



Iowa State Planning Grant

2005 Final Report to the Secretary

U.S. Department of Health and Human Services

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EXECUTIVE SUMMARY

Iowa's State Planning Grant, Striving to Expand Health Insurance to all Iowans

Iowa has been a HRSA State Planning Grant participant since October 2000. Iowa's purpose in participating in the program has remained constant: to identify, through research, policies that will help expand access to affordable health insurance coverage for all Iowans.

The Iowa State Planning Grant project (Iowa-SPG) has been able to serve as a significant state data resource on the uninsured in Iowa throughout its tenure. Through the use of State Planning Grant resources, policymakers, the media, and interested citizens have been able to access, from one convenient and trusted source, a variety of information on Iowa's uninsured population. Section 1 of this report presents an update of state-level data on the uninsured with a focus on the data that has been of greatest interest to various Iowa constituencies during the State Planning Grant years, 2001-2005.

At a policy level, Iowa has succeeded in reforming its Medicaid program to allow more Iowans to have access to medical care. During the 2005 session, the Iowa legislature passed the Iowa Medicaid Reform Act (IowaCare Act), which reforms the State's Medicaid program in a highly targeted and creative fashion, and does so without increasing State General Fund expenditures or Federal Medicaid expenditures. The IowaCare Act does not create a new entitlement population, but does provide for expanded program enrollment and services, with a focus on access to preventative care. The federal government has granted approval to the Medicaid program changes included in the IowaCare Act via a Medicaid §1115 waiver. Section 1.B of this report provides information on the reforms contained in the IowaCare Act.

Iowa's remaining uninsured population will continue to receive services much as they have in the past. However, it is believed safety-net institutions will be in a better position to assist uninsured Iowans with the passage of the IowaCare Act. This is because the Act increases the number of Iowans with financial resources to pay for the care they receive, thus reducing the uncompensated care burden on safety-net providers.

Iowa-SPG had initially focused on developing information on the uninsured so that policymakers and the public would have a better understanding of who are the uninsured in Iowa and the reasons why individuals and families are without health coverage. That effort has been supplemented by two additional research projects whose primary goal has been to understand the effects on Iowa business and Iowa consumers of rapidly increasing health care and health insurance costs. In 2004, with the Iowa Business Survey, the Iowa-SPG team reported that businesses statewide, of all sizes and in rural and metro counties alike, were having problems managing their bottom lines while paying the increasing burden of health insurance.¹ A major theme in the findings from the 2004 Business Survey was the conflict between businesses absorbing rising costs or passing costs onto employees.

¹ See "Iowa HRSA State Planning Grant 2004 Report to the Secretary" for the complete analysis of the 2004 Iowa Business Survey.

Building on those findings, the Iowa-SPG began focusing in late 2004 and into 2005 on developing an understanding of how Iowa consumers respond to rising health care and health insurance costs. The 2005 Iowa Survey of Consumers, a telephone survey of 1202 Iowans aged 18-64 conducted in early July 2005, traces the influence of health care and health insurance cost increases on how individuals and families access and use medical care. The major survey findings reveal:

- ◆ Iowans are paying more for health insurance, sometimes dramatically more.
- ◆ In response to rising health insurance costs, Iowans make sacrifices and increase their personal vulnerability.
- ◆ Increasing health care costs are changing how and when Iowans access health care. One strategy consistently ignored is opting out of health insurance.
- ◆ As health care costs increase, insured and uninsured Iowans try to save on medical expenses, sometimes in ways potentially detrimental to their good health.
- ◆ Underinsured Iowans closely resemble the uninsured: They act against medical advice in response to rising health care costs.
- ◆ Health insurance availability influences Iowans' life choices, including such decisions as when to start a family, when to enter or exit the workforce, and whether to invest or save, and may even dampen the entrepreneurial spirit of some Iowans.

These survey findings and others are fully discussed in Section 2 of this report.

Section 3 presents an economic analysis of the 2005 Iowa Survey of Consumers, the goal of which is to develop an understanding of how increasing health care and health insurance costs influence the overall Iowa economy. The key results of the analysis confirm that Iowans view inflation in health costs as a serious problem that broadly impacts their lives. In addition, the analysis shows:

- ◆ High rates of inflation in health costs are likely to have an impact on the Iowa economy, although the expected negative effects of price inflation and net wage reductions are most likely offset by gains to the Iowa economy from growth in the health sector.
- ◆ The demand for health is downward sloping, which implies that higher prices lead to less consumption, and beyond some threshold less consumption is likely to have negative effects on health.
- ◆ The secondary effects of inflation in health care costs are less employment mobility, dampening of entrepreneurial incentives, and stress.

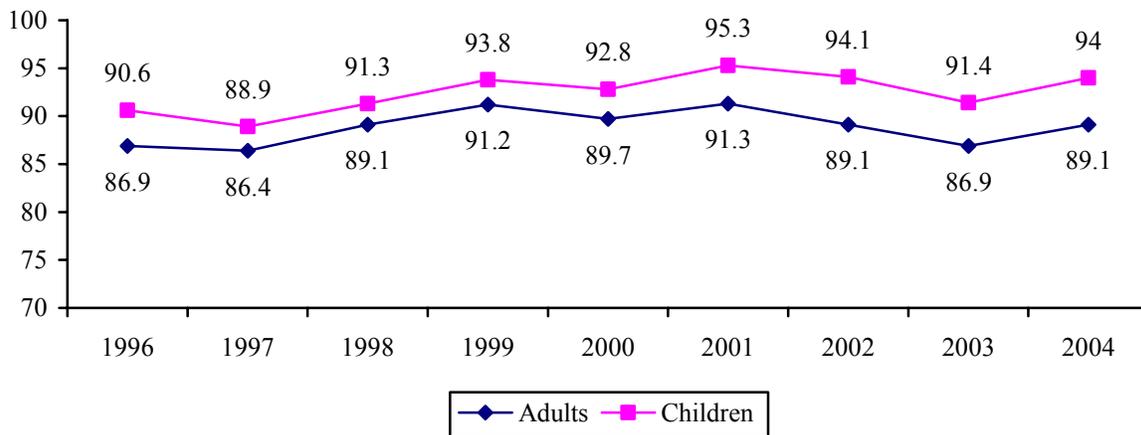
SECTION 1. HEALTH INSURANCE COVERAGE IN IOWA

To help achieve the initial State Planning Grant goal of a complete and data-driven picture of Iowa's uninsured population, the Iowa-SPG has used the Current Population Survey (CPS) as a resource for information on Iowa's uninsured since the fall of 2000. To further refine our understanding of Iowa's uninsured population, that data gathering effort has been supplemented by the findings from the Iowa-SPG Survey of the Uninsured (Winter 2001), and most currently, the Survey of Iowa Consumers completed in the Summer of 2005. For the purposes of this final report, we have updated key Current Population Survey data gathered since the project's inception, as there have been important changes in insurance coverage since Iowa joined the State Planning Grant program in late 2000.

A. Iowa Health Insurance Coverage: 2001 – 2005.

Iowans have historically had a stable and high rate of health insurance coverage (Figure 1). The Census Bureau's Current Population Survey (CPS) data for 2004 shows that in a comparison of uninsured rates among states using three-year averages for the years 2002 to 2004, Iowa has the third lowest rate of uninsured (10.1%), ranking only behind Minnesota (8.5%) and Hawaii (9.9%).² The highest rate was in Texas at 25.1 percent, and the rate for the nation as a whole is 15.5 percent.

Figure 1. Iowa Health Insurance Coverage, Adults Under 65 & Children 1996-2004



Source: U.S. Census Bureau, CPS, 1988 to 2005 Annual Social and Economic Supplements, Health Insurance Coverage Status by State, People Under 65 & Children Under 18: 1987 to 2004.

Comparisons of the most recent two-year moving average data (2002-2003 and 2003-2004) show that Iowa experienced no change in its two-year moving average of 10.4 percent. Across the nation, two-year moving average data comparisons show the proportion of uninsured

² U.S. Census Bureau, CPS, 2003 to 2005 Annual Social and Economic Supplements. In 2004, Iowa also had the third lowest rate of uninsurance, behind Minnesota (8.2%) and New Hampshire (9.3%).

people fell in three states and rose in eight states. Idaho, New York, and Wyoming experienced rate decreases of 1.3 percent, 0.8 percent, and 1.8 percent, respectively. The states experiencing increases are Delaware (2.3%), Montana (1.9%), Tennessee (1.7%), Florida (1.3%), Oklahoma (1.3%), South Carolina (1.1%), Massachusetts (0.9%), and New Hampshire (0.9%); none are in the Midwest.³

In 2001, the CPS estimated the total number of uninsured Iowans at 216,000.⁴ The latest CPS data shows the number of uninsured Iowans is 277,000 (Table 1). The number of uninsured children in 2004 is estimated at 41,000 or 4 percent.⁵

Since the initial SPG year, the percentage of Iowans insured through employment has fallen from 69 percent in 2001 to 64.9 percent in 2004, while the percentage of Iowans enrolled in government health programs has increased from 22.8 percent in 2001 to 26.0 percent in 2004.⁶

Table 1. Iowa Health Insurance Coverage Status 2001 & 2004 - All People

Coverage Status	2001 ¹		2004 ²	
	%	People (000)	%	People (000)
Not Covered	7.5	216	9.5	277
Private Health Insurance ⁷			79.6	2,314
Employment-based	69.0	1,973	64.9	1,886
Medicaid	7.8	224	11.9	346
Medicare	15.0	429	14.7	426

Source: ¹ Bureau of the Census, CPS, March 2002; ² U.S. Census Bureau, CPS, 2005 Annual Social and Economic Supplement.

Table 2 shows the coverage status for persons under 65 years of age and under 18 years of age, respectively. The increase in the number of uninsured Iowans under 18 has increased despite the growing number of children enrolled in the Iowa's State Children's Health Insurance Program known as hawk-I and the expanded state Medicaid program (Table 3).

³ U.S. Census Bureau, CPS, 2003 to 2005 Annual Social & Economic Supplements.

⁴ U.S. Census Bureau, CPS, 2005 Annual Social & Economic Supplement.

⁵ U.S. Census Bureau, CPS, 2005.

⁶ The Census Bureau defines government health insurance as plans funded by governments at the federal, state, or local level. The major categories are Medicare, Medicaid, the State Children's Health Insurance Program (SCHIP), military health care, state plans, and the Indian Health Service.

⁷ The Census Bureau defines private health insurance as health plans provided through an employer or union or purchased by an individual from a private health insurance company.

Table 2. Iowa Health Insurance Coverage Status 2001 & 2004 People Under 65 and People Under 18

Coverage Status	2001 ¹		2004 ²	
	Under 18	Under 65	Under 18	Under 65
Not Covered	4.7%	8.7%	5%	10.9%
Persons (000)	34	215	41	276
Employment-based	77.7%	75.9%	58.1%	70.2%
Persons (000)	557	1,881	455	1,767
Medicaid	16.0%	8%	24.7%	11.7%
Persons (000)	115	198	169	296
Medicare	0.7%	2.1%	0.5%	1.9%
Persons (000)	5	51	3	48

Source: ¹ Bureau of the Census, CPS, March 2002; ² U.S. Census Bureau, CPS, 2005 Annual Social and Economic Supplement.

The greatest change is seen in the reduction in the rate of children receiving employment-based coverage from 77.1 percent (2001) to 58.1 percent (2003), with the number of children covered in this fashion dropping by about 100,000 children. The question of whether families have substituted SCHIP coverage while dropping family coverage merits investigation.

Table 3. Iowa SCHIP (hawk-i) and Expanded Medicaid Enrollment, 2000-2005

	Total Children on Medicaid	Expanded Medicaid*	hawk-i Program (began 1/1/99)
July 2000	106,058	8,477	5,911
July 2001	126,370	11,316	10,273
July 2002	140,599	12,526	13,847
July 2003	152,228	13,751	15,644
July 2004	164,047	14,764	17,523
July 2005	171,727	15,013	20,084
Enrollment Totals			
SCHIP Enrollment July 1999-July 2005		35,097	
Increase in Medicaid enrollment July 1998 to July 2005		79,990	
Growth in hawk-i enrollment July 1999 to July 2005		20,084	

Source: Iowa Department of Public Health, August 2005.

Since 2001, Iowa employers have faced significant health insurance premium rate increases. According to David Lind, author of a yearly survey of Iowa employer benefit costs, in 2004, employers are paying an average of \$811 a month for family (preferred provider organization) coverage, with their employees contributing \$276 towards the premium total.⁸ According to Lind, there have been significant increases in monthly Preferred Provider Organization health premiums between 1999 and 2003 as shown in Table 4, below. Table 5 shows employer health insurance premium increases by employer size for the years 2001 through 2003.

Table 4. Iowa: History of Monthly Health Premiums Includes Employer and Employee Contribution		
Year	Single	Family
1999*	\$178	\$457
2000	\$195	\$493
2001	\$229	\$590
2002	\$255	\$651
2003	\$279	\$725
5 Year Increase (%)	56.7%	58.6%

Source: David P. Lind & Associates, 2003 Iowa Employer Benefits Study ©.
*1999 study included central Iowa employers only.

Looking at the Agency for Healthcare Research and Quality Medical Expenditure Panel Survey (MEPS) data for the years 2000 and 2003, we see that the percentage of private sector establishments offering health insurance has fallen from 53.3 percent of Iowa's employers in 2001 to 50.8 percent of employers in 2003 (Table 6).⁹

⁸ Personal communication with David P. Lind, David P. Lind & Associates, West Des Moines, Iowa. June 2004. According to Lind, in 2004 approximately 82 percent of Iowa employers offered PPO plans as compared to the less than 30 percent of firms that offered "Health Maintenance/POS" plans and the approximately 9 percent that offered traditional indemnity plans.

⁹ Agency for Healthcare Research & Quality, 2000 Medical Expenditure Panel Survey – Insurance Component. Percent of private sector establishments that offer health insurance by firm size and State, 2000 and 2003.

Table 5. Percent of Iowa Private-sector Establishments that Offer Health Insurance by Firm Size, 2000 & 2003

	2000 (%)	2003 (%)
All firms	53.3	50.8
Less than 10 employees	30.4	27.4
10 – 24 employees	70.3	69.1
25 – 99 employees	90.8	86.7
100 – 999 employees	97.3	98.6
1000 or more employees	97.2	100.0

Source: Agency for Healthcare Research and Quality, 2000 Medical Expenditure Panel Survey – Insurance Component. Percent of private sector establishments that offer health insurance by firm size and State, 2000 and 2003.

Table 6. Iowa Employer Health Insurance Premium Increases 2001-2004

EMPLOYER SIZE	2001	2002	2003	2004
20 – 49 employees	19.1	19.4	22.0	20.9
50 – 249 employees	18.9	20.1	18.7	14.9
250 – 999 employees	17.5	16.3	15.4	13.7
1000 + employees	10.3	17.4	17.2	15.8
Weighted Ave.	17.4	18.7	18.2	15.7

Source: David P. Lind & Associates, 2003 Iowa Employer Benefits Study ©.

B. 2005 Iowa Medicaid Reform

In 2004, political and health care leaders in the state of Iowa began to express concern regarding the future of the State's Medicaid program. Their anxiety was prompted by fears the program was spiraling out of control in terms of cost. The threat to the State was viewed as unsustainable cost increases and declines in healthy outcomes, quality and access to services. In short, state leaders saw they had to seize the initiative and accept the federal government's challenge to states to undertake the process of reforming their Medicaid programs. An unanticipated event, in the form of a challenge to Iowa's use of Intergovernmental Transfers, put the state firmly on the road to reforming its Medicaid program.

1. A Catalyst For Reform.

Iowa had for many years joined other states in using Intergovernmental Transfers (IGTs), with the approval of the Center for Medicare and Medicaid Services (CMS). The use of

IGTs had been an accepted means of increasing the availability of federal Medicaid funds. In March 2004, CMS took action requiring Iowa and other states to eliminate the use of IGTs as a supplemental funding mechanism by July 2005. Faced with a significant funding loss (\$65 million reduction in federal funding), Governor Tom Vilsack, members of the legislature, the Iowa congressional delegation, and the Iowa Department of Human Services began an intense negotiating process with the U.S. Secretary of Health and Human Services to resolve how to maintain adequate funding for the State's Medicaid program without using IGTs. During the 2005 legislative session, this process evolved into a reform of the State's Medicaid program, and in April 2005, the legislature approved the Iowa Medicaid Reform Act.¹⁰ The Act expands the State's Medicaid program in a highly targeted fashion and does so without increasing State General Fund expenditures and Federal Medicaid expenditures. The purpose behind the reform is provided in Iowa Code § 249J.4:

It is the purpose of this chapter to propose a variety of initiatives to increase the **efficiency, quality, and effectiveness** of the health care system; to **increase access** to appropriate health care; to **provide incentives** to consumers to engage in responsible health care utilization and personal health care management; to reward providers based on quality of care and improved service delivery; and to encourage the utilization of information technology, to the greatest extent possible, to reduce fragmentation and increase coordination of care and quality outcomes. [Emphasis added]

2. Expansion Population Eligibility.

The U.S. Department of Human Services issued a final five year letter of approval for the Iowa section 1115 Medicaid demonstration project (IowaCare) on July 1, 2005. Prior to the enactment of the IowaCare Act, eligibility for adults in Iowa's Medicaid program was limited as shown in Table 7, below.

¹⁰ Iowa Code § 249J.1 et seq. (HF 841) The full text of the Act is attached herein as Appendix VIII.

Table 7. Iowa Medicaid Eligibility Prior to Enactment of IowaCare Act, as a Percent of Federal Poverty Level (2004)

	%	\$
PARENTS		
Non-Working Parents	33	5,112
Working Parents	82	12,780
PREGNANT WOMEN		
Pregnant Women	200	31,340
OTHER MEDICAID ENROLLMENT GROUPS		
Supplemental Security Income (SSI), 2000	74	
Aged, Blind and Disabled (OBRA '86), 2001	NA*	-
Medicaid Coverage Expansions for State Supplementary Payment Recipients	Not Offered	-

Source: Medicaid Eligibility, US HHS, C M S;
www.cms.hhs.gov/medicaid/eligibility/criteria.asp

Iowa's 1115 waiver provides for three Medicaid expansion populations for which expenditures are now allowed under the State Plan:

Demonstration Population 1: Expenditures for services provided to:

- Individuals ages 19 through 64 with family incomes between 0 and 200 percent of the Federal Poverty Level (FPL) who do not meet eligibility requirements of the Medicaid State Plan or any other waiver except the Family Planning waiver under Title XIX; and
- Parents whose incomes between 0 and 200 percent of the Federal Poverty Level (FPL) are considered in determining the eligibility of a child found eligible under either Title XIX or Title XXI, who are not otherwise Medicaid eligible.

Demonstration Population 2: Expenditures for obstetrical and newborn care provided to newborns and pregnant women with incomes at or below 300 percent of the Federal Poverty Level (FPL) who have incurred medical expenses of all family members that reduce available family income to 200 percent of the Federal Poverty Level (FPL).

Demonstration Population 3: Expenditures for services provided to children from birth to age 18 who have serious emotional disabilities and who:

- Would be eligible for State Plan services if they were in a medical institution; and
- Need home and community based services in order to remain in the community; and
- Have income at or below 300 percent of the SSI Federal benefit; or
- Have net family income at or below 250 percent of the Federal Poverty Level (FPL) for family size.

Iowa Medicaid reform does not create a new entitlement population. Rather, it provides that expansion population enrollment may be limited, closed, or reduced and the expansion population's scope and duration of services may be limited, reduced, or terminated if the state finds that federal Medicaid matching funds or appropriated state funds will not be available to pay for existing or additional enrollment. Additionally, Iowa's § 1115 waiver approval includes provisions allowing the state to require Demonstration Population 1 and 2 enrollees to pay monthly premiums "not to exceed 5 percent of annual family income."¹¹

Uninsured persons not included in the newly eligible expansion population will continue to receive health care services much as they currently do. From a health care system perspective, these individuals continue to receive uncompensated care or partially compensated care.

3. Medical Services for the Newly Eligible Enrollees.¹²

The expansion population has been eligible to receive the following health care services beginning July 1, 2005:

- Inpatient and outpatient hospital services;
- Physician and advanced registered nurse practitioner services;
- Dental services;
- Limited pharmacy benefits provided at an expansion population provider network hospital pharmacy; and

¹¹ Iowa's § 1115 waiver approval includes provisions exempting the state plan from the cost-sharing and premium requirements of USC 1902(a)(14) and "may disenroll individuals in Demonstration Populations 1 and 2 after providing notice of [...] disenrollment for failure to pay premiums without requiring the failure to continue for sixty days. Beneficiaries will have access to a fair hearing process to appeal the disenrollment." [USC 1916(c)(3)]. The state "may consider the income of family members other than a spouse or parent in determining eligibility for Demonstration Populations 1 and 2;" and the state "may limit freedom of choice of provider for Demonstration Populations 1 and 2" [USC 1902(a)(23)]. "Self-attestation of proof of income will be allowed for Demonstration Populations 1 and 2" [USC 1902(a)(46)]. [http://staffweb.legis.state.ia.us/lfb/medicaid/Final_CMS_Approval.pdf]

¹² Iowa Code § 249J.6

- Transportation to and from an expansion population provider network provider only if the provider offers such transportation services or the transportation is provided by a volunteer.¹³

Initially, new enrollees would be eligible for inpatient and outpatient hospital services solely at Polk County's (Des Moines) county hospital (Broadlawns), at the University of Iowa teaching hospital located in Iowa City, Iowa, or one of the four state Mental Health Institutes. Later phases include significant innovations which would include preventative care targeted at improving the health of low-income Iowans. These innovative services are outlined in Table 8, below.

Table 8. Iowa 2005 Medicaid Reform Initiative: Health Transformation Provisions Relevant to Newly Eligible Populations

Due Date	
March 1, 2006	Medical Exams: All expansion population members are required to receive a single complete medical examination and personal health improvement plan within 90 days of enrollment in the program.
July 1, 2006	Dietary Counseling: Iowa DHS shall design and begin implementing a strategy to provide dietary counseling and support [...] to expansion population members to assist in avoiding excessive weight gain or loss and to assist in development of personal weight loss programs for members determined by their care provider to be clinically overweight.
October 1, 2006	Electronic Medical Records: Iowa DHS shall develop a practical strategy for expanding utilization of electronic medical recordkeeping by providers under the medical assistance program and the expansion population provider network.
July 1, 2007	Smoking Cessation: Iowa DHS, in collaboration with the Iowa Department of Public Health, shall implement a program with the goal of reducing smoking among [...] expansion population members who are adults to less than ten percent.

