EXECUTIVE SUMMARY
DEPARTMENT OF HEALTH CARE POLICY AND FINANCING
COMPARATIVE ANALYSIS OF CHILDREN ENROLLED IN THE MEDICAID AND CHP+ PROGRAMS

In the fall of 2001, the Federal Department of Health and Human Services (HHS) invited states to participate in the Health Insurance Flexibility and Accountability (HIFA) demonstration initiative. The primary goal of the HIFA demonstration initiative is to encourage new, comprehensive state approaches that will increase the number of individuals with health insurance coverage within current-level Medicaid and Child Health Plan Plus (CHP+) resources. The Federal administration puts a particular emphasis on broad statewide approaches that maximize private health insurance coverage options and target Medicaid and CHP+ expansion resources to populations with incomes below 200 percent of the federal poverty level (FPL).

As a result, the Department of Health Care Policy and Financing is considering how, through more prudent purchasing, to take advantage of this potential for more flexibility in providing services to Colorado's Medicaid and CHP+ populations, without increasing General Fund expenditures or decreasing available benefits.

As part of the department's ongoing efforts to analyze the feasibility of serving Medicaid and CHP+ enrolled populations under a combined program, the department contracted with JEN Associates, Inc. (JEN) to analyze Medicaid and CHP+ claims and enrollment information. This analysis is the third in a series of white papers intended to develop a comprehensive program that meets the needs of children and families. These papers are intended to be analyzed in context with each other. The other papers can be found at www.chcpf.state.co.us/HCPF/Current.asp.

CHP+ and Medicaid[1] children under the age of 20 were compared on the basis of demographics, utilization, diagnoses prevalence, and expenditures. Also, using statistical methods to control for differences between the demographic, socio-economic, and health characteristics of those in Medicaid and CHP+, JEN examined whether health care spending would be lower under a consolidated model than through current Medicaid. The study populations include income-eligible Medicaid children covered under fee-for-service (FFS) financing and children with primary care physician program (PCCP) capitated care, as well as HMO and managed care network CHP+. The claims and program eligibility data used for the analyses included service and enrollment dates between CY 2000-CY 2002.

Medicaid and CHP+ both serve children from birth through age eighteen, from 0% of the federal poverty level up to 133% of the federal poverty level. In addition, CHP+ serves children up to 185% of the federal poverty level. While there is an overlap in the

[1] Medicaid enrollees who were SSI eligible, in Foster Care, in a Home and Community Based Waiver, or otherwise not linked to an income-eligible aid category were excluded from the study population.

populations served, the Medicaid population is generally younger with a significant number of newborns that impacts both utilization patterns as well as costs.

The primary findings of the analyses are:

- The number of children under one year of age is significantly higher in the Medicaid program.
- The number of young women between 15-19 years of age with a pregnancy diagnosis is significantly higher in the Medicaid program.
- The disease profiles and risk distribution of the two populations are similar.
- Differences in utilization in the two programs are higher outpatient physician utilization in CHP+ and higher inpatient acute care in Medicaid.
- Cost per case differences are driven by conditions that are of intermediate severity (as opposed to high and low severity conditions).
- Per enrollee per month service costs for CHP+ services are lower than the comparable Medicaid population by close to 17%.
- The CHP+ benefit limits are not exceeded in the comparable Medicaid population to any large degree.

More specific findings behind these primary findings are:

- Prevalence of diagnoses/conditions and cost per case are similar between Medicaid and CHP+ for low severity conditions and for high severity conditions, where hospitalizations are unavoidable. The largest differences are with respiratory disease diagnoses that are of undetermined severity.
- Top tier patients in terms of costs are much higher in Medicaid than CHP+ for less than one year olds, special needs enrollees, and pregnant young women. These costs are primarily driven by inpatient costs.
- Medicaid pregnant women have higher rates of high-risk pregnancies and complications during delivery compared to CHP+.
- Medicaid infants have higher rates of diagnoses related to pregnancy and birth complications compared to CHP+.
- CHP+ pregnant women and infants have much higher rates of physician and pediatrician encounters than Medicaid.

