

The Real Cost of Living and Getting Healthcare in Connecticut:

The Health Economic Sufficiency Standard

A research report prepared for
The Connecticut Permanent Commission on the Status of Women
and the
Foundation for Connecticut Women
By the Women's Union

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- Statewide advocacy for economic self-sufficiency.
- Research into new trends and career possibilities for women.
- Job-readiness, technology skills training and mentoring for low-income women.
- Supportive housing for battered and homeless women and their children.

For more information, see <http://www.thewomensunion.org> or call (617) 536-5651, ext. 140.

The Women's Union collaborated with **Paul Dryfoos** to calculate the HESS and to prepare this report.

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The **Permanent Commission on the Status of Women** was established by the Connecticut General Assembly in 1973. The Commission's mandate is to inform leaders about the nature and scope of sex discrimination, to serve as a liaison between government and private interest groups concerned with services for women, to promote consideration of women for governmental positions, and to work with state agencies to assess programs and practices as they affect women and girls. For more information, see the website at <http://www.cga.ct.gov/PCSW>, or call (860) 240-8300. PCSW served as co-chair of the Advisory Committee overseeing production of this report.

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EXECUTIVE SUMMARY

KEY FINDINGS

- Access to employer-sponsored health insurance is the primary factor in family health costs and losses, and economic security – more so than health status. Whether or not family members are in poor health, families that do not have affordable ESI or an equivalent tend to be most at economic risk.
- However, family illness, even short-term ones, can cause serious risk or setbacks to family financial security. The costs include health care expenses and the income losses incurred due to caregiving.
- In most age groups, women tend to have higher “out of pocket” costs than men.
- Government-sponsored health insurance, including HUSKY B in Connecticut, strengthens family economic security for families who do not have ESI.
- Connecticut families must earn far more than the minimum wage (usually at least two times the minimum wage) and above the self-sufficiency standard to make ends meet and also pay for health care. Families who do not earn enough will not get needed care, will not be able to pay for other necessities, will accumulate medical debt and, in some cases, will file for bankruptcy.

The typical health-related “economic burden” (direct costs for health and disability insurance premiums, out of pocket expenses, and income lost due to illnesses or caregiving) is \$5,267 for a two-parent, two-child family in good health with access to employer-sponsored coverage for the adults and Connecticut HUSKY for the children. That includes \$2,489 for ESI premiums, \$2,169 for out-of-pocket costs, and \$512 for long-term disability insurance premium. A comparable family with a wage earner in fair or poor health, without access to employer-sponsored coverage, but with access to Connecticut HUSKY for the children, has a burden of \$14,535. That breaks down to \$11,849 for high risk pool, commercial non-group and HUSKY health insurance coverage combined, \$3,038 for out-of-pocket expenses, and \$2,686 for lost income due to missed work days). The burden for different family types ranges from \$1,322 for a healthy single male age 19-25 with access to employer coverage (family type 7) to \$37,306 for a couple age 55-64 in fair or poor health, without ESI access, caring for a disabled elderly relative at home (family type 9). It should be noted that these costs and losses are based, in some cases, on data from 2002 but trended forward to 2005. Because of increasing health care costs, even these estimates may seem low. For example, the Milliman Medical Index found that in 2006, an “average American family of four” would pay over \$13,000 for medical services, including premiums and out of pocket costs.¹

RECOMMENDATIONS

Connecticut policymakers must face the issues of eroding employer-sponsored coverage, an aging society, higher health care costs and rising rates of uninsured residents. Improving our health care system and reducing economic risk caused by family illness or injury require solutions that should prompt a dialogue among national and state policymakers, businesses, and residents. Short term steps include:

- Expand programs like HUSKY to include more children and caregiving adults, and streamline the enrollment.
- Target interventions to those least likely to have ESI, such as women, the working poor, part-time workers, service/retail sector employees, childless adults, and workers in small firms.

- Expand business and consumer access to short and long-term disability insurance products.
- Strengthen and expand employer-sponsored insurance, particularly for smaller firms.
- Study private insurer's policies that restrict health insurance benefits to certain employees or that impose exclusions and limitations.
- Make paid sick leave available to all Connecticut workers.

The Real Cost of Living and Getting Health Care in Connecticut:

The Health Economic Sufficiency Standard

The Connecticut Health Economic Sufficiency Standard (HESS) measures the economic burden of health care and illness on Connecticut Families. HESS is a study of the costs for access to health services and the economic consequences of illness for “typical” Connecticut families. That includes those with access to employer-sponsored health insurance (ESI) and those who purchase non-group insurance themselves. *The Real Cost of Living and Getting Healthcare in Connecticut, or “HESS”* assumes that high quality ESI or an equivalent social insurance program is essential for families’ health security. ESI covers 62% of Connecticut residents and accounts for 45% of health care costs. But 25% of the state’s population relies on public programs such as Medicare and Medicaid. Another 3% purchase individual coverage, often at high cost, and 11% are uninsured.²

The Real Cost of Living and Getting Healthcare in Connecticut report is a companion to the 2005 study *The Real Cost of Living in Connecticut*, which updated the Connecticut Family Economic Self-Sufficiency Standard (FESS). FESS measures the income needed by families with different compositions in different geographic locations to adequately meet basic needs—**without public or private assistance**. Family incomes used for the HESS study are too high to qualify for HUSKY A.

Our health care system in the United States and in Connecticut relies primarily on employer-sponsored health insurance (ESI). In post- World War II, the number of workers receiving employer sponsored health coverage expanded greatly. Some argue that this system was suited to a time when workers spent their entire careers with one company, and health care was less expensive. Then it was 5% of gross domestic product. Today it is nearly 15%.³

Health costs consume a growing portion of family incomes. Since 2000, the average commercial Connecticut health plan premium rose 56 percent while wages only increased by 14 percent.⁴ In 2000 Connecticut spent nearly \$5,000 per person on health care annually – 24 percent higher than the United States average.⁵ Our state is the 6th most expensive state in the United States for family coverage and 12th highest for individual coverage.

The Permanent Commission on the Status of Women and its partner, the Foundation for Connecticut Women, recognized that few tools existed to help policymakers as they considered the impact of health care costs on individual or family finances. Universal Health Care Foundation provided funding and contracted with the Women’s Union in Boston to conduct a study and produce the Connecticut Health Economic Sufficiency Standard. The HESS is an economic modeling study designed to increase understanding of the economic burden of health care and illness. By capturing health-related costs and losses in a single model, HESS enables us to develop holistic, public policy responses to health access, illness and disability.

THE HEALTH ECONOMIC SUFFICIENCY STANDARD (HESS) – AN ECONOMIC MODELING STUDY

Even when families have working adults with access to employer sponsored health insurance, they bear significant costs: insurance premiums; out of pocket expenses for services not covered; lost earnings due to illness. This report is based on an economic model of the costs to families to pay for insurance and other health expenses. The model is based on three possible situations: good employer-sponsored insurance benefits, where the employer pays the average share of the premium; “underinsured” where the worker pays 50% of the premium; and “no ESI” where the worker buys non-group insurance and pays the full cost.

Estimates of health-related economic burdens were calculated for twelve distinct demographic family types. For eleven family types, with working age family members under 65, six sets of estimates were calculated. They cover a range of assumptions about health status (good vs. fair/poor) and availability of employer-sponsored health insurance (typical ESI vs. underinsured vs. no ESI). For family type eleven (single female age 65-74), four sets of estimates were calculated reflecting health status (good vs. fair/poor) and Medicare options (Medicare Advantage vs. Medicare Supplement).⁶ Of course, families and health situations can be complex and changing. No family or illness is typical. This economic modeling study cannot capture all possibilities of real life. But it does provide data and analysis that help us understand what many families face as they try to respond to health needs and remain economically secure.

In addition, a modified Family Economic Self-Sufficiency Standard (FESS) was calculated for each family type. For the purposes of the HESS analysis, it is called the economic self-sufficiency requirement. The HESS economic self-sufficiency requirement differs slightly from the FESS in its health component. HESS uses a more detailed and subpopulation-specific method for estimating health costs.

This report is a historical snapshot. Data are based on 2005 figures, or trended forward to 2005. The model does not predict changes in future health care costs or growth in costs. Since the model was completed, many changes in the health care marketplace have already begun, such as the Medicare Part D prescription drug program and a renewed interest in consumer-driven health care plans. There is not enough experience with such plans to assess their effects on family health care costs.

For each family type, four components are estimated:

- health insurance premiums paid by the family,
- out-of-pocket medical expenses,
- lost earnings due to a wage earner’s illness, and
- lost earnings due to family caregiving responsibilities.

For example, a “typical” healthy, insured family of four in Connecticut requires \$55,876 annually to maintain health and prevent acute illnesses from overwhelming its budget (see Table R-1).

However, if a parent with employer-sponsored health insurance became ill, the family would need an additional \$2,164 annually to cover health needs. If the same parent were ill and the family did not have ESI, it would need \$8,984 to cover premiums, out-of-pocket costs and lost income.

DEVELOPING A COMPREHENSIVE MODEL OF HEALTH-RELATED ECONOMIC BURDEN IS IMPORTANT FOR THREE REASONS.

Rising Health Care Costs Create Financial Insecurity for Families:

Health-related expenses create economic stress and dislocation for Connecticut families. The rising cost of health insurance has a broad impact on family finances, especially for low- and middle-income families. The financial burden of serious illness can be a crushing blow to families.

- 10.7 million *insured* Americans spend one-quarter of their income on out of pocket health care costs. Another 6.8 million spend one-third.⁷
- Families that spend over 10% of their income on out-of-pocket medical costs are more than twice as likely to forego needed medical care as families who spend less than 5% of income on out-of-pocket costs.⁸
- A 2005 study found that half of all bankruptcies in the U.S. were due to medical expenses. Three out of four of those who filed for bankruptcy had health insurance when they became ill. Bankruptcies result from both the costs of medical care and income lost due to illness.

For most families, the precipitating illness affected the debtor or their spouse. In 13.3% of cases a child became ill and for 8.2% an elderly relative was ill. Personal bankruptcies have more than tripled since 1980 and bankruptcies due to medical debt rose 23-fold.⁹

Access to Insurance Means Access to Care:

Health care costs relative to income are major factors in access to health services and medical outcomes. Insurance is meant to moderate the consequences of high and unexpected health care costs. If health insurance is unaffordable or unavailable, families do not get the care they need.

- Lack of health insurance is a strong predictor of access problems, decreased likelihood of having a regular source of care, higher rates of postponed care and unfilled prescriptions, reduced use of preventive services, such as mammograms and cholesterol screening, and increased likelihood of hospitalization for conditions such as diabetes and congestive heart failure.¹⁰
- Connecticut's uninsured are seven times less likely to have a regular health care provider. That causes interruptions and delays in health care. Connecticut's uninsured are nine times more likely to use an emergency room for medical care. Connecticut's uninsured are five times more likely to not visit a doctor in a given year. Connecticut's uninsured are over ten times less likely to get care in an emergency and almost twice as likely to not fill a prescription.¹¹

- The uninsured are 30% to 50% more likely to be hospitalized for an avoidable condition, costs we all pay in higher premiums and higher taxes. Uninsured cancer patients are more likely to be diagnosed at a later stage and less likely to survive. Uninsured patients are three times less likely to get cancer screenings. Uninsured patients are more likely to have a ruptured appendix. Uninsured heart patients who suffer a heart attack are 30% more likely to die.¹²
- Twenty percent of uninsured adult residents reported no physician office visits in the prior year compared to 10% of insured adults.¹³

Fewer Uninsured Means a Stronger Connecticut Economy:

Uninsured workers weaken both health care and economic community resources. Communities with higher rates of uninsured residents have fewer hospital beds per capita, are less likely to offer trauma and burn care, and offer vulnerable populations fewer services, such as psychiatric, substance abuse treatment, and AIDS care. Rural hospitals in areas with high rates of uninsured residents have narrower financial margins; fewer intensive care beds and fewer inpatient psychiatric services. Neither insured nor uninsured residents have access to these limited resources.¹⁴

- Taxpayers shoulder 85% of the costs of caring for the uninsured. That increases taxes and depresses local economic activity.¹⁵ Due to lower productivity and frequent illness, being uninsured reduces wages by 12 to 28% over a ten-year period. Children in poor health miss

more school days. That increases the risk of poor academic performance and decreases job prospects. A family member's poor health can lead to family caregivers missing work, which reduces earnings. Reduced income affects the entire community.¹⁶

Half of U.S. bankruptcies are driven by medical bills.¹⁷ These debts mean families must rely more on community social services, which stresses the safety net. For example, one in four Americans with medical debt has trouble getting and maintaining secure housing, a problem which can lead to homelessness.¹⁸ That reduced income affects a community's ability to support decent, affordable housing.