Source: Iowa Department of Human Services and Iowa Code § 249J et seq.

SECTION 2. 2005 SURVEY OF IOWA CONSUMERS: THE IMPACT OF HEALTH CARE COST INCREASES

Research completed by the Iowa State Planning Grant in the summer of 2004 showed that Iowa businesses responded to increasing health insurance costs in ways that, over time, threaten business viability, and possibly reduce the strength of the Iowa economy.¹⁴ In 2004, the results of the Iowa Business Survey demonstrated that the burden of health insurance costs on Iowa businesses does not discriminate on the basis of location or size of the company. Businesses statewide of all sizes and in rural and metro counties alike reported having problems managing their bottom lines while paying the increasing burden of health insurance.¹⁵ A major theme in

¹³ Iowa's § 1115 waiver approval includes provisions exempting the state plan from the transportation requirements of USC 1902(a)(4) and CFR 431.50. http://staffweb.legis.state.ia.us/lfb/medicaid/Final_CMS_Approval.pdf

¹⁴ Iowa State Planning Grant 2004. The Regional Economic Impact of Inflation in Health Expenditures on Iowa Businesses. Des Moines and Iowa City: Selzer & Company.

¹⁵ See "Iowa HRSA State Planning Grant 2004 Report to the Secretary" for the complete analysis of the 2004 Iowa Business Survey.

the findings from the 2004 Business Survey was the conflict between businesses absorbing rising costs or passing costs onto employees. Building on those findings, the Iowa-SPG focused in 2005 on developing an understanding of how consumers respond to rising health care and health insurance costs.

A. 2005 Survey of Iowa Consumers

The 2005 Survey of Iowa Consumers complements the Iowa State Planning Grant's 2004 Iowa Business Survey. The purpose of the 2004 Business Survey was to understand the effect on Iowa businesses of four straight years of double-digit health insurance premium increases.¹⁶ The Business Survey results produced evidence of a growing crisis in health insurance in the state of Iowa. As premiums increase, Iowa businesses face four possible "Faustian bargains" as they attempt to deal with the rising costs of health insurance benefits: (1) a negative impact on profits, (2) a "passing on" of the costs to consumers in the form of higher prices, (3) a negative impact on the workforce, either through lower wages or fewer full-time equivalent (FTE) workers, or (4) a reduction in the amount of resources that get re-invested in the business (i.e., which are critical to growth). The principle findings from the 2004 survey are presented in Table 9, below.

Table 9. 2004 Iowa Business Survey Key Findings

- ▶ **Most businesses chose to absorb premium increase rather than take other action.** 75% who offer health insurance said they "took the hit" of recent increases squarely on their bottom line. About half (48%) said premium increases were forcing them to live with lower profits.

- ▶ **In reaction to higher premiums, businesses curtailed spending:** 22% said they put off buying equipment or making other purchases; 19% said they cut back on investments they would ordinarily have made for the development of new products and services.

- ▶ **Few businesses have reacted by burdening employees.** While 25% required employees to pay more of their health insurance premium than in prior years, very few chose to layoff workers (2%), or to reduce or eliminate other employees benefits (6%), convert some worked to part-time status(6%), reduce employee compensations in the form of salaries or bonuses (10%), or put off hiring new workers or left positions unfilled (12%).

- ▶ If premiums continue to rise at the same rate as they have in the recent past, employers could be forced to look to employees to contribute a greater portion of their compensation towards the payment of health insurance. 58% said they will look to employees to pay more of their premiums in the future if costs continue to rise.

- ▶ 44% said they would also consider raising the prices of the goods and services they sell to address rising insurance costs.

- ▶ **While few businesses see rising health insurance costs as an immediate threat to their ability to offer a health insurance plan, many report the situation is approaching crisis.** One in three Iowa businesses that offer health insurance said they could foresee a time within the next five (15%) or ten years (19%) when their company could no longer offer health insurance as part of employee compensation.

Source: 2005 Survey of Iowa Consumers, Iowa State Planning Grant

¹⁶ In the 2004 Iowa Business Survey, 82 percent of businesses who offered health insurance (35% of all businesses interviewed) said their premiums had increased an average of 14.75 percent (the median for the respondents was 11.86%). Half of the businesses who offered health insurance (50%) paid the entire premium for their employees' policies; another 45 percent of businesses paid part of the premium, resulting in an average contribution of \$337 per employee, per month for health insurance (the median is \$316).

1. Approach and Methods

The Iowa Department of Public Health commissioned SELZER & COMPANY to conduct a survey study to broaden understanding of how raising health insurance premiums and health care costs affect Iowans and the overall Iowa economy. Between, 1202 Iowa residents age 18 to 64 were interviewed about attitudes toward health insurance. The survey included an array of questions about health care access, insurance, income and other demographic characteristics. The survey was conducted between July 7th and July 12th, 2005. Interviews lasted approximately 15 minutes. Random-digit telephone numbers, provided by Survey Sampling Inc., were used as the sampling frame. The numbers were drawn and contacted in such a way that each household in the state with a landline telephone had an equal chance of participating in the survey. The response rate was 17 percent. To qualify for the survey, respondents had to be between the ages of 18 and 64, and be the person in the household who knows the most about health insurance. This latter qualification has a demographic impact, lowering the proportion of respondents in the age 18-24 group, for example, and resulting in slightly more females than is normal for the population at large. Because of this screen, we have no benchmark against which to compare the remaining demographics, but they appear to be consistent with Census reports for the population generally; thus, it is likely that this particular sample is representative of the universe of Iowa households. The margin of error was ± 2.8 percentage points.

The Iowa Department of Public Health commissioned SELZER & COMPANY to assist in broadening its understanding of how rising health care costs, including health insurance premium costs, affect Iowans and the overall Iowa economy. Between July 7th and July 12th, 2005, 1202 Iowa residents age 18 to 64 were interviewed about attitudes toward health insurance. The results of the survey have been used by economists John E. Schneider of the University of Iowa and Christopher S. Decker of the University of Nebraska at Omaha to analyze the regional economic impact of increases in health care expenditures on Iowa households.

This report is divided into several parts. We begin with a brief overview summarizing the key findings, followed by a more detailed discussion, including relevant tables. The last section of the report presents the economic analysis of the effects on households of increasing health care costs. A tabulated questionnaire showing topline percentage responses for each question follows the body of the report, along with more detailed profile tables and methodological descriptions.

2. Overview

As Iowans pay more, sometimes dramatically more, for health insurance, they make sacrifices to maintain their coverage and spend less in other areas of their lives. Many of these sacrifices involve behavioral changes that limit access to health care among those who are currently insured. Results from the 2005 Survey of Iowa Consumers show that some insured Iowans are responding to increasing health care cost pressures by taking the initiative to delay care or to consume fewer health care resources altogether. This includes such decisions as whether or not to seek or follow a physician's advice to undergo a diagnostic procedure or to begin or complete a course of treatment. These choices and others Iowans are making in response to cost pressures effectively downgrade the efficacy of the health care that professionals dispense to their patients. In short, insured Iowans are responding to increased costs in ways that

are similar to the cost-saving strategies used by uninsured persons, such as a delay in seeking medical care when ill, not following through on recommended treatments, and taking on more personal debt when they have no choice but to seek medical assistance.¹⁷ In fact, Iowans who rate their health insurance policy as no more than barely adequate are more likely to act against medical advice due to cost pressures than are the uninsured. The result is increased individual medical vulnerability and augmented societal costs in responding to the consequences of delayed medical care. What insured Iowans are not doing is voluntarily giving up health insurance as coverage rates have remained steady despite increasing premium costs.

A major theme in the 2004 study was the conflict between businesses absorbing rising health costs or passing costs onto employees. While the summer 2004 study showed few businesses had reacted by burdening employees (25% required employees to pay more in premium than in the past), the study also predicted an increasing shift of cost from employer to employee, with 58% of Iowa businesses saying they would require employees to pay more of their premiums if costs continued to rise.¹⁸

The 2005 Survey of Iowa Consumers traces the influence of health insurance cost on a multitude of individual and family life choices. The data show that health insurance currently exerts influence beyond matters of health and health care financing, and into Iowans' family decision-making, including when and if to get married or to start a family. Beyond its influence on the family, the need to maintain health insurance impacts job choice and mobility, workforce entry and exit (retirement), and even dampens the entrepreneurial spirit of some Iowans. Iowans believe health insurance's influence on their personal decision-making will be even stronger in the future.

Looking at the impact of rising health care costs beyond the individual and family level, an economic analysis of the survey data shows that high rates of health care cost increases are likely to have an impact on the regional economy. However, the expected negative effects of increasing health costs and the resulting net wage reductions are most likely offset by gains to the regional economy from growth in the health sector. At the sub-regional level, especially in small sub-regional economies, such as rural areas, the news is not so good. This is because higher health care costs have the effect of reducing health care consumption, and beyond some threshold, reduced consumption of health care is likely to translate into negative health outcomes. So while the net economic effects of economic activity moving from non-health care spending to health care spending may be offsetting in the short run, they are not likely to last in the long run, as small sub-regional economies experience net losses in economic activity. Similarly, the effects of reductions in health care consumption are likely to be greater for sicker,

¹⁷ Kaiser Foundation Commission on Medicaid and the Uninsured. 2004. *The Uninsured: A Primer*. Washington, D.C. IA-HRSA State Planning Grant 2001 Survey of the Uninsured.

¹⁸ Other strategies used by businesses by the summer of 2004, were to layoff workers (2%), reduce or eliminate other employees benefits (6%), convert some workers to part-time (6%), reduce employee pay in the form of salaries or bonuses (10%), or put off hiring new workers or leave positions unfilled (12%). However, employers indicated if premiums continued to rise at the same rate as in the recent past, employees would have to share more of the burden of rising costs. In the future, 15% of employers indicated they would react to cost pressures by laying off workers, while other potential actions included reducing or eliminating other employees benefits (32%), converting some workers to part-time (22%), reducing employee pay in the form of salaries or bonuses (30%), or putting off hiring new workers or leaving positions unfilled (36%).

low-income populations, where the marginal health effects of small reductions in health care consumption may be large.

3. Key Findings

a. Rising Health Care Costs Increase Iowans' Vulnerability

Increasing health care costs are forcing Iowans to cope with annual double-digit inflation rates in their household health care budgets. The result is that Iowans have faced and are continuing to face significant cost increases in what is a major portion of their household budget. (Research indicates direct medical care costs are a non-trivial component of household expenditures, comprising 19% of the median household income in Iowa.¹⁹) Along with increases in underlying health care costs, individual Iowans are taking on a larger burden of their health care expenses in the form of increased co-payments and deductibles. Past research shows that health insurance premium increases affect the behavior of Iowa businesses and the overall Iowa and regional economies.²⁰ We now look at how increases in health care expenses affect household finances and consumer behavior.

Iowans are paying more for health insurance, sometimes dramatically more.

Among Iowans with health insurance coverage, almost two-thirds (65%) say the amount they pay for their health insurance premium has increased over the past few years. Slightly more than one in five (21%) describe their premium cost as increasing dramatically.

Among those Iowans who have private health insurance (non-employment related) coverage, 85% say the amount they pay for coverage is increasing, and more than one-third (36%) say their premium cost is increasing dramatically.

The pressure of having to pay more for health insurance is felt more by Iowans over age 45 than by younger Iowans. Almost three-fourths of insured Iowans aged 45 to 64 (71%) describe their health insurance costs as increasing (including 26% who say it is increasing dramatically), while only 57% of Iowans aged 18 to 44 describe their costs as increasing (16% increasing dramatically).

To cope with rising health insurance costs, Iowans make sacrifices which increase their personal vulnerability. Among Iowans who describe the amount they personally pay in health insurance premiums as increasing, 59% say the increase is causing them to make sacrifices in their household budgets. Seventy-nine percent (79%) of those in households earning less than \$30,000 report having to make sacrifices, as do almost half (42%) of those in households with incomes above \$70,000. Other changes in household spending patterns include:

- ◆ 86% say they have cut back on how much they can save;
- ◆ 83% say they have cut back on spending for entertainment, vacations, or leisure activities;

¹⁹ Schneider & Decker analysis of data from the Kaiser Family Foundation (Kaiser Family Foundation 2004, 2005).

²⁰ Schneider, J.E., A. Selzer, & A. Kinzel, 2004.

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- ◆ 44% say they have cut back on normal household expenditures for items such as food and utilities;
 - ◆ 38% say they have taken on more debt, such as credit card debt or other loans;
 - ◆ 35% have downgraded the scope of their health insurance coverage to reduce their premium costs (includes changing to a different type of policy); and
 - ◆ 29% have reduced or eliminated other kinds of insurance coverage, such as life, disability, auto, and homeowners insurance.

Interpretation

Embedded in these data is an unmistakable irony. As insured Iowans make sacrifices to pay for increasing health insurance costs, they are taking on greater risk and increasing their personal financial vulnerability by saving less, increasing their level of personal debt, reducing the scope of their health insurance protection, and reducing other forms of insurance coverage. However, each of these elements has potential negative consequences for the household and the larger society. Cutting back on savings makes families less prepared for unanticipated events such as a job loss, and expected expenses such as higher education and retirement. Reducing vacation and leisure leaves individuals and families with less time to alleviate stress in their lives. Taking on more debt leaves individuals and families without the resources to deal with emergencies of all kinds, as well as leaving them more vulnerable to downturns in the local and national economies, not to mention the economic crunch by introducing new spending on interest. Downgrading health insurance coverage by switching to plans with higher premiums and co-payments may not be too risky for healthy individuals in higher income brackets, but can be devastating to middle and lower income households who may suddenly find themselves with a significant medical debt due to unexpected hospital and provider co-payments. For those with chronic diseases, reducing coverage often means going without necessary medical care, leading to increased future costs and disease burden. Reducing other forms of insurance coverage, such as homeowners or automobile insurance, without addressing underlying risk levels leads the insured to assume great risk, and has the potential to increase the government's burden as liability costs will be pushed from the private (insurance) sector to the public sector.

b. Increasing Health Care Costs are Changing How and When Iowans' Access Health Care

The Iowa State Planning Grant (IA-SPG) first looked for evidence of the pressure of increasing health care costs on consumer behavior in 2001. Initially, the research effort focused more on the behavior of uninsured Iowans, and accordingly, one of the questions asked in the 2001 IA-SPG Survey of the Uninsured was if respondents felt they had needed to go to the doctor in the preceding 12 months, but did not go due to the cost. Thirty-seven percent (37%) of

respondents said they had made the choice not to seek medical help when they needed it.²¹ The response was not surprising as numerous studies have shown the uninsured often delay seeking medical care.²² That finding, as well as insights drawn from focus groups of both insured and uninsured Iowans conducted by the IA-SPG in 2001, acted as a catalyst to move the focus of the SPG research effort in a direction of examining how rising health care costs affect the behavior of Iowa firms, as well as insured Iowans.

Throughout the IA-SPG term (2001-2005), there have been annual double-digit or near double-digit increases in the cost of health insurance premiums in Iowa and across the nation.²³ Drawing from the work of Miller (2004) and the Institute of Medicine, as well as from the overall IA-SPG research effort, it is clear these increases have significant effects, at the societal member level and to the overall society, resulting from the uninsured's foregone health care access.²⁴ Commentators suggest increases in health care costs and insurance premiums have changed insurance plan benefit design. This, they say, is moving the country to an insurance model that provides less comprehensive coverage than in the past and demands more financial participation from insureds in the form of higher deductibles, greater patient cost-sharing, and for some plans, a more restricted scope of benefits.²⁵ Expanding on the work of Miller and Schoen, the question arises, could delayed or reduced access to care in the already insured population, over time, lead to the same deleterious effects arising from the uninsured's lack of access to care? As a preliminary attempt to respond to that question, we look at how insured and uninsured Iowans respond to health care cost pressures as they make medical care decisions.

As health care costs increase, insured and uninsured Iowans try to save on medical expenses, sometimes in ways potentially detrimental to their good health. Survey results show Iowans have a number of strategies they use to try to save on health care expenses. Their most common savings strategy is to wait a little longer when they are sick before going to the doctor in the hope they will feel better on their own. This strategy is used by 53% of insured Iowans (including 63% of insured Iowans with incomes below \$50,000) and 75% of Iowans without health insurance coverage. Some Iowans, over the course of the past two or three years, have taken this cost-saving strategy a bit further. Twenty-nine percent (29%) of those with insurance coverage and 63% of those without coverage have chosen to not go to the doctor when they felt it was needed. In 2001, when a similar question was asked of both the total Iowa population and the uninsured population, 7% of the total population indicated they had needed to go to the doctor in the past 12 months, but did not do so due to cost, and 37% of the uninsured

²¹ IA-SPG & The Lewin Group. Winter 2001. *Iowa Survey of the Uninsured*.

²² Kaiser Commission on Medicaid and the Uninsured. 2003. Sicker and Poorer: The Consequences of Being Uninsured. www.kff.org/uninsured/loader.cfm?url=/commonspot/security/getfile.cfm&PageID=13970.

²³ According to the U.S. Agency for Healthcare Research & Quality, American workers with employer-sponsored health insurance coverage paid an average of 79% more in 2003 for their coverage than they did in 1996. Employers' coverage costs increased by 89% over the same period. Branscome, J. M. July 2005. *Employer-Sponsored Single, Employee-Plus-One, and Family Health Insurance Coverage: Selection and Cost, 2003*. Statistical Brief #90. Agency for Healthcare Research & Quality, Rockville, Md. www.meps.ahrq.gov/papers/st90/stat90.pdf

²⁴ According to Miller, "Lack of coverage also exposes people to financial risk and uncertainty. Also, it can have deleterious spillover effects across a community, contributing to the loss of certain kinds of health services, less effective control of communicable disease, and losses to the economic base." Miller, V., Vigdor, R. & W. Manning. 2004. *Covering the Uninsured: What is it Worth?* *Health Affairs* Web Exclusive (W4):157, W-158.

²⁵ Schoen, C., M.M. Doty, S.R. Collins, & A.L. Holmgren. 2005. *Insured But Not Protected: How Many Adults are Underinsured?* *Health Affairs* Web Exclusive (W5):289-302.

stated they refrained from going to the doctor due to cost. This apparent increase in the reluctance of the total population to seek medical care when a need is perceived confirms that double-digit increases in health care costs affect health care consumption in both insured and uninsured populations.

Underinsured Iowans closely resemble the uninsured: They act against medical advice in response to rising health care costs. Table 10, below, shows the rate at which three groups of Iowans have acted against medical advice due to cost pressures. As the literature suggests, there is considerable difference in the behavior choices of insured and uninsured Iowans; but when it comes to not following up on scheduled tests, a majority of those who rate their plan as barely adequate have acted against medical advice due to cost pressures at a rate (51%) that exceeds the rate of the uninsured (41%). They have also decided not to fill a prescription due to cost at a higher rate than have the uninsured, 47% to 41%.

Table 10. Actions Iowans Have Taken Against Medical Advice in Response to Rising Health Care Costs

	Insured Iowans	Health Insurance As No More Than Barely Adequate	Uninsured Iowans
Have not scheduled tests suggested by their doctor	21	51	41
Have decided not to fill a prescription given by their doctor	20	47	41
Have cut back on the dose of a prescription drug to help the drugs last longer	16	35	35
Have stopped taking medication to avoid the cost of prescription drugs	15	42	32

Source: 2005 Survey of Iowa Consumers, Iowa State Planning Grant.

To save money, insured Iowans have changed the type of health coverage they choose and the amount of health care they consume. Overall, 26% of insured Iowans say they have switched to a health insurance plan with higher deductibles and co-payments; sixteen percent (16%) say they have switched to a plan with fewer benefits, and 14% have switched to a plan with more restrictions on access, all in the name of saving money. Among privately insured Iowans, 48% have migrated to a plan with higher deductibles and co-pays, and 32% have gone to a plan with fewer benefits. When it comes to restrictions on access, the privately insured find this option nearly as unpalatable as those with employer coverage: only 17% have switched to access-restricted plans. Almost half of insured Iowans (47%) report they try to minimize how often they use their health insurance coverage in order to help keep overall premium costs for everyone in their coverage group from rising. Insured Iowans with incomes below \$50,000 are more likely to try to minimize use of their health insurance than Iowans with incomes of \$50,000 or above (55% compared to 42%, respectively). Rural insured Iowans are also more likely to say

they try to limit their insurance usage to keep premium costs down (55% compared to the overall average of 47%).

Interpretation

Regardless of insurance status, when Iowans choose not to follow professional advice so they can save on immediate medical care expenses, there is the possibility that negative health outcomes may follow. Ignoring medical advice can degrade the effectiveness of an already dispensed treatment regimen. Alternatively, the refusal to follow advice can lead to delays in starting necessary care. Either result increases inefficiency within the health care delivery system, which in turn leads to higher costs due to the need for more aggressive treatment regimens at a later point in time, potentially including increased hospital and nursing home admissions.

Policy makers and health care reform advocates often focus on the uninsured when they look at how increasing health care costs contribute to medical vulnerability. While the results of this survey confirm that uninsured Iowans do make choices that may increase their medical vulnerability at a higher rate than insured Iowans, the real story in these data is how increasing medical care and health insurance costs are also pushing insured Iowans to make potentially detrimental health care choices. The insured who rate their plans as barely adequate may well be the canaries in the coal mine. Their behaviors serve as a warning to policy makers that as health care costs are increasingly shifted to insured persons, with little account taken of cost exposure and underlying health status and income, there is a significant risk that individuals, families, and society will be without adequate protection from the health risk and expenses of forgone medical care.

One strategy consistently ignored is opting out of health insurance. Insured Iowans have chosen to ignore professional medical advice. They have cut back on their leisure activities, and they have made sacrifices that increase their personal and familial vulnerability. What they have not done is opt out of health insurance. To acquire health insurance requires an affirmative act. Eighty-eight percent (88%) of Iowans, all of them in a voluntary coverage market, have health insurance, and among the uninsured, only 12% say they have been in good health and that health insurance is not worth paying for.

Interpretation

The desire to keep coverage in the face of yearly double-digit premium increases is not surprising in light of what Iowans say about how they would fare without health insurance. Twenty-six percent of respondents estimated that if they did not have health insurance they would spend \$1,000 or more on health care in a three-month period. Annualized, this figure would be \$4,000. The most recent Iowa data (2003) on average annual employee contribution towards employment-based

family coverage is \$2,188 (\$683 for single coverage).²⁶ Insurance is still perceived as a better bargain than going without and taking on the full weight of medical risk.

