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Income Adequacy and the Affordability of Health Insurance in Washington State

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Executive Summary

Affordability of coverage is an important determinant of a family's decision to purchase health insurance. Although affordability depends in part on the price and terms of insurance coverage, it also depends on family income and other basic living expenses. That is, health insurance must be affordable in the context of an income adequate to meet a family's basic living expenses. Because living expenses vary by family composition and geographic region of residence, affordability must be assessed with these variables in mind. When health care expenses are added, the health status of family members and the type of coverage purchased are also important.

In this report, we examined the affordability of insurance by addressing the question: At what income level can family type *a*, living in county *b*, with health status *x* afford to buy coverage option *t* after paying for other basic living expenses?

This report is presented to the program staff of the Washington State Planning Grant on Access to Health Insurance. It represents the research findings and opinions of the consultant team.

We rejected the commonly used measures of income adequacy—federal poverty level, 50 percent of median income, and full-time minimum wage—because they did not account for variations across the major variables affecting a family's living expenses, particularly differences in family composition and regional variations. Instead, we used a variant of the Self-Sufficiency Standard developed by Diana Pearce (2001) for the state of Washington. The Self-Sufficiency Standard measures the income that is adequate for a family to meet its basic living expenses for child care, housing, food, transportation, health care costs, miscellaneous expenses, and taxes (net of tax credits) in various geographic regions.

To enable an analysis of a variety of insurance coverage options available to low-income Washington families, we substituted different measures of health care expenses for those used in Pearce's Self-Sufficiency Standard. Our "Adjusted Standard" uses estimated health care expenses (premiums plus out-of-pocket costs) for 12 family types enrolled in one of two public programs or three private programs. These estimates came from published program information on premiums and eligibility, and actuarial estimates of the out-of-pocket costs associated with these programs for families with three health status levels.

Our analysis indicates that:

- The family income required to cover basic living expenses including health care expenses (premiums, deductibles, and co-payments)—the Adjusted Standard—varies significantly by family type, county, coverage option, and health status of family members.
- The Adjusted Standard exceeds 100 percent of the federal poverty level (FPL) for all family types in all counties for all coverage options and levels of health status.

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- In many cases, the Adjusted Standard exceeds 250 percent FPL, particularly for private coverage options.
- Medicaid programs with zero premiums and no out-of-pocket costs offer the most affordable option. However, income levels high enough to cover basic living expenses exceed the income limits of some Medicaid programs, rendering at least the adult family members ineligible for that program (family income limits for children are generally higher than for adults). When eligibility is defined by TANF income limits, families with no dependents frequently have incomes that exceed the limits, since the limits rise with family size and child care expenses for working parents are fully deductible from allowable income.
- When we added Medicaid cost-sharing equal to 5 percent of family income to family expenses (this limit for Medicaid beneficiary cost-sharing was included in the state's recent request for a federal waiver), even fewer adults have incomes below TANF limits if their family income is high enough to cover basic living expenses and pay the cost share.
- On the other hand, family income adequate to meet basic living expenses including health care expenses associated with enrollment in Basic Health (BH) does not often exceed that required for eligibility in that public program—even for some family types with no dependents

This work is meant to complement the work in Chapter 6 of Research Deliverable 3.1. *Targeting the Uninsured in Washington State*. The analysis here provides information on the level of income various family types would need to afford different kinds of insurance coverage. Chapter 6 of Research Deliverable 3.1 uses Pearce's Self-Sufficiency Standard (SSS) as the income adequacy measure and Washington State Population Survey data to quantify how many families of each type actually had access to affordable coverage. Research Deliverable 3.1 used the SSS rather than the Adjusted Standard because the two reports were written simultaneously and the Adjusted Standard was not available in time to be used in 3.1.

The affordability analysis in this report uses a set of assumptions about the levels of living expenses and health care utilization of families with different characteristics. Other assumptions and other estimates of basic living expenses (including health care expenses) might yield other results. Because we intended to be illustrative rather than comprehensive, we restricted our analysis to eight Washington counties, 12 family types with particular age configurations, and five health insurance coverage options. We also made simplifying assumptions about health status and out-of-pocket health care expenses. Alternative assumptions about health status overall and within families might yield different results.

Policy makers can use this report in two ways. First, the findings based on our assumptions and limitations are useful in the immediate context. Our findings suggest that eligibility criteria for public programs targeting low-income families should reflect the significant variation in living expenses across geographic regions and family types.

Our findings also suggest that public policies aimed at making private insurance, particularly individual coverage, affordable for low-income families would need to include substantial subsidies of both premiums and non-covered out-of-pocket expenses. Making Medicaid and BH/BH Plus affordable would take fewer resources. If BH/BH Plus enrollment slots were

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available in all counties, our analysis suggests it would be affordable to most family types with dependents.

Despite the fact that our estimates of health care expenses are the same for all regions, there is substantial geographic variation in the Adjusted Standard, and thus the affordability of various statewide coverage options. This result, as well as the significant variation in the Adjusted Standard by family composition, underscores the importance of non-health care living expenses to the affordability of health care. Public policy around housing and child care expenses may do as much to affect low-income families' ability to purchase health insurance as policies that directly target premiums and eligibility.

Second, the Adjusted Standard is a robust alternative to measuring income adequacy for existing programs. Our approach to affordability using this measure has broad potential for modeling new public policy options, not only in Washington but also in other states. Alternative eligibility and coverage assumptions can easily be substituted for ours to determine overall affordability or affordability within targeted subgroups. Policy makers could examine the effect of alterations to existing programs or the creation of new ones. In conjunction with analyses around demographic patterns, our approach can be useful in modeling the numbers, characteristics, and distribution of families that might be affected by new policy options.

Although it is constrained by our assumptions and data limitations, our work, offers some broad insights into both the relative and absolute affordability of various insurance options available to Washington's low-income families. However, affordability of insurance is only one factor in a family's decision to purchase coverage. Thus, the payoff to substantial tinkering with the construction of the Adjusted Standard to increase its precision is probably small. The most productive next step would be to extend our analyses with additional coverage scenarios that reflect new approaches to making affordable coverage available to low-income Washington residents.

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Income Adequacy and the Affordability of Health Insurance in Washington State

Introduction and Context

The most carefully designed voluntary public program to improve access to health insurance will be ineffective if people do not buy it. One important factor in the decision to purchase insurance is the price of coverage relative to one's income, taking into account basic living expenses: in other words, its affordability. There has been much public policy debate about the level of subsidy required to make insurance affordable to low-income individuals. This report offers one approach to answering that question using a measure of affordability specific to family type, geographic area, and health status. More specifically, we address the primary question:

> At what income level can family type *a*, living in county *b*, with health status *x* afford to buy coverage option *t* after paying for other basic living expenses?

This report is presented to the program staff of the Washington State Planning Grant on Access to Health Insurance. It represents the research findings and opinions of the consultant team.

We report the level of income required by 12 family types in each of eight Washington counties to meet basic living expenses and also pay for premiums and out-of-pocket costs for any one of two public or three private health insurance coverage options. We report this "self-sufficiency" income both in dollars and as a percent of the federal poverty level. Although we cannot in this report answer questions about the number of families in each category that have incomes below the self-sufficient level, we can make some observations about how this level of income varies by family type, by geographic region, and insurance coverage option. In our companion report (Research Deliverable 3.1 *Targeting the Uninsured in Washington*), we assess how many uninsured families have access to affordable coverage and the characteristics of the uninsured who do and do not have such access.

We begin with a discussion of measures of income adequacy that have been used to determine eligibility for various public assistance programs. We describe an alternative measure that we have selected to define income adequacy and compare its characteristics with the previous measures. We then outline how we used this measure to determine the affordability of five insurance coverage options for twelve family types in eight Washington counties. Finally, we discuss how this measure of affordability can be used in the design of public policies to increase access to insurance coverage for low-income families.

Our approach for public program design has an important limitation, however. We can offer only a measure of *affordability* of coverage options. Although the affordability of coverage affects individuals' decision to purchase insurance (demand), many other factors affect demand: values, risk aversion, health status, and the value of assets to name a few. We do not attempt to quantify these other factors in this report; therefore we cannot make predictions about *how many* or *which* individuals will purchase insurance within the context of a specific program design.

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Measures of Income Adequacy

Policy makers often have a need to measure the ability of families to sustain themselves financially. In some cases, the purpose is informational: policy makers wish to know how many and what kinds of families have difficulty making ends meet. In other cases, the measure is used to determine eligibility for public programs to assist those in greatest need. In either case, the desire is for a measure of affordability that is objective, analytically simple, and precise enough to capture relevant variations in families' circumstances.

We consider four existing measures of families' economic status: the federal poverty level (FPL), 50 percent of median family income (measured at the county level), the full-time minimum wage, and the Self-Sufficiency Standard for Washington State developed by Diana Pearce (Pearce, 2001).

Federal Poverty Level

The need for an objective standard to assess income adequacy has led many policy makers to the official federal poverty measure. Using the federal poverty level, a family can be judged to be "poor" if its income is below the appropriate threshold and "not poor" if it is above the threshold. As Pearce (2001) points out, however, this measure has some significant limitations.

The federal poverty level was first developed in the early 1960s. It was based on the cost of a single item, food, and assumed a fixed ratio between food and all other components of families' living expenses (housing, clothing, etc.). This ratio, in turn, was based on spending patterns in the context of the dominant family composition of the time (two parent families with non-working wives), relative prices, and available products, housing stocks, and technology. The dollar amount of the FPL increases with family size.

Since the 1960s, the measure has been updated only for inflation, despite the fact that the composition of families has changed significantly, as has the context in which families make purchasing decisions. The needs of families with two working parents in particular—of whom there are many more today than in the 1960s—have changed to include child care for young children and transportation for the second worker. The FPL does not distinguish between families with one earner and two earners (or single-parent workers) despite the fact that these families have very different expenses associated with earning the same income.

An additional limitation of the FPL is that it does not vary by geographic location within the 48 contiguous states: it is the same for families in Republic or Seattle (as well as Mississippi and Manhattan). Although there was some geographic variation in costs even three decades ago, differences in the cost of living between areas have increased substantially since then, particularly for housing. Housing in the most expensive areas of the country costs about four times as much as the same size units in the least expensive areas (Pearce, 2001). Finally, the FPL is increasingly viewed as simply too low, as evidenced by the fact that some public programs—including Medicaid in many states—set eligibility standards that are well over 100 percent of FPL.

The federal poverty level ranged from $8,590 for a single person to $26,710 for a family of seven in 2001 (http://aspe.hhs.gov/poverty/01poverty.htm).

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Fifty Percent of Median Income

An alternative measure of income adequacy is 50 percent (or some other percentage) of median income. The advantage of this measure over the FPL is that is does vary by geographic region. In this report, we have measured the relevant geographic region by county. A significant limitation, however, is that median income is averaged over all family types. Thus, 50 percent of median county income is the same for a single-adult family as for a two-adult family with three children. Further, it does not take into account either levels or variations in living expenses by family type and geographic area. In 2001, 50 percent of county median income ranged from $23,634 in Okanogan County to $62,735 in King County (http://ofm.wa.gov/poptrends/table16.pdf).

Full-Time Minimum Wage

Policy makers have set an income standard through the minimum hourly wage. Thus, another available income adequacy measure is this wage calculated at full employment for all adults in each family. The advantage of this measure is that it is based on legislative deliberation and varies with the number of workers in the family. However, the standard is statewide and, like median income, does not measure income in relation to living expenses or number of dependents. The minimum wage in Washington was $6.72 per hour in 2001, or $14,193 annually, based on full employment of 176 hours per month (www.lni.wa.gov/scs/workstandards/minwage.htm).