Health care and illness are major factors in family and community economic well-being. The HESS is a tool for tracking health care costs and related expenses and for assessing the impact of public and workplace policies regarding health access and costs.

In this report, we look at the problems of rising health care costs and declining insurance rates from the viewpoint of families who are trying to make ends meet and get needed health care. Our findings demonstrate what people experience every day. If they do not have affordable health insurance, many cannot pay the bills when they need health care and also stay financially secure. The Health Economic Security Standard provides real data that demonstrate the challenges real Connecticut families face. We hope this report will be a useful tool for policy-makers to better understand the costs and consequences of our unstable and eroding health insurance system.

FINDINGS: THE ECONOMIC BURDEN OF HEALTH CARE AND ILLNESS ON CONNECTICUT FAMILIES

ACCESS TO ESI HAS A GREATER IMPACT ON FAMILY FINANCES THAN HEALTH STATUS OR FAMILY ILLNESS.

Our study finds that across all non-elderly family types, having ESI has a much greater impact on family finances than having a family member in poor health.

For a two-parent, two-child family in good health, this variable accounts for a differential of \$9,268. In comparison, a wage-earner's health status creates a differential of \$2,715 maximum.

Those who have private, employer-sponsored insurance and long-term disability insurance are still at risk for unaffordable health care costs and lost wages. But it is significantly less than the uninsured or underinsured. When high premiums or limited coverage make ESI inadequate, it fails to protect working families against extreme or unanticipated health care costs.

Working families at all income levels are more insecure financially than comparable families in the past. Recent research shows that family incomes rise and fall much more precipitously than expected.¹⁹ The risks of job transfer or layoffs create greater insecurity and vulnerability today.

EMPLOYER-SPONSORED INSURANCE IS ERODING

Although ESI in Connecticut remains the primary vehicle for health care coverage, there are signs that the ESI system is eroding. According to the U.S. Census Bureau, ESI coverage nationwide is declining. Between 2000 and 2005, the percentage of Americans who obtain insurance through their jobs slipped from 63.6 percent to 59.5 percent.²⁰

Fewer employees are being offered ESI. One study finds that only about one-third of 2003 high school graduates will have access to employer-sponsored health insurance coverage.²¹ The Connecticut Office of the Health Care Advocate estimates that 39% of small Connecticut firms do not offer ESI.²²

Health benefits vary from firm to firm, with less than half of the smallest companies (3–9 workers) offering health benefits. Small businesses that do offer health benefits typically have much higher rates than larger firms. Other company characteristics affect its ability to offer benefits, including the number of lower-wage and part-time workers in the company and the number of union workers. For example,

- only 42% of firms with a greater percentage of lower-wage workers offer health insurance;
- 44% of firms with a higher percentage of part-time workers offer health benefits to full and part-time employees, and
- a lower percentage of firms without union workers offer any health insurance.²³
- Health care spending is higher in Connecticut than in most other states. Costs are rising for employers and employees

ESI is also fraught with limitations that create “gaps” in insurance coverage, such as waiting periods and minimum work hours. For example, many private plans require workers to wait for 30–90 days and work a minimum of 30 hours per week to be eligible. According to a 2006 employer survey, only 78% of workers in firms which offer health benefits are actually eligible for coverage.²⁴

Changing employment situations can pose economic risk and create family debt. Many studies currently show that employers have cut back on health benefits for retirees as well.

The cost of premiums greatly influences both the offer of health insurance and the rate at which workers “take up” or accept the terms and offer of ESI. Health care spending is higher in Connecticut than in most other states, and costs are rising for both workers and employers. Average premium costs for employer-based coverage in Connecticut ranged from \$4,614 for an individual to \$12,375 for family coverage. Connecticut ranks in the top fifteen states for health care costs.²⁵ The Connecticut Office of Health Care Access (OHCA) found that in small firms, 21-36% of the insurance premium is paid by employees.²⁶ Health care costs continue to rise in Connecticut. Since 2000, the average health plan premium rose 56%, while wages only increased by 14%.²⁷

HEALTH CARE COSTS ARE INCREASING FOR WORKERS

About 16% of American families now spend more than 5% of their income on health care.²⁸ Nearly 60% of low-income adults would have to pay more than 25% of their income to obtain individual health insurance policies.²⁹ In 2005, the average annual employee share of ESI premiums was \$2,713 for family coverage.³⁰ Connecticut families pay even more. The FESS study found that Connecticut families living within the self-sufficiency standard would spend about 8% of their income on health care depending, on family size, composition, and region. HESS adds adjusted out-of-pocket expenses to account for families with members who have chronic health conditions and examines income losses due to illness or care giving.

Out-of-pocket health expenses

Having ESI does not necessarily protect workers from unaffordable out-of-pocket (OOP) health expenses. Out-of-pocket costs account for about 20% of total health care spending in Connecticut.³¹ Families with high OOP costs also face access barriers and are more likely to forego or delay care.

- Many studies on out-of-pocket health care spending do not analyze cost differences or cost impact by gender. However, female-headed households have higher out-of-pocket expenditures than male-headed households.³² In most age groups, according to our study, Connecticut women had higher out-of-pocket expenditures than men. (see Appendix V)
- National data suggest that the families that are most vulnerable to OOP costs and lost income include: families headed by women over 65; those that have a family member with a psychiatric diagnosis; and those with a family member taking prescription medication. Other medical conditions that are especially likely to result in high OOP costs include diabetes, high cholesterol, and back problems.³³ Such costs are not only associated with chronic health conditions, but also with single, unexpected events, such as injuries or strokes.³⁴
- In 2003, 42% of low-income, chronically ill people with private insurance spent more than 5% of their income on out-of-pocket health care costs.³⁵
- A recent study found that employers have attempted to control health care costs by increasing co-pays, particularly for prescription drugs and deductibles, thus increasing out-of-pocket expenses for workers.³⁶

WOMEN EXPERIENCE HIGHER FAMILY FINANCIAL HEALTH BURDENS

Women also experience higher premiums in the individual non-group market for most age groups under 60. Family types 6 and 7 offer a direct comparison. Both represent a single adult, age 19-25. Family type 6 is a female and family type 7 is a male. In the most extreme case, a female age 19-25 in fair/poor health without access to ESI would have a total family health cost of \$7,898; which is \$2,883 higher than a comparable male. Most of that difference is attributable to gender-based rates for individual and non-group insurance coverage in both commercial and high-risk pool. The differential diminishes significantly after age 40 (probably due to less likelihood of childbearing. After age 60, the differential reverse. (See Tables 3 and 4 in Appendix I) There are also gender differences in out-of-pocket costs, with females having higher costs in most age groups. (See Appendix IV)

INCOME LOSSES DUE TO FAMILY ILLNESS THREATEN ECONOMIC SECURITY

HESS and other research studies found that an illness or temporary disability can cause serious setbacks for working families – even for those with two wage-earners who have ESI and live self-sufficiently. In prior generations, if the primary wage earner was injured, sick or laid off, a back-up family member was more likely to provide care or enter the workforce to fill gaps in household income. For working class families living at the margin or in poverty, family illness can cause hardship or even bankruptcy.

Although the number of families with disabled children or elderly relatives is relatively small, (family types 5 and 9), income losses due to the wage-earner's caregiving responsibilities are potentially quite large. A family whose child has severe asthma, and whose wage earner lacks paid sick leave (about 42% of U.S. private sector workers)³⁷ can expect to incur more than \$800 per year in income loss due to caregiving. A midlife couple caring at home for an aged relative with serious disability can expect to incur more than \$6,900 per year in income losses.

Illnesses, disabilities, injuries, or the addition or loss of a family member often requires time off without pay, limits overtime pay or more demanding/high-paying job, or can even result in job loss.

- A large number – (42%) – of full-time private sector workers³⁸ or 59 million people in the U.S., have no paid sick leave, according to the Institute for Women's Policy Research. Some 86 million workers do not have paid sick leave that can be used to care for sick children.³⁹ Half of working mothers (49%) report that they do not get paid when they stay home to care for a sick child.⁴⁰
- More than one-third of those who took family and medical leave received no pay during their longest leave, and nearly two out of five of those on leave had to cut their time short because of lost pay.⁴¹
- More than a third of Americans (35%) have significant elder care responsibilities. More than one-third of these workers were forced to reduce their work hours or take time off to provide necessary care. Many suffered financially as a result.⁴²

- Over 23% of US households provide caregiving to a family member. American households spend an average of 18 hours per week on such care. Between 22% and 33% of adults 65 and over need help with personal care. (See Appendix I, tables 8 and 9)

Using our modeling, a family of three in the Upper Connecticut River Valley— with two adults aged 55-64, caring at home for a relative over 75 years of age with a serious disability – would lose almost \$7,000 in earnings due to caregiving. For this type of family, these losses represent 18% of their annual income. (Table R-9)

Direct medical costs are not the only expense associated with a medical problem. Families may be forced to relocate or travel frequently for specialty care. Having a disability may mean refitting a home or relocating to adapt for that disability.

HEALTH SECURITY AND MEDICAL DEBT

Mounting health care costs and medical debt put families' economic security at risk because such costs, whether for premiums or out-of-pocket (OOP) medical expenses, or both, compromise other financial obligations.

Medical debt can affect employment status, jeopardizing long-term economic stability. For example, some families work extra hours to meet increased health care costs. Even brief gaps in health insurance endanger family budgets and can lead to medical debt.⁴³ A recent study by the Commonwealth Foundation found that one in five adults under age 65 is currently paying off debt from medical bills.⁴⁴

Women Are More Vulnerable To Medical Debt Than Men. Women make up fifty-six percent of those who file for bankruptcy due to medical debts.⁴⁵ The typical medical debtor is a forty-two-year-old, college-educated mother who owns or did own a home.

- Half Of All Families Filing For Bankruptcy Cite Medical Debt As The Cause. For those families, out-of-pocket costs averaged \$11,854 since the start of an illness, and the vast majority – over 75% – had health insurance at the onset of the illness.⁴⁶

Medical debtors were likely to experience lapses in health care coverage, especially those who file for bankruptcy. Medical bankruptcy filers were more likely than other debtors to have had a gap in health insurance coverage in the two years prior to filing.⁴⁷

WORKERS AGE 55-64 ARE VULNERABLE TO UNMANAGEABLE HEALTH BURDENS

Because health insurance rates are set by age and health status, the uninsured who are 55 to 64 years old pay high premiums. In the HESS model, family types 8, 9 and 12 represent this group. Because individual coverage is rated by age and health, people in this age group without ESI face high coverage costs. It is unlikely that these individuals, even if they earn a “self-sufficient” wage, could afford private health insurance. A Connecticut couple in this age group, without ESI, would face health insurance premiums ranging from \$13,490 to \$17,315. Their total family health burdens would range from \$16,692 to \$21,631, depending on health status.

HUSKY IS FILLING SOME OF THE GAPS AND CAN HELP FAMILIES SAVE

As ESI has eroded, HUSKY has filled some of the void, preventing a jump in the number of uninsured. In fact, when OHCA surveyed working families with HUSKY insurance, 44% stated that they were offered ESI but couldn't afford it. (Of the employers with workers on HUSKY, 50% said they did not offer ESI because they could not afford to do so.⁴⁸)

For parents without ESI, HUSKY B can also provide savings for their children. Five of the 12 HESS family types have children eligible for HUSKY B, band 2 (235-300 percent of the FPL). Their subsidized premiums are capped at \$600 annually. For these families, annual savings range from \$404 to more than \$3,600 for families without access to ESI for their children. Parents' insurance status varies as noted in the first row of the chart below.