Health insurance buyers with a close connection to the purchasing decision are more likely to have used cost-saving strategies. In comparing how often insured Iowans say they have used various health care cost-saving strategies, the data show that Iowans with individually purchased private coverage are more likely to have used cost saving strategies than their counterparts covered by employer-sponsored health insurance policies. Almost half of privately covered Iowans (48%) have switched to an insurance plan with higher deductibles and co-payments, compared with 25% of Iowans with employer-sponsored coverage.

Table 11. Strategies Insured Iowans Have Used to Save on Health Care Expenses

	Employer Sponsored Coverage %	Private Coverage %
Have tried to minimize use of health insurance to keep overall premium costs for all group members from raising	48	57
Have switched to an insurance plan with higher deductibles and co-payments	25	48
Have switched to an insurance plan with fewer benefits	15	32
Have switched to an insurance plan with more restrictions on access	15	17
Have switched doctors or hospitals	9	10

Source: 2005 Survey of Iowa Consumers, Iowa State Planning Grant.

Interpretation

These data suggest Iowans consciously exercise control over their health care and health insurance decisions, based on their need to control costs. Those Iowans who purchase their own health insurance have a higher degree of personal control over their health insurance buying decisions and appear more likely to match their behavior to explicit cost-savings strategies.

The power in these findings is that they show consumers can be partners in meaningful efforts to control health care expenses as part of a greater health care reform movement. For policy makers, reform advocates, and the health care establishment, these findings present tremendous opportunity for improvements

²⁶ Agency for Healthcare Research & Quality, Center for Financing, Access and Cost Trends. 2003 Medical Expenditure Panel Survey (MEPS)—Insurance Component. Tables II.C.1, II.C.2, II.C.3. www.meeps.ahrq.gov/MEPSDATA/ic/2003/Index203.htm July 2005

and also huge potential risks to both individual and population health. In an environment where they are asked to shoulder more and more of the burden of increasing health care costs, consumers will make decisions which minimize their own up-front health care expenses. To the extent those decisions are medically sound and adequately protect against excessive medical risk, the possible future cost savings will be enormous. Left to their own devices, without adequate information from which to make reasoned decisions, insured and uninsured consumers risk making cost-based decisions that drive up individual and population health care expenses.

A largely ignored, but nonetheless troubling, issue hidden just below the surface of these findings is the potential for health insurance premium increases to unravel some of the social fabric. We see that nearly half of Iowans with employer-sponsored coverage report having tried to minimize using health insurance in an effort to keep group premium costs down. The corollary is that those insured Iowans who are in small group plans and who experience a catastrophic event leading to inevitable high medical expenses will cause future group premiums to increase. To the extent that group members attribute responsibility for increased group premiums to individual usage, the potential exists for diminished social support for those who experience catastrophic claims.

Insured Iowans are ready and willing to accept future changes in health care delivery and health insurance. While more than eight out of ten (83%) Iowans rate the current quality of their own health insurance coverage as at least reasonably good, their sense of satisfaction does not appear to stand as a barrier to embracing change. Insured Iowans show support for change through attitudes revealed in this survey:

- ◆ **Greater use of allied health professionals.** A solid majority of 64% are willing to make greater use of clinics staffed by nurses and physician's assistants rather than physicians.
- ◆ **Higher deductibles.** Overall, 52% of insured Iowans would be willing to accept a health insurance policy with a higher deductible to keep their premium costs down. Not surprisingly, those with the highest incomes rate this change more favorably (61% of those with incomes greater than \$70,000 are willing to go to policies with higher deductibles compared to 48% with incomes of \$50,000 or less).
- ◆ **Larger co-payments.** A near majority (48%) would be willing to accept a policy with higher co-pays for physician visits and prescription drugs, though support drops to 39% among insured Iowans with incomes below \$30,000.

In a finding that will not surprise health maintenance organization executives, insured Iowans show a limited willingness to choose health insurance policies with fewer participating doctors and hospitals. Thirty percent (30%) say they are willing to make that change to keep their premium costs down. Additionally, 40% of insured Iowans are willing to reduce the number of physician visits they or members of their household make to keep insurance premium costs down.

Interpretation

he reality of the economic pressure of rising health insurance rates lead Iowans to embrace changes to health care and health insurance. However, for changes to be broadly supported, they should not interfere with Iowans' ability to choose from an extensive physician panel, nor impose external limits on their physician usage. Additionally, changes which carry additional out-of-pocket costs for low-income insured Iowans find less support among those for whom co-payments for physician visits and pharmaceutical products may become a hardship.

The conclusion we draw is that cost pressures are changing health insurance plan design as well as how benefits are actually used by plan members. These changes are occurring parallel to on-going incremental health care system reforms. A full understanding of how increasing costs are changing when and how Iowans consume health care resources may well reveal that the cumulative effect of cost increases on the health care system will override changes arising from incremental reforms.

c. Health Insurance Influences Iowans' Life Choices

Survey results show the increased financial burden of rising health insurance costs has influenced Iowans to change their behaviors as health care consumers. Looking beyond changes related to health care consumption, past research teaches us that individuals make a multitude of life choices based on their health insurance coverage. A June 28, 2004 article in *The Los Angeles Times* mentions rising concern among those in the health insurance and health insurance policy fields of individuals marrying in order to get health insurance benefits. One of the questions this study seeks to answer is whether the availability of health insurance exerts influence on Iowans' life choices.

Social and family concerns. Within the family unit, some of the most private decisions that can be made focus on what health insurance will cover. In addition, families must sometimes choose between a desire to be a more engaged parent or caregiver and the need to hold a job that offers health insurance benefits.

The decision to start a family. Slightly less than one in four insured Iowans aged 35 or under (23%) say that within the past three or four years health insurance considerations influenced their decision on when or if to have a child (compared to 8% overall). When asked about future childbearing decisions, 31% of those in the prime child-bearing years say health insurance would influence their decisions (13% overall).

Family care giving. The decision for a parent to stay at home and care for children or other family members is a momentous one for families. The consequences are felt not only within the family, but reverberate throughout the economy. Among insured Iowans, 18% say that the ability to maintain health insurance coverage influenced them or a member of their household to keep working instead of staying home to care for children or other family members. In looking to the future, 30% say that decision will be influenced by health insurance coverage concerns, but 38% of those younger than 35 say they will be influenced by coverage concerns.

Nineteen percent (19%) overall and 27% of low income respondents indicate they or a member of their household has maintained full-time employment to stay eligible for insurance coverage when they would have preferred part-time employment to be able to spend time with family or pursue an education. A future decision to work full or part-time will be influenced by insurance eligibility according to 34% of insured respondents and 45% of those younger than 35.

Economic concerns. Going beyond social concerns and into the area of economic behaviors, Iowans are taking health insurance coverage into consideration as they make decisions regarding when to enter and exit the workforce, make personal investments, and whether or not to pursue an entrepreneurial future. The accompanying economic analysis of the survey data presented beginning on p. 14, confirms that the secondary effects of inflation in health care costs are less employment mobility, dampening of entrepreneurial incentives, and stress.

Job mobility. Almost one in four (24%) say they or someone in their household has stayed in a job they did not like in order to maintain coverage. Thirty-five percent (35%) believe they or someone in their household will have to make this compromise in the future. This finding is exaggerated among those with incomes below \$30,000, where 33% say they have stayed in a job they dislike to keep coverage (38% in the future).

While overall only 7% say they or a member of their household has taken a less desirable job to obtain or to improve health insurance coverage, the percentage who think they will be faced with that situation in the future climbs to 19%.

Entering the workforce. Twenty-one percent (21%) of low wage earners say they or someone in their household decided to start working in order to get health insurance coverage (as compared to 13% overall).

Retirement. Health insurance considerations exert even greater influence on retirement decisions. Four in ten insured Iowans aged 55 to 64 (41%) say they or someone in their household made the decision of whether or when to retire, based on health insurance coverage (compared to 24% overall). Looking to the future, a majority (50%) of these Iowans say health insurance will influence their retirement decisions (compared to 44% overall).

Entrepreneurship. The desire to maintain health insurance coverage has stopped 14% of insured Iowans from starting their own business; 23% believe they will not be able to start a business in the future because of the need to maintain health insurance coverage.

Insurance. Overall, one quarter of insured Iowans (25%) say they or someone in their household has stayed with an existing policy to avoid problems associated with pre-existing conditions. Among insured low-income Iowans (incomes below \$30,000), 42% say the presence of a pre-existing medical condition has caused them or a member of their household to retain an insurance policy.

Thirty-nine percent (39%) of insured Iowans say in the future they may well have to stay in a policy to avoid pre-existing condition issues as compared to 50% of low-income insured Iowans who see this happening to them in the future).

Among low-income Iowans (incomes below \$30,000), 42% say the presence of a pre-existing medical condition has caused them or a member of their household to retain an insurance policy (as compared to 50% who see this happening to them in the future).

Investments. When asked if they had decided to forgo making future investments such as starting a child's college fund or a retirement saving account based on health insurance considerations, 25% agreed the situation had happened to them or someone in their household (30% think this will happen to them in the future).

Table 12, below, shows not only the influence of health insurance concerns on past and future life decisions, but also the demographic groups among insured Iowans that are the most likely to be influenced by coverage concerns.

Lower-income insured Iowans are more likely to report that health insurance concerns influence life decisions. Also of note is that in four past life-decision categories and in six future categories, those persons identifying themselves as Democrats are among the groups most likely to say that health insurance concerns influence their decision-making. In no life decision tested do those identifying themselves as Republicans appear among the groups most likely to say health insurance has influenced their decisions.

Table 12. The influence of Health Insurance on Major Life Decisions

	Past Decision %	Key Groups Most Likely Past Decision %	Future Decision %	Key Groups Most Likely Future Decision %
Decided to forgo making an investment in the future, such as starting a college fund for a child or putting money into a retirement savings account	25	33 Rural 30 Age 35-54	30	39 Private Ins. 38 \$30-50K 36 Rural
Stayed with the same insurance policy to avoid problems with “pre-existing conditions”	25	42 <\$30K 37 Private Ins. 33 <=HS 33 Age 55-64	39	57 Private Ins. 46 <\$50K 45 <=HS
Stayed in a job you didn’t like in order to keep health insurance	24	36 \$30-50K	35	41 \$30-50K
Decided whether or when to retire, based on health insurance coverage	24	41 Age 55-64 32 <=HS 30 Boomer	44	51 Boomer 50 \$50-70K
Worked full-time so you would qualify for the company health insurance plan when you would have preferred part-time, so you could go to school, for example, or spend time with family	19	27 <\$30K	34	45 Age < 35
Decided to continue working instead of staying home to care for children or other family members in order to keep health insurance	18	27 \$30-50K	30	38 Age < 35 36 \$30-50K
Decided not to start a business on your own because of losing health insurance	14		23	
Decided to start working in order to get health insurance coverage	13	20 <\$50K	21	26 <\$50K
Decided whether or when to have a baby, based on health insurance coverage	8	23 Age < 35	13	31 Age < 35
Switched to a job that was less desirable in order to get health insurance coverage or get better coverage	7	12 <\$30K	19	24 <\$30K
Decided to get married or stay married to get or keep health insurance	6		9	

Source: 2005 Survey of Iowa Consumers, Iowa State Planning Grant.

Interpretation

Health insurance cost and availability affects Iowans’ lives, and the influence is growing. The data reveal differences among Iowans, primarily in the demographic categories of age, and income in the extent to which they say health

insurance is likely to influence life decisions. Iowans from disparate groups have a common stake in the future of health insurance.

4. A New Approach: Financing Health Care While Limiting Health Risk

In order to test more firmly consumers' openness to change, we offered a short description of an alternative health care system that postulates a combination of individual, business, and government involvement in paying for health insurance for all. The main planks of the conceptual model are:

- ◆ All Iowans would be responsible for having a catastrophic insurance policy for the coverage of major medical expenses.
- ◆ With statewide participation, the average premium was estimated to be \$150 per family of four.
- ◆ Low-income Iowans would get help if needed.
- ◆ Employers would no longer pay for health insurance, but would instead pay a contribution of \$3,000 per year (\$250 per month) into medical savings accounts for each employee. Employees could choose to contribute more from their own funds.
- ◆ Employees would use these accounts to pay for ordinary health care expenses such as doctor visits, routine tests, and prescription drugs.
- ◆ Excess money would roll over each year and earn untaxed interest.

Respondents were told that helping businesses control costs and stabilize expenses while still providing a genuine benefit for employees was the key concept behind the proposal.

This significant departure from the current system of health care financing wins near majority support. A near majority (49%) thought they would be better off in this kind of a health care financing system (including 34% who say they would be a little better off and 15% who would be a lot better off). Slightly fewer, 42%, thought they would be worse off (19% a little worse off and 23% a lot worse off). Those who are uninsured are more likely to see benefit in this system, with 68% saying they would be better off, compared to 47% of those who are currently insured.

Table 13. Reaction to an Alternative Health Care and Health Risk Financing System

	Better Off %	Worse Off %	Not Sure %
Total	49	42	9
Sex			
Male	54	39	7
Female	45	45	10
Age			
<25	69	23	8
25-44	52	42	6
45-64	47	43	10
Income			
<\$50,000		53	37
\$50,000+		46	47
Insurance			
Employer (self/spouse)	46	48	6
Private Insurance	60	24	16
Uninsured	68	20	12
Political Affiliation			
Democrat	52	40	8
Republican	48	42	10
Independent	48	44	8

Source: 2005 Survey of Iowa Consumers, Iowa State Planning Grant.

Interpretation

The purpose of assessing interest in this potential reform model was not to gauge the depth of Iowans' approval or disapproval of each of its key facets. Rather, it was to continue to explore Iowans' openness to the idea of system change. Our previous research had established that support for any given reform proposal will come down to how a proposal answers the question: "What's in it for me?" This reform model includes health insurance, provider choice, the means to finance access both to low-level and to catastrophic medical care, and support for low-income persons. We wanted to see if it elicited among Iowans across social,

economic and ideological lines a positive answer to the question “what’s in it for me?”

What we see in the reactions to this model and insured Iowans’ openness to coverage, benefit, and health care delivery changes is a willingness to consider even radical reform of the health care financing system. This is not surprising as insured and uninsured Iowans have already undertaken, on their own, change in how they use health care because of increasing cost pressures. In short, they have acted as consumers do when faced with cost pressures: they have attempted to change behaviors to control their exposure to increasing costs and will likely continue to do so in the future. Clearly, when purchasing non-health care goods and services, households can lower their exposure to increasing prices by substituting a less expensive mix of items, i.e., in the case of groceries, by consuming home-cooked meals rather than dining out or by eating less food. While consumers may be able to reduce their total household health care consumption by going to the doctor less often, putting off non-emergency medical care, or even by substituting complementary and alternative medicine for allopathic or osteopathic medicine, they are generally cognizant that decisions to reallocate or reduce health care spending involve potentially grave negative consequences from which they seek adequate protection. We believe the provisions of this conceptual model, which includes both funding for access to small dollar and preventative care as well as risk protection in the form of catastrophic health insurance coverage, explains why this conceptual reform model gains cautious initial support.

SECTION 3. AN EXPLORATORY ANALYSIS OF THE REGIONAL ECONOMIC IMPACT OF INFLATION IN HEALTH CARE EXPENDITURES ON IOWA HOUSEHOLDS²⁷

The purpose of this analysis is to discuss the results from the 2005 Iowa Survey of Consumers in the context of a simple model of household resource allocation and the recent literature on the various effects that are reported. The key results of the analysis are summarized as follows:

- Individuals view inflation in health costs as a serious problem that broadly impacts their lives;

²⁷ Section 3 was provided by John E. Schneider, PhD, Department of Health Management and Policy University of Iowa College of Public Health & VA Center for Research on Innovation in Implementation Center for Research in the Implementation of Innovative Strategies in Practice (CRIISP), Iowa City VA Medical Center (152) ; Christopher S. Decker, PhD, Department of Economics, College of Business Administration, University of Nebraska at Omaha; J. Ann Selzer, PhD, President Selzer & Company, Inc., Des Moines, Iowa, and . Anne Kinzel, MA, JD, Director of Policy and Research, Selzer & Company, Inc. Professors Schneider and Decker would like to thank Kaley Sholes and Janet Benton for very valuable research assistance. The views expressed in this Section 2, are those of the authors Professors Schneider and Decker and do not reflect those of the funding organization or the state of Iowa.

- High rates of inflation in health costs are likely to have an impact on the regional economy, although the expected negative effects of price inflation and net wage reductions are most likely offset by gains to the regional economy from growth in the health sector;
- The demand for health is downward sloping, which implies that higher prices lead to less consumption, and beyond some threshold less consumption is likely to have negative effects on health;
- The secondary effects of inflation in health care costs are less employment mobility, dampening of entrepreneurial incentives, and stress.

Critical to these findings is the question of where the thresholds lie. For example, the net economic effects of migration of economic activity from the non-health sector to the health sector of the economy may be offsetting in the short run but not in the long run as small sub-regional economies (such as rural areas) experience net losses in economic activity. Similarly, the effects of reductions in health care consumption are likely to be greater for sicker, low-income populations, where the marginal health effects of small reductions in health care consumption may be large.

A. Introduction

In the decade from 1993 to 2003, U.S. national health care expenditures grew more than 70 percent, compared to only 38 percent growth in average weekly earnings over the same period and a 28 percent increase in economy-wide prices.²⁸ As health care costs continue to climb, employers offering health benefits have reacted by shifting a larger share of the costs to employees, scaling back the generosity of health benefits, or ceasing to offer any health benefits to their employees.²⁹

These increases are likely to have an important impact on household finances. Direct medical care costs are a non-trivial component of household expenditures, comprising approximately 20 percent of the median household income in Iowa.³⁰ How do consumers change their economic behavior when nearly one fifth of their family budget is rising at a rate more than twice as high as other components of household expenditures? Firms faced with the same rate of increases in health care expenses report that they offset health care costs by passing more costs to employees, investing less in the company, and accepting lower profits.³¹ Do

²⁸ Bureau of Labor Statistics. 1994. Real Earnings in December 1993. Washington, D.C.: U.S. Department of Labor; Heffler, S., S. Smith, S. Keehan, C. Borger, M.K. Clemens, and C. Truffler. 2005. U.S. Health Spending Projections for 2004-2014. *Health Affairs* Web Exclusive (W5):74-85.

²⁹ Kaiser Family Foundation. 2004. Employer Health Benefits. Menlo Park, CA and Chicago, IL: Kaiser Family Foundation / Health Research and Educational Trust; Porter, E. 2004. Rising Cost of Health Benefits Cited as Factor in Slump of Jobs. *New York Times*, August 19, 2004; Regopoulos, L., and S. Trude. 2004. Employers Shift Rising Health Care Costs to Workers: No Long-term Solution in Sight. In *Issue Brief #83*. Washington, D.C.: Center for Studying Health System Change.

³⁰ Bureau of Labor Statistics. 2005. State Health Facts: (www.kff.org).

³¹ Porter, E. 2004. Rising Cost of Health Benefits Cited as Factor in Slump of Jobs. *New York Times*, August 19, 2004; Schneider, J.E., A. Selzer, and A. Kinzel. 2004. The Regional Economic Impact of Inflation in Health Expenditures on Iowa Businesses. IA-HRSA State Planning Grant.

households make analogous decisions? If so, how do those decisions aggregate to the regional economy?

The economic effects of rising health insurance premiums on individual behavior and regional economies are very complex. The scope of this research effort is to (1) briefly outline the economic problem, (2) identify the key pathways through which rising health care costs are likely to propagate, and (3) draw on some of the findings of a Iowa Department of Public Health survey to generate preliminary estimates of the magnitude of the economic effects of rising health insurance expenditures.

1. Data and Methods

Most of the findings in this paper are based on an Iowa Department of Public Health (IDPH) and Selzer and Company Inc. survey of 1,202 Iowans ages 18-64, known as the *Iowa Survey of Consumers*.

B. Simple Health Care Economic Model

The effects of inflation in health care expenses can be demonstrated with a simple model of household budgets. To make the problem more tractable, let us assume our typical household consumes only two things, H and X. Let H refer to all products and services related to health care. Let X refer to all products and services other than medical care. In other words, consider things like food, housing, utilities, education and entertainment to be captured in the X group. Furthermore, let us assume that our typical household saves an amount S every year. Depending on the method used to track savings rates, the typical saving rate in the U.S. in recent years has ranged from 1-5 percent of income. Thus, the household's "budget constraint" can be expressed as $Y = p_h H + p_x X + S$. In other words, the household spends all of its annual income (Y) on H and X, the costs of which are equal to the amounts consumed multiplied by the prices of each. Whatever is not spent on H and X is saved (S). We make the final assumption that income (Y) is fixed in the short run; in other words, a household cannot significantly change the level of Y in a short period of time, except through debt financing (e.g., loans and credit cards).

Now consider what happens when overall health expenditures ($p_h H$) rise. Given the assumptions of the model, there are five possible adaptive responses: (1) Decrease non-health consumption; (2) Decrease health consumption; (3) Decrease the amount added to savings; (4) Accept a larger share of income in the form of health benefits rather than wages; or (5) Increase annual income through debt financing.

The first and second options—decreasing either non-health or health consumption (or some amount of both)—have two components: reducing the amount (or volume) consumed, or substituting a lower-priced mix of products and services. For example, in the case of non-health care products and services, a household can choose to lower p_x by consuming a less expensive mix of groceries (i.e., substituting lower cost brands or substituting home-cooked meals for meals out) or by consuming less food. These options require an additional assumption regarding the relationship between price and quality. In reasonably competitive markets quality differences are reflected in prices, and consumers typically use a mix of price and non-price information to evaluate the quality of the goods and services that they consume. Thus, in this

model we assume that the substitution of lower-priced goods and services for higher-priced ones generally reflects consumption of a mix of goods and services of *lower quality* relative to those consumed prior to the adaptive response. Note that “lower quality” does not necessarily imply “low quality” in an absolute sense, although in some cases it may.³² It is also possible that, depending on the magnitude, reductions in volume of non-health care or health care goods and services can have quality implications. For example, reduction in the amount of health care (H) that the household consumes might be achieved by going to the doctor less frequently or putting off non-emergent medical care procedures.

