



**State of Missouri**  
**Department of Social Services**  
*Division of Medical Services*

EVALUATION  
OF THE  
MISSOURI  
SECTION 1115  
WAIVER

**Review Period: September 1, 2002 – August 31, 2003**

Submitted by:

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## INTRODUCTION

This report constitutes the fifth evaluation of the Missouri Medicaid Section 1115 Healthcare Demonstration Waiver program (1115 Waiver) and covers the period from September 1, 2002 through August 31, 2003. The 1115 Waiver, known as Managed Care Plus (MC<sup>+</sup>), expanded Medicaid eligibility to uninsured children, adults leaving welfare for work, uninsured custodial parents, uninsured non-custodial parents, and uninsured women losing their Medicaid eligibility 60 days after the birth of their child.<sup>1</sup> Implemented on September 1, 1998<sup>2</sup>, the original goals of the 1115 Waiver were to:

- Reduce the number of people in Missouri without health insurance coverage;
- Increase the number of children, youth, and families in Missouri who have medical insurance coverage; and
- Improve the health of Missouri's medically uninsured population.

Previous evaluations completed by Behavioral Health Concepts, Inc. (BHC) and Alicia Smith & Associates, LLC (AS&A) found that the waiver expansion:

- ☑ *Increased Rates of Insured Missourians.* Missouri reached 92 percent of the targeted population in the first year of the Waiver. Since then, rates of uninsured persons in Missouri have been lower than national rates for children and adults. Missouri has consistently had one of the five lowest rates of uninsured children in the country.
- ☑ *Improved the Health of Missourians.* In previous evaluations, beneficiaries consistently reported high rates of satisfaction with providers compared to national and commercial benchmarks. Decreasing rates of avoidable hospitalizations and member complaints along with utilization indicators for preventive services support this conclusion as well.
- ☑ *Improved Access to Services for Children and Youth with Serious Emotional Disturbance.* In early evaluations, beneficiaries reported that they were able to obtain needed services, and parents reported improved child functioning in home and school settings. Analysis of the data compiled for this evaluation suggests that these children are receiving “wraparound” services that should reduce the reliance on institution-based care.
- ☑ *No Irrefutable Evidence of Crowd-Out.* In the 2002 evaluation, BHC concluded that crowd-out was not a problem in the state of Missouri and that MC<sup>+</sup> was not affecting the private insurance market. Our most recent evaluation also suggests that observed changes in insurance status are most likely the result of well-documented economic changes.

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<sup>1</sup> Uninsured non-custodial parents no longer covered and coverage for uninsured custodial parents and women losing their Medicaid eligibility post-partum has been reduced.

<sup>2</sup> Service delivery to children began September 1, 1998. Service delivery for adults began February 1, 1999.

## SCOPE OF THE EVALUATION

This evaluation is being completed in accordance with the requirements of Missouri Senate Bill 632 and the Centers for Medicare & Medicaid Services (CMS). This report covers the evaluation period September 1, 2002 through August 31, 2003, and addresses the following questions:

- **RESEARCH QUESTION 1:** Has the MC+ expansion provided health insurance coverage to children and families who were previously uninsured?
- **RESEARCH QUESTION 2:** Has the MC+ expansion improved the health of Missouri children and families?
- **RESEARCH QUESTION 3:** What is the impact of MC+ on providing a comprehensive array of community based wraparound services for Seriously Emotionally Disturbed Children (SED) and children affected by substance abuse?
- **RESEARCH QUESTION 4:** What is the effect of MC+ on the number of children covered by private insurers? Does the MC+ expansion to cover children with a gross family income above 185 percent FPL have any negative effect on these numbers?

This report also takes a second look at the “Health Care for the Indigent of St. Louis” amendment (The “St. Louis Amendment”) to the 1115 waiver. The St. Louis Amendment authorizes the use of a limited portion of Disproportionate Share Hospital funds to be used for two purposes: (1) to transition Connect Care, a public-private hospital in St. Louis, from an inpatient facility to an outpatient facility; and (2) to enable the St. Louis region to transition its “safety net” system of care for the medically indigent to a viable, self-sustaining model. The related research question is:

- **RESEARCH QUESTION 5:** Has the 1115 Waiver Amendment improved the health of the indigent of St. Louis City?

## DATA SOURCES AND USES

Our evaluation relies on data compiled and presented in previous evaluation as well as from the following sources:

Dataset/Report Name	Dataset/Report Description and Use(s)
Stakeholder Interviews	<p>In order to obtain feedback on how well the waiver is working and areas that need improvement, members of the MC+ consumer advisory committee and other stakeholders identified by the Division of Medical Services (DMS) were interviewed and asked to respond to the following questions:</p> <ol style="list-style-type: none"> <li>1. How well is the 1115 Waiver working at providing access to health care services to the Waiver population in your community?</li> <li>2. What do you like most about the 1115 Waiver program?</li> <li>3. What do you like least about the 1115 Waiver program?</li> <li>4. What benefits has the 1115 Waiver program had for Waiver members?</li> <li>5. What can be done to make the 1115 Waiver program work better?</li> </ol>
Current Population Survey/Annual Demographic Supplement – US Bureau of the Census	The Current Population Survey (CPS) is a monthly survey conducted by the Bureau of the Census for the Bureau of Labor Statistics. In March, a more comprehensive survey is conducted, which is referred to as the Annual Demographic Supplement (ADS). The CPS ADS provides national and statewide estimates of rates of insurance by type of coverage. Data from the CPS ADS was used to respond to Research Questions 1 and 4.
Missouri Department of Social Services (DSS) Monthly Management Reports	The Monthly Management Report provides point-in-time enrollment in medical assistance programs by month, among other statistics. The enrollment information was used in responding to Research Question 1.
Health Status Indicator Rates – Missouri Department of Health and Senior Services, Community Health Information Management and Epidemiology (CHIME)	<p>The Missouri Department of Health and Senior Services, CHIME unit provided data on several health status indicators for children, including avoidable hospitalizations, emergency department visits, asthma emergency department visits, and asthma hospitalizations. This data was used in the response to Research Question 3.</p> <p><u>Note:</u> The data presented in this report restate prior year results. At the end of 2003, the Missouri Department of Health and Senior Services identified a Y2K problem that impacted results for calendar years 2000 and 2001. As a result, comparisons to data presented in previous evaluations should not be made.</p>
Ad Hoc Data Requests – fulfilled by DSS and the Missouri Department of Mental Health (DMH)	Additional enrollment data as well as service utilization data for the waiver and non-waiver populations was compiled from requests submitted to the aforementioned agencies. These data were used in responding to Research Questions 2 and 3. For detail on the specific data requested of these agencies, refer to Appendix I.
Centers for Disease Control and Prevention (CDC)	The CDC web site provides access to multiple reference sources maintained by the CDC. Use of these sources is prevalent in the response to Research Question 2. Please refer to the citations in our response to this question for specific references to these sources.
St. Louis ConnectCare utilization data a) July 1, 2002 – June 30, 2003 b) July 1, 2003 – Sept. 30, 2003	St. Louis ConnectCare provided emergency room, urgent care and clinic utilization data by department and payer to assist with the evaluation of Research Question 5.

## **STAKEHOLDER INTERVIEWS**

The stakeholder interviews represent an important enhancement to the methodology used to evaluate the impact of the 1115 Waiver, as it provided us with invaluable feedback on the operations of the Waiver program and on how it has impacted the lives of individual Missourians. We hereby acknowledge the interviewees' contribution to this report.

The interview process began by identifying individuals that represented a balanced cross-section of health care consumers, providers and advocates with a special interest in the 1115 Waiver program. These individuals were identified in collaboration with the Division of Medical Services (DMS). To solicit participation in the interview process, AS&A attended the December meeting of the Medicaid Consumer Advisory Committee and provided a brief description of the purpose of the Waiver evaluation and our approach to completing the evaluation. In addition, DMS contacted provider groups and advocacy organizations to request their participation.

The specific individuals who ultimately participated in the stakeholder interviews were (listed in alphabetical order):

- Mary Ann Banks
- Donna Checkett
- Marty Exline
- Rhonda Flynn
- Kathy Goldstein
- Urlene Jackson Branch
- Eddie May
- Joanne Morrow
- Joe Squillace
- Missy Waldman
- Barbara Willis
- Steve Winburn

## **General Comments and Observations**

Interviewee comments and observations that relate to specific Research Questions are incorporated into our response to the applicable Question. Overall, interviewees deemed the Waiver a success and expressed a great deal of satisfaction with the Waiver's impact on expanding access to insurance and thereby improving access to health care services. The interviewees also identified several opportunities for improving the Waiver program. Following are highlights from the feedback obtained through the interview process:

## **How well is the 1115 Waiver program working at providing access to health care services to the Waiver population in your community?**

Interviewees noted that some Waiver members had experienced difficulty accessing certain services, notably dental care, mental health services and prescription drugs. These observations were qualified by noting that the following factors could be contributing to this:

- Provider shortages not related to the Waiver or, conversely, Waiver members living in the more rural areas of the state;
- Service authorization procedures that were overly complex, confusing or otherwise difficult to explain or not well explained, e.g. prior authorization rules for certain prescription drugs seen as too complex or not clearly articulated in program materials;
- Insufficient awareness of the need to follow authorization procedures to have access to certain services; and,
- Growth in the population whose native language is not English. Several interviewees raised this particular concern and recommended that it be addressed by effectively translating program materials, conducting outreach activities in multiple foreign languages, insuring that enrollment staff can interact more effectively with these groups, and linking the enrollment and materials distribution process such that enrollees receive these materials in their native tongue (as identified during the enrollment process). Addressing this concern will likely become more challenging as the population migrating to the state becomes more ethnically and language-diverse.

## **What do you like most about the 1115 Waiver program?**

Interviewees consistently commented that the Waiver program has had a significant positive effect on expanding the number of people who are eligible for Medicaid benefits and providing health care and preventive care to thousands of children who otherwise would not have had access. Another aspect of the Waiver program that interviewees stated they liked was the Waiver's managed care service delivery structure – the interviewees believe that the structure promotes cost efficiency and appropriate services utilization and that it holds the managed care organizations providing services under the Waiver accountable for providing care, even if the care is provided outside of their networks.

## **What do you like least about the 1115 Waiver program?**

The least liked aspects of the Waiver program all pertain to the program's design:

- Cost-sharing requirements;
- No non-emergency transportation (NET) benefit; and,
- The six-month waiting period.

Interestingly, while these issues were raised by many interviewees there does not appear to be a coalescing opinion emerging around them. For instance, some interviewees believe that the program's co-pay and premium requirements are too onerous, while others believe that co-pays should be more substantial for higher income beneficiaries.

Other interviewees expressed concern about service authorization procedures that they perceived as geared primarily towards preventing crowd-out. They also noted that some of these procedures, such as those governing prior authorization for certain prescription drugs, were not easy to understand or follow which resulted in delays in authorizing needed services. In the case of orthodontia services, for instance, anecdotal reports of delays of this type have been attributed to children aging out of benefit coverage before the full course of treatment had been completed.

## **What benefits has the 1115 Waiver program had for 1115 Waiver members?**

All interviewees articulated benefits resulting from the Waiver program; benefits cited (anecdotally) include:

- Improved access to health care services;
- Improved health outcomes;
- Earlier identification of health needs through the increase in the number of children receiving EPSDT screens;
- An increase in the number of Missourians with access to health care insurance;
- A reduction in the rate of uninsured Missourians;
- Improved patterns of utilization of health services, e.g. a reduction in the number of inappropriate emergency room visits;
- A reduction in work absenteeism and the associated economic impact; and,
- A decrease in school absenteeism.



## What can be done to make the 1115 Waiver program work better?

The recommendations for improving the program are consistent with the comments noted earlier. Moreover, and to the interviewees' credit, on the whole they are meant to address current program problems in a proactive manner, i.e. by identifying and addressing the root causes of the perceived problems:

- **Modify the design of the program:** as noted earlier, consensus on how to modify the program itself has not yet materialized.
- **Improve program materials:** this would be of particular benefit to non-English-speaking members. Other related suggestions included educating providers and beneficiaries on the extent of dental and pharmaceutical benefits, clarifying eligibility notices to make individuals aware of eligibility exceptions (e.g., situations in which you are not required to wait six months to be eligible for the premium benefit), and increasing the frequency by which provider directories are updated.
- **Clarify, and to the degree possible simplify, service authorization procedures.**
- **Improve the capability to interact and exchange important program information with non-English speaking populations.**
- **Improve education to providers and beneficiaries:** on the extent of certain benefits and on the particulars of certain processes such as eligibility (including exceptions to the six-month waiting period) and service authorization. This would be achieved through greater personal interaction as a complement to improved program materials.
- **Increase resources tied to the program:** specifically, increase the number of providers, staff and other resources that manage and/or support the program, and financial resources. With regard to human resources, DMS was often described as being "extremely short-staffed", causing its oversight function to be "slow and bureaucratic".

## RESEARCH QUESTION 1: HAS THE MC+ EXPANSION PROVIDED HEALTH INSURANCE COVERAGE TO CHILDREN AND FAMILIES WHO WERE PREVIOUSLY UNINSURED?

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Analysis of the data from the most recent Current Population Survey/Annual Demographic Supplement (CPS ADS) points to a 25 percent reduction in the rate of uninsured in the State of Missouri, according to a comparison of the average rate of uninsured over the four year period prior to full implementation of the 1115 Waiver (1995-1998) and the four year period after full implementation of the waiver (1999-2002). This is a notable achievement, particularly in light of policy changes that reduced the original coverage levels available under the waiver and the start of an economic downturn in 2001. More recent statistics show that these two factors may be taking a toll on the state's ability to reduce the number of the uninsured. In fact, Missouri actually experienced a statistically significant increase in the overall rate of uninsured, from 9.9 percent in 2000/2001 to 10.9 percent in 2001/2002 (Mills 2003). This was primarily due to a significant increase in the number of uninsured non-elderly adults<sup>3</sup>. The number of uninsured children, however, has remained below the national average since the implementation of the Waiver.

The recent increase in the overall rate of the uninsured in Missouri correlates with the increase in the rate of uninsured in the nation as a whole – 18 other states also experienced a statistically significant increase in the rate of uninsured and not one experienced a statistically significant decrease (Mills 2003). At the national level, the overall rate of uninsured increased from 14.6 percent in 2001 to 15.2 percent in 2002, representing the second consecutive year of increases. This increase has been attributed to the declining number and percentage of people covered by employment-based health insurance which itself has been attributed to economic factors such as: 1) a decline in employment, 2) a decline in the number of workers in large establishments, 3) increases in the cost to employers to purchase health insurance, 4) the decrease in the offering of employment based health insurance by employers, and 5) the increase in the worker's required share of the cost of coverage (Holahan 2003).

These recent and potentially transient phenomena notwithstanding, over the 2000-2002 three-year period Missouri had the 11<sup>th</sup> lowest rate of uninsured in the country at 10.4 percent, well below national average over the same period (14.7 percent).

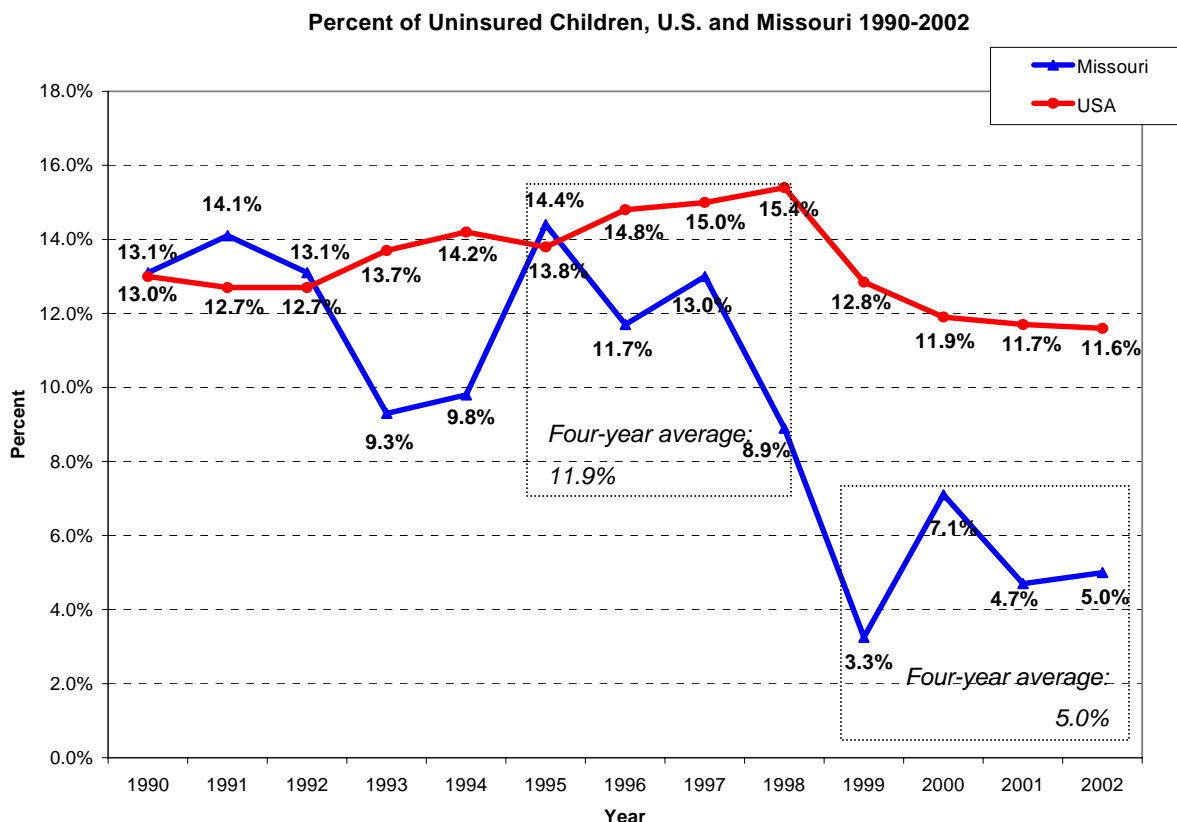
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<sup>3</sup> Often in this report there will be interchangeable references made to "non-elderly adults", i.e. adults not statutorily eligible for health insurance coverage under Medicare, and "adults". Throughout this document, please treat the term "adult" to mean "non-elderly adult".

