Maryland HealthChoice Program, December 1, 2007
- Reforming Medicaid: The Experiences of Five Pioneering States with Mandatory Managed Care and Eligibility Expansions, Mathematica Policy Research, for the Centers for Medicare and Medicaid Services, April 2001
- Comparative Evaluation of Pennsylvania's Health Choices Program and Fee-for-Service Program, The Lewin Group, May 2005, <http://www.lewin.com/NR/rdonlyres/49FBE34A-23DC-479E-A227-D464EECBDA6/0/3178.pdf>
- Independent Assessment of New Mexico's Medicaid Managed Care Program – Salud!, The Lewin Group, February 2007, <http://www.lewin.com/NR/rdonlyres/14A9B20B-FEC1-432E-A0D45BE461C305EA/0/NMPhysicalHealthMedicaidMCOAssessment421863.pdf>
- Medicaid Cost Containment: Report No. 3 (Washington State), The Lewin Group, January 2003.

### Studies of Medicaid Managed Care Programs Involving High-Need Population Subgroups

- STAR+PLUS Medicaid Managed Care Waiver Study: An Independent Assessment of Access, Quality, and Cost-Effectiveness, Texas A&M University, Public Policy Research Institute, October 1999 and June 2002
- Serving the Special Program/ Aged, Blind and Disabled Population (in Oklahoma's Medicaid managed care) by Schaller Anderson, April 2002

- How Managed Care Affects Medicaid Utilization A Synthetic Differences Zero-Inflated Count Model, Freund, D., Kniesner, T., LoSasso, A., April 1996
- Assessment of HUSKY, Connecticut's Medicaid Managed Care Program, The Lewin Group, January 22, 2007, <http://www.lewin.com/NR/rdonlyres/BA89A732-061C-4396-BB7D-A2CD49021A25/0/CTMedicaidMCFinalRpt.pdf>
- Independent Assessment of New Mexico's Behavioral Health Program, The Lewin Group, March 2007, <http://www.lewin.com/NR/rdonlyres/75B46894-9F31-4268-B95B-B0C3E81B4D44/0/NMBehavioraHealthIndAssessmen417146.pdf>

#### Studies of Medicaid Managed Care Program Impacts On Specific Services

- Comparisons of Medicaid Pharmacy Costs of Usage between the Fee-for-Service and Capitated Setting, prepared for CHCS by The Lewin Group, January 2003. [http://www.chcs.org/publications3960/publications\\_show.htm?doc\\_id=213037](http://www.chcs.org/publications3960/publications_show.htm?doc_id=213037)
- Analysis of Pharmacy Carve-Out Options for the Arizona Health Care Cost Containment System, prepared for CHCS by The Lewin Group, November 2003. <http://www.lewin.com/NR/rdonlyres/B37D9B2E-D750-4CFD-AE09-ACC061E57033/0/PharmacyCarveOutAHCCCS.pdf>
- Preventing Unnecessary Hospitalization in Medi-Cal: Comparing Fee-for-Service with Managed Care, CHCF, February 2004
- Comparison of Alcohol Treatment and Costs After Implementation of Medicaid Managed Care, Rothbard, A. and Kuno, E., The American Journal of Managed Care, May 2006

### Appendix B. Summary of Reported Savings

State/Study	Estimated Savings Under Capitated Managed Care	Year
<b>State Programs</b>		
Arizona	19% of FFS costs	1991
	7% of FFS costs	1983 - 1993
Kentucky	2.8% of FFS costs	FY1999
	5.4% of FFS costs	FY2000
	9.5% of FFS costs	FY2001
	9.5% of FFS costs	FY2002
	4.1% of FFS costs	FY2003
Ohio	2.2% of FFS costs	State FY2002
	7.0% of FFS costs	State FY2003
	4.5% of FFS costs	State FY2004
Wisconsin	7.9% of FFS costs	2001
	10.2% of FFS costs	2002
Michigan	9% of FFS costs	FY2001
	14% of FFS costs	FY2002
	16% of FFS costs	FY2003
	19% of FFS costs	FY2004
	16% of FFS costs (without FY2006 MCO rate increase/with QAAP)	FY2006
	7% of FFS costs (without FY2006 MCO rate increase/without QAAP)	FY2006
	12% of FFS costs (with FY2006 MCO rate increase/with QAAP)	FY2006
	2% of FFS costs (with FY2006 MCO rate increase/without QAAP)	FY2006
Maryland	Over budget neutrality cap	7/97 - 6/99
	2% under its budget neutrality cap	7/97 - 6/00
	10% under its budget neutrality cap	FY1998 - FY2007
Pennsylvania	10 - 20% of FFS costs	2000 - 2004
New Mexico	3 - 5% of FFS costs	FY2006
Washington	--	--