Another possible adaptive response to rising health benefit costs is the *reduction* of wages. Mark Pauly and other economists have made the argument that health benefits are a form of employee compensation akin to wages, and that benefits and wages should be treated as alternate and substitutable forms of worker compensation.³³ According to Pauly, “The economic viewpoint is that [increases in health benefit costs] will be offset by lower real wages, which will make workers worse off if the higher costs are not offset by benefits of higher quality or greater value.”³⁴

As prices rise, to what extent can consumers respond by increasing their wages? The answer to this question is dependent on several factors. In the short run, most consumers have the ability to undertake some degree of debt financing, either through personal loans, home equity loans, or by carrying over credit card balances. Debt financing has the short run effect of raising income, but will obviously reduce the amount of income in the long run due to the payment of fees and interest payments that typically exceed returns on other investments. Another option is for a non-wage member of the household to begin working. For example, in single-income two-person households, depending on labor market conditions it may be possible to increase short-run income by having one person return to work. Adding a person to the workforce generally has a positive effect on regional economies. However, the *net* effects are highly dependent on the services the new worker was providing prior to entry into the workforce (e.g., child care), the type of work the new worker secures, and the marginal productivity of the worker in their new job. A final option is to work more hours. Again, the ability to do so is dependent on the type of job and household management constraints. In our model, we feature debt as a feasible short-run adaptive response, but we assume that in the short run the typical household does *not* have the ability to increase wages by either working more hours or adding a wage-earner.³⁵

³² That is, we assume that there is some range of prices associated with high, medium, and low quality, and one may still obtain a “high quality” product or service at a price significantly lower than the highest price good or service in the “high quality” range. An example of this is *Consumer Reports* identification of products and services as “Best Buy,” which identifies comparatively low-priced products within the “high quality” grouping.

³³ Pauly, M.V. 1997. *Health Benefits at Work: An Economic and Political Analysis of Employment-Based Health Insurance*. Ann Arbor, MI: The University of Michigan Press.

³⁴ Pauly (1997), p.25.

³⁵ An interesting and potentially important aspect of this assumption is that, because health benefits can be considered a fixed cost (varying only by the number of employees) firms face an incentive to hire fewer workers and encourage (or require) existing workers to work more hours. Indeed, Cutler and Madrian found that over a relatively long period of time (1980 to 1993) rising health insurance costs increased hours worked by those with employer-based health insurance by up to 3%. It is important to note that these increases do not necessarily reflect employees opting to work more to offset the rising health insurance premiums. Cutler, D.M., and B.C. Madrian.

C. Effects on Households and the Regional Economy

The economic effects of price inflation are complex. U.S. monetary policy has been aimed generally at controlling economy-wide price inflation.³⁶ Inflation is thought to be costly to the economy because it can cause higher long-term interest rates, which discourage borrowing and investment and may also cause short run volatility in financial markets.³⁷ However, there is disagreement among economists over whether price inflation is unambiguously detrimental. Inflation that reflects increases in aggregate demand or increases in quality are likely to have positive effects on the economy. This is particularly true in cases where price increases reflect increases in quality or increases in demand. To the extent possible, this section takes these complexities into account as it explores the possible regional economic effects of each of the six effects identified above.

1. Decreases in Non-Health Consumption

The Survey of Consumers found that Iowans are very likely to reduce the consumption of non-health care products and services in response to rising health care costs, as reflected through their health insurance premiums. More than three quarters of the survey respondents indicated that they would “cut back on spending for entertainment, vacations, or leisure activities,” and a surprising 44% said that they would cut back on essentials like food and utilities.

These effects are complicated to model at the regional level. One approach is to assume that the additional resources going into the health sector of the economy will at least compensate for the drain of resources from the non-health sector of the economy.³⁸ But this assumption is dependent on two necessary conditions: (1) the total economic value of a dollar spent in the health sector is at least equivalent to the value of a dollar spent in the non-health sector, and (2) the geographic reach of the two markets are approximately equal; that is, the additional economic activity generated by each sector is primarily regional.

1998. Labor market responses to rising health insurance costs: evidence on hours worked. *The Rand Journal of Economics* 29 (3):509.

³⁶ Higginbotham, B, and K Schuler. 2004. Price Stability and Inflation Targets: A Legislative History. Washington, DC: Joint Economic Committee, United States Congress; Kelcher, R. 2002. Inflation Targeting Goals for the Federal Reserve. Washington, DC: Joint Economic Committee, United States Congress.

³⁷ For example, “virtually all economists agree that high inflation rates are disruptive. Economies experiencing double-digit inflation rates tend to have lower growth rates than economies experiencing lower rates of inflation. This is due, in large part, to the increased uncertainty about future income and prices that accompanies higher inflation rates. Thus, most economists agree that inflation rates should be relatively low. There is much less consensus about whether an inflation rate of 0% is better or worse than an inflation rate of 3%.” Economic Debates Online. *Policy Debate: Should the Federal Reserve aim at a zero inflation policy?* South-Western College Publishing 2005 [cited. Available from (<http://econapps.swlearning.com/student/welcome/html>), accessed August 18, 2005).

³⁸ Pauly, M. 1995. When Does Curbing Health Costs Help the Economy? *Health Affairs* 14 (2):68-82; Pauly, M. . 2003. Should We Be Worried About High Real Medical Spending Growth in the United States? *Health Affairs Web Exclusive* W3:15-27.

The reasonableness of these assumptions is largely dependent on the value of regional economic “multipliers” for the health care industry relative to other industries in the economy.³⁹ There are several different types of regional economic multipliers generated by the Regional Economic Analysis Division of the Bureau of Economic Analysis (BEA). Several key multipliers for the state of Iowa relevant to this analysis are shown in Table 15, below.

Table 14. All-Industry, Service Sector, and Health Care Sector Regional Multipliers for Iowa, 2001.

	Final-demand Output ² (dollars)	Final-demand Earnings ³ (dollars)	Final-demand Employment ⁴ (number of jobs)
All Industries	\$1.86	\$0.44	16.65
Household Goods and Services Sector ⁵	\$1.82	\$0.56	25.32
Health Sector ⁶	\$1.96	\$0.74	26.22

Notes: (1) Multipliers are based on the 1997 Benchmark Input-Output Table for the Nation and 2001 regional data; (2) total dollar change in output that occurs in all industries for each additional dollar of output delivered to final demand by the industry; (3) total dollar change in earnings of households employed by all industries for each additional dollar of output delivered to final demand by the industry; (4) total change in number of jobs that occurs in all industries for each additional \$1 million of output delivered to final demand by the industry (because the employment multipliers are based on 2001 data, the output delivered to final demand should be in 2001 dollars); (5) average of all household goods and services sector industries in Iowa (includes codes beginning with 4-8, excluding health care; also includes construction and retail trade); (6) Average based on five health-care sectors: offices of physicians, dentists, and other health care providers; other ambulatory health care services; hospitals; and home health care services. *Source:* Authors’ analysis of data from the Regional Input-Output Modeling System (RIMS II) from the Regional Economic Analysis Division of the Bureau of Economic Analysis, U.S. Department of Commerce.

To illustrate the interpretation of multipliers, consider column one of Table 1, which represents the total dollar change in output that occurs in *all* Iowa industries for each additional dollar of output delivered to “final demand” by three different industry groupings: all industries, household goods and services sector (excluding health care) and health sector.⁴⁰ A simplified

³⁹ Multipliers measure the total dollar impact on an economy that result from a change in production, earnings, or employment levels of a given industrial sector. The existence and construction of multipliers is predicated on the assumption that industrial sectors within a given economy are interrelated through forward (i.e. end user demand) and backward (i.e. supply) linkages. For details regarding the general construction of regional economic multipliers, see Appendix B.

⁴⁰ “Final demand” refers to output from a given sector demanded by the “final consumer” of that output, as apposed to “intermediate consumers” who use the output for further production processing. For instance, some portion of timber harvests can be sold with minimal processing to a consumer for the purposes of burning in one’s own fireplace or home furnace. Alternatively, timber can be sold to paper manufactures for the purposes of

interpretation of the data is that, for every \$1 spent in the service sector of the Iowa economy, \$1.82 worth of economic activity is generated. The Iowa health care sector generates slightly more: every \$1 spent in health care generates \$1.96 worth of economic activity. While these results are illuminating, given the characteristics of the theoretical model developed earlier, it is more appropriate to compare the health sector multiplier to the average of all other (non-health) household goods and services industries, mainly because it is more likely that a dollar *not* spent on health care will instead be spent on some other consumer goods. This is more likely to include, for instance, automobiles and automotive parts as well as electric house wares and other retail goods. The all-industry average, on the other hand, includes many industrial intermediate products, such as rolled steel and asphalt and other road surface products, the consumption of which at the regional level is less likely to be effected by changes in health insurance expenditures.

Column two shows the total dollar change in earnings of households employed by all industries for each additional dollar of output delivered to final demand by the industry non-health care versus health care industries in Iowa. Again, health care appears to have a stronger impact than non-health industries. For each additional dollar of output produced by the health care sector, earnings of all households increase by \$0.74, compared with a \$0.56 increase attributable to the service sector. Column three shows the analogous effect on employment. Each additional \$1 million of output delivered to final demand in the health care industry generates approximately 26.2 jobs, whereas the same amount of final demand across all other service industries generates 25.3 jobs.

In sum, this multiplier analysis demonstrates that the health sector of the economy generates economic growth. The Iowa health sector's impact on total output is about 8% higher than that of the household goods and service (excluding health) sector. In addition, perhaps due to the comparatively higher skill levels and wages in health care, the health sector adds about 32% more to earnings than the non-health care goods and services sector. Aggregate effects on employment are similar. These data suggest that moving dollars from one sector to the other would have an effect on the regional economy, a conclusion consistent with similar analyses conducted by Pauly (1995; 2003). However, while these multipliers provide some quantitative measures of the health sector's impact, to obtain more precise measures of the employment and earnings impacts on the Iowa economy would require a more structured analysis of an initial change in health sector demand. Therefore, since more detailed analysis would be required, some caution should be exercised when interpreting the results presented here.

2. Decreases in Health Consumption

The discussion of the previous adaptive response assumed that the level of health care consumption remained constant; that is, consumers choose to change other things and leave health care consumption alone. We know, however, that consumers are likely to also reduce health care consumption as health costs escalate, often such that reductions result in negative

manufacturing paper and paper products. The former would count as "final demand" where that later would count as "intermediate demand."

health effects.⁴¹ Due to high health care costs, respondents to our survey indicated, variously, that they would: change to a policy with less coverage (35%); avoid visiting a physician (33%); stop taking or take lower (non-prescribed) doses of prescription medications (17-23%); not schedule recommended tests (23%); and wait longer while sick before seeing a health care provider (55%). These findings are remarkably consistent with similar surveys and analyses of the uninsured and underinsured.⁴²

There are two important economic effects of decreasing health consumption. First, the previous discussion of multipliers showed that the health care sector has a positive effect on economic growth. But it appears as though at the regional level the health care sector is only slightly more of an engine of economic growth than other Iowa industries. Thus, it is unlikely that a shift in expenditures away from health and in to other sectors of the Iowa economy will by itself have an appreciable net impact on the Iowa economy.

That leaves the second possible effect, which is based on the health effects of reduced health care consumption. Reduced health care consumption may be the result of consumers changing to a less generous policy (as more than a third of the survey respondents indicated) or by changing consumption behavior such that consumption converges toward that which is normally attributed to the underinsured or the uninsured. According to Schoen et al. the underinsured experience health access problems remarkably similar to those of the uninsured, including failure to fill prescriptions, forgoing tests and treatment, and forgoing visits to regular doctors and specialists.⁴³ We also know that rising health insurance premiums can result in a larger number of uninsured as people drop coverage altogether.⁴⁴

In one of the most extensive literature reviews on the uninsured conducted to date, Hadley found that the uninsured “receive less preventive care, are diagnosed at more advanced disease stages, and once diagnosed, tend to receive less therapeutic care.”⁴⁵ Hadley also finds substantial evidence that access-related health problems have a non-trivial effect on labor force participation, productivity, full or part time status, wage rates, and annual income. The research generally finds that poor health reduces annual earnings of U.S. workers by roughly 15-30%.⁴⁶

⁴¹ Hadley, J., and J.D. Reschovsky. 2002. Small Firms' Demand for Health Insurance: The Decision to Offer Insurance. *Inquiry* 39 (2):118.

⁴² Schoen, C., M.M. Doty, S.R. Collins, and A.L. Holmgren. 2005. Insured But Not Protected: How Many Adults are Underinsured? *Health Affairs* Web Exclusive (W5):289-302.

⁴³ The definition of underinsured is based on cost-exposure to family income. Underinsured were defined as those with at least one of three indicators: (1) out-of-pocket medical expenses \geq 10% of income; (2) out-of-pocket medical expenses \geq 5% of income if income $<$ 200% of the federal poverty level; and (3) health plan deductibles \geq 5% of income. Schoen et al. (2005)

⁴⁴ Kronick, R., and T. Gilmer. 1999. Explaining the Decline in Health Insurance Coverage, 1979-1995. *Health Affairs* 18 (2):30-47.

⁴⁵ Hadley (2002)

⁴⁶ Simulations of these effects on the Iowa economy are difficult because poor health can be due to many factors beyond access problems stemming from financial barriers. For example, how many work-loss days can be attributed to financially-based access problems versus health behaviors (e.g., smoking), obesity, alcoholism, age, genetic factors, etc.

The economic implications of these findings are unclear because it is very difficult to identify the point at which decreases in health consumption result in negative health effects.⁴⁷

3. Decreases in Savings

Health insurance premiums have been rising faster than wages for the past several years. This puts added pressure on households to finance the cost increases by reallocating household expenses. Among the first to be cut appears to be savings. In our survey, 86% of respondents indicating that their family budgets have been affected by health insurance costs report that they would reduce the amount of household income that is saved for future use.

Savings has two economic benefits. First, savings protects households from financial uncertainty and allows households to maintain desired levels of consumption in the event of price instability. Second, in the aggregate, household and business savings creates a pool of funds necessary to invest in new plant and equipment, thereby supporting ongoing economic growth.⁴⁸

It is difficult to simulate the regional effects of decreases in personal savings rates, but it is likely that the effects are small. First, as personal savings rates have declined precipitously in the past decade, the ratio of household financial wealth to disposable personal income has increased from 3 in 1980 to 4 in 2001, a 33% increase.⁴⁹ Putting aside differences in liquidity, it is likely that the increase in household financial wealth is serving the same role as savings in terms of protection from financial instability. Second, in terms of macro effects, personal savings rates are a relatively small component of the total amount of capital available for investment. Capital markets—including the supply, demand, and cost of capital-- tend to be national or international, which suggests that regional economies may be less sensitive to fluctuations in savings rates. Moreover, the volume of capital supplied by businesses and governments far outweighs that which is supplied through personal savings (Marquis and Long 2001). In sum, it is not likely that regional economies are impacted significantly by a decline in the personal savings rate.

4. Decreases in Wages

Economists have long argued that health benefits should be treated as an alternate form of compensation, a variable that employers can adjust depending on prevailing labor market

⁴⁷ The main reason for the difficulty is the lagged relationship between consumption of primary health care and future health expenditures. Preventive care tends to have more elastic demand than acute care (Kenkel, D.S. 1994. The Demand for Preventive Medical Care. *Applied Economics* 26:313-325 and Kenkel, 2000. Prevention. In *Handbook of Health Economics*, edited by A. J. Culyer and J. P. Newhouse. New York: Elsevier Science B.V. Kenkel 1994, 2000). Thus, it is likely that cost increases in period t will result in decreases in preventive care in period t, the health effects of which may not be observable until t+5 or more, depending on the type of preventive care and the condition in question.

⁴⁸ Marquis, M.S., and S.H. Long. 2001. Employer Health Insurance and Local Labor Market Conditions. *International Journal of Health Care Finance and Economics* 1 (3-4):273. Ferguson, R.W. 2004. Questions and Reflections on the Personal Savings Rate. In *Paper read at the National Bankers Association*. Nashville, Tennessee.

⁴⁹ Marquis and Long (2001).

conditions and employees can use in making employment decisions.⁵⁰ The amount of compensation taken in the form of health benefits has been shown to vary by firm size, degree of unionization, regulated versus unregulated industries, local labor market conditions, employee age, employee education, and whether employees have working spouses.⁵¹ To illustrate the wage-benefit tradeoff, a recent Wall Street Journal / Harris poll found that close to 60% of respondents would prefer to forgo a pay increase in order to maintain current health insurance benefits.⁵²

There is ample empirical evidence to support compensating wage theory with respect to health benefits. Using data from the Current Population Survey, Olson found that in some cases workers will accept jobs with as much as 20% lower wages in order to obtain health benefits.⁵³ Baicker and Chandra estimated that, for workers with employee-based health insurance, a 10% increase in health insurance premiums results in an offsetting 2.3% decrease in wages.⁵⁴

This offsetting wage decrease is perhaps the most important effect of rising health insurance premiums. Taxable income of Iowa residents was \$51.2 billion in 2003.⁵⁵ Based on the findings of Baicker and Chandra, a 2.3% reduction in wages (attributable to a 10% rise in health insurance premiums) will result in a reduction in taxable income in Iowa of approximately \$1.2 billion. Assuming a 4% average marginal tax rate, the net result is a reduction in state tax revenue of \$48 million.⁵⁶ The reduction in wages is also likely to have a regional effect on gross state product, as workers experiencing the reduction in wages spend less. Recalling the multipliers from Table 1, a \$1.2 billion reduction in earnings is likely to result in a \$528 million reduction in final demand.⁵⁷ Based on a gross state product of about \$102.4 billion, this represents a 0.05% decline in gross state product. However, the 10 percent increase in health

⁵⁰ The economic theory of wages and compensation to date has not been the prevailing theory in the trade press and popular media, where health insurance costs often are viewed exclusively as an input in the production of goods and services, one that is more likely to impact the profits and incentives of businesses more than wages (e.g., Porter 2004). But the trend is shifting somewhat, as reports emerge that explicitly discuss health insurance cost increases in terms of wage reductions (Wall Street Journal 2003; Regopoulos and Trude 2004; Wall Street Journal 2005). In addition, we argued in an earlier report that, based on extensive evidence from surveys, firms actually do treat health insurance premiums as an input in the production process, but that the effects thereof need to be modeled simultaneously with the wage-benefits tradeoffs (Schneider, Selzer, and Kinzel (2004); Pauly, M.V. 1997. *Health Benefits at Work: An Economic and Political Analysis of Employment-Based Health Insurance*. Ann Arbor, MI: The University of Michigan Press. Cutler and Madrian (1998); Gruber, J., and R. McKnight. 2002. Why Did Employee Health Insurance Contributions Rise? In *NBER Working Paper #8878*. Cambridge, MA: National Bureau of Economic Research; Olson, C.A. 2002. Do Workers Accept Lower Wages in Exchange for Health Benefits? *Journal of Labor Economics* 20 (2); Baicker, K., and A. Chandra. 2005. The Labor Market Effects of Rising Health Insurance Premiums. In *NBER Working Paper Series # 11160*. Cambridge, MA: National Bureau of Economic Research.

⁵¹ Marquis and Long 2001.

⁵² Wall Street Journal. 2003. Many Would Choose Benefits Over an Increase in Salary. 10/15/03, Online.

⁵³ Olson (2002)

⁵⁴ Baicker and Chandra (2005)

⁵⁵ Revenue, Iowa Department of Revenue and Taxation. 2004. Iowa Individual Income Tax Annual Statistical Report: 2003 Returns Filed in 2004. Des Moines, IA: State of Iowa Department of Revenue, Tax Research and Program Analysis Section.

⁵⁶ Revenue (2004).

⁵⁷ This estimate ignores the secondary effects the reduced spending would have on state sales tax revenue. Assuming a 5% sales tax rate, state revenues may decline by an additional \$26.4 million due to attenuation in spending.

insurance costs is associated with a 1.96 multiplier. Thus, the offsetting health sector effect will add another \$1.4 billion, resulting in a net gain to the regional economy.

A common response is that the effects of wage offsets are deceiving because they do not reflect the added value of health insurance benefits associated with the higher premiums. For example, it is conceivable that a 10% annual increase in health insurance premiums—an amount roughly equal to \$850 in Iowa-- reflects an additional \$850 worth of value in terms of the medical care received. Thus, estimates of the economic impact of health insurance costs should, to the extent possible, account for changes in quality.⁵⁸ Such estimates have been empirically generated, and have consistently shown that, in the aggregate, the a large proportion of inflation in medical care cost increases over the past several years does indeed reflect improvements in quality, the benefits of which exceed the costs.⁵⁹

One important caveat, however, is that the purchasers of health insurance have little, if any, flexibility in choosing quality levels. Hence, even if cost increases reflect quality improvements, there still may be non-trivial economic burdens associated with disconnection between desired levels of quality and willingness to pay. Forcing everyone to buy a BMW might be a neutral proposition for those that were already planning on buying one but will be an economic burden to those whose budgets suggest something more along the lines of a Saturn.

5. Increases in Debt

The final adaptive response to consider is the possibility of increasing income by taking on more debt. More than a third (38%) of the respondents to the survey indicated that they would “take on more debt, such as credit card debt or other loans” to offset increases in health insurance premiums. Consumer debt has been rising over the past 30 years. Consumer debt comprised about 16% of disposable income in 1960 compared with more than 20% in 1996, a large part of which was credit card debt.⁶⁰

Debt is an important part of the economy, the effects of which depend on the nature of the debt. Using debt financing to buy appreciating assets, such as housing, is generally considered desirable debt as long as the magnitude of the debt is not disproportionate to the income necessary to service the debt. Other kinds of debt, such as credit card debt, can also benefit the economy by decoupling temporal differences in consumption and income. But in many cases levels of debt grow too fast or exceed the levels at which the economy benefits. Too much debt increases the probability that households will experience financial distress in the event of uncertainty (e.g., job loss or unanticipated out-of-pocket medical expenses). Increases

⁵⁸ Cutler, D.M., M. McClellan, and J.P. Newhouse. 1999. *The Costs and Benefits of Intensive Treatment for Cardiovascular Disease*. Edited by J. E. Triplett, *Measuring the Prices of Medical Treatments*. Washington, D.C.: Brookings Institutional Press.

⁵⁹ Cutler, McClellan, and Newhouse (1999); Cutler, D.M., and M. McClellan. 2001. Is Technological Change in Medicine Worth It? *Health Affairs* 20 (5):11-29; Lichtenberg, F.R. 2001. Are the Benefits of Newer Drugs Worth Their Cost? Evidence From the 1996.