The Self-Sufficiency Standard

A number of states have developed more sensitive measures of income adequacy by estimating basic living expenses for various family types and geographic areas. Researchers at the Josiah Bartlett Center for Public Policy in New Hampshire used mostly state-level data collected by various organizations to generate an estimate of a "livable wage" for seven family types for each New Hampshire County (Kenyon, 2000).[*] [†] Glazner (2001) used the same approach with 22 family types, but had to rely on national data from the Bureau of Labor Statistics Consumer Expenditure Survey (CES) for most expense categories. For health care expenditures, she combined health insurance premium data from Colorado's Alliance, a nonprofit membership organization that purchases health insurance for large and small employers, with CES data on non-covered health care expenses.

The Self-Sufficiency Standard, developed by Diana Pearce, is a similar measure of income adequacy (Pearce, 2001). The Self-Sufficiency Standard (the Standard):

> …measures how much income is needed, for a family of a given composition in a given place, to adequately meet its basic needs—*without public or private assistance.* By providing a measure that is customized to each family's circumstances, i.e., taking account of where they live, and how old their children are, the Self-Sufficiency Standard makes it possible to determine if a family's income is enough to meet its basic needs.
>
> The Standard does not try to combine, or average together, the very different circumstances of families in which adults work, compared to those in which they do not. Rather, the Self-Sufficiency Standard assumes that all adults (whether married or single)

[*] Data for out-of-pocket health care expenditures were estimated from national survey data.
[†] Researchers in Maine used a very similar approach. See Pohlmann, St. John, and Kavanaugh (2000).

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work full-time, and therefore, includes costs associated with employment, specifically transportation, taxes, and for families with young children, child care.

The Standard takes into account that many costs differ not only by family size and composition, but also by the age of children. While food and health care costs are slightly lower for younger children, child care costs are much higher—particularly for children not yet in school—and are a substantial budget item not included in the official poverty measure.

The Standard includes the net effect of taxes and tax credits. It provides for state sales taxes, as well as payroll (Social Security and Medicare) taxes, and federal and state income taxes. Three federal credits available to workers and their families are "credited" against the income needed to meet basic needs: the Child Care Tax Credit, the Earned Income Tax Credit, and the Child Tax Credit.

While the poverty standard is based on the cost of a single item, food, and assumes a fixed ratio between food and nonfood, the Standard is based on the costs of each basic need, determined independently, which allows each cost to increase at its own rate. Thus, the Standard does not assume that food is always 33 percent of a family's budget or constrain housing to 30 percent.

The Self-Sufficiency Standard is set at a level that is, on the one hand, not luxurious or even comfortable, and on the other, not so low that it fails to adequately provide for a family. Rather, the Standard provides income sufficient to meet minimum nutrition standards, for example, and to obtain housing that would be neither substandard nor overcrowded. The Standard does not, however, allow for longer-term needs, such as retirement, purchase of major items such as a car, or emergency expenses (except possibly under the "miscellaneous" cost category) (Pearce, 2001. pgs 1-4).*

The Standard is calculated for 70 different family types at the county (or in counties with distinct regions, the sub-county) level. It includes estimates of expenses in eight categories (see Table 1), including health care, taken from published sources.† Pearce and colleagues have calculated the Standard for a number of states, including Washington. Thus, the Standard provides a measure of income adequacy that is sensitive to family type and geographic variation.

Table 1. Expense Categories for Calculating the Self-Sufficiency Standard

Housing	Health Care
Child Care	Miscellaneous
Food	Taxes
Transportation	Tax Credits

Comparisons

The four measures—federal poverty level, 50 percent of median income, full-time minimum wage, and the Self Sufficiency Standard—have different characteristics and draw upon different data. The Standard is greater than the FPL for all family types with children and all counties.

* The New Hampshire livable wage includes 5 percent for savings; the Colorado income measure includes educational expenses, non-health insurance and pension contributions, and other cash contributions such as alimony payments and charitable donations.

† A complete description of how the Standard is calculated appears in Appendix A.

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Although FPL increases with family size, the Standard increases more rapidly for some family types. The Standard is also higher than 50 percent of median income for the families with children for all counties; less for single-adult families. The latter result is expected because median income is averaged over families of all sizes. FPL is less than 50 percent of median income in all cases except for large two-parent families in Chelan County, where they are equal. Table 2 summarizes the differences with regard to variation by geographic region and family size.

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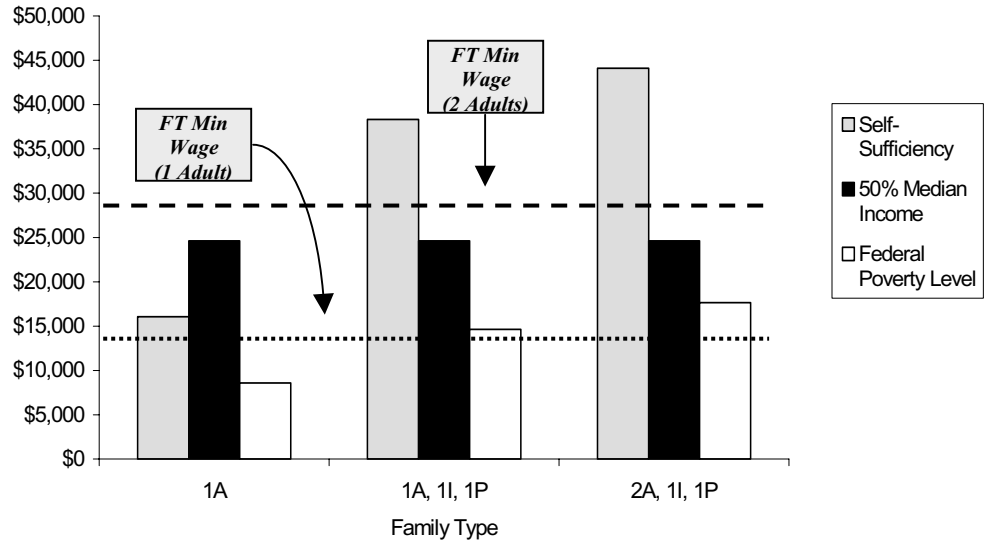
Table 2. Comparisons of Alternative Measures of Income Adequacy

Measure	Sources of Variation
Federal Poverty Level	- Varies by number of family members - Constant across counties
50% of County Median Income	- Varies by county - Constant across family types
Full-Time Earnings of Each Working Adult at Minimum Wage for 176 hours/month	- Varies by number of working adults - Constant across counties
Self-Sufficiency Standard for Washington State	- Varies by family type and county

Figures 1 through 4 illustrate these differences for FPL, 50 percent of median income, the minimum wage, and the Self-Sufficiency Standard for three family types and four counties (Jefferson, Pierce [Tacoma], Chelan, and Spokane).

Figure 1. Comparison of Income Adequacy Measures: Pierce County (Tacoma)



Note: A=Adult; I=Infant; P=Preschool age child; 2001 dollars; minimum wage calculated based on 176 hours per month for 12 months per worker
Source: 2001 Federal Poverty Guidelines (FPL). http://aspe.hhs.gov/poverty/01poverty.htm; Median Income by County (2001 Forecast) –http://www.ofm.wa.gov/poptrends/table16.pdf; Self-Sufficiency Standard for WA State, September 2001, by Diana Pearce, PhD.

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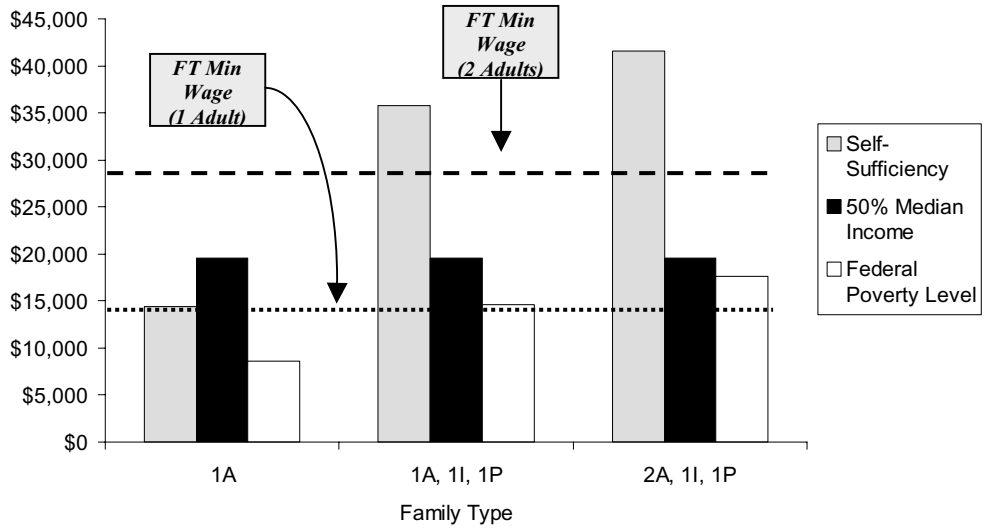
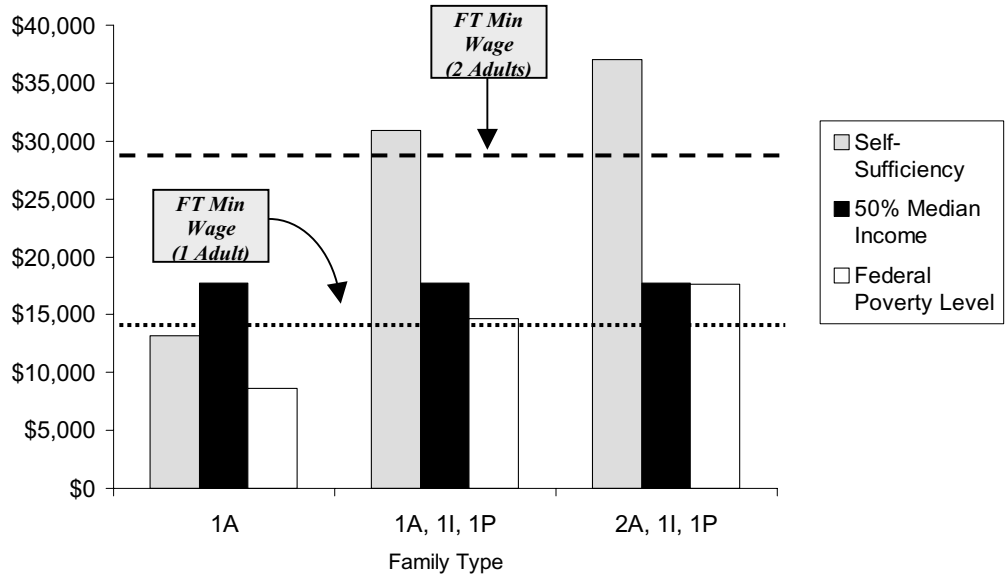
Figure 2. Comparison of Income Adequacy Measures: Jefferson County



Note: A=Adult; I=Infant; P=Preschool age child; 2001 dollars; minimum wage calculated based on 176 hours per month for 12 months per worker

Source: 2001 Federal Poverty Guidelines (FPL). http://aspe.hhs.gov/poverty/01poverty.htm; Median Income by County (2001 Forecast). www.ofm.wa.gov/poptrends/table16.pdf; Self-Sufficiency Standard for WA State, September 2001, by Diana Pearce, PhD.

Figure 3. Comparison of Income Adequacy Measures: Chelan County



Note: A=Adult; I=Infant; P=Preschool age child; 2001 dollars; minimum wage calculated based on 176 hours per month for 12 months per worker.

Source: 2001 Federal Poverty Guidelines (FPL). http://aspe.hhs.gov/poverty/01poverty.htm; Median Income by County (2001 Forecast). www.ofm.wa.gov/poptrends/table16.pdf; Self-Sufficiency Standard for WA State, September 2001, by Diana Pearce, PhD.