Impact of Husky B on Health Insurance Premiums for a Family of Four (family type 1)						
Insurance Status	ESI ⁱ		Underinsured		No ESI	
Health Status	Good	Fair/Poor	Good	Fair/Poor	Good	Fair/Poor
Total Premium with HUSKY	\$2,269	\$2,269	\$5,316	\$5,316	\$6,280	\$8,811
Total Premium without HUSKY	\$2,673	\$2,673	\$6,187	\$6,187	\$9,974	\$12,500
Savings Attributable to HUSKY	\$404	\$404	\$871	\$871	\$3,694	\$3,689

Note: There is no independent estimate for OOP costs for HUSKY B families. However, HUSKY B does require premiums and co-payments. Note also that there is a HUSKY PLUS program for children with special behavioral or physical needs. There are out-of-pocket fees for these services.

ⁱ Employer-sponsored health insurance.

IMPACT OF FAMILY HEALTH BURDEN ON ECONOMIC SELF-SUFFICIENCY REQUIREMENT

These findings are best viewed in the context of overall economic self-sufficiency. For example, a two-parent, two-child family living in the Lower Connecticut River Valley with typical employer coverage and in good health would require

\$54,575 per year to cover living expenses. The same family with no access to employer coverage would need an additional \$6,553 per year to cover health-related costs and losses. A comparable family without access to employer coverage and with a family member in fair or poor health would need an additional \$9,268 to cover costs and losses compared to a family with optimal conditions.

POLICY RECOMMENDATIONS

Connecticut policymakers must face the issues of eroding employer-sponsored coverage, an aging population, higher health care costs and rising rates of uninsured residents.

The two goals of improving our health care system and reducing economic risk as a consequence of family illness or injury require national and state policymakers, businesses, and residents to work together on solutions. Leadership is needed to create a long term vision for dealing with the implications of an aging society, such as delivery and financing of health care and caregiving.

Federal health care dollars are likely to shrink. Policymakers should come together to discuss this problem. In the short run, however, there are incremental steps that can be taken. Options include:

- Public insurance costs are growing at much slower rates than private insurance. Therefore, it makes good fiscal sense to explore ways to expand programs like HUSKY to include more children and caregiving adults and streamline enrollment for eligible families.
- Target interventions to those least likely to have ESI, including women, the working poor, part-time workers, service and retail sector employees, childless adults and employees of small businesses.

- Expand business and consumer access to short and long-term disability insurance products. Give particular attention to strengthening the buying power of small businesses to make policies more affordable for their workers.
- Strengthen and expand employer-sponsored insurance, particularly among smaller firms. (For example, the Municipal Employees Health Insurance Plan could be expanded.)
- Study private insurer's policies that restrict health insurance benefits to certain employees or that impose other exclusions or limitations.
- Foundations, government, providers, consumers and businesses should work together to develop ways to reduce out-of-pocket medical expenses. For example, focus on prescription drugs, high-deductible plans and gender differences in out of pocket costs.
- Make paid sick leave and paid family leave available to Connecticut workers.

Policy interventions should be targeted toward those least likely to have ESI.

Women, young adults, the working poor, part-time workers, service/retail sector employees, childless adults and those in small firms⁴⁹ are less likely to have ESI.

- Only 8% of low-income (under 200% of the federal poverty level) working-age adults have access to employer-sponsored insurance.⁵⁰
- Only about 4% of childless adults have access to ESI.⁵¹
- Latinas/Latinos are less likely to have ESI.⁵²
- Among temporary workers, 38% are uninsured, compared to 5% of those working full time.⁵³
- Almost 20% of Connecticut employees work 34 hours or less per week. Of those, 97,000 were uninsured for at least one month from January 2003 through December 2004.⁵⁴ The Office of Health Care Access found that almost one-third of employers with 300 or fewer employees require them to work 40 or more hours weekly to qualify for an employer-sponsored plan.
- OHCA found that 39% of Connecticut firms with 300 or fewer employees have no ESI coverage.⁵⁵
- Almost 17% of those ages 19-24 are uninsured. In fact, young adults age 19-29 are nearly four times as likely to be uninsured as other age groups.⁵⁶

SUMMARY OF METHODS AND DEFINITIONS

The Health Economic Sufficiency Standard (HESS) models the economic impact on families of health services costs and the financial consequences of illness. HESS provides estimates for twelve representative family types, with a series of health-related cost factors for each specific family type, defined by selected demographic and health-related characteristics. For a detailed explanation of the methodology, see Appendix I. The cost factors included in the model are:

- health insurance premiums,
- out-of-pocket medical costs,
- disability insurance premiums, and
- lost income due to a wage-earner's illness or family caregiving responsibility.

Family types are based on:

- demographic factors (family size, age, gender),
- availability of employer-sponsored or publicly subsidized health insurance, and
- health status, i.e. whether family members are in excellent/very good/good health vs. fair/poor health.

The Health Economic Sufficiency Standard is the sum of the relevant health-related direct and indirect costs (including lost earnings due to a family illness) for each family type. The model examines the impact of these health-related costs on overall family economic self-sufficiency for a range of assumptions about health status and access to employer-sponsored insurance.

DEFINITIONS

The results are presented in Tables R-1 through R-12. Each table represents one of the following demographic family types:

1.	Two parents age 35 – 44, two school-age children
2.	Single mother age 35-44, one infant, one school-age child
3.	Single mother age 19-34, one child with asthma
4.	Single mother age 19-34, one child, no chronic health problems
5.	Couple ages 19 – 34, one child with asthma
6.	Single woman age 19 – 25
7.	Single man age 19 – 25
8.	Couple ages 55-64
9.	Couple ages 55 – 64, with disabled parent age 75+ living at home
10.	Couple ages 45-55, two college-age children
11.	Single adult age 65 – 74
12.	Single grandmother age 55-64, one school-age child

For each of these demographic family types, four or six subtypes are defined based on access to health insurance and health status.

The following definitions of insurance access and health status are used:

- **ESI** means that the family has access to employer- based coverage with “typical” premium contribution (employee share is 18.4% of total premium for family plans and 21.6% for individual plans).⁵⁷
- **Underinsured** means that the family has access to employer-based coverage with a 50% premium contribution.
- **No ESI** means that the family does not have access to employer-based coverage and have to obtain health insurance through the non-group coverage market at their own expense.
- **Medicare Advantage** means that the family is covered through a Medicare HMO (applies to family type 11).
- **Medicare Supplement** means that the family is covered through Medicare with a supplemental policy (applies to family type 11).

- **Good** means that the primary wage-earner (or first listed family member in type I I) is in good, very good, or excellent health.
- **Fair/Poor** means that the primary wage-earner (or first listed family member in type I I) is in fair or poor health.

The following definitions of cost components are used:

1. **Health Insurance Premium** means the premium that the family would have to pay to obtain health insurance coverage under a “typical” Connecticut managed care plan, or in the case of family type I I, a Medicare HMO Advantage plan.
2. **Out-of-Pocket Costs** means the costs that the family would pay directly for co-payments, co-insurance, and medical goods and services not covered by the health insurance plan.
3. **Total Health Access Costs** is the sum of (1) and (2) above. It represents the total direct financial burden on the family related to being able to access health services on an ongoing basis, and in the event of serious illness or injury.
4. **Disability Income Protection** means the premium that the family would pay to obtain long-term disability insurance to protect the family’s income if the wage-earner became seriously ill.
5. **Income Loss Due to Wage-earner’s Illness** means the expected loss of income due to the wage-earner’s absence from work caused by the wage-earner’s illness.
6. **Income Loss Due to Caregiving** means the expected loss of income due to the wage-earner’s absence from work caused by the wage-earner’s responsibility to care for an ill or disabled family member.
7. **Total Income-Related Costs** is the sum of (4), (5) and (6) above. It represents the total direct cost (for disability insurance premiums) and indirect cost (for expected lost income due to illness-related absences) that a family is expected to incur.
8. **Total Family Health Burden** is the sum of items (3) and (7) above. It represents the total health-related financial burden (costs and losses) a family is expected to incur.

TABLES: CONNECTICUT HESS FAMILY TYPES

**TABLE R-1: CONNECTICUT HEALTH ECONOMIC SUFFICIENCY STANDARD
FOR A FAMILY OF FOUR IN THE LOWER CONNECTICUT RIVER VALLEY ⁱ**

Economic self-sufficiency requirement: \$53,737ⁱⁱ

Insurance Status	ESI ⁱⁱⁱ		Underinsured		No ESI	
	Good	Fair/Poor	Good	Fair/Poor	Good	Fair/Poor
Health Insurance Premium	\$2,269	\$2,269	\$5,316	\$5,316	\$6,280	\$8,811
Out-of-Pocket Costs	\$2,486	\$3,038	\$2,486	\$3,038	\$2,486	\$3,038
Total Health Access Costs	\$4,755	\$5,307	\$7,802	\$8,354	\$8,766	\$11,849
Disability Income Protection ^{iv}	\$512	\$512	\$512	\$512	\$2,560	—
Income Loss Due to Wage-earner's Illness ^v	—	\$1,612	—	\$1,612	\$494	\$2,686
Income Loss Due to Caregiving ^{vi}	—	—	—	—	—	—
Total Income Related Costs^{vii}	\$512	\$2,124	\$512	\$2,124	\$3,054	\$2,686
Total Family Financial Health Burden	\$5,267	\$7,430	\$8,314	\$10,477	\$11,820	\$14,535

Note: Total may not equal column sum due to rounding

ⁱ Female parent age 35-44, health status varies according to table; male parent age 35-44, health status good; female child age 5-17, health status good; male child age 5-17, health status good.

ⁱⁱ Based on Self-Sufficiency Standard for Lower CT River Valley modified by HESS estimate of total health access costs. See Appendices III and IV for details.

ⁱⁱⁱ Employer-sponsored health insurance.

^{iv} ESI and Underinsured: typical group disability premium; No ESI/ Health Good: typical non-group disability premium. No ESI/Health Fair/Poor considered uninsurable for disability.

^v Direct earnings loss, subject to availability of sick leave and number of work-loss days specific to each category.

^{vi} Direct earnings loss, subject to availability of sick leave and number of work-loss days specific to each category.

^{vii} Includes costs of disability protection plus lost earnings due to illness.

**TABLE R-2: CONNECTICUT HEALTH ECONOMIC SUFFICIENCY STANDARD
FOR A FAMILY OF THREE IN NORTH CENTRAL CONNECTICUTⁱ**

Economic self-sufficiency requirement: \$51,405ⁱⁱ

Insurance Status	ESI ⁱⁱⁱ		Underinsured		No ESI	
	Good	Fair/Poor	Good	Fair/Poor	Good	Fair/Poor
Health Insurance Premium	\$2,673	\$2,673	\$6,187	\$6,187	\$3,773	\$9,162
Out-of-Pocket Costs	\$1,749	2,301	\$1,749	\$2,301	\$1,749	\$2,301
Total Health Access Costs	\$4,422	\$4,974	\$7,936	\$8,488	\$5,522	\$11,463
Disability Income Protection ^{iv}	\$512	\$512	\$512	\$512	\$2,560	—
Income Loss Due to Wage-earner's Illness ^v	—	\$3,035	—	\$3,035	\$931	\$5,069
Income Loss Due to Caregiving ^{vi}	—	—	—	—	—	—
Total Income Related Costs^{vii}	\$512	\$3,547	\$512	\$3,547	\$3,491	\$5,059
Total Family Financial Health Burden	\$4,934	\$8,522	\$8,448	\$12,036	\$9,013	\$16,523

Note: Total may not equal column sum due to rounding

ⁱ Female parent age 35-44, health status varies according to table; female child age 5-17, health status good; male child age 0-4, health status good.

ⁱⁱ Based on Self-Sufficiency Standard for North Central CT modified by HESS estimate of total health access costs. See Appendices III and IV for details.