State/Study	Estimated Savings Under Capitated Managed Care	Year
<b>Targeted Medicaid Managed Care Programs</b>		
Texas STAR+PLUS	\$4.11 PMPM	4/98 - 3/00
	\$91.67 PMPM, 17% of FFS costs	4/00 - 3/02
Oklahoma - Special Populations/ABD	4%	1998 - 2000
Minnesota Hennepin County	10% of FFS costs	--
Connecticut HUSKY	6.7% of FFS costs	CY2005
New Mexico Behavioral Health	Intentional increase w/ implementation	2005
<b>Service Specific Studies</b>		
CHCS - Prescription Drugs	Drug costs were 18% higher in FFS	--
Arizona - Prescription Drug Carve-Out Option	\$3.7M cost to carve-out Rx from capitation	--
California - Preventable Hospitalization	\$66M reduction in preventable hospital costs	1994 - 1999
Pennsylvania - Alcohol Treatment	Cost of treatment for alcohol-related conditions decreased by almost \$2K per member at the managed care site	1995 - 1998

### Appendix C. Side by Side Summary of Studies

Report	Program Description & Enrollment	Benefits	Enrollment	Savings
<b>State Studies</b>				
<p>Arizona Medicaid - Competition Among Managed Care Plans Lowers Program Costs, U.S. General Accounting Office, October 1995</p>	<p>1115 Waiver</p> <p>AHCCCS is Arizona's statewide Medicaid managed care program implemented in 1982. Prior to AHCCCS, Arizona did not operate a Medicaid program.</p> <p>Nine private or county health plans health plans cover the AHCCCS population. Five of the health plans are not-for-profit entities.</p>	<p>AHCCCS includes family planning, behavioral health, and LTC.</p>	<p>As of February 2004, 767,857 individuals were enrolled in the acute care program.</p> <p>(Enrollment data from Acute Care Enrollment, By County By Health Plan, <a href="http://www.ahcccs.state.az.us/Statistics/Enrollment/Acute/2004/enrollmnt.asp">http://www.ahcccs.state.az.us/Statistics/Enrollment/Acute/2004/enrollmnt.asp</a>)</p>	<p>In FY1991, federal savings were \$37 M and state savings were \$15M in acute care costs.</p> <p>Arizona's capitation rate for Medicaid declined by 11% in 1994 even while other states' per capita costs grew.</p> <p>Arizona's administrative costs are higher than in other states.</p> <p>AHCCCS slowed the growth rate in Medicaid expenditure compared with the state might have experienced in a traditional FFS program. For the AFDC and SSI populations, the per capita growth rate from 1983 to 1991 was 6.8% versus an estimated 9.9% for a traditional Medicaid program.</p> <p>The biggest slow-down in AHCCCS growth rate was for SSI beneficiaries after 1987.</p> <p>Overall, AHCCCS spend 81% of what a traditional Medicaid program would have spent.</p>

Report	Program Description & Enrollment	Benefits	Enrollment	Savings
<p>Wisconsin HMOs' Success in Medicaid and BadgerCare: Government Cost Savings and Better Health Care Quality, Milliman USA, Feb. 2002</p> <p>Study funding not specified</p>	<p>1115 waiver</p> <p>HMOs are present in nearly every WI county, and mandatory managed care enrollment has been implemented completely or partially in 47 counties. Voluntary managed care enrollment occurs in 21 counties. Enrollment is voluntary in counties where only 1 HMO is present.</p> <p>Eligibility: AFDC-children - Children who meet the requirements for the former AFDC program.</p> <p>BadgerCare - Parents and children under age 19 with incomes less than 185% FPL. Families income above 150% pay a premium of 3% of family income.</p> <p>Healthy Start - children and pregnant women with incomes up to 185% FPL, no asset limit.</p> <p>Dual eligibles are not enrolled.</p>	<p>Comprehensive benefits.</p> <p>BadgerCare Carve-outs include: LTC, transportation, family planning, prenatal care coordination, targeted case management, dental, chiropractic, school-based services, and TB-related services. Families with employer sponsored coverage, receive Medicaid wrap around services for those services excluded from the employer's benefits package.</p>	<p>Enrollment: AFDC/Healthy Start Children and Pregnant Women: 216,185 (as of report publication)</p> <p>BadgerCare: 64,036 (as of report publication)</p>	<p>2001: \$14M in state savings, \$21M in federal savings.</p> <p>2002: \$22M in state savings, \$34M in federal savings.</p> <p>The study attributes savings to MCO efforts such as a 24-hour nurse line, utilization management activities, and disease management programs. The 24-hour nurse line focused on reducing unnecessary emergency room visits, and the utilization efforts helped to reduce hospital inpatient admissions and number of inpatients days; which lead to reduced costs.</p>