## Uninsured Children – Provision of Coverage

The MC+ expansion has clearly provided insurance coverage to children who were previously uninsured as demonstrated by the drop in the four-year average rate of uninsured children under the age of 18, from 11.9 percent before full implementation of the waiver (1995-1998) to 5.0 percent after full implementation of the waiver (1999-2002); ref. Figure 1<sup>4</sup>. Stakeholders interviewed for this evaluation generally recognize the state's success in expanding health insurance to children as one of the greatest achievements of the Waiver program. A more recent measure also supports this contention - using a two-year rolling average, the rate of uninsured children in Missouri decreased from 5.9 percent in 2000-2001 to 4.9 percent in 2001-2002. This change is statistically significant, indicating the state is continuing to make progress at reducing the rate of uninsured children. Readers should also note that the Census Bureau has implemented several sampling methodology modifications in recent years; as a result, 1) year-to-year comparisons should not be made and 2) the increase from 4.7 percent in 2001 to 5.0 percent in 2002 is not statistically significant.

**Figure 1** Source: Census Bureau

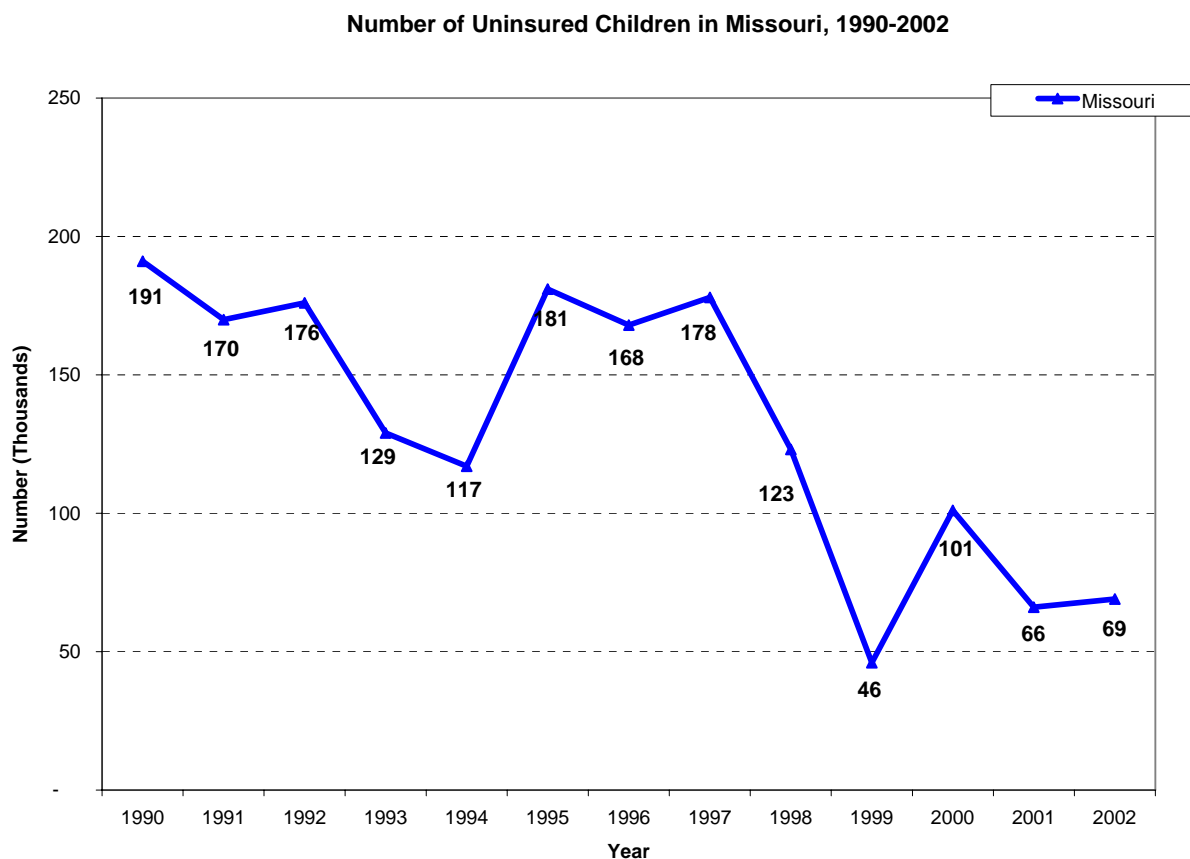


<sup>4</sup> This Census bureau information is captured for "children" up to age 18. The Waiver expansion covered "children" up to age 19. Thus, please note that there is a slight discrepancy between the information in the Census bureau report and the definition of *children* used for Waiver eligibility purposes. This discrepancy is not expected to impact the conclusions in this report.

As further evidence of the in-roads Missouri has made in reducing the rate of uninsured children in the state, we compared uninsured rates in Missouri to the national average and other states. The rate of uninsured children in the State of Missouri continues to be well below the national average, as it has been for the past five years. In 2002, Missouri's rate of uninsured children was less than half of the national average of 11.6 percent – had Missouri's rate been equal to the national average, the state would have been confronted with 91,000 additional uninsured children. Missouri's 2002 rate of uninsured children was also the fourth lowest in the country (Wisconsin - 4.6 percent, Rhode Island - 4.7 percent, New Hampshire - 4.8 percent) and within 10 percent of the lowest.

Figure 2 illustrates the estimated number of uninsured children by year in Missouri based on CPS ADS data.

**Figure 2** Source: Census Bureau

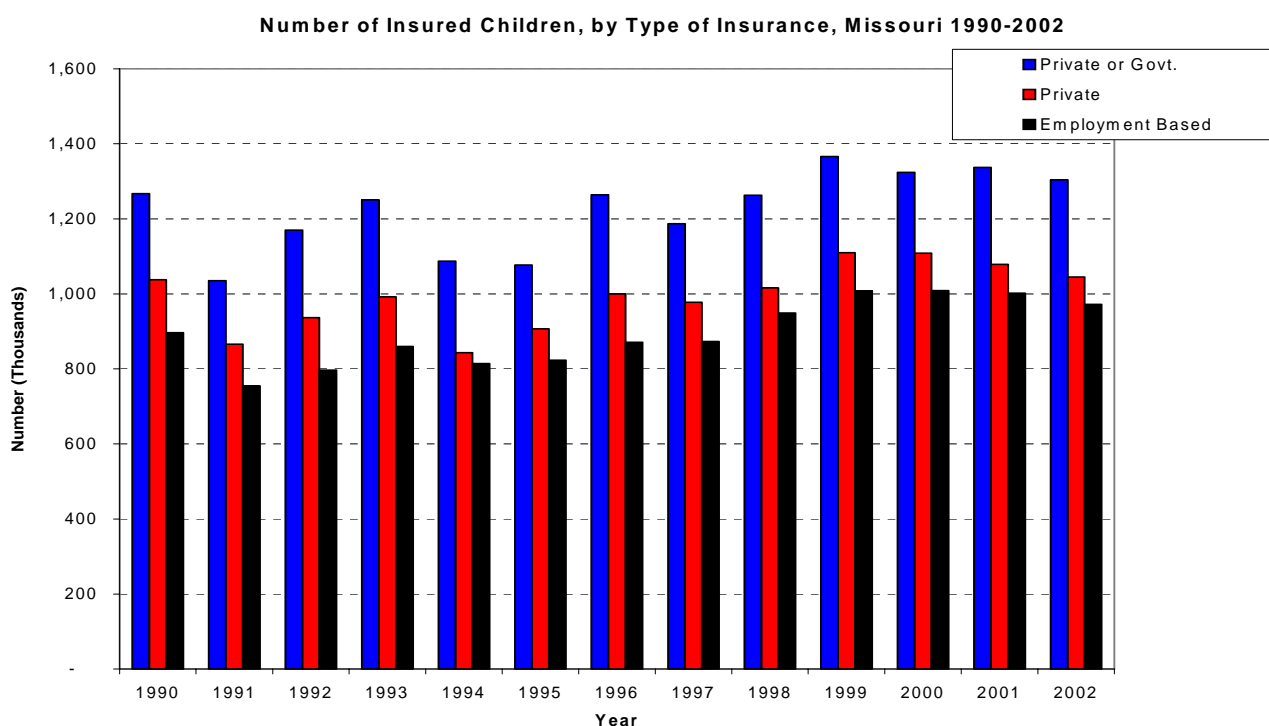


## Uninsured Children - Types of Coverage

According to CPS ADS data, the number of children in Missouri with health insurance decreased slightly, from 1.34 million in 2001 to 1.30 million in 2002. This minimal decrease is most likely attributed to the 3 percent decrease - from about 1 million in 2001 to 970,000 in 2002 - in the number of children covered under employment-based insurance (Ref. Figure 3). Between 2001 and 2002 there was also a small increase - 2.7 percent - in the number of children covered by Medicaid, which includes the 1115 Waiver population (Ref. Figure 4). Because the increase in Medicaid coverage occurred as the rate of children with employment-based coverage decreased slightly (about 3 percent), the 1115 Waiver continues to expand health coverage to children who were previously uninsured. The number of children in the Medicaid program and the number of children in the Waiver program each continue to grow, with the waiver population growing at a faster rate.

The number of Missouri children in the Medicaid program has increased 4.7 percent from 422,225 in September 2002 to 443,114 in August 2003 (DSS Monthly Management Reports). During the same period, the number of Missouri children in the Waiver program increased 6.6 percent, from 78,240 in September 2002 to 83,365 in August 2003. Increases in the number and rate of children covered by Medicaid are also occurring at the national level - the number of children nationally insured by Medicaid rose 6.2 percent, from 16.5 million in 2001 to 17.5 million in 2002.

**Figure 3** Source: Census Bureau

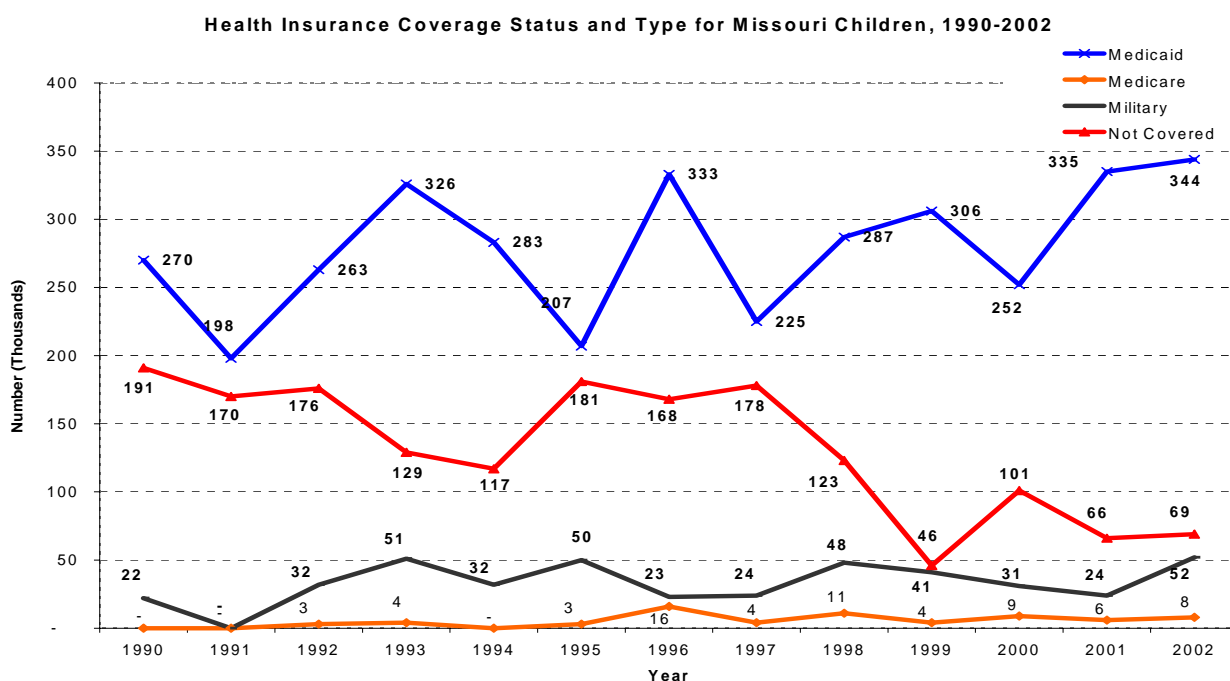


## Uninsured Children – Enrollment in 1115 Waiver

The State of Missouri originally estimated that about 91,300 uninsured Missouri children would be eligible under the 1115 Waiver, and expected 75 percent of these children, or about 68,500, to present for enrollment. In November 2000, after 26 months of operation, enrollment of children reached 69,967, surpassing the original enrollment target. By the end of the current evaluation period (August 2003) enrollment had reached 83,365 (DSS 2003), a 6.6 percent increase in the number of children enrolled in the 1115 Waiver during the study period. Although this represents an increase in enrollment over the course of a year, enrollment in August 2003 was down slightly from the peak of 85,754, which occurred in June 2003.

Further, the change in enrollment in the past year was not consistent across waiver populations. Enrollment increases were limited to children whose families have the lowest or no premium responsibilities under the terms of MC<sup>+</sup> (families with income at or below 225 percent of the FPL). Children with family income at or below 185 percent of the FPL make up almost 80 percent of the children enrolled under the Waiver - as of August 2003 there were approximately 65,000 children in this subset, a 7.6 percent increase over the previous year. Children with family income at or between 186 and 225 percent of the FPL make up the next largest population enrolled under the waiver - as of August 2003, there were 16,000 children enrolled, a 5.5 percent increase over the previous year (Ref. Figure 5).

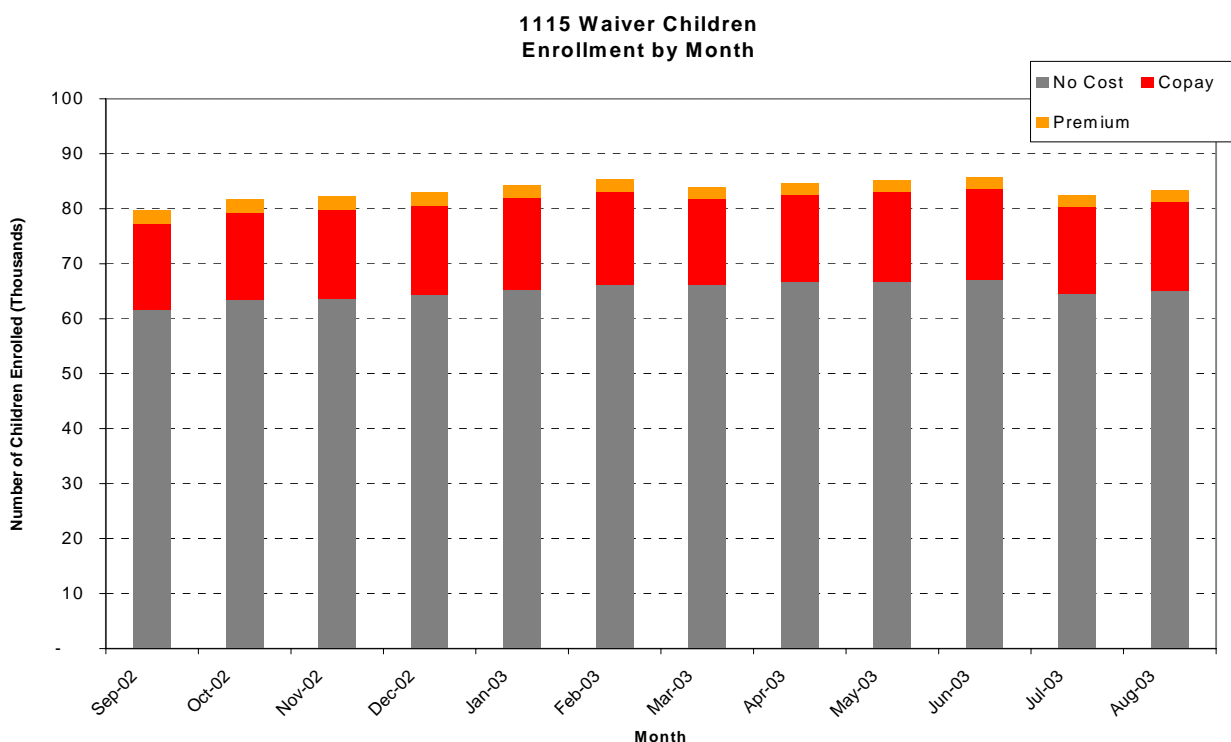
**Figure 4** Source: Census Bureau



Enrollment of children whose families have the highest premium responsibilities (family incomes at or between 225 and 300 percent of the FPL) actually decreased 10.9 percent, from 2,422 enrollees in August 2002 to 2,138 enrollees in August 2003. This represents the third consecutive year of enrollment decreases for this population. Since August 2000, the highest premiums under the Waiver program have increased by more than 200 percent; during the same period enrollment of children for which the parents would have premium responsibilities has decreased by more than 32 percent. While there may be a causal link between the two phenomena, annual changes in the income/family poverty level thresholds may be playing a role as well – as these thresholds are raised, families that at first may have fallen in an eligibility group with premium responsibilities can “roll over” into a group with no premium responsibilities.