ⁱⁱⁱ Employer-sponsored health insurance.

^{iv} ESI and Underinsured: typical group disability premium; No ESI/ Health Good: typical non-group disability premium. No ESI/Health Fair/Poor considered uninsurable for disability.

^v Direct earnings loss, subject to availability of sick leave and number of work-loss days specific to each category.

^{vi} Direct earnings loss, subject to availability of sick leave and number of work-loss days specific to each category.

^{vii} Includes costs of disability protection plus lost earnings due to illness.

**TABLE R-3: CONNECTICUT HEALTH ECONOMIC SUFFICIENCY STANDARD
FOR A FAMILY OF TWO WITH A CHILD WITH ASTHMA IN NORTH CENTRAL CONNECTICUTⁱ**

Economic self-sufficiency requirement: \$35,599ⁱⁱ

Insurance Status	ESI ⁱⁱⁱ		Underinsured		No ESI	
	Good	Fair/Poor	Good	Fair/Poor	Good	Fair/Poor
Health Insurance Premium	\$1,209	\$1,209	\$2,667	\$2,667	\$3,791	\$5,581
Out-of-Pocket Costs	\$2,241	\$2,780	\$2,241	\$2,780	\$2,241	\$2,780
Total Health Access Costs	\$3,450	\$3,989	\$4,908	\$5,447	\$6,032	\$8,361
Disability Income Protection ^{iv}	\$154	\$154	\$154	\$154	\$770	—
Income Loss Due to Wage-earner's Illness ^v	—	\$2,084	—	\$2,084	\$639	\$3,474
Income Loss Due to Caregiving ^{vi}	\$486	\$1,181	\$486	\$1,181	\$1,181	\$1,181
Total Income Related Costs^{vii}	\$640	\$3,419	\$640	\$3,419	\$2,590	\$4,655
Total Family Financial Health Burden	\$4,090	\$7,409	\$5,548	\$8,867	\$8,622	\$13,016

Note: Total may not equal column sum due to rounding

ⁱ Female parent age 19-34, varies according to table; female child age 5-17, health status fair/poor (asthma).

ⁱⁱ Based on Self-Sufficiency Standard for North Central CT modified by HESS estimate of total health access costs. See Appendices III and IV for details.

ⁱⁱⁱ Employer-sponsored health insurance.

^{iv} ESI and Underinsured: typical group disability premium; No ESI/ Health Good: typical non-group disability premium. No ESI/Health Fair/Poor considered uninsurable for disability.

^v Direct earnings loss, subject to availability of sick leave and number of work-loss days specific to each category.

^{vi} Direct earnings loss, subject to availability of sick leave and number of work-loss days specific to each category.

^{vii} Includes costs of disability protection plus lost earnings due to illness.

**TABLE R-4: CONNECTICUT HEALTH ECONOMIC SUFFICIENCY STANDARD
FOR A FAMILY OF TWO IN NORTH-CENTRAL CONNECTICUTⁱ**

Economic self-sufficiency requirement: \$34,263ⁱⁱ

Insurance Status	ESI ⁱⁱⁱ		Underinsured		No ESI	
	Good	Fair/Poor	Good	Fair/Poor	Good	Fair/Poor
Health Insurance Premium	\$1,209	\$1,209	\$2,667	\$2,667	\$3,801	\$5,581
Out-of-Pocket Costs	\$1,132	\$1,671	\$1,132	\$1,671	\$1,132	\$1,671
Total Health Access Costs	\$2,341	\$2,880	\$3,799	\$4,338	\$4,933	\$7,252
Disability Income Protection ^{iv}	\$154	\$154	\$154	\$154	\$770	—
Income Loss Due to Wage-earner's Illness ^v	—	\$2,007	—	\$2,007	\$616	\$3,346
Income Loss Due to Caregiving ^{vi}	—	—	—	—	—	—
Total Income Related Costs^{vii}	\$154	\$2,161	\$154	\$2,161	\$1,386	\$3,346
Total Family Financial Health Burden	\$2,495	\$5,042	\$3,953	\$6,500	\$6,500	\$10,598

Note: Total may not equal column sum due to rounding

ⁱ Female parent age 35-44, health status varies according to table; female child age 5-17, health status good; male child age 0-4, health status good.

ⁱⁱ Based on Self-Sufficiency Standard for North Central CT modified by HESS estimate of total health access costs. See Appendices III and IV for details.

ⁱⁱⁱ Employer-sponsored health insurance.

^{iv} ESI and Underinsured: typical group disability premium; No ESI/ Health Good: typical non-group disability premium. No ESI/Health Fair/Poor considered uninsurable for disability.

^v Direct earnings loss, subject to availability of sick leave and number of work-loss days specific to each category.

^{vi} Direct earnings loss, subject to availability of sick leave and number of work-loss days specific to each category.

^{vii} Includes costs of disability protection plus lost earnings due to illness.

**TABLE R-5: CONNECTICUT HEALTH ECONOMIC SUFFICIENCY STANDARD
FOR A FAMILY OF THREE WITH A CHILD WITH ASTHMA IN THE LOWER CONNECTICUT RIVER VALLEYⁱ**

Economic self-sufficiency requirement: \$45,567ⁱⁱ

Insurance Status	ESI ⁱⁱⁱ		Underinsured		No ESI	
	Good	Fair/Poor	Good	Fair/Poor	Good	Fair/Poor
Health Insurance Premium	\$2,029	\$2,029	\$5,076	\$5,076	\$6,040	\$8,571
Out-of-Pocket Costs	\$2,565	\$3,463	\$2,565	\$3,463	\$2,565	\$3,463
Total Health Access Costs	\$4,594	\$5,492	\$7,641	\$8,539	\$8,605	\$12,034
Disability Income Protection ^{iv}	\$242	\$242	\$242	\$242	\$1,210	—
Income Loss Due to Wage-earner's Illness ^v	—	\$1,571	—	\$1,571	\$482	\$2,618
Income Loss Due to Caregiving ^{vi}	\$366	\$890	\$366	\$890	\$890	\$890
Total Income Related Costs^{vii}	\$608	\$2,703	\$608	\$2,703	\$2,582	\$3,508
Total Family Financial Health Burden	\$5,203	\$8,194	\$8,250	\$11,241	\$11,187	\$15,541

Note: Total may not equal column sum due to rounding

ⁱ Female parent age 19-34, health status varies according to table; male parent age 19-34, health status good. Female child age 5-17, health status fair/poor (asthma).

ⁱⁱ Based on Self-Sufficiency Standard for Lower CT River Valley modified by HESS estimate of total health access costs. See Appendices III and IV for details.

ⁱⁱⁱ Employer-sponsored health insurance.

^{iv} ESI and Underinsured: typical group disability premium; No ESI/ Health Good: typical non-group disability premium. No ESI/Health Fair/Poor considered uninsurable for disability.

^v Direct earnings loss, subject to availability of sick leave and number of work-loss days specific to each category.

^{vi} Direct earnings loss, subject to availability of sick leave and number of work-loss days specific to each category.

^{vii} Includes costs of disability protection plus lost earnings due to illness.

TABLE R-6: CONNECTICUT HEALTH ECONOMIC SUFFICIENCY STANDARD FOR FAMILY OF ONE FEMALE IN THE UPPER CONNECTICUT RIVER VALLEYⁱ

Economic self-sufficiency requirement: \$20,335ⁱⁱ

Insurance Status	ESI ⁱⁱⁱ		Underinsured		No ESI	
	Good	Fair/Poor	Good	Fair/Poor	Good	Fair/Poor
Health Insurance Premium	\$849	\$849	\$2,307	\$2,307	\$3,239	\$5,091
Out-of-Pocket Costs	\$573	\$816	\$573	\$816	\$573	\$816
Total Health Access Costs	\$1,422	\$1,665	\$2,880	\$3,123	\$3,812	\$5,907
Disability Income Protection ^{iv}	\$154	\$154	\$154	\$154	\$770	—
Income Loss Due to Wage-earner's Illness ^v	—	\$1,195	—	\$1,195	\$366	\$1,991
Income Loss Due to Caregiving ^{vi}	—	—	—	—	—	—
Total Income Related Costs^{vii}	\$154	\$1,349	\$154	\$1,349	\$1,136	\$1,991
Total Family Financial Health Burden	\$1,576	\$3,014	\$3,034	\$4,472	\$4,949	\$7,898

Note: Total may not equal column sum due to rounding

ⁱ Female age 19-25, health status varies according to table.

ⁱⁱ Based on Self-Sufficiency Standard for Upper CT River Valley modified by HESS estimate of total health access costs. See Appendices III and IV for details.

ⁱⁱⁱ Employer-sponsored health insurance.

^{iv} ESI and Underinsured: typical group disability premium; No ESI/ Health Good: typical non-group disability premium. No ESI/Health Fair/Poor considered uninsurable for disability.

^v Direct earnings loss, subject to availability of sick leave and number of work-loss days specific to each category.

^{vi} Direct earnings loss, subject to availability of sick leave and number of work-loss days specific to each category.

^{vii} Includes costs of disability protection plus lost earnings due to illness.

TABLE R-7: CONNECTICUT HEALTH ECONOMIC SUFFICIENCY STANDARD FOR FAMILY OF ONE MALE IN THE UPPER CONNECTICUT RIVER VALLEYⁱ

Economic self-sufficiency requirement: \$20,020ⁱⁱ

Insurance Status	ESI ⁱⁱⁱ		Underinsured		No ESI	
	Good	Fair/Poor	Good	Fair/Poor	Good	Fair/Poor
Health Insurance Premium	\$849	\$849	\$2,307	\$2,307	\$1,932	\$2,616
Out-of-Pocket Costs	\$319	\$438	\$319	\$438	\$319	\$438
Total Health Access Costs	\$1,168	\$1,287	\$2,626	\$2,745	\$2,251	\$3,054
Disability Income Protection ^{iv}	\$154	\$154	\$154	\$154	\$770	—
Income Loss Due to Wage-earner's Illness ^v	—	\$1,176	—	\$1,176	\$361	\$1,961
Income Loss Due to Caregiving ^{vi}	—	—	—	—	—	—
Total Income Related Costs^{vii}	\$154	\$1,330	\$154	\$1,330	\$1,131	\$1,961
Total Family Financial Health Burden	\$1,322	\$2,618	\$2,780	\$4,076	\$3,382	\$5,015

Note: Total may not equal column sum due to rounding

ⁱ Male age 19-25, health status varies according to table.

ⁱⁱ Based on Self-Sufficiency Standard for Upper CT River Valley modified by HESS estimate of total health access costs. See Appendices III and IV for details.

ⁱⁱⁱ Employer-sponsored health insurance.

^{iv} ESI and Underinsured: typical group disability premium; No ESI/ Health Good: typical non-group disability premium. No ESI/Health Fair/Poor considered uninsurable for disability.

^v Direct earnings loss, subject to availability of sick leave and number of work-loss days specific to each category.

^{vi} Direct earnings loss, subject to availability of sick leave and number of work-loss days specific to each category.

^{vii} Includes costs of disability protection plus lost earnings due to illness.

**TABLE R-8: CONNECTICUT HEALTH ECONOMIC SUFFICIENCY STANDARD
FOR FAMILY OF TWO IN THE UPPER CONNECTICUT RIVER VALLEYⁱ**

Economic self-sufficiency requirement: \$29,826ⁱⁱ

Insurance Status	ESI ⁱⁱⁱ		Underinsured		No ESI	
	Good	Fair/Poor	Good	Fair/Poor	Good	Fair/Poor
Health Insurance Premium	\$1,669	\$1,669	\$4,716	\$4,716	\$12,659	\$15,874
Out-of-Pocket Costs	\$2,728	\$4,106	\$2,728	\$4,106	\$2,728	\$4,106
Total Health Access Costs	\$4,397	\$5,775	\$7,444	\$8,822	\$15,387	\$19,980
Disability Income Protection ^{iv}	\$697	\$697	\$697	\$697	\$3,485	—
Income Loss Due to Wage-earner's Illness ^v	—	\$881	—	\$881	\$270	\$1,468
Income Loss Due to Caregiving ^{vi}	—	—	—	—	—	—
Total Income Related Costs^{vii}	\$697	\$1,578	\$697	\$1,578	\$3,755	\$1,468
Total Family Financial Health Burden	\$5,094	\$7,353	\$8,141	\$10,400	\$19,142	\$21,449

Note: Total may not equal column sum due to rounding

ⁱ Female age 55-64, health status varies according to table; male age 55-64, health status good.

