

Medicaid Managed Care Cost Savings – A Synthesis of Fourteen Studies

Final Report

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EXECUTIVE SUMMARY

America’s Health Insurance Plans¹ engaged The Lewin Group to synthesize existing research on the savings achieved when states have implemented Medicaid managed care programs. The Lewin Group reviewed 14 studies.² The studies reviewed were identified and selected by America’s Health Insurance Plans and Lewin and include federally required independent assessments and studies commissioned by the federal and state governments and private foundations. 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; and 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 MCOs have earned high satisfaction ratings from enrollees.

The studies present compelling evidence about 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. These findings are summarized below.

¹ America’s Health Insurance Plans was formerly known as the American Association of Health Plans – Health Insurance Association of America.
² This total includes two reports on the Texas STAR+PLUS program.

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- **First, the studies strongly suggest that the Medicaid managed care model typically yields cost savings.** While percentage savings varied widely (from 2 to 19 percent), nearly all the studies demonstrated a savings from the managed care setting.
 - **Second, the studies provide some evidence that Medicaid managed care savings could be 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 population who were enrolled in a particular Medicaid health plan and who were among the highest ten 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.
 - **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, inpatient costs decreased 27 percent under capitated Medicaid managed care, from \$76 PMPM to \$55 PMPM.
 - **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 managed care organization (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 aged, blind and disabled (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 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.³ However, there is still substantial opportunity for states to expand Medicaid enrollment in managed care plans. According to the Centers for Medicare and Medicaid Services (CMS), 59 percent of the Medicaid population is enrolled in managed care. Of the Medicaid managed care population, 66 percent are enrolled in comprehensive, prepaid managed care plans.⁴ Thus, approximately 39 percent of all Medicaid enrollees are in prepaid managed care plans. 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 prepaid managed care plans provide health care services to almost half of Medicaid beneficiaries nationwide, 88 percent of national Medicaid spending remains in the fee-for-service system⁵ where coordination of care is the exception rather than the rule.

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.

³ 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 prepaid managed care model only and are not inclusive of the PCCM model. The PCCM model is not the subject of this report.

⁴ Analysis of CMS *Medicaid Managed Care Enrollment Report, June 2003*.

⁵ Kaiser Family Foundation, *State Health Facts, Distribution of Medicaid Spending by Services, 2001*, <http://www.statehealthfacts.kff.org>.

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.

I. INTRODUCTION AND CONCEPTUAL OVERVIEW

Since the early 1990s, state Medicaid programs have turned increasingly to the managed care model⁶ 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 (approximately 39 percent) of Medicaid recipients nationwide are enrolled in the prepaid managed care model,⁷ a large proportion of Medicaid expenditures—indeed 88 percent—remain in the fee-for-service (FFS) system. This is largely because most states have not yet embraced the managed care model for the disabled segments of their Medicaid populations which—though comprising a relatively small percentage of Medicaid recipients overall—represent the highest-need, highest-cost categories of eligibility, and thus a disproportionate share of total Medicaid expenditures.⁸ In addition, a number of states “carve out” certain high-cost services, such as prescription drugs and mental health, from their existing managed care programs and pay for these services on a fee-for-service basis.

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 avoid being perceived as a “second class” system of coverage.

⁶ 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. 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. However, all medical services provided to the recipient are paid on a fee-for-service basis. The PCCM model is not the subject of this report.

⁷ Analysis of CMS *Medicaid Managed Care Enrollment Report, June 2003*.

⁸ In 1998, disabled persons accounted for 17 percent of all beneficiaries, but nearly 40 percent of total Medicaid expenditures (Kaiser Family Foundation, *Medicaid’s Disabled Population and Managed Care*, March 2001).

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 while maintaining quality of care 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 and preventive 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); and
- 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 recipients, 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 recipients 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 only 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 tap Medicaid's purchasing power by giving the program the same types of volume discounts (the "best price") generally afforded to other large purchasers of health care services. Drug manufacturers participating in the drug rebate program provide quarterly rebates to states for drugs dispensed to state Medicaid recipients. 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, 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. As a result of the marketplace dynamics related to Medicaid "best price" rules, these rebates are at most no greater than those available to state Medicaid programs.

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 seems to exist. 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 and private foundations 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 to objectively summarize a sample of the body of research.

In total, Lewin reviewed 14 studies,⁹ 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. 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 14 studies that were reviewed followed by a summary of findings by topic area. The 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

⁹ This total includes two reports on the Texas STAR+PLUS program.