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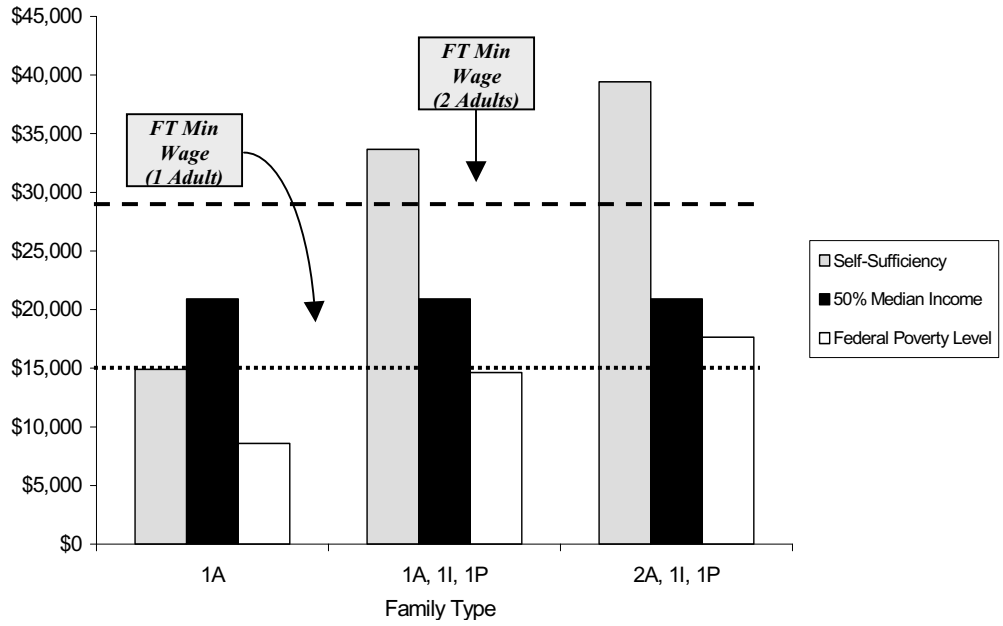
Figure 4. Comparison of Income Adequacy Measures: Spokane County



Note: A=Adult; I=Infant; P=Preschool age child; 2001 dollars; minimum wage calculated based on 176 hours per month for 12 months per worker.
Source: 2001 Federal Poverty Guidelines (FPL). http://aspe.hhs.gov/poverty/01poverty.htm; Median Income by County (2001 Forecast). www.ofm.wa.gov/poptrends/table16.pdf; Self-Sufficiency Standard for WA State, September 2001, by Diana Pearce, PhD.

Figures 5 through 7 illustrate the differences among all four measures for three family types across eight counties.* The Standard is higher than the full-time minimum wage except for single adult families in Chelan County. However, the full-time minimum wage is greater than FPL in all counties for all family types except single adults with dependents. The latter result is predictable given that FPL increases with family size whereas full-time minimum wage only increases with additional workers.

* Pearce's Self Sufficiency Standard used in Figures 5-7 is higher for King County than for Whatcom County, but the Adjusted Standard is sometimes higher for Whatcom County than for King County. This apparent anomaly is because the Self Sufficiency Standard is calculated for three sub-regions within King County (Seattle, Bellevue/Juanita/ Kirkland/Redmond, and the balance of the county). The Standard in Figures 5-7 represents an amalgam of the entire county. However, we only calculated the Adjusted Standard for the Seattle sub-region recognizing that the uninsured population is concentrated in this area. In central King County (as opposed to the two other King County regions), Pearce's model assumes that families use public transportation at a cost of $45-$90 per month depending on family size, whereas families in the more rural Whatcom County are assumed to use private transportation at a cost of $236-$416 per month, again depending on family size.

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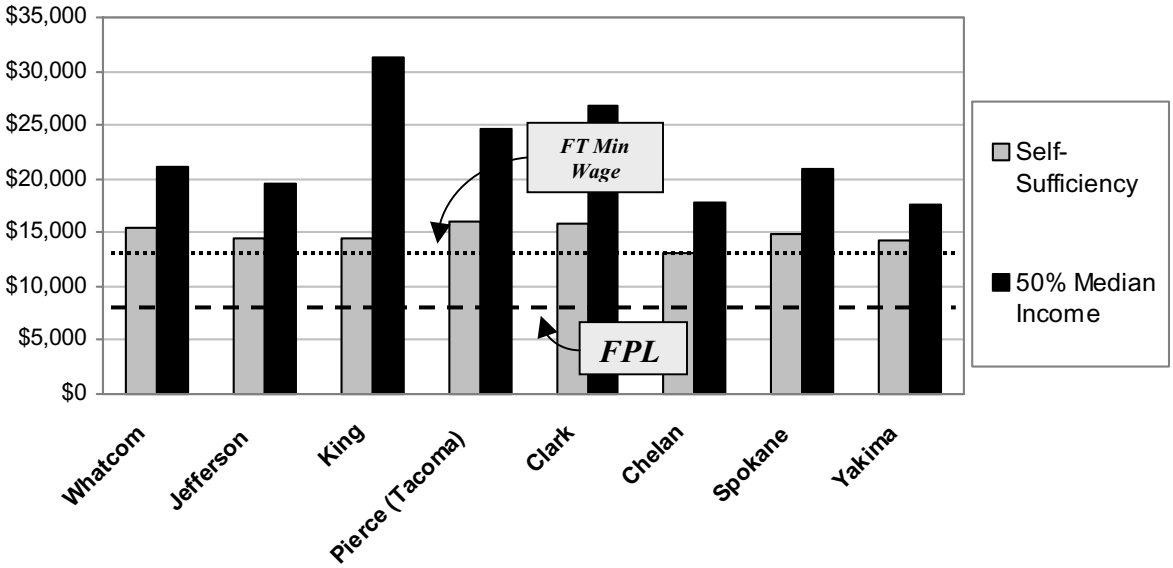
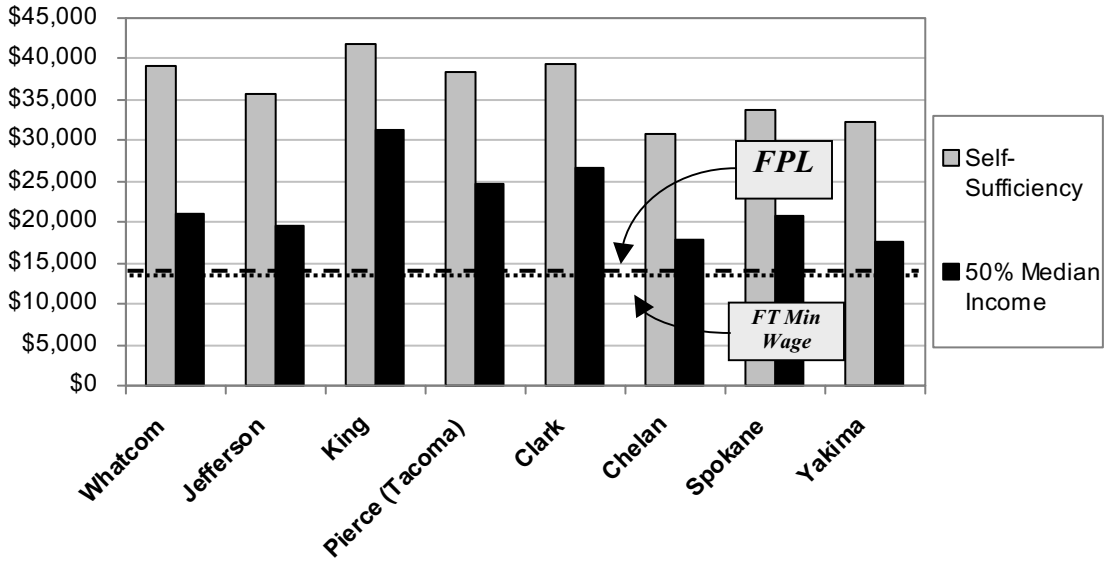
Figure 5. Comparison of Income Adequacy Measures: 1 Adult



Note: 2001 dollars; minimum wage calculated based on 176 hours per month for 12 months per worker.
Source: 2001 Federal Poverty Guidelines (FPL). http://aspe.hhs.gov/poverty/01poverty.htm (1/23/01); Median Income by County (2001 Forecast). www.ofm.wa.gov/poptrends/table16.pdf; Self-Sufficiency Standard for WA State, September 2001, by Diana Pearce, PhD.

Figure 6. Comparison of Income Adequacy Measures: 1 Adult, 1 Infant, 1 Preschool-Aged Child



Note: 2001 dollars; minimum wage calculated based on 176 hours per month for 12 months per worker.
Source: 2001 Federal Poverty Guidelines (FPL). http://aspe.hhs.gov/poverty/01poverty.htm (1/23/01); Median Income by County (2001 Forecast). www.ofm.wa.gov/poptrends/table16.pdf; Self-Sufficiency Standard for WA State, September 2001, by Diana Pearce, PhD.

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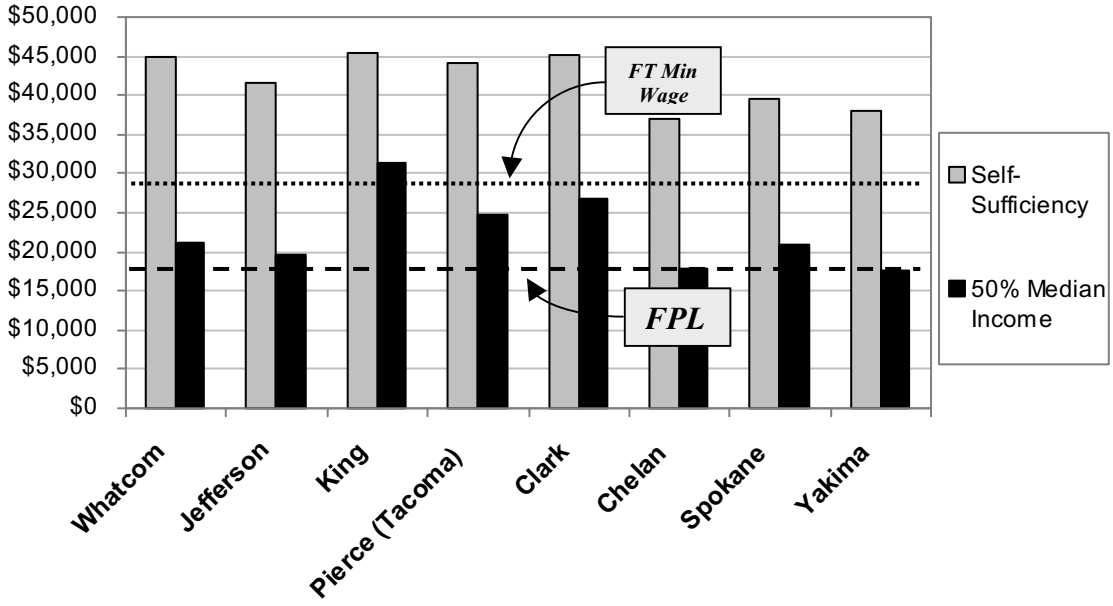
Figure 7. Comparison of Income Adequacy Measures: 2 Adults, 1 Infant, 1 Preschool-Aged Child



Note: 2001 dollars; minimum wage calculated based on 176 hours per month for 12 months per worker.
Source: 2001 Federal Poverty Guidelines (FPL) – http://aspe.hhs.gov/poverty/01poverty.htm (1/23/01); Median Income by County (2001 Forecast). http://www.ofm.wa.gov/poptrends/table16.pdf; Self-Sufficiency Standard for WA State, September 2001, by Diana Pearce, PhD.