ⁱⁱ Based on Self-Sufficiency Standard for Upper CT River Valley modified by HESS estimate of total health access costs. See Appendices III and IV for details.

ⁱⁱⁱ Employer-sponsored health insurance.

^{iv} ESI and Underinsured: typical group disability premium; No ESI/ Health Good: typical non-group disability premium. No ESI/Health Fair/Poor considered uninsurable for disability.

^v Direct earnings loss, subject to availability of sick leave and number of work-loss days specific to each category.

^{vi} Direct earnings loss, subject to availability of sick leave and number of work-loss days specific to each category.

^{vii} Includes costs of disability protection plus lost earnings due to illness.

**TABLE R-9: CONNECTICUT HEALTH ECONOMIC SUFFICIENCY STANDARD
FOR FAMILY OF THREE WITH A DISABLED ELDER IN THE UPPER CONNECTICUT RIVER VALLEYⁱ**

Economic self-sufficiency requirement: \$39,476ⁱⁱ

Insurance Status	ESI ⁱⁱⁱ		Underinsured		No ESI	
	Good	Fair/Poor	Good	Fair/Poor	Good	Fair/Poor
Health Insurance Premium	\$6,223	\$6,223	\$9,270	\$9,270	\$17,213	\$20,428
Out-of-Pocket Costs	\$6,551	\$7,929	\$6,551	\$7,929	\$6,551	\$7,929
Total Health Access Costs	\$12,774	\$14,152	\$15,821	\$17,199	\$23,764	\$28,357
Disability Income Protection ^{iv}	\$697	\$697	\$697	\$697	\$3,485	—
Income Loss Due to Wage-earner's Illness ^v	—	\$1,215	—	\$1,215	\$373	\$2,025
Income Loss Due to Caregiving ^{vi}	\$6,519	\$6,924	\$6,519	\$6,924	\$6,924	\$6,924
Total Income Related Costs^{vii}	\$7,216	\$8,836	\$7,216	\$8,836	\$10,782	\$8,949
Total Family Financial Health Burden	\$19,990	\$22,988	\$23,037	\$26,035	\$34,546	\$37,306

Note: Total may not equal column sum due to rounding

ⁱ Female age 55-64, health status varies according to table; male age 55-64, health status good; female age 75+, health status fair/poor (aging relative with serious disability cared for at home).

ⁱⁱ Based on Self-Sufficiency Standard for Upper CT River Valley modified by HESS estimate of total health access costs. See Appendices III and IV for details.

ⁱⁱⁱ Employer-sponsored health insurance.

^{iv} ESI and Underinsured: typical group disability premium; No ESI/ Health Good: typical non-group disability premium. No ESI/Health Fair/Poor considered uninsurable for disability.

^v Direct earnings loss, subject to availability of sick leave and number of work-loss days specific to each category.

^{vi} Direct earnings loss, subject to availability of sick leave and number of work-loss days specific to each category.

^{vii} Includes costs of disability protection plus lost earnings due to illness.

**TABLE R-10: CONNECTICUT HEALTH ECONOMIC SUFFICIENCY STANDARD
FOR FAMILY OF FOUR IN THE LOWER CONNECTICUT RIVER VALLEYⁱ**

Economic self-sufficiency requirement: \$37,450ⁱⁱ

Insurance Status	ESI ⁱⁱⁱ		Underinsured		No ESI	
	Good	Fair/Poor	Good	Fair/Poor	Good	Fair/Poor
Health Insurance Premium	\$2,673	\$2,673	\$6,187	\$6,187	\$13,490	\$17,315
Out-of-Pocket Costs	\$3,202	\$4,316	\$3,202	\$4,316	\$3,202	\$4,316
Total Health Access Costs	\$5,875	\$6,989	\$9,389	\$10,503	\$16,692	\$21,631
Disability Income Protection ^{iv}	\$806	\$806	\$806	\$806	\$4,030	—
Income Loss Due to Wage-earner's Illness ^v	—	\$1,113	—	\$1,113	\$341	\$1,854
Income Loss Due to Caregiving ^{vi}	—	—	—	—	—	—
Total Income Related Costs^{vii}	\$806	\$1,919	\$806	\$1,919	\$4,371	\$1,854
Total Family Financial Health Burden	\$6,681	\$8,908	\$10,195	\$12,422	\$21,063	\$23,486

Note: Total may not equal column sum due to rounding

ⁱ Female age 45-64, health status varies according to table; male age 45-64, health status good; female child age 18-22, health status good; male child age 18-22, health status good.

ⁱⁱ Based on Self-Sufficiency Standard for Lower CT River Valley modified by HESS estimate of total health access costs. See Appendices III and IV for details.

ⁱⁱⁱ Employer-sponsored health insurance.

^{iv} ESI and Underinsured: typical group disability premium; No ESI/ Health Good: typical non-group disability premium. No ESI/Health Fair/Poor considered uninsurable for disability.

^v Direct earnings loss, subject to availability of sick leave and number of work-loss days specific to each category.

^{vi} Direct earnings loss, subject to availability of sick leave and number of work-loss days specific to each category.

^{vii} Includes costs of disability protection plus lost earnings due to illness.

TABLE R-11: CONNECTICUT HEALTH ECONOMIC SUFFICIENCY STANDARD FOR ONE ELDERLY FEMALE IN THE UPPER CONNECTICUT RIVER VALLEYⁱ

Economic self-sufficiency requirement: \$23,115ⁱⁱ

Insurance Status ⁱⁱⁱ	Medicare Advantage		Medicare Supplement	
	Good	Fair/Poor	Good	Fair/Poor
Health Insurance Premium	\$2,124	\$2,124	\$3,618	\$3,618
Out-of-Pocket Costs	\$1,630	\$2,515	\$1,472	\$2,271
Total Health Access Costs	\$3,754	\$4,639	\$5,090	\$5,889
Disability Income Protection ^{iv}	—	—	—	—
Income Loss Due to Wage-earner's Illness ^v	—	—	—	—
Income Loss Due to Caregiving ^{vi}	—	—	—	—
Total Income Related Costs^{vii}	—	—	—	—
Total Family Financial Health Burden	\$3,754	\$4,639	\$5,090	\$5,889

ⁱ Female age 65-74, health status varies according to table.

ⁱⁱ Based on Self-Sufficiency Standard for Upper CT River Valley modified by HESS estimate of total health access costs. See Appendices III and IV for details.

ⁱⁱⁱ Medicare Advantage is a program of HMOs and other health plans approved by the federal government to provide services to Medicare beneficiaries. Members receive services from providers affiliated with each plan, and pay premiums and co-payments according to each plan's fee schedule. Medicare Supplement J is the most comprehensive supplemental insurance policy available to Medicare fee-for-service beneficiaries. It includes a limited, but substantial pharmacy benefit.

^{iv} Not applicable for elders.

^v Not applicable for elders.

^{vi} Not applicable for elders.

^{vii} Not applicable for elders

**TABLE R-12: CONNECTICUT HEALTH ECONOMIC SUFFICIENCY STANDARD
FOR A FAMILY OF TWO IN NORTH-CENTRAL CONNECTICUTⁱ**

Economic self-sufficiency requirement: \$35,427ⁱⁱ

Insurance Status	ESI ⁱⁱⁱ		Underinsured		No ESI	
	Good	Fair/Poor	Good	Fair/Poor	Good	Fair/Poor
Health Insurance Premium	\$1,209	\$1,209	\$2,667	\$2,667	\$7,299	\$9,205
Out-of-Pocket Costs	\$2,108	\$3,486	\$2,108	\$3,486	\$2,108	\$3,486
Total Health Access Costs	\$3,317	\$4,695	\$4,775	\$6,153	\$9,407	\$12,691
Disability Income Protection ^{iv}	\$697	\$697	\$697	\$697	\$3,485	—
Income Loss Due to Wage-earner's Illness ^v	—	\$2,075	—	\$2,075	\$636	\$3,458
Income Loss Due to Caregiving ^{vi}	—	—	—	—	—	—
Total Income Related Costs^{vii}	\$697	\$2,772	\$697	\$2,772	\$4,121	\$3,458
Total Family Financial Health Burden	\$4,014	\$7,466	\$5,472	\$8,924	\$13,528	\$16,148

Note: Total may not equal column sum due to rounding

ⁱ Female age 55-64, health status varies according to table; female child age 5-17, health status good.

ⁱⁱ Based on Self-Sufficiency Standard for North Central CT modified by HESS estimate of total health access costs. See Appendices III and IV for details.

ⁱⁱⁱ Employer-sponsored health insurance.

^{iv} ESI and Underinsured typical group disability premium; No ESI/ Health Good: typical non-group disability premium. No ESI/Health Fair/Poor considered uninsurable for disability.

^v Direct earnings loss, subject to availability of sick leave and number of work-loss days specific to each category.

^{vi} Direct earnings loss, subject to availability of sick leave and number of work-loss days specific to each category.

^{vii} Includes costs of disability protection plus lost earnings due to illness.

APPENDIX I. HEALTH ECONOMIC SUFFICIENCY STANDARD METHODOLOGY

The Connecticut Health Economic Sufficiency Standard (HESS) was created using a broad amalgamation of data on the cost of health care insurance, out-of-pocket medical spending, disability income protection, lost income due to illness, and lost income due to caregiving. In order to make the model as representative as possible of Connecticut, state-specific data were used when available, and supplemented by national data adjusted for Connecticut health costs. See **Appendix I** for details on data sources and how they are applied to the model.

The HESS captures variation in health-related economic burden among families based on demographics, health status and availability of employer or public health insurance coverage. The model is useful for a population-wide analysis of these burdens, and for analyses focused on particular sub-populations of interest.

The HESS is linked to the Connecticut Family Economic Self-Sufficiency Standard. The Self-Sufficiency Standard is a realistic measure of what it costs to raise a family in Connecticut. Unlike the Federal Poverty Level which is based on a minimal food budget multiplied by three, the Self-Sufficiency Standard includes the cost of child care, food, housing, transportation, taxes and health care. The intersection of these models allows analysis of variation in health-related economic burden within a broader framework of overall family economic well-being. This is useful for sub-population comparisons, and for forecasts and policy models that predict the impact on families of changes in the health care and health insurance environment.

The HESS models the economic impact on families of health services costs and the financial consequences of illness. HESS provides estimates for 12 representative family types with a series of health-related cost factors for each specific family type, defined by selected demographic and health-related characteristics.⁵⁸ The cost factors included in the model are:

- health insurance premiums,
- out-of-pocket medical costs,
- disability insurance premiums, and
- lost income due to a wage-earner's illness or family care-giving responsibility.

Family types and subtypes are defined based on:

- demographic factors (family size, age, gender),
- availability of employer-sponsored or publicly subsidized health insurance, and
- health status, i.e. whether family members are in excellent/very good/good health vs. fair/poor health.

The Health Economic Sufficiency Standard is simply the sum of the relevant health-related costs for each family type. The model examines the impact of these health-related costs on overall family economic self-sufficiency for a range of assumptions about health status and access to employer-sponsored insurance

Twelve family types were selected for the Connecticut HESS model, based on a set of objective criteria that ensure the analysis addresses population groups of concern as defined by size of

cohort and perceived vulnerability to health-related economic hardship. With these considerations in mind, the Connecticut HESS Advisory Group, in consultation with the team of analysts formulated these family types. The HESS model is simple in logical structure, but potentially quite powerful in its ability to apply a broad spectrum of health economic data to improve understanding of the relationship between health care and family economic self-sufficiency. Key strengths of the model are:

- The model incorporates numerous health economic data sources into coherent estimates of financial impact that consider the full range of cost factors potentially affecting a family.
- The model considers the impact on particular demographic family types as assumptions about their health-related circumstances change.
- The model is explicitly related to the Connecticut FESS, and thus is capable of exploring relationships between health issues and economic well being.