Report	Program Description & Enrollment	Benefits	Enrollment	Savings
KY Region 3 Partnership Program, Milliman USA, December 2003  Health plan-funded study	1115 Waiver	Standard Medicaid benefits are covered. Carve-outs include LTC, MH, and school-based services.	2003: 132,579	<i>Total Savings:</i> FY1999: \$7.9M (2.8%) FY2000: \$16.1M (5.4%) FY2001: \$32.6M (9.5%) FY2002: \$35.8 M (9.5%) FY2003: \$17.7M (4.1%) - including savings from PCCM
	Mandatory for TANF, foster care, SOBRA, SSI, KCHIP.  All non-institutionalized Medicaid beneficiaries are enrolled, including dual eligibles. Dual eligibles receive the Medicaid only benefits (Rx and transportation) under the Partnership, dba Passport Health Plan.  Passport Health Plan is a non-profit, provider-run, Medicaid health plan. AmeriHealth Mercy Health Plan administers Passport Health Plan.  Region 3 represents the state's largest urban area, including Louisville in Jefferson County and 15 surrounding counties. This area makes up 20% of the state's Medicaid population.	Non-emergency transportation services are covered only for enrollees who need transport by stretcher only.  There are no cost-sharing requirements.	32% Sobra 29% TANF 17% SSI, no Medicare 10% Duals 9% KCHIP 4% Foster Care  (Enrollment data provided by University Health Care Inc, dba Passport Health Plan presentation, provided to The Lewin Group on 2/27/04.)	<i>PMPM Savings:</i> FY2000 TANF: \$6.69 Foster Care: \$15.17 Preg. Women: \$4.60 SSI/Medicare: \$19.41 SSI/No Medicare: \$31.91 Composite: \$11.67  Sources of savings are not identified, but Passport attributes its savings to disease and utilization management (personal communication with Jill Bell of Passport Health Plan on 2/27/04).

Report	Program Description & Enrollment	Benefits	Enrollment	Savings
<p>Independent Assessment for the Ohio Medicaid Managed Care Program, Mercer Government Human Services Consulting, March 2003</p> <p>State-funded study</p>	<p>1915(b) waiver</p> <p>Healthy Families (parents and kids up to 100% FPL) and Healthy Start (kids up to age 19 up to 200% FPL and pregnant women up to 150% FPL).</p> <p>6 health plans participate in 15 counties (as of July 03).</p> <p>MCO enrollment is mandatory in 4 counties, and voluntary in 5 counties. 6 counties are "Preferred Option" where only 1 MCO operates. In "Preferred Option" counties, beneficiaries choose either the MCO or FFS.</p>	<p>Standard Medicaid benefits are covered. The majority of mental health and substance abuse, and non-emergency transportation are paid under FFS. LTC is carved-out.</p>	<p>Enrollment (as of February 2004):</p> <p>Total managed care: 495,555 (2004)</p> <p>Mandatory: 297,166 (2004)</p> <p>Voluntary: 2107 (2004)</p> <p>"Preferred Option": 196,292 (2004)</p> <p>(Enrollment data from Ohio Department of Job and Family Services, Fact Sheet 2.4, Medicaid Managed Care, <a href="http://jfs.ohio.gov/ohp/bcps/FactSheets/MedicaidManagedCare.pdf">http://jfs.ohio.gov/ohp/bcps/FactSheets/MedicaidManagedCare.pdf</a>)</p>	<p>\$26.4M in State FY2002 (2.2% of FFS)</p> <p>Cost effectiveness analysis compared projected FFS costs of the OH Medicaid program in managed care counties (w/o waiver) with the actual costs under the waiver.</p> <p>The main source of savings is from decreased use of inpatient hospital services.</p>