In total, enrollment of the Waiver populations increased in all family support regions across the state (these regions are: Northwest, Northeast, Southeast, Southwest, Kansas City, St. Louis City and St. Louis County; Table 5 provides a crosswalk of counties to regions<sup>5</sup>). The greatest increase in enrollment took place in St. Louis County; the lowest percentage increase occurred in St. Louis City (ref. Table 4a).

**Figure 5** Source: Census Bureau



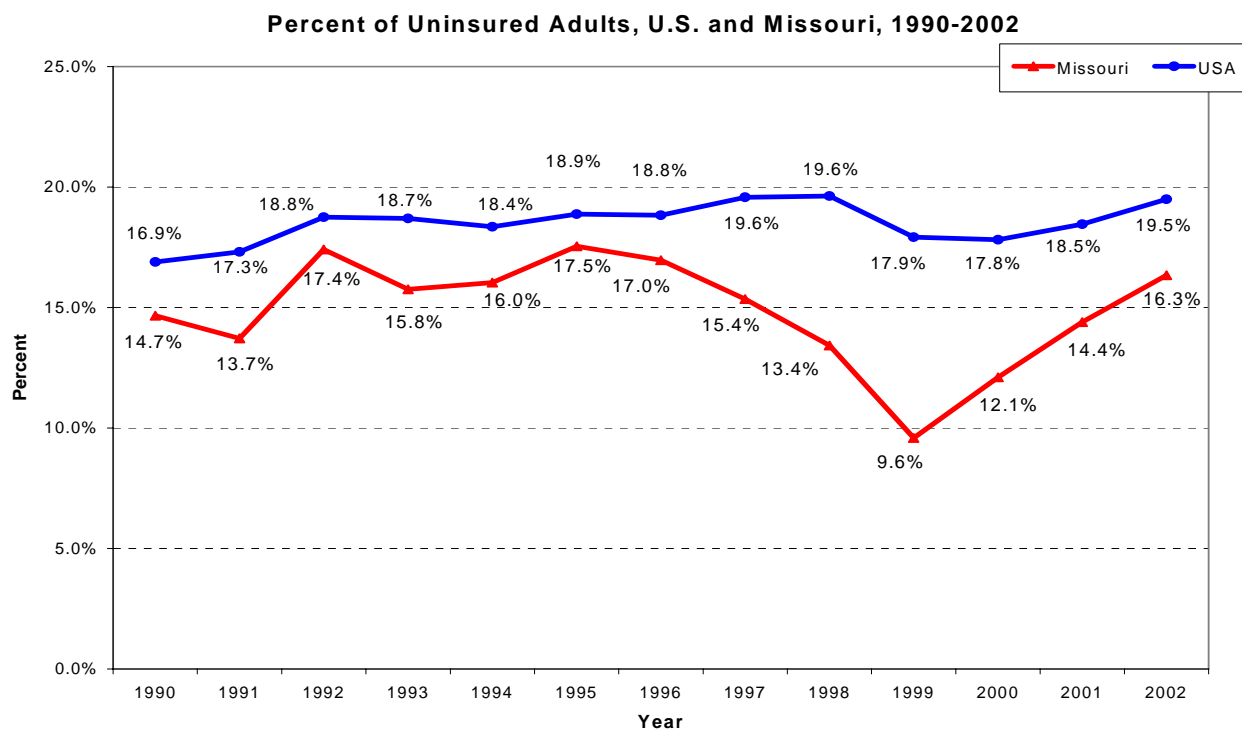
<sup>5</sup> As shown in Table 5, the county mapping was changed effective July 2003. For the purpose of this discussion county enrollment figures were aggregated to regions in accordance with the pre-July 2003 crosswalk. The NW and SW regions each lost four counties to other regions, while the SE and Jackson -Kansas City regions gained new counties. The two previously separate regions of St. Louis County and St. Louis City were combined with two other counties to create the new St. Louis region.

## Uninsured (Non-Elderly) Adults – Provision of Coverage

The rate of uninsured non-elderly adults in Missouri increased from 12.1 percent in 2000 to 14.4 percent in 2001, and again to 16.3 percent in 2002 (Ref. Figure 6), but continues to remain lower than the national rate (19.5 percent). Nationally, the increase in the uninsured has been attributed to the overall decline in the rate of employer sponsored insurance stemming primarily from decreased employer contributions to premiums, the decline in the number of workers in large establishments and rising unemployment (Holahan 2003). Based on Department of Labor statistics, in 2002 the unemployment rate in Missouri, like the national unemployment rate, increased again - from 4.7 percent in 2001 to 5.5 percent in 2002, an increase of 17 percent (nationally the rate increased from 4.7 percent in 2001 to 5.8 percent in 2002, an increase of 23 percent).

The rise in the number of uninsured non-elderly adults is affecting the overall number of the insured in Missouri in two ways. First, when the number of uninsured non-elderly adults increases the overall average of Missourians with health insurance decreases. Moreover, as these adults lose their employment-based health insurance and become both unemployed and uninsured, their children lose coverage as well.

**Figure 6** Source: Census Bureau



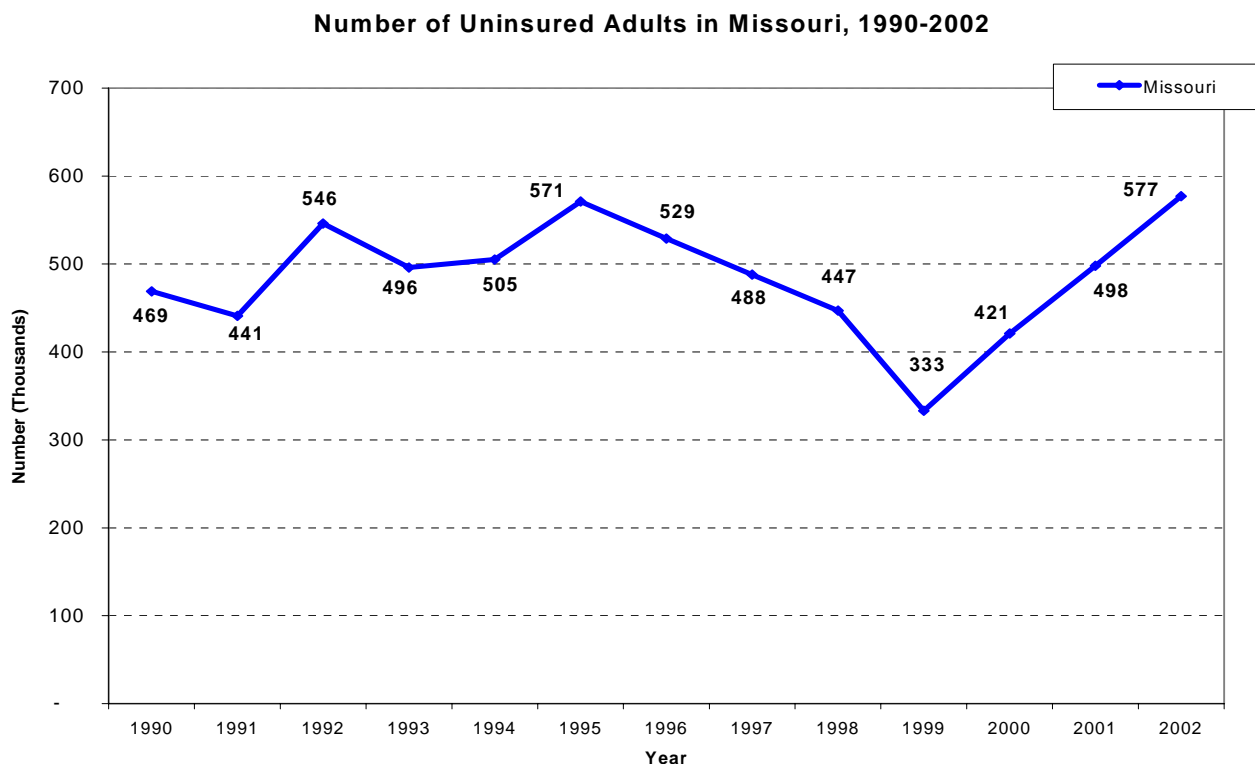


Whether through the indirect ramifications affecting their children's insurance status or through more direct influences based on mathematical averages, when the number and rate of non-elderly adults with employment-based insurance declines the overall number of uninsured increases as well. Compared to other states, Missouri has the 19<sup>th</sup> lowest rate of uninsured non-elderly adults at 16.3 percent. Missouri is behind Minnesota (9.9 percent), Delaware (11.9 percent), Iowa (12.8 percent), Hawaii and Massachusetts (13.3 percent), New Hampshire and Kansas (13.6 percent), Rhode Island (13.8 percent), Tennessee (13.9 percent), Nebraska (14.1 percent), Connecticut (14.2 percent), Vermont (14.3 percent), Pennsylvania (14.5 percent), North Dakota (14.6 percent), South Dakota (15.2 percent), Maine (15.3 percent), Michigan (15.5 percent) and Ohio (15.6 percent).

The number of uninsured non-elderly adults in Missouri has increased significantly in the past three years. Figure 7 illustrates the noticeable and significant decrease that occurred in 1999 when the Waiver was initially extended to adults. Budgetary changes effected after 1999 have contributed to a reversal of this trend:

1. Effective July 1, 2002 the waiver was modified to eliminate coverage for two adult populations: uninsured non-custodial parents below 125 percent of the FPL who are paying child support, and uninsured non-custodial parents actively participating in the Missouri Parent's Fair Share program.

**Figure 7** Source: Census Bureau



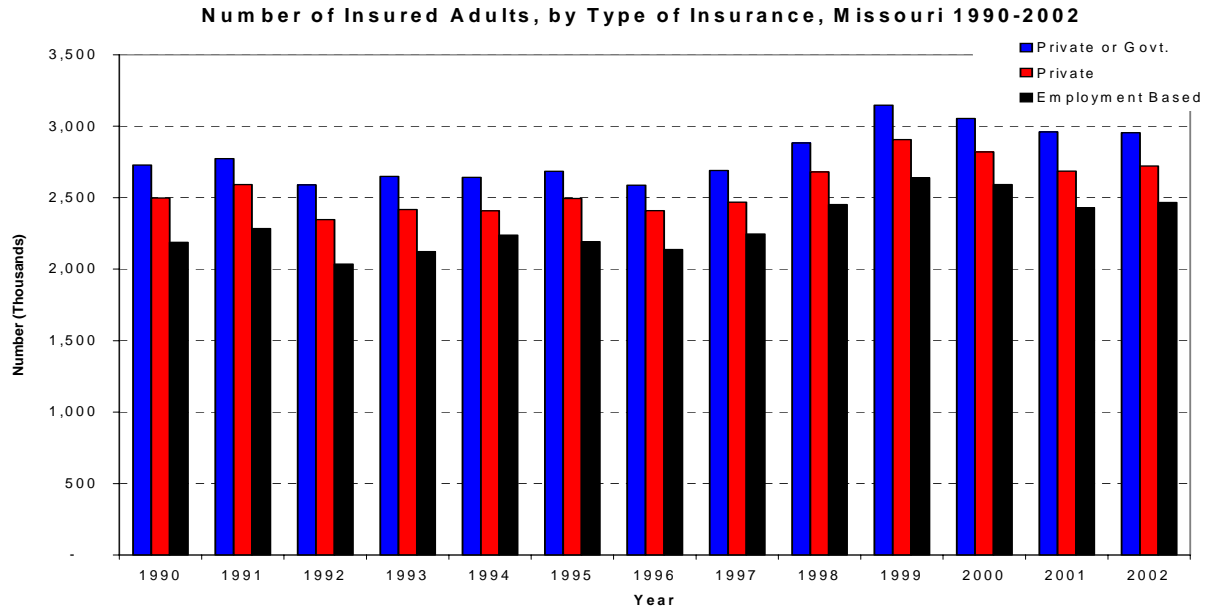
2. As a way to moderate the impact of welfare reform, originally the waiver extended two additional years of medical assistance to adults transitioning out of welfare as long as family income remained under 100 percent of the FPL. Effective July 1, 2002 medical assistance was made available for only one additional year.
3. Under the original terms of the Waiver women who were Medicaid-eligible for services up to 60 days after the birth of their child would retain coverage for women's health services for two years after delivery. Beginning in July 2002 the aforementioned services were covered for one year after delivery.

### **Uninsured (Non-Elderly) Adults - Types of Coverage**

Figures 8 and 9 show the number of non-elderly adults by type of health insurance coverage.

Between 1998 and 1999, the number covered by all types of insurance - private, government and employment based - increased, even as the number of uninsured increased. Beginning in 1999 the trend reversed, a change driven by decreases in the number of non-elderly adults with private and employment-based coverage and a drop in the number of non-elderly adults with Medicaid - in 2002 the number of non-elderly adults with Medicaid coverage fell to a four-year low of 212,000, a 40,000 enrollee decrease from the previous year. These statistics strongly suggest that as non-elderly adults lose private employment-based health insurance they become part of the uninsured population.

**Figure 8** Source: Census Bureau



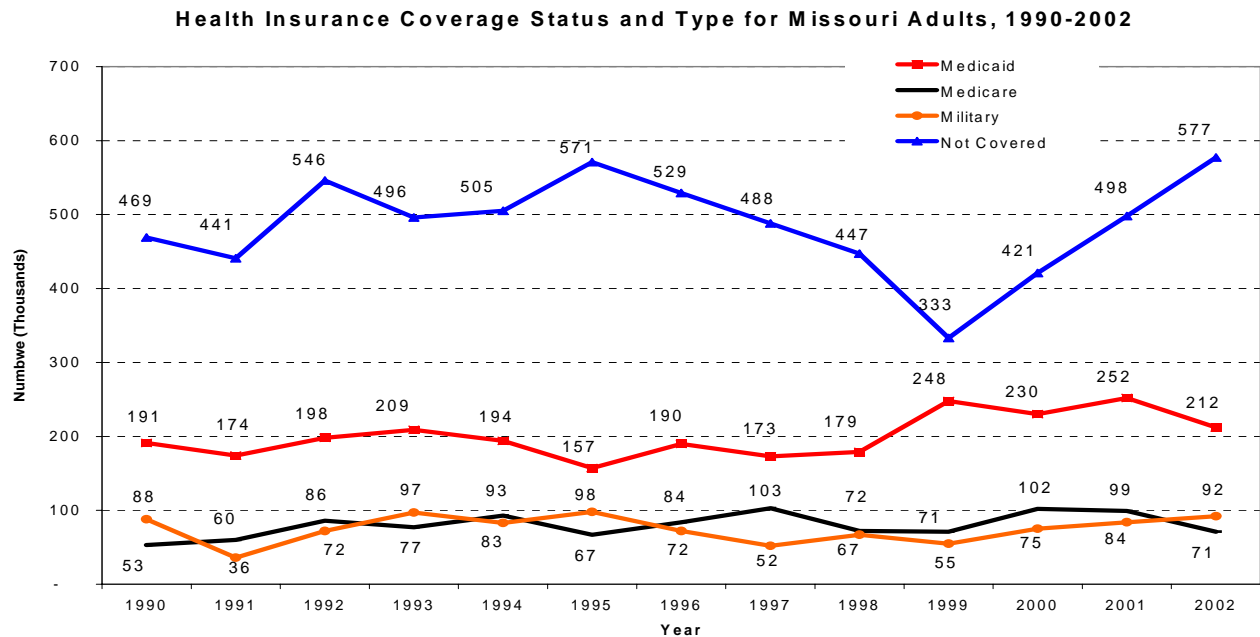
**Key:**

Private or Govt.: Includes those with private insurance, whether purchased directly from an insurance company or employment based, and government insurance. Government insurance includes Medicaid, Medicare, S-CHIP, Military health insurance, VA healthcare, TRicare or CHAMPUS, CHAMPVA and Indian health insurance.

Private: Anyone covered by a plan, whether purchased directly from an insurance company or employment based

Employment based: Anyone insured through his/her employer or union or that of a relative (e.g. child of an insured parent)

**Figure 9** Source: Census Bureau



## Summary and Conclusion

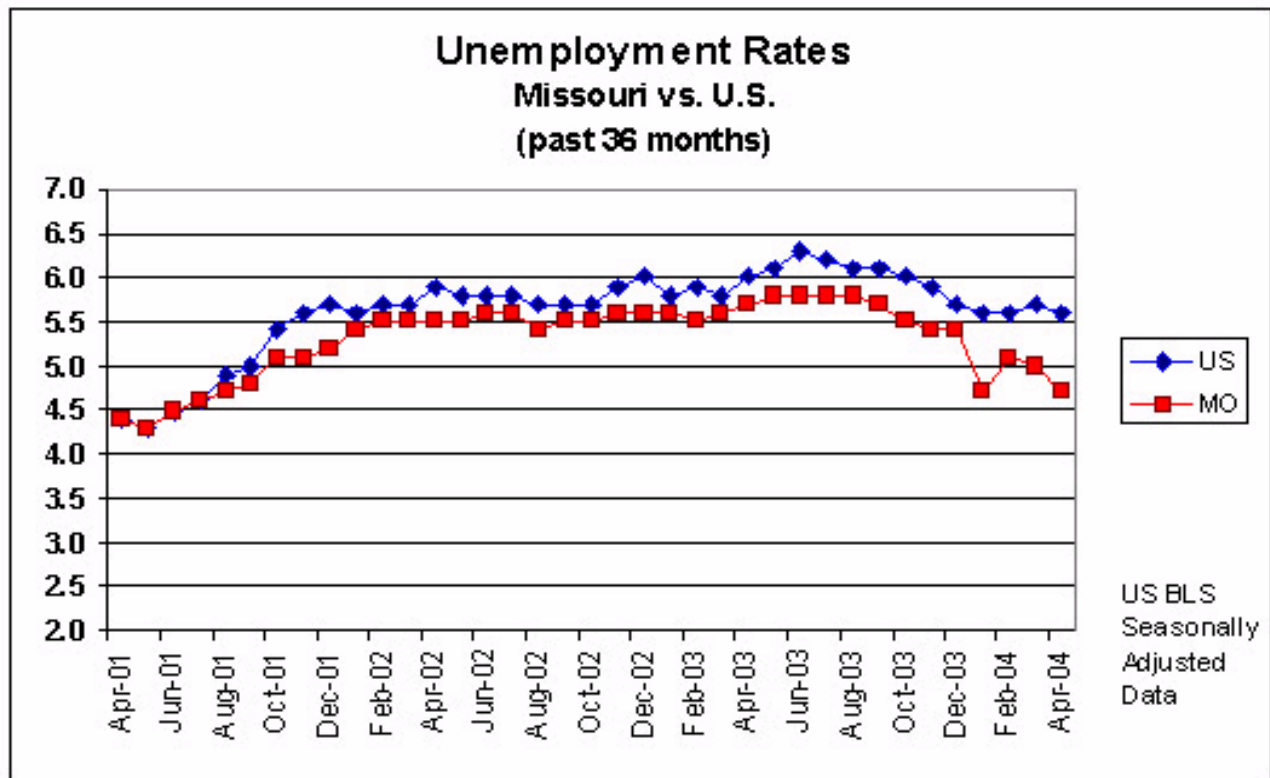
The MC<sup>+</sup> expansion has continued to provide health insurance to children who would otherwise be uninsured. At the end of this evaluation period, the waiver has reached its five-year anniversary, and the enrollment results for children during this period remain favorable and have continued to increase year over year. The state will continue to be challenged to sustain the enrollment of children in the “premium” eligibility groups. As pointed out in the previous evaluation, the families of these children are particularly sensitive to changes in premium requirements.