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 14 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: (a) claims savings under managed care, (b) the administrative expenses MCOs incur as a result of their efforts to coordinate care and achieve savings, and (c) 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.

Finally, it is noteworthy that managed care programs often incorporate a more comprehensive set of benefits than the FFS system. For instance, Oklahoma's SoonerCare program, discussed later in this report, removed limits on number of hospital days and skilled nursing facility days per year, physician visits per year, home health visits per year, and number of prescriptions per month.

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 six studies conducted in five states. Of these, Kentucky, Michigan, Arizona, Ohio, and Wisconsin all enroll both TANF and SSI recipients into their capitated managed care initiatives. Ohio does not cover SSI and SSI-related populations in managed care and only Kentucky included children in foster care in its Medicaid managed care program. Common state carve-outs include long-term care, mental health and substance abuse services, and school-based health services. MCO enrollment is mandatory in Kentucky, Arizona, Michigan, and Wisconsin, while Ohio operates a mixed mandatory/voluntary program. Exhibit 1 summarizes states' Medicaid managed care programs.

Exhibit 1. Summary of Select Medicaid Managed Care Programs

State	TANF children	TANF adults	Foster Care	Pregnant Women	SSI, SSI-Related	Mandatory/Voluntary	Carve-Outs
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
KY	✓	✓	✓	✓	✓	M	Long-term care, mental health, and school-based services
MI	✓	✓		✓	✓	M/V*	Long-term care, dental, behavioral, school-based health services
OH	✓	✓		✓		M/V*	Long-term care, mental health, substance abuse services, non-emergency transportation
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

** 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. Ohio’s program involves mandatory enrollment in 4 counties and voluntary enrollment in 11 counties. In Wisconsin, most Medicaid recipients are served in a mandatory enrollment model, which has been implemented in 47 counties; voluntary enrollment is used in 21 more rural counties.*

a. Arizona

The level of cost savings achieved by these 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 fiscal year 1991, 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.¹⁰ 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.¹¹ 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 2.

¹⁰ U.S. General Accounting Office, Arizona Medicaid – Competition Among Managed Care Plans Lowers Program Costs, October 1995.

¹¹ Milliman USA, Wisconsin HMOs' Success in Medicaid and BadgerCare: Government Cost Savings and Better Health Care Quality, February 2002.

Exhibit 2. 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.

c. Kentucky

The prepaid Medicaid managed care program in Kentucky operates in the state's largest urban area, which includes Jefferson County (Louisville) and 15 neighboring counties. About 20 percent of the state'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 fiscal year 2000, total Region 3 enrollment in Passport Health Plan was 97,255 individuals, and in calendar year 2003, enrollment was about 126,524.¹²

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

¹² Milliman USA, Kentucky Region 3 Partnership Program, December 2003.

subgroup.¹³ The savings calculations account for start-up costs and costs related to HIPAA compliance requirements. Since 1999, program savings have grown as shown in Exhibits 3 and 4.

Exhibit 3. Savings in the Kentucky Partnership Program

Fiscal Year	Total Dollar Savings (millions)	Savings as a Percent of Estimated FFS Costs
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 4. Per Member Per Month Savings by Population in the Kentucky Partnership

Population	FY 2000	FY 2001	FY 2002	CY 2003*
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 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 Compass mean.^{14,15}

¹³ Lewin analysis of data contained in Milliman 2003, Kentucky Region 3 Partnership Program, December 2003.

¹⁴ Passport Health Plan presentation, transmitted to Lewin on February 27, 2004 from AmeriHealth Mercy staff.

d. *Ohio*

Ohio enrollment in MCOs is voluntary in certain areas where choice of MCOs is limited. Ohio's Medicaid managed care program, PremierCare, is reported to have saved \$26.4 million for a savings of 2.2 percent versus what costs would have been under FFS from July 1, 2001 to June 30, 2002. Exhibit 5 provides costs for services in calendar year 2000 before PremierCare was implemented and in state fiscal year 2002 with implementation of the program. Percent distribution of cost and estimated PMPM cost are provided. In Ohio, savings are primarily attributed to a 27 percent decrease in PMPM costs for inpatient hospital services.¹⁶

As would be expected when inpatient services utilization decreases, PremierCare experienced costs above FFS levels in primary care physician and outpatient services. The program also experienced a substantial increase in the PMPM cost of pharmacy.

