Final Report of the Child Health Plan Plus Employer Buy-In Feasibility Study

Few Child Health Plan Plus Eligibles Would Qualify for an Employer Subsidy

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Executive Summary

When Colorado legislators created the Child Health Plan Plus (CHP+) program to provide health insurance for low-income uninsured children, they intended the program to support employment-based health insurance in the state. The original CHP+ legislation, therefore, authorized the program to create an employer buy-in option for eligible children. An employer buy-in program allows eligible children to receive health insurance through their parent's employer health plan instead of through CHP+ directly. In the summer of 2000, CHP+ administrators and stakeholders decided to evaluate the ability of an employer buy-in program to increase CHP+ enrollment and reduce program expenditures. Under grants from Rose Community Foundation and The Robert Wood Johnson Foundation, the CHP+ Employer Buy-In Feasibility Study was conducted to estimate the enrollment, administrative costs and savings that would be generated by an employer buy-in program.

The feasibility study analyzed Colorado household and employer survey data to estimate enrollment and savings of a CHP+ employer buy-in program. In addition, budget data from employer buy-in programs in other states were used to estimate administrative costs.

The study found that few CHP+ eligibles would qualify for an employer buy-in program and that the administrative costs of the program would be high. Even if applicable federal regulations were eliminated, a CHP+ employer buy-in program would enroll only 4,500 children and would require an annual administrative budget of over $1 million per year.

Given this low enrollment and high administrative cost, the Employer Buy-In Project Board and the Children's Basic Health Plan Policy Board recommend that a CHP+ employer buy-in program not be implemented at this time. The Boards further recommend that an employer buy-in program be reevaluated if the CHP+ program were to expand to cover parents. An employer buy-in program for parents and children would experience higher enrollment and lower per enrollee administrative costs, resulting in a more cost-effective program.

Project Background

In the summer of 1997, Congress enacted Title XXI of the Social Security Act, creating the State Children's Health Insurance Program. Under Title XXI, children in families with incomes up to 200 percent of the federal poverty level may be eligible for free or reduced-premium health insurance. In Colorado, state lawmakers chose to create a program for uninsured children in families with annual incomes up to 185 percent of the federal poverty level.

Prior to the passage of Title XXI, families with incomes at these higher levels were generally excluded from publicly-funded coverage. By increasing the income threshold for participation in publicly-funded health insurance programs, Title XXI has significantly increased the likelihood that program participants will be employed (or have an employed parent) and may have access to employer-based insurance. Data from the 1996 Medical Expenditure Panel Survey (MEPS) indicate that nationally about 37 percent of uninsured children had at least one parent with access to an employer-based plan.[1] Many researchers and policy-makers believe that cost is a major factor in parents' decisions not to take up available employer-based coverage for their children. If, however, states could subsidize the cost of children's coverage using Title XXI funds, more children might be covered.

While it is likely that many CHP+-eligible children may have access to employer-based coverage that is unaffordable, it is also true that in Colorado, as in most states, Title XXI has not reached all eligible children using non-employer-based marketing strategies. During the first years of operation, marketing and outreach strategies focused on families accessing community-based organizations including safety net providers. CHP+ is now working to reach other targeted populations, including those with at least one employed parent.

Given the potential availability of employer-based insurance, coupled with an unreached population, Colorado officials are considering the feasibility of a Title XXI employer buy-in program. Under such a program, CHP+ funds would be leveraged into employer-based coverage when it is available, rather than enrolling children directly in the "regular" CHP+. Advantages to this approach include: 1) covering more children by creating an alternate means by which families can gain access to CHP+; 2) maximizing state and federal funds by taking advantage of employer contributions where available; 3) keeping families together under a single insurance plan; 4) minimizing potential stigma associated with "public" health insurance programs; 5) minimizing "crowd-out" of existing private coverage; and 6) supporting the employment and employer-based insurance market.

Three states, Massachusetts, Mississippi, and Wisconsin, have already obtained federal approval to implement employer buy-in programs under Title XXI[2]. One additional state, Oregon, has a state-funded employer subsidy program and has been exploring ways to obtain federal matching funds for its program. Legislators, employers and consumer advocates in Colorado wish to determine whether such an employer buy-in program would make sense in this state and whether implementation would be feasible and cost-effective.

[1] Analysis of the 1996 Medical Expenditure Panel Survey was performed by Mark Merlis of the Institute for Health Policy Solutions, funded by the David and Lucile Packard Foundation.
[2] Since this study was conducted, four additional states have received approval for premium assistance programs: Maryland, Virginia, New Jersey and Wyoming.

Objectives and Scope

The purpose of the Employer Buy-In Feasibility Study is to determine whether an employer buy-in program would be a cost-effective method for covering uninsured children in Colorado. The project objectives include 1) identifying options for a CHP+ employer buy-in program, 2) estimating program enrollment for each option, 3) estimating administrative costs of each option, and 4) developing recommendations for implementation of an employer buy-in program.

While the feasibility study could include analysis of hundreds of program design options, time and resource constraints dictate the analysis of likely employer buy-in scenarios in Colorado. Project staff and the Employer Buy-In Project Board developed three scenarios for study, including a standard plan scenario, an HMO scenario and a waiver scenario.

The standard plan scenario limits participation to children with access to the Colorado Small Group Standard Plan, a benefit plan created and regulated by the Colorado Division of Insurance for the small group health insurance market. Because Colorado insurers offer thousands of different health plans, ensuring each one could meet the minimum benefit and maximum cost-sharing requirements of federal law would be an overwhelming administrative task. A single benefit plan, like the Standard Plan, would simplify program compliance with federal benefit and cost-sharing requirements.

The HMO scenario subsidizes any qualified HMO employer plan. While compliance with federal benefit and cost-sharing requirements would be more burdensome in this scenario, subsidizing any employer HMO plan would allow more children to participate in the program.

The waiver scenario requires a waiver of federal benefit and cost-sharing requirements, which would allow the employer buy-in program to subsidize more employer plans with less administrative cost. This scenario would also provide family coverage when cost-effective family coverage is available through the employer.

The following table presents the elements of each of the three employer buy-in scenarios. (For complete descriptions of these design elements, please see Appendix A.)

Table 1: Elements of Three Employer Buy-In Scenarios

Requirement	Standard Plan Scenario	HMO Scenario	Waiver Scenario
Benchmark Package	Small Group Standard Plan	Small Group Standard Plan	Basic benefits
Supplemental Benefits	Cost-sharing only	Cost-sharing only	None
Cost-Effectiveness Test	Per child	Per employer	Per employer
Eligible Plans	Standard Plan	HMO plans	PPO and HMO plans
Copayment Systems	Benefit rider	Standard copay upgrade	None
Entity Supplying Employer Data	Applicant and state	Applicant	Applicant
Enrollment Date	Open enrollment	Qualifying event	Qualifying event
Mandatory or Voluntary	Voluntary	Voluntary	Voluntary
Child or Family Subsidy	Child	Child	Family

Data Gathering Methodology

Project staff conducted five activities to estimate enrollment and administrative costs of the three employer buy-in options. Most of these activities generated state-level data about CHP+ eligibles and employer health plans in Colorado. Activities included household and employer survey data analysis, actuarial analysis, program site visits, and a literature review.

Analysis of Household Survey Data

The 1999 National Survey of America's Families (NSAF) was chosen to estimate the number of CHP+ eligibles in Colorado with access to employer-based coverage. The NSAF survey questions families regarding their income and insurance status and includes a sample of over 3,000 households in Colorado, including an oversample of families with incomes below the 200 percent of federal poverty level.

Analysis of Employer Survey Data

Project staff used data from two employer surveys to estimate the percent of employer health plans that would be eligible for an employer buy-in subsidy. Data from the 1998 Medical Expenditure Panel Survey (MEPS) was used to estimate employee premium contributions and availability of HMO and PPO plans to employees. The MEPS data is based on a sample of 800 private and public establishments in Colorado. Project staff also used survey data from the Mountain States Employers Council (MSEC) to estimate employee premium contributions, health plan benefits, and health plan deductibles. The MSEC survey data is based on the survey responses of Colorado MSEC member organizations in 2000.

Actuarial Analysis

Leif and Associates, an actuarial firm in Denver, estimated the monthly premium of a health plan policy that would be purchased for employer buy-in enrollees to reduce the cost-sharing of their employer's health plan. Because Leif and Associates have performed actuarial work for the CHP+ program since 1997, Leif and Associates were able to use CHP+ claim data to estimate the monthly premiums of this additional coverage.

Site Visits

Project staff conducted three site visits to employer buy-in programs in Massachusetts, Oregon and Wisconsin. Project staff used information provided by the states to estimate staffing levels, marketing costs, and other administrative costs of an employer buy-in program.

Literature Review

Studies conducted by the Urban Institute, the Lewin Group and other researchers were used to estimate the participation and crowd-out rates of eligible families. These studies provided unique information on the impact of premiums on enrollment levels and potential crowd-out associated with a subsidized insurance program

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Analysis

Expected Employer Buy-In Enrollment

Increasing CHP+ enrollment is one of the objectives of an employer buy-in program; therefore, potential enrollment is a key indicator of the program's feasibility. To estimate the number of children who would enroll in a CHP+ employer buy-in program, the study estimated: 1) the number of CHP+ eligibles with access to employer-based coverage, 2) the percent of employees in Colorado who are offered an eligible employer health plan, and 3) the percent of eligibles who would choose to enroll in an employer buy-in program.

Number of CHP+ Eligibles with Access to Employer Coverage

To receive an employer buy-in subsidy, a CHP+ eligible child must first have access to an employer health plan. To estimate the number of CHP+ eligibles with access to employer-based coverage, project staff calculated: 1) the number of CHP+ eligibles, 2) the number of CHP+ eligibles with an employed parent, and 3) the number of CHP+ eligibles with access to employer-based coverage.

For this study, the Urban Institute produced estimates of the number of CHP+ eligibles in Colorado based on the age, income and insurance status of Colorado children in the 1999 National Survey of America's Families (NSAF). Using the 1999 NSAF estimate as a baseline and adjusting for other eligibility factors, project staff estimates that 62,000 children were eligible for the CHP+ program in 2000. (These calculations are presented in Appendix B.) The following table shows the current insurance status of these CHP+ eligibles.

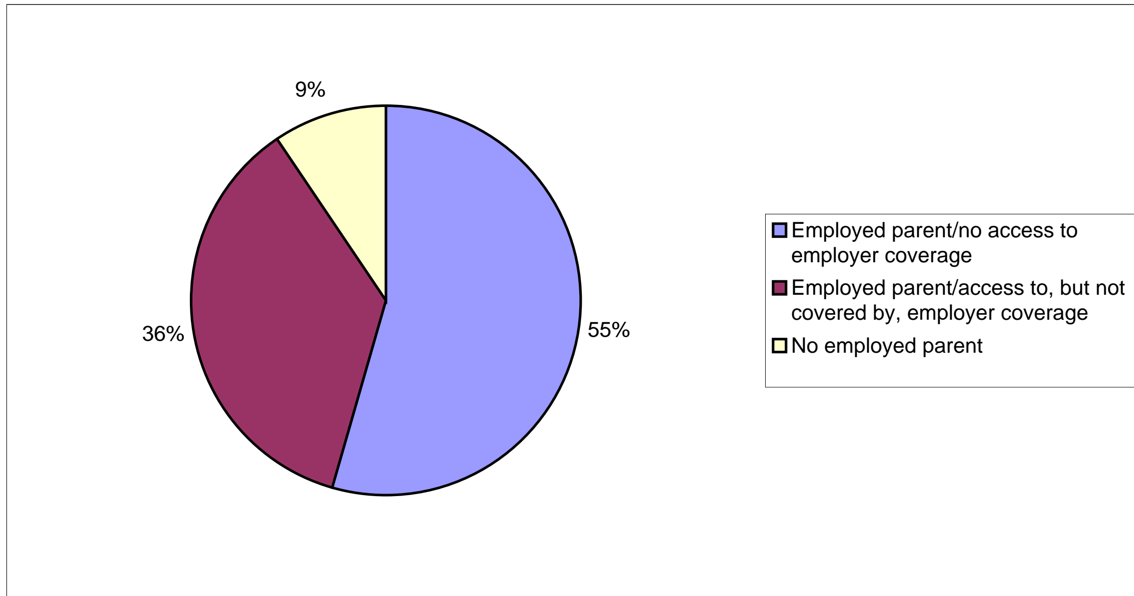
Table 2: Estimate of 2000 CHP+ Eligibles

Type of Insurance Coverage	No. of CHP+ Eligibles[3]
Medicaid/CHP+/CICP[4]	21,000
Uninsured	41,000
Total	**62,000**

[3] Numbers rounded to the nearest 1,000.
[4] CICP is the Colorado Indigent Care Program.

The Urban Institute also calculated the percent of CHP+ eligibles that have at least one employed parent and the percent that have access to employment-based insurance. Although a majority of eligibles have at least one employed parent (91 percent), only 36 percent have access to employer-based health insurance. The following chart summarizes the employment and insurance status of CHP+ eligibles.

Figure 1: Employment and Insurance Status of CHP+ Eligibles



If 36 percent of CHP+ eligibles have access to employment-based coverage, then approximately 22,280 children might be eligible for an employer buy-in program. The following section will estimate what percent of these children have access to an employer health insurance plan that would be eligible for subsidy.

Number of Eligibles with Access to an Eligible Employer Plan

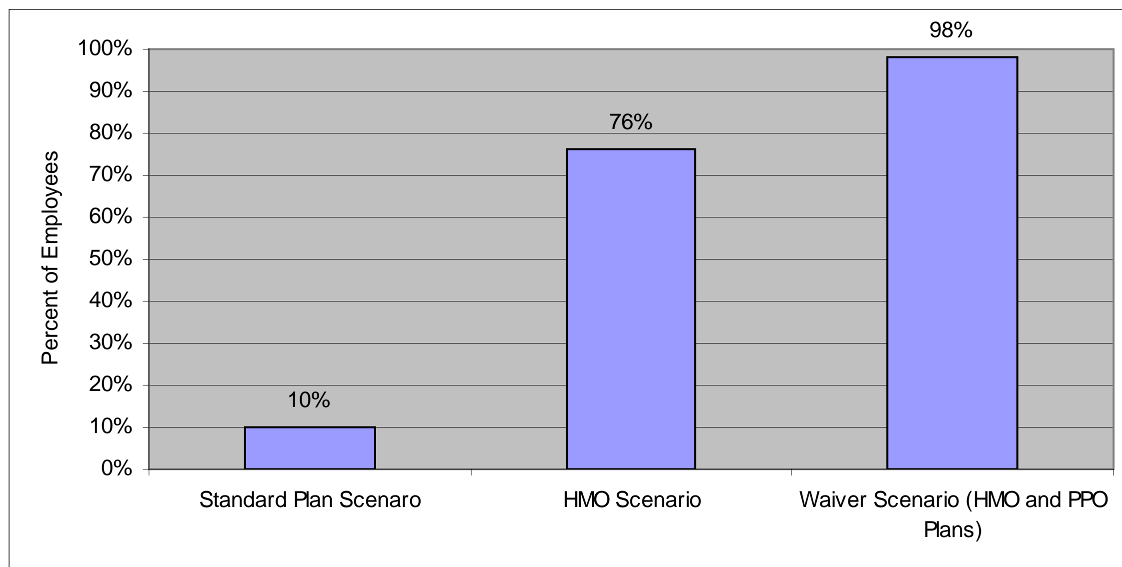
Although a CHP+ eligible may have access to employer-based health insurance, the employer's plan may or may not be eligible for a subsidy under an employer buy-in program. For example, an employer health plan that offers only minimal benefits or is very expensive would not be eligible for subsidy. This section will estimate the percent of employees in Colorado who are offered an employer plan that meets employer buy-in criteria, including managed care, adequate benefits, and cost-effectiveness.

Percent of Employees Offered an Eligible Managed Care Plan

A child must have access to a type of managed care plan that qualifies for premium assistance to be eligible for the employer buy-in program. Under the standard plan scenario, a child must have access to the Colorado Small Group Standard HMO Health Benefit Plan to qualify for premium assistance. Data from the 1997 National Survey of America's Families indicate that, among uninsured children who have a parent who is covered or offered coverage under an employer plan, 55 percent have access to small group coverage. In addition, 18 percent of employers in Colorado offering a small group plan offered the Standard HMO Plan in 1999.[5] Approximately 10 percent of CHP+ eligibles with access to employer coverage, therefore, would have an opportunity to enroll in the Small Group Standard Plan.

Under the HMO scenario, a child may enroll in any HMO plan. Based on data from the 1998 Medical Expenditures Panel Survey (MEPS), 76 percent of Colorado employees are offered HMO coverage at the work place. The waiver scenario expands eligible plans to include PPO plans as well as HMO plans. Based on data from the 1998 MEPS, 98 percent of Colorado employees who are offered insurance coverage are offered either an HMO or a PPO plan at the work place. The following chart summarizes the percent of employees that are offered an eligible managed care plan in the three employer buy-in scenarios.

Figure 2: Percent of Colorado Employees with Access to an Eligible Plan, by Scenario



[5] Colorado Division of Insurance

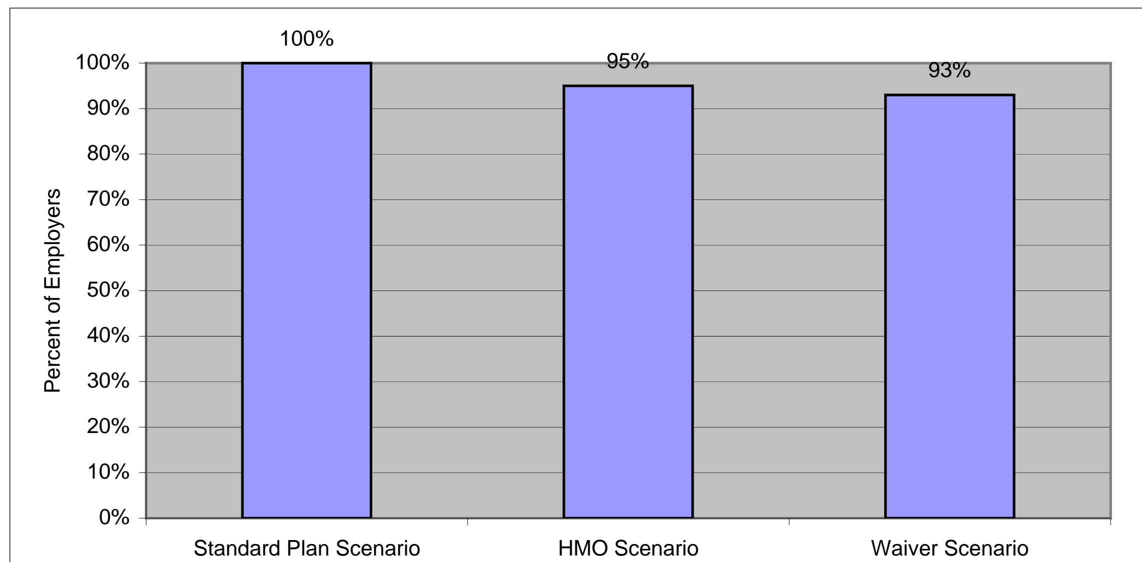
Percent of Employees Offered Adequate Benefits

Even if a CHP+ eligible child has access to an eligible managed care plan, the plan is not eligible for a subsidy unless it offers "adequate benefits." Federal law defines "adequate benefits" to be a package of benefits that is actuarially equivalent to a benchmark benefit plan. In the standard plan and HMO scenarios, the benchmark package is the Colorado Small Group HMO Standard Plan. The waiver scenario replaces the benchmark plan requirement with a requirement that the employer plan cover a list of basic benefits.

Under the standard plan scenario, only the Colorado Small Group Standard Plan is eligible for subsidy. Because this benefit package is also the benchmark benefit package, all employer plans subsidized in this scenario would automatically meet the adequate benefits test. Under the HMO scenario, where any HMO plan is eligible for subsidy, the vast majority of plans are likely to have benefits that are actuarially equivalent to the benchmark plan. This is because most HMOs offer benefits similar to the Colorado Standard HMO Plan, the benchmark plan, such as physician services, hospital services, mental health, and prescription drug coverage. According to the Mountain States Employer Council Data, 95 percent of HMO plans covered these services.

Under the waiver scenario, HMO and PPO plans that are eligible for a subsidy must cover basic services (such as inpatient hospital, physician care, and lab and x-ray services) and have an annual deductible that does not exceed $250 per person. According to data collected by Mountain States Employers Council, about 94 percent of the employers have an HMO or PPO plan that would cover basic services. The Mountain States Employers Council survey also showed that 89 percent of employers offering a PPO plan had a deductible of $250 or less. Approximately 84 percent of PPO plans and 94 percent of HMO plans, therefore, would meet the adequate benefits test in the waiver scenario. Given likely enrollment in HMO and PPO plans, an average of 93 percent of plans would meet the adequate benefits test under the waiver scenario.[6]

Figure 3 Colorado Employers Offering Adequate Benefits, by Scenario



[6] Medical Expenditure Panel Survey 1998 data suggests that 77 percent of CHIP eligibles would have access to an HMO plan, and that 23 percent would only have access to a PPO plan.

Percent of Employers Offering a Cost-Effective Plan

The final test that an employer's plan must pass to qualify for a CHP+ subsidy is that of cost-effectiveness. The Center for Medicare and Medicaid Services (CMS) guidelines require that every employer plan subsidized by the CHP+ program meet a cost-effectiveness test that ensures that the CHP+ program does not spend more program funds covering an eligible child under the employer buy-in program than it would under CHP+ direct coverage.