While straightforward in structure, the HESS model is quite challenging in execution. Some of the key methodological challenges are:

- There are dozens of relevant demographic factors that could be used to define family types, and thousands of possible family types that could be defined for the purposes of this analysis. It was thus necessary to narrow those down to a manageable and comprehensible number based on a set of objective criteria and a flexible framework that can accommodate emerging health access and affordability issues.

- Health-related costs are unevenly distributed, even within specific population subgroups. The ten percent of people who use health care services the most consume seven times what the median person consumes. They have out-of-pocket costs that are four times what the median person spends. This disparity in out-of-pocket costs between the healthy and the unhealthy is especially pronounced for those who are uninsured or underinsured.
- Some of the relevant economic factors are not well-measured or are not measured for sub-populations that correspond to the HESS family types. For most population-based surveys – even those with a state-level sampling scheme – highly refined subpopulation estimates tend to lack statistical power at the state level. Thus, national-level estimates have been used in some instances, appropriately modified based on knowledge of Connecticut health costs and cost-sharing patterns. Nevertheless, the largest factor – cost of health insurance – is relatively easy to quantify and allocate to family types based on family composition, health status, and location.

Another complexity is observing and basing cost estimates only on actual use of health services. For instance, our principal source for estimating out-of-pocket spending is the Medical Expenditure Panel Survey-Household Component, which reflects respondents' self-reported estimates. This model may not account for a systemic unmet need. Conversely, our estimates may be skewed due to systemic overuse of services. Nevertheless, the model can differentiate health-related burdens based on the major family health cost determinants: health status, age, and access to affordable coverage.

FAMILY TYPE CRITERIA

Family type definitions are descriptions of prototypical families based on a set of determinants, (including demographics, health status and health insurance status) that correlate to the magnitude of a family's health-related economic burden. Those definitions are the reference point for relating cost data to specific population cohorts. The factors defining the family types – age, gender and number of family members, health status, and access to employer health coverage – are used to create variables for applying population surveys and health insurance market data to the HESS model.

As key parameters in the HESS model, the family types must meet the following requirements:

- The family types must *represent population groups of significance* in size and health-related economic vulnerability. Family types representing smaller population cohorts may be included if they are considered extremely vulnerable to health-related economic dislocation, such as families caring for a disabled family member at home.
- Each family type must represent a *substantive variation from other family types in health-related economic burdens*. Those differences must be measurable using available data sources and estimation methods.

The family type definitions used in the model *must be broad enough* to be adequately representative of the population, *but narrow enough* for manageable analysis and easy comprehension.

- Additional issues not fully addressed through the family types in this analysis can be addressed in additional case studies and issue papers using the HESS methodology. For instance, HESS can be used to examine the economic causes and consequences of racial and ethnic disparities in health care.

Consistent with the above criteria, we have developed a multi-tiered framework for family type definitions.

Basic population demographics:

- Age
- Gender
- Family size/relationship structure

Other critical determinants – these factors will be applied selectively to demographic prototypes:

- Health status
- Availability of employer-based health insurance
- Presence of disabled or chronically ill dependent (adult or child) requiring family caregiving

Specific family types: Based on the criteria and specific determinants described above, and on input from the project's advisory committee, we have selected the following family types. As previously indicated, these are intended to broadly represent key populations of concern.⁵⁹

COST COMPONENTS

The Health Economic Sufficiency Standard is a model of the health-related costs that the prototypical families described in the previous section would incur. It includes:

The cost of health services:

- Health insurance premiums, and
- out-of-pocket medical costs paid by the family.

Loss of income due to wage-earners' or other family members' illness, including:

- Disability insurance premiums associated with avoiding illness-related earnings loss,
- lost earnings due to a wage-earner's own illness and disability, and
- lost earnings due to a wage-earner's caregiver responsibilities for a disabled family member.

Deciding which costs to include and how to measure them are among the model's most important analytic specifications.

A. The Cost of Health Services

HESS uses the following principle to define which health care costs and corresponding lost earnings to include in the standard:

A cost is included if it relates to an appropriate health service for a family member, or represents a necessary health-related expense or a loss of income based on a "prudent consumer" standard.

We include a cost if a typical consumer, adequately insured and not excessively limited by inability to pay out-of-pocket costs, would use the good or service. Although this criteria is subjective, it reflects broad population-based surveys such as the Medical Expenditure Panel Survey (MEPS), which are based on actual use and spending, as reported by consumers, employers, insurers and providers. Thus, in practice, we assume that the costs reported by insured respondents in consumer surveys represent an appropriate level of health services use.

TABLE 1: HUSKY RATES AND COST-SHARING, 2005

Income Ranges	Who is covered	Cost to families
Under 150% FPL	Parents, pregnant women, children and relative caregivers	No cost to families Coverage is Medicaid (HUSKY Part A)
151 to 185% FPL	Children and pregnant women only	No cost to families Coverage is Medicaid
185 to 235% FPL	Children Only	No premiums; co-payments with family max of \$650/yr. Coverage is separate state program loosely based on state employee plan (HUSKY Part B)
235 to 300% FPL	Children Only	Copays as above, plus premiums of \$30/child/month to family max of \$50/month. Family max of \$1,250/yr. Coverage is HUSKY B
Over 300% FPL	Children Only	Co-payments as above plus premiums per child per month: Blue Care \$221.71, Preferred One \$152.14, CHN \$157.26. No limit on out-of-pocket costs

I. Cost of health insurance

The HESS is built on the premise that health sufficiency is not possible without health insurance coverage, even for families who can afford to pay for routine medical costs out-of-pocket. Thus, the HESS model differentiates between families that have access to “typical” employer-based coverage; those with access to minimal employer-based coverage; and those that do not have access to employer-based coverage. HESS incorporates the estimated cost of obtaining health insurance based on family access to ESI. This distinction is the single most significant health sufficiency determinant for non-elderly families.

It is important to clarify that the HESS differentiates families based on whether they have or do not have access to employer-based coverage, not based on whether they are insured or uninsured. In the HESS tables, there are three health insurance cost levels for each non-elderly family type, based on health insurance access.

In the HESS model, the standard cost of health insurance premiums for families in these three categories is estimated based on the following definitions:

- a. For family types with children under age 18, it is assumed that children will be covered by HUSKY B, Band 2 if this minimizes the overall cost of coverage for the family (see Table 1 for HUSKY eligibility and rates).
- b. For non-elderly family members with access to employer-based coverage (**ESI**), the cost of the employee share of premium for a policy that covers all family members not covered by HUSKY, is based on reported costs in the 2002 national Medical Expenditure Panel Survey-Insurance Component for Connecticut (The results are adjusted to represent 2005 premium costs based on the 2004 Kaiser Family Foundation/Health Research and Education Trust Survey of Health Benefits and the 2005 Towers Perrin Health Care Cost Survey. (Table 2)

TABLE 2: ANNUAL PREMIUMS FOR CONNECTICUT EMPLOYER-BASED HEALTH INSURANCE, 2005

	Total Premium	Employee Share	Employee Share
Individual	\$4,614	\$849	18.4%
Employee and Spouse	\$9,432	\$1,669	17.7%
Family	\$12,375	\$2,673	21.6%

Source: Medical Expenditure Panel Survey – Insurance Component, 2002, trended to 2005 based on Kaiser Family Foundation/Health Research and Education Trust Survey of Health Benefits (2004) and Towers Perrin Health Care Cost Survey (2005).

c. For non-elderly family members with access to employer-based coverage, but who are underinsured (**Underinsured**), the family's cost is assumed to be 50% of the total premium for a policy that covers all family members not covered by HUSKY, as reported in the national Medical Expenditure Panel Survey. The results are adjusted to represent 2005 premiums based on the 2004 Kaiser Family Foundation survey of Health Benefits and the 2005 Towers Perrin Health Care Cost Survey. (Table 1)

d. For non-elderly family members without access to employer-based coverage (**No ESI**), a commercial non-group policy is used for families with excellent/very good/good health status (Table 3), and a guaranteed issue high risk pool policy from the Connecticut Health Reinsurance Association is used for families with fair/poor health status. (Table 4).

TABLE 3: INDIVIDUAL COMMERCIAL NON-GROUP ANNUAL PREMIUMS, 2005

Age Band	Single Male	Single Female	Two Person	Family
Under 30	\$1,932	\$3,239	\$5,340	\$8,609
30-34	\$2,542	\$3,623	\$5,419	\$9,656
35-39	\$2,542	\$3,623	\$5,942	\$9,656
40-44	\$3,092	\$3,920	\$5,942	\$10,292
45-49	\$3,578	\$4,316	\$6,598	\$10,732
50-54	\$4,594	\$5,009	\$8,545	\$11,881
55-59	\$6,063	\$6,327	\$11,158	\$14,386
60-64	\$7,995	\$7,551	\$14,160	\$16,961

Source: Anthem Blue Cross and Blue Shield rate For BlueCare Direct; rates applicable Jan 1 – Dec 31, 2005.

TABLE 4: HIGH RISK POOL INDIVIDUAL PREMIUMS, 2005

Age Band	Male Rate	Female Rate
Children	\$3,827	\$3,827
Adults under age 30	\$2,616	\$5,091
30-34	\$3,165	\$5,352
35-39	\$3,481	\$5,271
40-44	\$4,177	\$5,518
45-49	\$5,163	\$6,008
50-54	\$6,804	\$6,902
55-59	\$8,904	\$8,064
60-64	\$11,363	\$9,626

Source: Connecticut Health Reinsurance Association web site at <http://www.hract.org/hra/Brochures/2005/Individual/PPO/PPO%20Individual%20Plan%20Brochure05.pdf>; reflects rates for PPO individual plan.

- e. For elderly family members, two scenarios are presented: Medicare coverage with a typical Medicare Advantage plan (Tables 5a and 5b), and Medicare coverage with a Medicare Supplement J policy.⁶⁰

TABLE 5a: AVERAGE ANNUAL ENROLLEE OUT-OF-POCKET AND PREMIUM COSTS IN MEDICARE ADVANTAGE PLAN BY HEALTH STATUS FOR AGE 65-69, 2005.

Health Status	Annual Costs					
	Part B Premium	Plan Premium	Pharmacy Cost Sharing	Dental Cost Sharing	Other Cost Sharing	Total Beneficiary-Paid Expense
Good	\$936	\$1,188	\$2,580	\$372	\$288	\$5,364
Fair	\$936	\$1,188	\$3,384	\$216	\$888	\$6,612
Poor	\$936	\$1,188	\$5,676	\$120	\$1,104	\$9,024

Source: Medicare.org, Medicare Plan Selector and Out-of-Pocket Cost Estimator for HealthNet Smart Choice Plan, Bridgeport, CT.

TABLE 5b: AVERAGE ANNUAL ENROLLEE OUT-OF-POCKET AND PREMIUM COSTS IN MEDICARE ADVANTAGE PLAN BY HEALTH STATUS FOR AGE 70-74, 2005.

Health Status	Annual Costs					
	Part B Premium	M+C Premium	Pharmacy Cost Sharing	Dental Cost Sharing	Other Cost Sharing	Total Beneficiary-Paid Expense
Good	\$936	\$1,188	\$2,712	\$384	\$432	\$5,652
Fair	\$936	\$1,188	\$3,588	\$252	\$756	\$6,720
Poor	\$936	\$1,188	\$4,512	\$252	\$852	\$7,740

Source: Medicare.org, Medicare Plan Selector and Out-of-Pocket Cost Estimator for HealthNet Smart Choice Plan, Bridgeport, CT.