Our selection criteria for a measure of income adequacy were objectivity, analytic simplicity, and precision in the sense of distinguishing among families in different circumstances that affect their basic living expenses. All four measures of income adequacy we considered are objective and sufficiently simple analytically. However, the comparisons in Figures 1 through 7 provide strong evidence that the Self-Sufficiency Standard is the only measure that accounts for both income and living expenses and differences in these components across both family types and geographic regions. Thus, we selected the Self-Sufficiency Standard as our measure of income adequacy for this report.

Methods

The purpose of the affordability analysis is to answer the primary question:

> At what income level can family type *a*, living in county *b*, with health status *x* afford to buy coverage option *t* after paying for other basic living expenses?

The analysis requires decisions about an income adequacy measure, family type, geographic region, health status, and coverage options.

Income Adequacy

We began with the basic framework of Pearce's Self-Sufficiency Standard. However, the Standard's single estimate for health care expenses in each geographic region was not

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sufficiently sensitive to allow us to compare the affordability of various insurance coverage options and examine the impact of health status on affordability. Thus, we substituted a matrix of our own estimates of total health care expenses (premiums plus out-of-pocket costs) for the Standard's single measure in each region. We used these numbers in conjunction with the Standard's estimates for all other living expenses to generate what we term the "Adjusted Self-Sufficiency Standard." We present a detailed description of our health care expense estimates below.

Family Type

From the 70 family types used to calculate the Self-Sufficiency Standard, we chose 12 family types for this analysis to allow variability without generating an overwhelming amount of information (Table 3). The basis for our selection was evidence about those family types most likely to be uninsured and those family types that represent large numbers of Washington families. For example, we included the single-adult family with no children to reflect the fact that young adults (ages 19-34) made up the largest proportion of the uninsured in Washington in 2000 (43.4 percent) and had the highest rate of uninsurance (16.5 percent) of any age category. The two-adult family with no children represents an age group (55-64) that accounted for another 6.5 percent of the uninsured population in 2000, with an uninsurance rate of 5.9 percent. Families with children make up nearly one-quarter of the uninsured (Research Deliverable 3.1. *Targeting the Uninsured in Washington State*).

Child care is one of the largest expense categories for low-income families. The Standard (and our Adjusted Standard) makes separate estimates of child care expenses for different aged children. Because we had no data on the dominant ages of uninsured children, we selected family types to represent a range of dependent ages (and therefore a range of child care expenses).

Table 3. Description of Family Types

Abbreviation	Family Type
1A	1 Adult (age 20), no children
1A, 1I	1 Adult (age 20), 1 infant
1A, 1S	1 Adult (age 30), school age child
1A, 1T	1 Adult (age 40), 1 teenager
1A, 1I, 1P	1 Adult (age 20), 1 infant, 1 preschooler
1A, 2S	1 Adult (age 30), 2 school age children
1A, 2P, 2S, 1T	1 Adult (age 40), 2 preschoolers, 2 school age children, 1 teenager
2A	2 Adults (age 55), no children
2A, 1I, 1P	2 Adults (age 30), 1 infant, 1 preschooler
2A, 2S	2 Adults (age 30), 2 school age children
2A, 2T	2 Adults (age 40), 2 teenagers
2A, 1P, 1S, 1T	2 Adults (age 40), 1 preschooler, 1 school age child, 1 teenager

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Although the Standard does not distinguish among adults of different ages, health insurance premiums frequently do vary by age of adult. Therefore, we made simplifying assumptions about the ages of adults based on the family type and/or ages of the children in the family. These assumptions are intended to facilitate comparison and are included in Table 3.

Geographic Area.

We used the geographic areas defined by the Washington State Population Survey (WSPS). We selected these areas to be consistent with other pieces of our analysis in which we used income and other data from the survey (Report 3.1 *Targeting the Uninsured in Washington State*). The WSPS areas include three single-county areas (King, Clark, and Spokane counties) and five multiple-county areas (North Sound, West Balance, Other Puget Sound Metro, East Balance, and Yakima-Tri-Cities). Appendix B lists the eight areas and the counties they include. In multiple county areas, we selected a single county from among the most populous counties, based on feedback from a variety of stakeholders. The counties we selected (Whatcom, Jefferson, King, Pierce, Clark, Chelan, Spokane, and Yakima), their median incomes, and the Standard for a single-adult family with an infant and a preschool child are listed in Table 4. Because the Standard is calculated for sub-county regions in King and Pierce counties (and not for the county as a whole), we selected the urban centers of both counties on the grounds that the largest number of uninsured families lives in these areas.

Table 4. Counties and Income Adequacy (2001 Dollars)

Geographic Area	Median Income	Self-Sufficiency (1A, 1I, 1P)
1. North Sound: Whatcom	$42,272	$39,136
2. West Balance: Jefferson	$39,045	$35,815
3. King County (Seattle)	$62,735	$41,843
4. Other Puget Sound Metro: Pierce	$49,265	$38,318
5. Clark County	$53,418	$39,473
6. East Balance: Chelan	$35,500	$30,906
7. Spokane County	$41,795	$33,658
8. Yakima Tri-Cities: Yakima	$35,183	$32,357

Note: A=Adult, I=Infant, P= Preschool child
Source: 2000 State Population Survey Geographic Regions; Median Income by County (2001 Forecast). www.ofm.wa.gov/poptrends/table16.pdf; Self-Sufficiency Standard for WA State, September 2001, by Diana Pearce, PhD.

Health Care Costs

Because we are interested in a measure of the affordability of specific health insurance options that may be available to low-income families, we substituted several of our own estimates of health care costs for the Standard's estimates. The Standard's health care cost estimates were based on data from the National Medical Expenditure Survey. Our estimates, like the Standard's figures, included both the share of premiums paid by families and their estimated out-of-pocket costs (e.g., deductible, co-payments, uncovered services). We added our estimates of health care expenditures to the other living expenses in the Standard to calculate the Adjusted Self-Sufficiency Standard (the Adjusted Standard).

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Coverage Options and Insurance Premiums

Premiums for health insurance vary by type of coverage. We wanted to include the major coverage options likely to be used by lower-income families in Washington. These include: Medicaid, Basic Health (BH—subsidized and unsubsidized), BH Plus (for children), State Children's Health Insurance Program (SCHIP), Washington State Health Insurance Pool (WSHIP), individual insurance, small-group insurance, and large-group insurance. For purposes of this analysis, we omitted the unsubsidized BH option on the grounds that this program is closed to new enrollees and will be for the foreseeable future. We omitted SCHIP on the grounds that it is a very small program, and most children will be covered through either Medicaid or BH Plus. We also omitted the large-group insurance option on the grounds that it is more affordable because it typically has lower premium costs for a given set of benefits. We combined BH and BH Plus, assuming that families who are eligible for (and choose) BH can and would enroll their children in BH Plus. Finally, we assumed that only one adult from a family would be screened into WSHIP, while other family members would be covered by an individual product.

For individual coverage, we assumed that the family purchases a policy for each family member. For small-group coverage, we assumed that only one worker is covered per family, with additional family members (including other adults) covered as dependents. We assumed that employers pay 75 percent of the premium for working adults and 50 percent for dependents (spouses and children). This reflects the fact that small-group coverage typically subsidizes dependents less than employees.

In recognition of the fact that the very lowest-income level families may have access to non-health care subsidies (e.g., child care subsidies and food stamps), the two options that target these families are modeled in two ways: one assuming other subsidies and one assuming no other subsidies. Thus, the seven coverage options we modeled are:

- Medicaid, no other subsidies
- Medicaid, other subsidies (food stamps and child care, as used in the Pearce model)
- BH/BH Plus, no other subsidies
- BH/BH Plus, other subsidies (as above)
- Small-group coverage
- Individual coverage
- WSHIP/Individual

A number of programs are included under the Medicaid label. Each has separate eligibility criteria, including income, assets, and a variety of categorical requirements. At the present time, none of the Medicaid programs require cost sharing. Thus, out-of-pocket health care expenses (premiums, deductibles, and co-payments) are zero for covered services for all Medicaid programs across all counties, all family types, and all health status levels. The Adjusted Standard for a participating family type in a participating county, therefore, is the same (zero) for all Medicaid programs for which the family is eligible. To reflect this uniformity in out-of-pocket health care expenses across Medicaid programs, we have labeled the Adjusted Standard for this coverage option with the general term *Medicaid* in Tables 5 and 6 and in Appendices C and D. Because our desire (and our necessity) was to be illustrative rather than comprehensive in our selection of options to model, our calculation of Medicaid income eligibility in Tables 9 and 11 and Figure 9 is based on the relatively straightforward income limits of the TANF program (see

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Table 9). For simplicity, we calculated income eligibility for all family members together even though children may be eligible for some Medicaid programs at higher levels of income than adults.

We used premium data for the public programs from published program materials and telephone conversations with agency staff. For BH we calculated premiums based on the upper income level (185-200 percent FPL) with children eligible for no-cost BH Plus coverage.* For WSHIP we selected Plan 3—Network Plan (Non-Medicare) $500 deductible program. This option has the highest current enrollment (other than the Medicare option). WSHIP discounts for members over age 50 with income < 301% FPL and for members with continuous coverage were not included in our analysis.

For the individual coverage option we selected the Premera Personal Prudent Buyer Program Option 2—$500 deductible plan for non-smokers. This program is available in all but one county and represents a common plan design. We derived the premium figures from a carrier survey conducted by the study team for this project by William M. Mercer, Inc.

For small-group coverage we obtained information from several sources, including brokers and health plans. We developed an average plan and premium based on all sources of information. That plan design included a $200 deductible, 90 percent coinsurance, $15 co-pay per prescription, and a $2,500 out-of-pocket maximum. The baseline total premium for 2001 is estimated at $210 per employee per month, $262.50 (25 percent more) for spouses, and $189 (90 percent of employee rate) for any number of children in a family (these amounts represent full-cost health plan insurance premium—the employer subsidy percentages discussed above are applied to these figures). These factors and this rate tier structure are commonplace.

In general, health insurance premiums do not vary by geographic regions as small as counties. Medicaid is free to all enrollees across the state. BH premiums are statewide (the lowest-cost plan was offered in all regions in 2001), and WSHIP premiums no longer vary by region. In the individual market there is some variation within some carriers. However, the program we selected has statewide premium rates. For the small-group market we believe the geographic variation in rates is small and overshadowed by other rating factors. One point estimate we were able to obtain showed less than a 5 percent variation across the regions of this study.

Health Status and Out-of-Pocket Expenses

Families incur out-of-pocket health care expenses beyond their premiums. Cost-sharing provisions such as deductibles, co-payments, and coinsurance must be paid by members when they use health care. These out-of-pocket costs vary greatly based on the design of the health plan and the health of the family. For example, a plan design with a $500 deductible has significantly more cost to a person with a serious illness than a $10 co-pay plan. From a health status point of view, a person with no health care use pays nothing beyond the monthly premium, but a person with a serious illness can pay thousands of dollars in deductibles, co-payments,

* This was a simplifying assumption chosen prior to the calculation of the Adjusted Standard. Final Adjusted Standard results vary in relation to FPL (by health status, family type, and geography). In several cases (where the Adjusted Standard is less than 185 percent FPL) the BH premiums could be somewhat lower and thus more easily afforded. In some cases, the Adjusted Standard with the BH premium exceeds 200 percent FPL. At least the adults in family types with this level of income might be income ineligible for BH (although the BH rules allow families to deduct child care expenses up to $650 per month).

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coinsurance and prescription drug costs. In recognition of the fact that families whose members have different health status have different out-of-pocket expenses, we selected three levels of health status and made assumptions about their use of services.