The cost-effectiveness test, therefore, must compare the cost of subsidizing a child's enrollment in their employer's plan with the cost of enrolling that eligible in direct coverage in CHP+. There are four primary costs of an employer buy-in program that must be considered in this calculation:

- The eligible child's subsidy, equal to the cost of adding a child to the employer's health plan;
- The cost of purchasing a benefit rider from the employer's health plan to reduce cost-sharing to levels required by federal statute;
- The cost of additional months of fee-for-service coverage that must be provided to children while their eligibility for a subsidy is being determined; and
- The additional administrative costs incurred by the CHP+ program in developing, implementing and operating an employer buy-in program.

For an employer subsidy to be cost-effective, the sum of the above costs cannot exceed the cost of enrolling an eligible child in direct CHP+ coverage. This section will describe the costs associated with the cost-sharing benefit rider, fee-for-service coverage, and employer buy-in administration. These amounts will then be compared to the CHP+ direct coverage premium to estimate what percent of employer plans would meet the cost-effectiveness test in each of the three scenarios.

Cost of Benefit Rider

Under the standard plan and HMO scenarios, the CHP+ program would purchase benefit riders from the employer's health plan to reduce copayments to the levels allowed by the CHP+ program. Leif Associates, Inc., an actuarial firm in Denver, Colorado, performed an analysis to estimate per-member per-month costs associated with purchasing such a cost-sharing rider.

Leif Associates identified three types of cost that will determine the monthly premium associated with a reduced cost-sharing benefit:

- **Decreased employee cost-sharing**. The amount needed to offset the additional copayment costs due to the differences in copay levels in the employer's plan and the CHP+ plan.

- **Increased utilization**. The decrease in cost-sharing, such as for office visits, would reduce the barrier to receiving such services. For example, if an employer's plan has an office copay greater than the CHP+ design (e.g. $15 rather than $0), there will be more office visits under the CHP+ plan.

- **Health plan administrative expenses**. Approximately 40 percent of the total premium cost is needed to cover items such as identification cards, billing, member services, etc. Administrative expenses as a percentage of overall rider premium are high because the overall rider benefit is small.

The following chart summarizes per-member per-month costs of purchasing a benefit rider from an employer's health plan in each scenario. (For the full report of Leif Associates, please see Appendix C.)

Table 3: Monthly Premiums Associated with Reduced Cost-Sharing [7]

Scenario	Increased Cost-sharing	Additional Utilization	Administrative Charges	Total Monthly Premium
Standard Plan	$13.00	$5.00	$12.00	$30.00
HMO	$8.00	$4.00	$8.00	$20.00
Waiver	N/A	N/A	N/A	N/A

The monthly premium associated with the rider varies between the three scenarios for two reasons. First, the plans eligible for subsidy differ in the standard plan and HMO scenarios, affecting the value of the benefit rider in each scenario. For example, the Standard Plan's $15 office copay is 50 percent higher than the average Colorado HMO copay of $10. Reducing the office copay of the Standard Plan to CHP+ levels ($0-$5) is therefore more expensive than reducing the copay levels of the average Colorado HMO plan. Secondly, the waiver scenario does not require that cost-sharing be reduced to CHP+ levels, so no benefit riders are purchased on behalf of enrollees in this scenario.

[7] Values shown rounded to the nearest $1.00

Cost of Additional Fee-For-Service Coverage

Several aspects of an employer buy-in program would increase fee-for-service (FFS) costs to the CHP+ program. This section will describe these costs and estimate the additional per-member per-month FFS costs in each employer buy-in scenario.

The current CHP+ program delivers medical services to enrollees through one of two delivery systems: 1) HMO coverage, provided through contractual agreements with private HMOs or 2) FFS coverage, provided through contracts with individual providers such as physicians and hospitals. The CHP+ program currently provides FFS coverage for an initial period of enrollment after eligibility has been determined but before HMO enrollment has begun. The employer buy-in program would increase this FFS cost in two ways. First, the program would increase the period between program eligibility determination and HMO enrollment due to additional time needed to determine employer plan eligibility. Second, a child would need to be on FFS until the family was able to enroll in the employer's plan. (Both Wisconsin and Massachusetts provide such FFS coverage until the employer plan enrollment becomes effective.)

The following table summarizes the FFS costs in each scenario. The waiver scenario experiences the lowest per-enrollee FFS cost because the FFS cost of all applicants can be recouped by a larger number of employer buy-in enrollees. (For a complete description of the calculation of FFS costs, please see Appendix D.)

Table 4: Per-member Per-month FFS Costs in the Three Scenarios

Scenario	PMPM FFS Cost[8]
Standard Plan	$3.40
HMO	$3.00
Waiver	$1.50

[8] Values rounded to the nearest $.10.

Cost of Program Administration

Under each of the three employer buy-in scenarios, the CHP+ program would be required to perform new administrative tasks unique to providing subsidies to families for employer coverage. Linde Howell, under contract to the Colorado Department of Health Care Policy and Financing, performed an analysis to estimate the total and per-member per-month costs associated with employer buy-in administrative functions. Based on interviews with existing and developing employer buy-in programs in other states, Ms. Howell identified the following four types of administrative costs unique to an employer buy-in program:

Employer marketing. The successes and failures of existing employer buy-in programs indicate that employer marketing is critical to enrolling eligible families. For example, states that have devoted funding and staffing to employer-specific marketing have experienced significantly higher enrollment that states than have not. This suggests a need to adequately fund a marketing budget for advertising, public relations and outreach geared specifically to employers.

Eligibility and enrollment. Staff is needed to collect employer health plan data and to determine the eligibility of an employer's health plan for subsidy. Information systems to perform functions associated with eligibility, such as determining whether a health plan meets the cost-effectiveness test, are needed to support the eligibility process.

Benefit rider and subsidies. In the standard plan and HMO scenarios, staff is needed to negotiate contract terms and premium rates with health plans that agree to provide cost-sharing benefit riders. In all three scenarios, staff will calculate monthly family subsidy checks, verify continued employer plan enrollment and oversee accounting systems that track subsidy payments. New information systems are needed to automate monthly payments to participating health plans and enrolled families.

General administration. A small number of staff people are required at the state level to oversee the employer buy-in program. These staff would perform contracting and budgeting functions for the program.

The following chart presents the annual and per-member per-month administrative costs of each employer buy-in scenario. Because administrative costs are largely fixed, scenarios with projected higher enrollment experience lower per enrollee costs. (For Linde Howell's full report on administrative costs, please see Appendix E.)

Table 5: Annual and Per-member Per-month Administrative Costs

Scenario	Annual Costs	PMPM Costs[9]
Standard Plan	$787,370	$186.00
HMO	$1,187,370	$35.00
Waiver	$1,187,370	$17.00

[9] Enrollment used to calculate per-member per-month administrative costs is based on a scenario where administrative costs are zero in the cost-effectiveness test. Actual enrollment numbers estimated later in this report are based on the administrative costs shown in this chart. Values shown in this table are rounded to the nearest $1.00.

Percent of Employers Offering a Cost-Effective Plan

The data regarding benefit rider, fee-for-service and administrative costs can be combined with data about CHP+ and employer premiums to estimate the percent of employer plans that would meet the cost-effectiveness test under each of the three scenarios. (For a full description of the calculations presented in this section, please see Appendix F.)

An employer health plan meets the cost-effectiveness test if the employee's dependent premium plus the cost of the benefit rider, FFS costs and administrative costs are less than the cost of the CHP+ direct premium. The following equation states this test in terms of the maximum employee dependent premium that would be subsidized in an employer buy-in program.

Equation 1: Maximum Employee Dependent Premium

Maximum Employer Dependent Premium =
CHP+ Premium – Benefit Rider Premium – FFS Cost – Administrative Cost

Using the costs described earlier in this paper, along with the CHP+ monthly premium of $71.25, maximum employee dependent premiums can be calculated for each of the three scenarios. These maximum premiums represent the cost-effective premium for 1.8 children, the average number of children in a CHP+-eligible family.

Table 6: Maximum Cost-Effective Employee Dependent Premiums for 1.8 CHP+ Eligibles, by Scenario

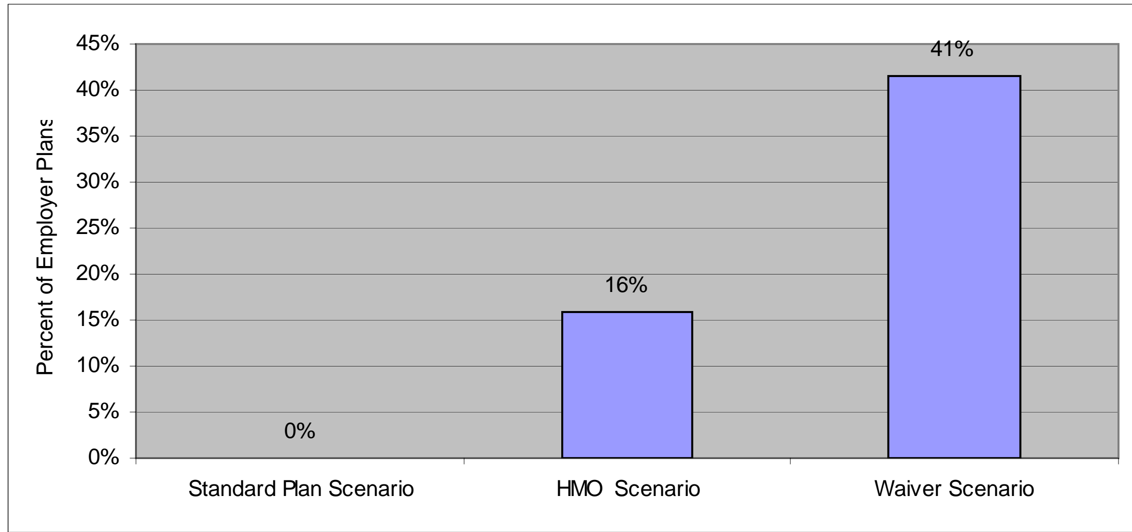
Scenario	Maximum Cost-Effective Employee Dependent Premium[10]
Standard Plan	($296)
HMO	$23
Waiver	$95

No child would qualify for employer buy-in in the standard plan scenario because an employer would have to provide free dependent coverage to their employee plus pay $296 per-month to the CHP+ program to cover the administrative, fee-for-service and benefit supplements of employer buy-in enrollment. Some children will qualify for a subsidy in the HMO and waiver scenarios, with the waiver scenario having a higher allowable dependent premium primarily because the CHP+ program would not have to purchase benefit riders in that scenario.

Using the distribution of employee premiums collected by Mountain States Employers Council, the percent of employers offering dependent premiums equal to or less than the maximum allowable can be calculated. The results are presented in Figure 4.

[10] Values rounded to the nearest $1.00.

Figure 4 Percent of Employer Plans that Meet the Cost-Effectiveness Test in the Three Scenarios



The cost of the cost-sharing rider, additional months of FFS coverage, and program administration account for the different rates of the three scenarios. Even under the least restrictive requirements of the waiver scenario, however, only 41 percent of employer plans meet the cost-effectiveness test. This indicates that employees pay higher premiums for child coverage through their employers than the CHP+ program pays for its enrollees.

Percent of Employees Offered a Cost-Effective Family Plan

The waiver scenario allows parents of eligible children to be covered if the cost of covering the parent and the eligible children under the employer's plan would be no more than covering the eligible children under the direct CHP+ program.

Instead of comparing the maximum employee premium to the cost of adding dependents, as in the prior section, the maximum employee premium can be compared to the cost of insuring both the parent and the children through the employer's plan. The following table shows the percent of employers who offer coverage that meets this family cost-effectiveness test. (For the detailed calculations, please see Appendix F.)

Table 7: Percent of Employers Offering a Cost-Effective Family Health Plan in the Waiver Scenario

Type of Employer Plan	Maximum Cost-Effective Family Premium[11]	Percent of Employers Meeting Cost-Effectiveness Test
HMO	$95	32%
PPO	$95	35%
Average for HMO and PPO		33%

This chart indicates that a majority of families that would qualify for a child subsidy would also qualify for a family subsidy (41 percent of children in the waiver scenario would meet the cost-effectiveness test; 33 percent of parents in the scenario would also meet the cost-effectiveness test). This high percentage may be due to the fact that employees are inexpensive to cover relative to dependents. Assuming 1.8 eligible children per family, approximately 3,882 employee/parents would be eligible to receive a family subsidy.

[11] Values rounded to the nearest $1.00.

Number of CHP+ Eligibles Offered an Eligible Employer Plan

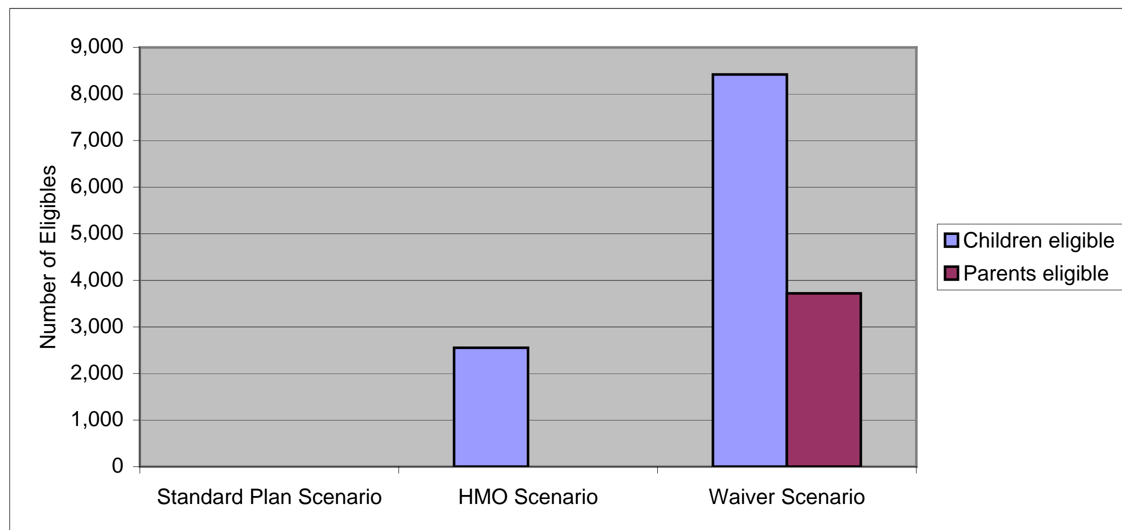
The following table summarizes the percent of employees in Colorado who are offered an eligible employer plan, based on the three criteria discussed in this section. The table indicates that while most employees are offered adequate benefits and an eligible managed care plan, few employees have access to the Colorado Small Group Standard Plan. In addition, most children with access to coverage do not have access to a plan that meets the cost-effectiveness test.

Table 8: Percent of CHP+ Eligibles Offered An Eligible Employer Plan

Scenario	Eligible Managed Care Plan	Adequate Benefits	Cost-Effective Plan	Health Plan that Meets All Criteria
Standard Plan	10%	100%	0%	**0%**
HMO	76%	95%	16%	**9%**
Waiver	98%	93%	41%	**37%**

Applying these percentages to the number of CHP+ eligibles with access to employer-based coverage (22,280) yields the number of CHP+ eligibles who would qualify for an employer buy-in program under each scenario. These numbers are presented in Figure 5.

Figure 5: Number of CHP+ Employer Buy-In Eligibles



Participation Rates of Employer Buy-In Eligibles

Parents of children who are eligible for CHP+ and have access to an eligible employer plan may choose not to enroll in an employer buy-in program. The following section discusses three elements of an employer buy-in program that would affect the participation rates of employer buy-in eligibles: employer marketing, out-of-pocket costs, and application assistance. These three factors will be analyzed and combined to estimate an overall participation rate in the three employer buy-in scenarios.

Employer Marketing

The experience of the three state programs visited for this study suggests a correlation between marketing and enrollment, particularly employer-specific marketing. For example, the Massachusetts employer buy-in program spends approximately $ 3 million per year in advertising and outreach to employers; the program currently has 10,000 Medicaid and CHP+ enrollees receiving an employer subsidy. Wisconsin, on the other hand, relies primarily on general outreach strategies and has enrolled only seven families in their employer-subsidy program.

Despite this apparent correlation, no data exists on which to estimate the relationship between marketing activities and percent of eligibles enrolled. Therefore, this study will assume a fixed marketing budget adequate to produce the percent of enrollees predicted by other factors such as application assistance and cost.

Increased Out-of-Pocket Costs

Studies show that premiums and out-of-pocket costs required by subsidized health insurance programs may reduce participation rates of eligible low-income families. The following section describes the types of out-of-pocket costs that families would be required to assume under an employer buy-in program and then estimates the impact of these costs on enrollment in an employer buy-in program.

The following table displays the additional costs that families might incur under an employer subsidy program compared to the direct CHP+ program. As the table shows, most out-of-pocket costs would be borne by two groups. First, uninsured parents in the standard plan and HMO scenarios would have to pay a premium to cover themselves before they could cover their children. Second, families in the waiver scenario would have to pay the higher copayments and deductibles associated with their employer's health plan. (For description of the calculation of these figures, please see Appendix G.)

Table 9: Additional Annual Out-Of-Pocket Costs of Employer Buy-In Program Compared to CHP+ Direct Coverage

Insured Parent				
	Premiums	Copayments	Deductibles	Total
Standard Plan Scenario	$0	$0	$0	$0
HMO Scenario	$0	$0	$0	$0
Waiver Scenario				
--HMO	$0	$22.50	$0	$22.50
--PPO	$0	$31.50	$125	$156.50
Uninsured Parent				
	Premiums[12]	Copayments	Deductibles	Total
Standard Plan Scenario	$270	$0	$0	$270
HMO Scenario	$270	$0	$0	$270
Waiver Scenario				
--HMO	$0	$22.50	$0	$22.50
--PPO	$0	$31.50	$125	$156.50

[12] These premiums are based on the employee contribution for single coverage as estimated by 1998 MEPS and 2000 Kaiser Employer Health Benefits Survey (monthly premium of $22.45 for HMO coverage; $31.47 for PPO coverage). There would be no premiums for most families in the waiver scenario because of the family coverage option.

Using the results of studies conducted by the Urban Institute, the following table estimates the percent of eligible families who would participate in an employer buy-in program in each scenario based on families' out-of-pocket costs. The waiver scenario has the highest participation rate because, although families are asked to pay copayments and deductibles, the family coverage provided in this option eliminates premium payments for most families. (For a description of the calculation of these numbers, please see Appendix G.)

Table 10: Participation Rates of Eligible Children based on Out-Of-Pocket Costs, by Scenario

Scenario	Participation rate of Eligible Children
Standard Plan	58%
HMO	58%
Waiver	70%

Application Assistance

To determine the eligibility of an employer health plan, either the CHP+ program or the applicant would have to obtain benefit and premium information from the employer. Of the three states visited for this study, employer response rates to request for health plan information ranged from 100 percent in Oregon, where the applicant must contact the employer for benefit information with some assistance from the state, to 65 percent in Wisconsin, where the state collects needed data from the employer. The following section will estimate employer response rates that might be expected in a CHP+ employer buy-in program based on the administrative structures of the three scenarios.

In the standard plan scenario, the CHP+ program, not the applicant, would contact the employer and gather information regarding the employer's health plan needed to determine whether the plan is eligible for a subsidy. Two of the three states visited for this study gather employer plan data in this way—Massachusetts and Wisconsin. This analysis will assume a 75 percent response rate (the average of the Wisconsin and Massachusetts rates), which the state might be able to achieve after one or two years of operation.[13]

In the HMO and waiver scenarios, applicants to an employer buy-in program would be asked to contact their employer for needed plan information without state assistance. One state reviewed for this study, Oregon, requires applicants to gather employer plan information and submit the information as part of their application for subsidy. Oregon reports that almost 100 percent of employers respond to a request from the applicant for premium and benefit information.

The experience of existing employer buy-in programs suggests that high response rates can be obtained from employers, even if responsibility for collection of employer data rests with the applicant. Because the state collection of information does not improve the employer response rate, a 75 percent response rate will be assumed for all three employer buy-in scenarios.

[13] The State of Iowa reports that employer response rates increased as the employer buy-in program matured and employers became more familiar with the program and its rules.

Estimated Overall Participation Rate

This section has analyzed two factors that will influence the participation rate of employer buy-in eligibles in such a program: out-of-pocket costs and employer response rates. The following chart indicates that these two elements of an employer buy-in program will result in an enrollment rate of 44 percent-53 percent of eligible children.

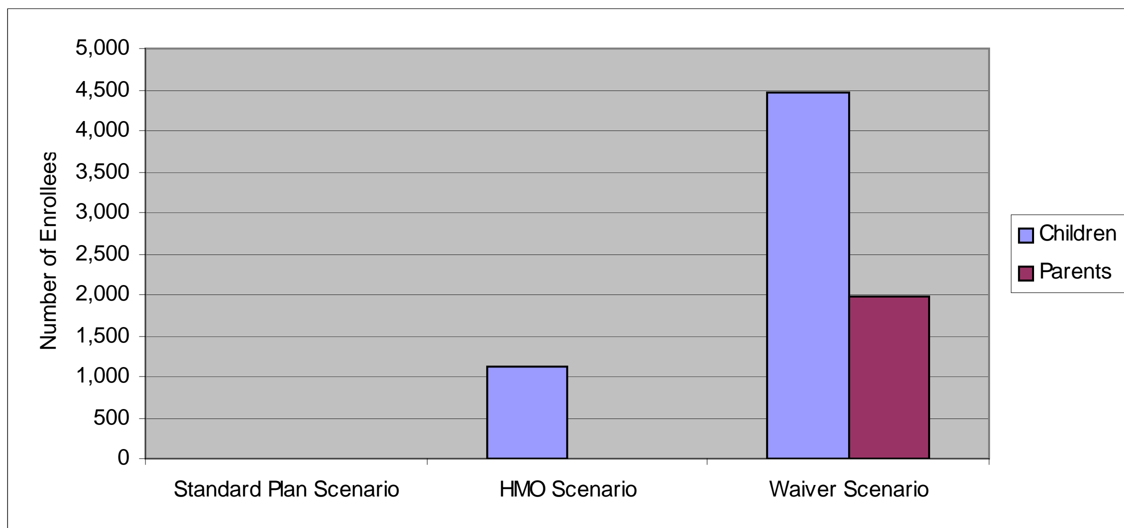
Table 11: Employer Buy-In Participation Rates of Eligibles

Scenario	Out-of-Pocket Cost Participation Rate	Application Assistance Participation Rate	Program Participation Rate
Standard Plan	58%	75%	44%
HMO	58%	75%	44%
Waiver	70%	75%	53%

Summary of Expected Employer Buy-In Enrollment

Applying the expected participation rates to the number of CHP+ employer buy-in eligibles provides an estimate of the number of CHP+ eligibles who could be expected to enroll in an employer buy-in program, as shown in Figure 6. The chart shows that an employer buy-in program could expect enrollment between 0 and 4,500 children, depending on the scenario implemented.