⁶⁰ Garner, C.A. 1996. Can Measures of the Consumer Debt Burden Reliably Predict an Economic Slowdown?: Federal Reserve Bank of Kansas City: Economic Review; Guimaraes, T., Y. Yoon, and A. Clevenson. 1997. Empirically Testing ES Success Factors in Business Process Reengineering. *International Journal of Production Economics* 50:245-259.

in the probability of financial distress have the effect of dampening consumer spending, which in turn has a negative effect on the regional and national economy. However, there is little direct evidence that higher debt levels have led to economic slowdowns.⁶¹

Supporting our economic model, there is ample evidence that consumers rely on debt financing specifically to fund the consumption of medical care. According to a recent Commonwealth Fund (CF) survey, 37 percent of adults have difficulty paying medical bills, have accrued medical debt, or both.⁶² Although the CF survey used different questions to get at the same problem, the results from our survey are remarkably similar to the CF findings. In addition, according to the Center for Studying Health System Change, there is a direct relationship between medical bill problems and out-of-pocket costs. Families with more than \$2,000 of annual out-of-pocket medical costs were more than five times more likely to experience problems paying medical bills compared to those with annual out-of-pocket costs less than \$250.⁶³

Not surprisingly, there is an association between medical bill problems and access to health care that is very similar to that observed in the uninsured population. Compared to all families, persons in families with medical bill problems are two to three times more likely to report unmet medical need, delayed care, or inability to obtain prescription drugs in the past year.⁶⁴ Other studies have reached similar conclusions.⁶⁵

6. Other Effects

The IDPH survey revealed several other potentially important economic effects of rising health insurance costs, including the association between health insurance, employment mobility, and entrepreneurial activity. The IDPH survey results indicate that 24 percent of insured Iowans “stayed in a job they didn’t like in order to keep health insurance,” 24 percent indicated that health insurance costs have affected their ability to retire, and 19 percent of insured Iowans indicated that they were working full-time only to qualify for employer health benefits. The size of these proportions suggest that job mobility is a serious concern among insured working Iowans, despite national evidence that the prevalence and severity of job lock is likely to be quite small.⁶⁶

Employment mobility has two components: the disutility of remaining in a relatively undesirable employment situation, and the inefficiencies associated with under-employment. In order to quantify the disutility of remaining in a relatively undesirable employment situation,

⁶¹ Carlson, K.M. 1993. On the Macroeconomics of Private Debt: Federal Reserve Bank of St. Louis; Garner (1996).

⁶² Doty, M.M., J.N. Edwards, and A.L. Holmgren. 2005. Seeing Red: Americans Driven into Debt by Medical Bills. In *Issue Brief #837: The Commonwealth Fund*.

⁶³ May, J.H., and P.J. Cunningham. 2004. Tough Trade-Offs: Medical Bills, Family Finances and Access to Care. In *Issue Brief #85* Washington, D.C. : Center for Studying Health System Change

⁶⁴ May and Cunningham (2004).

⁶⁵ e.g., Tu, H.T. 2004. Rising Health Costs, Medical Debt and Chronic Conditions. In *Issue Brief #88*. Washington, DC: Center for Studying Health System Change.

⁶⁶ Kapur, K. 1998. The Impact of Health on Job Mobility: A Measure of Job Lock. *Industrial and Labor Relations Review* 51 (2):282.

individuals would have to be asked a series of questions that address their willingness to pay for employment changes. One would also want to consider additional costs associated with stress, a risk factor that has been found to increase health expenditures by as much as 46 percent.⁶⁷ The IDPH survey identified several important stress-related effects, including job lock (24 percent) and various family problems (6-18 percent). Similarly, in order to assess the impact of underemployment, one would have to measure the difference between an employee's highest attainable wage (i.e., their maximum marginal product) and their current wage.

In addition to problems associated with employment mobility, 14 percent of survey respondents indicated they "decided not to start a business on your own because of losing health insurance coverage." Again, it is difficult to quantify these effects; for example, Holtz-Eakin et al. failed to find strong evidence of reduced entrepreneurial activity attributable to health insurance.⁶⁸ Nevertheless, even if the effects are small it is likely that the impact would be larger in a state with a disproportionately large proportion of small firms, like Iowa.

7. Discussion

Based on a simple economic model, the range of reactions that individuals might have in response to inflation in health care costs includes reductions in non-health care consumption, reductions in health care consumption, reductions in savings, reductions in wages, and increases in debt burden. In addition to the economic model, a working hypothesis is that price inflation, particularly within disproportionately large components of household expenditures (like health care), is a cause of anxiety and stress within the household. The results of the IDPH survey suggest that all of these effects are to varying degrees observed among the Iowa population. In this paper we have put forth a discussion of how these effects might impact the regional economy. We conclude that: (1) individuals view inflation in health costs as a serious problem that broadly impacts their lives; (2) high rates of inflation in health costs are likely to have an impact on the regional economy, although the expected negative effects of price inflation and net wage reductions are most likely offset by gains to the regional economy from growth in the health sector; (3) the demand for health is downward sloping, which implies that higher prices lead to less consumption, and beyond some threshold less consumption is likely to have negative effects on health; and (4) the secondary effects of inflation in health care costs are less employment mobility, dampening of entrepreneurial incentives, and stress.

Based on simulations and estimations, we conclude that the net effect of these adaptive responses on the regional economy is likely to be small, mainly due to the offset associated with increased economic activity in the health care sector. That said, we caution against inferring that

⁶⁷ Goetzel et al. studied 46,026 employees from six large health care purchasers for up to three years. The results were that employees at high risk for poor health outcomes had significantly higher expenditures than did subjects at lower risk in seven of ten risk categories: those who reported themselves as depressed (70% higher expenditures), at high stress (46%), with high blood glucose levels (35%), at extremely high or low body weight (21%), former (20%) and current (14%) tobacco users, with high blood pressure (12%), and with sedentary lifestyle (10%). Goetzel, R.Z., D.R. Anderson, R.W. Whitmer, R.J. Ozminkowski, R.L. Dunn, and J. Wasserman. 1998. The Relationship Between Modifiable Health Risks and Health Care Expenditures: An Analysis of the Multi-employer HERO Health Risk and Cost Database. *Journal of Occupational and Environmental Medicine* 40 (10):843-854.

⁶⁸ Holtz-Eakin, D., J.R. Penrod, and H.S. Rosen. 1996. Health Insurance and the Supply of Entrepreneurs. *Journal of Public Economics* 62:209-235.

the net effects will be small under all circumstances and over time. For example, the net economic effects of migration of economic activity from the non-health sector to the health sector of the economy may be offsetting in the short run but not in the long run as small sub-regional economies (such as rural areas) experience net losses in economic activity. Firms operating in small local economies, such as hardware stores or accounting agencies, face a double-edged sword: they could potentially experience a decrease in demand for their (non-health care) services while at the same time having to pay more for employee benefits. There is little question that small firms face difficulties as health benefit costs increase two to three times faster than inflation.⁶⁹ Some of these firms may eventually fail. As these firms fail, that can potentially have a dramatic one-time effect on a local economy. Similarly, the effects of reductions in health care consumption are likely to be greater for sicker, low-income populations, where the marginal health effects of small reductions in health care consumption may be large. Thus, there would be great value in further study of these effects, observing changes in a diverse cross-section of markets over time.

D. Conclusions

We report results from a recent survey of Iowa residents concerning the effects on their family budgets of recent increases in health insurance costs. The results are discussed in the context of a simple model of household resource allocation and the recent literature on the various effects that are reported. The results are summarized as follows: (1) individuals view inflation in health costs as a serious problem that broadly impacts their lives; (2) high rates of inflation in health costs are likely to have an impact on the regional economy, although the expected negative effects of price inflation and net wage reductions are most likely offset by gains to the regional economy from growth in the health sector; (3) the demand for health is downward sloping, which implies that higher prices lead to less consumption, and beyond some threshold less consumption is likely to have negative effects on health; and (4) the secondary effects of inflation in health care costs are less employment mobility, dampening of entrepreneurial incentives, and stress.

Critical to these findings is the question of where the thresholds lie. For example, the net economic effects of migration of economic activity from the non-health sector to the health sector of the economy may be offsetting in the short run but not in the long run as small sub-regional economies (such as rural areas) experience net losses in economic activity. Similarly, the effects of reductions in health care consumption are likely to be greater for sicker, low-income populations, where the marginal health effects of small reductions in health care consumption may be large.

⁶⁹ Kapur. 2004. The Impact of the Health Insurance Market on Small Firm Employment. *The Journal of Risk and Insurance* 71 (1):63-90. 2004; Morrisey, M.A., G.A. Jensen, and R.J. Morlock. 1994. Small Employers and the Health Insurance Market. *Health Affairs*:149-161; William M. Mercer Inc. 1999. Employer-Sponsored Health Insurance: A Survey of Small Employers in California. Oakland, CA: California HealthCare Foundation; Kronick and Gilmer (1999).

APPENDIX 1

IOWA BASELINE INFORMATION

A. Iowa Population

TABLE A-1. IOWA POPULATION

2005	2,954,451
2000	2,926,324 ²

Source: ¹Annual Estimates of the Population of the U.S.: April 1, 2004, Population Division, U.S. Census Bureau, Releases Date Dec. 22, 2004.

²U.S. Department of Commerce, U.S. Census Bureau. Internet Release Date: December 28, 2000.

TABLE A-2. IOWA POPULATION DISTRIBUTION BY AGE

	2003	2000²	
	Estimate	Number	%
Total Population	2,839,868	2,926,324	
Children 19 & Under	753,330	827,983	28.2
Adults 20-64	1,689,416	1,662,128	56.8
65+	397,122	436,213	14.9
65-74	198,730	211,935	7.2
75-84	148,542	159,160	5.4
85+	49,850	65,116	2.2

Source: ¹U.S. Census Bureau, 2003 American Community Survey. ²U.S. Census Bureau, Census 2000 Summary File.

B. Number and Percentage of Uninsured Iowans

TABLE A-3. Number & Percentage Of Uninsured Iowans (All persons not covered at any time during the year)

YEAR	NUMBER (000)	PERCENT (%)
2004 ¹	277	9.5
2001 ²	215	7.5

Source: ¹U.S. Census Bureau, CPS, 2005 Annual Social and Economic Supplement
²CPS, March 2002.

TABLE A-4. IOWA: HEALTH INSURANCE COVERAGE STATUS & TYPE OF COVERAGE

IOWA	2004 ¹		2001 ²	
Covered by Some Type of Health Insurance³				
	Number	%	Number	%
All persons	2,529,000	90.5	2,635,000	92.5
Under 65	2,243,000	89.1	2,264,000	91.3
Under 18	542,000	94.0	684,000	95.3
65 and over	387,000	99.7	382,000	99.8
Covered by Private Health Insurance⁴				
All persons	2,314,000	79.6	2,434,000	85.1
Under 65	2,013,000	79.9	2,121,000	85.6
Under 18	519,000	76.0	621,000	86.7
65 and over	300,000	77.4	313,000	82.1
Covered by Employment-Based Health Insurance⁵				
All persons	1,886,000	64.9	1,973,000	69.0
Under 65	1,767,000	70.2	1,881,000	75.9
Under 18	455,000	58.1	557,000	77.7
65 and over	118,000	30.5	92,000	24.0

IOWA	2004		2001	
Covered by Own Employment-Based Health Insurance⁶				
All persons	970,000	33.4	987,000	34.5
Under 65	885,000	35.2	915,000	37.0
Under 18	1,000	0.10	2,000	0.20
65 and over	85,000	21.8	71,000	18.7
Covered by Direct Purchase Health Insurance				
	Number	Percent	Number	Percent
All persons	453,000	15.5	495,000	17.3
Under 65	253,000	10.1	246,000	9.9
Under 18	53,000	7.7	66,000	9.2
65 and over	200,000	51.4	-	-
Covered by Government Health Insurance				
All persons	755,000	26.0	653,000	22.8
Under 65	375,000	14.9	275,000	11.1
Under 18	181,000	25.4	132,000	18.5
65 and over	379,000	97.7	378,000	99.0
Covered by Medicaid				
All persons	345,000	11.9	224,000	7.8
Under 65	295,000	11.7	198,000	8.0
Under 18	169,000	24.7	115,000	16.0
65 and over	50,000	12.9	26,000	5.8
Not Covered at any Time During the Year				
All persons	277,000	9.5	216,000	7.5
Under 65	275,000	10.9	215,000	8.7
Under 18	41,000	5.0	34,000	4.7
65 and over	1,000	0.3	1,000	0.2
Source: ¹ U.S. Census Bureau, CPS, 2005 Annual Social and Economic Supplement. ² CPS, March 2002.				

CPS Health Insurance Definitions

The Census Bureau broadly classifies health insurance coverage as either Private (non-government) coverage or Government-sponsored coverage.³

Private Health Insurance⁴

Private health insurance is coverage by a health plan provided through an employer or union or purchased by an individual from a private health insurance company.

Employment-based plans^{5,6}

Employment-based health insurance is coverage offered through one's own employment or a relative's. It may be offered by an employer or by a union.

Direct-purchase plans⁷

Direct-purchase health insurance is coverage through a plan purchased by an individual from a private company.

Government Health Insurance⁸

Government health insurance includes plans funded by governments as the federal, state, or local level. The major categories of government health insurance are Medicare, Medicaid, the State Children's Health Insurance Program (SCHIP), military health care, state plans, and the Indian Health Service.

Medicaid⁹

Medicaid is a program administered at the state level, which provides medical assistance to the needy. Families with dependent children, the aged, blind, and disabled who are in financial need are eligible for Medicaid. It may be known by different names in different states.

SCHIP

SCHIP, the State Children's Health Insurance Program, is a program administered at the state level, providing health care to low-income children whose parents do not qualify for Medicaid. SCHIP may be known by different names in different states.

C. Percent of Population Living in Poverty.

TABLE A-5. PERCENT OF IOWA POPULATION LIVING IN POVERTY

100% of FPL	2003-2004 2-Year Average	2001-2002 2-Year Average
	9.9	8.3

Source: U.S. Census Bureau, CPS, 2003-2005 Annual Social and Economic Supplements

TABLE A-6. DISTRIBUTION OF IOWA POPULATION BY FEDERAL POVERTY LEVEL, 2002-2003

	Number	%
Under 100%	323,740	11
100-199%	526,180	18
Low Income Subtotal	849,920	29
200% +	2,507,820	71

Source: Urban Institute & Kaiser Commission on Medicaid & the Uninsured estimates based on pooled March 2003 and 2004 CPS.

D. Employment and Health Insurance

TABLE A-7. DISTRIBUTION OF NON-ELDERLY IOWANS WITH EMPLOYER COVERAGE, 2002-2003

	Number	%
At least 1 full-time worker	1,656,000	95
Part-time Workers	51,540	3
Non Workers	33,390	2
Total	1,740,390	100

Source: Urban Institute & Kaiser Commission on Medicaid & the Uninsured estimates based on pooled March 2003 and 2004 CPS.

TABLE A-8. RATE OF NON-ELDERLY IOWANS WITH EMPLOYER COVERAGE , 2002-2003

	Number	%
At least 1 full-time worker	1,656,000	75
Part-time Workers	51,540	34
Non Workers	33,390	21
Total	1,740,390	NA

Source: Urban Institute & Kaiser Commission on Medicaid & the Uninsured estimates based on pooled March 2003 and 2004 CPS.

TABLE A-9. DISTRIBUTION OF NON-ELDERLY UNINSURED IOWANS BY EMPLOYMENT STATUS, 2002-2003

	Number	%
At least 1 full-time worker	227,990	76
Part-time Workers	33,890	11
Non Workers	39,540	13
Total	301,420	100

Source: Urban Institute & Kaiser Commission on Medicaid & the Uninsured estimates based on pooled March 2003 and 2004 CPS.

**TABLE A-10. RATE OF NON-ELDERLY UNINSURED IOWANS
BY EMPLOYMENT STATUS, 2002-2003**

	Number	%
At least 1 full-time worker	227,990	10
Part-time Workers	33,890	22
Non Workers	39,540	25
Total	301,420	NA

Source: Urban Institute & Kaiser Commission on Medicaid & the Uninsured estimates based on pooled March 2003 and 2004 CPS.

**TABLE A-11. DISTRIBUTION OF NON-ELDERLY IOWA
MEDICAID ENROLLEES BY EMPLOYMENT
STATUS, 2002-2003**

	Number	%
At least 1 full-time worker	162,750	59
Part-time Workers	41,500	15
Non Workers	73,360	26
Total	277,610	100

Source: Urban Institute & Kaiser Commission on Medicaid & the Uninsured estimates based on pooled March 2003 and 2004 CPS.

APPENDIX II

LINKS TO RESEARCH FINDINGS AND METHODOLOGIES

- ◆ Letter from US Department of Health & Human Services dated July 1, 2005 providing approval for the 2005 Iowa §1115 Medicaid demonstration project (IowaCare)
http://staffweb.legis.state.ia.us/lfb/medicaid/Final_CMS_Approval.pdf
- ◆ **2005 Iowa Medicaid Reform**
IowaCare Act [Iowa General Assembly HF 841 – Iowa Code Section 249J.1 et seq.]
<http://coolice.legis.state.ia.us/Cool-ICE/default.asp?Category=billinfo&Service=Billbook&menu=false&hbill=HF841>
- ◆ **1115 Waiver to the Secretary: 2005 Iowa Medicaid Reform**
Medicaid Reform 1115 WAIVER Medicaid Reform - IowaCare 1115 Waiver
http://staffweb.legis.state.ia.us/lfb/medicaid/waiver_docs/waiver_docs2/medicaid_waiver2.htm
- ◆ **Iowa HRSA State Planning Grant Interim Report to the Secretary**
March 30, 2002
www.statecoverage.net/statereports/ia5.pdf
- ◆ **2001 Iowa State Planning Grant Final Report to the Secretary**
September 30, 2001
www.statecoverage.net/statereports/ia.pdf

APPENDIX III

2005 IOWA SURVEY OF CONSUMERS TECHNICAL NOTES

About the Study

Most of the findings in this report are based on a survey of 1,202 Iowans aged 18-64. The survey was conducted from the 7th through the 12th of July, 2005, with interviews lasting approximately 15 minutes. Random-digit telephone numbers provided by Survey Sampling, Inc. of Fairfield, Connecticut and representing the state were used as the sampling frame. The numbers were drawn and contacted in such a way that each household in the state with a landline telephone had an equal chance of participating in the survey. The response rate was 17%.

To qualify, respondents had to be between the ages of 18 and 64, and be the person in the household who knows the most about health insurance. This latter qualification has a demographic impact, lowering the proportion of respondents in the age 18 to 24 category, for example, and resulting in slightly more females than is normal for the population at large. Because of this screen, we have no benchmark against which to compare the remaining demographics, but they look to be not far off from what the Census reports for the population generally and so we are confident this particular sample is representative of the universe of Iowa households.

The margin of error for this statewide sample of Iowans is plus or minus 2.8 percentage points. This means that if this survey were repeated using the same questions and the same methodology, 19 times out of 20, the findings would not vary from the percentages shown here by more than plus or minus 2.8 percentage points.

SURVEY SPECIFICATIONS

Sample:	1,202 Iowans aged 18-64 contacted using a list of random-digit telephone numbers, and screening for qualifying adults.
Qualifications:	Interviews were conducted with adult Iowans aged 18 to 64. Within the household, the adult who knows the most about health insurance was selected. This effectively reduced the proportion of respondents age 18 to 24.
Margin of error:	The margin of error for this main statewide sample of Iowans is plus or minus 2.8 percentage points.
Field dates:	The 7th through the 12th of July, 2005.
Interview length:	Approximately 15 minutes.

APPENDIX IV: SPG SUMMARY OF POLICY OPTIONS

Policy options considered under the Iowa HRSA SPG, including original grant and continuation grants.					
Option Considered	Target Population	Estimated Number of People Served [Based on 2001 Estimates]	Status of Approval	Status of Implementation	If implemented, most recent estimate within the federal fiscal year
Expanding Coverage for Children Under Medicaid/hawk-I (Iowa SCHIP)	Children up to 19 years of age	In 2001, we estimated the following increases in children who would be served under this expansion scenario 58,009	No approval was sought	NA	NA
Expanding Medicaid Coverage for Adults	Adults 19-64	Below 50% FPL 44,700 Non-custodial adults; Below 100% FPL 74,700 Non-custodial adults; Below 150% FPL 135,500 Non-custodial adults; Below 200% FPL 202,000 Non-custodial adults	In 2005, the Iowa enacted HF 841 which was designed to reform the State's Medicaid program.	The 2005 Iowa Medicaid reform is currently being implemented.	NA
Provide Short-term Insurance Coverage to the Unemployed Program would purchase insurance during the statutory period of unemployment. Estimates uses state employee coverage.	Iowa unemployment insurance claimants	Total Claimants (2000) 105,114 Persons Estimated reduction in uninsured: 24,000 persons	Not pursued.	NA	NA

Option Considered	Target Population	Estimated Number of People Served [Based on 2001 Estimates]	Status of Approval	Status of Implementation	If implemented, most recent estimate within the federal fiscal year
Subsidies to Help Individuals Purchase Private Coverage	Adults 19-64	\$750 Ind. & \$1500 Family Subsidy Tax Credit 2001 Eligible: 363,800 (Insured 145,000/ Uninsured 218,800) 2001 Enroll: 194,700 (Insured 145,000/Uninsured 49,700) Newly Covered: (uninsured) 49,700	Not pursued.	NA	NA
		\$1000 Ind. & \$2,000 Family Subsidy Tax Credit 2001 Eligible: 363,800 (Insured 145,000/ Uninsured 218,800) 2001 Enroll: 203,400 (Insured 145,000/Uninsured 58,400) Newly Insured(Uninsured) 58,400	Not pursued.		
		\$1250/Ind. & \$2500 Family Subsidy Tax Credit 2001 Eligible: 363,800 (Insured 145,000 / Uninsured 218,800) 2001 Enroll: 224,200 (Insured 145,000 / Uninsured 79,200) Newly Covered: Uninsured) 79,200	Not pursued.		