2. Out-of-pocket medical expenses

Out-of-pocket (OOP) expenses are all medical expenditures made directly by an individual. OOP expenses do not include a family's share of health insurance premium; they do include co-payments, deductibles, and payments for non-covered goods and services. Our definition of OOP expenses largely follows that used in the MEPS Household Component.⁶¹ MEPS include the following OOP costs:

- Inpatient hospital
- Outpatient hospital
- Services of a medical professional or practitioner
- Prescription medications
- Laboratory and diagnostic services
- Mental health services
- Clinic services
- Dental care
- Institutional long-term care
- Home care services
- Medical supplies and equipment

The HESS OOP cost estimates are based on the 2002 MEPS, with costs updated based on the 2003- 2005 Medical Consumer Price Index for the northeastern United States.

To ensure that the estimates conform to health economic sufficiency criteria,⁶² adjustments are made to include non-prescription medications, which are not included in MEPS. The cost factor is based on the Centers for Medicare and Medicaid Services (CMS) Office of the Actuary national health accounts estimates of spending by service category and payment source.

At this time, we have not included OOP costs in two categories that are often cited as important. These are health-related transportation (other than ambulance, which is included in MEPS) and non-traditional health services. These categories are omitted because there are insufficient data on the incidence and distribution of these costs, and there is no reliable rule for determining which of these costs to include.

B. Lost earnings due to illness or disability

The second set of HESS cost components includes direct and opportunity costs due to lost earnings resulting from a wage-earner's illness, or caregiving responsibilities for an ill or disabled family member. There is evidence that lost earnings is a significant source of economic distress for families whose wage-earner(s) experiences serious illness, or must care for an ill family member.⁶³ Thus, HESS includes lost earnings as an essential cost factor. The HESS model uses the Economic Self-Sufficiency Standard as the income benchmark for calculating lost earnings due to illness or disability. The rationale for this is that a family must protect or replace income up to the level of the Self-Sufficiency Standard in order to remain economically self-sufficient.⁶⁴ For the purposes of the HESS model, the Self-Sufficiency Standard is adjusted to make it consistent with the HESS definition of health access costs. See Appendices III and V.

There are two buffers that families may have against lost wages: paid sick leave and disability insurance. In the HESS model, for family types that include an employed wage-earner (i.e. all family types that include a non-elderly adult) we make the following assumptions about lost earnings:

I. Families with wage-earner in good, very good, or excellent health ("Health Good"):

- For families with access to employer-sponsored health coverage (factors labeled **"ESI" and "Underinsured"** in the tables) whose wage-earner is in good, very good, or excellent health, we assume that paid sick leave and group disability insurance are sufficient to entirely buffer the family from income loss.⁶⁵ The cost of lost earnings for this family type is simply the employee's age-adjusted premium payment for a group disability insurance policy sufficient to keep the family's income at the level of economic self-sufficiency (see Table 6).⁶⁶

TABLE 6: GROUP LONG-TERM DISABILITY COVERAGE, ANNUAL PREMIUM BY AGE AND SALARY

Age	Annual Salary		
	\$35,000	\$45,000	\$55,000
Under 35	\$154	\$198	\$242
35-39	\$263	\$338	\$413
40-44	\$389	\$500	\$611
45-49	\$557	\$716	\$875
50+	\$697	\$896	\$1,095

Source: State of Connecticut employee voluntary long-term disability program; annual premium for Plan 2, Option 1, which pays 60% of regular pay after a 90-day elimination period, with up to five annual COLAs of the lesser of 3% or one-half the CPI.

- For families without access to employer-sponsored health coverage (“No ESI”) whose wage-earner is in good, very good, or excellent health status, we assume that paid sick leave is not provided, and that group disability insurance coverage is not available. There are two components of the cost of lost earnings associated with this family type:

- Lost income due to unpaid sick leave. Number of sick days is based on the age and gender of the wage-earner (see Table 7, row 1). Lost income is calculated based on these estimates times the daily wage at the adjusted CT FESS income standard.
- The premium cost of a non-group disability insurance that would provide sufficient family income. We assume that the cost of a non-group policy is five times the cost of a group disability policy.⁶⁷

TABLE 7: SUMMARY OF EVIDENCE ON EARNINGS LOSS DUE TO ILLNESS AND DISABILITY

Measure	Impact	Source
1. Work-loss days per person, employed persons age 18+	<u>Female:</u> age 18-44: 4.6 days age 45-64: 6.0 days <u>Male:</u> age 18-44: 3.9 days age 45-64: 4.7 days	Centers for Disease Control and Prevention, “ <i>Summary Statistics for U.S. adults: National Health Interview Survey, 1998</i> ,” December 2002.
2. Median annual earnings differential for persons with a non-severe disability vs. no disability	<u>Female:</u> \$3,240 <u>Male:</u> \$3,996	McNeil, J., “ <i>Americans with Disabilities: 1997</i> ,” U.S. Census Bureau, Current Population Reports.
3. Median annual earnings differential for people in fair/poor health status vs. excellent/very good/good health status; individuals age 21-64	<u>Median earnings:</u> ex/vg/g: \$23,087 f/p: \$14,999 <u>Differential:</u> \$ 8,088 (35%)	McNeil, J., “ <i>Employment, Earnings and Disability: 1991-97 Data from the Survey of Income and Program Participation</i> ,” U.S. Census Bureau, 2000
4. Average lost income due to chronic respiratory disorders, age 25-64	<u>Average income loss:</u> \$5,272	Ward, et al, “ <i>Lost income and work limitations in persons with chronic respiratory disorders</i> ,” J Clin, Epidemiology 2002 March; 55(3):260-8 Based on analysis of Survey of Income and Program Participation and National Health Interview Survey

2. Families with wage-earner in fair or poor health (“Health Fair/Poor”):

Generally, people in fair or poor health are effectively uninsurable in the individual disability insurance market. We assume that workers without access to employer health insurance coverage also do not have paid sick leave or group disability coverage. Therefore, for families with a wage-earner in fair or poor health without access to employer coverage, we assume that the family directly bears the impact of lost earnings due to illness or disability. Making a generalized estimate of this nature is difficult, as the impact depends on several interrelated factors, including type and severity of illness, type of employment, and the specifics of sick-leave benefits.

Nevertheless, a number of national studies provide estimates of the earnings differential between healthy and less healthy people, and the earnings loss attributable to specific medical conditions (see Table 7). Based on these studies, we will assume that a wage-earner in fair or poor health status misses 25 days of work per year due to the wage-earner’s own illness. This is a relatively conservative assumption, given study estimates ranging from \$3,240 to \$8,088 of lost income due to poor health.

- *For families with access to employer-sponsored health coverage (“ESI” and “Underinsured”) whose wage-earner is in fair or poor health status, we assume that paid sick leave is provided, group disability coverage is available, and that sick leave offsets the cost of 10 of the 25 lost work days. The family*

loses the earnings for the remaining 15 days. Lost income is based on this estimate times the daily wage at the adjusted CT FESS income standard.

- *For families without access to employer-sponsored health coverage (“No ESI”) whose wage-earner is in fair or poor health status, we assume that paid sick leave is not provided, that disability insurance is not available, and that earnings for the full 25 days of illness are lost. Lost income is based on this estimate times the daily wage at the adjusted CT FESS income standard.*

C. Caregiver costs

For family types that include a disabled family member requiring direct care from other family members, the opportunity cost of the time required and its impact on household earnings is included as a cost component in the HESS model. This applies to two family types in this version of the HESS: Family Type 3 and 5 (child with asthma) and Family Type 9 (non-institutionalized elderly relative with a serious disability).

- *For Family Type 3 and 5, we assume that a child with serious asthma⁶⁸ requires seven ambulatory and emergency room visits⁶⁹ and is absent from school 10 days.⁷⁰ We assume that each medical visit requires a parent to miss one-half day, and that half of the missed school days requires a parent to miss work. This accounts for overlap between medical visits and missed school*

days, and for alternative sick-child arrangements). For **ESI-Health Good** and **Underinsured-Health Good** families, we further assume that five days of the wage-earner's paid sick leave are available to offset missed workdays (the other five days of sick leave are required for the wage-earner's illness). For **No ESI, ESI-Health Fair/Poor**, and **Underinsured-Health Fair/Poor** families, we assume no paid sick days are available for caregiving, because any paid sick days are used for the wage-earner's needs.

- For *Family Type 9*, we assume that the disabled elder requiring care needs Level 4 of family caregiving, as defined in the National Survey of Caregiving.⁷¹ This level is characterized by the need for assistance with at least one Activity of Daily Living

(ADL), significant physical and emotional stress on the caregiver, and significant financial hardship. According to the National Survey of Caregiving, this level of need is associated with a mean of 27.3 hours of family caregiving per week (Tables 8 and 9). We assume that half of this burden is met through reduced availability for paid employment. For **ESI-Health Good** and **Underinsured-Health Good** families, we further assume that five days of the wage-earner's paid sick leave are available to offset missed workdays. For **No ESI, ESI-Health Fair/Poor** and **Underinsured-Health Fair/Poor** families, we assume no paid sick days are available for caregiving, because any paid sick days are used for the wage-earner's needs.

TABLE 8: MEAN NUMBER OF HOURS OF CARE PROVIDED PER WEEK BY FAMILY CAREGIVERS IN HOUSEHOLDS (23.2% OF U.S. HOUSEHOLDS), BY CAREGIVING LEVEL

Level of Caregiving	% of All Family Caregivers	Mean Hours of Caregiving/Week
All caregivers	100%	17.9
Level 1	25.8%	3.6
Level 2	13.8%	8.2
Level 3	19.0%	9.1
Level 4	23.5%	27.3
Level 5	12.3%	56.5

Note: Level of Caregiving is an index of intensity of caregiving based on five factors: hours of care provided, types of care provided (number of ADL/IADL's), physical strain, emotional stress, and financial hardship, based on responses to the 1996 National Survey of Caregiving. Sample is representative of American households with a telephone and an English-speaking respondent.

Source: "Family Caregiving in the U.S.: Findings from a National Survey," National Alliance for Caregiving, Bethesda, MD and American Association of Retired Persons, Washington DC, 1997.

TABLE 9: ADULTS AGE 65 AND OVER WHO NEED HELP WITH PERSONAL CARE, BY AGE AND GENDER, 2002

Age	Percent In Need of Personal Care	
	Male	Female
65-74	2.8%	3.1%
75-84	7.4%	7.5%
85+	12.4%	22.8%

Source: National Health Interview Survey, 2002. Washington DC, 1997.

D. Limitations of HESS Methodology

The HESS methodology is comprehensive in its segmentation of the population and inclusion of cost factors, and explicit in its analytic structure. Nevertheless, the model has several significant limitations.

1. The model is static, while reality is dynamic. The model provides a snapshot of different population groups based on their characteristics at a particular point in time. While demographic characteristics, such as age, sex and family composition are relatively stable or predictable over time, the health-related variables (health status and access to health coverage) can change precipitously for a given family. Thus, the model does not adequately address a family's risk for deterioration (or improvement) in health economic sufficiency over time.
2. The model focuses on the "typical" family within each type and subtype. This is an inherent characteristic of a standard. Nevertheless, there is significant variation that is not addressed. For instance, in the area of out-of-pocket costs, the standard uses the mean cost for each subgroup defined by age, sex and health status. For most of these subgroups, between 10 and 25% of respondents have out-of-pocket costs that exceed the mean. Therefore, for those

exceptions, the HESS underestimates their financial burden. Of course, the HESS also understates the burden for those who spend below the mean. See Appendix V for detailed information on the distribution of out-of-pocket costs. This concern is even more evident in the area of income loss, where relevant factors include health status of multiple family members, availability and amount of paid sick leave, and number of wage-earners in the family.

3. The model uses self-reported health status as a major population parameter. Self-reported health status is a widely-used measure of health with considerable explanatory power. However, it does have limits: It is a subjective, self-reported measure, and there is potential response bias across demographically distinct subpopulations.
4. The model employs several simplifying assumptions about health insurance. For instance, "underinsured" is defined by premium contribution, rather than benefit structure. In reality, many families considered underinsured may have relatively low premiums, but very limited benefits. This would result in a distribution of premium and out-of-pocket costs quite different from that incorporated in the HESS. To be consistent, this and other simplifying assumptions are employed.