Figure 6: Number of CHP+ Employer Buy-In Enrollees



Savings

For families that are offered a cost-effective plan, the CHP+ program could realize some savings for each family that enrolls in an employer buy-in program. While no savings would be realized in the standard plan scenario, where enrollment is expected to be zero, the HMO and waiver scenarios would create some financial savings for the CHP+ program.

In the HMO scenario, the CHP+ program would realize an annual savings of approximately $220,000 per year, or $16 per-member per-month, for the 1,123 enrollees expected under this option.

The family subsidy option utilized in the waiver scenario significantly reduces the savings realized by this scenario. In the waiver scenario, any savings achieved by providing coverage to children through their employer plan is used to provide coverage for the parent. This reduces per-member per-month savings from $16 per-month, as in the HMO scenario, to $1 per-month in the waiver scenario. The total savings in the waiver scenario would total $43,000 per year.

The following chart summarizes savings that would be realized in each of the three scenarios.

Table 12: Projected Savings in an Employer Buy-In Program

Scenario	Annual Savings[14]	PMPM Savings[15]
Standard Plan	$0	$0
HMO	$220,000	$16
Waiver	$43,000	$1

[14] Values rounded to t he nearest $1,000.
[15] Values rounded to the nearest $1.00.

Crowd-Out

Crowd-out occurs when privately insurance individuals drop their private health insurance to enroll in a public insurance program. In such a situation, the public funds of the new program replace or "crowd-out" the existing private dollar contributions of the individual toward health insurance. Crowd-out can also occur when employers discontinue health insurance coverage or reduce their dollar contributions to employee coverage in an effort to encourage their employees to drop their employer coverage and enroll in the new public program.

While national studies show that crowd-out is more likely to occur in programs that serve higher income populations, federal and state officials disagree on whether an employer buy-in program would increase or reduce the occurrence of crowd-out. This section will review the crowd-out issues that are of concern to federal and state officials and review the concern that employer buy-in programs may increase the risk of crowd-out.

In its 1998 letter to CHP+ officials, the Health Care Financing Administration (now CMS) expressed its belief that employer subsidy programs would increase the occurrence of crowd-out in programs like CHP+. The letter provides two reasons for this concern: 1) families who currently receive employer-based insurance are more likely to apply for CHP+ if they can keep their children enrolled in their employer's health plan, and 2) employers have incentives to reduce or eliminate their premium contributions for dependent coverage if a state subsidy replaced that contribution. While this concern is also true for coverage under direct CHP+ coverage, CMS appears to believe that this type of crowd-out is more likely if employers are aware of the program, as they may be under an employer buy-in program. Because of these concerns, CMS has placed additional restrictions on the operation of a CHP+ employer buy-in program, such as longer waiting periods.

State officials and some researchers believe, however, that crowd-out may be reduced, not increased, under employer buy-in programs. They point to other aspects of an employer buy-in program, not discussed in the CMS guidance. First, many employer buy-in programs, particularly those contemplated by this study, would not require any on-going participation on the part of the employer. Instead, after completing a single request for benefit and premium information, an employer would not be involved in the on-going receipt of a subsidy by their employees. It is difficult to say, and it certainly has not been proven, that such a one-time interaction with the CHP+ program would lead to a reduction in employer contributions toward or offering of family health coverage.

Secondly, even if an employer were to wish to change their health benefit policy in response to CHP+ subsidies, aspects of employer wages and insurance regulation make it difficult for the employer to take such action. First, most employers' workforces are diverse in terms of income, meaning that only a very small percentage of any employer's workforce would qualify for subsidies under the new program. Secondly, federal and state law prohibits employers from offering health benefits based on the wages of their workers, so an employer would not be able to drop or reduce coverage for only their low-wage workers. These two factors would make it difficult for an employer to change their health benefits based on the availability of an employer buy-in program.

Because there is no evidence that an employer buy-in program would increase the risk of crowd-out, this study concludes that crowd-out should not be considered an additional cost of an employer buy-in program. Instead, crowd-out should be monitored during implementation of an employer buy-in program and corrective action taken only if crowd-out levels are unacceptable.

Summary of Enrollment and Costs in the Three Scenarios

The following chart summarizes the estimated enrollment and costs in the three employer buy-in scenarios and compares them to the current CHP+ program. While the enrollment and savings of an employer buy-in program would be modest relative to the current CHP+ program, administrative costs would be significant.

Table 13: Enrollment and Administrative Costs of the Three Scenarios

Scenario	Enrollment	Annual Administrative Costs	Net Annual Savings
Standard Plan	0	$787,000	($787,000)
HMO	1,110	$1,187,000	$250,000
Waiver	4,500	$1,187,000	$45,000
Current CHP+ Program	35,000	$5,600,000	N/A

Findings

1) **Most CHP+ eligibles do not have access to an employer health plan.** Although 91 percent of CHP+ eligibles have an employed parent, only 36 percent have access to employer-based insurance.

2) **Most employer health plans offer managed care plans with benefits that meet the requirements of an employer buy-in program.** Over 90 percent of CHP+ eligibles with access to employment-based insurance have access to a managed care plan with adequate benefits.

3) **Most employer plans fail the cost-effectiveness test.** Only 0 percent-16 percent of employer health plans in Colorado would pass a cost-effectiveness test under current federal law and regulation. Elimination of federal benefits and cost-sharing requirements would increase the number of cost-effective employer plans to 41 percent.

4) **Providing family coverage would increase the participation of uninsured families from 45 percent to 77 percent.** Because uninsured parents would have to pay $270 per year to cover themselves if offered a subsidy for their children, only 45 percent of eligible such families would enroll in an employer buy-in program. Offering family coverage would decrease out-of-pocket costs for these families and increase their participation rate to 77 percent.

5) **An employer buy-in program implemented with a federal waiver would experience the highest enrollment.** An employer buy-in program implemented with a federal waiver would enroll the highest number of children for three reasons. First, a waiver would allow children with access to a PPO plan as well as an HMO plan to participate. In addition, a waiver of cost-sharing requirements would reduce monthly premium costs, increasing the number of cost-effective employer plans. Finally, provision of family subsidies under a waiver would increase the participation of uninsured families.

6) **Even with a federal waiver, an employer buy-in program would enroll only 7 percent of CHP+ eligibles.** Several characteristics of employer health insurance in Colorado limit the number of eligibles who could be served by an employer buy-in program. Such factors include: 1) only 36 percent of CHP+ eligibles have access to employer-based health insurance, 2) only 41 percent of Colorado employer health plans would meet the cost-effectiveness test and 3) only 53 percent of eligible families would participate in an employer buy-in program, primarily because of the out-of-pocket costs of employer health plans.

7) **A CHP+ employer buy-in program would need a significant administrative budget, but would produce only modest savings.** An employer buy-in program would require four to nine staff and a $787,000-$1,187,000 annual budget to perform functions such as employer marketing, employer eligibility and subsidy administration. After administrative expenses, an employer buy-in program would produce net savings between $43,000 and $220,000 annually.

Recommendations

Using the analysis and findings of this report, the Employer Buy-In Project Board and the Children's Basic Health Plan Policy Board make the following recommendations regarding a CHP+ employer buy-in program.

1) The CHP+ program should not implement an employer buy-in program at this time.

Even with a waiver of federal benefit and cost-sharing requirements, an employer buy-in program would enroll only 7 percent of CHP+ eligibles and would require an annual budget of over $1 million.

Several characteristics of employer health insurance in Colorado limit the number of eligibles who could be served by an employer buy-in program, including low rates of access to employment-based insurance among CHP+ eligibles and the relatively high cost of child coverage through employer health plans. Access and cost are not likely to improve in the near future in light of increasing employer premiums, lower employer contributions toward employee coverage, and increasing copayments and deductibles required by employer health plans.

In addition, administration of an employer buy-in program would require a $1.25 million annual budget, excluding start-up costs of approximately $ 2 million. These resources might be more effectively spent in other areas of the CHP+ program to reach and enroll a higher percentage of CHP+ eligibles.

2) CHP+ should pursue grant funding to test the effectiveness of marketing the CHP+ program to employees at their work sites.

In lieu of an employer buy-in program, the CHP+ program should test marketing and outreach strategies designed to reach eligible families through their employers. The CHP+ program could apply for grant funds to collect market data, evaluate the potential for crowd-out, and work with employer stakeholders to assess the effectiveness of employer-based marketing. Grant-funded activities could include:

- Analysis of National Survey of America's Families data regarding employment characteristics of CHP+ families by industry type, firm size, geography, part-time or seasonal status, and length of time in job.
- Analysis of employer data, like the Medical Expenditure Panel Survey, to assess the risk of crowd-out in Colorado, e.g. estimating employer contributions toward dependent coverage in small and large firms.
- Development and staffing of advisory groups of small and large employers, insurance agents and brokers, unions, and health plans to evaluate employer marketing strategies.

In the absence of an employer buy-in program, such marketing activities will allow the CHP+ program to explore effective ways to work with employers of CHP+-eligible families without increasing crowd-out.

3) If the CHP+ program were to cover parents, the CHP+ program should reconsider implementing an employer buy-in program.

Findings of this study and experience of other states suggest that an employer buy-in program for parents and children would be more cost-effective than a child-only program.

- **Family coverage would increase the percent of cost-effective employer plans.** Because employers generally contribute more toward employee coverage than dependent coverage, programs that cover parents and children are more likely to find subsidizing an employer's plan to be cost-effective.

- **Family coverage would increase the number of employer buy-in eligibles.** By extending coverage to parents of eligible children, the CHP+ program would increase the number of employer buy-in eligibles by 50 percent.

- **The existing employer buy-in programs in Oregon, Wisconsin and Massachusetts provide coverage to parents and children.** Programs in these states cover parents through Medicaid or state-only funding.

It appears from this analysis and from other states' experience that family coverage must be part of the CHP+ program if an employer buy-in program is to reach a significant proportion of eligibles in a cost-effective manner. States that wish to provide such coverage, however, must do so with state-only or Medicaid funding, or must apply for a CHIP 1115 waiver[16].

4) If the CHP+ program were to pursue an employer buy-in program, certain program design elements should be chosen to ensure maximum enrollment.

Designing an employer buy-in program in accordance with the following recommendations ensures that an employer buy-in program would provide cost-effective subsidies to the maximum number of uninsured children. The first three elements would require a federal waiver of benefit and cost-sharing requirements.

- Subsidize any HMO or PPO plan that meets a basic benefit test, and do not limit enrollment to a single plan design such as the Small Group Standard Plan. While 98 percent of CHP+ eligibles have access to an HMO or PPO plan, only 10 percent have access to the Colorado Small Group Standard Plan.

- Do not reduce cost-sharing of employer plans to levels required by current federal law and regulation. Purchasing reduced cost-sharing for the average HMO plan costs $20 per-member per-month, reducing the number of employer plans that meet the cost-effectiveness test by 30 percent.

- Provide a family subsidy when it is cost-effective to do so. Subsidizing parents as well as children significantly increases the number of people covered by 1) covering 80 percent of parents whose children qualify for the program, and 2) increasing participation rates of uninsured families by reducing their out-of-pocket costs.

- Adequately fund and staff the program to ensure enrollment. Experience of other states with employer buy-in programs suggests that significant resources are required to design and

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[16] CMS outlined its willingness to consider 1115 waivers to cover parents of CHIP children in its Health Insurance Flexibility and Accountability Demonstration Initiative Memo, August 8, 2001.

implement a successful program; states that understaff or underbudget their programs experience low enrollment.

- Design and implement the program with a governing or advisory structure that includes key stakeholders including large and small employers, health plans and providers, agents and brokers, marketing contractors, employees and CHP+ staff. Successful employer buy-in programs in other states believe that input from stakeholders is essential to a successful program, particularly because CHP+ staff may not be familiar with the employer health insurance market.

Benefits of the Feasibility Study

The conclusions and recommendations of this feasibility study ensure cost-effective use of CHP+ program dollars. Specifically:

1) An employer buy-in program implemented under current federal and state law would be an ineffective use of program resources. The study finds that an employer buy-in program would have low enrollment and high administrative costs, even if operated with a federal waiver of benefit and cost-sharing requirements.

2) If the CHP+ were to expand to cover parents through a Medicaid expansion or Children's Health Insurance Program waiver, an employer buy-in program might offer a cost-effective method for providing health insurance to uninsured families.

3) If the CHP+ program were to implement an employer buy-in program, the study indicates which program design options should be used to maximize enrollment and minimize administrative costs, including benefit designs, cost-sharing levels, and program administration.

Appendices

Appendix A: Three Employer Buy-In Scenarios

While the feasibility study could have included analysis of hundreds of program design options, time and resource constraints dictate the analysis of three likely employer buy-in scenarios in Colorado. The three scenarios include 1) subsidizing only the Colorado Small Group Standard Plan, 2) subsidizing any employer HMO plan, and 3) operation of a program under a federal waiver.

Standard Plan Scenario: Limit Subsidies to the Colorado Small Group Standard Plan

The standard plan scenario would only subsidize children who enrolled in the Colorado Small Group Standard Plan. This restriction would allow an employer buy-in program to more easily meet federal benefit and copayment requirements. For example, federal statute and guidance sets out clear requirements for minimum benefit packages and maximum cost sharing that can be provided under a CHIP program, including employer plans subsidized with CHIP dollars. While meeting these requirements would be difficult if hundreds of employer plans were to be subsidized, benefit requirements could be met easily if only one plan, such as the Colorado Small Group Standard Plan, was eligible for subsidy.

HMO Scenario: Subsidize any employer HMO plan

Like the Standard Plan Scenario, this option complies with current federal statutory and regulatory requirements, but it allows subsidization of any employer HMO plan. While this option would be more administratively complex, it allows more children to participate in an employer buy-in program.

Waiver Scenario

The waiver scenario describes an employer buy-in program that the state might design if it decided to pursue a waiver of current federal CHIP requirements. This option is unique in its absence of minimum benefits and maximum cost-sharing, requirements which the federal government has indicated a willingness to waive. Eliminating these requirements allows more employers and children to participate in the program.

Description of program design options

The following section discusses each element of the three employer buy-in programs that the Employer Buy-In Project Board approved for study. Parts of this section are drawn from a paper released in May 1999 “Establishing a Colorado Health Insurance Employer Buy-In Program for Kids: Issues and Options” written by Barbara Yondorf and Sarah Schulte.

Table 14: Elements of Proposed Employer Buy-In Scenarios

Requirement	Federal Scenario	Waiver Scenario	State Scenario
Benchmark Benefit Package	Colorado Small Group Standard Plan	Colorado Small Group Standard Plan	Basic benefits
Supplemental benefits provided	Cost-sharing only	Cost-sharing only	None
Benefit equivalency test	No test needed	Check-off form or actuarial analysis	Benefit checklist
Cost-effectiveness test	Per child	Per employer	Per employer
Waiting period	6 months	3 months	3 months
Eligible carriers	Any qualified	Any qualified	Any qualified
Eligible plans	Standard Plan only	HMO plans only	PPO (with limited deductible) and HMO plans
Copayment systems	Benefit rider	Standard copay upgrade across multiple plans	None
Entity that receives subsidy	Employee	Employee	Employee
Entity responsible for providing employer eligibility data to the state	Applicant and state	Applicant	Applicant
Enrollment effective date	Open enrollment	Qualifying event	Qualifying event
Mandatory or voluntary enrollment	Voluntary	Voluntary	Voluntary
Child or family subsidy	Child	Child	Family

Benchmark Benefit Plans

Federal statute requires that all plans subsidized by CHIP funds meet three basic requirements: 1) cover basic benefits named in the statute[17], 2) meet or exceed the value of one of three benchmark plans, and 3) cover mental health, prescription drugs, vision and hearing services at a level at least 75% of the benchmark plan. States can choose one of three benchmark plans: the Federal Employee Health Benefit Plan (FEHBP), the state employee health plan, or the HMO plan with the largest commercial enrollment in the state. Because the last two benefit requirements are related to the benchmark plan, choosing an appropriate benchmark plan can have significant consequences for an employer buy-in program.

Standard Plan and HMO Scenarios: The Colorado Small Group Standard Plan

Current federal and state statutes offer the flexibility to adopt an alternate benefit benchmark for an employer buy-in program. Specifically, the HMO plan with the largest commercial enrollment in the state may not be the Kaiser Permanente 710 plan, as identified in the original CHP+ state plan, but the Colorado Small Group Standard Plan.

[17] These services include inpatient hospital, outpatient hospital, physician care, lab and x-ray services, well-baby and well-child care and immunizations.

Multiple carriers in the state carry the Standard Plan and offer the plan to every small group seeking insurance. Use of the Standard Plan, which has lower value than the FEHBP plan, may be a more appropriate benefit benchmark for a subsidy program for low-income employees.

Waiver Scenario: Basic benefits

The Health Insurance Flexibility and Accountability Demonstration Initiative suggests that CMS may be willing to approve alternate benefit packages under an employer buy-in program. Under this option, the state could apply for use of a basic benefits test in lieu of a benefit benchmark plan. This option is used currently by other states that offer insurance assistance programs with state dollars, such as the Oregon Family Health Insurance Assistance Program. Instead of a benefit benchmark package, the state could adopt a list of benefits that must be covered somewhat under the employer's plan. An example of such a list could be the list of benefits that must be included in a CHIP plan, e.g. inpatient hospital, outpatient hospital, physician care, lab and x-ray services, well-baby and well-child care and immunizations.

Supplemental Benefits and Reduced Cost-Sharing

In addition to the benchmark plan requirement described above, the federal CHIP statute requires that cost sharing be limited to nominal levels. For example, cost sharing under CHIP plans is limited to 3 dollars for an office visit and zero copayment for well-baby care, well-child care and immunizations. An employer plan subsidized by CHP+ must meet these standards as well as the benefit requirements described in the previous section. States can either subsidize only plans that meet these requirements, or provide additional benefits to supplement the employer's plan.

Standard Plan and HMO Scenarios: Provide reduced cost-sharing

Under the waiver scenario, the state would provide an additional benefit to program enrollees to ensure that their out-of-pocket expenses did not exceed allowable federal limits. Both Massachusetts and Wisconsin are currently providing this type of enhanced cost-sharing benefits to enrollees in their employer buy-in programs.

Waiver Scenario: Do not provide supplemental benefits or reduced cost-sharing to program enrollees

Employer plans rarely offer benefit plans with the copayment levels allowed by federal law ($0 to $3 for physician visits); copayments of 5 to 20 dollars are more typical of commercial employer plans. In addition, the related administrative cost to the state or a carrier of ensuring low copayments to enrollees would be extremely high, due to the number of small payments (under 20 dollars) to many providers. The waiver scenario eliminates these minimum benefit and maximum cost sharing requirements and their related supplemental benefits. While higher copayments may reduce service utilization by families in the low-income groups eligible for CHP+, it may be a cost-effective option for reaching more uninsured children. The Oregon Family Health Insurance Assistance Program, a state-funded program, currently uses this option.

Benefit Equivalency Test

Once the state chooses a level of required benefits, the state must implement a method for deciding whether a particular employer plan offers the required benefits. CMS has approved two methods for evaluating employer plans: an actuarial analysis or a checklist of plan benefits.

Standard Plan Scenario: No test needed

Under the standard plan scenario, only employers who offer the Standard Plan will be eligible for subsidy. Since the Standard Plan is also the benchmark, no test for benefit equivalency will need to be performed.

HMO Scenario: Use a benefits checklist or actuarial analysis to determine benchmark equivalency

CMS has approved two methods for determining whether an employer's plan offers the required benefits under CHIP. First, the state may perform an actuarial analysis of each employer plan presented for a subsidy. An alternative method for testing benefit equivalency is that of the benefit checklist, developed and used in the Massachusetts employer buy-in program. The test involves comparing a summary of the employer's benefits against a checklist of benefits in the benchmark plan and is potentially less expensive and time-consuming than an actuarial analysis. The actuarial test could be used by plans that are commonly offered by employers, while the less expensive checklist method could be used for less popular plans.

Waiver Scenario: Benefit checklist

The state scenario will use a simple benefit checklist to determine whether an employer's plan meets the basic benefits required under this scenario.

Cost-Effectiveness Test

The federal CHIP statue requires that a subsidy payment under an employer buy-in program not be greater than the cost of enrolling an eligible child in the state's direct program. Even without such a federal requirement, the state would probably want to assure efficient use of funds and coverage for the maximum number of eligible children.