Option Considered	Target Population	Estimated Number of People Served [Based on 2001 Estimates]	Status of Approval	Status of Implementation	If implemented, most recent estimate within the federal fiscal year
Create Low-cost Health Insurance Coverage Options	Adults 19-64	[Based on 2001 Estimates] Persons in Firms of < 50 Workers Newly Insured 6,036 (Below 250% FPL 4,089)	Not pursued.	NA	NA
Pooling Small Businesses with State Employees' Health Plan	Adults 19-64	Unknown	Not pursued.	NA	NA
Subsidies to Help Employers Purchase Coverage for Their Low-Income Workers	Adults 19-64	<p>10 or Fewer Workers 25% Credit: Eligible Est.: 149,900 (Currently insured 29,500/Uninsured 120,400) Enroll Est.: 39,600 (Currently insured 7,000/Uninsured 32,600) Newly Insured 32,600</p> <p>40% Credit Eligible Est. 149,900 (Currently insured 29,500/Uninsured 120,400) Newly Insured 47,200</p> <p>Enroll Est. 57,300 (Currently insured 10,100/ Uninsured 47,200) Newly Insured 47,200</p> <p>25 or Fewer Workers</p> <p>25% Credit Eligible Est. 180,900 (Currently insured 41,200/</p>	Not pursued.	NA	NA

		Uninsured 139,700 Enroll Est. 47,800 (Currently insured 9,800/Uninsured 38,000) Newly insured: 38,000 40% Credit Eligible Est. 180,900 (Currently insured 41,200/ Uninsured 139,700) Enroll Est. 70,100 (Currently insured 143,300/Uninsured 55,800) Newly Covered: 55,800			
A Combined Strategy: With a Children’s Mandate	Children 0-19 Adults 19-64	Public Program Participants: 346,900 Newly Insured Persons: 206,300	Not pursued.	NA	NA
A Combined Strategy: Without a Children’s Mandate	Children 0-19 Adults 19-64	Public Program Participants: 338,000 Newly Insured Persons: 152,800	Not pursued.	NA	NA
Source: IA-HRSA State Planning Grant.					

APPENDIX V**IOWA DEPARTMENT OF PUBLIC HEALTH SURVEY OF IOWA CONSUMERS****Questionnaire**

1,201 Iowans Age 18-64

SELZER & COMPANY

July 7-12, 2005

Margin of Error: +/- 2.8

Hello. This is _____ calling from SELZER & COMPANY, a survey research firm located here in Iowa. We're taking a short survey today on important issues in Iowa. Your individual responses will be kept confidential, and the results will be used to inform public policy. This survey is being done on behalf of a state agency. I'd like to speak to the adult age 18 to 64 who knows the most about health insurance. **(If respondent says they do not have health insurance coverage, tell them this will be a very short survey with some questions especially for people like them.)**

This will take only a few minutes of your time. **(Verify the respondent is under age 65.)**

1. I'd like to begin by asking about your view of the nation and the state. In general, do you think things in the nation are headed in the right direction, or have they gotten off on the wrong track?

 Right direction
 Wrong track
 Not sure

2. What about here in Iowa? Do you think things in the state of Iowa are headed in the right direction, or have they gotten off on the wrong track?

 Right direction
 Wrong track
 Not sure

3a. Compared to last year, would you say your personal financial situation is improving, staying the same, or getting worse?

- | | | |
|----------------------------|------------------|-------------|
| 1 <input type="checkbox"/> | Improving | Ask b |
| 2 <input type="checkbox"/> | Staying the same | Skip to Q.4 |
| 3 <input type="checkbox"/> | Getting worse | Ask c |
| 4 <input type="checkbox"/> | Not sure | Skip to Q.4 |

b. **(If improving, ask:)** Which one or two of the following would you say are the main reasons your personal financial situation is improving? **(Read list. Accept up to two answers.)**

- 1 You or someone in your household got a raise
- 2 You or someone in your household got a better job
- 3 You or someone in your household who was previously unemployed is now working for wages
- 4 Your investments are doing better
- 5 You have cut expenses so your money goes farther
- 6 None of these (VOL)
- 7 Not sure

c. **(If getting worse, ask:)** Which one or two of the following would you say are the main reasons your personal financial situation is getting worse? **(Read list. Accept up to two answers.)**

- 1 You or someone in your household is earning less income, because of a lay-off, a cut in pay, or some other reason
- 2 You or someone in your household is bringing home less in the paycheck because of having to pay more for employee benefits
- 3 Your investments are not doing as well as they have before
- 4 You have more expenses you have to pay
- 5 None of these (VOL)
- 6 Not sure

(Ask everyone.)

4a. Do you currently have health insurance coverage? **(If yes, ask:)** What is the source of the insurance—your employer, a spouse’s employer, your own private policy, a government program, or other?

- 1 Yes, have coverage through employer
 2 Yes, have coverage through spouse’s employer
 3 Yes, have coverage through private policy—that is, one not offered through employer **Continue to Q.5**
 4 Yes, have coverage through a government program such as Medicaid, Champus, the VA, CHIP, etc.
 5 Yes, have coverage from some other source
-
- 6 No, do not have coverage **Ask b**
-
- 7 Not sure

b. **(If do not currently have coverage, ask:)** For how long have you not had coverage—Has that been less than a year, one to two years, or longer than two years, or have you never had health insurance coverage?

- 1 Less than a year **Ask c-e**
 2 One to two years
-
- 3 Longer than two years
 4 Never had coverage **Skip to d**
 5 Not sure

c. **(If less than two years, ask:)** Which of the following help explain why you do not currently have health insurance—just answer yes or no to each possible explanation. **(Read list. Mark all that apply.)**

- 1 Your employer dropped its health insurance plan
 2 You are not eligible for your employer’s health insurance plan
 3 Your spouse’s employer dropped coverage for family members
 4 Your spouse’s employer dropped its health insurance plan
 5 Your spouse is not eligible for their employer’s health insurance plan
 6 Your cost for insurance coverage went up and it was too expensive
 7 You have been in good health and did not think the cost was worth paying
 8 None of these (VOL)
 9 Not sure

d. Do you believe you would benefit from having health insurance coverage, or do you think you do not need it at this time?

- 1 Would benefit
 2 Do not need it at this time
 3 Not sure

- e. If you were offered the opportunity to buy a health insurance plan to cover large medical expenses in case of serious illness or accident, how much do you think you could afford to pay a month for a basic policy for yourself? **(Let respondent volunteer. (Format in four digits: \$100 would be 0100.)**

- f. **(Code from e AND ask only if needed.)**

- 01 Zero
02 \$1 to \$9
03 \$10 to \$24
04 \$25 to \$49
05 \$50 to \$99
06 \$100 to \$149
07 \$150 to \$199
08 \$200 to \$249
09 \$250 to \$299
10 \$300 to \$349
11 \$350 to \$399
12 \$400 or more
13 Not sure

**After this question all respondents
who answered skip to Q.14**

(Ask only of those who currently have health insurance.)

- 5a. About how much per month do you or your spouse pay for health insurance for one person's contribution to the premium? This amount might be withheld from a paycheck if you get your insurance through an employer. **(Format in four digits: \$100 would be 0100.)**

- b. **(Code from Q.5a AND ask only if needed.)**

- 01 Zero
02 \$1 to \$9
03 \$10 to \$24
04 \$25 to \$49
05 \$50 to \$99
06 \$100 to \$149
07 \$150 to \$199
08 \$200 to \$249
09 \$250 to \$299
10 \$300 to \$349
11 \$350 to \$399
12 \$400 or more

13 Not sure

- 6a. If you did not have health insurance, can you estimate for me about how much you think you would spend on health care in a three-month period for yourself—counting doctor visits, prescription drugs, medical equipment and so on.

- b. **(Code from Q.6a AND ask only if needed.)**

- 01 Zero
 02 \$1 to \$99
 03 \$100 to \$249
 04 \$250 to \$499
 05 \$500 to \$999
 06 \$1,000 to \$1,499
 07 \$1,500 to \$1,999
 08 \$2,000 to \$2,499
 09 \$2,500 or more
 10 Not sure

- 7a. Some insurance companies offer high-deductible health insurance plans, combined with a health savings account—or HSA—to be used to pay for routine medical expenses, such as doctor's visits and prescription drugs, in pre-tax dollars. Do you currently have such a plan?

- | | | |
|----------------------------|----------|--------------------|
| 1 <input type="checkbox"/> | Yes | Ask b |
| 2 <input type="checkbox"/> | No | Skip to Q.8 |
| 3 <input type="checkbox"/> | Not sure | |

- b. About how much do you or your spouse personally contribute per year to your Health Saving Account? **(Format in four digits: \$100 would be 0100.)**

- c. **(Code from Q.7b AND ask only if needed.)**

- 01 Zero
 02 \$1 to \$99
 03 \$100 to \$249
 04 \$250 to \$499
 05 \$500 to \$999
 06 \$1,000 to \$1,499
 07 \$1,500 to \$1,999
 08 \$2,000 to \$2,499
 09 \$2,500 or more

10 Not sure

8. How would you describe the quality of coverage in your health insurance plan—is it very good, reasonably good, barely adequate, or not really adequate?

1 Very good
 2 Reasonably good
 3 Barely adequate
 4 Not really adequate
 5 Not sure

9. How would you describe your access to quality health care providers in your health insurance plan—is it very good, reasonably good, barely adequate, or not really adequate?

1 Very good
 2 Reasonably good
 3 Barely adequate
 4 Not really adequate
 5 Not sure

10. Do you currently work full-time, part-time, or do you not currently work for wages?

1 Work full-time
 2 Work part-time
 3 Do not work
 4 Not sure

11. Is the cost you or your spouse pay personally for your health insurance premium increasing, decreasing, or staying about the same in the past few years? **(If increasing or decreasing, follow with:)** Would you say it is (INCREASING/DECREASING) dramatically or just (INCREASING/DECREASING)?

1 Increasing dramatically
 2 Increasing **Continue with Q.12**
 3 Staying the same
 4 Decreasing
 5 Decreasing dramatically **Skip to Q.14**
 6 Do not pay anything for health insurance (VOL)
 7 Not sure

12. How much effect does this increasing cost have on your household budget—are you making major sacrifices because of having to pay more for health insurance, minor sacrifices, or are you not really sacrificing because of rising health insurance costs?

1 Major sacrifices **Continue with Q.13**

- 2 Minor sacrifices
 3 Not really sacrificing **Skip to Q.14**
 4 Not sure

13. I'm going to mention some ways your household budget might be affected by having to pay more for health insurance. For each, please tell me if this affects your household budget or not. Just answer yes or no. **(Mark all that apply. Rotate list.)**

	<u>Yes</u>	<u>No</u>	<u>Not Sure</u>
A. Cut back on how much you can save	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>
B. Cut back on spending for entertainment, vacations, or leisure activities	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>
C. Cut back on normal household expenses such as food, utilities, and so on	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>
D. Downgrade what your policy covers so you do not have to pay so much (includes changing to a different policy)	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>
E. Reduce or eliminate other kinds of insurance coverage, such as life, disability, auto, and homeowners insurance	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>
F. Take on more debt, such as credit card debt or other loans	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>

(Ask A-F of all, then skip uninsured to Q.18.)

14. I have some questions about ways you might be trying to save on health care expenses. Thinking just about the past two or three years . . . **(Rotate list.)**

	<u>Yes</u>	<u>No</u>	<u>Not Sure</u>
A. Have you decided not to go to the doctor when you felt you needed to because of cost?	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>
B. Have you stopped taking medication to avoid the cost of prescription drugs?	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>
C. Have you cut back the dose of prescription drugs to help make the drugs last longer?	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>
D. Have you decided not to fill prescriptions given to you by your doctor because of cost?	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>
E. Have you not scheduled tests your doctor has suggested in order to save on cost?	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>
F. Do you wait longer to see a doctor when you are sick with hopes you will get better on your own?	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>
G. Do you try to minimize how often you use your health insurance in order to keep the overall cost of premiums for everyone in your group from rising?	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>
H. Have you switched doctors or hospitals in order to save money?	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>
I. Have you switched health insurance to a plan with higher deductibles and co-payments in order to save money?	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>
J. Have you switched health insurance to a plan with more restrictions on access to save money?	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>
K. Have you switched health insurance to a plan with fewer benefits to save money?	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>

15. Sometimes people make major decisions based on what might happen with health insurance. For each of the following, please tell me if this describes a situation you or someone in your household faced in the past three or four years. Just answer yes or no. **(Mark all that apply. Rotate list.)**

	<u>Yes</u>	<u>No</u>	<u>Not Sure</u>
A. Stayed in a job you didn't like in order to keep health insurance	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>
B. Stayed with the same insurance policy to avoid problems with "pre-existing conditions"	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>
C. Decided whether or when to have a baby, based on health insurance coverage	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>
D. Decided whether or when to retire, based on health insurance coverage	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>
E. Decided to start working in order to get health insurance coverage	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>
F. Decided not to start a business on your own because of losing health insurance coverage	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>
G. Decided to get married or stay married to get or keep health insurance	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>
H. Decided to continue working instead of staying home to care for children or other family members in order to keep health insurance	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>
I. Switched to a job that was less desirable in order to get health insurance coverage or get better coverage	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>
J. Decided to forgo making an investment in the future, such as starting a college fund for a child or putting money into a retirement savings account	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>
K. Worked full-time so you would qualify for the company health insurance plan when you would have preferred part-time, so you could to go to school, for example, or spend time with family	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>

16. And thinking about the future, do you think you or someone in your household will make any of the following decisions based on what might happen to their health insurance? Just answer yes or no. **(Mark all that apply. Rotate list.)**

	<u>Yes</u>	<u>No</u>	<u>Not sure</u>
A. Stay in a job you don't like in order to keep health insurance	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>
B. Stay with the same insurance policy to avoid problems with "pre-existing conditions"	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>
C. Decide whether or when to have a baby, based on health insurance coverage	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>
D. Decide whether or when to retire, based on health insurance coverage	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>
E. Decide to start working in order to get health insurance coverage	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>
F. Decide not to start a business on your own because of losing health insurance coverage	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>
G. Decide to get married or stay married to get or keep health insurance	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>
H. Decide to continue working instead of staying home to care for children or other family members in order to keep health insurance	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>
I. Switch to a job that is less desirable in order to get health insurance coverage or get better coverage	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>
J. Decide to forgo making an investment in the future, such as starting a college fund for a child or putting money into a retirement savings account	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>
K. Work full-time so you will qualify for the company health insurance plan when you would prefer part-time, so you could to go to school, for example, or spend time with family	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>

17. Which of the following would you be willing to do to help keep down the cost that you or your spouse must pay for health insurance—Just answer yes or no. **(Mark all that apply. Rotate list.)**

	<u>Yes</u>	<u>No</u>	<u>Not sure</u>
A. Choose a policy with a higher deductible	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>
B. Choose a policy with higher co-pays for doctor visits and prescription drugs	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>
C. Reduce the number of doctor's visits made by members of your household	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>
D. Make more use of clinics staffed by nurses and physician's assistants rather than doctors	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>
E. Choose a policy with fewer participating doctors and hospitals	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>

(Ask all.)

18. We're almost to the end of the survey. I want to describe to you a change to the way health insurance is currently provided. It includes participation by individuals, employers, and the government, when needed. Of course, there are more details than I can reasonably give you, but we're interested in your first impression. At the end of the description, I'll ask whether you think the plan would be good or bad for you and your household.

All Iowans would be responsible for having a catastrophic health insurance policy to cover major medical expenses for things like injuries from major accidents, cancer, heart disease, diabetes, and so on. The cost would be somewhere around \$150 per month for a family of four. Low-income Iowans would get help if needed.

Employers would no longer pay for health insurance, but would pay a fixed amount into each employee's medical savings account. This money would be used to pay for ordinary medical expenses, such as doctor visits, routine tests, and prescription drugs. Employers could choose to pay more, but the standard amount would be \$3,000 per year or \$250 per month per employee. Unused money would roll forward to successive years and would earn untaxed interest. The idea is to help businesses control costs and stabilize expenses, yet still provide a genuine benefit for employees.

In general, does a system like this, given time to get up and running, sound like you and your household would be a lot better off with a system like this, a little better off, a little worse off, or a lot worse off?

- 1 A lot better off
 2 A little better off
 3 A little worse off
 4 A lot worse off
 5 Not sure

These final questions are just to help us learn what cross-section of Iowans we have interviewed.

- 100a. What is your age? **(RECORD ACTUAL AGE AND CODE WITH APPROPRIATE AGE GROUP. IF RESPONDENT REFUSES, OFFER AGE GROUPS.)**

b. (CODE PROPER CATEGORY :)

- 1 Under 25
 2 25 to 34
 3 35 to 44
 4 45 to 54
 5 55 to 64
 6 65 and over
 7 Refused/not sure

c. (RECORD IF :) Boomer age 40-59

-
101. In politics as of today, do you consider yourself a Republican, Democrat, or independent?
- 1 Republican
 - 2 Democrat
 - 3 Independent
 - 4 Other (VOL)
 - 5 Refused/not sure
102. What is the last grade of school you completed?
- 1 High school graduate or less
 - 2 Some college
 - 3 College degree
 - 4 Postgraduate work or degree
 - 5 Refused/not sure
103. Do you have children under the age of 18 living at home?
- 1 Yes
 - 2 No
 - 3 Refused/not sure
104. How would you describe the area where you live in Iowa—rural, small town, small city, large city, or suburb?
- 1 Rural
 - 2 Small town
 - 3 Small city
 - 4 Large city
 - 5 Suburb
 - 6 Refused/not sure
105. With what racial or ethnic group do you identify most—White, Black, Hispanic, Asian, or some other group?
- 1 White
 - 2 Black
 - 3 Hispanic
 - 4 Asian
 - 5 Other
 - 6 Refused/not sure

APPENDIX VI

IOWA DEPARTMENT OF PUBLIC HEALTH SURVEY OF IOWA CONSUMERS

Filled in Questionnaire
 1,201 Iowans Age 18-64
 SELZER & COMPANY
 July 7-12, 2005
 Margin of Error: +/- 2.8

Hello. This is _____ calling from SELZER & COMPANY, a survey research firm located here in Iowa. We're taking a short survey today on important issues in Iowa. Your individual responses will be kept confidential, and the results will be used to inform public policy. This survey is being done on behalf of a state agency. I'd like to speak to the adult age 18 to 64 who knows the most about health insurance. **(If respondent says they do not have health insurance coverage, tell them this will be a very short survey with some questions especially for people like them.)**
 This will take only a few minutes of your time. **(Verify the respondent is under age 65.)**

1. I'd like to begin by asking about your view of the nation and the state. In general, do you think things in the nation are headed in the right direction, or have they gotten off on the wrong track?

35	Right direction	
59	Wrong track	
6	Not sure	

2. What about here in Iowa? Do you think things in the state of Iowa are headed in the right direction, or have they gotten off on the wrong track?

50	Right direction	
41	Wrong track	
9	Not sure	

- 3a. Compared to last year, would you say your personal financial situation is improving, staying the same, or getting worse?

29	Improving	Ask b
45	Staying the same	Skip to Q.4
26	Getting worse	Ask c
-	Not sure	Skip to Q.4

- b. **(If improving, ask:)** Which one or two of the following would you say are the main reasons your personal financial situation is improving? **(Read list. Accept up to two answers. Multiple responses were allowed, therefore the total will exceed 100%.)**
(Based only on those whose financial situation is improving; n = 344.)

- 49 You or someone in your household got a raise
- 22 You or someone in your household got a better job
- 7 You or someone in your household who was previously unemployed is now working for wages
- 18 Your investments are doing better
- 16 You have cut expenses so your money goes farther
- 4 None of these (VOL)
- 1 Not sure

- c. **(If getting worse, ask:)** Which one or two of the following would you say are the main reasons your personal financial situation is getting worse? **(Read list. Accept up to two answers. Multiple responses were allowed, therefore the total will exceed 100%.)**
(Based only on those whose financial situation is getting worse; n = 308.)

- 32 You or someone in your household is earning less income, because of a lay-off, a cut in pay, or some other reason
- 25 You or someone in your household is bringing home less in the paycheck because of having to pay more for employee benefits
- 13 Your investments are not doing as well as they have before
- 49 You have more expenses you have to pay
- 3 None of these (VOL)
- 1 Not sure

- 4a. Do you currently have health insurance coverage? **(If yes, ask:)** What is the source of the insurance—your employer, a spouse's employer, your own private policy, a government program, or other?