Exhibit 5. Without and With Waiver Costs in PremierCare¹⁷

Service	Distribution of Cost		Per Member Per Month Cost		
	Before Waiver	With Waiver	Before Waiver	With Waiver	Percent Change
Inpatient	47%	35%	\$76	\$55	- 27%
PCP	11%	13%	\$18	\$20	15%
Pharmacy	7%	14%	\$11	\$22	95%
Outpatient	11%	16%	\$18	\$25	42%
Other	24%	22%	\$39	\$35	- 11%
Total	100%	100%	\$162	\$157	- 3%

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

¹⁵ Quality Compass is a database of health plan quality performance and enrollee satisfaction, as measured using HEDIS and CAHPS.

¹⁶ Mercer Government Human Services Consulting, Independent Assessment for the Ohio Medicaid Managed Care Program, March 2003.

¹⁷ Based on Lewin calculations using data provided in Mercer Government Human Services Consulting, March 2003.

require Medicaid enrollees in rural areas to enroll in a single MCO. As of August 2003, 836,387 individuals were enrolled in a Michigan Medicaid MCO.¹⁸

A Michigan Department of Community Health presentation included data demonstrating historic savings in the Medicaid managed care program in terms of PMPM costs. From fiscal year 2001 to 2004, 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.¹⁹ Exhibit 6 below summarizes the savings achieved in the Medicaid managed care program.

Exhibit 6. 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.

¹⁸ Michigan Department of Consumer and Industry Services, Michigan HMO Enrollment Information, http://www.michigan.gov/documents/hmo_enrl_25290_7.html.

¹⁹ Michigan Department of Community Health, Presentation – Michigan Medicaid: New Direction, July 23, 2003.

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.²⁰ 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 published an evaluation of HealthChoice in January 2002, which found the program to be budget neutral over the course of the evaluation period.^{21,22} The report states that during the first two years of the waiver, the state exceeded its budget neutrality cap.²³ 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 355,000 in calendar year 1999 to almost 470,000 as of January 2004.²⁴

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 2002.²⁵

²⁰ 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.

²¹ Maryland Department of Health and Mental Hygiene, HealthChoice Evaluation Final Report & Recommendations, January 2002.

²² The HealthChoice evaluation began in January 2001, during its fourth waiver year.

²³ Initially, Maryland experienced a problem in setting appropriate capitation payment rates, effectively overpaying MCOs for SSI recipients and driving up total program costs.

²⁴ Maryland HealthChoice Factsheet, January 2004, <http://www.dhmf.state.md.us/mma/pdf/MdHC-fact-2004.pdf>.

²⁵ Maryland Department of Health and Mental Hygiene, HealthChoice Evaluation Final Report & Recommendations, January 2002 and HealthChoice Evaluation Update, January 2004.

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.²⁶ 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, 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 7).

²⁶ Mathematica Policy Research, Inc., *Reforming Medicaid: The Experiences of Five Pioneering States with Mandatory Managed Care and Eligibility Expansion*, April 2001.

**Exhibit 7. 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 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 recipients 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.

2. Studies of Medicaid Managed Care Programs Involving Population Subgroups

The studies above describe state experiences with Medicaid managed care programs that cover broad populations, typically the TANF and TANF-related²⁷ children and adults, 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 aged, blind, and disabled population in

²⁷ TANF-related recipients 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.

Oklahoma, and a prospective analysis of estimated savings achievable under Medicaid managed care for Hennepin County in Minnesota.

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-related²⁸ population residing in Harris County (Houston), including those who are dually eligible for Medicaid and Medicare.²⁹ 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, 62,782 individuals were enrolled in STAR+PLUS. During the period of the first independent assessment (February 1998 to January 2000), 55,000 were enrolled, and during the second independent assessment period (September 1999 to August 2002), 57,000 were enrolled.³⁰ (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

²⁸ 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.

²⁹ 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.

³⁰ 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 recipients 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.

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 one due to implementation costs, and savings of \$7.57 million or \$10.22 PMPM in year two. Combined savings in years one and two were \$6.05 million or \$4.11 PMPM.³¹ 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 one (February 2000 to January 2001), and \$56 million or \$82.71 PMPM in year two (February 2001 to January 2002). Combined savings in waiver period two were \$123 million or \$91.67 PMPM.³² 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.

³¹ Ibid.

³² 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.

Note that the state is currently seeking to expand STAR+PLUS to several new market areas. A state slide presentation³³ explaining the state's approach contains 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.

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.³⁴ In more urban areas of the state, Medicaid beneficiaries, including the ABD population, were enrolled in fully prepaid MCOs, while in more rural parts of the state, 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 ten percent of service users from among this urban ABD population.³⁵ The study analyzed enrollment and medical claims data from the twelve months before and following each member's enrollment into managed care, during the time period from February 1998 to December 2000.