While the state must consider many elements of an employer's plan when calculating cost-effectiveness, staff has identified one aspect of the cost-effectiveness test that could vary significantly between scenarios. The state could calculate the cost of the employer buy-in on a per child basis or on a per employer basis.

Standard Plan Scenario: Per Child Cost-Effectiveness Test

The per child test would require the state to determine cost-effectiveness on a case-by-case basis for each employer buy-in applicant. While the per child cost-effectiveness test may be more costly from an administrative perspective, this option is suggested for the

standard plan scenario because it is the only method that has been approved for use in CHIP employer buy-in programs by CMS.

HMO and Waiver Scenarios: Per employer calculation of cost-effectiveness

Employee cost could be determined by calculating the cost of enrolling an average-sized CHP+ family in a specific plan offered by a particular employer. Under this option, an employer's plan is examined and if, on average, the subsidy cost is equal to or less than the CHP+ total plan cost, then all CHP+ eligible children can enroll in that employer's plan. This strategy would reduce administrative cost to the state and ensure equity among families of different sizes.

Waiting Period

One fear regarding a new program such as CHP+ is that families will drop their current private coverage to enroll in the newer, cheaper public program. This poses a problem for public programs because both federal and state funds are intended to be used for the currently uninsured, not to replace current private funding of insurance. One method for preventing such "crowding out" of private coverage is to require that eligible children must have been uninsured for at least a minimum period before they can be eligible for a subsidy. These required periods of uninsurance are referred to as "waiting periods."

Standard Plan Scenario: Require a 6 month waiting period

CMS has issued guidance to states that CHIP employer buy-in programs cannot provide subsidies to children whose family has been covered by employer-sponsored coverage in the previous 6 months, unless the coverage was involuntarily terminated. Because the direct CHP+ program currently uses a 3-month waiting period, requiring a 6-month waiting period would create substantial changes in the operation of the Colorado plan and reduce the number of children eligible for the program.

Unfortunately, the only state to secure a waiver of this provision, Massachusetts, was able to do so because it employer buy-in program is administered with its Medicaid program. The Colorado program would not work closely with the Medicaid buy-in program and therefore it is unlikely that Colorado would receive a waiver of this provision.

HMO and Waiver Scenarios: Require a 3 month waiting period

While it would require a federal waiver, a 3-month waiting period reflects the Colorado statutory requirement and current CHP+ application processes. Staff does not recommend this requirement be eliminated in the waiver scenario due to possibilities that CHP+ funds would be used by currently insured families.

Eligible Carriers

State authorizing legislation requires the program to contract only with managed care plans that also are willing to contract with Medicaid, but this requirement may not apply to the employer buy-in program. The state may have flexibility; therefore, in deciding which insurance carrier's plans may be eligible for a CHP+ subsidy.

Standard Plan, HMO and Waiver Scenarios: Subsidize the qualified employer plan of any carrier

While subsidizing carriers that are CHP+ contractors would offer some advantages, such as provision of the provider networks similar to Medicaid and the direct CHP+ program, these carriers represent only one-third of the HMO plans in the state. A restriction to these plans could therefore dramatically reduce the number of children eligible for the program.

Eligible Plans

While neither the federal nor state laws governing the CHP+ program restrict the type of plan that can be subsidized under an employer buy-in program[18], the state may wish to restrict eligible plans to reduce administrative costs under the program. Limiting the program to plans with certain benefits or likely cost sharing levels, for example, would reduce the administrative costs of testing benefits and providing additional cost-sharing benefits.

Standard Plan Scenario: Subsidize the Standard Plan only

As discussed earlier, Colorado state insurance law requires all insurance carriers selling in the small group market (groups under 50) to offer the Standard Plan to these groups. While limiting CHP+ subsidy plans to these would significantly limit the number of children eligible for the program, it offers several important advantages. First, a benefit equivalency test would only have to be performed once per year to determine the value of the Standard Plan relative to the benchmark plan. Secondly, this method would allow the employer buy-in program to purchase one supplemental policy that would ensure that subsidized health plans meet the benefit and cost sharing requirements of federal law.

HMO Scenario: Subsidize HMO plans only

Allowing any employer HMO plan to be subsidzed increases the number of families who could participate in an employer buy-in program, while excluding plans that are unlikely to meet benefit requirements of the program, like PPO and indemnity plans. Allowing such plans to apply under these requirements would likely create eligibility work for the state without any subsequent increased enrollment in the employer buy-in program.

Waiver Scenario: Subsidize any qualified managed care plan, such as an HMO or PPO

Because the waiver option has neither minimum benefits nor maximum cost sharing, PPO plans could conceivably meet the only eligibility requirement of the waiver scenario: cost-effectiveness. In particular, these plans could be cost-effective relative to the fee-for-service delivery system currently used by the CHP+ program in rural areas of the state.

[18] Plans must meet benefit, cost-sharing and employer contribution requirements, as discussed in this paper, but do not have to be a particular plan like an HMO or PPO plan.

Supplemental benefit systems

Employer buy-in programs must develop methods for assuring that enrollees do not face higher cost sharing or smaller benefits than allowed by the program. The options presented in this section are those that have received positive response in national and state discussion and have not been rejected by CMS. Examples of options not presented here because of poor experience of states, negative response by carriers, or denial of approval by CMS include providing cash to beneficiaries, providing vouchers to enrollees, or providing debit cards to enrollees to cover copayments.

Standard Plan Scenario: Purchase a benefit rider

This option requires the state to pay a carrier to develop, price and administer a supplemental benefit package that would ensure that the benefits provided to the enrollee meet the cost sharing requirements of the subsidy program. While this option significantly reduces state and possibly enrollee burden, it would only be practical in an employer buy-in program with a limited number of benefit plans. In the standard plan scenario, however, both carriers and the state would be able to develop and administer a single rider.

HMO Scenario: Pay plans a standard addition premium

The state must provide a mechanism for assuring nominal copayments under the HMO scenario to comply with federal law. Unlike the fee-for-service option used by Wisconsin, Massachusetts, and Colorado Medicaid, this option would pay carriers a standard premium amount to increase any employer plan cost-sharing to the required level. This idea has not been implemented in any other state, but is the preferred method of the Project Board, primarily because it avoids requiring providers to bill third parties for small amounts.

Waiver Scenario: No supplemental benefit system

Because there is no maximum cost sharing requirements in the waiver scenario, no copayment system would be needed.

Entity that receives subsidy

Standard Plan, HMO and Waiver Scenarios: Send premium subsidy to the enrollee

National and state discussion and state experience indicate that sending the subsidy to the enrollee is the best option for an employer buy-program. Primary arguments against sending the subsidy to another entity, such as the employer or the carrier, include lack of enrollee confidentiality and increased administrative burden to the employer or carrier. In addition, employers may be more likely to reduce their contribution to employee coverage if they receive the subsidy directly from the state.

Prospective payment, which assures that the enrollee is paid the subsidy in advance of their contribution being made to their employer, has not been subject to the fraud that some state officials feared. For example, early results from the Oregon Family Assistance

Program indicate that the number of individuals receiving the subsidy and failing to enroll is extremely low.

Entity responsible for providing employer eligibility data to the CHP+ program

States need two pieces of information to determine whether or not an employer's plan is eligible for subsidy: benefit description and employee contribution toward family premium. With these two pieces of information, the CHP+ program could determine whether the employer's plan meets the two aspects of eligibility: benefit equivalency and cost-effectiveness.

Standard Plan Scenario: Obtain needed information from the applicant, with state assistance

Under this scenario, the applicant would be asked to provide needed information, but the state would provide staff to assist applicants in gathering the needed data from employers and carriers on the applicant's behalf.

HMO and Waiver Scenarios: Require applicant to submit needed employer information

Requiring the applicant to provide needed information may or may not reduce the number of potential applicants who fail to complete the application process. The State of Oregon currently requires applicants to gather and submit the needed employer data.

Enrollment in the employer plan

Under current state law, most children will not be able to sign onto their parents' employer-sponsored health plan at the time the state deems them eligible for a subsidy. This is because most families and children can only enroll for their employer's coverage when they first become eligible for their employer's plan (i.e. within 30 days of being hired) or during an open enrollment period. Exceptions to this rule include enrollment of a newborn, a new spouse, or a dependent that lost coverage under another health plan. Because qualifying for CHP+ is not one of these exceptions, children wishing to enroll in their employer's plan under CHP+ would be required to wait until their next open enrollment period, which could be up to 12 months away.

Standard Plan Scenario: Allow enrollment in employer's plan only at open enrollment

While this option would certainly create operational problems for both the program and the enrollee, it may be the only option for enrollment in a program where any qualified employer plan can be subsidized. For example, it would be extremely difficult to negotiate individually with the hundreds or thousands of employers who could potentially participate under this option.

HMO and Waiver Scenarios: Legislatively mandate eligibility for CHP+ as a qualifying event

This option would require introduction of legislation during a session of the General Assembly. Under such a new statute, the parents of a child newly eligible for CHP+ would receive confirmation of eligibility and be given a letter to share with the parent's employer. The letter would inform the employer that the family is entitled to sign up for coverage under the employer's plan within 30 days of the date of the letter. Although self-funded plans would be exempt from this requirement, CHP+ would encourage employers and plans to allow enrollment of CHP+ in a similar manner.

Family choice to enroll in employer plan

Standard Plan, HMO and Waiver Scenarios: Make enrollment in the employer subsidy program voluntary for all families.

Enrollment under each of the three scenarios must be voluntary, but for different reasons. Under the standard plan and HMO scenarios, CHIP regulations require that enrollment be voluntary unless specific enrollee protections can be guaranteed under the employer's plan. Because these requirements cannot be guaranteed in all Colorado employer plans, enrollment must be voluntary under these scenarios.[19] In the waiver scenario, the employer buy-in option potentially offers reduced benefits and increased cost sharing relative to the direct CHP+ program, thereby necessitating a voluntary enrollment in the program.

Child or Family Subsidies

While the CHP+ program is targeted toward uninsured children, the federal statute allows states to subsidize the coverage of an employee and spouse if the cost of doing so is the same as to cover the children directly. Advantages of a family subsidy include more participation by families due to the larger subsidies and children more likely to receive care because their parents are insured. Disadvantages include using CHP+ program dollars for uninsured adults instead of uninsured children, and the possible necessity of state law change to allow subsidy of family coverage.

Because a child or family subsidy could be provided under any scenario, the child-only subsidy is included in the standard plan and HMO scenarios, and family subsidy in the waiver scenario, where it may be more likely that family subsidy would be cost-effective.

[19] For example, the CHIP regulations require expedited external review appeals to be completed within 72 hours, while Colorado Insurance law allows such a review to be conducted for up to 12 working days.

Appendix B: Number of CHP+ Eligibles

To estimate the number of CHP+ eligibles with access to employer-based coverage, this section will calculate the following numbers:

4) The number of CHP+ eligibles

5) The number of CHP+ eligibles with an employed parent, and

6) The number of CHP+ eligibles with access to employer-based coverage

Number of CHP+ and Medicaid Eligibles

CHP+ and Medicaid Eligibility Criteria

The following factors are the major criteria used by the Colorado CHP+ and Medicaid programs to determine eligibility of children who apply for coverage.

Age. Both the CHP+ and Medicaid programs consider children aged 0-18 years old as eligible for children's programs.

Income. In 1999, the Colorado Medicaid program covered children aged 0-5 up to 133% of Federal Poverty Level (FPL); children aged 6-16 up to 100% FPL; and 17-18 years olds up to 36 % FPL. CHP+ covers children up to 185% FPL who do not qualify for Medicaid. The following chart gives some examples of income levels associated with Medicaid and CHP+ eligibility.

Table 15: Examples of annual income levels of Medicaid and CHP+ eligible families

Income Level	One adult + One child	One adult + Two children
100% FPL (Medicaid)	$11,060	$13,880
185% FPL (CHP+)	$20,461	$25,678

Assets. In addition to income limits, Medicaid considers the resources, or assets, available to a family when determining the children's eligibility for Medicaid. For example, under the new welfare reform law in Colorado, families may have one vehicle and $2000 worth of assets, as defined in state regulation (8.102.1). Children in families that meet Medicaid income guidelines but surpass allowable resource levels are eligible for CHP+. The CHP+ program does not have any asset limits.

Insurance status. Medicaid will provide coverage to children who meet the age, income, asset and other requirements of the Medicaid program, regardless of the child's insurance status. To be eligible for CHP+, however, a child must meet age and income requirements and be currently uninsured through any employer, individual or other type of health insurance.

Number of CHP+ and Medicaid Eligibles

The National Survey of America's Families (NSAF), conducted by the Urban Institute, estimates that there were 49,414 children eligible for CHP+ and 151,006 children eligible for Medicaid in 1999 in Colorado. These numbers are based on the age, income and insurance status of the children in the survey's sample. Table 16 shows the number of eligibles for each program and their current insurance status as estimated by the Urban Institute.

Table 16: 1999 NSAF Estimates of the Number of Colorado Children Eligible for Medicaid and CHP+

Type of Health Insurance	Number of Medicaid Eligibles	Number of CHP+ Eligibles
Employer Coverage	41,644	Not Eligible
Other Coverage	6,506	Not Eligible
Medicaid/CHP+/CICP	66,891	15,004
Uninsured	35,965	34,410
Total	151,006	49,414

Several adjustments must be made to these numbers to approximate the number of Medicaid and CHP+ child eligible in Colorado in 2000. These adjustments include: 1) an adjustment for 18 year olds not included in the estimate, 2) an adjustment for children in families that fail the Medicaid asset test, and 3) a population inflation factor to estimate year 2000 eligibles based on the 1999 NSAF data.

As described earlier, 18 year olds in Colorado are eligible for the Medicaid and CHP+ programs. Unfortunately, the NSAF estimates produced for this report only include children through age 17. The Urban institute has calculated, however, the number of uninsured children eligible for CHP+ and Medicaid for all children through age 18. For example, the NSAF estimates that 34,410 uninsured children 0-17 were eligible for CHP+ in 1999, but, in a separate report prepared for CHP+, it estimated that 38,290 uninsured children aged 0-18 were eligible for CHP+ that year. This represents an increase of approximately 11%. Applying a similar method for Medicaid, it appears that including 18 year olds in the Medicaid calculation would increase the estimate of child eligibles by approximately 9%.[20] Applying these rates to the numbers in the previous table, Table 17 presents the estimates of eligible children by type of insurance coverage:

Table 17: NSAF Estimate of Eligibles, Adjusted to included 18 year olds

Type of Insurance Coverage	Number of Medicaid Eligibles[21]	Number of CHP+ Eligibles[22]
Employer	45,392	Not eligible
Other Coverage	7,092	Not eligible
Medicaid/CHP+/CICP	72,911	16,654
Uninsured	39,202	38,195
Total	164,597	54,850

[20] NSAF estimates that 35,965 uninsured children aged 0-17 were eligible for Medicaid in 1999, but 39,270 0-18 years old.
[21] 9% higher than NSAF estimate without 18 year olds.
[22] 11% higher than NSAF estimate without 18 year olds.

Children who qualify for Medicaid based on age and income may be denied eligibility because their family's assets exceed the allowable limits of the program. At the time of this report, both the Department of Health Care Policy and Financing and the Urban Institute were developing models for estimating the percent of age- and income-eligible children who are denied Medicaid coverage due to the asset test; unfortunately, these analyses were not available at the time of this report.

In 1999, the Department of Health Care Policy and Financing estimated that in fiscal year 1997-1998, 2,000 children were denied Medicaid eligibility due to "total resources exceeding the maximum resource level.[23]" During that same year, the Medicaid program covered approximately 40,000 children in Colorado. Assuming that the entire Medicaid caseload turns over in one year, it appears that 5% of Medicaid age- and income-eligible children are denied Medicaid coverage due to the asset test (2,000 of 42,000).

This experience in 1998 suggests that 5% of all Medicaid eligible children are actually eligible for the CHP+ program due to the Medicaid asset test. The following chart calculates the number of Medicaid and CHP+ eligible children in Colorado if 5% of Medicaid children are eligible for CHP+.

Table 18: NSAF Estimate of Eligibles, Adjusted for Medicaid Asset Test

Type of Insurance Coverage	Number of Medicaid Eligibles[24]	Number of CHP+ Eligibles[25]
Employer	43,122	Not eligible
Other Coverage	6,737	Not eligible
Medicaid/CHP+/CICP	69,265	20,300
Uninsured	37,242	40,155
Total	156,367	60,455

A final adjustment to the Urban Institute numbers is made to reflect the potential increased number of eligibles from 1999, the survey year, to 2000, the year of this feasibility study. This adjustment does not take into consideration changes in income, insurance status and age that may have occurred in Colorado between 1999 and 2000. Rather, it simply increases the number of eligibles by the percent population increase anticipated by the State of Colorado in its economic projections. In its "Colorado Economic Perspective," the Office of State Planning and Budgeting projects that the Colorado population increased by 2.3% between 1999 and 2000. The following chart shows how such an adjustment will increase the CHP+ and Medicaid eligibles estimates for the year 2000.

Table 19: NSAF Estimate of Eligibles: Adjusted for population increase 1999-2000

Type of Insurance Coverage	Number of Medicaid Eligibles	Number of CHP+ Eligibles
Employer	44,114	Not eligible
Other Coverage	6,892	Not eligible
Medicaid/CHP+/CICP	70,858	20,767
Uninsured	38,099	41,079
Total	159,963	61,846

[23] Colorado Legislative Council, Fiscal Note Worksheet, 1999 Legislative Session, Bill Number 99-1085.
[24] 95% of NSAF estimate inflated to include 18 year olds.
[25] Five percent (5%) of Medicaid category added to each type of coverage to reflect asset test.

Using the 1999 NSAF survey as a baseline and adjusting for 18 year olds, the asset test and population increases, this paper will use the estimate of eligibles presented in Table 19 as the number of children who are eligible for the Medicaid and CHP+ programs in 2000: 159,963 and 61,486, respectively.

Appendix C: Benefit Rider Cost by Leif Associates, Inc.

Leif Associates, Inc. has been asked to provide actuarial services regarding the feasibility study for the potential Employer Buy-In Program for the Colorado Children's Basic Health Plan. The purpose of this letter is to document the findings from our analysis and to offer our recommendations as to the feasibility of implementation of such a program.

Background

The current proposal of the Employer Buy-In Program for Colorado offered three scenarios under which implementation of the program would possibly be permitted by CMS. The three scenarios differ substantially in their approaches of determining employer eligibility and financial subsidization. The following list is a brief summary of the main features of the three scenarios:

Standard Plan Scenario

- Eligibility is restricted to employers offering the Colorado Small Group Standard Plan.
- Actuarial analysis is necessary to determine the estimated "buy-up" premium necessary to replace the additional cost sharing inherent in the standard plan compared to the cost sharing in the CHP+ plans. Eventually this "buy-up" premium will be based on a process or an amount negotiated with the contracted HMOs. The carrier-specific premiums would differ from the estimates due to differences in assumptions such as those used for covering administrative expenses. The actual "buy-up" premiums used by the carriers would then be utilized when determining the plan's passage of the cost effectiveness test, which requires that the overall cost of subsidization by the state for the employer buy-in program would be less than the subsidization when joining the direct CHP+ plan.

HMO Scenario

- Eligibility is restricted to employers offering HMO plans that cover basic services such as inpatient hospital, outpatient hospital, physician care, lab and x-ray services, well-baby and well-child care, and immunizations. The employer plan must also cover mental health, prescription drugs, vision, and hearing services if the Colorado Small Group Standard Plan (the "benchmark plan") covers such services. For example, the employer plan in 2001 would need to have prescription drug coverage in order to qualify, but plans would not have to cover vision or hearing because the 2001 Colorado Standard Plan does not cover vision or hearing services.
- Actuarial analysis is necessary to determine the estimated "buy-up" premium necessary to replace the additional cost sharing inherent in the average HMO plan compared to the cost sharing in the CHP+ plans. Eventually this "buy-up" premium will be based on a process or an amount negotiated with the contracted HMOs. The carrier-specific premiums would differ from the estimates due to differences in assumptions such as those used for covering administrative expenses. The actual "buy-up" premiums used by the carriers would then be utilized when determining the plan's passage of the cost effectiveness test, which requires the overall cost of subsidization by the state for the employer buy-in program to be less than the subsidization when joining the direct CHP+ plan.

Waiver Scenario

- Eligibility requirements for waiver scenario are consistent with those of the HMO scenario, with the addition of PPO plans being permitted under the wavier scenario. Participation in this program under the waiver scenario is restricted to employers offering HMO or PPO plans that cover basic services such as inpatient hospital, outpatient hospital, physician care, lab and x-ray services, well-baby and well-child care, and immunizations.

- No actuarial analysis is needed.

Therefore, the main issue involving actuarial analysis is the determination of the estimated "buy-up" premium of the eligible employer plans to the CHP+ plans (used in the standard plan and HMO scenarios). The state agency overseeing this program would be able to use such estimates when implementing actual rates established by those HMOs interested in offering this "top-up" benefit rider. Two possible uses of such information would be 1) to have the carriers agree to utilize the components that make up the estimated premium when any potential employer plan design is involved or 2) to have the carriers use set rates based on specific employer plan designs according to the three different poverty levels, again with rates based off of key components underlying the state's original estimate.

Benefit Equivalency Test and Benefit Rider Premium Calculation

As mentioned previously, the standard plan scenario can only be implemented if the employer offers the Colorado Small Group Standard Plan. Because the HMO scenario requires the employer plan to be an HMO, the CMS-required benefits would almost certainly be inherent in the currently offered plan. Therefore, there would be no need to perform a benefit equivalency test that would require additional administration on behalf of the state.