Healthy: No out-of-pocket costs beyond the insurance premium.

Average: Out-of-pocket costs were calculated as the average of members' co-payments, coinsurance, and deductibles.

Sick: Cost sharing for a sicker family member is somewhat more complex. In plans with out-of-pocket maximum caps for members, we used that amount as an upper level of out-of-pocket costs. For plans without such features, out-of-pocket costs could be (theoretically) infinite. Where plan-defined caps on out-of-pocket expenses did not exist, we targeted the out-of-pocket costs for a member at the 90th percentile of total costs.

Because this is a family analysis, and in recognition of time and budget constraints, we assumed that no family member in the "healthy" families used any health care in the year. For the "average" families, we assumed that all family members had average health care use. For the "sick" families, we assumed that two family members hit the out-of-pocket limit or 90th percentile.* Although we recognize that this may not perfectly reflect many families' health status, it represents a reasonable compromise between the need for analytic simplicity and the complexity of reality.

All out-of-pocket costs were calculated using standard actuarial procedures and tables representing health care utilization and cost per service for a commercially insured population.[†] Table 5 lists the out-of-pocket cost levels (above and beyond premium payments) by plan for families with different health status levels.

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* When we assessed the out-of-pocket costs for the "sick" family in the WSHIP/Individual insurance option, we assumed that the WSHIP member and one other family member (in the Individual plan) hit their out-of-pocket maximum limit

[†] Standard actuarial tables include information on the number of visits, admissions, prescriptions, and other services. Out-of-pocket costs are derived by considering these use rates in conjunction with plan features. For example, if the average number of office visits per member is four and the plan calls for a $10 co-pay, $40 of annual cost sharing is generated. After all cost sharing is calculated in this way and summed, an average is calculated per insured person. For convenience, this average is converted to a percentage of the insurance premium. This percentage (which varies by plan) times the full insurance premium paid to the plan for a specific family type generates the costs shown in Tables 6A-6D for families with average health status. For example, for a two-adult, two-child family of average health status covered by a small-group policy, total health care expenses would be calculated as follows:

Premiums = [$210/month (employee) x 12 months] x .25 (employee's share) + [($262.50/month (spouse) x 12 months) + ($189/month (2 children) x 12 months)] x .5 (employee share) = $3339

Out-of-pocket expenses = $7938 x 16.2% = $1286

Total expenses = $3339 + $1286 = $4625/year

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Table 5: Out-of-Pocket Cost Sharing Beyond Monthly Premiums by Plan and Health Status

	Healthy	Average (% of total insurance premium)	Sick * ($ per person)
Medicaid	-none-	-none-	-none-
Basic Health	-none-	13.5%	$1,300
Small Group	-none-	16.2%	$3,040
Individual	-none-	30.4%	$2,680
WSHIP	-none-	17.3%	$1,500

Total Health Care Expenses

The family's share of health care premiums (without out-of-pocket expenses) across coverage options and family composition varies from zero to $9064 per month for single-adult families (the latter figure is for a single adult in WSHIP and five children with individual insurance), and from zero to $9580 per month for two-adult families (the latter figure is for two adults, one of whom is in WSHIP and one of whom has individual insurance, and three children all of whom have individual insurance). Premiums for Medicaid coverage are zero for all family types and health status levels; out-of-pocket costs are zero for healthy families of all types and for all coverage options. Total premiums paid on behalf of BH/BH Plus enrollees are lower than for private options for all families. Premiums for individual coverage are lower than for small-group coverage for all single-adult families except the largest one; for two-adult families, relative premiums of the two options vary by family type. The WSHIP/ Individual option's premium also varies in relation to the other private options, but it is frequently highest. Tables 6A through 6D give the estimates for premiums and out-of-pocket costs for all family types, all health status levels, and all five insurance programs.

* For BH there is no explicit out-of-pocket limit. We assumed two admissions, $75 per month in co-payments for prescriptions, 12 office visits, one ambulance call, and one outpatient facility charge. The small-group plan design assumes $2500 out-of-pocket maximum (not including prescription drugs) plus 36 prescriptions per year. Individual plan design includes a $2000 out-of-pocket maximum (not including prescription drugs) plus $200 deductible and $40 per month in co-payments for prescriptions. WSHIP has a $1000 out-of-pocket maximum for medical and $500 for prescription drug coverage.

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Table 6A. Annual Health Care Costs for Coverage Options in One-Adult Publicly Insured Families, All Washington Counties

Family Type	Medicaid				Basic Health			
	Total Insurance Premium	Member's Share of Total Premium	Additional Out-of-Pocket Costs	Total	Total Insurance Premium	Member's Share of Total Premium	Additional Out-of-Pocket Costs	Total
1 Adult (age 20)								
Healthy	0	0	0	0	1555	715	0	715
Average	0	0	0	0	1555	715	210	925
Sick	0	0	0	0	1555	715	1300	2015
1 Adult (age 20), 1 infant								
Healthy	0	0	0	0	1555	715	0	715
Average	0	0	0	0	1555	715	210	925
Sick	0	0	0	0	1555	715	1300	2015
1 Adult (age 30), 1 school age child								
Healthy	0	0	0	0	1555	715	0	715
Average	0	0	0	0	1555	715	210	925
Sick	0	0	0	0	1555	715	1300	2015
1 Adult (age 40), 1 teenager								
Healthy	0	0	0	0	1994	917	0	917
Average	0	0	0	0	1994	917	269	1186
Sick	0	0	0	0	1994	917	1300	2217
1 Adult (age 20), 1 infant, 1 preschool								
Healthy	0	0	0	0	1555	715	0	715
Average	0	0	0	0	1555	715	210	925
Sick	0	0	0	0	1555	715	1300	2015
1 Adult (age 30), 2 school age								
Healthy	0	0	0	0	1555	715	0	715
Average	0	0	0	0	1555	715	210	925
Sick	0	0	0	0	1555	715	1300	2015
1 Adult (age 40, 2 preschool, 2 school age, 1 teenager								
Healthy	0	0	0	0	1994	917	0	917
Average	0	0	0	0	1994	917	269	1186
Sick	0	0	0	0	1994	917	1300	2217

Note: BH premiums vary by age of adult. The premium for dependent children is a flat rate regardless of number. Premiums for individual coverage and WSHIP also vary by age of adult.

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Table 6B. Annual Health Care Costs for Coverage Options in One-Adult Privately Insured Families, All Washington Counties

Family Type	Small Group				Individual				WSHIP/Individual			
	Total Insurance Premium	Member's Share of Total Premium	Additional Out-of-Pocket	Total	Total Insurance Premium	Member's Share of Total Premium	Additional Out-of-Pocket	Total	Total Insurance Premium	Member's Share of Total Premium	Additional Out-of-Pocket	Total
1 Adult (age 20)												
Healthy	2520	630	0	630	1728	1728	0	1728	2170	2170	0	2170
Average	2520	630	408	1038	1728	1728	526	2254	2170	2170	374	2544
Sick	2520	630	3040	3670	1728	1728	2680	4408	2170	2170	1500	3670
1 Adult (age 20), 1 infant												
Healthy	4788	1764	0	1764	2856	2856	0	2856	3298	3298	0	3298
Average	4788	1764	776	2540	2856	2856	869	3725	3298	3298	718	4016
Sick	4788	1764	6080	7844	2856	2856	5360	8216	3298	3298	4180	7478
1 Adult (age 30), 1 school age child												
Healthy	4788	1764	0	1764	3216	3216	0	3216	3861	3861	0	3861
Average	4788	1764	776	2540	3216	3216	979	4195	3861	3861	815	4676
Sick	4788	1764	6080	7844	3216	3216	5360	8576	3861	3861	4180	8041
1 Adult (age 40), 1 teenager												
Healthy	4788	1764	0	1764	3900	3900	0	3900	4552	4552	0	4552
Average	4788	1764	776	2540	3900	3900	1187	5087	4552	4552	934	5486
Sick	4788	1764	6080	7844	3900	3900	5360	9260	4552	4552	4180	8732
1 Adult (age 20), 1 infant, 1 preschool												
Healthy	4788	1764	0	1764	3984	3984	0	3984	4426	4426	0	4426
Average	4788	1764	776	2540	3984	3984	1213	5197	4426	4426	1061	5487
Sick	4788	1764	6080	7844	3984	3984	5360	9344	4426	4426	4180	8606
1 Adult, 2 school age (adult age 30)												
Healthy	4788	1764	0	1764	4344	4344	0	4344	4989	4989	0	4989
Average	4788	1764	776	2540	4344	4344	1322	5666	4989	4989	1159	6148
Sick	4788	1764	6080	7844	4344	4344	5360	9704	4989	4989	4180	9169
1 Adult (age 40), 2 preschool, 2 school age, 1 teenager												
Healthy	4788	1764	0	1764	8412	8412	0	8412	9064	9064	0	9064
Average	4788	1764	776	2540	8412	8412	2561	10973	9064	9064	2308	11372
Sick	4788	1764	6080	7844	8412	8412	5360	13772	9064	9064	4180	13244

Note: BH premiums vary by age of adult. The premium for dependent children is a flat rate regardless of number. Premiums for individual coverage and WSHIP also vary by age of adult.

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Table 6C. Annual Health Care Costs for Coverage Options in Two-Adult Publicly Insured Families, All Washington Counties

Family Type	Medicaid				Basic Health			
	Total Insurance Premium	Member's Share of Total Premium	Additional Out-of-Pocket Costs	Total	Total Insurance Premium	Member's Share of Total Premium	Additional Out-of-Pocket Costs	Total
2 Adults (age 55)								
Healthy	0	0	0	0	6818	3137	0	3137
Average	0	0	0	0	6818	3137	920	4057
Sick	0	0	0	0	6818	3137	2600	5737
2 Adults, (age 30) 1 infant, 1 preschool								
Healthy	0	0	0	0	3110	1431	0	1431
Average	0	0	0	0	3110	1431	420	1851
Sick	0	0	0	0	3110	1431	2600	4031
2 Adults (age 30), 2 school age								
Healthy	0	0	0	0	3110	1431	0	1431
Average	0	0	0	0	3110	1431	420	1851
Sick	0	0	0	0	3110	1431	2600	4031
2 Adults (age 40), 2 teenagers								
Healthy	0	0	0	0	3987	1834	0	1834
Average	0	0	0	0	3987	1834	538	2372
Sick	0	0	0	0	3987	1834	2600	4434
2 Adults (age 40), 1 preschool, 1 school age, 1 teenager								
Healthy	0	0	0	0	3987	1834	0	1834
Average	0	0	0	0	3987	1834	538	2372
Sick	0	0	0	0	3987	1834	2600	4434

Note: BH premiums vary by age of adult. The premium for dependent children is a flat rate regardless of number. Premiums for individual coverage and WSHIP also vary by age of adult.