Report	Program Description & Enrollment	Benefits	Enrollment	Savings
Michigan Medicaid: New Directions Presentation by MIDCH, July 23, 2003	1915(b) Waiver	Carved-out services include dental, behavioral health, school based services provided to special education students, and long term care.	As of August 2003, 836,387 individuals were in enrolled in a Michigan Medicaid MCO.	Medicaid Health Plans have lower costs and a slower rate of increase in PMPM costs. The difference in FFS and MCO PMPM costs as calculated by Lewin using data from the presentation are:
and				
Michigan Medicaid: Relative Cost Effectiveness of Alternative Service Delivery Systems, prepared for the Michigan Department of Community Health, April 2005	The Michigan capitated Medicaid program is statewide, in all but 19 counties. Managed care enrollment is mandatory in counties where the state can guarantee that 2 health plans will accept auto-assignment. Michigan has implemented the single plan rural option authorized under 42 C.F.R. 438.52.		As of June 30, 2006, 1.3 million individuals were enrolled in a Michigan Medicaid MCO ( <a href="http://www.statehealthfacts.org/profileind.jsp?ind=216&amp;cat=4&amp;gn=24">http://www.statehealthfacts.org/profileind.jsp?ind=216&amp;cat=4&amp;gn=24</a> ).	2001: -9% 2002: -14% 2003: -16% 2004: -19%
Center for Health Program Development and Management at the University of Maryland, Baltimore County	Beneficiaries choose between at least 2 full-risk health MCOs in 54 of 83 counties; enrollment in a single MCO is voluntary in 7 counties; automatic enrollment into an MCO occurs in 4 counties; the single plan rural option occurs in 15 counties; MCO enrollment is not available in 3 counties.			MCO PMPM costs were 9% lower than FFS PMPM costs and so forth.
	The voluntary population also includes: migrant individuals, Native Americans, individuals with TBI, pregnant women in their third trimester or who became Medicaid eligible because of their pregnancy.			When capitated managed care is compared to alternative delivery systems, Michigan would save between \$28 million and \$129 million in State funds for FY2006.
	Eligible populations include: TANF and related, SSI and related, and ABD.			Comparison of Estimated State costs - MCO vs. FFS (cumulative 2004-2006):  Without FY2006 MCO rate increase/With QAAP: FFS costs \$330 million more than MCO Without FY2006 MCO rate increase/Without QAAP: FFS costs \$152 million more than MCO With FY2006 MCO rate increase/With QAAP: FFS costs \$247 million more than MCO With FY2006 MCO rate increase/Without QAAP: FFS costs \$62 million more than MCO

Report	Program Description & Enrollment	Benefits	Enrollment	Savings
<p>HealthChoice Evaluation, MD Dept. of Health and Mental Hygiene, January 2002</p> <p>State-funded study</p> <p>and</p> <p>Status Report on the Budget Neutrality Calculation for the Maryland HealthChoice Program, prepared for the Maryland Department of Health and Mental Hygiene, December 2007</p> <p>Center for Health Program Development and Management at the University of Maryland, Baltimore County</p>	<p>1115 Waiver</p> <p>Enrollment is mandatory for children, pregnant and postpartum women, families receiving Temporary Cash Assistance (TCA), individuals receiving SSI, and foster children.</p> <p>Seven for-profit MCOs serve HealthChoice enrollees, of which 5 MCOs serve Medicaid enrollees only. The 4 largest MCOs are statewide.</p>	<p>Carve-outs: specialty mental health, rare and expensive case management, long-term nursing facility benefit, health-related special education services under an IEP or IFSP, substance abuse treatment services in ICF-Additions for children under age 21, OT/PT, and speech therapy and audiology.</p>	<p>In CY2002, 455,000 were enrolled. Nearly 80% of MD Medicaid beneficiaries were enrolled in an MCO.</p> <p>By June 2003, 487,073 individuals were enrolled in HealthChoice (Maryland HealthChoice Factsheet, January 2004, <a href="http://www.dhnh.state.md.us/mma/pdf/MdHC-fact-2004.pdf">http://www.dhnh.state.md.us/mma/pdf/MdHC-fact-2004.pdf</a>).</p> <p>By 2006, 491,800 individuals were enrolled in HealthChoice (Maryland HealthChoice Factsheet, January 2007, <a href="http://www.dhnh.state.md.us/mma/pdf/FINALHealthChoiceFactSheet.pdf">http://www.dhnh.state.md.us/mma/pdf/FINALHealthChoiceFactSheet.pdf</a>).</p>	<p>The 1115 waiver was found to be budget neutral. The state exceeded the BN cap in the 1<sup>st</sup> 2 years of the waiver, but spending has been below the cap since. By the end of the third year, spending was about 2% below the cap.</p> <p>HealthChoice met the budget neutrality test each year for FY2000 through FY2007.</p> <p>By the end of FY2007, the State was about \$2 billion, or about 10 percentage points of margin under the budget cap.</p> <p>Neither study identifies specific sources of savings.</p>