However, in order to perform the cost effectiveness test and to determine an estimated cost of the plan, calculations of the estimated "buy-up" premiums are necessary and require calculation of actuarial values. We have developed two different methodologies under which actuarial values are utilized in the determination of the estimated "buy-up" premiums. We have termed these two approaches to be the Equitable Approach, involving more detail, benefit flexibility, and seemingly more fairness, and the Simplified Approach, which is a less complex method. Explanations of both approaches are located below.

Equitable Approach

The Equitable Approach involves an Excel file that allows the user to input the copays and plan design features of an employer's plan. An example of the model is located in Table 10. While this model does not take into account all plan design features, it does consider the major categories affecting cost. The estimated "top-up" premium results to go from the 2000 Colorado Standard HMO Plan to the CHP+ plans using the Equitable Approach can be seen in Table 11. Therefore, Table 11 contains the "top-up" premium estimates under the standard plan scenario.

The key piece of information obtained from the model is the estimated "top-up" rider premiums, according to submitted plan design, by income level of employee. These riders "top-up" the present employer plan to get to the cost-sharing levels of the CHP+ plans.

If the employer health plan is determined to be eligible for the program, the applicable "top-up" benefit rider premiums, under the standard plan and HMO scenarios, are then calculated. In order to value the premiums for the additional rider provided to children of the employees, the program compares the actuarial values of the three CHP+ plans based on income levels and the current health plan offered through the employer. The actuarial values are all calculated based on actual 1999 Colorado Child Health Plan (CCHP) fee-for service data, as adjusted to reflect expected HMO experience. As new CHP+ data becomes available, the actuarial value pricing methods should be updated annually with the new data. The differences between the CHP+ plans and the current employer health plan contain three major components, which are displayed to the user of the model. The components of the "top-up" rider premium are:

- Increased child/employee cost sharing—This is to offset the additional copay costs due to the differences in copay levels in the employer plan and the CHP+ plans

- An increase in utilization from the employer plan to the CHP+ plans—This is a result of the decrease in cost sharing for several services, such as office visits, which would lead to less of a barrier when needing such services. The list of utilization adjustments used by service may be found in Table 12. To account for the utilization differences based on the changing levels of cost sharing, the utilization was incrementally decreased when copays for discretionary benefits were increased. Likewise, utilization was increased when copays for discretionary benefits were decreased. For example, since we are using the CHP+ HMO assumption data set for these comparisons, if the employer's plan design has an office visit copay greater than the pertinent CHP+ plan design (e.g., $15 rather than $0), the model assumes that there will be fewer office visits under the employer's plan. Because experience by specific poverty level was determined to be not credible, CHP+ composite utilization over all poverty levels was used in the premium calculations. This explains why the utilization component of the "top-up" premium found in Table 10 is consistent for all poverty levels

- Administrative expenses—Approximately 40% of total premium to cover items such as identification cards, billing, member services, etc. We used expenses indicative of a Medicaid population and plan as a benchmark, along with the rough estimate of no more than 1,500 potential enrollees in the plan. Administrative expenses as a percentage of overall rider premium are going to be high because the overall rider benefit is relatively small

Table 12 displays expected costs by general service category for the input employer plan, costs of the input employer plan if no utilization adjustments had been applied, the Standard HMO costs, and CHP+ plan costs by poverty level. Amounts located in the Total Claim Cost row at the bottom of the table are used in determining the final numbers on Table 10 in the following ways:

1) Increased Cost Sharing pmpm = CHP+ plan costs by poverty level minus employer plan costs with no utilization adjustments. E.g., $64.22 - $55.18 = $9.05 (rounded)

2) Additional Utilization pmpm = Employer plan costs with no utilization adjustments minus expected employer plan costs. $55.18 - $50.98 = $4.19 (rounded)

3) Total Premium pmpm = (Increased Cost Sharing pmpm plus Additional Utilization pmpm) divided by (1 minus percentage of Total Premium that is due to Administrative Charges). E.g., ($9.05 + $4.19)/(1 - 0.40) = $22.06

4) Administrative Charges pmpm = Total Premium pmpm minus Increased Cost Sharing pmpm minus Additional Utilization pmpm. E.g., $22.06 - $9.05 - $4.19 = $8.83

The output displayed in Table 10 reflects a typical plan design currently in Colorado. Therefore, the resulting output could be used as an estimate of the average cost of a "top-up" rider plan. This is only an estimated amount and establishes a target point for specific negotiations with those HMOs that will be interested in offering this "top-up" benefit rider.

Simplified Approach

This approach also accomplishes the goal of determining the estimated "top-up" benefit rider premium. However, nothing is input into a model and the only characteristic used in determining the "top-up" benefit rider premium, once the plan is determined to be eligible for the program through the benefit assessment test, is the routine medical office visit copay amount. This model is displayed in Table 13.

The "top-up" benefit rider premium is then determined simply by looking up the inherent copay amount from the employer plan and employee income level in a chart. The calculations of "top-up" benefit rider premium estimates under this method were based off of the identical 1999 CHP+ data used for the Equitable Approach model. An average plan design was assumed, with only the copays changing. This underlying average plan design is displayed in Table 14.

Dependent Premium

One main concern of this plan is the requirement for an employer plan to meet the "cost effectiveness test." This test involves determination of whether or not the cost of coverage for each eligible child under the employer buy-in program is less than the cost of entering the child into the direct CHP+ plan. Under the HMO scenario, if the majority of eligible children within an employer plan would have lower costs under the employer buy-in program versus the direct program, all eligible children under that employer's plan could participate in the employer buy-in program. Under the standard plan scenario, the cost-effectiveness test would be conducted for each child.

One piece in developing the cost-effective determination is the cost of an employee adding the dependent onto his or her coverage. Such costs vary by tier rating structure, number of dependents added, whether or not the employee's spouse is covered under the same plan, and the amount of employee contribution of the total premium. *Leif Associates* was asked to assist in the understanding of the tier rating structure development. The following chart displays the most common structures and the premium ratios within each.

Table 20 Premium Ratios by Tier and Rating Structure

Rating Structure	Tier Structures and Ratios			
2-tier	Employee-only 1.00		Employee + 1 or more 2.90	
3-tier	Employee-only 1.00	Employee + 1 2.00	Employee + 2 or more 2.90	
4-tier	Employee-only 1.00	Employee + Spouse 2.00	Employee + Child(ren) 1.90	Family 2.90

The development of these ratios is typically based off of an overall per member per month rate calculated by using actual data. Next, we find the distribution of plans by tier. If possible, we determine how many plan members are enrolled under each of the tiers. If that information is not available to us, then we estimate the number of dependents where necessary. For example, we estimate that a "family" under the four-tier structure is composed of an employee, the spouse, and two children. Children costs on average are half the costs of adults. Let's use the following example for a four-tier structure.

Table 21 Calculation of Premiums by Tiers

Tiers	Employee-only	Employee + Spouse	Employee + Child(ren)	Family
Premium Ratios	1.00	2.00	1.90	2.90
Plan Distribution	50	10	10	30
# of Members/tier	1	2	3	4

Assume that based on plan data, the average cost is $100 pmpm

# of total members = (50 x 1) + (10 x 2) + (10 x 3) + (30 x 4) = 220

Monthly revenue needed based on average pmpm = $100 x 220 = $22,000

Let P = monthly premium per employee in the employee-only tier

Total premium dollars = (50 x P) + (10 x 2P) + (10 x 1.9P) + (30 x 2.9P) = 176P

Premium must equal needed revenue. Therefore, 176P = $22,000

Solved for P = $125.00 per month for employee-only
2P = $250.00 per month for employee + spouse
1.9P = $237.50 per month for employee + child(ren)
2.9P = $362.50 per month for family

Estimating the employee cost of adding dependents to their employer plan is not such a simple matter, however. As mentioned previously, this amount depends on the employee contribution, rather than the total premium. Such current statewide information is difficult to obtain, making an estimation of the cost of adding dependents to the plan a guess at best.

Another concern is the trend we have witnessed in the Colorado marketplace toward implementation of defined contribution plans, which involve the employer paying 100% for the employee costs, but nothing toward dependent costs. This situation is important when

considering the plan eligibility requirement of the "employer contribution test." This test requires that the employer contribute at least 50% of the premium under the standard plan scenario, and the HMO scenario requires the employer to contribute at least the average employer contribution for Colorado small employers[26]. This test is unlikely to be passed in the case of the family tier of a defined contribution plan, eliminating many of the eligible plans. For example, refer to the following chart that displays a defined contribution plan scenario:

Table 22 Premiums in Defined Contribution Plan

Defined Contribution Premium Example			
	Employee Premium	Employer Premium	Total Premium
Employee-only coverage	$0	$100	$100
Family coverage needed to add two children	$200	$100	$300

Under the family coverage, the employer in this example is only paying one-third of the health care premium. This plan would therefore not be eligible under the standard plan scenario and would most likely not be eligible under the HMO scenario either.

We have seen this movement toward defined contribution plans in several public and private sector entities including public school systems, which cover thousands of families. As recent as 10 years ago, such plans were quite rare in the health care arena of employee benefits; however, due to rapidly rising health care premiums, employers have found cutting costs necessary. In order to preserve their contributions made directly to staff, employers have continued to pay for the employee portion of care while discontinuing dependent contributions in order to limit expenses. Considering that the rising costs of health care were the main reasons for the change in contribution design for many groups, coupled with the outlook that does not see a change in the near future for this rising cost trend, we suspect that many more plans may feel that adopting a defined contribution strategy will be necessary within the next few years.

Conclusion

We have provided insight into two methodologies for calculating the "buy-up" rider premium to be purchased by eligible employees to be used in place of the additional cost sharing they will incur on their children's behalves under the employer plans rather than as participants of the direct CHP+ plan. We will also provide you with the actual Excel model for your future use. Guidance regarding the development of tier structures has also been given as assistance in developing additional analyses regarding dependent premiums based on actual employee contributions. If you have any questions regarding our analysis, please feel free to contact us.

[26] This report was written before CMS revised its rules toward minimum employer contributions

Table 23 Equitable Approach Average HMO Plan Design

Please enter the features of your current health plan in the following highlighted cells:

Benefit	Copay	Selection of Choices	Choices (enter a number choice)
Routine Medical Office Visits	10		
Preventive Care	10		
Maternity			
Prenatal	10		
Delivery	100		
Prescription Drugs	5/10	1	1. Generic/Brand 2. One Copay
Inpatient Hospital	100	2	1. Per day 2. Per admission
Outpatient Surgery	25		
Laboratory & X-ray	0		
Emergency Care	50		
Ambulance	50		
Urgent Care	25		
Mental Health (non-biologically-based)			
Inpatient	50	1	1. Percentage paid by plan 2. Copay
Outpatient	50	1	1. Percentage paid by plan 2. Copay
Therapy	10		
DME (coinsurance covered by the health plan)	80%		
Home Health	0		
Hearing Exams	10		
Vision		2	1. Covered 2. Not Covered
Chiropractic Care	20	1	1. Covered 2. Not Covered

	"Top-up" Premium Components (pmpm)			
Income Level of Employee	Increased Cost Sharing	Additional Utilization	Administrative Charges	Total Premium
<100% FPL	$9.05	$4.19	$8.83	$22.06
100% to 150% FPL	$8.50	$4.19	$8.46	$21.16
>150% FPL	$6.21	$4.19	$6.93	$17.34
Weighted Average of the Premiums*	$8.05	$4.19	$8.16	$20.41

Table 24 Equitable Approach 2000 Small Group Standard Plan Design

Please enter the features of your current health plan in the following highlighted cells:

Benefit	Copay	Selection of Choices	Choices (enter a number choice)
Routine Medical Office Visits	15		
Preventive Care	10		
Maternity			
Prenatal	10		
Delivery	100		
Prescription Drugs	15	2	1. Generic/Brand 2. One Copay
Inpatient Hospital	100	2	1. Per day 2. Per admission
Outpatient Surgery	50		
Laboratory & X-ray	0		
Emergency Care	50		
Ambulance	50		
Urgent Care	25		
Mental Health (non-biologically-based)			
Inpatient	50	1	1. Percentage paid by plan 2. Copay
Outpatient	50	1	1. Percentage paid by plan 2. Copay
Therapy	15		
DME (coinsurance covered by the health plan)	50%		
Home Health	0		
Hearing Exams	15		
Vision		2	1. Covered 2. Not Covered
Chiropractic Care	20	1	1. Covered 2. Not Covered

	"Top-up" Premium Components (pmpm)			
Income Level of Employee	Increased Cost Sharing	Additional Utilization	Administrative Charges	Total Premium
<100% FPL	$14.00	$5.04	$12.69	$31.72
100% to 150% FPL	$13.45	$5.04	$12.32	$30.81
>150% FPL	$11.16	$5.04	$10.80	$26.99
Weighted Average of the Premiums*	$13.00	$5.04	$12.03	$30.07

Table 25 Utilization Adjustments according to Copays

Benefits comparable to Routine Medical Office Visits					
Copay	$0	$2	$5	$10	$15
Adjustment	1.10	1.00	0.90	0.80	0.70

Preventive Care/Immunizations and Hearing Exams				
Copay	$0	$5	$10	$15
Adjustment	1.00	0.90	0.80	0.70

Emergency Room				
Copay	$0	$7	$25	$50
Adjustment	1.10	1.00	0.90	0.80

Prescription Drugs				
Copay	$0	$1	$5	$10
Adjustment	1.05	1.00	0.90	0.80

Average Hospital Copay
per day copay x 2.5 = per admit copay

Generic/Brand Drug Copay Equivalent
equivalent copay = average of generic and brand copays

Table 26 Simplified Approach

PMPM "Top-up" Premium					
		"Top-up" Premium Components (pmpm)			
Income Level of Employee	**OV Copay**	**Increased Cost Sharing**	**Additional Utilization**	**Administrative Charges**	**Total Premium**
<100% FPL	$0	$6.57	$1.25	$5.21	$13.02
100% to 150% FPL		$6.02	$1.25	$4.85	$12.11
>150% FPL		$3.73	$1.25	$3.32	$8.30
<100% FPL	$5	$7.81	$3.42	$7.48	$18.71
100% to 150% FPL		$7.26	$3.42	$7.12	$17.80
>150% FPL		$4.97	$3.42	$5.59	$13.98
<100% FPL	$10	$9.05	$4.19	$8.83	$22.06
100% to 150% FPL		$8.50	$4.19	$8.46	$21.16
>150% FPL		$6.21	$4.19	$6.93	$17.34
<100% FPL	$15	$10.28	$4.72	$10.00	$25.01
100% to 150% FPL		$9.74	$4.72	$9.64	$24.10
>150% FPL		$7.45	$4.72	$8.11	$20.28

Table 27 Simplified Approach (Only Office Visit Copay Changes)

Please enter the features of your current health plan in the following highlighted cells:

Benefit	Copay	Selection of Choices	Choices (enter a number choice)
Routine Medical Office Visits	10		
Preventive Care	10		
Maternity			
Prenatal	10		
Delivery	100		
Prescription Drugs	5/10	1	1. Generic/Brand 2. One Copay
Inpatient Hospital	100	2	1. Per day 2. Per admission
Outpatient Surgery	25		
Laboratory & X-ray	0		
Emergency Care	50		
Ambulance	50		
Urgent Care	25		
Mental Health (non-biologically-based)			
Inpatient	50	1	1. Percentage paid by plan 2. Copay
Outpatient	50	1	1. Percentage paid by plan 2. Copay
Therapy	10		
DME (coinsurance covered by the health plan)	80%		
Home Health	0		
Hearing Exams	10		
Vision		2	1. Covered 2. Not Covered
Chiropractic Care	20	1	1. Covered 2. Not Covered

	"Top-up" Premium Components (pmpm)			
Income Level of Employee	Increased Cost Sharing	Additional Utilization	Administrative Charges	Total Premium
<100% FPL	$9.05	$4.19	$8.83	$22.06
100% to 150% FPL	$8.50	$4.19	$8.46	$21.16
>150% FPL	$6.21	$4.19	$6.93	$17.34
Weighted Average of the Premiums*	$8.05	$4.19	$8.16	$20.41

Appendix D: FFS Costs

Several aspects of an employer buy-in program would increase fee-for-service (FFS) costs to the CHP+ program. This section will describe these costs and estimate the additional per member per month FFS costs associated with the program.

Description of FFS costs and their relationship to an employer buy-in program

The current CHP+ programs delivers medical services to enrollees through one of two delivery systems: 1) HMO coverage, provided through contractual agreements with private HMOs or 2) FFS coverage, provided through contracts with individual providers such as physicians and hospitals. Because HMO coverage is usually more cost-effective than FFS coverage, state law requires the CHP+ program to enroll its eligibles in HMO coverage whenever possible. The CHP+ program currently provides FFS coverage in the following two situations: 1) for an initial period of enrollment after eligibility has been determined but before HMO enrollment has begun and 2) for all enrollees in counties where the CHP+ program does not have a contract with an HMO. The employer buy-in program would increase the first type of FFS cost in two ways. First, the program would increase the period between program eligibility determination and HMO enrollment due to additional time needed to determine employer plan eligibility. Second, a child would need to be on FFS until the family was able to enroll in the employer's plan. (Both Wisconsin and Massachusetts provide such FFS coverage until the employer plan enrollment becomes effective.) Neither of these additional FFS costs, however, would be relevant in counties where no HMO services are available and FFS is the method of service delivery for all CHP+ enrollees.

FFS costs under the standard plan scenario

To estimate the FFS costs under the standard plan scenario, FFS costs associated with employer eligibility determination and employer health plan enrollment must be estimated.

FFS costs associated with EBI eligibility determination

While CHP+ program eligibility determination takes about one month[27], determining employer plan eligibility would extend this period by two months. Currently, CHP+ eligibles are enrolled on average in FFS for 1.4 months while their program eligibility is determined and their HMO enrollment is processed. States visited for this report indicate that an additional two months are needed to allow eligibility technicians to determine whether the available employer plan is eligible for subsidy (allowing time to collect employer health plan information and determine employer health plan eligibility). This would be an additional cost to the program because monthly FFS program costs are higher than monthly HMO premiums.[28]

A monthly per-enrollee FFS cost associated with longer FFS coverage can be calculated based on the employer buy-in applicant/enrollee ratio, monthly FFS costs, and average length of EBI enrollment.

[27] Department of Health Care Policy and Financing, December 2000.
[28] Department of Health Care Policy and Financing, December 2000.

Applicant/enrollee ratio. Estimates of the number of eligibles and enrollment under the standard plan scenario indicate that the CHP+ program would process approximately six EBI applications for every EBI enrollee.[29] This figure includes an assumption that potential eligibles would be tightly screened for access to the Colorado Small Group Standard Plan. For example, applications would be asked if they have access to employer-based coverage and whether their employer employs more than 50 people.

Additional months of FFS enrollment due to employer eligibility determination. EBI applicants will remain enrolled in FFS coverage for an additional two months; this is the length of time used by existing employer buy-in programs in Oregon, Wisconsin, and Massachusetts.

Marginal per member per month cost of FFS coverage. Fiscal year 2000 data provided by the Department of Health Care Policy and Financing indicates that monthly FFS costs were $2.09 higher than monthly HMO costs that year (FFS=$68.97, HMO=$66.88). [30]

Average length of subsidy enrollment. This analysis will assume that the average EBI recipient in the standard plan scenario would be enrolled in the employer buy-in program for 8 months. This estimate is based on the length of time CHP+ would need to determine program eligibility and complete employer plan enrollment, as well as the average length of employment of a CHP+ parent. For example, data from 1999 Colorado NSAF data that indicate that the average CHP+ parent has been employed at their current job for 24 months.[31] Because families might apply for CHP+ at any point during their period of 24 months of continuous employment, the average CHP+ family is probably 12 months away from a parent changing jobs. This 12-month period would begin after employer data is collected from the family. Using these timeframes as starting points, the following table shows how a typical eligible CHP+ family would be enrolled in the EBI program for 8 months.

Table 28 Standard Plan Scenario Average Length of EBI Enrollment

Eligibility and Enrollment Steps	Duration in months	Length of time left in average employment period (12 months)
Family submits application		
CHP+ eligibility determined	1.0	
Employer data gathered	1.0	12.0
Employer eligibility determined	1.0	11.0
Open enrollment period delay	2.0	9.0
Employer plan enrollment	1.0	8.0

Total FFS costs associated with EBI eligibility determination. Using the numbers calculated in Table 28, the per enrollee per month cost can be determined.

[29] This ratio is based on enrollment in a scenario where FFS and administrative costs were zero. Actual enrollment presented later in this paper are based on the FFS and administrative costs calculated in this and the following sections.

30 Data from the Department indicates that FFS costs continue to rise relative to HMO costs. Preliminary data suggest that fiscal year 2002 FFS costs will be 5%-6% higher than HMO costs, due solely to the impact of HMO management on claims costs.

[31] Data provided by Child Health Advocates indicates that the average length of CHP+ enrollment is at least this long; the average CHP+ enrollment period in fiscal year 2000 was at least 15.5 months

Table 29 Standard Plan Scenario FFS Costs Associated with EBI eligibility determination

Ratio of Applicants to Enrollees	6
X Number of months for EBI determination	2
X Marginal monthly FFS cost	$2.09
/ Average length of EBI enrollment in months	8
Average monthly FFS cost per EBI enrollee	$3.26

FFS cost associated with EBI enrollment

The standard plan scenario requires eligibles to wait for their employer's open enrollment period to enroll in their employer's plan.[32] If the CHP+ program chose to provide subsidies to children who had an open enrollment within 6 months of eligibility,[33] then the average EBI enrollee would spend an additional 3 months on FFS coverage waiting to enroll in their employer's plan. Using this information and the data used above, the per enrollee per month costs associated with this additional FFS coverage can be calculated.