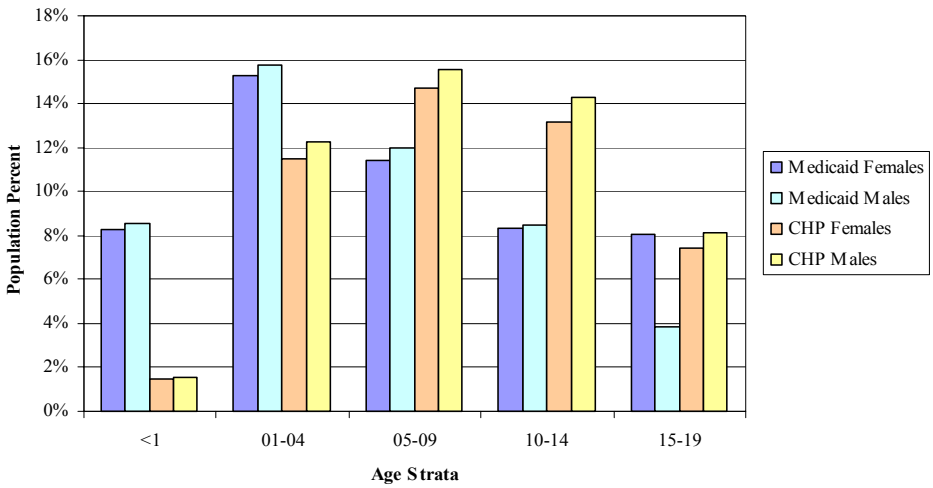
The conclusion is that the current CHP+ program as currently configured, in terms of the types of children enrolled, the benefits offered and the costs of care, is compatible, but not equivalent, with the care needs and costs of low-risk children currently covered under the Medicaid program. Also, in the cases where expenses are higher in Medicaid compared to CHP+ (specifically for inpatient costs related to children with special needs, infants, and pregnant young women) the current CHP+ benefit package would adequately cover all of these costs.

STUDY HIGHLIGHTS

DEMOGRAPHICS

Medicaid serves proportionally more children under the age of five (48%) than CHP+ (28%). Accordingly, CHP+ serves proportionally older children (72%) than Medicaid (52%).

Figure 1
CY 2002 Medicaid and CHP Demographic Distribution



Specific subpopulations exist in both Medicaid and CHP+.

The majority of children in both the Medicaid and CHP+ programs are defined as low-risk children. However, the Medicaid program covers disproportionately more pregnant young women and infants under one year old than CHP+. Medicaid and CHP+ both serve a similar proportion of high-risk children.[2]

As you would expect, Medicaid costs are disproportionately higher for pregnant young women and infants under one year old.

Figures 2a and 2b illustrate how each of the four subpopulations is distributed both in terms of population and payment.

Figure 2a

CY 2002 Select CHP Populations and Payments
By Risk Group

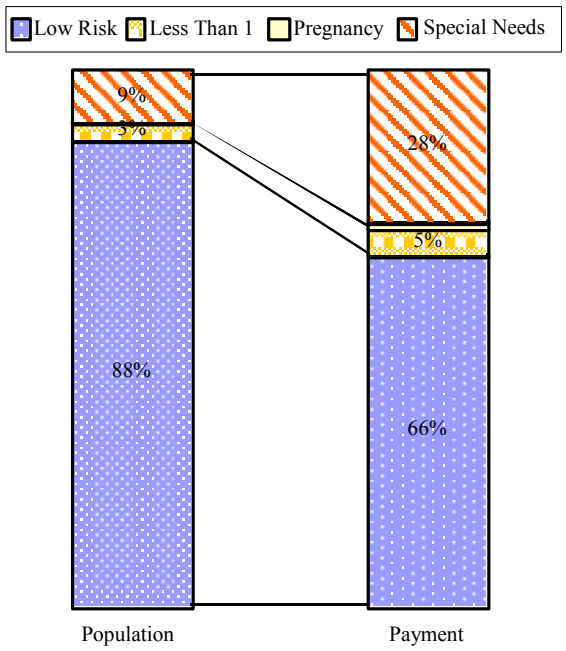
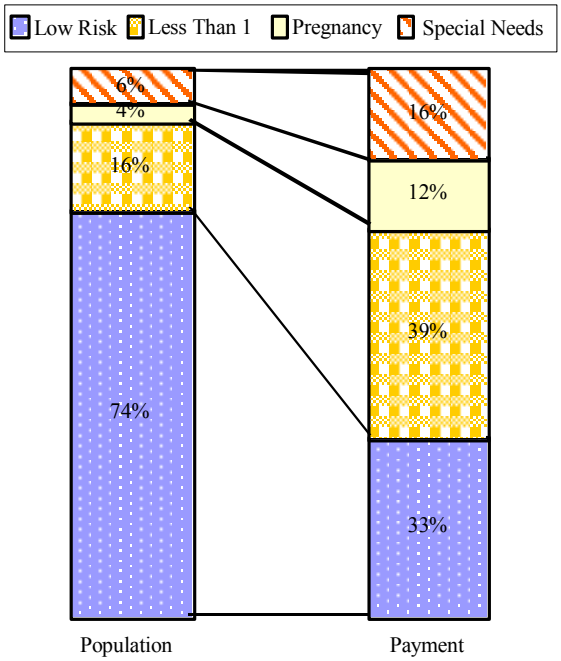