Regarding health insurance coverage of non-elderly adults, since 1999 their rate of uninsured has steadily increased, both at the national level and in Missouri. These increases correspond with unemployment increases at the national level (unemployment rose from a low of 4.3 percent in May 2001 to a high of 6.3 percent during the study period, in June 2003) and in Missouri (unemployment rose from a low of 4.3 percent in May 2001 to a high of 5.8 percent during the study period, during the summer of 2003); refer to Figure 10.

Going forward the state will be challenged to effect additional reductions in the number of uninsured adults at a time when access to employer coverage is decreasing and access to government based programs, including the Waiver itself, is tightening. While public programs have filled some gaps created by the loss of employer coverage, many groups of uninsured non-elderly adults were not eligible for relief through these programs. Although theoretically non-elderly adults are free to purchase coverage on their own, data show that there was no overall increase in other types of coverage such as private and individual coverage. Nationally, there has been a call for policymakers to expand eligibility for the current set of public programs or to provide subsidies that would enable people to purchase other coverage more easily (Zuckerman). Other suggestions have included increasing the role of publicly subsidized care in the way of tax credits and the establishment of broad purchasing cooperatives or government reinsurance for catastrophic costs (Haley and Zuckerman). In response, many states are evaluating expanding eligibility to Medicaid services, primarily through the use of a Health Insurance Flexibility and Accountability (HIFA) Act waiver. Given this trend, the state of Missouri may want to explore this option.

It should be noted that the feedback provided through the stakeholder interview process points to the beneficial impact of the Waiver in expanding access to health insurance to the previously uninsured. The interviewees generally expressed a great deal of satisfaction with the Waiver and described it as a success.

Figure 10



Source: Missouri Department of Economic Development web site

<http://www.ded.mo.gov/business/researchandplanning/indicators/unemp/>

## **RESEARCH QUESTION 2: HAS THE MC+ EXPANSION IMPROVED THE HEALTH OF MISSOURI'S CHILDREN AND FAMILIES?**

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Recent studies strongly suggest that the health of the 9 million uninsured children in the U.S.<sup>6</sup> is impacted adversely by the considerable barriers they face to access needed health care services. For instance, a study by the Kaiser Commission on Medicaid and the Uninsured (KCMU) found that “the uninsured are up to three times more likely than those with insurance to report problems getting needed medical care...”<sup>7</sup> Moreover, the study also found that “the uninsured are also less likely to receive timely preventive care”.<sup>8</sup> Finally, the study points to a direct link between access to health care services and deaths resulting from medical conditions or disease states that can be managed proactively – health insurance coverage could reduce the mortality rate among the uninsured by up to 15 percent.<sup>9</sup>

Consistent with this premise, in order to evaluate the impact of the 1115 waiver on the health of Missouri's children and families we examined the following indicators:

- ☑ **Avoidable hospitalizations:** Hospitalizations are considered to be avoidable when the associated primary diagnosis is for a preventable or manageable illness.<sup>10</sup>
- ☑ **Utilization of emergency services**
- ☑ **Utilization of preventive and wellness services:** as defined under early preventive, screening, diagnostic and treatment (EPSDT) guidelines.

Our analysis of avoidable hospitalizations and utilization of emergency services covers calendar years 1999 through 2002, the period following the implementation of the 1115 Waiver for which complete, validated information was available. Information was collected for three distinct populations:

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<sup>6</sup> Derived from The Uninsured: A Primer - Key Facts about Americans without Health Insurance. Kaiser Commission on Medicaid and the Insured, December 2003.

<http://kff.org/uninsured/loader.cfm?url=/commonspot/security/getfile.cfm&PageID=29345>

<sup>7</sup> Ibid

<sup>8</sup> Ibid

<sup>9</sup> Ibid

<sup>10</sup> From “Missouri Monthly Vital Statistics”, 29(4), 1995, State Center for Health Statistics, Missouri Dept. of Health: The diagnoses associated with avoidable hospitalizations in this study are: Angina; Asthma; Bacterial Pneumonia; Cellulites; Chronic Obstructive Pulmonary Disease; Congenital Syphilis; Congestive Heart Failure; Dehydration; Dental Conditions; Diabetes; Epilepsy; Failure to Thrive; Gastroenteritis; Hypertension; Hypoglycemia; Kidney or Urinary Infection; Nutritional Deficiencies; Pelvic Inflammatory Disease; Severe Ear, Nose or Throat infection; Tuberculosis.

1. Children eligible for medical assistance under the 1115 waiver (*1115 Waiver Children*);
2. Children otherwise eligible for medical assistance (*Other Medicaid Children*); and,
3. Children not eligible for any medical assistance; this group includes mostly individuals with commercial, i.e. private health insurance (*Non-Medicaid Children*).

In the absence of historical, “baseline” data on the 1115 Waiver Children population, we opted to ascertain the effect of the 1115 waiver on children who otherwise would have been uninsured by comparing the experience of the three populations during a common time period.

Our analysis extended beyond statewide statistics – it also looked for potential disparities across the four MC+ areas (the three managed care regions and the rest of the state, the “fee-for-service area”), including those that may be caused by the varying degrees of managed care rigor that exist in each managed care region. To that end, the requested information pertaining to each indicator was stratified by MC+ area.

The analysis of utilization of preventive and wellness services is similar in approach to our analysis of avoidable hospitalizations and ER service utilization, as it compares utilization of these services between the Waiver and non-Waiver, medical assistance populations.

We also looked at a fourth indicator – the rate at which the 1115 Waiver population filed medical or non-medical **complaints** related to their MC+ plan and their health care providers. This indicator is viewed as a proxy measure for the degree to which this population is satisfied with the outcome of their interactions with the plan and the providers; purportedly one of these (desirable) outcomes is an improvement in health status. As such, improved health status would be reflected in a decreased frequency of complaints.

When brought together these indicators provide considerable visibility into the health of the population being studied.

## Avoidable Hospitalizations

The American Academy of Pediatrics points to the rate of hospitalizations for ambulatory sensitive conditions (asthma, diabetes, gastroenteritis, etc.) as a recommended indicator for evaluating the impact of S-CHIP programs, as high rates of avoidable hospitalizations may indicate lack of access to or insufficient utilization of primary care services.

We examined the following indicators related to the use of these services during calendar years 1999 through 2002:

1. Rates of avoidable hospitalizations/all applicable diagnoses; and,
2. Rates of avoidable hospitalizations/*asthma* primary diagnosis.

### ***Avoidable hospitalizations – all applicable diagnoses***

The avoidable hospitalization rates for children in the study populations are shown in Figure 11. In contrast with the upward trend observed in all three study populations between 1999 and 2000, the hospitalization rates for children in the 1115 Waiver population decreased by almost five percent between 2001 and 2002.

- While the hospitalization rates for children in the Other Medicaid population also decreased between 2001 and 2002, the 1115 Waiver rate was considerably lower – **45** percent lower – than the Other Medicaid rate. This observation applies to every year in the study.
- While the 1115 Waiver rate in 2002 was higher than the Non Medicaid rate, the gap between the use rates of these two populations has been steadily decreasing: in 1999, the 1115 Waiver rate was almost twice as high as the Non-Medicaid rate; by 2002 the difference in the use rates had been reduced by almost 30 percent.
- The 2002 1115 Waiver rate was higher than the 1998 benchmark rate (7.2 per 1,000 population) computed using data from the National Hospital Discharge Survey.<sup>11</sup> Nonetheless, it must be noted that over the last two years of the study the decrease in the 1115 Waiver rate (8.9 percent) matches the decrease the national rate experienced over an eight-year period.

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<sup>11</sup> “Trends in Avoidable Hospitalizations, 1980-1998”; Kozak, Hall and Owings; Health Affairs; March/April 2001; pgs. 225-232.



### ***Avoidable hospitalizations – asthma primary diagnosis***

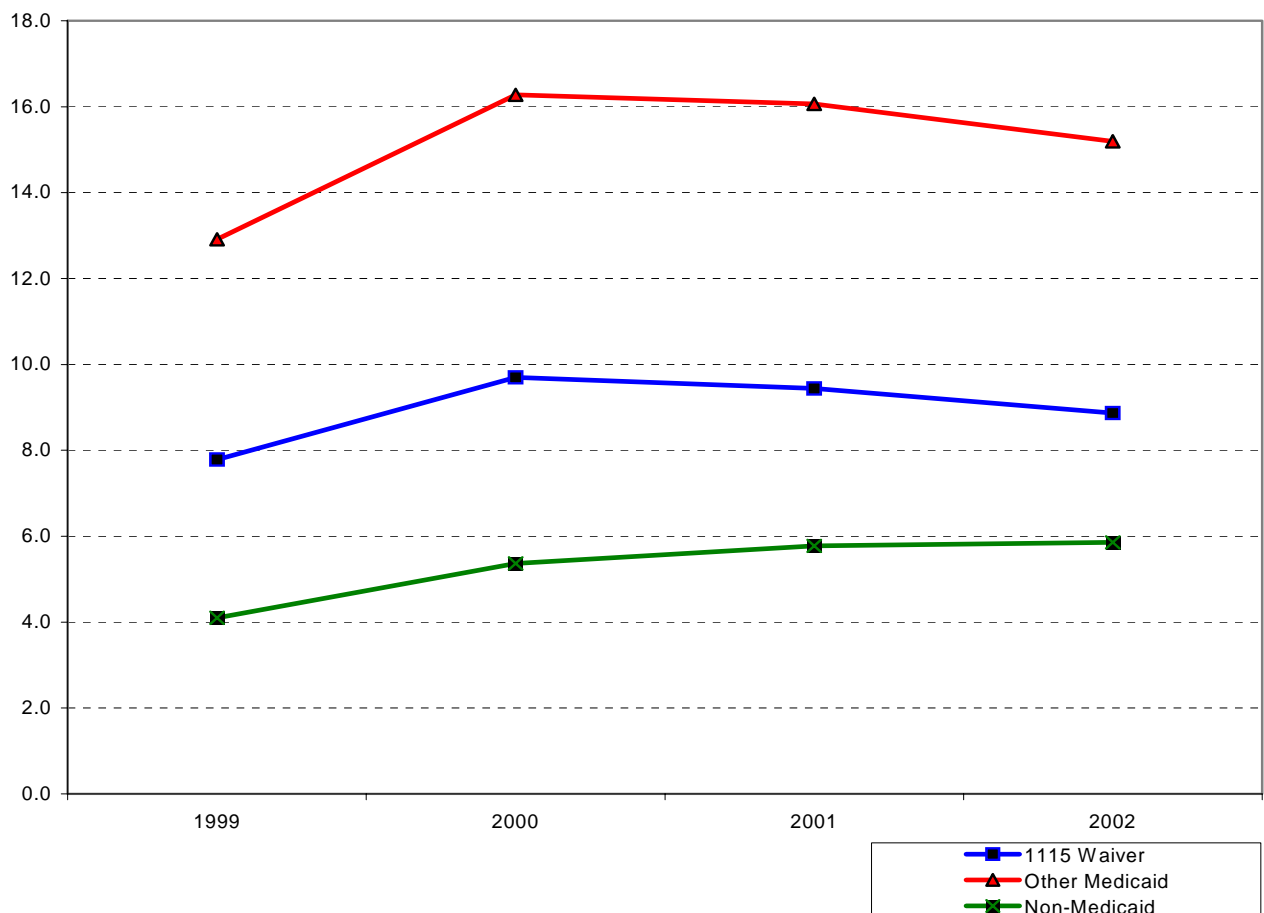
The asthma hospitalization rates for children in the study populations are shown in Figure 12.

- The hospitalization rates for children in the 1115 Waiver and Non-Medicaid populations experienced little or no change between 2001 and 2002.
- For the fourth consecutive year the Other Medicaid population had the highest rate of avoidable hospitalizations with asthma as the primary diagnosis, at 3.9 admissions per 1,000 members. While this represents a significant decrease from the four-year high (4.7), this occurrence rate is more than twice as high as that of the 1115 Waiver population.

Also for the fourth consecutive year, the hospitalization rate for the 1115 Waiver population fell between that of the two other groups, and closer to the Non-Medicaid population's than to the Other Medicaid population's, at 1.9 admissions per 1,000 members.

**Figure 11: Avoidable hospitalizations per 1,000 population, Missouri age <19.**

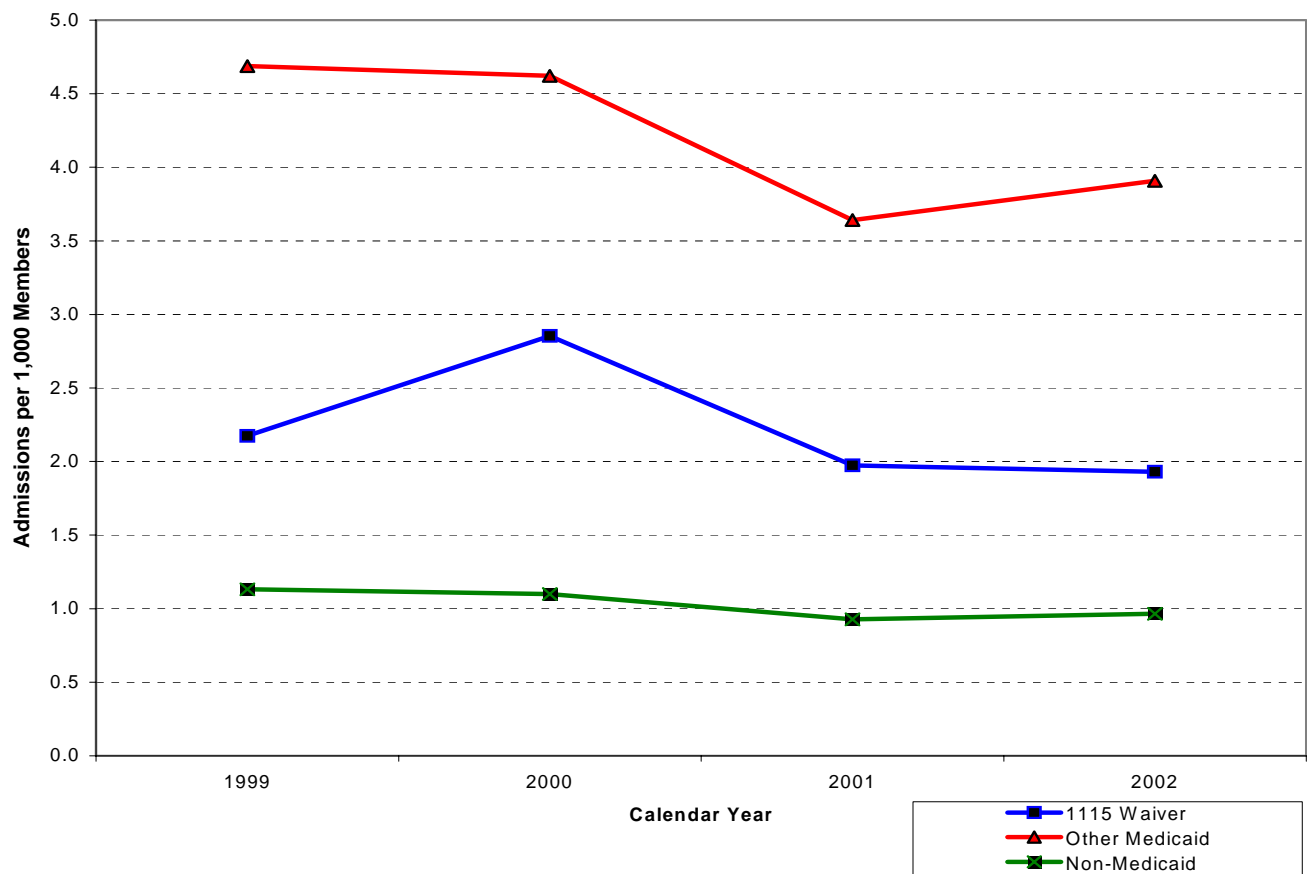
*Data Source: Missouri Department of Health and Senior Services*



- The 1115 Waiver rate compares very favorably with national benchmarks. According to statistics compiled by the Centers for Disease Control and Prevention (CDC)<sup>12</sup>, in 2000 the asthma hospitalization rate among children was about 3 per 1,000. The 1115 Waiver rate has been lower than this benchmark in each study year (by contrast, the Other Medicaid rate has been consistently higher than the national benchmark in every year of the study).