Table 30 Standard Plan Scenario FFS Costs Associated with EBI Enrollment

Number of months until employer plan enrollment	3
X Marginal monthly FFS cost	$2.09
/ Average length of EBI enrollment in months	8
Average monthly FFS cost per EBI enrollee	$0.78

FFS costs under the HMO scenario

FFS costs under the HMO scenario would be similar to those under the standard plan scenario, with two exceptions. First, the applicant/enrollee ratio is slightly higher in this scenario, increasing the FFS cost of employer eligibility determination associated with each enrollee. Second, unlike the standard plan scenario, a qualifying event provision would allow new EBI eligibles to enroll in their employer's plan immediately, regardless of the employer's open enrollment period. This both reduces the period of FFS coverage and increases the average number of months of EBI enrollment.

[32] The open enrollment period is an annual period established by the employer during which its employees may elect to enroll in the employer's health plan. Most employers do not allow employees to enroll in the employer's health plan at other times during the year except for situations such as new employees, marriage or a birth.
[33] Wisconsin has such a policy to avoid extended periods of FFS coverage.

FFS cost associated with EBI eligibility determination

Applicant/enrollee ratio. Estimates of the number of eligibles and enrollment under the HMO scenario indicate that the CHP+ program would process approximately eight EBI applications for every EBI enrollee.

Average length of subsidy enrollment. Because the qualifying event provision would allow recipients to enroll in their employer's plan immediately, the average EBI enrollee would remain in the program for 10 months, two months longer than the two months of the standard plan scenario. The enrollment timeframe of an EBI recipient under the HMO scenario might look as follows:

Table 31 HMO Scenario Average Length of EBI Enrollment

Eligibility and Enrollment Steps	Duration in months	Length of time left in average employment period (12 months)
Family submits application		
CHP+ eligibility determined	1.0	
Employer data gathered	1.0	12.0
Employer eligibility determined	1.0	11.0
Open enrollment period delay	0.0	11.0
Employer plan enrollment	1.0	10.0

The average CHP+ family, therefore, will have 10 months remaining at their current job by the time EBI enrollment is complete.

Total FFS costs associated with EBI eligibility determination. Using the numbers calculated above, the per enrollee per month cost can be determined.

Table 32 Waiver Scenario FFS Costs Associated with EBI Eligibility Determination

Ratio of Applicants to Enrollees	8
X Number of months for EBI determination	2
X Marginal monthly FFS cost	$2.09
/ Average length of EBI enrollment in months	10
Average monthly FFS cost per EBI enrollee	$3.31

FFS cost associated with EBI enrollment

The qualifying event provision reduces the number of months that an EBI eligible must remain on FFS, thereby reducing FFS costs associated with such coverage by one-third over the standard plan scenario costs, as shown in Table 20.

Table 33 HMO Scenario FFS Costs Associated with EBI Enrollment

Number of months until employer plan enrollment	1
X Marginal monthly FFS cost	$2.09
/ Average length of EBI enrollment in months	10
Average monthly FFS cost per EBI enrollee	$0.21

FFS costs under the waiver scenario

FFS costs under the waiver scenario are identical to those under the waiver scenario, except for a lower applicant/enrollee ratio that results in a lower FFS cost associated with EBI eligibility determination. FFS costs under the state scenario are summarized in Table 21 and Table 22.

Table 34 Waiver Scenario FFS Costs Associated with EBI Eligibility Determination

Ratio of Applicants to Enrollees	4
X Number of months for EBI determination	2
X Marginal monthly FFS cost	$2.09
/ Average length of EBI enrollment in months	10
Average monthly FFS cost per EBI enrollee	$1.60

Table 35 Waiver Scenario FFS Costs Associated with EBI Enrollment

Number of months until employer plan enrollment	1
X Marginal monthly FFS cost	2.09
/ Average length of EBI enrollment in months	10
Average monthly FFS cost per EBI enrollee	$0.21

Summary of FFS Costs in the Three Scenarios

The following table summarizes the FFS costs that have been described above. In addition, the chart reduces each FFS cost by 16%, because the FFS costs will only affect eligibles that live in HMO counties.[34]

Table 36 Summary of FFS Costs in the Three Scenarios

FEE-FOR-SERVICE COSTS

Standard Plan Scenario	
A. FFS Cost Associated with EBI Eligiblity Determination in HMO counties	
Ratio of Applicants to Enrollees	6
X Number of months for EBI determination	2
X Marginal monthly FFS cost	2.09
/ Average length of EBI enrollment in months	8
Average monthly FFS cost per EBI enrollee	$3.26
B. FFS Cost Associated with EBI Enrollment in HMO counties	
Number of months until employer plan enrollment	3
X Marginal monthly FFS cost	2.09
/ Average length of EBI enrollment in months	8
Average monthly FFS cost per EBI enrollee	$0.78
Total average monthly FFS cost per EBI enrollee in HMO counties	$4.04
Percent of eligibles in HMO counties	84%
Total average monthly FFS cost per EBI enrollee in all counties	**$3.40**
HMO Scenario	
A. FFS Cost Associated with EBI Eligiblity Determination in HMO counties	
Ratio of Applicants to Enrollees	8
X Number of months for EBI determination	2
X Marginal monthly FFS cost	2.09
/ Average length of EBI enrollment in months	10
Average monthly FFS cost per EBI enrollee	$3.31

[34] The Department of Health Care Policy and Financing estimates that 84% of CHP+ eligibles live in HMO counties.

B. FFS Cost Associated with EBI Enrollment in HMO counties

Number of months until employer plan enrollment	1
X Marginal monthly FFS cost	2.09
/ Average length of EBI enrollment in months	10
Average monthly FFS cost per EBI enrollee	$0.21
Total average monthly FFS cost per EBI enrollee in HMO counties	$3.52
Percent of eligibles in HMO counties	84%
Total average monthly FFS cost per EBI enrolle in all counties	**$2.96**

Waiver Scenario

A. FFS Cost Associated with EBI Eligiblity Determination in HMO counties

Ratio of Applicants to Enrollees	4
X Number of months for EBI determination	2
X Marginal monthly FFS cost	2.09
/ Average length of EBI enrollment in months	10
Average monthly FFS cost per EBI enrollee	$1.60

B. FFS Cost Associated with EBI Enrollment in HMO counties

Number of months until employer plan enrollment	1
X Marginal monthly FFS cost	2.09
/ Average length of EBI enrollment in months	10
Average monthly FFS cost per EBI enrollee	$0.21
Total average monthly FFS cost per EBI enrollee in HMO counties	$1.81
Percent of eligibles in HMO counties	84%
Total average monthly FFS cost per EBI enrolle in all counties	**$1.52**

Appendix E: Administrative Costs by Linde Howell

In designing the employer buy-in component of the current Child Health Insurance Program, administrative costs must be analyzed as a component of feasibility. Analysis of administrative cost was completed using data obtained from several sources including:

5) Site visits to lprograms in Massachusetts, Oregon and Wisconsin,

6) State interviews with CHIP representatives from New Jersey, New York, Maryland, Mississippi and Colorado,

7) Interviews with existing Colorado programs such as Medicaid Health Insurance Buy-In Program (HIBI) and Child Health Plan Plus (CHP+),

8) Interviews with the current contractor for CHP+, Child Health Advocates (CHA), and

9) Interviews with organizations in the private sector.

Massachusetts, Oregon and Wisconsin were the only states with an employer buy-in program that is operational. The states interviewed via telephone are in various stages of development of an employer buy-in program. Interviews were also conducted with the Medicaid Health Insurance Buy-In Program (HIBI). Pam Moores from the Colorado HIBI program was interviewed to determine process design and resultant estimates of costs, as well as potential interface with the CHP+ employer buy-in program. Extensive interviews and site visits were condcuted with Child Health Advocates (CHA), the current contractor for CHP+. Where little or no information was available from the above sources, the private sector was also accessed for information. Specific business processes were measured within the private sector and related costs accessed.

Administrative costs for an employer buy-in program have been very elusive. States with experience have completed either a gross estimate or costs are rolled into other programs and teasing out specifics is impossible. As a result, several modifications have been made to arrive at a cost estimate.

Overall Assumptions

Administrative costs for the employer buy-in may be divided into two categories, start-up costs and ongoing operating costs. Start-up costs are costs incurred prior to initiation and require an initial investment, but will not be incurred monthly. Ongoing operating costs are general operating costs for operation. Within this report, ongoing operating costs have been annualized except where noted. Annualized costs indicated for year 2 may be increased for inflation and assumed to a large degree for years 3 and beyond, however, caution must be exercised in such a highly volatile market like the current healthcare market.

It is further assumed that current structure will be utilized to optimize administrative costs. The structure currently utilized with contractors was assumed. If other contractors are selected, costs would be within 10% of those indicated.

Start up costs

Start-up costs have been largely derived from development projects in similar industries, as well as state information from site visits. It is anticipated that a grant or combination of grants will cover all start-up costs.

Ongoing Operating Costs

Ongoing operating costs were arrived at using a combination of data from states with current programs and costs for like projects in other industries, both public and private. All ongoing operating costs are included in the per member per month administrative cost estimate.

General Administration/Personnel Costs

General administration refers to the personnel costs associated with administration of the employer buy-in program.

Labor costs are always the most significant ongoing operating costs in most operations; however, the state has been efficient in the use of contractors. There will be some costs, however, associated with personnel to the employer buy-in program.

Start-up

Personnel costs associated with start-up are contractual and related to marketing and outreach. (See Marketing)

Ongoing Operating Costs

One FTE will be required to administer the program and .5 administrative support. The 1.5 FTE will be state employees and are separate from the FTEs that are included in the contractor fees. One FTE in administration is based on the need to coordinate contractors and act as a liaison between the program and other entities. A support position of .5 FTE will be required to provide administrative support to the program manager.

10) Salary increases 3.5% from year 1 to year 2.

11) Benefit and employee costs increase 15% from year 1 to year 2. This is largely due to the significant increases in benefit costs in this state.

12) Employee and employer eligibility, subsidy administration and benefit rider administration will all be administered by contract and are included in the contractor section of the assumptions.

Marketing and Outreach

As indicated from all state sources, marketing is critical to the successful enrollment of children. Within current programs, there exists a strong linear relationship between the program resources and the enrollment numbers. Significant dollars were spent on marketing in Massachusetts where seventy percent of the total budget was spent on marketing.

The three programs visited (Massachusetts, Wisconsin and Oregon) indicated branding and name recognition were significant factors in marketing. All three states developed a specific name and logo for the program. In addition, all indicated that employers are reluctant to market the program and the state and its contractors must initiate all marketing activities.

The most effective type of marketing was visits to employers and community groups. Massachusetts found radio to be the most effective mass media, followed by print media. Television ads in Massachusetts were not successful and were dropped after the first year.

The majority of the marketing and outreach costs are included in the start-up cost estimate; however, additional monies are included in the operating budget to cover additional materials. Costs increase in year 2 with inflation and revisions.

Start up

Marketing and outreach are critical to maximal promotion of the program, particularly in the start up phase and during the first year. According to representatives from Wisconsin and Massachusetts, initial start-up costs may be significant. FTEs will be required to address initial marketing and public relations to build awareness. This activity warrants the flexing of staff for optimal productivity.

Initial startup costs for marketing and outreach are also based on the following additional assumptions:

Marketing Personnel

Marketing and outreach staff should be flexed up to six FTEs in the start-up phase (initial annum). While these six FTEs are being paid for within start up costs, actual work performed will be during the first year. The six FTEs will be contractors and will be paid for in advance. It may also be assumed that the same contractor performing eligibility and enrollment as well as subsidy administration, will be used for marketing. FTE assumptions underlying this include one FTE per region (Western Slope, Denver Metro Area, Eastern Plains, Colorado Springs, Pueblo and Southern Mountain area and Fort Collins, Loveland and Northern mountain area) and one FTE to manage the effort. Contractor fees are assumed to be $90,000. per FTE. Contractors are recommended to avoid ongoing employee costs enabling flex down after year 1.

In Oregon, initial marketing efforts included groups of three: one community partner, one insurance agent and one enrollment specialist. The state was divided into eight regions and 80 3-hour training sessions were held to familiarize the population with the Family Health Insurance Assistance Program (FHIAP). Target populations were:

- Employees and their dependents without health insurance coverage
- Temporary or seasonal workers
- People who lose their eligibility for Medicaid or are turned down
- Other low income people who do not use public assistance

The proposed program for Colorado encompasses a contractor model with similar activities used in Massachusetts and Oregon. The proposed marketing model enables no impact on state FTEs and Tabor limits.

Public relations

Start up public relations fees are related to the development of a strategic marketing plan, as well as developing a plan for appropriate market penetration. Estimates were received from three public relations firms. Two of three estimates were $50,000.

Creative/Production

Creative/Production starts up costs include development of materials for advertising in the first annum.

- Development of TV advertisement
- PSA development
- One brochure design targeted to employers
- One brochure design targeted to potential enrollees (English)
- One brochure design targeted to potential enrollees (Spanish)

Comparisons were made to Massachusetts, understanding the population is double that of Colorado and the cost of services is elevated. Massachusetts's creative development and production costs are $299,000 per year. Creative/Production costs were also determined by using current CHP+ creative/production costs and receipt of estimates from two agencies totaling $3,000-4,000 per brochure for development. An additional $2,000 for revision of brochures is included in creative production for year 2. It is included in the May estimate to prepare for the upcoming school start, where most brochures are circulated.

Training

It is further recommended that Colorado use a training program for communities and employer councils, chambers and other groups. This will reduce costs and increase visibility of the program. It will also add value accessing a previously convened group. Training expenses associated with marketing and related travel expenses per numbers from Oregon. The training expenses in the start up phase are focused on employers and train the trainer activities. Training expenses during the start-up phase also include expenses related to materials and facility expenses for training locations.

Ongoing Operating Costs

Advertising

In Massachusetts, $697,600 was spent during a 6-month period on media. Break down in specific media is as follows:

- Television (including $28,125 for Hispanic television) $276,985

- Radio (700 GRPs) $232,875
- Print-general and ethnic (158 GRPs) $ 77,740
- Outdoor $110,000
- Total media expenditure $697,600 or $1,694,200/annum

For the figure derived within the cost estimate for the EBI Program in Colorado, approximately 12% or $201,436 was utilized based on a population that is 50% smaller than Massachusetts, reduced costs for advertising in Colorado and estimated reduction in project scope.

Precise cost estimates for advertising were also based on costs incurred by CHA since cost significantly differ by region and locale. Child Health Advocates (CHA) budget for 2001 includes $300,000 for advertising based on 24,000 enrollees or 33% of estimated eligibles. One-third of CHA budgeted advertising costs was estimated based on 17,674 eligibles (or ¼ of estimated eligibles for CHP+) with additional monies for base. Included in advertising are:

- Television
- Radio
- Hispanic newspaper

Public Relations

After initial start-up, public relations are necessary to assist in effective modes of penetration. It is assumed within the proforma that public relations services will be contracted for. CHA budgeted $100,000 for public relations costs for 2001. Using 25% of costs based on estimated eligibles $25,000 would be the estimate, however, after discussions with two advertising and public relations firms, development of a public relations plan and roll out were estimated to be $15,000 per annum.

Training

Training subsequent to start-up will be completed by contractors to avoid adding FTEs and developing ongoing employer/employee relationships. Costs associated with training reflect this contractual relationship and will be significantly reduced after year 1 to one training session per month. It is anticipated that the same contractor will be used for marketing.

Travel Expenses

Travel expenses are based on 12,000 miles at $.32/mile with 100 nights of lodging and 100 days of meals at a $30.00 per diem. The travel expenses support the marketing and training components of the budget.

Incentives to Employers and Brokers

Incentives to employers and brokers will offset the time to promote the program within employers' organizations and provide assistance to eligible employees to complete

applications for subsidy payments. In Massachusetts, BEIs receive 10% commission for each new employer signed. This estimate is proposed for direct employer incentives within the EBI Project in Colorado.

Information Systems

Currently, a new information system is in the process of being developed for the CHP+ program. Additionally, there are other systems utilized by contractors for CHP+. The Colorado Benefit Management System (CBMS), which in under development, will not overly simplify the process, but additional modules may be developed to facilitate easier administration of an employer buy-in program.

Start up

13) System development start-up costs are associated with the development of the new module for the existing CHP+ system. This module will determine eligibility, assist in the administration of subsidies, benefit rider premiums and incentives to employers. It will also track employers, identified pre-approved plans and group employees by employer. The module is necessary to adequately track multiple sources of payment, as well as multiple plans. Estimated costs for development were based on estimates from IBM, developers of a similar module in several states.

14) Software start-up costs are associated with basic office software and additional licensed copies of software related to systems

15) An upgrade to MMIS is included in start-up costs. This is critical for coordinated delivery of services and assuring that the EBI program can easily coordinate with other programs where appropriate. Cost estimates were derived from HIBI and sum $25,000.

Ongoing Operating Costs

Operating costs in year 1 are associated with ongoing system maintenance. In year 2, a 10% increase is added. IBM also estimated system maintenance costs.

Equipment and Supplies

Equipment and supplies are included in the budget in support of the 1.5 FTE in general administration (see General Administration section).

Start up

Initial startup costs for equipment and supplies are based on the following assumptions:

16) Furniture rental based on 1.5 FTEs @ $1,000 per person or $2,000 total

17) Two computers @ $1,600/person or $3,200 total

18) Office Equipment (e.g. printer, facsimile, shredder) $1,900 total

19) Basic office supplies @ $500 per person or $1,000 total

20) Printing and copying (cards, forms, letterhead, etc.)

Costs for equipment and supplies were derived from fixed state costs used as guidelines for budgeting.

Ongoing Operating Costs

Equipment and supplies for ongoing operations include basic office supplies, postage for mailings and general forms and printing. Postage was based on .32 per piece (reductions may be seen with non-profit bulk mailing) with five major mailings.

Office Space

Initial startup costs and ongoing operating costs for office space are both based on 200 square feet of office space at $22/square foot.

Contractor Fees

Contractor fees are based on fees currently paid in Wisconsin, Oregon and Colorado (for CHP+). In Oregon, the Family Health Insurance Assistance Program (FHIAP) is most comparable to the employer buy-in program proposed in Colorado. The program provides subsidies to purchase private health insurance. It is not an insurance plan and does not pay co-pays or deductibles. Currently, three FTEs are used to process eligibility on 50 to 60 applications per week or an annual total of 2,600 to 3,120. An additional 12 FTEs are used for other aspects of the program. In Massachusetts, 17 FTEs are used in the program with 12 used for marketing alone. Wisconsin uses a contractor that has six FTEs with none used in marketing, however there is a portion of an FTE from the State of Wisconsin that works on marketing the program.

Inclusions in Contractor Fees

Eligibility and Enrollment. Processing phase of application process.

Customer Service. All customer service functions related to application, eligibility, enrollment, claims, and general information, etc.

Marketing.

Subsidy Administration. Administration of subsidies paid to employees, actual cutting of checks and operations related to this.

Benefit Rider Administration. Administration of benefit riders required

Required FTEs Converted to Contractor Costs

In Colorado, it is anticipated that the initial annum applications will exceed the number indicated by Oregon. Oregon has a cap on this program and there is a significant waiting list. For example, it is assumed that all eligibles will apply within the first 3 years. Assuming stasis of the population, the estimated number of applications in the HMO and waiver scenarios would be total 4,302 per year, slightly less than double that of Oregon. This number is assuming a mean of 1.8 children per household with on application per household. Using this assumption, the number of required FTEs would be four. In the

standard plan scenario, two FTE would be required. In addition, Oregon receives 800 to 900 inquiry calls per week. The average length of call according to Oregon is 2 minutes. Assuming 900 calls at 2 minutes per call, productive hours indicate an additional FTE required for phone coverage. In the standard plan scenario, other staff would absorb this task. An additional FTE would be required for subsidy administration and benefit rider administration. It is also anticipated that an additional three FTEs will be required for marketing and training; in the standard plan scenario, one FTE would be needed for marketing. Total contractor FTEs is nine for the HMO and waiver scenarios. Because of the very low number of estimated enrollees, it is anticipated that four additional FTEs will be required for the program.

Contractor fees for each scenario was determined using the estimated FTEs multiplied by $50,000, mean salary for Oregon plus employee costs, and multiplied by a factor of 1.60 to estimate 60% mark up for contractor fees. For the standard plan scenario, it is estimated that the contractor costs will be $320,000. For the HMO and waiver scenarios, costs are very similar. An estimate of $720,000 was determined based on an expected application number of 23,231 for the HMO and waiver scenarios.

Table 37 Estimates of Personnel and Contract Costs for an Employer Buy-In Program, by Scenario

	Standard Plan Scenario	HMO Scenario	Waiver Scenario
Marketing FTE	1	3	3
Eligibility and enrollment FTE	2	4	4
Customer Service FTE	0	1	1
Benefit rider and subsidy administration	1	1	1
Total FTE	4	9	9
Personnel costs @ $50,000 per FTE	$200,000	$450,000	$450,000
Time 1.60 for total contract costs	$320,000	$720,000	$720,000

Table 38 Estimates of Applications, by Scenario

	Standard Plan Scenario	HMO Scenario	Waiver Scenario
Estimated number of CHIP eligibles with access to employer based coverage	12,777	23,231	23,231
Number of applicants per application	1.8	1.8	1.8
Estimated number of applications	7,098	12,906	12,906
Percent of employees completing an application	100%	100%	100%

A 5% increase in contractor costs is assumed between years 1 and 2 based on inflation and market based cost increases of contractors related to internal contractor cost increases.

Crowd-Out

A system to monitor crowd-out will be determined prior to project initiation and will be designed by an outside consultant. HCFA regulations require the development of such a process. Ongoing costs of $10,000 are based on annual HCFA requirement to monitor "crowd out."