Figure 2b

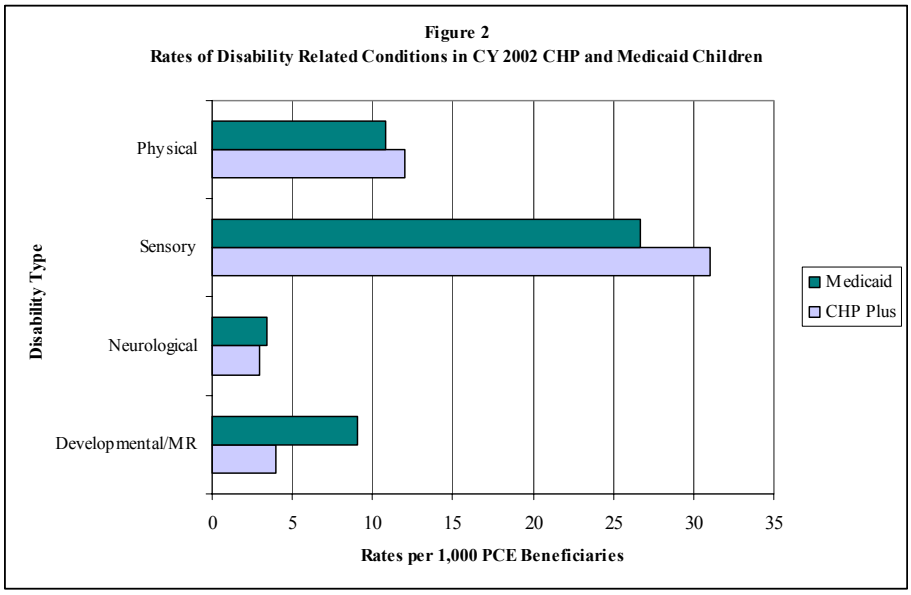
CY 2002 Model Medicaid Populations and Payments
By Risk Group

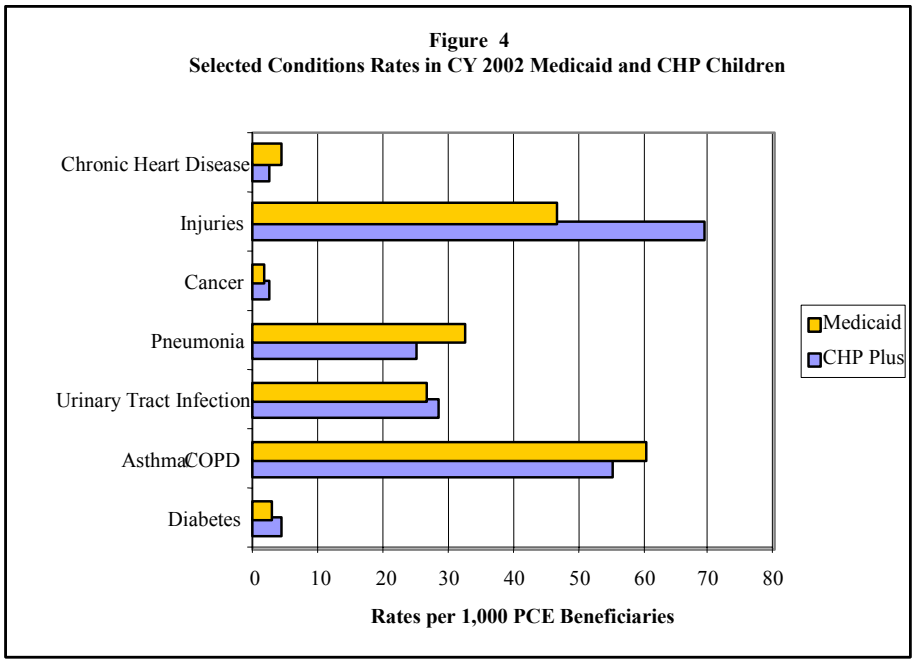


[2] These children were identified by selecting enrollees in Medicaid and CHP+ who had a diagnosis that is commonly used to qualify for Social Security Disability Income benefits. It is important to note that SSI-eligible children were not included in this study population.

HEALTH STATUS

Both Medicaid and CHP+ have similar rates of disability and other health conditions.