- 51 Yes, have coverage through employer
 - 20 Yes, have coverage through spouse's employer
 - 8 Yes, have coverage through private policy—that is, one not offered through employer **Continue to Q.5**
 - 7 Yes, have coverage through a government program such as Medicaid, Champus, the VA, CHIP, etc.
 - 2 Yes, have coverage from some other source
-
- 12 No, do not have coverage **Ask b**
 - Not sure

- b. **(If do not currently have coverage, ask:)** For how long have you not had coverage—Has that been less than a year, one to two years, or longer than two years, or have you never had health insurance coverage? **(Based only on those who do not currently have coverage; n = 142.)**

22	\$50 to \$99
14	\$100 to \$149
5	\$150 to \$199
6	\$200 to \$249
1	\$250 to \$299
4	\$300 to \$349
0	\$350 to \$399
1	\$400 or more
7	Not sure

- 5a. About how much per month do you or your spouse pay for health insurance for one person's contribution to the premium? This amount might be withheld from a paycheck if you get your insurance through an employer. **(Format in four digits: \$100 would be 0100.) (Based only on those who currently have coverage; n = 1060.)**

Mean: \$172.45 Median: \$100.00

- b. **(Code from Q.5a AND ask only if needed.)**

16	Zero
1	\$1 to \$9
3	\$10 to \$24
7	\$25 to \$49
15	\$50 to \$99
13	\$100 to \$149
8	\$150 to \$199
8	\$200 to \$249
4	\$250 to \$299
5	\$300 to \$349
2	\$350 to \$399
10	\$400 or more
8	Not sure

- 6a. If you did not have health insurance, can you estimate for me about how much you think you would spend on health care in a three-month period for yourself—counting doctor visits, prescription drugs, medical equipment and so on. **(Based only on those who currently have coverage; n = 1060.)**

Mean: \$799.34 Median: \$300.00

- b. **(Code from Q.6a AND ask only if needed.) (Based only on those who currently have coverage; n = 1060.)**

14	Zero
8	\$1 to \$99
17	\$100 to \$249
14	\$250 to \$499

9. How would you describe your access to quality health care providers in your health insurance plan—is it very good, reasonably good, barely adequate, or not really adequate? **(Based only on those who currently have coverage; n = 1060.)**

55 Very good
 34 Reasonably good
 6 Barely adequate
 4 Not really adequate
 1 Not sure

16 \$500 to \$999
 10 \$1,000 to \$1,499
 4 \$1,500 to \$1,999
 3 \$2,000 to \$2,499
 9 \$2,500 or more
 5 Not sure

- 7a. Some insurance companies offer high-deductible health insurance plans, combined with a health savings account—or HSA—to be used to pay for routine medical expenses, such as doctor’s visits and prescription drugs, in pre-tax dollars. Do you currently have such a plan? **(Based only on those who currently have coverage; n = 1060.)**

25	Yes	Ask b
73	No	Skip to Q.8
2	Not sure	

- b. About how much do you or your spouse personally contribute per year to your Health Saving Account? **(Format in four digits: \$100 would be 0100.) (Based only on those who have an HSA; n=263.)**

Mean: \$1,072.83 Median: \$600.00

- c. **(Code from Q.7b AND ask only if needed.) (Based only on those who have an HSA; n=263.)**

21 Zero
 4 \$1 to \$99
 5 \$100 to \$249
 6 \$250 to \$499
 13 \$500 to \$999
 13 \$1,000 to \$1,499
 9 \$1,500 to \$1,999
 4 \$2,000 to \$2,499
 13 \$2,500 or more
 12 Not sure

10. Do you currently work full-time, part-time, or do you not currently work for wages? **(Based only on those who currently have coverage; n = 1060.)**

- 68 Work full-time
- 12 Work part-time
- 20 Do not work
- Not sure

11. Is the cost you or your spouse pay personally for your health insurance premium increasing, decreasing, or staying about the same in the past few years? **(If increasing or decreasing, follow with:)** Would you say it is (INCREASING/DECREASING) dramatically or just (INCREASING/DECREASING)? **(Based only on those who currently have coverage; n = 1060.)**

- | | | |
|-------|--|---------------------------|
| 21 | Increasing dramatically | Continue with Q.12 |
| 44 | Increasing | |
| <hr/> | | |
| 28 | Staying the same | |
| 2 | Decreasing | |
| 1 | Decreasing dramatically | Skip to Q.14 |
| 3 | Do not pay anything for health insurance (VOL) | |
| 1 | Not sure | |

12. How much effect does this increasing cost have on your household budget—are you making major sacrifices because of having to pay more for health insurance, minor sacrifices, or are you not really sacrificing because of rising health insurance costs? **(Based only on those whose premium is increasing; n = 690.)**

- | | | |
|-------|------------------------|---------------------------|
| 14 | Major sacrifices | Continue with Q.13 |
| 45 | Minor sacrifices | |
| <hr/> | | |
| 40 | Not really sacrificing | Skip to Q.14 |
| 1 | Not sure | |

13. I'm going to mention some ways your household budget might be affected by having to pay more for health insurance. For each, please tell me if this affects your household budget or not. Just answer yes or no. **(Mark all that apply. Rotate list.) (Based only on those who are making sacrifices because of having to pay more for health insurance; n = 407.)**

	<u>Yes</u>	<u>No</u>	<u>Not Sure</u>
A. Cut back on how much you can save	86	13	1
B. Cut back on spending for entertainment, vacations, or leisure activities	83	16	1
C. Cut back on normal household expenses such as food, utilities, and so on	44	55	1
D. Downgrade what your policy covers so you do not have to pay so much (includes changing to a different policy)	35	62	3
E. Reduce or eliminate other kinds of insurance coverage, such as life, disability, auto, and homeowners insurance	29	71	-
F. Take on more debt, such as credit card debt or other loans	38	61	1

14. I have some questions about ways you might be trying to save on health care expenses. Thinking just about the past two or three years . . . **(Rotate list.) (Ask A-F of all, then skip uninsured to Q.18.)**

	<u>Yes</u>	<u>No</u>	<u>Not Sure</u>
A. Have you decided not to go to the doctor when you felt you needed to because of cost?	33	67	-
B. Have you stopped taking medication to avoid the cost of prescription drugs?	17	83	-
C. Have you cut back the dose of prescription drugs to help make the drugs last longer?	18	82	-
D. Have you decided not to fill prescriptions given to you by your doctor because of cost?	23	77	-
E. Have you not scheduled tests your doctor has suggested in order to save on cost?	23	76	1
F. Do you wait longer to see a doctor when you are sick with hopes you will get better on your own?	55	44	1
G. Do you try to minimize how often you use your health insurance in order to keep the overall cost of premiums for everyone in your group from rising? (Based only on those who currently have health insurance; n=1060.)	47	52	1
H. Have you switched doctors or hospitals in order to save money? (Based only on those who currently have health insurance; n=1060.)	9	91	-
I. Have you switched health insurance to a plan with higher deductibles and co-payments in order to save money? (Based only on those who currently have health insurance; n=1060.)	26	73	1
J. Have you switched health insurance to a plan with more restrictions on access to save money? (Based only on those who currently have health insurance; n=1060.)	14	85	1
K. Have you switched health insurance to a plan with fewer benefits to save money? (Based only on those who currently have health insurance; n=1060.)	16	83	1

15. Sometimes people make major decisions based on what might happen with health insurance. For each of the following, please tell me if this describes a situation you or someone in your household faced in the past three or four years. Just answer yes or no. **(Mark all that apply. Rotate list.) (Based only on those who currently have coverage; n = 1060.)**

	<u>Yes</u>	<u>No</u>	<u>Not Sure</u>
A. Stayed in a job you didn't like in order to keep health insurance	24	76	-
B. Stayed with the same insurance policy to avoid problems with "pre-existing conditions"	25	74	1
C. Decided whether or when to have a baby, based on health insurance coverage	8	92	-
D. Decided whether or when to retire, based on health insurance coverage	24	75	1
E. Decided to start working in order to get health insurance coverage	13	87	-
F. Decided not to start a business on your own because of losing health insurance coverage	14	86	-
G. Decided to get married or stay married to get or keep health insurance	6	94	-
H. Decided to continue working instead of staying home to care for children or other family members in order to keep health insurance	18	82	-
I. Switched to a job that was less desirable in order to get health insurance coverage or get better coverage	7	93	-
J. Decided to forgo making an investment in the future, such as starting a college fund for a child or putting money into a retirement savings account	25	75	-
K. Worked full-time so you would qualify for the company health insurance plan when you would have preferred part-time, so you could go to school, for example, or spend time with family	19	80	1

16. And thinking about the future, do you think you or someone in your household will make any of the following decisions based on what might happen to their health insurance? Just answer yes or no. **(Mark all that apply. Rotate list.) (Based only on those who currently have coverage; n = 1060.)**

	<u>Yes</u>	<u>No</u>	<u>Not sure</u>
A. Stay in a job you don't like in order to keep health insurance	35	64	1
B. Stay with the same insurance policy to avoid problems with "pre-existing conditions"	39	60	1
C. Decide whether or when to have a baby, based on health insurance coverage	13	87	-
D. Decide whether or when to retire, based on health insurance coverage	44	55	1
E. Decide to start working in order to get health insurance coverage	21	78	1
F. Decide not to start a business on your own because of losing health insurance coverage	23	77	-
G. Decide to get married or stay married to get or keep health insurance	9	90	1

H. Decide to continue working instead of staying home to care for children or other family members in order to keep health insurance	30	69	1
I. Switch to a job that is less desirable in order to get health insurance coverage or get better coverage	19	81	-
J. Decide to forgo making an investment in the future, such as starting a college fund for a child or putting money into a retirement savings account	30	69	1
K. Work full-time so you will qualify for the company health insurance plan when you would prefer part-time, so you could to go to school, for example, or spend time with family	34	66	-

17. Which of the following would you be willing to do to help keep down the cost that you or your spouse must pay for health insurance—Just answer yes or no. **(Mark all that apply. Rotate list.) (Based only on those who currently have coverage; n = 1060.)**

	<u>Yes</u>	<u>No</u>	<u>Not sure</u>
A. Choose a policy with a higher deductible	52	46	2
B. Choose a policy with higher co-pays for doctor visits and prescription drugs	48	50	2
C. Reduce the number of doctor's visits made by members of your household	40	59	1
D. Make more use of clinics staffed by nurses and physician's assistants rather than doctors	64	35	1
E. Choose a policy with fewer participating doctors and hospitals	30	67	3

18. **(Ask all.)** We're almost to the end of the survey. I want to describe to you a change to the way health insurance is currently provided. It includes participation by individuals, employers, and the government, when needed. Of course, there are more details than I can reasonably give you, but we're interested in your first impression. At the end of the description, I'll ask whether you think the plan would be good or bad for you and your household.

All Iowans would be responsible for having a catastrophic health insurance policy to cover major medical expenses for things like injuries from major accidents, cancer, heart disease, diabetes, and so on. The cost would be somewhere around \$150 per month for a family of four. Low-income Iowans would get help if needed.

Employers would no longer pay for health insurance, but would pay a fixed amount into each employee's medical savings account. This money would be used to pay for ordinary medical expenses, such as doctor visits, routine tests, and prescription drugs. Employers could choose to pay more, but the standard amount would be \$3,000 per year or \$250 per month per employee. Unused money would roll forward to successive years and would earn untaxed interest. The idea is to help businesses control costs and stabilize expenses, yet still provide a genuine benefit for employees.

In general, does a system like this, given time to get up and running, sound like you and your household would be a lot better off with a system like this, a little better off, a little worse off, or a lot worse off

- 15 A lot better off
- 34 A little better off
- 19 A little worse off
- 23 A lot worse off
- 9 Not sure

These final questions are just to help us learn what cross-section of Iowans we have interviewed.

- 100a. What is your age? **(RECORD ACTUAL AGE AND CODE WITH APPROPRIATE AGE GROUP. IF RESPONDENT REFUSES, OFFER AGE GROUPS.)**

Mean: 45

Median: 45.5

b. (CODE PROPER CATEGORY :)

- 4 Under 25
- 18 25 to 34
- 24 35 to 44
- 28 45 to 54
- 24 55 to 64
- 65 and over
- 2 Refused/not sure

c. (RECORD IF :) Boomer age 40-59

- 53 Yes

101. In politics as of today, do you consider yourself a Republican, Democrat, or independent?

- 29 Republican
- 28 Democrat
- 37 Independent
- 1 Other (VOL)
- 5 Refused/not sure

102. What is the last grade of school you completed?

- 29 High school graduate or less
- 28 Some college
- 29 College degree
- 12 Postgraduate work or degree
- 2 Refused/not sure

103. Do you have children under the age of 18 living at home?

- 42 Yes
- 56 No
- 2 Refused/not sure

104. How would you describe the area where you live in Iowa—rural, small town, small city, large city, or suburb?

- 20 Rural
- 33 Small town
- 24 Small city
- 12 Large city
- 9 Suburb
- 2 Refused/not sure

105. With what racial or ethnic group do you identify most—White, Black, Hispanic, Asian, or some other group?

- 93 White
- 1 Black
- 2 Hispanic
- Asian
- 1 Other
- 3 Refused/not sure

106. Is your total annual household income before taxes above or below \$50,000 per year?

Above **ASK b**
Below **ASK c**

- | | | |
|--|----|---------------------------|
| b. Is it above or below \$70,000 per year? | 25 | Above (\$70,000+) |
| | 22 | Below (\$50,000-\$69,999) |
| c. Is it above or below \$30,000 per year? | 25 | Above (\$30,000-\$49,999) |
| | 20 | Below (<\$30,000) |
| | 8 | Refused/not sure |

107. Would you be willing to talk more about your responses and perhaps participate in additional research on this topic or would you prefer not?

- 33 Yes, willing to talk more
- 67 No, prefer not

If yes, ask first name: _____

Verify phone number: _____

108. Sex :

- 44 Male
- 56 Female

109. Record county from sample

110. Record congressional district from sample

That's all the questions I have. Thank you for your time.

APPENDIX VII

TECHNICAL NOTES

Basic Input-Output (IO) Modeling and the Derivation of IO Multipliers

Since its development in the mid-1950s, Input-Output (I-O) models have been used extensively by economists and policy analysts to quantitatively measure the impact on an economy (either national or regional) from a variety of economic phenomena such as tax policy, pollution regulation, oil price spikes, military base closings, and industrial entry. The main strength to the I-O approach is that, with a primary focus on production, it recognizes that production processes are complex and that production of on good or service draws as inputs from other sectors (or industries) in an economy. Hence, it quantitatively measures the inter-dependency that exists between industries in an economy. Something that impacts one market, say higher labor costs in the construction sector, will have subsequent impacts on many other sectors in the economy. Other regional models, such as Economic Base models, do not account for this interdependency. The magnitudes of these “ripple effects” in the I-O framework are ultimately are what determines the magnitudes of the various multipliers discussed in the text.

The purpose of this appendix is to briefly describe the essential elements of an I-O model from the perspective of highlighting where these multipliers come from. This appendix is not intended to be an exhaustive treatment of I-O models. There are other sources that describe in greater detail the mechanics of input-output models.⁷⁰

In general, the following assumptions regarding I-O models are made: (1) each industry (i) produces only one homogeneous commodity or service (i); (2) each industry uses a fixed input ratio (or factor combination) for the production of its output; (3) production in every industry is subject to constant returns to scale, so that a k-fold increase in every input will result in a k-fold increase in output.

From these assumptions it will be the case that the production of one unit of the *j*th commodity requires a fixed proportion a_{ij} ($0 \leq a_{ij} < 1$) of the *i*th input. The key to the I-O model is the I-O matrix which incorporates these fixed proportions. Consider, for instance, the following (simplified) I-O matrix, denoted as **A** (Table B-1).

Table B-1

		Outputs					
		1	2	3	...	n	
Inputs	1	a_{11}	a_{12}	a_{13}	...	a_{1n}	d_1
	2	a_{21}	a_{22}	a_{23}	...	a_{2n}	d_2
	3	a_{31}	a_{32}	a_{33}	...	a_{3n}	d_3

⁷⁰ E.g. Chiang, A.C. 1984. *Fundamentals of Mathematical Economics*. 3rd ed. New York: McGraw-Hill; Hoover, E.M., and F. Giarratani. 1984. *An Introduction to Regional Economics*. 3rd ed. New York, NY: Alfred A. Knopf; Hewings, G.J.D. 1985. *Regional Input-Output Analysis*. London: Sage Publications.

...
n	a_{n1}	a_{n2}	a_{n3}	...	a_{nn}	d_n
	v_1	v_2	v_3	...	v_n	

The *columns* of this matrix represent the input requirements from industries 1, 2, 3,..n needed to produce commodity 1. Hence, to produce x_1 units of commodity 1 requires as inputs proportional amounts of the other commodities in the matrix: $a_{21}x_2$, $a_{31}x_3$, etc., as well some primary input v_1 (a labor and/or capital input for example). Algebraically, then, by reading down the first *column* of **A** we can describe a fixed proportions production function for commodity 1:

$$x_1 = a_{11}x_1 + a_{21}x_2 + a_{31}x_3 + \dots + a_{n1}x_n + v_1. \quad (\text{A1})$$

Production functions for the remaining sectors can thus be derived in similar fashion.

The rows of this matrix can be used to determine the total output necessary from a given industry to produce all the other commodities in the economy, as well as meet final (or end user) demand (households for instance) for that given industry. Viewing the matrix from this perspective, we can develop the I-O *multipliers* of the type discussed in the text. For example, if industry 1 is to produce an output level sufficient to meet the input requirements of the n commodities comprising the economy as well as final demand, commodity 1's output level, x_1 , must be (reading across the first *row* of **A**):

$$x_1 = a_{11}x_1 + a_{12}x_2 + a_{13}x_3 + \dots + a_{1n}x_n + d_1, \quad (\text{A2})$$

where d_1 is the final demand for commodity 1. To calculate the I-O multiplier for commodity 1, we first solve (A2) for d_1 :

$$x_1(1 - a_{11}) - a_{12}x_2 - a_{13}x_3 - \dots - a_{1n}x_n = d_1. \quad (\text{A3})$$

We then do this same operation for the remaining industries comprising our economy. In so doing, we can represent the resulting system of equations compactly using matrix algebra notation:

$$(\mathbf{I}-\mathbf{A})\mathbf{x} = \mathbf{d}, \quad (\text{A4})$$

where \mathbf{x} is a (nx1) output vector, \mathbf{d} is and (nx1) final demand vector, and \mathbf{I} is an (nxn) identity matrix. The matrix $\mathbf{I}-\mathbf{A}$ is often referred to as the *technology matrix* and is critical to deriving I-O multipliers. Notice that if we solve for our vector of industry output levels we obtain:

$$\mathbf{x} = (\mathbf{I}-\mathbf{A})^{-1}\mathbf{d}, \quad (\text{A4})$$

where $\mathbf{B} = (\mathbf{I} - \mathbf{A})^{-1}$ comprises a matrix of individual industry multiplier effects and therefore can be summed to obtain the total output multiplier effect from an increase in a given final demand sector. To see this, expand (A4) and, for the sake of simplicity, assume only two sectors, 1 and 2. In so doing, we obtain:

$$\begin{bmatrix} x_1 \\ x_2 \end{bmatrix} = \begin{bmatrix} b_{11} & b_{12} \\ b_{21} & b_{22} \end{bmatrix} \begin{bmatrix} d_1 \\ d_2 \end{bmatrix}. \quad (\text{A5})$$

Using matrix multiplication, this system becomes:

$$\begin{aligned} x_1 &= b_{11}d_1 + b_{12}d_2 \\ x_2 &= b_{21}d_1 + b_{22}d_2 \end{aligned} \quad (\text{A6})$$

Notice now that the *direct* impact of a one dollar increase in final demand in sector 1 yields a b_{11} dollar increase in output from x_1 . Notice further, however, that that same dollar increase in sector 1's final demand has in *indirect* impact equal to d_{21} dollars on sector 2's output. The total output multiplier (i.e. the total *direct* and *indirect* effects) from a one dollar increase in sector 1's final demand is $b_{11} + b_{21}$. In general then, to determine the total output multiplier from an increase in final demand from a given sector i , we simply add up the elements in our \mathbf{B} matrix corresponding to the i th *column* in \mathbf{B} .

As stated above, the I-O modeling framework has been and currently is used extensively in applied economic analysis because it has a number of desirable attributes that other model structures do not possess. However, there are some limitations as well. For completeness, these strengths and limitations are listed below.

One of the major benefits from using of the I-O framework is that it typically provides substantially more industry detail than is normally included in standard regional econometric models. Secondly, I-O models offer ease and flexibility in simulation analyses. Finally, and perhaps most importantly, the simultaneous nature of I-O models allows for direct and indirect effects to be measured. Feedback and ripple effects are generally difficult, and in many cases impossible, to measure in Economic Base or standard regional econometric models.

There are several important limitations of the I-O modeling framework. First, the coefficients in production are fixed in the I-O matrix, which does not allow for input substitution in response to changes in input prices. Second, given the large data requirements and structure of I-O models, it is difficult to interpret the models for time periods other the specific year for which data are drawn. The limitation is that, over time, it might be more reasonable to assume that the matrix coefficients will change, perhaps due to technological innovations in production or processing. Third, the I-O framework, by construction, imposes constant returns to scale for all industries in the economy. Finally, I-O models assume that the same production technology (i.e. a single, linear production function) is used throughout a particular industry. This assumption may in some cases be problematic, for two reasons: (1) depending on the industry in question, firms may or not rely on similar production technologies; and (2) industry groupings

often lump together disparate industrial components. For example, the utility sector, which normally is associated with one single multiplier, is comprised of electricity (generation and distribution), water supply systems, and natural gas (production and distribution)—industries with vastly different production and distribution technologies.

Appendix IX.

2005 IowaCare Act

The full text of Iowa General Assembly House File 841 is available on the internet at:
<http://coolice.legis.state.ia.us/Cool-ICE/default.asp?Category=billinfo&Service=Billbook&menu=false&hbill=HF841>

Appendix IX

2005 Survey of Iowa Consumers Presentation Materials.

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RESEARCH • KNOWLEDGE • WISDOM

The Impact of Rising Health Insurance Costs

Prepared for
Mary Hansen, Director
Iowa Department of Public Health
September 2005

A HRSA State Planning Grant Sponsored Project

SELZER & COMPANY

Objectives

- Explore Iowans' attitudes toward current state of health insurance.
- Assess the impact of rising health care and health insurance costs on Iowans and the Iowa economy.
- Gauge Iowans' reaction to a conceptual method of financing health care costs and protection from catastrophic medical expenses.

Methodology

Sample frame	Iowa population aged 18-64
Sample size	1202 Iowa residents aged 18-64 <ul style="list-style-type: none">▶ 1060 Insured Iowans▶ 142 Uninsured Iowans
Margin of error	Plus or minus 2.8 percentage points
Method/length	Telephone survey, with interviews lasting approximately 15 minutes
Field dates	July 7-12, 2005

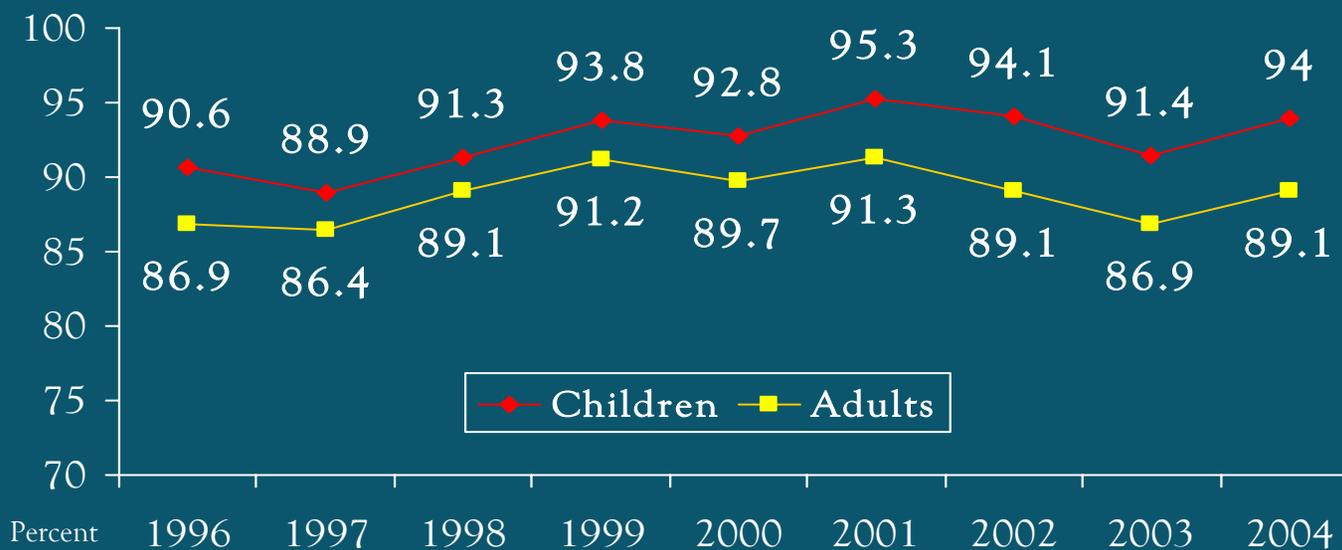
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The State of Health Insurance Coverage in Iowa

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From 1996 to 2004, Iowa coverage rates are deceptively stable.