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<p>Reforming Medicaid: The Experiences of Five Pioneering States with Mandatory Managed Care and Eligibility Expansions, Mathematica Policy Research, for CMS, April 2001</p> <p>Study funding from the federal government</p>	<p>MPR and Urban Institute conducted a 6 year evaluation of 5 Medicaid 1115 waiver programs - HI, MD, OK, RI, TN - the were implemented between 1994-1997.</p>	<p>Comprehensive Medicaid benefits, with some state by state variation.</p>	<p>Varied by state.</p>	<p>Demonstrations had little impact on state expenditures and states did not achieve a high level of savings. 3 of the 5 states had average annual growth rates close to the national average for the same years.</p> <p>HI: 3.0%, US: 2.9%, years: 1993 - 1998</p> <p>MD: -0.2%, US: 2.6%, years: 1996 - 1998</p> <p>OK: 2.8%, US 2.4%, years: 1995 - 1998</p> <p>RI: 3.4%, US: 2.9%, years: 1993 - 1998</p> <p>TN: 2.8%, US: 2.9%, years: 1993 - 1998</p>

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<p>Comparative Evaluation of Pennsylvania's HealthChoices Program and Fee-for-Service Program, by The Lewin Group, May 2005</p> <p>Coalition of Medical Assistance Managed Care Organizations</p>	<p>HealthChoices is Pennsylvania's managed care program for Medical Assistance beneficiaries. This program was implemented in 1997 as mandatory in Pennsylvania's urban zones.</p> <p>In 2003, the Pennsylvania Department of Public Welfare terminated statewide expansion of HealthChoices in favor of the ACCESS Plus program, an enhanced primary care case management and FFS program.</p>	<p>Comprehensive Medicaid benefit package.</p>	<p>As of December 2007:</p> <p>Southeast: 495,333 Southwest: 271,769 Lehigh/Capital: 243,920</p>	<p>Despite being implemented in urban settings with higher cost platforms, HealthChoices average annual medical cost increase was 7.4% between 2001-2004, while FFS medical costs increased 10.4% between 1999-2002.</p> <p>While other states' managed care programs are unable to balance profits with saving the state money, HealthChoice has found the balance with approximate revenue ratios of 90% medical cost, 8% administrative, and 3% profit.</p> <p>A conservative estimate has HealthChoices saving approximately \$2.7 billion between 2000 and 2004.</p>
<p>Independent Assessment of New Mexico's Medicaid Managed Care Program - Salud!, by The Lewin Group February, 2007</p> <p>New Mexico Medical Review Association</p>	<p>1915(b) waiver</p> <p>Salud! is administered by 3 MCOs.</p> <p>All 3 MCOs were rated "excellent" by the National Committee for Quality Assurance.</p> <p>Physician fee schedules are high relative to other states.</p>	<p>Comprehensive Medicaid benefit package.</p> <p>Disease management, childhood immunization, adolescent outreach, and prenatal care programs.</p> <p>Addresses cultural and linguistic barriers.</p>	<p>Lovelace MCO Members: 66,450</p> <p>Molina MCO Members: 59,159</p> <p>Presbyterian MCO Members: 1,237</p>	<p>Higher costs per eligible due to quality of coverage, provider gross receipt tax of 7% and a premium tax assessment.</p> <p>Annual cost trends are aligned with national averages.</p> <p>Estimated savings for FY2006 are between 3-5%, or \$33-\$56 million.</p>