Low-risk groups within Medicaid and CHP+ have similar rates of diagnoses for low-severity conditions (fever and abdominal pain) and for high severity conditions where hospitalization is unavoidable (acute appendicitis). However, the average cost of care for those diagnoses is typically higher in the Medicaid program. The differences in the average cost can be related to differences in settings of service (inpatient versus outpatient) between the two programs. The largest differences in overall cost per case are found in respiratory disease diagnoses with unidentified severity.

Treatment Diagnosis Code from all Provider Types	MCD Sum of Service Payment	MCD Rate per 1,000	MCD Cost per Case	CHP Sum of Service Payment	CHP Rate per 1,000	CHP Cost per Case
Acute Upper Respiratory Infection	$723,936	179	$76	$110,173	158	$ 29
Ear Infection	$670,469	129	$97	$133,106	94	$59
Acute Pharyngitis	$433,742	128	$63	$131,383	153	$36
Asthma with Acute Exacerbation	$417,911	10	$807	$112,403	7	$657
Pneumonia	$406,179	17	$446	$122,786	14	$354
Asthma	$311,098	39	$148	$103,233	36	$120
Fever	$283,810	53	$100	$78,442	35	$94
Viral Infection	$205,022	46	$83	$64,784	40	$66
Nearsightedness	$200,416	47	$80	$143,918	51	$116
Abdominal Pain	$196,980	27	$135	$80,875	27	$124
Ill Defined condition	$195,419	15	$243	$62	0	$62
Fluid loss	$183,901	6	$611	$33,323	4	$358
Non-infect Gastroenteritis	$181,109	32	$107	$46,199	21	$90
Acute Bronchiolitis	$178,105	9	$382	$39,903	5	$353
Far-sightedness	$176,318	45	$73	$64,541	27	$98
Acute Appendicitis	$169,711	1	$2,424	$76,096	1	$2,455
Swollen Toncils	$168,424	6	$533	$107,760	6	$709
Strep Sore Throat	$158,186	39	$76	$48,118	49	$40

The Medicaid high-risk, pregnant young women, and infants under one subgroups have higher rates of top 20 diagnoses and higher costs per case. Most of the cost is driven by high rates of inpatient visits.

- Medicaid pregnant women have higher rates of high-risk pregnancies and complications during delivery compared to CHP+.
- Medicaid infants have higher rates of diagnoses related to pregnancy and birth complications compared to CHP+.

HEALTH CARE UTILIZATION

In every sub-population, Medicaid enrollees have more inpatient and emergency room visits than CHP+. Also, CHP+ enrollees use more Physician/Pediatrician visits.

Utilization Type	Medicaid Rate per 1,000		CHP+ Rate per 1,000
LOW RISK			
Acute Care Hospital Days	94	>	49
General Practitioner/Pediatrician Encounters	1,188	<	2,004
Outpatient Emergency Visits	393	>	272
INFANTS UNDER 1 YR OLD			
Acute Care Hospital Days	2,612	>	392
General Practitioner/Pediatrician Encounters	4,252	<	5,610
Outpatient Emergency Visits	875	>	485
PREGNANT YOUNG WOMEN			
Acute Care Hospital Days	2,215	>	1,620
General Practitioner/Pediatrician Encounters	1,086	<	6,398
Outpatient Emergency Visits	875	>	601
HIGH RISK			
Acute Care Hospital Days	1,753	>	542
General Practitioner/Pediatrician Encounters	3,721	<	4,493
Outpatient Emergency Visits	1,097	>	714