Other Start Up Costs

Additional costs include the development of contractor standards prior to RFP development and the development of quality standards, as well as a process for quarterly audits. It is assumed that an independent contractor or contractors will develop quality standards.

Other Ongoing Operating Costs

Other costs associated with operation of the EBI program include:

QA Reviews

It will be essential to conduct quality assurance reviews biannually to first develop a baseline for operational efficiency and effectiveness and subsequently measure progress toward goals established. Costs have been extrapolated from similar operations in other industries and total $500 per review.

Customer Satisfaction Surveying

To assure ongoing customer satisfaction and determine essential customer directed changes necessary, customer satisfaction will be surveyed on an annual basis by an outside surveying firm. Costs for this service were derived from Press-Ganey and PRC; two health organization-surveying firms and total $15,000 per survey with a sample size of 400.

Per Capita Administrative Costs

An estimate was assessed of per capita administrative costs based on estimated enrollment. Administrative costs for the program are high due to limited volume. Volume increases yield lower costs due to efficiencies of operation.

It must be further noted that start up costs are not included in per capita administrative costs. An assumption is made that start up costs will be funded through grants, since the program is of great interest to many philanthropic parties.

Table 39 Per Capita Administrative Costs by Scenario

	Standard Plan Scenario	HMO Scenario	Waiver Scenario
Ongoing Per Capita Administrative Cost Estimate	$186.00 PMPM	$35.00 PMPM	$17.00 PMPM
Based on expected enrollment[35]	353	2,811	5,816

[35] Enrollment used to calculate the per member per month administrative cost is based on a scenario where administrative costs are zero in the cost-effectiveness test. Actual enollment numbers estimated later in this report are based on these administrative costs and are lower than the enrollment figures shown here.

Table 40 Employer Buy-In Start Up Costs

Start-up Costs		
Marketing and Outreach		
Public Relations	50,000	
Creative/Production	100,000	
Contractor for training/outreach community sites and general promotion (6 FTEs/first annum-payment in advance)	480,000	
Travel expenses	11,340	
Training (initial round)	10,000	
Information Systems		
System development	750,000	
Software	25,000	
Upgrade to MMIS	25,000	
Equipment and supplies (initial)		
Office equipment	7,100	
Printing and copying	5,000	
Office supplies	1,000	
Contractors (eligibility & enrollment, customer service-payment in advance)	480,000	
Crowd-out		
Development of a system to monitor "crowd-out"	20,000	
TOTAL START UP COSTS	1,964,440	

Standard Plan Scenario

Year 1	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
General Administration													
Personnel	5,208	5,208	5,208	5,208	5,208	5,208	5,208	5,208	5,208	5,208	5,208	5,208	62,496
Benefits and employee costs (21%)	1,094	1,094	1,094	1,094	1,094	1,094	1,094	1,094	1,094	1,094	1,094	1,094	13,128
Marketing and Outreach													
Advertising	20,000	10,000	10,000	20,000	10,000	10,000	20,000	10,000	10,000	20,000	10,000	10,000	160,000
Public Relations	1,258	1,258	1,258	1,258	1,258	1,258	1,258	1,258	1,258	1,258	1,258	1,258	15,096
Creative/Production	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	12,000
Travel expenses	1,195	1,195	1,195	1,195	1,195	1,195	1,195	1,195	1,195	1,195	1,195	1,195	14,340
Incentives to employers	3,750	3,750	3,750	3,750	3,750	3,750	3,750	3,750	3,750	3,750	3,750	3,750	45,000
Training contractors	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	48,000
Information Systems													
System maintenance	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	60,000
Equipment and supplies													
Office supplies	83	83	83	83	83	83	83	83	83	83	83	83	1,000
Postage	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	12,000
Forms and printing	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	48,000
Office Space													
Rent	367	367	367	367	367	367	367	367	367	367	367	367	2,569
Other													
QA reviews	-	-	500	-	-	500	-	-	500	-	-	500	2,000
Customer satisfaction surveying	15,000												15,000
Crowd-out													
Monitoring of "crowd-out"	10,000												
TOTAL	72,955	37,955	38,455	47,955	37,955	38,455	47,955	37,955	38,455	47,955	37,955	38,455	510,629

Standard Plan Scenario

Year 2	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
General Administration													
Personnel	5,469	5,469	5,469	5,469	5,469	5,469	5,469	5,469	5,469	5,469	5,469	5,469	65,628
Benefits and employee costs (21%)	1,148	1,148	1,148	1,148	1,148	1,148	1,148	1,148	1,148	1,148	1,148	1,148	13,782
Marketing and Outreach													
Advertising	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000	180,000
Public Relations	1,258	1,258	1,258	1,258	1,258	1,258	1,258	1,258	1,258	1,258	1,258	1,258	15,096
Creative/Production	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	12,000
Travel expenses	1,255	1,255	1,255	1,255	1,255	1,255	1,255	1,255	1,255	1,255	1,255	1,255	15,060
Incentives to employers	3,750	3,750	3,750	3,750	3,750	3,750	3,750	3,750	3,750	3,750	3,750	3,750	45,000
Training contractors	500	500	500	500	500	500	500	500	500	500	500	500	6,000
Information Systems													
System maintenance	5,500	5,500	5,500	5,500	5,500	5,500	5,500	5,500	5,500	5,500	5,500	5,500	66,000
Equipment and supplies													
Office supplies	83	83	83	83	83	83	83	83	83	83	83	83	1,000
Postage	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	12,000
Forms and printing	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	14,400
Office Space													
Rent	367	367	367	367	367	367	367	367	367	367	367	367	4,404
Contractors													
Eligibility and enrollment, customer service	26,667	26,667	26,667	26,667	26,667	26,667	26,667	26,667	26,667	26,667	26,667	26,667	320,000
Other													
QA reviews	-	-	500	-	-	500	-	-	500	-	-	500	2,000
Satisfaction surveying	15,000												15,000
Crowd-out													
Monitoring of "crowd-out"	10,000												
TOTAL	89,197	64,197	64,697	64,197	64,197	64,697	64,197	64,197	64,697	64,197	64,197	64,697	787,370

HMO and Waiver Scenarios

Year 1	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
General Administration													
Personnel	5,208	5,208	5,208	5,208	5,208	5,208	5,208	5,208	5,208	5,208	5,208	5,208	62,496
Benefits and employee costs (21%)	1,094	1,094	1,094	1,094	1,094	1,094	1,094	1,094	1,094	1,094	1,094	1,094	13,128
Marketing and Outreach													
Advertising	20,000	10,000	10,000	20,000	10,000	10,000	20,000	10,000	10,000	20,000	10,000	10,000	160,000
Public Relations	1,258	1,258	1,258	1,258	1,258	1,258	1,258	1,258	1,258	1,258	1,258	1,258	15,096
Creative/Production	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	12,000
Travel expenses	1,195	1,195	1,195	1,195	1,195	1,195	1,195	1,195	1,195	1,195	1,195	1,195	14,340
Incentives to employers	3,750	3,750	3,750	3,750	3,750	3,750	3,750	3,750	3,750	3,750	3,750	3,750	45,000
Training contractors	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	48,000
Information Systems													
System maintenance	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	60,000
Equipment and supplies													
Office supplies	83	83	83	83	83	83	83	83	83	83	83	83	1,000
Postage	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	12,000
Forms and printing	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	48,000
Office Space													
Rent	367	367	367	367	367	367	367	367	367	367	367	367	2,569
Other													
QA reviews	-	-	500	-	-	500	-	-	500	-	-	500	2,000
Customer satisfaction surveying	15,000												15,000
Crowd-out													
Monitoring of "crowd-out"	10,000												
TOTAL	72,955	37,955	38,455	47,955	37,955	38,455	47,955	37,955	38,455	47,955	37,955	38,455	510,629

HMO and Waiver Scenarios

Year 2	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
General Administration													
Personnel	5,469	5,469	5,469	5,469	5,469	5,469	5,469	5,469	5,469	5,469	5,469	5,469	65,628
Benefits and employee costs (21%)	1,148	1,148	1,148	1,148	1,148	1,148	1,148	1,148	1,148	1,148	1,148	1,148	13,782
Marketing and Outreach													
Advertising	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000	180,000
Public Relations	1,258	1,258	1,258	1,258	1,258	1,258	1,258	1,258	1,258	1,258	1,258	1,258	15,096
Creative/Production	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	12,000
Travel expenses	1,255	1,255	1,255	1,255	1,255	1,255	1,255	1,255	1,255	1,255	1,255	1,255	15,060
Incentives to employers	3,750	3,750	3,750	3,750	3,750	3,750	3,750	3,750	3,750	3,750	3,750	3,750	45,000
Training contractors	500	500	500	500	500	500	500	500	500	500	500	500	6,000
Information Systems													
System maintenance	5,500	5,500	5,500	5,500	5,500	5,500	5,500	5,500	5,500	5,500	5,500	5,500	66,000
Equipment and supplies													
Office supplies	83	83	83	83	83	83	83	83	83	83	83	83	1,000
Postage	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	12,000
Forms and printing	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	14,400
Office Space													
Rent	367	367	367	367	367	367	367	367	367	367	367	367	4,404
Contractors													
Eligibility and enrollment, customer service	60,000	60,000	60,000	60,000	60,000	60,000	60,000	60,000	60,000	60,000	60,000	60,000	720,000
Other													
QA reviews	-	-	500	-	-	500	-	-	500	-	-	500	2,000
Customer satisfaction surveying	15,000												15,000
Crowd-out													
Monitoring of "crowd-out"	10,000												
													1,187,370
TOTAL	122,531	97,531	98,031	97,531	97,531	98,031	97,531	97,531	98,031	97,531	97,531	98,031	

Appendix F: Cost-Effectiveness Test

The data regarding benefit rider costs, fee-for-service costs and administrative costs can be combined with data about CHP+ and employer premiums to estimate the percent of employer plans that would qualify for a subsidy under each of the three employer buy-in scenarios.

As described earlier, the cost-effectiveness test can be expressed in terms of the following equation:

Subsidy to family to purchase employer plan for eligible children

plus

Cost-sharing benefit rider

plus

Fee-for-service coverage

plus

Employer buy-in administrative costs

must be less than or equal to

CHP+ direct coverage premium for eligible children

To test whether or not a given employer plan meets the cost-effectiveness test, the above equation can be expressed in terms of what the employer premium for dependent children must be less than or equal to:

Subsidy to family to purchase employer plan for eligible children

must be less than or equal to

CHP+ direct coverage premium for eligible children

minus

Cost-sharing benefit rider

minus

Fee-for-service coverage

minus

Employer buy-in administrative costs

Using employer survey data as well as the additional costs described in this paper, the percent of employees who have access to a cost-effective plan can be estimated.

Employer premium data used for cost-effectiveness test

This section will rely on data provided by the Mountain States Employers Council 2000 Survey of Colorado Health and Welfare Plans (MSEC). While this survey has a survey sample and response rate that is less desirable than that of MEPS (see "Data Gathering" for a complete discussion) and the data produced by the survey are not as well suited to cost-effectiveness testing,[36]the survey provides data that can estimate the cost of adding dependents to Colorado employer plans.

Standard plan scenario

The standard plan scenario requires that the cost-effectiveness test be conducted on a per family basis. This means that each family that applies for an employer subsidy would be evaluated individually for cost-effectiveness based on the number of CHP+ eligible children in the family. In addition, the standard plan scenario allows only the Standard HMO Plan to be subsidized; this section will therefore rely on HMO data provided by the MSEC survey regarding employee contribution amounts.

The following table displays the maximum employer dependent premium that could be paid to families for one, two or three eligibles under the cost-effectiveness test in the standard plan scenario.

[36] Requested MEPS data would have calculated a distribution of the average difference between employee contributions for single and family coverage. While MSEC data provides distributions for both single and family employee contributions, the lack of a link between single and family contributions makes it difficult to estimate the cost of adding dependents to an employer plan.

Table 41 Standard Scenario Maximum Cost-Effective Employer Dependent Premiums

Standard Plan Scenario

	Assumptions	
	CHP+ single premium	$71.25
	FFS costs per enrollee	$3.40
	Wrap-around cost per enrollee	$30.07
	Administrative costs per enrollee	$185.62
	One Eligible	
	CHP+ single premium	$71.25
-	FFS costs	$3.40
-	Wrap-around costs	$30.07
-	Administrative costs	$185.62
=	Employer dependent premium less than or equal to	($147.83)
	Two Eligibles	
	CHP+ single premium	$142.50
-	FFS costs	$6.79
-	Wrap-around costs	$60.14
-	Administrative costs	$371.23
=	Employer dependent premium less than or equal to	($295.67)
	Three Eligibles	
	CHP+ single premium	$213.75
-	FFS costs	$10.19
-	Wrap-around costs	$90.21
-	Administrative costs	$556.85
=	Employer dependent premium less than or equal to	($443.50)

Because of the high administrative costs of the standard plan scenario, no employer plan can meet the cost-effectiveness test of this scenario (the negative numbers actually indicate that an employer would have to pay an administrative fee to CHP+ to have the employer subsidy be cost-effective).

HMO Scenario

The cost-effectiveness test in the HMO scenario varies from that of the standard plan scenario in two important ways. First, the costs under the HMO scenario, such as benefit rider and FFS costs, are lower than in the standard plan scenario, resulting in a higher maximum cost-effective family premium. Secondly, the HMO scenario allows the cost-effectiveness test to be calculated on an average family basis, meaning that if a given employer offers a plan is cost-effective for the average-sized CHP+ family (1.8 eligibles), then any sized family will be eligible to receive a subsidy to enroll their children in that employer plan.

The following table displays the elements of the cost-effectiveness test to be used in the HMO scenario and the resulting maximum cost-effective dependent premium for this scenario.

Table 42 HMO Scenario Maximum Cost-Effective Employer Dependent Premium

	HMO Scenario	
Assumptions		
	CHP+ single premium	$71.25
	FFS costs per enrollee	$2.96
	Wrap-around cost per enrollee	$20.41
	Administrative costs per enrollee	$35.20
	Average number of CHP+ eligibles per family	1.8
Average CHP+ Family		
	CHP+ premium	$128.25
-	FFS costs	$5.32
-	Wrap-around costs	$36.74
-	Administrative costs	$63.35
=	Employer dependent premium less than or equal to	$22.84

There are two steps involved in calculating the percent of employers that offer a cost-effective dependent premium: 1) calculating the employee's dependent premium and 2) determining whether this amount is less than or equal to the maximum cost-effective amount presented above.

Employers do not pay their health plan premiums based on a per person cost, as CHP+ does, but instead pay premiums based on a premium structure with either two, three or four tiers. These tier structures are built to reflect the family composition of an employee and their dependents that have elected coverage through the employer's plan. The three premium tier structures common in Colorado are shown below:

- Two tier premium structure
  - Employee only coverage

- Family coverage

- Three tier premium structure
  - Employee only coverage
  - Employee + 1 dependent coverage
  - Employee + 2 dependent coverage
- Four tier premium structure
  - Employee only coverage
  - Employee + spouse coverage
  - Employee + children coverage
  - Employee + spouse + children coverage

An employer will typically offer one of these tier structures, and its employees will sign up for the appropriate premium level, based on the number of dependents they wish to insure. An important aspect of this arrangement is that, except in the three-tier structure, it costs an employee the same amount to add one child as it does to add six children to their employer's health plan. This is dissimilar to the premiums paid by the CHP+ program to its health plans, which is on a per-child basis.

Calculating the cost of adding a child to an employer's health plan, therefore, depends on the premium structure used by the employer and the number of children in the family. The following chart demonstrates how the cost of adding children to an employer's plan can be calculated in each type of premium structure.

Table 43 Formulas for Calculating Dependent Premium Levels for Three Different Employer Premium Tier Structures

Premium Structure Type	Premium Levels Offered	Formulas for calculating dependent premium
2 tier	Employee Only Family	Family-Employee only
3 tier	Employee Only Employee + 1 Employee + 2	(Employee + 1)-Employee only (Employee +2) –Employee only (Employee +2) –(Employee +1) *(Note: The formula used would depend on the number of dependents and coverage of the spouse)*
4 tier	Employee Only Employee + spouse Employee + children Employee + spouse + children	(Employee + children)-Employee only (Employee + spouse + children) - (Employee + spouse) *(Note: The formula used would depend on the coverage of the spouse.)*

Despite the impact of the spouse's coverage status on the cost of dependent coverage, the cost-effectiveness analysis presented here will assume that the spouse is uncovered and will remain uncovered by the employer's plan. There are three reasons for this assumption. First, the project team does not have access to data regarding the percent of spouses of parents of eligible children who are insured or uninsured through the employer's health plan. Second, if an eligible child has not been covered by the employee/parent, it may be reasonable to assume that the spouse is also uncovered either because employers often contribute a smaller percentage toward spouse and child coverage than toward employee coverage or because the spouse receives coverage as an employee through another employer. Finally, the assumption of the uncovered spouse will not affect the calculation of dependent premium cost in either the two or four tier structures. In the two tier structure, the inclusion or exclusion of the spouse does not affect the cost of adding children, and in the four-tier structure, the cost differential between employee and employee plus children is the same as between employee plus spouse and employee plus spouse plus children (This relationship holds true for total premiums; see actuarial report in Appendix C). The strategy of excluding the spouse from the calculation may, however, slightly overestimate costs in the three-tier structure where adding children to an Employee + 1 premium may be cheaper than adding children to the Employee only premium.

Assuming the spouse is and remains uncovered by the employer plan leaves nine formulas for calculating the cost of dependent coverage, depending on the tier structure and the number of CHP+ eligibles in the family, as shown in Table 44:

Table 44 Formulas for Calculating Employer Dependent Premiums based on Three Employer Premium Structures and Three Family Sizes

Number of Eligibles	Tier Structure	Dependent Premium Formula
One	2 tier	Family-Employee only
Two		Family-Employee only
Three		Family-Employee only
One	3 tier	(Employee + 1) – Employee only
Two		(Employee + 2) – Employee only
Three		(Employee + 2) – Employee only
One	4 tier	(Employee + children) – Employee only
Two		(Employee + children) – Employee only
Three		(Employee + children) – Employee only

Note that the formulas within a tier structure are the same, except under a three tier structure where the formula differs based on the number of eligibles.

Now the maximum cost-effective premiums calculated earlier (based on CHP+ premiums, benefit riders, FFS costs, administrative costs, and the number of eligibles), can be compared to the employer plan dependent premiums for each tier, as shown in Table 45:

Table 45 HMO Scenario Maximum Cost-Effective Dependent Premium for each Employer Tier

Average Number of Eligibles per Family	Maximum Cost-Effective Dependent Premium	Tier Structure	Dependent Premium Formula
1.8	$22.84	2 tier	Family-Employee only
1.8	$22.84	3 tier	(Employee + 1) – Employee only
1.8	$22.84	3 tier	(Employee + 2)– Employee only
1.8	$22.84	4 tier	(Employee + children) – Employee only

One change is needed to the premiums presented in Table 45 to estimate the percent of employers who meet the cost-effectiveness test: translating the test from a dependent premium test to a family premium test. None of the employer survey data currently available to the project team estimates the differences in employee contributions to single and family coverage as required by the dependent premium formulas presented in Table 45. Employer surveys do, however, provide information about the amount and range of employee contributions toward family coverage in different tier structures. Converting the dependent premium calculations to family premiums calculations will therefore allow the final step of estimating the percent of employer plans in Colorado that meet the cost-effectiveness test.

By adding the average Colorado employee contribution toward employee only coverage to both the maximum cost-effective dependent premium and the dependent premium formula, the cost-effectiveness test is converted to a test of the family premium. The Mountain States Employers Council 2000 survey indicates that the average employee contribution toward single HMO coverage in 2000 was $20 per month[37]. A return to the example of the average-sized family in the two-tier structure can illustrate how this information can be used to create a family premium test:

21) Family premium - employee only premium must be less than or equal to $22.84.

22) If the average employee only premium is $20, then the equation can be converted to a family premium test by adding the employee only premium to both sides, resulting in:

23) Family premium must be less than or equal to $42.84.

Applying this methodology, the above dependent premium test chart can be converted to the following family premium test chart:

[37] Although $20 is the average in Colorado, it may not be the average for low-income, uninsured workers.

Table 46 HMO Scenario Maximum Cost-Effective Family Premium for each Employer Tier

Average Number of Eligibles per Family	Maximum Cost-Effective Family Premium	Tier Structure	Family Premium Level
1.8	$42.84	2 tier	Family
1.8	$42.84	3 tier	(Employee + 1)
1.8	$42.84	3 tier	(Employee + 2)
1.8	$42.84	4 tier	(Employee + children)

At this point, the family premium formula can be compared to the maximum cost-effective premium to estimate the percent of plans that meet the cost-effectiveness test. For example, to answer the question, "What percent of families in a two tier employer premium structure are offered a cost-effective employer health plan?" the maximum cost-effective family premium a family ($42.84) can be compared to the employer premium in the two tier structure (family coverage). By making this comparison for each tier structure, the percent of employers who meet the cost-effectiveness test in the waiver scenario can be calculated.

Using the distribution of employee contributions to family premiums collected by MSEC 2000, the percent of employers offering cost-effective coverage can be calculated. The results are presented in Table 47.