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<p>Medicaid Cost Containment Report No. 3, by The Lewin Group, January 2003</p> <p>The Washington State Legislature</p>	<p>Washington's Medicaid Utilization and Cost Containment Initiative (UCCI) is designed to find efficiencies and lower expenditures in Medicaid without reducing benefits or eligibility. One approach to cost containment has been the administering of care to the Medicaid population by 6 HMO's. The Lewin Group looked at the relationship between the HMO's and the State to find further opportunities for the State's cost saving efforts.</p>	<p>Comprehensive Medicaid benefit package.</p>	<p>In 2003, 403,162 Medicaid beneficiaries were enrolled in 1 of the 6 HMO's.</p> <p>The top 3 HMOs in terms of percentage of total enrollment were:</p> <p>Molina Healthcare - 38%</p> <p>Community Health Plan - 28%</p> <p>Premera Blue Cross - 11%</p>	<p>Washington had been increasing managed care rates at a pace higher than inflation. As a result, the HMOs had gained a surplus of \$30M, or 2.8% of Medicaid premiums from their Medicaid business from 1999-2001. If the State had limited just the 3 most Medicaid-focused HMOs to the State average hospital operating margin of 1.5% during CY2002, the State would have saved about \$30.5M.</p> <p>With an expected increase of capitation payments from \$600M to \$700M in 2004, the State could save \$7M for each percentage point reduction in payments.</p>

Report	Program Description & Enrollment	Benefits	Enrollment	Savings
<b>Targeted Medicaid Managed Care Program Studies</b>				
<p>STAR+PLUS Medicaid Managed Care Waiver Study: An Independent Assessment of Access, Quality, and Cost-Effectiveness, Texas A&amp;M University, PPRI, October 1999</p> <p>and</p> <p>Medicaid Managed Care Waiver Study: An Independent Assessment of Access, Quality, and Cost-Effectiveness of the STAR+PLUS Program, Public Policy Research Institute, June 2002 (Second waiver period)</p> <p>State-funded studies</p>	<p>1915(b) Waiver for SSI and SSI-related populations in Harris County (Houston). These individuals are required to enroll in Medicaid managed care.</p> <p>STAR+PLUS enrollees can choose between 2 MCOs or the PCCM, if the individual is not dually eligible.</p> <p>94% of the population is over the age of 20, and 43% are age 65 or older.</p>	<p>All Medicaid primary care, acute and long-term care services are covered. Medicaid only enrollees also receive specialty, home health, medical equipment, lab, x-ray, and hospital services through MCOs.</p> <p>Dually eligible enrollees receive acute care services from Medicare providers and LTC services through managed care, including personal care services, adult day care, and 1915(c) services.</p> <p>Prescription drugs are carved out of managed care, but an enhanced benefit is available to managed care enrollees who choose the same MCO for Medicare and Medicaid services.</p>	<p>About 55,000 were enrolled mandatorily during the first waiver period.</p> <p>During the second waiver period, 57,000 individuals were enrolled.</p> <p>As of February 2004, 62,782 individuals were enrollee. (STAR+PLUS website, <a href="http://www.hhsc.state.tx.us/starplus/enrollmen_numbers/confirm ed/confirm.htm">http://www.hhsc.state.tx.us/starplus/enrollmen_numbers/confirm ed/confirm.htm</a>.)</p>	<p><i>Cost savings in the first waiver period:</i></p> <p>Waiver year 1: -\$1.97M, -\$2.68 PMPM</p> <p>Waiver year 2: \$7.57 M, \$10.22 PMPM</p> <p>Waiver years 1&amp;2: \$6.05M, \$4.11 PMPM</p> <p>Savings were less than 1% of the cost for the two years combined.</p> <p><i>Cost savings in the second waiver period:</i></p> <p>Waiver year 1: \$66M, \$100.95 per member month</p> <p>Waiver year 2: \$56M, \$82.71 per member month</p> <p>Waiver years 1 &amp; 2: \$123M, \$91.67 per member month.</p> <p>This represents a nearly 17% reduction in state Medicaid expenditure for this population from what would have been spent absent the waiver.</p>