**Figure 12: Avoidable hospitalizations per 1,000 population, asthma primary diagnosis, Missouri, age <19.**

*Data Source: Missouri Department of Health and Senior Services*



<sup>12</sup> National Center for Health Statistics Fast Facts online:  
<http://www.cdc.gov/nchs/products/pubs/pubd/hestats/asthma/asthma.htm>

## Utilization of Emergency Services

We examined the following indicators related to the use of these services during calendar years 1999 through 2002:

1. Emergency room use rate/all primary diagnoses; and,
2. Emergency room use rate/*asthma* primary diagnosis.

### ***ER visits - all***

In the aggregate, the trends for emergency room utilization (ref. Figure 13) are consistent with those observed in the avoidable hospitalizations data.

- The ER use rate for children in the 1115 Waiver population decreased by almost 3 percent between 2001 and 2002.
- The Non-Medicaid use rate decreased by less than 2 percent during the same period.
- The use rate for children in the Other Medicaid population experienced little or no change during the same period.
- For the fourth consecutive year the Other Medicaid population had the highest ER use rate, 37 percent higher than the rate for 1115 Waiver children.
- Also for the fourth consecutive year, the ER use rate for the 1115 Waiver population fell between that of the two other groups, at 518 visits per 1,000 members.
- The 1115 Waiver rate is higher than the 2001 national benchmark rate (about 384 visits per 1,000 population) derived from CDC statistics.<sup>13</sup> However, as recently as 2000 the 1115 Waiver rate in the managed care regions was at or below this benchmark. Since 2000 there has been a marked increase in the utilization of ER services in the managed care regions, with a particularly dramatic increase – 43 percent – having occurred in the Eastern region. The 1115 Waiver rate in the fee-for-service area has actually decreased by 5 percent since 2000. This phenomenon will be discussed further in the Regional Variations section of the report.

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<sup>13</sup> “National Hospital Ambulatory Medical Care Survey: 2001 Emergency Department Summary”; Advance Data from Vital and Health Statistics; No. 335; June 4, 2003. <http://www.cdc.gov/nchs/data/ad/ad335.pdf>

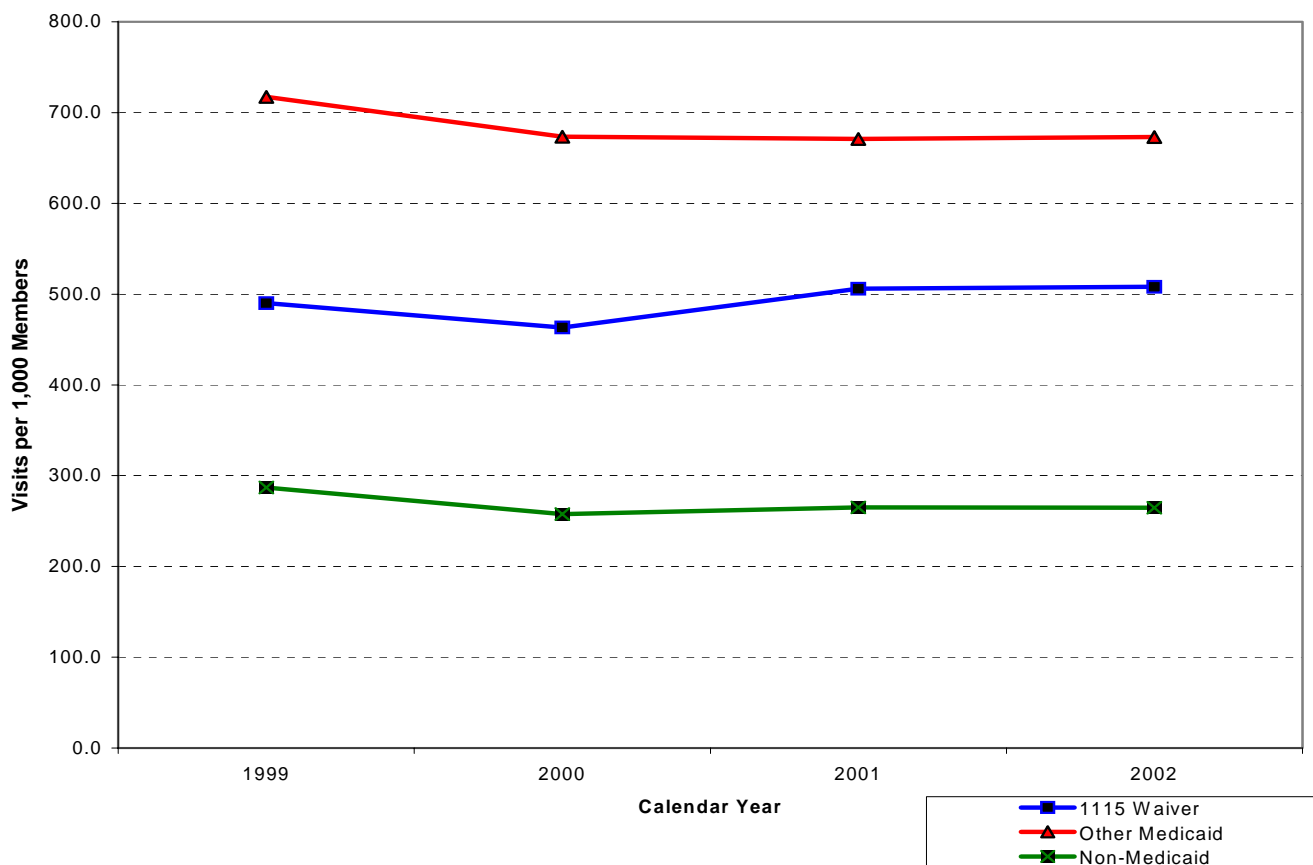
### ER visits - asthma

The trends in asthma-specific ER visits (ref. Figure 14) are somewhat different than the overall trend for ER visits:

- Between 2001 and 2002 the ER-asthma use rates increased or showed no material change across all three populations.
- Nonetheless, the ER-asthma use rate for the 1115 Waiver population was still lower than in 1999, and more than 20 percent lower than the rate for the Other Medicaid population.

**Figure 13: ER visits per 1,000 population, Missouri, age <19.**

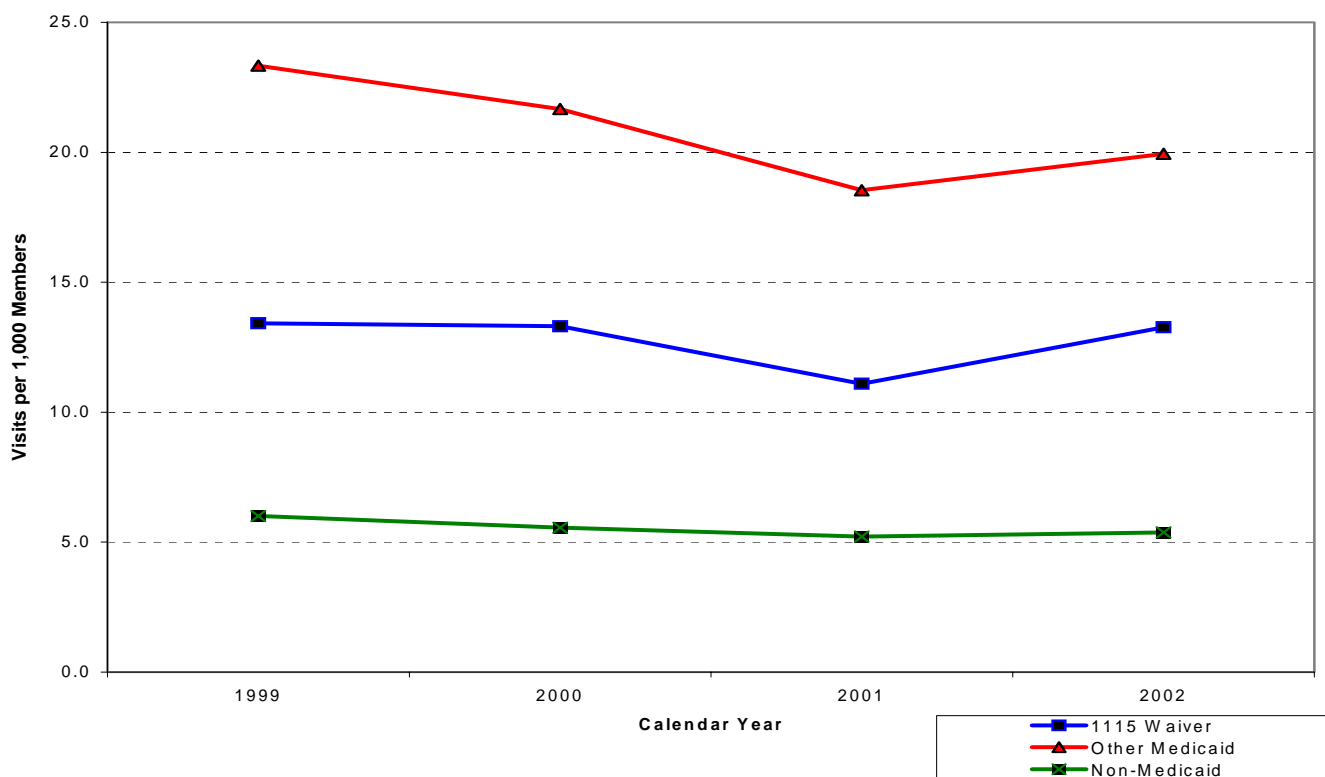
*Data Source: Missouri Department of Health and Senior Services*



- In every year of the study the 1115 Waiver ER-asthma use rate has been higher than the 2000 national benchmark (10.4 per 1,000 population) as reported by the CDC.<sup>14</sup> It should be noted that the use rate in the managed care regions that have the most 1115 waiver members - the Eastern and Western regions – are 21 and 11 percent lower, respectively, than in 2001. Moreover, these two regions are also more heavily urban, and thus the prevalence of asthma and related illness would be expected to be higher in these regions<sup>15</sup>.

**Figure 14: ER visits per 1,000 population, asthma primary diagnosis, age <19.**

*Data Source: Missouri Department of Health and Senior Services*



<sup>14</sup> Asthma Prevalence, Health Care Use and Mortality, 2000-2001; fact sheet by the National Center for Health Statistics; last updated January 28, 2003. <http://www.cdc.gov/nchs/products/pubs/pubd/hestats/asthma/asthma.htm>

<sup>15</sup> (a) Prevalence of asthma in urban and rural children in Tamil Nadu; Chakravarthy S., Singh R.B. and Swaminathan S., Venkatesan P; National Library of Medicine; Sep-Oct 2002.

[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=12502136&dopt=Abstract](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=12502136&dopt=Abstract)

(b) "Childhood asthma and urban geography"; Nagourney E.; *New York Times*; Sept. 29, 2000.

<http://library.uchc.edu/bhn/cite/nyt/3245asthma.html>

(c) Disproportionate Air Pollution Burden and Asthma in Urban Communities; Clark S. and Shat J.; published by the Harvard School of Public Health. <http://www.med.harvard.edu/chge/textbook/papers/Clark.pdf>

## Regional Variations

The health indicators for each population were also compared across MC+ managed care state regions and the parts of the state that have remained fee-for-service. Some regional variations should be noted:

- Across all three populations (Non-Medicaid, Other Medicaid and 1115 Waiver), the fee-for-service part of the state consistently had the highest rates of avoidable hospitalizations and emergency department visits. On average utilization rates for these services in the fee-for-service area have been about 20 percent higher than in the managed care regions. This statistic could be a function of several factors, including:
  - The fee-for-service area is predominantly rural (access to primary care services may be less than adequate in this area).
  - Additionally, the fee-for-service area contains some of the poorest sections of the state (southeastern Missouri, south of Kansas City).
- There is significant variation in asthma-related activity across regions. The regions with the largest urban populations – the Western region and particularly the Eastern region – have had utilization rates for asthma-related hospitalizations and ER visits that were considerably higher than in other parts of the state (the managed care Central region and the fee-for-service area). Asthma-related hospitalizations were almost 60 percent more likely in the Eastern region, while asthma-related ER visits were more than twice as frequent. These regional variations are consistent with national studies that have found a higher presence of asthma in urban areas.
- Part of the increase in asthma-related ER visits in the 1115 Waiver population observed between 2001 and 2002 is attributable to a 160 percent reported increase in the utilization of these services in the Central region (visits increased from 38 to 90). A change of this magnitude in any health indicator warrants an examination of how the particular statistic was derived.

## Utilization of Preventive and Wellness Services

We examined the degree to which the 1115 Waiver populations were able to access and receive the following preventive and wellness services:

1. Well baby physician/clinic services;
2. Well child physician/clinic services; and,
3. Child and adolescent preventive immunizations.

The services examined in this part of the analysis are consistent with the definition of early preventive, screening, diagnostic and treatment (EPSDT) services contained in the Omnibus Budget and Reconciliation Act of 1989 (OBRA 89) and in rules and regulations managed by CMS.<sup>16</sup>

### Analysis

Providing access to preventive services is a cornerstone of the MC<sup>+</sup> benefit design and it is a class of services that is actively promoted in outreach activities. Using these facts as a framework, when conducting our analysis we treated the utilization of these services by medical assistance recipients outside of the Waiver as the benchmark, under the assumption that the *minimum desirable outcome* would be for the Waiver population to access these services at a rate comparable to that of all other children in Missouri's medical assistance programs.

To conduct our analysis we requested data from the Division of Medical Services (DMS) of the Department of Social Services on the monthly utilization of preventive services by waiver children and non-waiver medical assistance children spanning the period of July 2001 and August 2003. A service was deemed "preventive and/or wellness" when the provider assigned one of a set of procedure codes and a preventive diagnosis code to the encounter.<sup>17</sup> While we did not receive data for every month in the request and we have concerns about the quality of the data for several other months, we were able to discern and thus compare general utilization patterns for both populations.

The utilization by month of these services by the two study populations - Waiver children and non-Waiver medical assistance children – is illustrated in Figure 15.

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<sup>16</sup> <http://www.cms.hhs.gov/medicaid/epsdt/default.asp>

<sup>17</sup> Preventive diagnosis codes in-scope included: V20-V20.2, V70.0 and V70.3-V70.9. Procedure codes in-scope included: 99381-99385, 99391-99395, 99431-99432, 99201-99205, 99211-99215, 90476-90748.

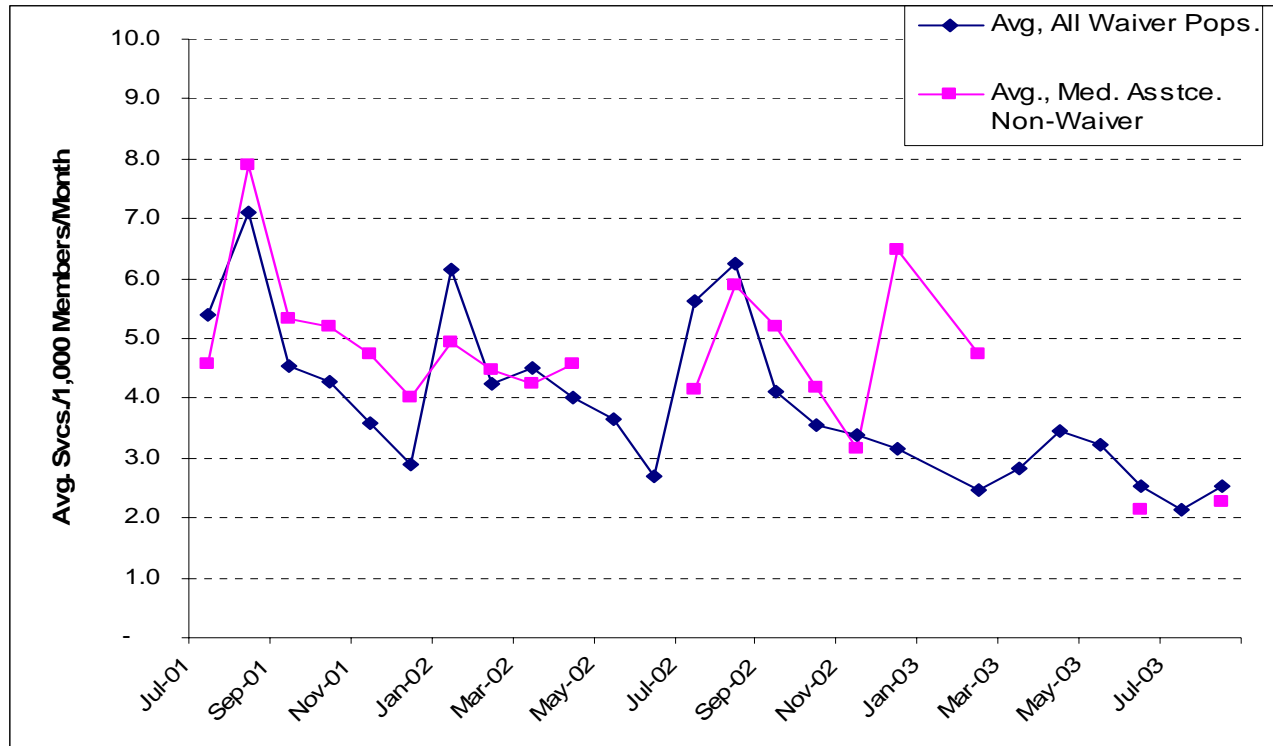
## Observations

All of these observations have to be tempered by the fact that the comparison between the Waiver and non-Waiver population is not “apples to apples” – there are potential differences in income levels, average age and average health status that can play into the comparisons.<sup>18</sup>

- Over the 19 months for which we have complete, reliable utilization data for both populations, the average per-member utilization rate for the non-Waiver population (7.6 units of service per 1,000 enrollees per month) was almost twice as high as that of the Waiver population (3.8 units of service per 1,000 enrollees per month).
- On the other hand, during the same 19 months the utilization rate by the Waiver population was greater than that of the non-Waiver population in eight of those months.
- The average utilization rate of waiver children in eligibility group 71 (12 units of service per 1,000 enrollees per month), all of whom are ages 1 to 6, in the lowest income bracket (family income between 134 and 150 percent of FPL) and in the no premium, no co-payment group, is considerably higher than the average rate of the non-Waiver population.