³³ "Medicaid Managed Care Expansion" slide presentation, which state staff are currently using to describe the state's intended broadening of STAR+PLUS.

³⁴ 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/>.

³⁵ Center for Health Care Strategies, *Serving the Special Program/Aged, Blind, and Disabled Population*, April 2002.

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 four percent lower under managed care.³⁶ 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

³⁶ Ibid.

County, Minnesota.³⁷ 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 ten percent, taking into account the initial effects of switching to managed care.

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 and cost in Medicaid FFS versus Medicaid managed care; and of preventable hospitalizations in California.

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

The Center for Health Care Strategies funded two 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 five states as compared to similar data from 13 Medicaid health plans in ten states,³⁸ specifically for the TANF population.³⁹ 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 ten to 15 percent lower in capitated Medicaid managed than in the FFS setting, although MCOs initially started at a 15

³⁷ Freund, D., Kniesner, T., LoSasso, A., How Managed Care Affects Medicaid Utilization A Synthetic Difference-in-Difference Zero-Inflated Model, April 1996.

³⁸ States were requested to provide data from calendar year 2001.

³⁹ 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.

percent price disadvantage largely due to Medicaid drug rebates rules. Once factors such as MCOs' lower dispensing fees, their ability of MCOs 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. 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 federal fiscal year 2002 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.⁴⁰

The study found the AHCCCS program to be exceptionally cost-effective in providing prescription drugs. The PMPM cost of providing pharmaceuticals to the aged, blind, and disabled population in the AHCCCS program in federal fiscal year 2002 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 aged and disabled persons' pharmacy claims under FFS.

⁴⁰ 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.

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.⁴¹ The study found that TANF and TANF-related enrollees in Medi-Cal managed care had 38 percent lower rates of preventable hospitalization (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 hospitalization 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 eight 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

⁴¹ 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.

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.

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 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 ten 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 (MCO and PCCM) 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).

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 calendar year 2000) to \$55 PMPM once the program was implemented (in state fiscal year 2002).

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 (calendar year 2001), 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 ten 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 fiscal year 2002 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.

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 studies⁴² 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. In Wisconsin, HMOs members are more likely to have at least one primary care physician 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

⁴² Wisconsin, Kentucky, Maryland, Tennessee, Texas, and Oklahoma.

of HMO members had a PCP visit compared to 42.3 percent of those in FFS.⁴³ 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.

⁴³ Milliman USA, Inc. Wisconsin HMOs' Success in Medicaid and BadgerCare: Government Cost Savings and Better Health Care Quality, February 2002.

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 two to 19 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 disabled population makes up 17 percent of total Medicaid enrollment, but accounts for 40 percent of total Medicaid expenditures.⁴⁴ The studies reviewed demonstrated very strong savings can be achieved by capitated health plans in SSI recipients' inpatient and pharmacy costs.

Second, states with Medicaid managed care programs that have carved out prescription drugs may wish to revisit their carve-out decision. Pharmacy carve-outs enable states to obtain higher rebates through the federal rebate program, but capitating the pharmacy benefit clearly appears to minimize post-rebate PMPM costs by taking advantage of Medicaid managed care benefit management capabilities.

⁴⁴ Kaiser Commission on Medicaid and the Uninsured, Medicaid's Disabled Population and Managed Care, March 2001.

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.

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
- Michigan Medicaid: New Directions Presentation by the Michigan Department of Community Health, July 23, 2003
- HealthChoice Evaluation, Maryland Department of Health and Mental Hygiene, January 2002
- 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

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; and performance statistics on STAR+PLUS were also taken from the “Medicaid Managed Care Expansion” slide presentation, which state staff are currently using to describe the state’s intended broadening of STAR+PLUS.
- 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

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
- Analysis of Pharmacy Carve-Out Options for the Arizona Health Care Cost Containment System, prepared for CHCS by The Lewin Group, November 2003
- Preventing Unnecessary Hospitalization in Medi-Cal: Comparing Fee-for-Service with Managed Care, CHCF, February 2004