Table 47 HMO Scenario Percent of Employers Offering a Cost-Effective Health Plan

Average Number of Eligibles per Family	Maximum Cost-Effective Family Premium	Tier Structure	Family Premium	Percent of employers meeting cost-effectiveness test
1.8	$42.84	2 tier	Family	15%
1.8	$42.84	3 tier	(Employee + 1)	17%
1.8	$42.84		(Employee + 2)	
1.8	$42.84	4 tier	(Employee + children)	15%
Average for the Waiver Scenario (based on distribution of family size and employer tier structures)				**16%**

Waiver Scenario

Although the cost-effectiveness test in the waiver scenario is calculated on an average family basis, the maximum cost-effective premium under this scenario is higher than that of the HMO scenario for two reasons. First, the FFS costs associated with each enrollee is lower because the applicant/enrollee ratio is lower.[38] Secondly and more importantly, this scenario does not require the employer buy-in program to comply with the federal guidelines regarding limited cost sharing in an employer buy-in program. Unlike the standard plan and HMO scenarios, therefore, a benefit rider does not have to be

[38] Each applicant for employer buy-in must be maintained on the FFS network for an additional two months while the employer buy-in application is being processed. The higher the applicant/enrollee ratio, the higher the FFS costs that must be recouped by each enrollee.

purchased from the health plan to reduce cost-sharing to the enrollee to the nominal levels required by federal statue and regulation (e.g. $0-$5 for a medical office visit). Because the cost of purchasing such a rider can range from $20 to $30 per member per month, eliminating this requirement significantly increases the maximum cost-effective premium amount and, therefore, the number of employer plans that meet the cost-effectiveness test.

The effect of these differences can be seen in the following chart. The maximum cost-effective premium is $94.89, significantly higher than the amounts in the standard plan and HMO scenarios.

Table 48 Waiver Scenario Maximum Cost-Effective Employer Dependent Premium

Waiver Scenario

Assumptions		
	CHP+ single premium	$71.25
	FFS costs per enrollee	$1.52
	Wrap-around cost per enrollee	$0.00
	Administrative costs per enrollee	$17.01
	Average number of CHP+ eligibles per family	1.8
Average CHP+ Family		
	CHP+ premium	$128.25
-	FFS costs	$2.74
-	Wrap-around costs	$0.00
-	Administrative costs	$30.62
=	Employer dependent premium less than or equal to	$94.89

Using a methodology similar to that presented in the previous scenarios, the maximum cost-effective dependent premiums can be compared to dependent premiums of employer plans in each tier structure.

Table 49 State Scenario Maximum Cost-Effective Dependent Premium for each Employer Tier

Average Number of Eligibles per Family	Maximum Cost-Effective Dependent Premium	Tier Structure	Dependent Premium Formula
1.8	$94.89	2 tier	Family-Employee only
1.8	$94.89	3 tier	(Employee + 1) – Employee only
1.8	$94.89	3 tier	(Employee + 2)– Employee only
1.8	$94.89	4 tier	(Employee + children) – Employee only

Recall that in the previous scenarios, this dependent premium table was converted to a family premium table by adding the average employee contribution for HMO employee

only coverage to the maximum cost-effective dependent premium amounts. Because eligible families in the state scenario can enroll in either an HMO or PPO plan and the average employee contributions for these types of plans differ, a maximum cost-effective premium must be established for each type of plan. While the HMO family premium can be established using the $20 employee contribution figure used in the previous scenarios, data from the MSEC survey indicate that employee contributions for PPO employee only coverage is higher: $26 dollars per month[39]. Applying these two figures to the premiums in Table 49, the maximum cost-effective family premiums for the two plan types can be calculated.

Table 50 Waiver Scenario Maximum Cost-Effective Family Premium for each Plan Type and Employer Tier

HMO Employer Plans			
Average Number of Eligibles per Family	Maximum Cost-Effective Family Premium	Tier Structure	Family Premium Level
1.8	$114.89	2 tier	Family
1.8	$114.89	3 tier	(Employee + 1)
1.8	$114.89	3 tier	(Employee + 2)
1.8	$114.89	4 tier	(Employee + children)
PPO Employer Plans			
Average Number of Eligibles per Family	Maximum Cost-Effective Family Premium	Tier Structure	Family Premium Level
1.8	$120.68	2 tier	Family
1.8	$120.68	3 tier	(Employee + 1)
1.8	$120.68	3 tier	(Employee + 2)
1.8	$120.68	4 tier	(Employee + children)

Using the distribution of employee contributions to family premiums for both HMO and PPO coverage collected by MSEC 2000, the percent of employers offering cost-effective coverage can be calculated. The results are presented in Table 51.

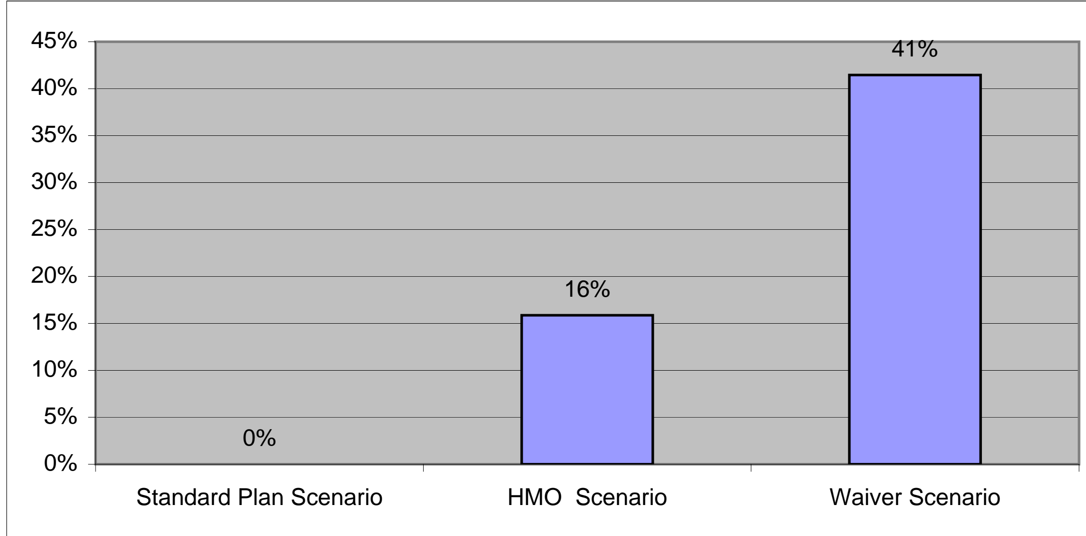
[39] While $20 and $27 are the Colorado averages, they may not be the average for low-income, uninsured workers.

Table 51 Waiver Scenario Percent of Employers Offering a Cost-Effective Health Plan

HMO Employer Plans				
Average Number of Eligibles per Family	Maximum Cost-Effective Family Premium	Tier Structure	Family Premium	Percent of employers meeting cost-effectiveness test
1.8	$114.89	2 tier	Family	38%
1.8	$114.89	3 tier	(Employee + 1)	42%
1.8	$114.89		(Employee + 2)	
1.8	$114.89	4 tier	(Employee + children)	38%
Average for HMO Plans (based on distribution of family size and employer tier structures)				**40%**
PPO Employer Plans				
Average Number of Eligibles per Family	Maximum Cost-Effective Family Premium	Tier Structure	Family Premium	Percent of employers meeting cost-effectiveness test
1.8	$120.68	2 tier	Family	46%
1.8	$120.68	3 tier	(Employee + 1)	49%
1.8	$120.68		(Employee + 2)	
1.8	$120.68	4 tier	(Employee + children)	46%
Average for PPO Plans (based on distribution of family size and employer tier structures)				**47%**
All Plans				
Average for All Plans (based on distribution of plan type)				**41%**

The percent of employer plans that meet the cost-effectiveness test varies significantly between the three scenarios, as shown in Figure 7:

Figure 7 Percent of Employer Plans that Meet the Cost-Effectiveness Test in the Three Scenarios



The cost of the cost-sharing rider, additional months of FFS coverage, and administrative costs account for the entirety of the differences between the three scenarios. Even under the least restrictive requirements of the waiver scenario, however, only a 41% of employer plans meet the cost-effectiveness test. This indicates that employees pay significantly higher premiums for child coverage through their employers than does the CHP+ program.

Percent of Employees Offered a Cost-Effective Family Plan

The waiver scenario also allows for parents of eligible children to be covered if the cost of covering the parent and the eligible children under the employer's plan would be no more than covering the eligible children under the direct CHP+ program. The percentage of parents who could be covered under this scenario can be calculated with a small adjustment to the cost-effectiveness test used in this section.

To calculate the percent of parents who could be covered under such a parent subsidy provision, the dependent premium calculated in the waiver scenario can be compared to family employer premium data. Unlike the calculations presented earlier in this section, the cost of employee-only coverage is not added to the employer dependent premium because the employee's cost of both the employee and dependents must be less than the cost of eligible children under the direct coverage program. Like earlier calculations, coverage of the spouse will be ignored, and only the coverage of the employee/parent will be considered.

The following table compares the maximum cost-effective family employer premium (same as the dependent premium presented earlier) to employer premium data and estimates the percent of employees who would be offered a cost-effective family coverage plan.

Table 52 Waiver Scenario Percent of Employers Offering a Cost-Effective Family Health Plan

HMO Employer Plans				
Average Number of Eligibles per Family	Maximum Cost-Effective Family Premium	Tier Structure	Family Premium	Percent of employers meeting cost-effectiveness test
1.8	$94.89	2 tier	Family	31%
1.8	$94.89	3 tier	(Employee + 1)	34%
1.8	$94.89		(Employee + 2)	
1.8	$94.89	4 tier	(Employee + children)	31%
Average for HMO Plans (based on distribution of family size and employer tier structures)				**32%**
PPO Employer Plans				
Average Number of Eligibles per Family	Maximum Cost-Effective Family Premium	Tier Structure	Family Premium	Percent of employers meeting cost-effectiveness test
1.8	$94.89	2 tier	Family	34%
1.8	$94.89	3 tier	(Employee + 1)	37%
1.8	$94.89		(Employee + 2)	
1.8	$94.89	4 tier	(Employee + children)	34%
Average for PPO Plans (based on distribution of family size and employer tier structures)				**35%**
All Plans				
Average for All Plans (based on distribution of plan type)				**33%**

This chart indicates that a majority of families that would qualify for a child subsidy would also qualify for a family subsidy (39% of children; 33% of parents). Assuming 1.8 eligible children per family, approximately 3,921 employee/parents would be eligible to receive a family subsidy.

Appendix G: Effect of Out-of-Pocket Costs on Participation Rates

Studies show that premiums and out-of-pocket costs required by subsidized health insurance programs, such as CHP+, may reduce participation rates by eligible low-income families. Out-of-pocket costs to a family in the form of premiums, copayments and deductibles will significantly impact a family's decision to enroll in a subsidized health insurance program. Findings of national studies indicate that participation rates in an employer buy-in program could vary from a high of 77% for no-cost options under the standard plan and HMO scenarios, to a low of 35% under higher-cost PPO options available under the waiver scenario. The following section describes the types of out-of-pocket costs that families might be required to assume under an employer buy-in program and then estimates the impact of these costs on enrollment in such a program

Parent premiums

Under employer health plans, employees cannot elect to cover only their dependents. To enroll their dependents in the employer's plan, they must enroll themselves as well. A typical employer, for example, might offer the following choices to an employee for health plan enrollment: 1) employee only, 2) employee plus spouse, 3) employee plus children, or 4) employee plus spouse and children. Each option requires the employee to cover him or herself; the employee decides the number and type of dependents enrolled.

This structure has implications for an employer buy-in program. If a parent currently covers himself or herself through the employer plan, then receiving a subsidy for only the child portion of their premium contribution will not present a financial burden to the family. If the parent were currently uninsured, however, the cost of covering the employee would be borne by the family.

The National Survey of America's Families estimates that 59% of parents of CHP+ eligibles who have access to employer coverage were uninsured in 1999. For these families, how much would it cost the family to insure the parent/employee? Colorado data from the 1998 Medical Expenditure Panel Survey—Insurance Component (MEPS) and the 2000 Employer Health Benefits Survey indicate that the average Colorado employee must contribute approximately $22.45 per month for HMO and $31.47 per month for PPO employee-only coverage[40]. These premium amounts would be the total amount of out-of-pocket costs required of an uninsured family under the standard plan and HMO scenarios.

In the waiver scenario, most families would not have to pay the parent premium because they would qualify for the family subsidy.

Copayments and deductibles

Under the standard plan and HMO scenarios, families would not be required to pay any copayment for their enrolled children that is greater than that of the direct CHP+ program. For example, if an employer's plan requires a $15 medical office copayment, the state would purchase an additional benefit for the child that would reduce their office visit copay to that of the CHP+ program ($0-$5, depending on the family's income.) Consequently,

[40] These average employee contributions for single coverage were calculated using Colorado 1998 MEPS data and inflation factors for 1998 to 2000 using the national data provided by the Kaiser Employer Health Benefits Survey.

copayment levels for the employer subsidy program and direct coverage by CHP+ would be identical under the standard plan and HMO scenarios.

Under the waiver scenario, however, the state would not purchase additional coverage to reduce copayments for services charged by HMOs or PPOs, or to cover deductibles charged by PPOs. Families who receive a CHP+ subsidy to enroll in employer coverage under the waiver scenario, therefore, would be required to pay the full cost-sharing required by the employer's plan, which would likely be substantially more than the out-of-pocket costs of the CHP+ direct coverage program

For example, a family who receives a CHP+ subsidy to enroll in an employer's HMO plan in the waiver scenario might have two types of out-of-pocket costs: 1) parent premiums (discussed in the previous section) and 2) increased copayments for services. The Kaiser Employer Health Benefits Survey found that the average HMO copayment for an office visit in the year 2000 was $10. This amount is higher than the $0-$5 co-payment amount charged to enrollees of the direct CHP+ program. Assuming a $7.50 differential in office visit copayments, a family with one child[41] and an average of three visits per child per year[42]would pay an additional $22.50 per year in copayments for office visits. (Although similar differences could occur in copayments for drugs and other services, these are not included in this analysis.)

Families who enrolled in a PPO might incur not only parent premiums and increased copayments, but also an out-of-pocket cost in the form of a deductible. The Kaiser Employer Health Benefit Survey found that average office co-payment for a medical office visit in PPO plans is $13. Using the methodology described above, this would result in an average additional out-of-pocket cost to the family of $31.50 per year. The average single deductible for a PPO plan in Colorado is $125, according the 2000 Mountain States Employer Council Survey[43]. A one-child family in the CHP+ program might be required to spend up to $125, therefore, in a year before coverage for hospital and other medical services began.

Summary of additional out-of-pocket costs to families as compared to direct coverage under CHP+

The following tables represent additional costs that families might incur under an employer subsidy program as compared to the direct CHP+ program. The waiver scenario estimates out-of-pocket costs related to both HMO enrollment and PPO enrollment. All scenarios consider the cost of paying the parent premium if the parent is not currently covered.

[41] Although the average number of CHP+ enrollees per family is approximately two children, the studies used later in this section to estimate participation are based on a one-parent, one-child family.
[42] CHP+ HMO rates for fiscal year 2001 assume 2.97 office visits per child per year; data provided by Leif and Associates
[43] This average excludes plans with individual deductibles greater than $250 per year that would not be eligible for subsidy.

Table 53 Additional Annual Out-Of-Pocket Costs of Employer Plan Compared to CHP+ Direct Coverage

Insured Parent				
	Premiums	Copayments	Deductibles	Total
Standard Plan Scenario	$0	$0	$0	$0
HMO Scenario	$0	$0	$0	$0
Waiver Scenario				
--HMO	$0	$22.50	$0	$22.50
--PPO	$0	$31.50	$125	$156.50
Uninsured Parent				
	Premiums[44]	Copayments	Deductibles	Total
Standard Plan Scenario	$270	$0	$0	$270
HMO Scenario	$270	$0	$0	$270
Waiver Scenario				
--HMO	$0	$22.50	$0	$22.50
--PPO	$0	$31.50	$125	$156.50

Effect of additional out-of-pocket costs on participation in the employer subsidy program

Two studies in the past several years have demonstrated a strong correlation between higher premiums charged and lower percent of eligibles that will participate in a subsidized health insurance program, such as an employer buy-in program. While these studies attempt to determine the enrollment effect of premiums only and do not consider the effect of a lower-cost program alternative (such as would exist for employer buy-in eligibles), the results of these studies may indicate to what extent total out-of-pocket costs may reduce enrollment.

In the spring of 2000, John Holahan of the Urban Institute published a study estimating participation rates that CHP+ programs might expect based on administrative and premium structures of their programs. Holahan analyzed 1995 Current Population Survey data, the 1991 Health Insurance Association of American Employer Survey data, and 1991 Blue Cross Blue Shield non-group premium data. Using these numbers, Holahan and his colleagues estimated what percent of families at different income levels might purchase insurance at different premium levels. Further, the researchers tested a premium structure like many CHP+ programs across the country, where premiums are not charged to lower-income families (below 150% of FPL), but are charged to higher income families. Assuming this premium structure and low administrative barriers to enrollment, Holahan estimates that between 47% and 77% of eligibles could be expected to participate in a CHP+ program. The following chart shows his estimated participation rates at different premium levels:

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[44] These premiums are based on the employee contribution for single coverage as estimated by 1998 MEPS and 2000 Kaiser Employer Health Benefits Survey (monthly premium of $22.45 for HMO coverage; $31.47 for PPO coverage). There would be no premiums for most families in the state scenario because of the family coverage option.

Table 54 Percent of CHP+ Eligible Families who will Participate in a CHP+ Program based on Annual Premiums Charged: 2000 Holahan Study

Premium Structure	100% FPL	150% FPL	200% FPL	Participation Rate
No Premium	$0	$0	$0	77%
Low Premium	$0	$0	$250	55%
High Premium	$0	$0	$658	47%

Although premiums are only charged to families over 150% of FPL, higher premiums dramatically reduce the percent of eligibles that will participate in the subsidized health insurance program (with all other program elements the same). Free programs would have the highest enrollment (77%), while high premium programs would only enroll 47% of eligible families.

Leighton Ku of the Urban Institute conducted a study in 1997 that reached a similar conclusion. Using data from four state programs that charge a sliding scale premium to low-income families,[45] Ku used premium structure and enrollment data to estimate the relationship between premium levels and participation rates. Instead of testing a fixed premium structure, as in the Holahan study, Ku estimated variance in participation rates when premiums varied as a percent of income. Ku found a correlation between premiums and participation rates, as shown in the following table.

Table 55 Participation Rate of Eligible Families in Subsidized Health Insurance Programs With Sliding Scale Premiums: 1997 Ku Study[46]

Annual Premium Charged	100% FPL	150% FPL	200% FPL	Participation Rate[47]
.5% of Income	$56	$84	$113	67%
1% of Income	$113	$169	$225	57%
1.5% of Income	$169	$253	$338	51%
2% of Income	$225	$338	$450	45%
2.5% of Income	$281	$422	$563	40%
3% of Income	$338	$507	$675	35%

The following table summarizes total out-of-pocket costs that would be born by a two-person family in the CHP+ program in each scenario and estimates the percent of eligibles that would participate in an employer buy-in program based on those costs. For scenarios with a 0% of family income required in costs, the Holahan study estimate of a 77% participation rate is used. For non-zero percent of income levels, participation rates are based on the Ku participation function.

[45] Washington's Basic Health Plan, Tennessee's TennCare, Hawaii's QUEST, and MinnesotaCare.

[46] Dollar figures based on 2000 Federal Poverty Levels for a family of one adult and one-child, the family size used in the Ku study. (FPL levels in 2000 for a two-person family are $11,256 at 100%, $16,884 for 150% and $22,512 at 200%. The Colorado Department of Health Care Policy and Financing provided these figures). Participation rates at different levels of income were based on the 1995 data of the original study.

[47] Participation rates based on calculations based on equation presented in Ku's Table A-1. The equation is $\ln(p/(1-p)) = .7239 - .4555P + E$, where p is the participation rate, P is the premium for two people as a percent of family income and E is the error term.

Table 56 Estimated Participation Rate of Employer Buy-In Eligibles based on Out-of-Pocket Costs

Eligibles with Insured Parent			
	Total Out-of-Pocket Costs	Cost as Percent of Income[48]	Participation Rate
Standard Plan Scenario	$0	0%	77%
HMO Scenario	$0	0%	77%
Waiver Scenario			
--HMO	*$22.50*	*0%*	*77%*
--PPO	*$156.50*	*1%*	*45%*
--Total[49]			70%
Eligibles with Uninsured Parent			
	Total Out-of-Pocket Costs	Cost as Percent of Income	Participation Rate
Standard Plan Scenario	$270	2%	45%
HMO Scenario	$270	2%	45%
Waiver Scenario			
--HMO	*$22.50*	*0%*	*77%*
--PPO	*$156.50*	*1%*	*45%*
--Total			70%

Finally, a single participation rate for each scenario can be calculated by weighting the participation rates by the percent of insured and uninsured parents eligible for the employer buy-in program. The following chart shows this calculation:

Table 57 Weighted Participation Rates for Each Scenario Based on Out-of-Pocket Costs and the Insurance Status of Eligibles' Parents

	Participation rate	Percent of CHP+ Eligibles
Standard Plan Scenario		
Insured parents	77%	41%
Uninsured parents	45%	59%
Total		58%
HMO Scenario		
Insured parents	77%	41%
Uninsured parents	45%	59%
Total		58%
Waiver Scenario		
Insured parents	70%	41%
Uninsured parents	70%	59%
Total		70%

[48] Based on income of family at 150% FPL. Assuming an equal distribution of age and income throughout the CHP+ eligibility group, the average FPL is 146%. 150% FPL is used for simplicity.
[49] Total participation rate in the waiver scenario is weighted by expected participation rates in HMO and PPO plans. Data from the 1998 Colorado MEPS survey indicates that 76% of eligibles are offered at least one HMO plan. It is assumed that enrollees who are offered a choice of HMO or PPO coverage will choose HMO coverage. The waiver scenario assumes, therefore, that 76% of participants will receive HMO coverage and 22% will receive PPO coverage.