**Figure 15: Preventive and wellness services per 1,000 enrollees, children in waiver and non-waiver medical assistance populations, July 2001 – August 2003.**

*Data Source: Missouri Department of Social Services, Division of Medical Services*



<sup>18</sup> The data as provided did not support stratification by the aforementioned variables.



- The utilization rates of Waiver children in eligibility group 71, 73, 74 and 75 are all higher than the rate of children in eligibility group 72. Group 72 has the largest number of waiver enrollees, but it is the only group that does not have children ages 1 to 5, the children that would be expected to utilize the greatest number of in-scope services.
- By and large the monthly variations in utilization, partly due to seasonality (e.g. utilization of these services, which include well visits and visits for immunizations, picks up right before the start of a school year and drops off during the winter and summer vacation months) is the same for both populations.

While the data may not support indisputable or definitive conclusions about the level to which the Waiver population is utilizing preventive services vis-à-vis the non-Waiver population, it does seem to indicate that at least some of the members of the Waiver population are accessing these services at a par with, or with a greater frequency than, the non-Waiver population. Moreover, based on an aforementioned observation it appears that the younger, more vulnerable members of the Waiver population are not encountering problems accessing these services. Finally, anecdotal evidence gathered from the stakeholder interviews would support the contention that the Waiver population is indeed receiving beneficial preventive services – specifically, interviewees repeatedly cited the use of the waiver’s managed care model as having improved access to these services.

It is strongly recommended that this indicator be analyzed more thoroughly in subsequent studies.

## Member Complaints

The Division of Medical Services (DMS) of the Department of Social Services provided us with information related to complaints filed by MC+ enrollees against their plan or the health care providers with whom they interacted. DMS classified the complaints as follows:

- Quality of Care - the complaint type that would be expected to correlate most strongly with health status; includes complaints such as “provider treatment not helping”, “not getting better”, “lack of provider concern” and “concerned about and/or disagrees with diagnosis”;
- Timeliness of Appointments;
- Denial of Services;
- Other Medical - “unable to reach provider”, “(member) wants new provider”;
- Transportation Complaints;
- Interpreter Complaints;
- Denial of Claims;
- Office Waiting Complaints - related to office visits;
- Office Staff Behavior Complaints - can relate to providers or their staff; or,
- Other Non-Medical - “member (inappropriately) charged at time service is rendered”, “receiving bills from PCPs, collection agencies, etc.” and “place of service not clean”, etc.

The complaints were compiled for the following periods:

- Period A: January, 2002 to September, 2002
- Period B: January, 2003 to September, 2003

We then computed the average number of complaints per month for each Period. Finally, we converted these averages to per-member per-month statistics by factoring the average number of MC+ members per month during each Period. The resulting statistics are shown below.

Comparing the two statistics points to a significant reduction in the aggregate and the per-member frequency of complaints which, all else being equal, would suggest the satisfaction of MC+ enrollees with their plan, providers and health status is on the rise.

Comparison of Complaint Activity Between Periods:						
		A	B	C	B/(C/1,000)	(B/(C/1,000)) *12
		Complaints during Period	Avg. # Complaints/ Mo.	Avg. # Members/ Mo.	Complaints per 1,000 Members/ Mo.	Complaints per 1,000 Members/ Yr.
Period A	1/02-9/02	104	11.6	76,636	0.15	1.81
Period B	1/03-9/03	77	8.6	84,020	0.10	1.22
Difference, Period B to Period A:						-32.5%

## Feedback from Stakeholder Interviews

The feedback obtained through the stakeholder interview process is generally supportive of the position that the Waiver population's health status has improved as a result of the Waiver. As noted earlier the waiver's managed care model was credited with improving access to preventive services; improved access to EPSDT screens was cited as a waiver achievement. Additionally, interviewees cited other specific benefits related to health status: improved health service utilization patterns, such as a reduction in avoidable or sub-optimal ER use, the positive economic impact of improved worker productivity, and a decrease in school absenteeism.

On the other hand, some interviewees did point to some difficulties accessing mental health services and dental care as well as obtaining certain prescriptions. These comments were qualified several ways – first, the interviewees pointed to well documented dental and mental health provider shortages in the state as contributing to access problems (in support of the waiver's effect on addressing the provider shortage, one of the interviewees commended the waiver's managed care model for organizing a network of dental care services that enables Waiver enrollees to access these services without having to drive great distances). Furthermore, it was noted that increased awareness and understanding of prior authorization procedures for certain services and prescription drugs would have a positive impact on the access problem. Finally, it was noted that racial minorities, non-English speaking and rural enrollees were experiencing greater access problems than the rest of the Waiver population. This phenomenon is indeed significant and in need of addressing, yet it is not specific to the Waiver program.

## Summary and Conclusion

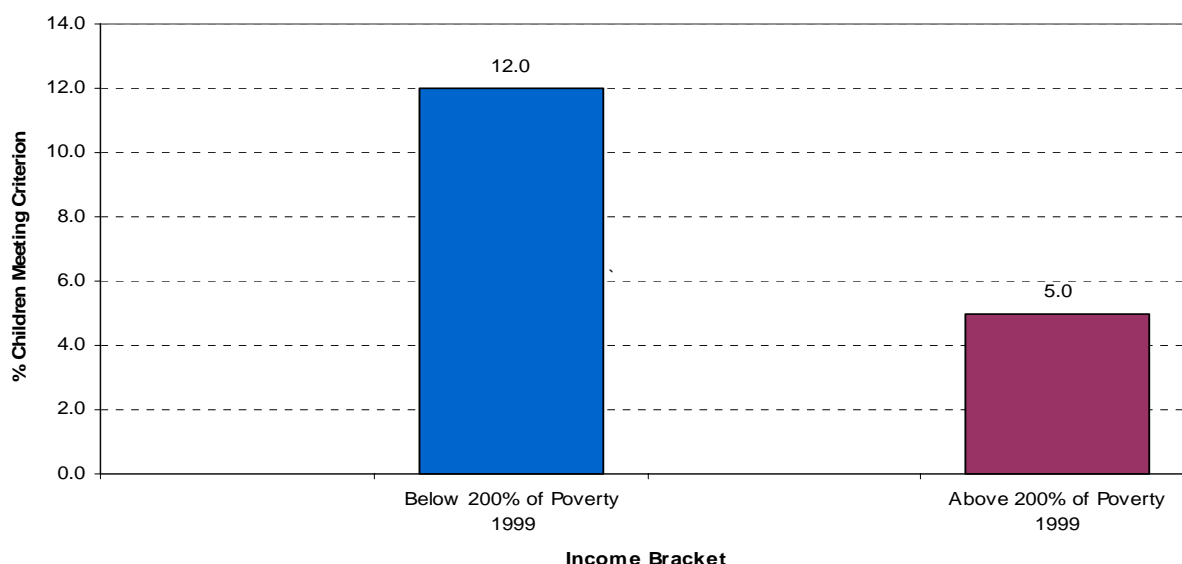
While most health indicators for the Other Medicaid population experienced improvement during the study period, the statistics for the 1115 Waiver population remain considerably more favorable. At worst, the overall rate of emergency room visits and the use rate of ER services for asthma in the 1115 Waiver population remained constant during the study period. During the same period, this population experienced a decrease in the rates of avoidable hospitalizations and hospitalizations related to asthma. Moreover, Waiver populations such as the children in Eligibility Group 71, which purportedly would benefit the most from preventive and wellness services to which they would not have access otherwise, are accessing these services at a rate that exceeds the average of the non-Waiver children's population. Finally, as measured by member complaints their satisfaction with their plans and providers, and by inference their overall health situation, has improved to a significant degree. In its most conservative interpretation, and as measured by the aforementioned indicators, the data suggest that *all else being equal* the health status of the 1115 Waiver population has improved since the start of the waiver program.

The observations resulting from comparing utilization patterns across the three study populations – the 1115 Waiver, Other Medicaid and Non Medicaid populations – are consistent with findings compiled from several studies on the health status of uninsured and low-income children:

- The *Kaiser Foundation* study referenced previously in the report highlighted the potential impact of health insurance coverage on mortality: health insurance coverage could reduce the mortality rate among the uninsured by up to 15 percent.
- A study by the *Urban Institute* pointed to a strong correlation between a child's health status and the child's family income level (ref. Figures 16a-c). According to the study, "low-income children are more likely to lack a usual source of care, to have parents who are not confident that family members can get medical care when they need it, and to be in fair or poor health."<sup>19</sup>
- Statistics compiled by the *Centers for Disease Control* show that, all else being equal, thirty percent more children in the "at or above poverty" income bracket were reported to be in "very good and excellent health" vs. children in the "below poverty" bracket.<sup>20</sup>

These findings underscore the vital role played by the Waiver in extending health insurance coverage to children who benefit greatly from having access to needed health care services - services that otherwise they would be unlikely to receive.

**Figure 16a: Percentage of children with "no usual source of care" as reported in 1999 Snapshots of America's Families II. Data Source: Urban Institute**

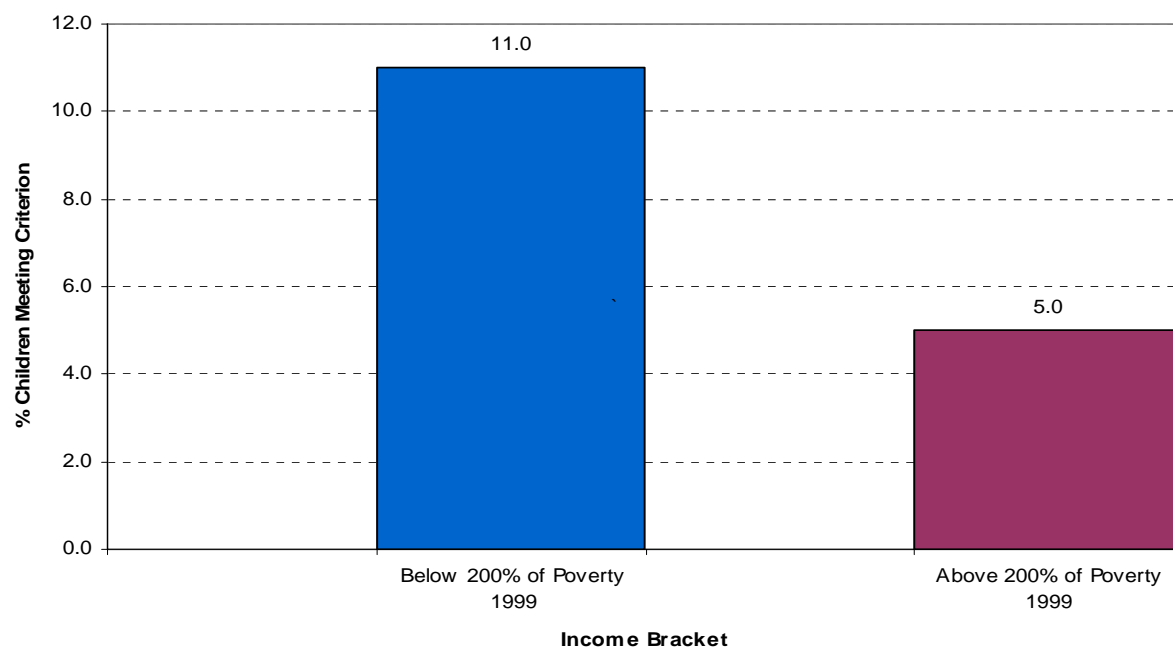


<sup>19</sup> 1999 Snapshots of America's Families II: Health Insurance, Access, and Health Status of Children; Kenney G., Dubay L. and Haley J. Published by the Urban Institute.

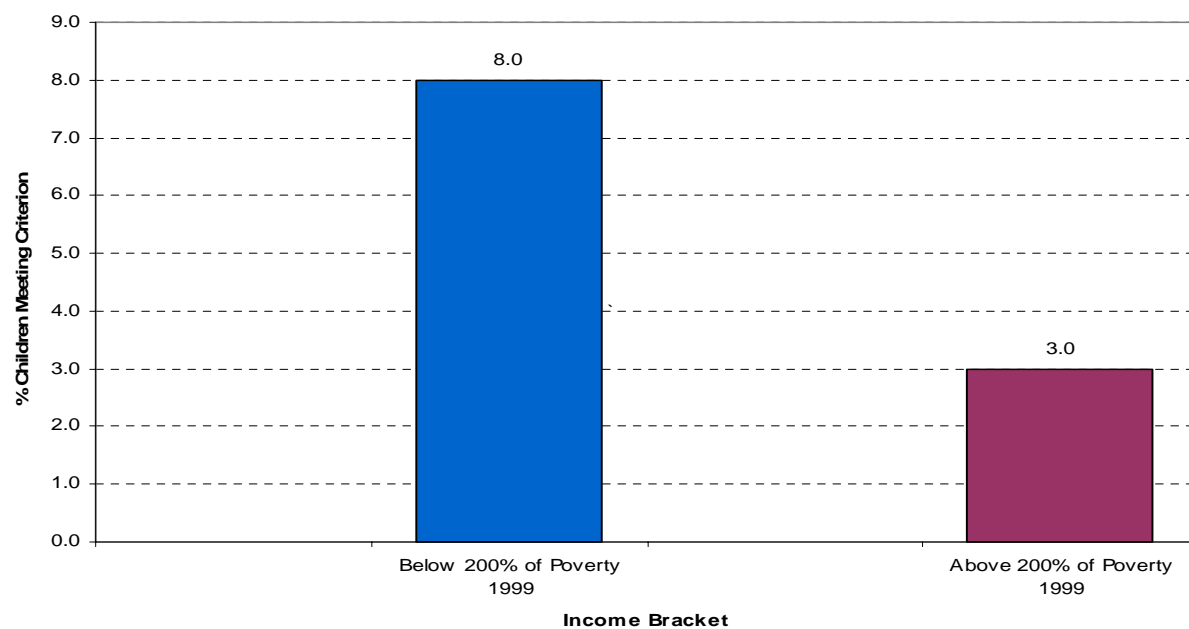
[http://www.urban.org/content/research/newfederalism/nsaf/snapshots/1999\\_results](http://www.urban.org/content/research/newfederalism/nsaf/snapshots/1999_results)

<sup>20</sup> Table HEALTH1: General Health Status: Percentage of Children under Age 18 in Very Good or Excellent Health by Age and Poverty Status, selected years, 1984-96. <http://www.childstats.gov/ac1999/hlth1.asp>

**Figure 16b: Percentage of children whose parents are “not confident in ability to get needed care” as reported in 1999 Snapshots of America’s Families II. Data Source: Urban Institute**



**Figure 16c: Percentage of children whose parents indicate are “in fair or poor health” as reported in 1999 Snapshots of America’s Families II. Data Source: Urban Institute**



### **RESEARCH QUESTION 3: WHAT IS THE IMPACT OF MC+ ON PROVIDING A COMPREHENSIVE ARRAY OF COMMUNITY BASED WRAPAROUND SERVICES FOR SERIOUSLY EMOTIONALLY DISTURBED CHILDREN (SED) AND CHILDREN AFFECTED BY SUBSTANCE ABUSE?**

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#### **Background: About Wraparound Services**

As described in the strategic plan for the Department of Mental Health (DMH), over the last twenty years the field of children's mental health has experienced a dramatic paradigm shift away from institutionalization and towards a more holistic, community-based intervention and treatment model. Given that service fragmentation and the over reliance on institutional care were recognized as a major impediment to improving the management of mental health, service coordination and the provision of **wraparound services** have been identified as critical factors for insuring the success of the new model.

Wraparound services (sometimes referred to as "umbrella services") are a class of treatment and support services provided to a child and/or the child's family with the intent of facilitating the child's functioning and transition towards a better mental health state. The services that may be provided under this definition are:

- **Transportation support services** that enable the child and his/her family to access needed services and support;
- **Social and recreational support services** that enable the child and his/her family to participate in activities that s/he would otherwise not be able to be involved in due to distance and/or cost;
- **Basic needs support services** provided on a temporary and/or emergency basis;
- **Clinical/medical support services**, not including traditional outpatient services, that help meet non-behavioral health treatment needs as well as facilitate meeting the child's overall treatment goals; and,
- **Other specialized support services** such as crisis management, legal support, basic schooling and vocational training that cannot be met through other means.

DMH and DMS have developed joint protocols and guidelines for the provision of wraparound services; they also share responsibility for the funding of these services. The services – and related codes – that Missouri classifies as wraparound services are listed in Appendix II.

## **Analysis - Service Utilization**

In this evaluation cycle, our analysis focused on documenting the degree to which waiver children were receiving mental health services and the degree to which children receiving mental health services were also receiving wraparound services. To that end we compiled data from DMH and DMS on the mental health and wraparound services received during the study period by children in the Waiver program during the same period.

To analyze the data, as well as for reporting purposes, we categorized mental health services into Types based on whether they were:

**TYPE A** - Provided under the Title XIX/Medicaid benefit package (and thus paid for partly with federal funds); or,

**TYPE B** - Fully funded by DMH (with state funds only, i.e. no federal funds participation).

Wraparound services are always fully funded by DMH.