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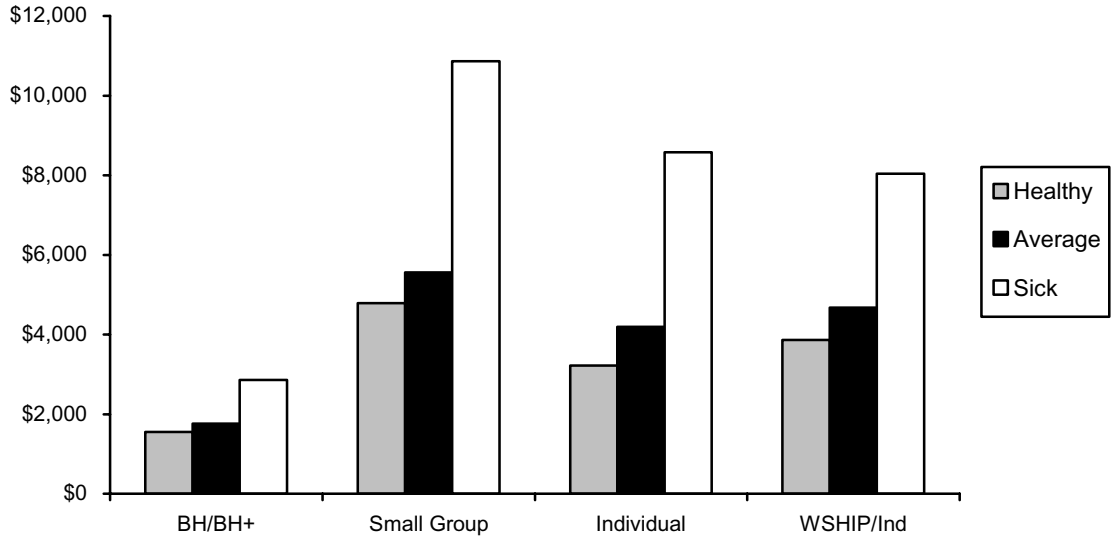
Table 6D. Annual Health Care Costs for Coverage Options in Two-Adult Privately Insured Families, All Washington Counties

Family Type	Small Group				Individual				WSHIP/Individual			
	Total Insurance Premium	Member's Share of Total Premium	Additional Out-of-Pocket	Total	Total Insurance Premium	Member's Share of Total Premium	Additional Out-of-Pocket	Total	Total Insurance Premium	Member's Share of Total Premium	Additional Out-of-Pocket	Total
2 Adults (age 55)												
Healthy	5670	2205	0	2205	8424	8424	0	8424	9572	9572	0	9572
Average	5670	2205	919	3124	8424	8424	2564	10988	9572	9572	2206	11778
Sick	5670	2205	6080	8285	8424	8424	5360	13784	9572	9572	4180	13752
2 Adults (age 30), 1 infant, 1 preschool												
Healthy	7938	3339	0	3339	6432	6432	0	6432	7077	7077	0	7077
Average	7938	3339	1286	4625	6432	6432	1958	8390	7077	7077	1794	8871
Sick	7938	3339	6080	9419	6432	6432	5360	11792	7077	7077	4180	11257
2 Adults (age 30), 2 school age												
Healthy	7938	3339	0	3339	6432	6432	0	6432	7077	7077	0	7077
Average	7938	3339	1286	4625	6432	6432	1958	8390	7077	7077	1794	8871
Sick	7938	3339	6080	9419	6432	6432	5360	11792	7077	7077	4180	11257
2 Adults (age 40), 2 teenagers												
Healthy	7938	3339	0	3339	7800	7800	0	7800	8452	8452	0	8452
Average	7938	3339	1286	4625	7800	7800	2374	10174	8452	8452	2121	10573
Sick	7938	3339	6080	9419	7800	7800	5360	13160	8452	8452	4180	12632
2 Adults (age 40), 1 preschool, 1 school age, 1 teenager												
Healthy	7938	3339	0	3339	8928	8928	0	8928	9580	9580	0	9580
Average	7938	3339	1286	4625	8928	8928	2718	11646	9580	9580	2465	12045
Sick	7938	3339	6080	9419	8928	8928	5360	14288	9580	9580	4180	13760

Note: BH premiums vary by age of adult. The premium for dependent children is a flat rate regardless of number. Premiums for individual coverage and WSHIP also vary by age of adult.

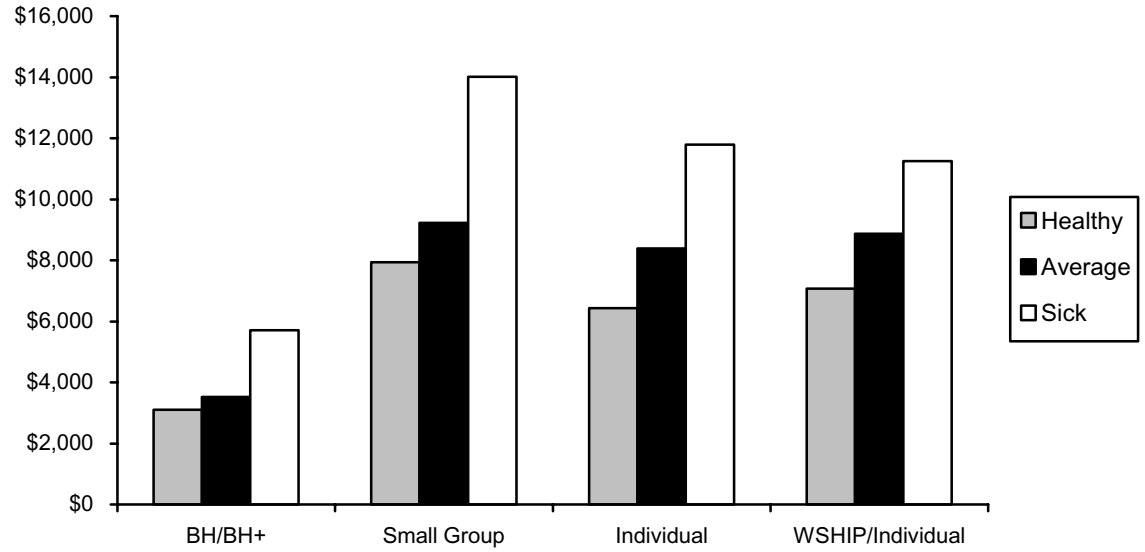
Total out-of-pocket health care expenses (premiums, cost-sharing, and non-covered services) vary dramatically by family size, health status, and coverage option. Figures 8A and 8B illustrate this point for two family types. For the one adult/one school age child family type, sick families pay 267 percent of what healthy families pay for health care expenses with individual insurance. For the two adult/one infant/one preschool child family type, sick families pay 183 percent of what healthy families pay with individual coverage. For the single adult family type in Figure 8A, health care expenses for sick adults with small-group coverage are 389 percent of what sick families enrolled in BH/BH Plus pay. For the two-adult family type in Figure 8B, that figure is 234 percent.

Figure 8A. Annual Health Care Expenses by Health Status: 1 Adult, 1 School-Aged Child, All Washington Counties



Note: 2001 dollars; Medicaid is not displayed because families enrolled in Medicaid have no out-of-pocket health care expenses.
Source: William M. Mercer, Inc.

Figure 8B.Annual Health Care Expenses by Health Status: 2 Adult, 1 Infant, 1 Preschool-Aged Child, All Washington Counties



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Note: 2001 dollars; Medicaid is not displayed because families enrolled in Medicaid have no out of pocket health care expenses.
Source: William M. Mercer, Inc.

Findings

The Adjusted Standard measures the income required for a family to pay its basic living expenses and purchase health insurance coverage for all its members.* As expected, the Adjusted Standard varies significantly across counties because living expenses vary. For example, a healthy, single adult living in Whatcom County would need a total annual income of $15,358 to be able to afford to enroll in BH and also have enough money to pay for the rest of his or her living expenses without other public support, such as food stamps and child care subsidies (Table 7). The same individual would need $16,809 to afford an individual policy. Because of geographic differences in the cost of basic expenses, an income of $12,988 would allow a healthy, single adult to enroll in BH in Chelan County; an income of $14,439 would allow the purchase of an individual policy. In King County (Seattle), he or she would need $14,233 to enroll in BH or $15,685 for an individual policy. In all cases, annual health care expenses (premiums only: out-of-pocket expenses are zero for all healthy families) are $720 for BH and $1728 for individual coverage. The Adjusted Standards for all family types, all eight counties, and each health status level for all seven coverage options appear in Appendix C.† The tables in Appendix C show the details for all the living expense categories underlying the Adjusted Standard, including health care expenses.

Table 7. Adjusted Self-Sufficiency Standard for One Healthy Adult—Basic Health (without supports) and Individual Coverage

	BH/BH+	Individual
Whatcom	$15,358	$16,809
Chelan	$12,988	$14,439
King	$14,233	$15,685

The Adjusted Standard is affected by family size and the ages of the dependents (largely because of child care expenses). A single healthy adult with two school-age children and no food stamps or child care subsidies needs $25,116 to enroll in BH/BH Plus in Whatcom County, $19,282 in Chelan County, and $29,647 in King County (Seattle) (Table 8). If the single adult family's two dependents are an infant and a preschooler, the Adjusted Standard when all members are healthy and enrolled in BH/BH Plus with no other public supports is $35,966 in Whatcom County, $26,943 in Chelan County, and $38,671 in King County (Seattle).

Table 8. Adjusted Self-Sufficiency Standard for Healthy Families—Basic Health Coverage

	Whatcom	Chelan	King
1A, 2S	$25,116	$19,282	$29,647
1A, 1I, 1P	$35,966	$26,943	$38,671

* The Adjusted Standard substitutes our measure of health care costs for the original estimate used by Pearce (2001).
† The original Self-Sufficiency Standard calculated by Pearce appears in Appendix C for comparison purposes.

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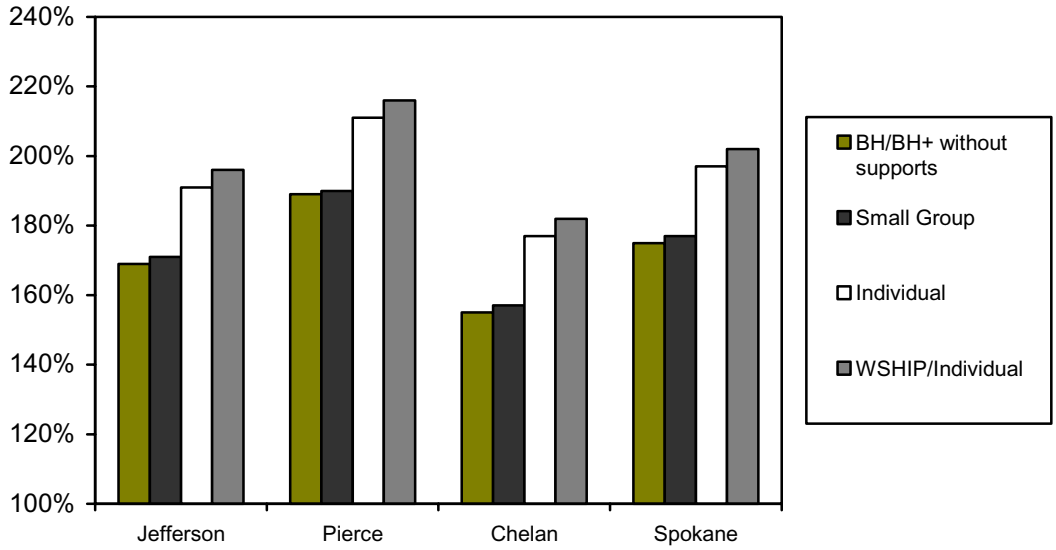
The Adjusted Standard is greater than 100 percent FPL for all family types in all counties for all coverage options. That is, families need incomes greater than 100 percent FPL to cover their basic living expenses, even with Medicaid coverage for which health care expenses are zero. When health care expenses are included and families receive no food stamps or child care subsidies, the Adjusted Standard ranges from a low of 124 percent FPL for a healthy family enrolled in a Medicaid program living in King County (Seattle) with two adults and two teenagers, to a high of 362 percent FPL for a sick single-adult family in King County (Seattle) with five children that purchases individual insurance. Between these two extremes, there is much variation by family type, county, health status, and coverage option. Figures 9A through 9D illustrate this variation for four family types and five coverage options for Jefferson, Pierce (Tacoma), Chelan, and Spokane Counties. As noted earlier, we used the TANF income limits in Table 9 to determine Medicaid income eligibility, and we assume income eligibility is the same for all family members.* In Figure 9A, for example, a single adult of average health status needs an income of about 180 percent FPL to meet his or her basic living expenses (including the health care expenses associated with enrollment in WSHIP) in Chelan County; about 200 percent FPL in Spokane County. In Figure 9B, a family with one adult, one infant, and one preschooler needs an income of about 260 percent FPL in Pierce County (Tacoma); closer to 240 percent FPL in Jefferson County. Figures 9C and 9D illustrate these figures for a two-adult family (9C) and a two-adult family with one infant and one preschooler (9D).