APPENDIX II. DATA SOURCES

Component	Source
Family economic self-sufficiency requirement	Self-Sufficiency Standard for Connecticut, Preliminary 2005 results, unpublished, Connecticut Permanent Commission on the Status of Women and Wider Opportunities for Women.
Out-of-pocket medical costs	Medical Expenditure Panel Survey-Household Component, 2002, adjusted for CT per capita personal health care expenditures, non-prescription drugs and trended to 2005 using the CPI, All Urban Consumers, Medical Care, and Northeast Region.
Group health insurance premiums	Medical Expenditure Panel Survey – Insurance Component, 2002, trended to 2005 based on Kaiser Family Foundation/Health Research and Education Trust Survey of Health Benefits (2004) and Towers Perrin Health Care Cost Survey (2005).
Non-group health insurance premiums	Commercial: Anthem blue Cross and Blue Shield rate for BlueCare Direct, 2005. High Risk: Connecticut Health Reinsurance Association, PPO individual plan, 2005.
HUSKY premiums	Connecticut Health Policy Institute, 2005 rates.
Medicare supplement and HMO premiums	U.S. Centers for Medicare and Medicaid Services, Medicare.Gov.
Group disability insurance premiums	State of Connecticut employee long-term disability program.
Non-group disability insurance premiums	John Hewitt Associates individual and group market surveys.
Earnings loss due to wage-earner's illness or disability.	Centers for Disease Control and Prevention, <i>"Summary Statistics for U.S. adults: National Health Interview Survey, 1998,"</i> National Health Interview Survey 2004. McNeil, J., <i>"Americans with Disabilities: 1997,"</i> U.S. Census Bureau, Current Population Reports. McNeil, J., <i>"Employment, Earnings and Disability: 1991-97 Data from the Survey of Income and Program Participation,"</i> U.S. Census Bureau, 2000. Ward, et al, <i>"Lost income and work limitations in persons with chronic respiratory disorders,"</i> Journal of Clinical Epidemiology, 2002 March; 55(3):260-8. Fronstin, P., Holtmann, A., <i>"Productivity Gains from Employment-Based Health Insurance,"</i> unpublished working paper, 2000.
Earnings loss due to caregiving	<i>"Family Caregiving in the U.S.: Findings from a National Survey,"</i> National Alliance for Caregiving, Bethesda, MD and American Association of Retired Persons, Washington DC, 1997. National Health Interview Survey, 2002. Lozano, P. et al, <i>"The Economic Burden of Asthma In U.S. Children: Estimates from the National Medical Expenditure Survey,"</i> Journal of Clinical Epidemiology, 104(5), 1999. Newacheck, P and Halfon, N, <i>"Prevalence, Impact, and Trends in Childhood Disability Due to Asthma,"</i> Journal of the American Medical Association, 154:3, 2000.

APPENDIX III. DIFFERENCES BETWEEN HESS AND FESS DEFINITIONS OF HEALTH COSTS

Cost Component	HESS	FESS
Out-of-pocket costs	Medical Expenditure Panel Survey-Household Component, 2002, adjusted for CT per capita personal health care expenditures, non-prescription drugs and trended to 2005 using the CPI All Urban Consumers, Medical Care, and Northeast Region. Mean costs for each individual family member based on age, sex and health status.	Agency for Healthcare Research and Quality. <i>Household Component Analytical Tool (MEPSnet/HC)</i> . August 2003, updated with the Medical CPI.
Group health insurance premiums	Medical Expenditure Panel Survey – Insurance Component, 2002, trended to 2005 based on Kaiser Family Foundation/Health Research and Education Trust Survey of Health Benefits (2004) and Towers Perrin Health Care Cost Survey (2005).	Kaiser Family Foundation. Average Annual Costs of Employment-Based Health Insurance – Single & Family Coverage, 2003. Retrieved from http://www.statehealthfacts.kff.org/
Non-group health insurance premiums	Commercial: Anthem Blue Cross and Blue Shield rate for BlueCare Direct, 2005. High Risk: Connecticut Health Reinsurance Association, PPO individual plan, 2005	Not included
Disability Insurance Premiums	Group: State of Connecticut employee long-term disability program, premiums by age and salary. Non-group: J. Hewitt market surveys.	Not included
Income loss due to wage-earner's illness	Differential estimates based on insurance and health status. See Table 7 in Methodology section for sources.	Not included
Income loss due to family caregiving	Estimates based on wage-earner's sick leave and dependent's care needs. National Survey of Family Caregiving, 1997 and 2002.	Not included

APPENDIX IV. COMPARISON OF FAMILY ECONOMIC SELF-SUFFICIENCY STANDARD AS PUBLISHED VS. ADJUSTED FOR HEALTH ECONOMIC SUFFICIENCY STANDARD HEALTH ACCESS COSTS

Reflecting the differences described in Appendix III, the HESS results incorporate an estimated self-sufficiency income for each family type based on the HESS definition of **Total Health Access Costs** for

Family Type I. Similar calculations were done for all family types to calculate the economic self-sufficiency requirement shown in Tables R-1 through R-10.

Cost Component	Family Economic Self-Sufficiency Standard as published	Family Economic Self-Sufficiency Requirement adjusted for HESS estimate on health access costs
Housing	\$ 11,077	\$ 11,077
Child Care	13,050	13,050
Food	8,642	8,642
Transportation	5,525	5,525
Health Care	6,528	4,752
Miscellaneous	4,245	4,245
Taxes	10,008	9,646
Earning Income Tax Credit	0	0
Child Care Tax Credit	(1,200)	(1,200)
Child Tax Credit	(2,000)	(2,000)
Self-Sufficiency Standard	\$ 55,876	\$ 53,737

Source: Pearce, D. et al., *The Real Cost of Living in 2005: Self-Sufficiency Standard for Connecticut*. State of Connecticut Office of Workforce Competitiveness, 2005.
 Note: Figures may not add up due to rounding.

APPENDIX V. DISTRIBUTION OF MEDICAL OUT-OF-POCKET SPENDING

MEDICAL OUT-OF-POCKET SPENDING AMONG INSURED U.S. CIVILIAN NON-INSTITUTIONALIZED FEMALES BY AGE AND HEALTH STATUS, ANNUAL SPENDING IN DOLLARS, 2002				
Females	Mean	Percentile		
		50th	75th	90th
Age 0-4				
Healthy	126	70	154	320
Not Healthy	181	75	349	440
Age 5-17				
Healthy	346	90	284	726
Not Healthy	1027	226	1002	2230
Age 18-24				
Healthy	352	163	422	847
Not Healthy	501	427	642	1354
Age 25-34				
Healthy	491	227	512	1119
Not Healthy	860	474	1111	1898
Age 35-44				
Healthy	571	256	628	1256
Not Healthy	910	436	1034	2671
Age 45-54				
Healthy	731	420	886	1719
Not Healthy	1253	736	1477	3002
Age 55-64				
Healthy	948	565	1134	2126
Not Healthy	1794	1105	2849	4080
Age 65-74				
Healthy	1117	780	1465	2386
Not Healthy	1723	1207	2555	3828
Age 75 and up				
Healthy	1476	903	1809	3238
Not Healthy	1791	1314	2347	4010

Source: Medical Expenditure Panel Survey-Household Component, 2002.

**APPENDIX V. DISTRIBUTION OF MEDICAL OUT-OF-POCKET SPENDING
(CONT'D)**

MEDICAL OUT-OF-POCKET SPENDING AMONG INSURED U.S. CIVILIAN NON-INSTITUTIONALIZED MALES BY AGE AND HEALTH STATUS, ANNUAL SPENDING IN DOLLARS, 2002				
Males	Mean	Percentile		
		50th	75th	90th
Age 0-4				
Healthy	157	73	186	392
Not Healthy	308	232	435	878
Age 5-17				
Healthy	323	84	252	644
Not Healthy	525	140	333	2263
Age 18-24				
Healthy	196	50	200	510
Not Healthy	269	190	553	603
Age 25-34				
Healthy	203	50	237	530
Not Healthy	569	214	962	1950
Age 35-44				
Healthy	286	100	320	794
Not Healthy	641	198	760	1786
Age 45-54				
Healthy	431	205	530	1084
Not Healthy	982	631	1162	2360
Age 55-64				
Healthy	727	350	841	1718
Not Healthy	1125	659	1524	2669
Age 65-74				
Healthy	897	510	1182	1983
Not Healthy	1222	760	1426	2847
Age 75 and up				
Healthy	1231	663	1546	3237
Not Healthy	1578	1038	2126	3489

Source: Medical Expenditure Panel Survey-Household Component, 2002.

APPENDIX VI. PROFILE OF CONNECTICUT POPULATION

The HESS models health-related costs for family types defined by a set of factors: age, gender, family composition, access to employment-based health insurance, and self-reported health status. The HESS family types are a mechanism for better understanding the relationship between these factors and health costs. Making this analysis relevant to the Connecticut population requires a clear understanding of the population distribution across these factors.

- The Connecticut population is 3.37 million, with over 900,000 (27%) under age 19; 2 million (62%) are age 18-64; over 430,000 (13%) are age 65 and over.⁷²
- 51% of Connecticut households are married couple families: 14% of households are headed by a female with no male present.⁷³
- Over 550,000 Connecticut children have two custodial parents or guardians in the labor force.⁷⁴

HEALTH INSURANCE STATUS

The HESS model considers whether a family has access to employment-based health insurance, not whether the members are actually insured. Nevertheless, it is instructive to consider some of the population dynamics of the uninsured.⁷⁵ Highly vulnerable sub-populations include those with incomes between 150 and 200% of the federal poverty line, Hispanics, young adults, and unmarried adults. The low rate of uninsured children is attributable to expanded HUSKY eligibility that provides Medicaid coverage for more than 300,000 children, pregnant women and parents (Table 1).

Of note:

- Approximately 200,000 Connecticut residents – 5.8% of the non-elderly population – have no health insurance. The groups most likely to be uninsured are those aged 19-24 (16.8% uninsured), Hispanics (21% uninsured), those with annual incomes between \$12,000 and \$21,999 (20% uninsured), and those living with a partner (21% uninsured).⁷⁶
- Nearly two-thirds of Connecticut's uninsured adults are employed.⁷⁷
- As of May 1, 2005 there were 326,518 Connecticut residents enrolled in HUSKY, including 234,060 children.⁷⁸

HEALTH STATUS AND DISABILITY

Health status and disability are important determinants of health-related economic burden, related to out-of-pocket medical costs and lost earnings due to illness and related limits on activity. Health status and disability correlate strongly with age (Tables 17 and 18). Also, African-Americans, Hispanics, low-income and near-poor people are more likely to report fair or poor health status.

Health status is extremely volatile. Today's healthy people are potentially just one injury or adverse diagnosis away from being unhealthy or disabled. In addition:

- In 2004, 11.3% of Connecticut adults reported that they were in fair or poor health.⁷⁹

Factors associated with a high rate of fair or poor health are old age, African-American or Hispanic race/ethnicity, low income, and presence of a disability. Nine percent of the U.S. civilian non-institutionalized population reports being in fair or poor health.⁸⁰

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⁵⁸ The HESS focuses on the non-institutionalized civilian population of Connecticut.

⁵⁹ See *Appendix VI: Profile of Connecticut Population* for a discussion of the prevalence of these family types in the Connecticut population.

⁶⁰ Medicare Advantage is a program of HMOs and other health plans approved by the federal government to provide services to Medicare beneficiaries. Members receive services from providers affiliated with each plan, and pay premiums and co-payments according to each plan's fee schedule. Medicare Supplement J is the most comprehensive supplemental insurance policy available to Medicare fee-for-service beneficiaries. It includes a limited, but substantial pharmacy benefit.

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⁶² Included cost components must satisfy a threshold of being generally accepted as an appropriate health service, or as a non-discretionary expense or loss of income. On this point, we use a "prudent consumer" test. We will include a cost if a typical consumer, adequately-insured and not unduly constrained by out-of-pocket cost constraints, would consume the good or service. This criterion is reflective of population-based surveys such as the MEPS, which are based on actual use and outlay, as reported by consumers, employers, insurers and providers.

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