It should be noted that DMH provides the state funds for many mental health services included in the Title XIX/Medicaid benefit package ("Type A" services), including some of the most heavily utilized services identified in this analysis. DMH also coordinates and oversees the delivery of these services.

We then divided up the population of service recipients into five mutually exclusive subsets:

**SUBSET 1** - received wraparound services, Type A and Type B mental health services;

**SUBSET 2** - received wraparound services and only Type B mental health services;

**SUBSET 3** - received Type A mental health services only;

**SUBSET 4** - received Type A and Type B mental health services but no wraparound services;

or,

**SUBSET 5** - received Type B mental health services only.

The number of recipients by subset is shown below (subsets labeled in white text against black background):

Received Wrap around Services?	Received In-Scope Mental Health Services?			TOTAL
	Type A Only	Type A and/or Type B	Type B Only	
Yes	N/A	<b>1</b> 45	<b>2</b> 13	<b>58</b>
No	<b>3</b> 7,493	<b>4</b> 303	<b>5</b> 32	<b>7,828</b>
<b>TOTAL</b>	<b>7,493</b>	<b>348</b>	<b>45</b>	

Grand Total, Unique Recipient Count:

**7,886**

### Aggregate Statistics

The following statistics cover all recipients of mental health and/or wraparound services for the entire study period (September 1, 2002 – August 31, 2003).

- Total number of service recipients: 7,886
- Recipients as a percentage of all enrollees: 6.7 percent
- Average age of recipients (at the time they received services): 14
- Average number of months recipients were waiver enrollees: 8.7
- Average # services per member,
  - ❖ Type A services (in Title XIX benefit package): 69.3
  - ❖ Wraparound and Type B services (funded by DMH): 39.9



- Services rendered most frequently (make up at least 90 percent of services of each type),

1. Type A Services (title XIX):

#	Procedure Code/Description	Units of Service	Avg. Services/ Recipient	% Total	Cumulative % Total
1	Y3103 CSTAR DAT TREATMENT ( 1/2 HOUR)	200,259	25.4	35.5%	35.5%
2	90804 INDIV. PSYCHOTHERAPY, INSIGHT ORIENTED..., OFFICE OR OUTPATIENT 20-30 MINS FACE TO FACE W/ PATIENT	79,696	10.1	14.1%	49.6%
3	90853 GROUP THERAPY(OTHER THAN MULTI-FAMILY)BY PSYCHOLOGIST, LPC, OR SOCIALWORKER, 1/2 HR UNIT, 3/DAY	51,802	6.6	9.2%	58.8%
4	90847 FAMILY PSYCHOTHERAPY, W/ PATIENT, BY PSYCHOLOGIST,L.P.C., OR SOCIAL WORKER, 1/2 HR UNIT, 2 UNITS/DAY	41,097	5.2	7.3%	66.1%
5	Y3119 COMMUNITY SUPPORT 1/4 HOUR	32,481	4.1	5.8%	71.8%
6	Y3111 CTAR ADA COMMUNITY SUPPORT 1/4 HOUR	26,924	3.4	4.8%	76.6%
7	Y3110 CSTAR GROUP EDUCATIONAL COUNSELING 1/4 HOUR	25,713	3.3	4.6%	81.1%
8	Y3107 CSTAR GROUP COUNSELING 1/4 HOUR	19,096	2.4	3.4%	84.5%
9	Y3104 CSTA INDIVIDUAL COUNSELING 1/4 HOUR	17,348	2.2	3.1%	87.6%
10	90801 PSYCHIATRIC DIAGNOSTIC INTERVIEW EXAMINATION	16,896	2.1	3.0%	90.6%

2. Wraparound and Type B Services (funded by DMH; wraparound services are highlighted):

#	Procedure Code/Description	Units of Service	Avg. Services/ Recipient	% Total	Cumulative % Total
1	Y3128J TARGET C M SED/CM IND	5,734	0.73	35.2%	35.2%
2	451022 ADOLES ACADEMIC ED-CSTAR -	2,912	0.37	17.9%	53.1%
3	Y3103A DAY TREATMENT-CSTAR	1,687	0.21	10.4%	63.5%
4	Y3127J TARGET C M SED/MHP IND	1,566	0.20	9.6%	73.1%
5	Y3119L COMMUNITY SUPPORT-CPR -	1,435	0.18	8.8%	81.9%
6	490041 CHILD/ADOLEN FAMILY ASSIST	802	0.10	4.9%	86.8%
7	Y3107J GROUP COUNSELING-CSTAR -	399	0.05	2.5%	89.3%
8	Y3110J GROUP EDUCATION-CSTAR -	393	0.05	2.4%	91.7%
9	W1355L INTENSIVE CPR	355	0.05	2.2%	93.8%
10	Y3111J COMMUNITY SUPPORT-CSTAR -	345	0.04	2.1%	96.0%
11	Y3104J INDIVIDUAL COUNS-CSTAR -	288	0.04	1.8%	97.7%
12	Y3116J OFFICE FAMILY THER CSTAR	68	0.01	0.4%	98.2%
13	44000W RESPITE SRVCS /SHARED UNIT-	45	0.01	0.3%	98.4%
14	02500W	43	0.01	0.3%	98.7%
15	W1356L PSYCHOSOCIAL REHAB. -	36	0.00	0.2%	98.9%

## Statistics by Subset

- Service utilization, average per subset member,
  - ❖ **SUBSET 1** *Received wraparound services (funded by DMH), Type A (title XIX) and Type B (funded by DMH) mental health services*

Type A Services:	166.4
Wraparound and Type B Services:	25.2
  - ❖ **SUBSET 2** *Received wraparound services and Type B mental health services only*

Wraparound and Type B Services:	37.1
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  - ❖ **SUBSET 3** *Received Type A mental health services only*

	57.4
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  - ❖ **SUBSET 4** *Received Type A and Type B mental health services*

Type A services:	418.6
Type B services:	42.2
  - ❖ **SUBSET 5** *Received Type B mental health services only*

	58.8
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## Observations – Recipients of Wraparound Services (Subsets 1 and 2)

### **Subset 1 (received wraparound services, Type A and Type B mental health services)**

- Almost half of all children in Subset 1 utilized community support services (code Y3119); on average Subset 1 recipients used approximately 32 hours of this service.
- More than half of Subset 1 children received individual and/or family psychotherapy services (codes 90804 and 90847, among others); recipients received an average of 18 hours of individual services and 9 hours of family services.
- More than half of Subset 1 children benefited from family assistance services; on average recipients consumed 10 units of this service.
- While few Subset 1 children (only 8 out of 45) received group therapy services (code 90853), those who did received almost 80 hours of this service.
- Forty percent of Subset 1 children received respite services (code 44000W).
- About one quarter of Subset 1 children received intensive CPR services (code W1355); recipients averaged 94 full days of this service.
- Almost two-thirds of Subset 1 children received medication services (code 90802); recipients averaged more than 9 units of service.

- Only eight out of the 45 children in Subset 1 received targeted case management services (codes W1327J and Y1328J). On average recipients of this services averaged 8 units of service.
- The profile of the most frequently accessed services by this subset is shown below; Type A mental health services:

#	Procedure Code/Description	% Children in Subset Receiving Service	Units of Service	Avg. Services/ Recipient	% Total	Cumulative % Total
1	Y3119 COMMUNITY SUPPORT 1/4 HOUR	46.7%	2,706	60.1	36.1%	36.1%
2	90853 GROUP THERAPY(OTHER THAN MULTI-FAMILY)BY PSYCHOLOGIST, LPC, OR SOCIALWORKER	17.8%	1,262	28.0	16.9%	53.0%
3	W1355 INTENSIVE COMMUNITY PSYCHIATRIC REHABILITATION (1 DAY UNIT)	24.4%	1,037	23.0	13.9%	66.8%
4	90804 INDIV. PSYCHOTHERAPY, INSIGHT ORIENTED..., OFFICE OR OUTPATIENT 20-30 MINS FACE	51.1%	864	19.2	11.5%	78.4%
5	90847 FAMILY PSYCHOTHERAPY, W/ PATIENT, BY PSYCHOLOGIST,L.P.C., OR SOCIAL WORKER, 1/	51.1%	436	9.7	5.8%	84.2%
6	90862 MEDICATION SERVICES (15 MINUTE UNIT)	64.4%	272	6.0	3.6%	87.8%
7	90801 PSYCHIATRIC DIAGNOSTIC INTERVIEW EXAMINATION	64.4%	214	4.8	2.9%	90.7%
8	96100 PSYCHOLOGICAL TESTING BY PSYCHOLOGIST (RHC-LPC/SW/PSYCHOLOGIST) 1/2 HR UNIT	15.6%	120	2.7	1.6%	92.3%
9	90816 INDIV. PSYCHOTHERAPY, INSIGHT ORIENTED, INPAT, PARTIAL HOSP, RES CARE, 20-30 MIN	11.1%	111	2.5	1.5%	93.8%
10	Y3103 CSTAR DAT TREATMENT ( 1/2 HOUR)	2.2%	87	1.9	1.2%	95.0%
11	90805 INDIV PSYCHOTHERAPY, ....., OFFICE OR OUTPATIENT 20-30 MINS FACE TO FACE, W/MED I	31.1%	75	1.7	1.0%	96.0%
12	90806 PSYTX, OFF 45-50 MIN OR OUTPATIENT FACE TO FACE W/PATIENT	17.8%	52	1.2	0.7%	96.6%
13	90817 INDIV. PSYCHOTHERAPY, INPAT, PARTIAL HOSP, RES CARE, 20-30 MINS FACE TO FACE, W/	15.6%	48	1.1	0.6%	97.3%
14	99271 CONFIRMATORY CONSULTATION FOR NEW OR ESTABLISHED PATIENT, WHICH REQUIRES	15.6%	36	0.8	0.5%	97.8%
15	Y3107 CSTAR GROUP COUNSELING 1/4 HOUR	2.2%	28	0.6	0.4%	98.1%
16	Y3104 CSTA INDIVIDUAL COUNSELING 1/4 HOUR	2.2%	28	0.6	0.4%	98.5%
17	Y3111 CTAR ADA COMMUNITY SUPPORT 1/4 HOUR	2.2%	26	0.6	0.3%	98.9%
18	W1351 INITIAL INTAKE EVALUATION/ASSESSMENT/TREATMENT PLAN	26.7%	17	0.4	0.2%	99.1%
19	90824 INDIV. PSYCHOTHERAPY INTERACTIVE IP HOSP, PART HOSP, RES CARE, 20-30 MINS W/ME	2.2%	16	0.4	0.2%	99.3%
20	W1353 MEDICATION ADMINISTRATION (15 MINUTE UNIT)	6.7%	13	0.3	0.2%	99.5%
21	Y3102 EXTENDED DAY TREATMENT PER 15 MINUTE UNIT	2.2%	13	0.3	0.2%	99.7%

- Wraparound services and Type B mental health services (wraparound services are highlighted):

#	Procedure Code/Description	% Children in Subset Receiving Service	Units of Service	Avg. Services/ All Recipients	% Total	Cumulative % Total
1	490041 CHILD/ADOLESCENT FAMILY ASSIST	53.3%	437	9.7	38.6%	38.6%
2	Y3128J TARGET C M SED/CM IND	22.2%	356	7.9	31.4%	70.1%
3	Y3119L COMMUNITY SUPPORT-CPR -	8.9%	146	3.2	12.9%	83.0%
4	W1355L INTENSIVE CPR	4.4%	76	1.7	6.7%	89.7%
5	44000W RESPITE SRVCS /SHARED UNIT-	40.0%	43	1.0	3.8%	93.5%
6	02500W	2.2%	43	1.0	3.8%	97.3%
7	Y3127J TARGET C M SED/MHP IND	6.7%	22	0.5	1.9%	99.2%
8	Y3128H	4.4%	7	0.2	0.6%	99.8%
9	Y3118L ANNUAL/SUPP EVAL-CPR -	2.2%	1	0.0	0.1%	99.9%
10	W1353L MEDICATION ADMIN. 1/	2.2%	1	0.0	0.1%	100.0%

**Subset 2 (received wraparound services and Type B mental health services only)**

- 12 out of the 13 children (92 percent) in Subset 2 received family assistance services vs. 51 percent in subset 1; Subset 2 recipients of this service utilized it at a 68 percent greater rate than recipients in Subset 1 (30.5 vs. 18.2 units of service, respectively).
- Only 1 out of the 13 children in Subset 2 received respite services vs. the 40 percent of children in Subset 1 that did.
- Subset 1 and Subset 2 children appear to utilize targeted case management services at about the same rate.
- The profile of the most frequently accessed services by this subset is shown below (wraparound services are highlighted):

#	Procedure Code/Description	% Children in Subset Receiving Service	Units of Service	Avg. Services/ All Recipients	% Total	Cumulative % Total
1	490041 CHILD/ADOLESC FAMILY ASSIST	92.3%	365	28.1	75.7%	75.7%
2	Y3127J TARGET C M SED/MHP IND	23.1%	85	6.5	17.6%	93.4%
3	Y3128J TARGET C M SED/CM IND	15.4%	30	2.3	6.2%	99.6%
4	44000W RESPITE SRVCS /SHARED UNIT-	7.7%	2	0.2	0.4%	100.0%

**Observations – Other Subsets (children who did not receive wraparound services)**

- C-STAR day treatment services were by far the most frequent service rendered to Subset 3 enrollees, making up almost 30 percent of all services rendered to this subset, yet only two percent of Subset 3 enrollees received these services (this utilization rate is the same as the rate for Subset 1 enrollees). On average Subset 3 recipients of this service utilized about 400 hours of this service (by contrast the average utilization among Subset 1 enrollees is about 90 hours). Similar observations apply to:
  1. ADA community support services (code Y3111), for which Subset 3 recipient utilization averaged 14.6 hours vs. about 7 hours for Subset 1 recipients.
  2. Group educational counseling services (code Y3110), for which Subset 3 recipient utilization averaged almost 24 hours vs. only 1 hour for Subset 1 recipients.
- A much greater percentage of Subset 1 enrollees utilized community support (code Y3119), group therapy (code 90853), intensive community psych rehab (code W1355) and medication (code 90862) services than did Subset 3 enrollees. Among recipients of these services, on average Subset 1 recipients utilized more of each of these services than did Subset 3 recipients.

- Subset 4 recipients of the higher-volume services appear to consume these services at about the same rate as do Subset 3 recipients. On the other hand, a much greater percentage of Subset 4 enrollees access these services than do Subset 3 enrollees. This is particularly true with CSTAR day treatment (code Y3103) and community support (Y3119) services.
- Subset 4 enrollees tend to use certain targeted case management services (specifically, service code W1327J) at a higher rate than Subset 1 enrollees.
- On average recipients of wraparound services use less Type B services than those who do not receive wraparound services.

## Summary and Conclusion

Based on the observations from the previous section, the subset that may be of most import to this discussion – Subset 1 – is generally utilizing the following mental health and wraparound services:

- Community support services;
- Individual psychotherapy;
- Family psychotherapy;
- Intensive community psychiatric rehab;
- Group therapy;
- CSTAR services;
- Medication services;
- Family assistance services;
- Respite services; and,
- Targeted case management.

The analysis did not reveal access restrictions to any particular service. Furthermore, a comparison of the overall utilization of mental health services by this population to national benchmarks suggests that the Waiver population has been able to access these services at a rate which, at a minimum, may be beginning to address the mental health needs of a population which otherwise would not have access to these services. The relevant benchmarks that were identified and used in this comparison were:

1. Prevalence estimates for mental disorders among children and adolescents range from 16 to 22 percent<sup>21</sup>.

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<sup>21</sup> “Report of the Surgeon General’s Conference on Children’s Mental Health: A National Action Agenda.” September 18-19, 2000. Presentation by David Offord, M.D.

2. About half of all children with mental health conditions are never treated for these conditions; blending this and the previous statistic suggests that between 8 and 11 percent ultimately receive treatment.<sup>22</sup>
3. The percentage of Medicaid enrollees receiving any mental health or substance abuse service:<sup>23</sup>
  - ☑ Children ages 1-5: 2.9%
  - ☑ Children ages 6-14: 12.7%
  - ☑ Children ages 15-20: 11.4%
  - ☑ Overall (average): 10%

The percentage of recipients in the Waiver population receiving mental health services – 6.7 percent – is lower than, but close to, the average utilization rate that can be surmised from these national benchmarks (on the range of 8 to 11 percent). This supports our previous assertions. However, these assertions cannot be treated as conclusive or specifically addressing the Research Question – whose scope is limited to access to wraparound services – until:

- A more detailed baseline assessment of the mental health needs of the Waiver population is conducted and documented;
- A more comprehensive analysis of the mental health services these children are receiving is performed using more precise diagnosis and service utilization data (this may require profiling the utilization of services by specific children as part of a statistical study);
- Benchmarks (either national or specific to Missouri or its Waiver population) for utilization of specific target services, such as the wraparound services, are available for use in the aforementioned analysis; and,
- As part of the enhanced analytical process described in the preceding items, feedback from stakeholder interviews can be addressed. Several interviewees suggested that the service management rules tied to the Waiver might be restricting access to needed mental health services. Specific concerns were raised about service authorization processes that do not appear to consider individual needs. Additionally, several interviewees noted that a greater level of collaboration between DMS and DMH would be beneficial.

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<sup>22</sup> “Report of the Surgeon General’s Conference on Children’s Mental Health: A National Action Agenda.” September 18-19, 2000. Presentation by Sherry Glied, M.D.

<sup>23</sup> Mental Health and Substance Abuse Services in Medicaid, 1995; Buck, J. and Miller, K.; National Mental Health Information Center; 2002. <http://www.meantalhealth.samhsa.gov/publications/allpubs/SMA02-3713/default.asp>. The sample in this study was limited to Medicaid enrollees in a fee-for-service delivery system because of challenges in obtaining quality service utilization information from enrollees in managed care delivery systems.