Appendix B. Summary of Reported Savings

State/Study	Estimated Savings Under Capitated Managed Care	Year
State Programs		
Arizona	19% of FFS costs	1991
	7% of FFS costs	1983 - 1993
Kentucky	2.8% of FFS costs	FY 1999
	5.4% of FFS costs	FY 2000
	9.5% of FFS costs	FY 2001
	9.5% of FFS costs	FY 2002
	4.1% of FFS costs	FY 2003
Ohio	2.2% of FFS costs	SFY 2002
Wisconsin	7.9% of FFS costs	2001
	10.2% of FFS costs	2002
Michigan	9% of FFS costs	FY 2001
	14% of FFS costs	FY 2002
	16% of FFS costs	FY 2003
	19% of FFS costs	FY 2004
Maryland	Over budget neutrality cap	7/97 – 6/99
	2% under its budget neutrality cap	7/97 – 6/00
Targeted Medicaid Managed Care Programs		
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	--
Service Specific Studies		
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

Appendix C. Side by Side Summary of Studies

Report	Program Description & Enrollment	Benefits	Enrollment	Savings
State Studies				
<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, http://www.ahcccs.state.az.us/Statistics/Enrollment/Acute/2004/enrollment.asp)</p>	<p>In fiscal year 1991, 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, Milligan 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
<p>KY Region 3 Partnership Program, Milligan USA, December 2003</p> <p>State-funded study</p>	<p>1115 Waiver</p> <p>Mandatory for TANF, foster care, SOBRA, SSI, KCHIP.</p> <p>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.</p> <p>Passport Health Plan is a non-profit, provider-run, Medicaid health plan. AmeriHealth Mercy Health Plan administers Passport Health Plan.</p> <p>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.</p>	<p>Standard Medicaid benefits are covered. Carve-outs include LTC, MH, and school-based services.</p> <p>Non-emergency transportation services are covered only for enrollees who need transport by stretcher only.</p> <p>There are no cost-sharing requirements.</p>	<p>2003: 132,579</p> <ul style="list-style-type: none"> 32% Sobra 29% TANF 17% SSI, no Medicare 10% Duals 9% KCHIP 4% Foster Care <p>(Enrollment data provided by University Health Care Inc, dba Passport Health Plan presentation, provided to The Lewin Group on 2/27/04.)</p>	<p><i>Total Savings:</i></p> <ul style="list-style-type: none"> FY99: \$7.9M (2.8%) FY00: \$16.1M (5.4%) FY01: \$32.6M (9.5%) FY02: \$35.8 M (9.5%) FY03: \$17.7M (4.1%) – including savings from PCCM <p><i>PMPM Savings:</i></p> <ul style="list-style-type: none"> FY 2000 TANF: \$6.69 Foster Care: \$15.17 Preg. Women: \$4.60 SSI/Medicare: \$19.41 SSI/No Medicare: \$31.91 Composite: \$11.67 <p>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).</p>

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<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, http://jfs.ohio.gov/ohp/bcps/FactSheets/MedicaidManagedCare.pdf)</p>	<p>\$26.4M in SFY 2002 (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>

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<p>Michigan Medicaid: New Directions Presentation by MIDCH, July 23, 2003</p>	<p>1915(b) Waiver</p> <p>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.</p> <p>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.</p> <p>Eligible populations include: TANF and related, SSI and related, and ABD.</p>	<p>Carved-out services include dental, behavioral health, school based services provided to special education students, and long term care.</p>	<p>As of August 2003, 836,387 individuals were enrolled in a Michigan Medicaid MCO.</p>	<p>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:</p> <p>2001: -9% 2002: -14% 2003: -16% 2004: -19%</p> <p>MCO PMPM costs were 9% lower than FFS PMPM costs and so forth.</p>
<p>HealthChoice Evaluation, MD Dept. of Health and Mental Hygiene, January 2002</p> <p>State-funded study</p>	<p>1115 Waiver</p> <p>Enrollment is mandatory for children, pregnant 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 ed 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 CY02, 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, http://www.dhmh.state.md.us/mm/a/pdf/MdHC-fact-2004.pdf.)</p>	<p>The 1115 waiver was found to be budget neutral. The state exceeded the BN cap in the 1st 2 years of the waiver, but spending has been below the cap since. By the end of the third year, spending was about two percent below the cap.</p> <p>The study does not identify 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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Targeted Medicaid Managed Care Program Studies				
<p>STAR+PLUS Medicaid Managed Care Waiver Study: An Independent Assessment of Access, Quality, and Cost Effectiveness, Texas A&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, http://www.hhsc.state.tx.us/starplus/enrollmen_numbers/confirmed/confirm.htm.)</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&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 & 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, one of the three 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>

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Specific Service Studies			
<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>
<p>Preventing Unnecessary Hospitalization in Medi-Cal: Comparing Fee-for-Service with Managed Care, CHCF, February 2004</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 hospitalization 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>