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<p>Serving the Special Program/Aged, Blind and Disabled Population (in OK Medicaid managed care) by Schaller Anderson, April 2002</p> <p>Center for Health Care Strategies funded study</p>	<p>1115 Waiver</p> <p>Managed care enrollment became mandatory for the ABD Medicaid population in 1999. Managed care was implemented in 17 counties surrounding the urban centers of Oklahoma City, Tulsa, and Lawton. In other counties, the PCCM model was implemented.</p> <p>The study covered the SP/ABD population, i.e., the 583 individuals who were the top 10% of ABD service utilizers who were also enrolled in the Heartland Health Plan of Oklahoma.</p> <p>Individuals who are disabled and have incomes up to 100% FPL are eligible for Medicaid.</p> <p>**Effective Jan. 2004, the capitated managed care program was discontinued. In Nov. 2003, 1 of the 3 MCOs decided not to renew its contract with OHCA, prompting OHCA to terminate the MCO program. Individuals enrolled in an MCO are being transitioned into the PCCM program.</p>	<p>Behavioral health services are included in the MCOs benefits package with a \$10,000 per beneficiary limit. Beyond the limit the state pays 70% of additional claims. Carved out services include non-emergency transportation, services ordered through an IEP or IFSP, court-ordered treatment, non-state plan services ordered as a result of an EPSDT visit.</p>	<p>Claims savings were 15% of FFS. In assessing the full managed care payment costs in relation to FFS claims cost, overall PMPM costs were 4% lower in managed care. After removing the 10 most expensive enrollees, savings under managed care were 31%.</p>	
<p>How Managed Care Affects Medicaid Utilization A Synthetic Differences Zero-Inflated Count Model, Freund, D., Kniesner, T., LoSasso, A., April 1996</p> <p>AHRQ-funded study</p>	<p>The study analyzed the effects of managed care on doctor office visits, hospital outpatient dept. visits, ER visits, and hospital inpatient days.</p> <p>The study population included adult women.</p>	<p>Comprehensive Medicaid benefits were modeled.</p>	<p>Based on Hennepin County data used for the study.</p>	<p>Estimated economic savings totaled about 10%, which the authors state is lower than estimated savings reported in states' waiver applications.</p> <p>The 10% savings figure accounts for the initial effect of switching to managed care.</p>

Report	Program Description & Enrollment	Benefits	Enrollment	Savings
<p>Assessment of HUSKY, Connecticut's Medicaid Managed Care Program, prepared for the four participating HUSKY managed care companies by The Lewin Group, January 2007</p> <p>Anthem Blue Cross Blue Shield Community Health Network of Connecticut HealthNet of the Northeast WellCare of Connecticut</p>	<p>1915(b) waiver</p> <p>Connecticut's mandatory capitated managed care program for the State's TANF (HUSKY A) and SCHIP (HUSKY B) populations.</p> <p>HUSKY is statewide and is served by four different HMOs.</p> <p>Over 80% of the State's TANF spending occurs through capitation payments to health plans.</p>	<p>Comprehensive Medicaid benefits package.</p> <p>Carve-out: behavioral health (January 2006), essentially creating a disease management initiative for behavioral health services.</p>	<p>Over 309,000 (HUSKY A - 292,852; HUSKY B - 16,579) enrolled as of December 2006</p> <p>Anthem Blue Cross Blue Shield - 132,852</p> <p>Community Health Network - 57,703</p> <p>HealthNet - 82,678 (only HUSKY A)</p> <p>WellCare - 36,198</p>	<p>HUSKY's per capita cost escalation is below the national rate for TANF cost escalation and the rate of inflation for selected non-HUSKY Medicaid subgroups.</p> <p>HUSKY medical loss ratio is 90-91% compared to 84.5% nationally.</p> <p>HUSKY administrative costs were between 8.8% and 10.2% between 2003 and 2005, low when compared to the national average of 12.2%.</p> <p>Expenditures under HUSKY are at least 5% less than any new non-capitated Medicaid managed care model (annual Medicaid savings of at least \$37 million).</p>

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Independent Assessment of New Mexico's Behavioral Health Program, by The Lewin Group, March 2007	Prior to establishing a single, comprehensive mental health system for Medicaid beneficiaries in 2006, New Mexico had a fragmented system.	Comprehensive behavioral health services for the New Mexico Medicaid population.	As of July 2006, 69,380 individuals were enrolled in New Mexico's ValueOptions behavioral health carve-out.	It is not yet possible to determine the cost effectiveness of the new program for two reasons. First, the program has only been in place a year, therefore a comparison of trends cannot be made. More importantly, the program was replacing an inadequate predecessor and thus had many additional costs in an attempt to strengthen the behavioral health delivery system and improve patient outcomes. As a result, behavioral health costs increased by 26.3% in total dollars and by 34.5% on a PMPM basis. Despite the inability to determine true cost effectiveness, there is evidence of improved service delivery under the new program.
New Mexico Medical Review Association	Under the new program, behavioral health was carved out from the services provided by the 3 Medicaid MCOs.  ValueOptions administered the program. The transitioning phase of the program was completed in 2006.			