Appendix D presents the Adjusted Standard as a percent of FPL for all family types and all counties.

Figure 9A. Adjusted Self-Sufficiency Standard as a Percent of the Federal Poverty Level for Families of Average Health Status in Select Washington Counties: 1 Adult†

Source: 2001 Federal Poverty Guidelines (FPL). http://aspe.hhs.gov/poverty/01poverty.htm (1/23/01); Self-Suf



* Alternatively, the income eligibility results could be interpreted to apply to the adult members of the family, with income eligibility of dependents unknown (because children can qualify for some Medicaid programs at higher family incomes levels than can adults).

† Medicaid is not displayed because families with adequate incomes exceed the TANF income limits.

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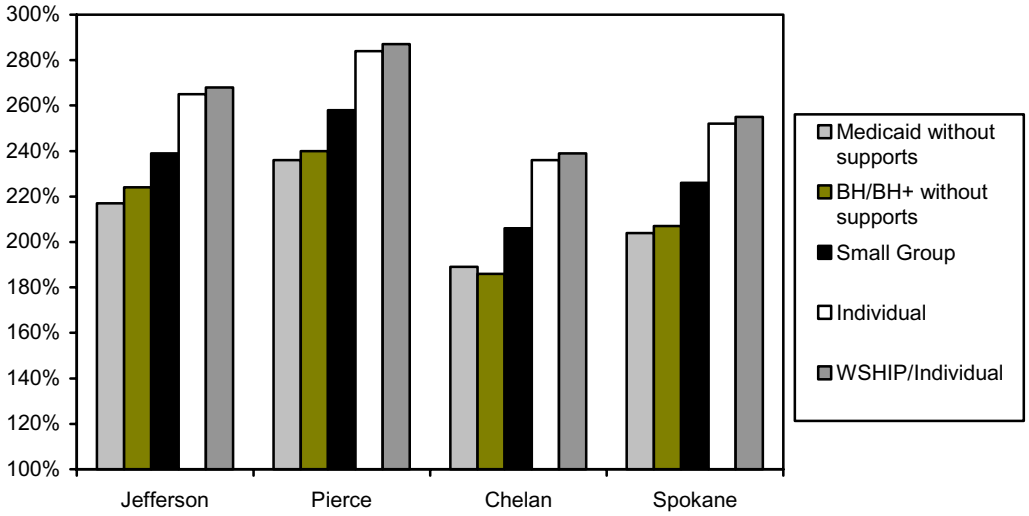
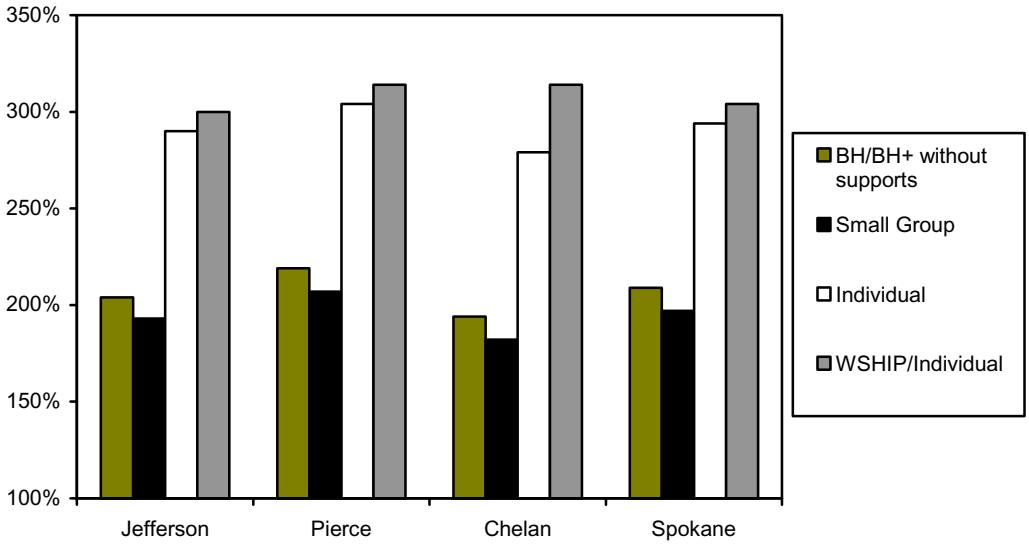
Figure 9B. Adjusted Self-Sufficiency Standard as a Percent of the Federal Poverty Level for Families of Average Health Status in Select Washington Counties: 1 Adult, 1 Infant, 1 Preschool-Aged Child



Source: 2001 Federal Poverty Guidelines (FPL). http://aspe.hhs.gov/poverty/01poverty.htm (1/23/01); Self-Sufficiency Standard for WA State, September 2001, by Diana Pearce, PhD.

Figure 9C. Adjusted Self-Sufficiency Standard as a Percent of the Federal Poverty Level for Families of Average Health Status in Select WA Counties: 2 Adults*



Source: 2001 Federal Poverty Guidelines (FPL). http://aspe.hhs.gov/poverty/01poverty.htm (1/23/01); Self-Sufficiency Standard for WA State, September 2001, by Diana Pearce, PhD.

* Medicaid is not displayed because families with adequate incomes exceed the TANF income limits.

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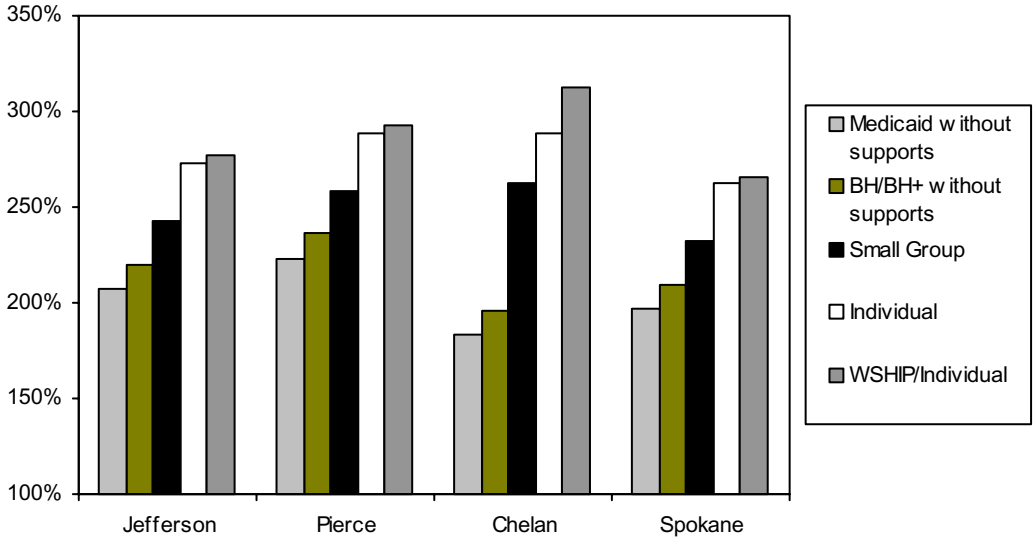
Figure 9D. Adjusted Self-Sufficiency Standard as a Percent of the Federal Poverty Level for Families of Average Health Status in Select WA Counties: 2 Adults, 1 Infant, 1 Preschool- Age Child



Source: 2001 Federal Poverty Guidelines (FPL). http://aspe.hhs.gov/poverty/01poverty.htm (1/23/01); Self-Sufficiency Standard for WA State, September 2001, by Diana Pearce, PhD.

In some cases, the income required to meet all basic living expenses is so high that families with this income may not meet the income criteria to be eligible for public programs. For example, many family types need incomes higher than TANF limits in order to meet their basic living expenses (the TANF income limits appear at the bottom of Table 9). For illustrative purposes, we used TANF limits to define income eligibility for Medicaid coverage. We compared TANF limits to the monthly Adjusted Standard using the TANF income calculation: Income (the Adjusted Standard) minus 50 percent of income (the Adjusted Standard) minus child care expenses (see sample calculation below). Using this definition of Medicaid income eligibility, Table 9 indicates for which family types in which counties Adjusted Standard-based incomes are less than the TANF income limits.

Our results indicate that families without children with income levels that allow them to meet their basic living expenses have incomes higher than the TANF income limit. Three family types (a single adult with two very young children, a single adult with five children, and a two-adult family with two very young children) have incomes lower than the limit in all counties. None of the family types, when they receive government child care supports and food stamps, have incomes lower than the TANF limits. This follows from the fact that their earned income requirements are lower, which reduces the 50 percent income disregard, and their deductible child care expenses are minimal.

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Table 9. Family Types with Adjusted Standard Incomes Below TANF Income Limits, with No Other Supports

County	Family Type					
	1A, 1I, 1P	1A,2S	1A,2P,2S,1T	2A,1I,1P	2A, 2S	2A, 2T
Whatcom	X		X	X		
Jefferson	X		X	X		
King	X	X	X	X	X	X
Pierce	X		X	X		
Clark	X	X	X	X		
Chelan	X		X	X		X
Spokane	X		X	X		
Yakima	X	X	X	X		

A=Adult; I=Infant; P=Preschool child; S=School-age child; T=Teen
Note: No family types with other supports have Adjusted Standard incomes below TANF limits.

TANF Monthly Income Limit (Income = Adjusted Standard-50 percent of Adjusted Standard – Child Care Costs)*

Family Size	Limit
1	$349
2	$440
3	$546
4	$642
5	$740
6	$841

Sample calculation for Table 9: One adult, one infant, one preschooler in Clark County†

Adjusted Standard for Medicaid coverage with no other supports (per month) =	$2956
50% income disregard	- 1478
Child care deduction	- 1127
Adjusted "income"	$ 351
TANF income limit for three-person family =	$ 546
Income eligible for TANF?	

The picture for BH/BH Plus eligibility is quite different. We calculate income for purposes of determining BH eligibility as the monthly Adjusted Standard minus child care expenses up to $650 per month (Health Care Authority, 2002). If this figure is less than the BH income limits (displayed at the bottom of Table 10), we deem the family income eligible (see sample calculations below). With the exception of two-adult families with no dependents and single-adult families with no dependents and poor health status, all family types are eligible for BH/BH Plus at income levels that allow them to pay their basic living expenses (including the health care expenses associated with BH/BH Plus enrollment). The family types with Adjusted Standard incomes above BH limits are shown in Table 10.

* The TANF monthly income limits were last updated in 1993 (WAC 388-250-140).
† The 50% earned income disregard and child care expense deduction was added in 1997 (RCW 74.08A.23).