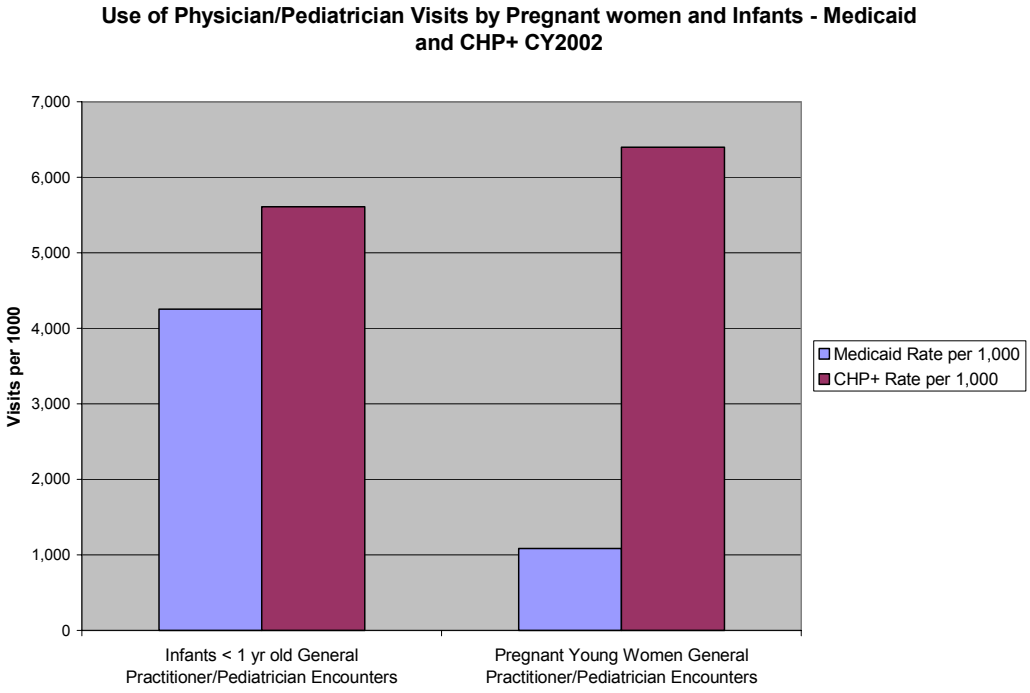
CHP+ benefit limits are not exceeded in the comparable Medicaid population to a large degree.

**CY 2002 Medicaid non-SSI FFS,
and HMO Enrolled Children with Utilization Beyond
CHP+ Benefit Limits**

Benefit Limit	Beneficiaries	Payments
DME, $2,000 annual cap	10	$75,925
Outpatient Substance Abuse, 20 encounter annual cap	1	$2,238
Outpatient Rehabilitation Therapy, 30 annual encounters	4	$1,982
Outpatient Mental Health, 20 encounter annual cap	0	$0
Inpatient Psychiatric Hospital Care, 45 day annual cap	0	$0
Hearing Supplies, $800 annual cap	2	$1,728
Vision related encounters, 2 encounters annual cap	13	$572

CHP+ Pregnant young women and infants have much higher rates of physician and Pediatrician visits compared to Medicaid.

CHP+ pregnant women and infants have much higher rates of physician and pediatrician encounters than Medicaid. For pregnant women the CHP+ encounter rate per 1,000 is six times higher than that of Medicaid (6,398 vs. 1,086).



Simulating Cost Differences

As stated in previous recommendations papers[3], the consolidated program would look more like CHP+ in its benefits design and delivery system structure. The final step of the analysis was to predict what health care utilization and cost would be in a consolidated program. JEN used statistical methods to control for differences between the demographic, socio-economic and health characteristics of those with Medicaid and CHP+. All of the simulation results presented in this report are statistically significant at the 5% level.

As for conclusions regarding differences in CHP+ and Medicaid, the statistical simulation projected how likely CHP+ and Medicaid enrollees would be to use certain health care services. The research did not address delivery system capacity or other variables that may impact the outcome. The simulation projected the following findings for each of the sub-populations:

Low Risk
The statistical simulations show that if the average low-risk person under the age of 20 enrolled in Medicaid were provided services through the CHP+ delivery system:

- Spending, on average, would decrease by $271.56 per enrollee per year. This fact is interesting because on average, CHP+ reimburses for services at a higher rate than Medicaid.
- Inpatient spending, on average, would decrease by $608.22 per enrollee per year.

High Risk
Simulations project that if the average high-risk person enrolled in Medicaid were provided services through the CHP+ delivery system:

- Spending, on average, would decrease by $1,400.67 per enrollee per year.[4]
- Inpatient spending, on average, would decrease by $470.38

Pregnant Young Women
Simulations project that if the average pregnant young woman enrolled in Medicaid were provided services through the CHP+ delivery system, spending, on average, would decrease by $2,799.72 per enrollee per year.

Infants Under 1 Year of Age
Simulations also project that if the average infant enrolled in Medicaid were provided services through the CHP+ delivery system, pharmacy spending, on average, would decrease by $104.60.

[3] Price M. Benefit Package Recommendations for a Streamlined Program. Commissioned Paper for the State of Colorado Department of Health Care Policy and Financing. 2004; MA: MDF and Associates. And Health Policy Solutions, "Purchasing Models for Children with Special Health Care Needs: Streamlining Policy Options" Commissioned by the Colorado Department of Health Care Policy and Financing, February 2004.

[4] It is important to note that the severity of the high-risk diagnoses cannot be measured. Therefore, the potential exists that Medicaid high-risk children are sicker than CHP+ high-risk children and therefore cause more expenditures.