Report	Program Description and Enrollment	Benefits	Savings
<b>Service Specific Studies</b>			
<p>Comparison of Medicaid Pharmacy Costs of Usage between the Fee-for-Service and Capitated Setting, prepared for CHCS by The Lewin Group, January 2003</p> <p>Center for Health Care Strategies funded study</p>	<p>Reported data focus on TANF enrollees.</p>	<p>Prescription drugs only.</p>	<p>Lewin calculated average PMPM pharmacy costs using data provided by states. The average cost in FFS was \$20.46 PMPM and in managed care \$17.36 PMPM. Both figures are post rebate and take into the average rebates received. Pharmacy costs are 18% higher in FFS than in managed care.</p> <p>This difference in average pharmacy costs exists even though health plans initially have a 15% price disadvantage compared to states, largely due to the Medicaid drug rebate rules. However, once lower dispensing fees, high rate of substitution of lower cost drugs, and reduced number of prescriptions is factored in, health plans achieve better drug prices than stated do for FFS.</p>
<p>Analysis of Pharmacy Carve-Out Options for the Arizona Health Care Cost Containment System, prepared for CHCS by The Lewin Group, November 2003</p> <p>Center for Health Care Strategies funded study</p>	<p>AHCCCS is Arizona's Medicaid 1115 waiver program. Currently prescription drugs are included in the managed care benefit.</p>	<p>The study looked at prescription drugs only.</p>	<p>The AHCCCS system operates a cost-effective prescription drug benefit currently. The analysis demonstrates that the AHCCCS system is more cost-effective than other Medicaid programs, including in FFS. The study concludes that carving-out pharmacy from the capitation would increase program costs by \$3.5M.</p>

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<p><b>Preventing Unnecessary Hospitalization in Medi-Cal: Comparing Fee-for-Service with Managed Care, CHCF, February 2004</b></p> <p>California HealthCare Foundation funded study</p>	<p>Medi-Cal managed care was implemented on a county by county basis and included both voluntary and involuntary enrollment.</p> <p>During the study period, most of the large urban counties moved to mandatory managed care for CalWORKS (TANF) eligible Medi-Cal beneficiaries, if they hadn't already done so. The county operated health system (COHS) counties also moved to mandatory managed care for SSI-eligible beneficiaries.</p>	<p>Looked at preventable hospitalizations only.</p>	<p>The preventable hospitalization rate for Cal-WORKS eligible Medi-Cal beneficiaries was 7.2/1000 per year versus 11.4/1000 in FFS. The managed care rate was more than a third lower. Based on the average charge per preventable hospitalization, the cost to Medi-Cal was more than \$66M less in managed care than it would have been in FFS.</p> <p>The average annual rate of preventable hospitalization for SSI-eligible Medi-Cal beneficiaries was 57.5/1000 versus 76.4/1000 in FFS, about a third lower. The difference between FFS and managed care rates was about the same as for the CalWORKS population.</p>
<p><b>Comparison of Alcohol Treatment and Costs After Implementation of Medicaid Managed Care, May 2006.</b></p> <p>The American Journal of Managed Care</p>	<p>Philadelphia County: 400,000 enrolled (as of January 1998).</p> <p>The MCO is a carve-out agency that receives PMPM capitation fee for providing behavioral health services to the enrolled population.</p> <p>Allegheny County (Pittsburgh): 140,000 enrolled (as of January 1998) in the FFS program.</p> <p>During the study period, both sites were funded equally for public substance abuse treatment systems.</p>	<p>The study looked at behavioral health services for high-risk public-sector clients between 1995 and 1998 who were being treated for alcohol abuse or dependence problems.</p>	<p>The study looked at the pre- (1995) and the post-managed care period (1998) in both the managed care and FFS sites.</p> <p>Per person behavioral health costs decreased from \$7,662 to \$5,664 at the MC site per person, while they increased from \$4,871 to \$6,449 at the FFS site per person.</p> <p>Managed care site (Philadelphia County): \$1,200 reduction for alcohol abuse treatment; \$900 reduction for drug abuse treatment per person.</p> <p>FFS site (Allegheny County): \$400 reduction for alcohol costs; \$250 reduction for drug costs per person; increase of \$2000 per person for psychiatric inpatient costs.</p>