We believe that this year's response to this Research Question provides valuable insight into the utilization of mental health services and related wraparound services by the Waiver population. Additionally, this response represents a positive step towards ultimately addressing the concerns behind the Research Question. On the other hand, we recognize that more detailed information needs to be available and collected, and more analysis needs to be conducted, before the Research Question can be addressed in a definitive manner.

**RESEARCH QUESTION 4: WHAT IS THE EFFECT OF MC+ ON THE NUMBER OF CHILDREN COVERED BY PRIVATE INSURERS? DOES THE MC+ EXPANSION TO COVER CHILDREN WITH A GROSS FAMILY INCOME ABOVE 185 percent FPL HAVE ANY NEGATIVE EFFECT ON THESE NUMBERS?**

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Historically, identifying an *unintended shift* to public insurance from private insurance involved gathering and comparing three statistics: 1) the number of the uninsured, 2) private insurance enrollment, and 3) enrollment in medical assistance programs. The theory behind this method has been that, all else being equal, a decrease in enrollment in private insurance occurring in the same timeframe as an increase in medical assistance program enrollment was evidence of “crowd out” – on their own volition, enrollees in private insurance had decided to avoid costs and switch to government-funded medical assistance for which they were eligible. Current public policy treats the crowd-out phenomenon as an *unintended consequence* of “inappropriately relaxed” medical assistance eligibility rules.

Applying this assessment method and the underlying theory has been complicated by the decline in the availability of employment-based health insurance and the rise in unemployment at certain income levels. Under these conditions, although statistical trends might suggest crowd out, the family income of the population undergoing the transition from private to public insurance might not be above 200 percent of the FPL – this is the population that in the past has particularly concerned CMS officials (Mathematica 2003). Thus, in order to appropriately evaluate these statistics it is necessary to examine the effect that employer actions may be having on the population mix that is transitioning from private insurance to medical assistance.

## **Analysis**

During the study period, both in Missouri and nationally,

- The number of privately insured individuals has decreased.
- The number of Medicaid covered individuals has slightly increased.
- Among children, the uninsured population remained relatively constant.

Based on previous assumptions, these statistical changes could be used to assert that crowd out is occurring. Instead, the reason for the decline in the number of people with employee based health insurance needs to be more thoroughly examined.



Several other factors have gained national attention as possible reasons for this decline:

- The decline in the number of workers in large establishments, as these establishments are *more* likely to offer health insurance;
- The increase in the number of workers in small establishments, as these establishments are *less* likely to offer coverage;
- The overall decline in employment, which means fewer families could receive coverage through an employer;
- The decrease in the number of employers offering health insurance as a benefit; and,
- The acceleration of the shift in the responsibility for health insurance premiums from employers to employees (i.e. employees are now paying a larger percentage of the cost of health insurance premiums, particularly for “indemnity” health plans).

Many recent studies have interpreted these statistical changes and trends as reflecting the changing availability of employment based health insurance, particularly for low-income adults: “While employer sponsored health insurance has proved vulnerable to economic setbacks, public program expansions have averted an increase in the number of uninsured Americans at least to date.” (Holahan 2003)

The aforementioned phenomena have the potential of having a disproportionate effect on the number of uninsured children. As noted in our response to Research Question 1, as the number of unemployed adults increases, especially those in the lower-income brackets that previously had employer-based insurance coverage, the number of uninsured children should also increase as dependents in the adult’s family unit lose coverage as well. Going by national averages, about two uninsured children would result for every adult that loses employer-based coverage.

To specifically address whether crowd-out was an issue during the study period we examined changes in the number of uninsured children relative to the number of children with private insurance. These changes are examined in the context of other economic indicators that may affect the data used to identify evidence of crowd out:

- Between 2001 and 2002, the rate of uninsured children in Missouri increased by just three-tenths of a percentage point, from 4.7 to 5.0 percent. This marginal increase was on the heels of the lowest level of uninsured children since the implementation of the 1115 Waiver (the 4.7 percent achieved in 2001). Furthermore, as stated earlier this change is not statistically significant. Moreover, the 2002 rate is still significantly below the national average of 11.6 percent.
- During the same period, there was a 0.6 percent decrease in the number of children with access to employment-based coverage at the national level. In Missouri, the decrease in the number of children with employer-based coverage was slightly higher, about 2.9 percent.

## **Summary and Conclusion**

The number of children insured by private or employment-based insurance in Missouri has indeed decreased during the study period, while the number of children covered by medical assistance has increased, and the rates of uninsured children have remained relatively constant. While this might appear to be evidence of crowd-out, closer examination into the circumstances of these children's transition to medical assistance reveals that the children's families may very well be losing access to private insurance because of employment benefit changes, a decline in the offering of employment based insurance, or the outright loss of employment by their parents. Were it not for the waiver, these children could very well be joining the ranks of the uninsured, as has been the case with the adult population. Moreover, given the circumstances by which many of these children's parents have lost private health insurance, this phenomenon would not appear to be evidence of crowd-out.

Feedback from the stakeholder interviews would tend to support the contention that crowd-out is not occurring. Several interviewees commented on the 6-month waiting period and the rules built into enrollment and disenrollment procedures as being heavily oriented to, and by inference succeeding in, preventing crowd-out to the point where individuals who were incorrectly disenrolled have found it difficult to re-enroll.

## **RESEARCH QUESTION 5: HAS THE 1115 WAIVER AMENDMENT IMPROVED THE HEALTH OF THE INDIGENT OF ST. LOUIS CITY?**

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The **St. Louis Waiver Amendment** authorized a demonstration to transition St. Louis ConnectCare (ConnectCare) from an inpatient facility to an outpatient facility and to enable the St. Louis region to transition its “safety net” system of care to a viable, *self-sustaining model*. The previous evaluation found that:

- ConnectCare had successfully transitioned from an inpatient to an outpatient facility; and,
- All of the benchmarks identified in the demonstration proposal for transitioning the safety net system of care in St. Louis to a viable, self-sustaining model that fell in the evaluation period had been met.

Since that evaluation, in October 2003 the St. Louis Regional Health Commission (RHC) released its “Recommendations for Improving the Delivery of Safety Net Primary and Specialty Care Services in St. Louis City and County”. These recommendations outline the plan to successfully transition the safety net system of care in St. Louis to a viable self-sustaining model. ConnectCare is expected to be a key component of this new model. The Commission’s recommendations address the following:

- Improving the integration and financing of the safety net health system;
- Improving safety net care coordination;
- Improving availability of specialty care services;
- Reducing cultural and information barriers to accessing health care; and,
- Improving measurement and reporting.

At the time of this evaluation, implementation of these recommendations was just beginning; thus our evaluation focuses on the availability of ConnectCare services to the in-scope populations during this transition period.

### **About ConnectCare**

ConnectCare provides primary care and specialty provider services in six locations - the main Delmar site, four community-based clinics and a stand-alone dialysis center. ConnectCare completed its transition to an outpatient service provider when, in accordance with the requirements of the waiver, it closed its emergency room and hospital in December 2002 and subsequently opened the Smiley Urgent Care Center (UCC) with extended hours of operation: 9 a.m. – 7 p.m. on weekdays and 8 a.m. – 5 p.m. on weekends.

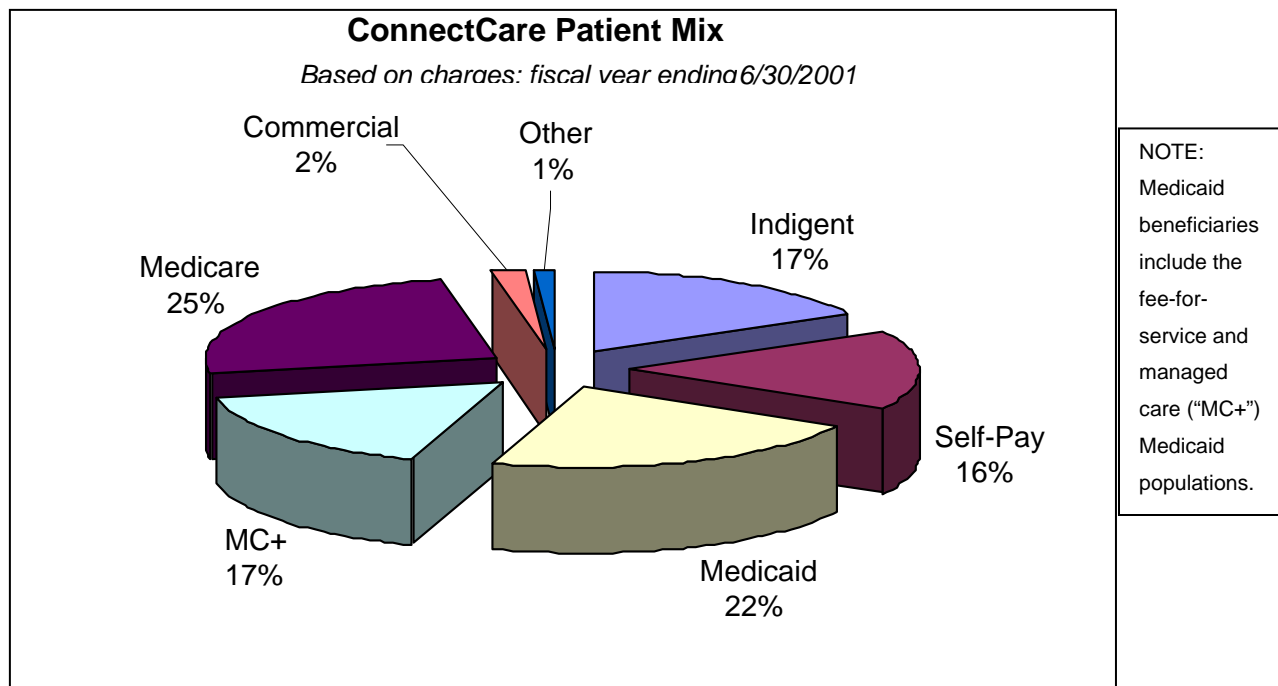
Whereas our previous evaluation looked at whether access to services had been maintained after the closing of the emergency room, in this evaluation we examined the impact of the transition period on visits to ConnectCare providers by the Medicaid and Uninsured populations.

### ConnectCare service and patient profile

Service utilization statistics demonstrate that ConnectCare plays a vital role in serving Medicaid and Uninsured patients in the St. Louis region. The majority of ConnectCare patients are uninsured – self-pay or indigent – or Medicaid beneficiaries. These populations account for 72 percent of total charges (ref. Figure 17).

Previous analyses have shown that the vast majority of uninsured ConnectCare patients are between the ages of 19 and 65 - 94 percent in December 1999<sup>24</sup>. This has contributed to the funding challenges encountered by ConnectCare<sup>25</sup> since a significant portion of this population is unlikely to be eligible for health coverage under Medicaid or S-CHIP. According to The Lewin Group, less than 24 percent of an estimated 50,193<sup>26</sup> uninsured in St. Louis City were eligible for Medicaid or S-CHIP. Additionally, it is believed that about half of the estimated number of uninsured in St. Louis is made up of adults without children.

**Figure 17**



<sup>24</sup> Source: St. Louis ConnectCare

<sup>25</sup> In response to this funding challenge, one of the goals of the St. Louis Waiver Amendment was to allow ConnectCare to continue to receive Disproportionate Share Hospital (DSH) funds it was eligible for as a hospital as it became an outpatient facility.

<sup>26</sup> The Lewin Group arrived at this estimate using a proprietary simulation model.

A review of provider visits and activities over the past three fiscal years (July through June) provides insight into the dynamics of the availability and utilization of ConnectCare services during that period (refer to statistics below):

- The total number of visits to ConnectCare providers decreased 8.8 percent, from 100,727 in 2001 to 91,865 in 2003. The decrease in total visits was mainly due to decreases in the number of visits to Adult Medicine (primary care) providers.
- On the other hand, the total number of Women's Health, Dermatology, Ophthalmology, Cardiology and Neurology visits increased over the same period (refer to the statistics highlighted in the table below).
- Between 2001 and 2003 the average number of urgent care visits increased to over 1,000 per month.
- The Medicaid and Uninsured populations incurred a total of 46,211 provider visits in FY03, accounting for more than half of all provider visits at ConnectCare clinics.

#### ConnectCare visits by provider type, Fiscal Years 2001-2003

Provider Type	2001	2002	2003	% Change, 2001 to 2003
Adult Medicine	36,318	32,169	28,968	-20.2%
Women's Health	14,496	16,327	16,050	10.7%
Pediatrics	14,576	14,826	14,020	-3.8%
Dental	8,002	8,759	7,887	-1.4%
Dermatology	1,917	2,167	1,997	4.2%
Ophthalmology	2,257	2,490	2,442	8.2%
Podiatry	4,334	4,038	3,922	-9.5%
Cardiology	1,553	1,398	1,975	27.2%
Endocrinology	78	106		
ENT	1,896	1,672	1,693	-10.7%
Gastroenterology/GI	2,232	2,351	1,386	-37.9%
General Surgery	2,326	2,043	1,746	-24.9%
Infectious Disease	1,543	1,577	1,478	-4.2%
Neurology	2,664	2,721	2,832	6.3%
Oncology	1,720	1,542	1,167	-32.2%
Orthopedics	1,372	1,419	684	-50.1%
Hypertension	118	231		
Renal*	1,471	1,649	1,482	0.7%
Rheumatology	720	291		
Urology	1,134	985	889	-21.6%
Pulmonary			1,247	
<b>Total</b>	<b>100,727</b>	<b>98,761</b>	<b>91,865</b>	

### ***Access to primary care, urgent care and after-hour services***

Statistics demonstrate that the Medicaid and Uninsured populations in the St. Louis Region are heavy consumers of primary care services at ConnectCare clinics:

- Visits to primary care provider types - Adult Medicine, Women's Health and Pediatrics - accounted for 55 percent of total Medicaid and Uninsured visits.
- Within primary care, the Uninsured population had a much higher proportion of visits to Adult Medicine providers than the Medicaid population (43.1 vs. 27.4 percent) and a much lower proportion of visits to Women's Health providers (19.7 vs. 7.9 percent). These statistics reflect the different demographics of the two populations - as mentioned previously the uninsured are more likely to be adults without children while Medicaid eligibles are more likely to be pregnant women and children.

One of the barriers to receiving needed health care services identified in the RHC Situational Analysis was the limited availability of after-hours urgent care. The RHC reported that hospital emergency departments in the area were providing a substantial amount of non-emergent care to safety-net patients; these services could be delivered more cost effectively in a primary care setting. Moreover, half of the patients presenting at area ERs for non-emergent care arrived for care after 4 p.m. The presence of the UCC is proving to be key to expanding the availability of after-hours care in the St. Louis region. In the first six months of operation, The Medicaid and uninsured populations accounted for almost three of every four urgent care visits to the UCC. The uninsured population is by far the most frequent user of the UCC, accounting for 62 percent of visits. These statistics for the UCC demonstrate that the Uninsured population is heavily reliant on the UCC for care, quite possibly as an alternative to the ER.

Future evaluations should examine whether safety net patients currently accessing emergency rooms for non-emergent conditions have been successfully redirected to more cost-effective settings including area clinics and the UCC. This data should be available for incorporation into the next evaluation.

### **Access to specialty care services**

The RHC identified several issues that were contributing to poor health outcomes in the region including barriers to accessing health care services, provider shortages and a lack of care coordination within health care systems. Although the RHC concludes that there is sufficient primary care capacity in the St. Louis Region - enough to manage more than 900,000 primary care visits per year – in a recent year only 437,022 primary care visits occurred relative to the projected need of 552,600 referenced in the report.

The opposite appears to be true of specialty care. While the RHC found that actual subspecialty visits were below the projected need by 246,400, potentially indicative of a shortage of providers (at least a shortage of providers who are willing to see safety-net patients), the RHC also found that the demand for subspecialty care “is significantly greater than existing safety-net capacity”. Likewise, there is a shortage of dentists and limited availability of psychiatric and substance abuse services.

As noted below, ConnectCare is clearly playing a role in ensuring access to these services for Medicaid eligibles and the Uninsured:

- The Medicaid and Uninsured populations incurred a total of 13,809 specialist visits in FY03, accounting for 56 percent of all specialty visits at ConnectCare clinics.
- Visits to specialists accounted for 29 percent of all ConnectCare provider visits by these populations.
- Dentists were the second most frequently seen provider type. The Medicaid and Uninsured populations accounted for 95 percent of all dental visits at ConnectCare.
- The Medicaid and Uninsured populations were also heavy consumers of Podiatry, Neurology, Ophthalmology, General Surgery and Dermatology services offered by ConnectCare (see below).

### **Top 5 ConnectCare Specialist Types Visited by Medicaid and Uninsured Populations**

*Based on percent of specialist visits in FY03*

	<b>Uninsured</b>	<b>Medicaid</b>
Rank 1	Podiatry (16.0%)	Podiatry (14.7%)
Rank 2	Neurology (13.4%)	Neurology (12.8%)
Rank 3	General Surgery (10.0%)	Oncology (10.8%)
Rank 4	Ophthalmology (9.6%)	Infectious Disease (7.5%)
Rank 5	ENT (9.1%)	Gastroenterology (6.9%)

## **Summary and Conclusion**

The transition of ConnectCare from an inpatient facility to an outpatient facility was a key first step in ensuring the success of the St. Louis Waiver Amendment. As the aforementioned statistics demonstrate, the Medicaid and Uninsured populations rely greatly on the ConnectCare network for primary and specialty health care services. As such, ConnectCare will be a major player in the transformation of the safety net health care system in the St. Louis Region envisioned by the RHC and key to improving the health of the populations it serves.



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