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Table 10. Family Types with Adjusted Standard Incomes Higher than BH Limits, with No Other Supports

Family Type	County							
	Whatcom	Jefferson	King	Pierce	Clark	Chelan	Spokane	Yakima
1 Adult								
Healthy								
Average								
Sick	X*			X	X			
2 Adults								
Healthy	X			X	X			
Average	X	X		X	X		X	X
Sick	X	X	X	X	X	X	X	X

* Without other supports only

BH Income Limits (Income = Adjusted Standard – Child Care Costs up to $650)

Family Size	Cutoff
1	$1,431
2	$1,935
3	$2,438
4	$2,941
5	$3,445
6	$3,948

Sample calculations for Table 10:

Two adults, no dependents in Pierce County (Tacoma)

Adjusted Standard for BH coverage, average health, with no other supports (per month)=	$2117
BH income limit for two-person family =	$ 1935
Income eligible for BH?	No

One adult, two school age dependents in Pierce County (Tacoma)

Adjusted Standard for BH/BH Plus coverage, average health, with food stamps and child care subsidies (per month)=	$2077
Child care deduction (to $650)	- 220
Adjusted "income" =	$1857
BH/BH Plus income limit for three-person family =	$2438
Income eligible for BH/BH Plus?	Yes

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Medicaid Cost Sharing

The state of Washington has submitted a request to the federal government for a waiver that would require recipients to share in the costs of some Medicaid programs. An initial target appears to be 5 percent of family income. We estimated the effect of this level of cost sharing on the Adjusted Standard and eligibility for Medicaid using the TANF limits. We assumed two levels of income for purposes of estimating a Medicaid cost share: 100 percent and 200 percent FPL. We added these cost shares (separately) to the Adjusted Standards from Appendix C for the family types whose TANF-based incomes were below the appropriate limits at zero cost share from Table 9.

The Adjusted Standard including Medicaid cost share (calculated as 5 percent of income at 100 percent FPL) ranges from just under 200 to nearly 275 percent FPL across all family types and in all counties. By way of comparison to other public programs in our analysis, we calculated the total health care expenses (premiums and out-of-pocket costs) associated with BH/BH Plus as a percent of the Adjusted Standard including BH/BH Plus expenses (that is, as a percent of an income adequate to meet basic living expenses including those associated with enrollment in BH/BH Plus). For a family with one adult, one infant, and one preschooler in Whatcom County, BH/BH Plus expenses range from 2 percent of income for a healthy family with no other government support to 8 percent for a sick family that receives food stamps and child care subsidies (so that the income required to meet basic living expenses is lower). For a two-adult family with one infant and one preschooler, BH/BH Plus expenses range from 3.4 percent of income for a healthy family with no other supports to 8.9 percent for a sick family that receives food stamps and child care subsidies.

We reassessed Medicaid income eligibility with the added cost share, applying the 50 percent income disregard, subtracting child care expenses, and comparing the resulting figure with TANF income limits.[*] The increase in income required to cover the additional expense of a Medicaid cost share puts two-adult families with two teenagers over the TANF limits in the two remaining counties in which they had been eligible without cost sharing.(Table 11). When cost-sharing is calculated based on incomes at 200 percent of FPL, families with two adults and two school age children need incomes higher than TANF limits to cover their expenses, as do families with two adults, an infant, and a preschooler in Whatcom and Clark counties and one-adult families with five children in Whatcom county.

[*] The Adjusted Standard with a 5 percent cost share is calculated for a two-adult family with one infant and one preschooler in Whatcom County as $3355 (the Adjusted Standard with no cost-sharing) + 5 percent of $1471 (=100 percent of monthly FPL for a family of four), or $3429. At 200 percent FPL, the Adjusted Standard with cost share is $3355 + 5 percent of $2942 (=200 percent of monthly FPL for a family of four), or $3502. The TANF limit for the former family type is $642 per month, higher than the monthly allowable income calculated based on an Adjusted Standard Income of $3429 and child care expenses of $1095 per month ($620 = [$3429- (.5 x 3429)] – 1095).

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Table 11. Family Types with Adjusted Standard Incomes Below TANF Limits, with Other Supports (Among Family Types Below TANF Limits with No Cost Sharing)

	Family Type					
	1A, 1I, 1P	**2A,2S**	**1A,2P,2S,1T**	**2A,1I,1P**	**2A, 2S**	**2A, 2T**
Whatcom	Yes		Yes	Yes		
Jefferson	Yes		Yes	Yes		
King	Yes	Yes	Yes	Yes	Yes	No
Pierce	Yes		Yes	No		
Clark	Yes	Yes	Yes	Yes		
Chelan	Yes		Yes	Yes		No
Spokane	Yes		Yes	Yes		
Yakima	Yes	Yes	Yes	Yes		

A=Adult; I= Infant; P=Preschool child; S=School-age child; T=Teen

Summary and Conclusion

We used the Self-Sufficiency Standard (Pearce, 2001) for Washington as a basis for assessing the affordability of five public and private health insurance coverage programs for twelve family types at three health status levels in eight counties of Washington. We selected the Standard over several other available measures of income adequacy to determine the affordability of insurance because, unlike the federal poverty level, 50 percent of median income, or the full-time minimum wage, the Standard is sensitive to variations in family type, geographic region, and living expenses. We created an Adjusted Standard by substituting our more specific estimates of health care expenses for five coverage options most likely to be available to low-income families, and assumptions about the health status of family members.

We found that the level of income required for families to cover their basic living expenses and their health care costs is uniformly higher than FPL, sometimes more than 300 percent higher. The Adjusted Standard varies by insurance coverage option as well as geographic region, health status, and family type. Medicaid programs with no cost sharing offer the most affordable option, with the BH/BH Plus option next least expensive. Using TANF income limits to determine Medicaid eligibility, we found that families with enough income to pay for their non-health care living expenses are frequently income ineligible for this coverage. On the other hand, most families with incomes adequate to meet basic living expenses are eligible for BH/BH Plus in all areas of the state. The private insurance options are much more expensive. Families must generally have incomes well above 150 percent FPL, and often greater than 250 percent FPL to be able to pay for private coverage and meet all their other living expenses. Adding Medicaid cost sharing of 5 percent of family income to basic living expenses pushes adequate incomes over TANF limits for several family types in several counties and requires incomes in the range of 200 to 250 percent of the federal poverty level.

Links to Other Work

The purpose of this report is to assess the affordability of various insurance options available to low-income Washington residents. Our companion report, Research Deliverable 3.1 *Targeting the Uninsured in Washington State,* extends this analysis by using income information from the Washington State Population Survey to estimate the numbers and characteristics of families and individuals who have access to affordable insurance. Research Deliverable 3.1 uses the Self-

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Sufficiency Standard (Pearce, 2001) as the measure of income adequacy by which to gauge the affordability of available coverage options. Because the two Research Deliverables (3.1 and 3.3) were written simultaneously, the Adjusted Standard developed in the present report was not yet ready to be used in Research Deliverable 3.1.

Our work is similar to research conducted in other states (Kenyon, 2000; Glazner, 2000). Health care expenses made up 16 percent of the basic budget estimated in New Hampshire for a two adult/one child family. Our findings are similar for private insurance for families of average health. In Colorado, HMO premiums for a family of four averaged 36 percent FPL. Our premium estimates for a two adult/two children of school age family range from 18 percent of FPL for BH/BH Plus to 45 percent for small-group coverage (premiums for individual coverage are 36 percent FPL; for the WSHIP/individual coverage option premiums are 40 percent FPL).

Limitations

The affordability analysis in this report uses a set of assumptions about the levels of living expenses and health care utilization of families with different characteristics. Other assumptions and other estimates of basic living expenses (including health care expenses) might yield other results. For example, we used the TANF income limits in our discussion about income eligibility for Medicaid, and we assumed that income eligibility was the same for all members of the family. There is, however, a complex array of Medicaid programs, each with its own set of eligibility criteria, some of which are different for adults and children.

Because we intended to be illustrative rather than comprehensive, we restricted our analysis to eight Washington counties, twelve family types with particular age configurations, and five health insurance coverage options. We also made simplifying assumptions about health status and out of pocket health care expenses. Other geographic areas, other family types, and other insurance options (e.g., SCHIP) could be modeled. Alternative assumptions about health status overall and within families might yield different results.

Our analysis focused on the ability of families in different circumstances to *afford* alternative health care expense scenarios after meeting all their other basic living expenses. Our analysis should not be construed to provide a prediction about which families will *purchase* insurance. The insurance purchasing decision is complex, and although affordability is certainly an important factor, other factors such as values and risk aversion may be equally (if not more) important. The results of Report 3.1 support this caution. Some families that the analysis in Report 3.3 indicates *can* afford coverage do not purchase it, while other families that *cannot* afford coverage do.

The literature provides further evidence in this regard. Ku and Coughlin (1997) estimate that if two-person families at 200 percent FPL are asked to pay 7 percent of their income to participate in a public insurance program, only 10 percent of those eligible would enroll.[*] In Colorado, Glazner assumed participation rates of 45 percent for families with incomes less than 250 percent FPL in programs requiring premiums of 3 percent of income (Glazner, 2000). Other studies demonstrate the price and income sensitivity of the demand for health insurance in various populations (Gruber and Poterba, 1994; Manning and Marquis, 1996; Marquis and Long, 1995; Saver and Doescher, 2000).

[*] These findings are particularly relevant because the authors used data from Washington's BH (in combination with data from several other states) for their study.

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Implications for Public Policy

Policy makers can use this report in two ways. First, the findings based on our assumptions and limitations are useful in the immediate context. Our findings suggest that eligibility criteria for public programs targeting low income families should reflect the significant variation in living expenses across geographic regions and family types. When public programs target health care expenses of low income families, eligibility criteria should also reflect variations in the health status of family members. Using geographically and demographically static measures like FPL, 50% of median income or minimum wage in eligibility standards will result in policies that are not always focused on those in greatest need of public support.

Our findings also suggest that public policies aimed at making private insurance, particularly individual coverage, affordable for low income families would need to include substantial subsidies of both premiums and non-covered out of pocket expenses. Making Medicaid and BH/BH Plus affordable would take fewer resources. If BH/BH Plus enrollment slots were available in all counties, our analysis suggests it would be affordable to most family types with dependents.

We found that affordability, particularly of some coverage options, had predictable patterns across specific family types. For example, the BH option was less likely to be affordable for older adults with no dependent children. This result highlights the consequence of BH premiums that rise with age and the advantage of the child care expense deduction. If BH is to reach adults who no longer have dependent children or access to employer-sponsored coverage options (but do not yet qualify for Medicare), policy makers may need to reexamine the premium structure of the program.

By construction, our estimates of health care expenses (premiums and out-of-pocket expenses) are the same for all counties. However, there is substantial geographic variation in the Adjusted Standard, and thus the affordability of various statewide coverage options. This result, as well as the significant variation in the Adjusted Standard by family composition, underscores the importance of non-health care living expenses to the affordability of health care. Public policy around housing and child care expenses may do as much to affect low-income families' ability to purchase health insurance as policies that directly target premiums and eligibility.

Second, the Adjusted Standard is a robust alternative to measuring income adequacy for existing programs. Our approach to affordability using this measure has broad potential for modeling new public policy options, not only in Washington but also in other states. Alternative eligibility and coverage assumptions can easily be substituted for ours to determine overall affordability or affordability within targeted subgroups. For example, our model could be used to examine the effect of increasing the eligibility of BH to 300 percent of poverty, increasing the TANF income limits, or modifying the child care expense deduction. In the same way we have attempted to model the effect of cost sharing on the affordability of Medicaid (using TANF income criteria), policy makers could examine the effect of other alterations to existing programs or the creation of new ones. In conjunction with analyses around demographic patterns (as in Research Deliverable 3.1), our approach can be useful in modeling numbers, characteristics, and distribution of families that might be affected by new policy options.

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Extensions and Next Steps

Although it is constrained by our assumptions and data limitations, our work, offers some broad insights into both the relative and absolute affordability of various insurance options available to Washington's low-income families. Because, as we have noted, affordability of insurance is only one factor in a family's decision to purchase coverage, the payoff to substantial tinkering with the construction of the Adjusted Standard is probably small. The most productive next step would be to extend our analyses with additional coverage scenarios that reflect new approaches to making affordable coverage available to low-income Washington residents.

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