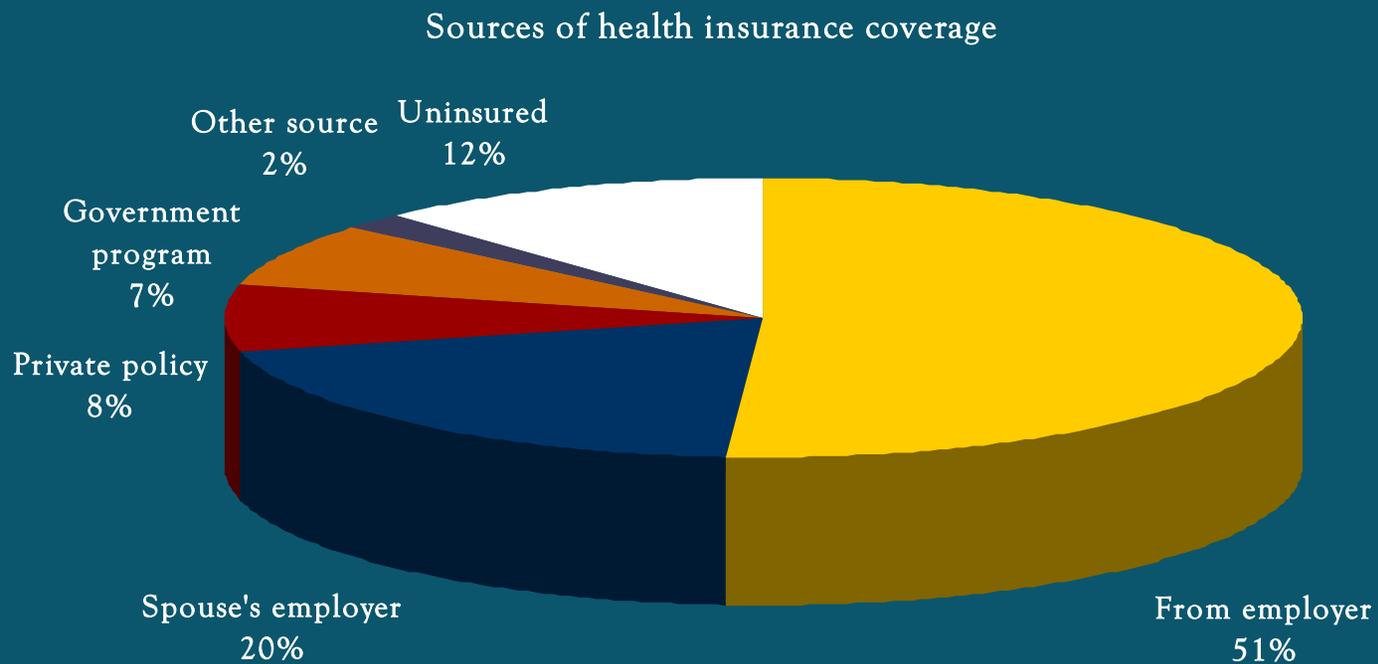
Iowa Health Insurance Coverage, Adults Under 65 & Children, 1996-2004



Source: U.S. Census Bureau, CPS, 1988-2005 Annual Social & Economic Supp. Health Insurance Coverage Status by State, People Under 65 & Children Under 18: 1987- 2004

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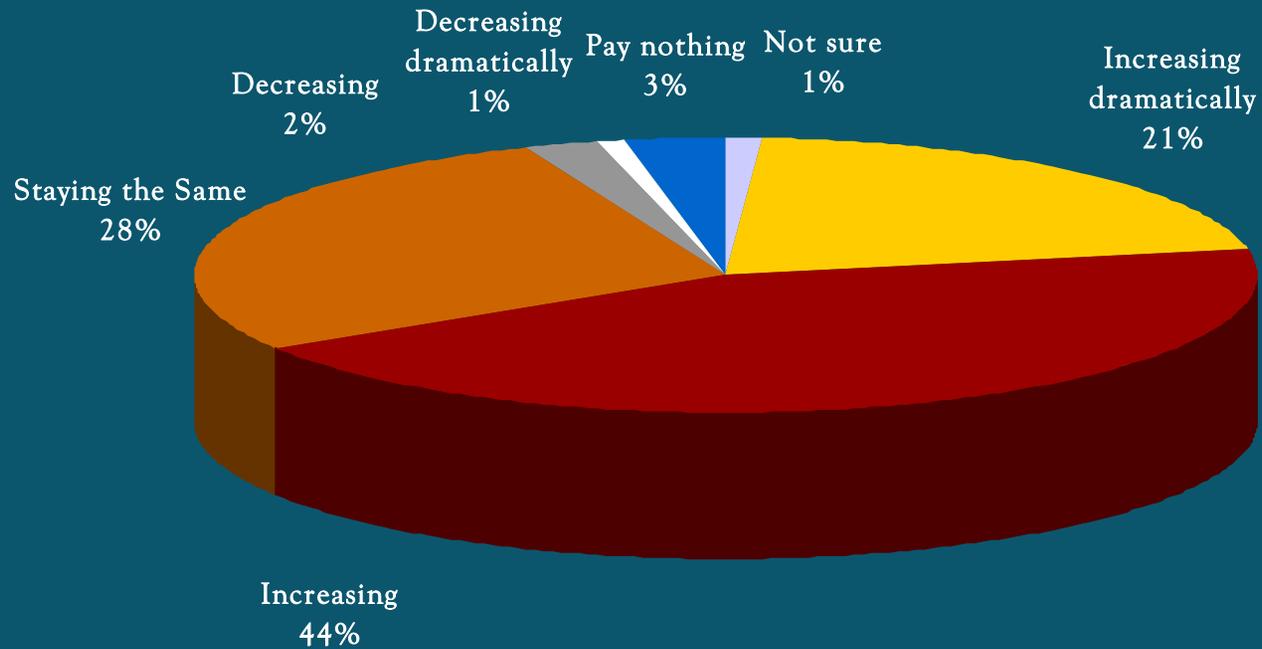
Most Iowans obtain their health insurance coverage through employment.



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Iowans are paying more for coverage, sometimes dramatically more.

How Iowans describe the cost of their health insurance premiums



n=1020

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Cost increases cause some Iowans to take a hard hit.

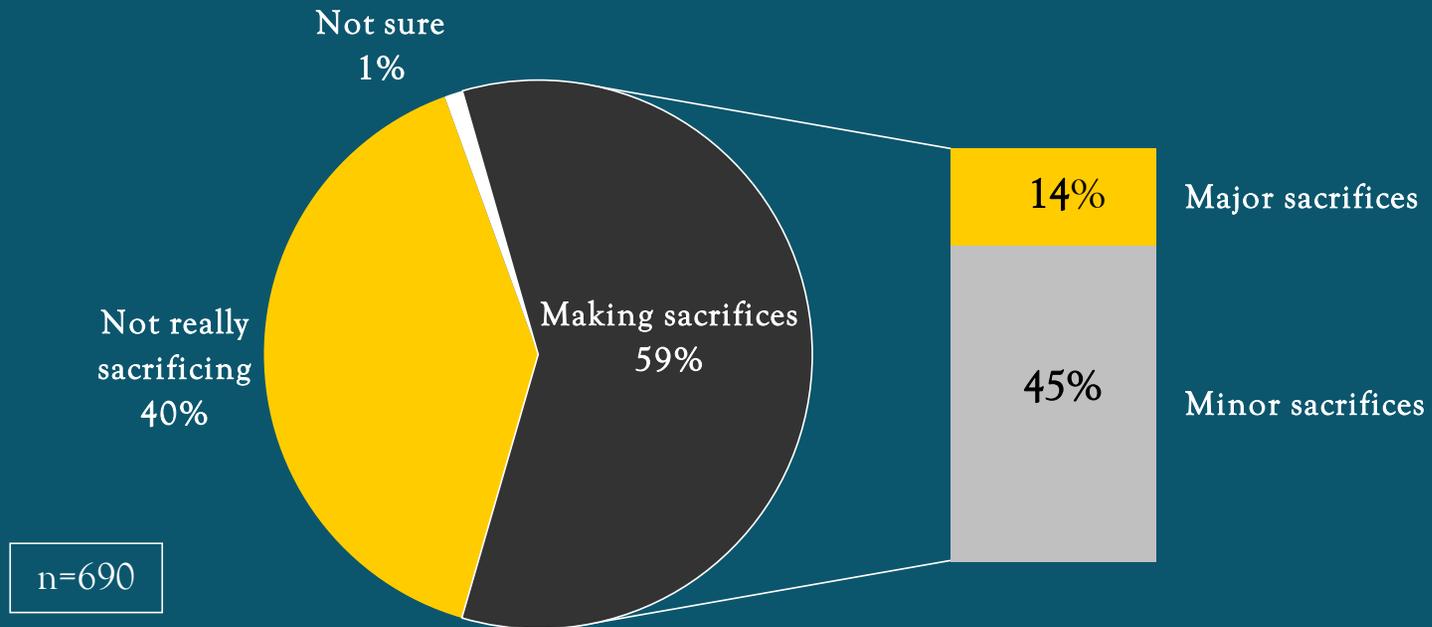
- Among Iowans who buy their own health insurance, **85%** say their premiums have increased, as compared to **65%** overall.
- **71%** of Iowans aged 45 to 64 say their premiums are increasing, as compared to **57%** of those aged 18-44.

Rising Health Care Costs: A New Source of Vulnerability

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As health care costs increase, Iowans respond by making sacrifices in their household budgets.

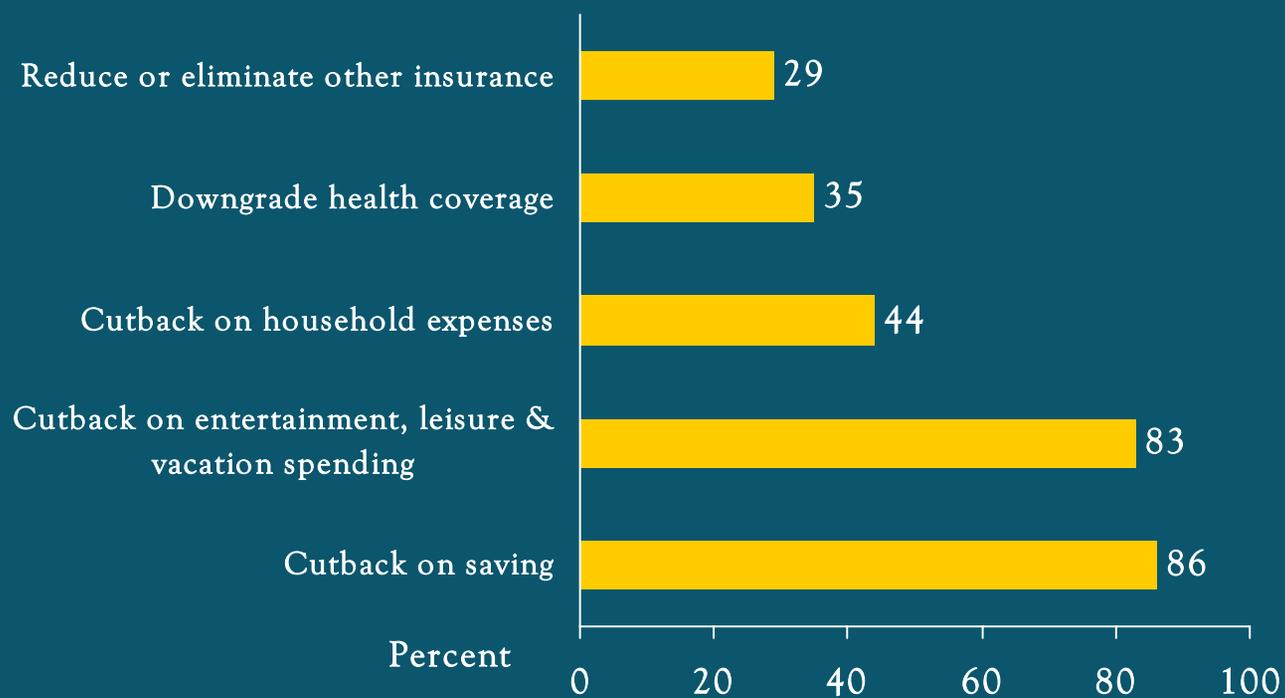
The effects of increasing costs on household budgets among Iowans who describe their premiums as increasing



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Rising costs result in increasing vulnerability.

Responses to increasing health insurance costs



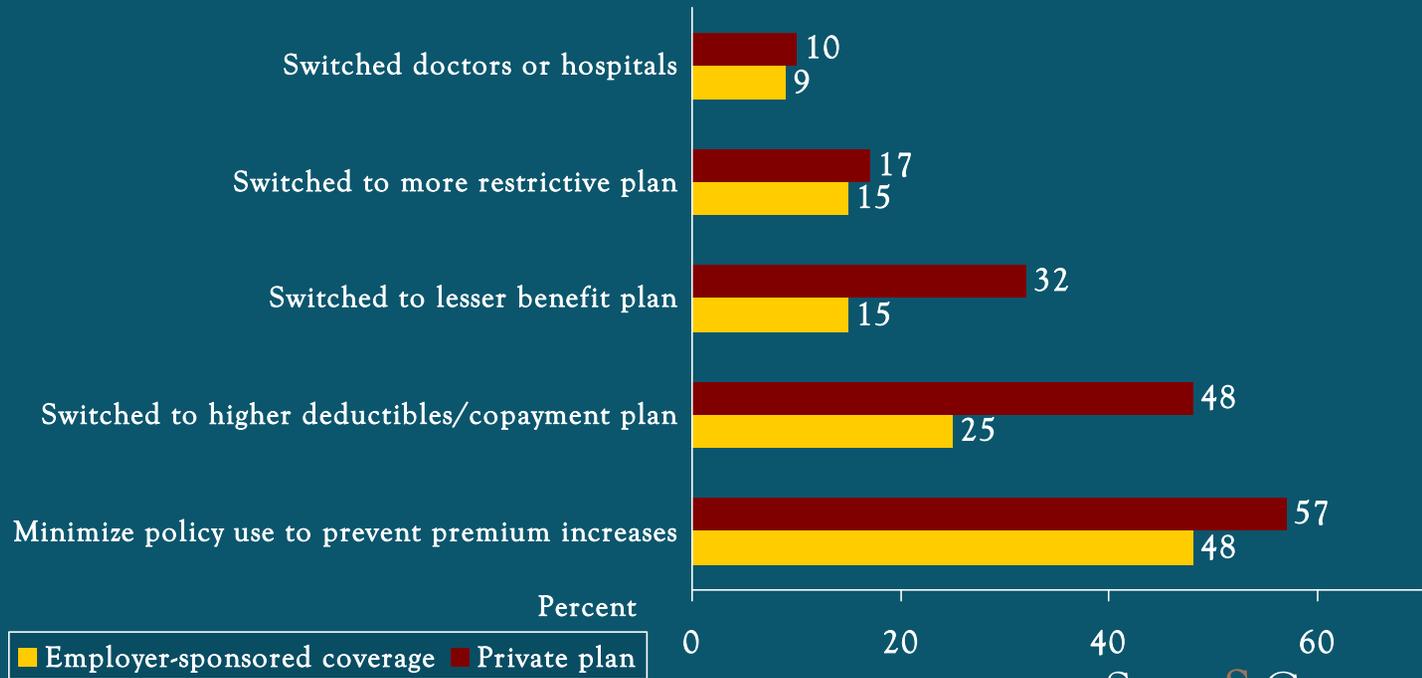
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Increased Costs and Reduced Access:
A Population-Wide Response

SELZER & COMPANY

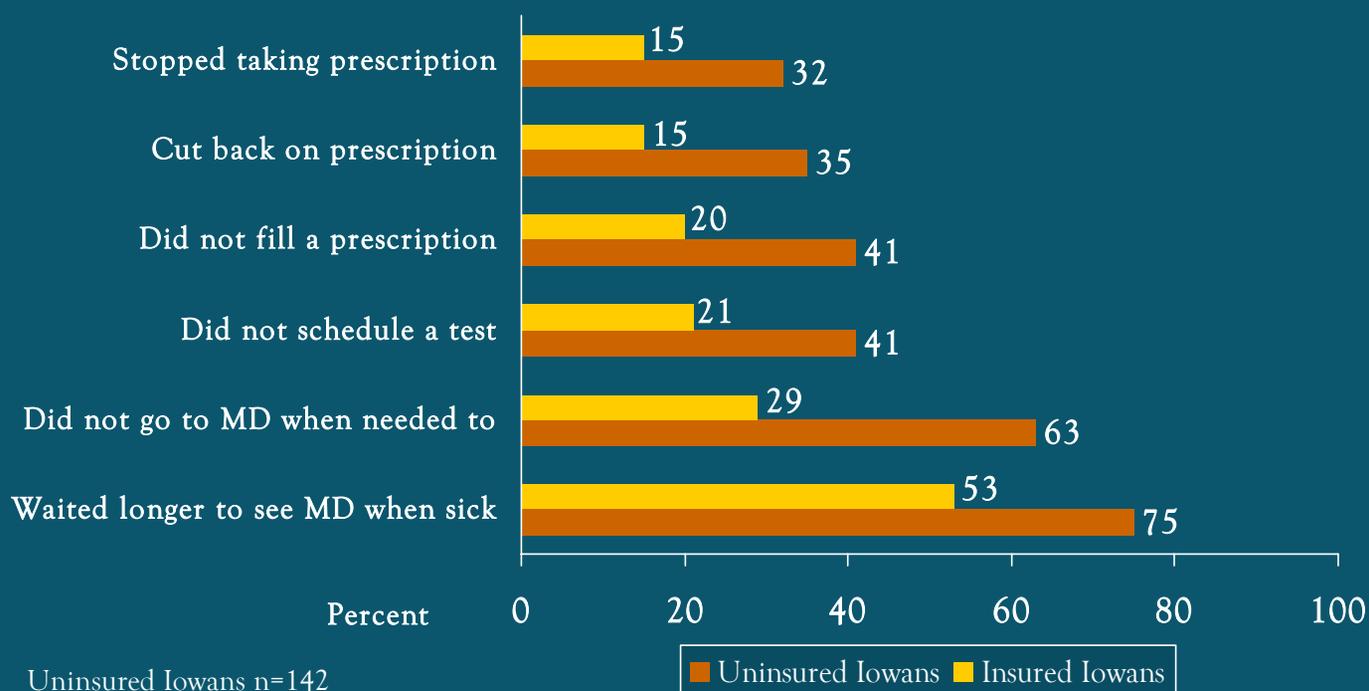
To save money, insured Iowans are changing their health care and insurance buying strategies.

Actions employer-covered and privately insured Iowans have taken to save on premium costs



As costs increase, the insured and uninsured try to save on medical expenses, sometimes in potentially detrimental ways.

Actions Iowans have taken to save on health care expenses



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Are underinsured Iowans the canaries in the coal mine?

Actions Iowans have taken against medical advice in response to rising health care costs

	Insured Iowans	Health Insurance No More Than Barely Adequate	Uninsured Iowans
Have not scheduled tests suggested by their doctor	21	51	41
Have decided not to fill a prescription given by their doctor	20	47	41
Have cut back on the dose of prescription drugs to help make the drugs last longer	16	35	35
Have stopped taking medication to avoid the cost of prescription drugs	15	42	32

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The road Iowans are not following...

- Insured Iowans are generally not opting out of the voluntary health insurance system:
 - ◆ 88% of Iowans have some form of coverage
 - ◆ 89% say their plan provides good access to quality health care providers, including 55% who say their plan provides very good access
 - ◆ 83% rate the quality of their coverage as good, including 38% who rate the quality of their coverage as very good

Iowans appear willing to accept changes in health care and in health insurance.

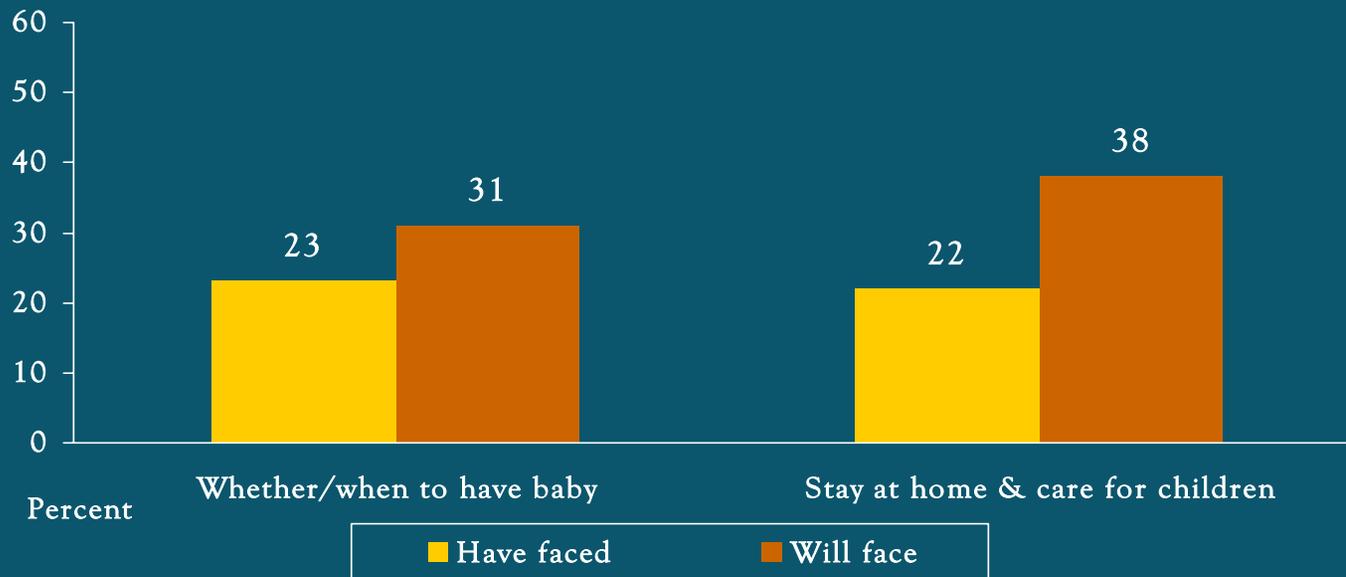
- **Greater use of allied health professionals**
64% are willing to make greater use of clinics staffed by nurses and physician's assistants
- **Higher deductibles**
52% would be willing to accept a health insurance policy with a higher deductible to keep their premium costs down
- **Larger co-payments**
48% would be willing to accept higher co-pays for physician visits and prescription drugs

Health Insurance and Iowans' Life Choices

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Health insurance considerations influence household decisions.

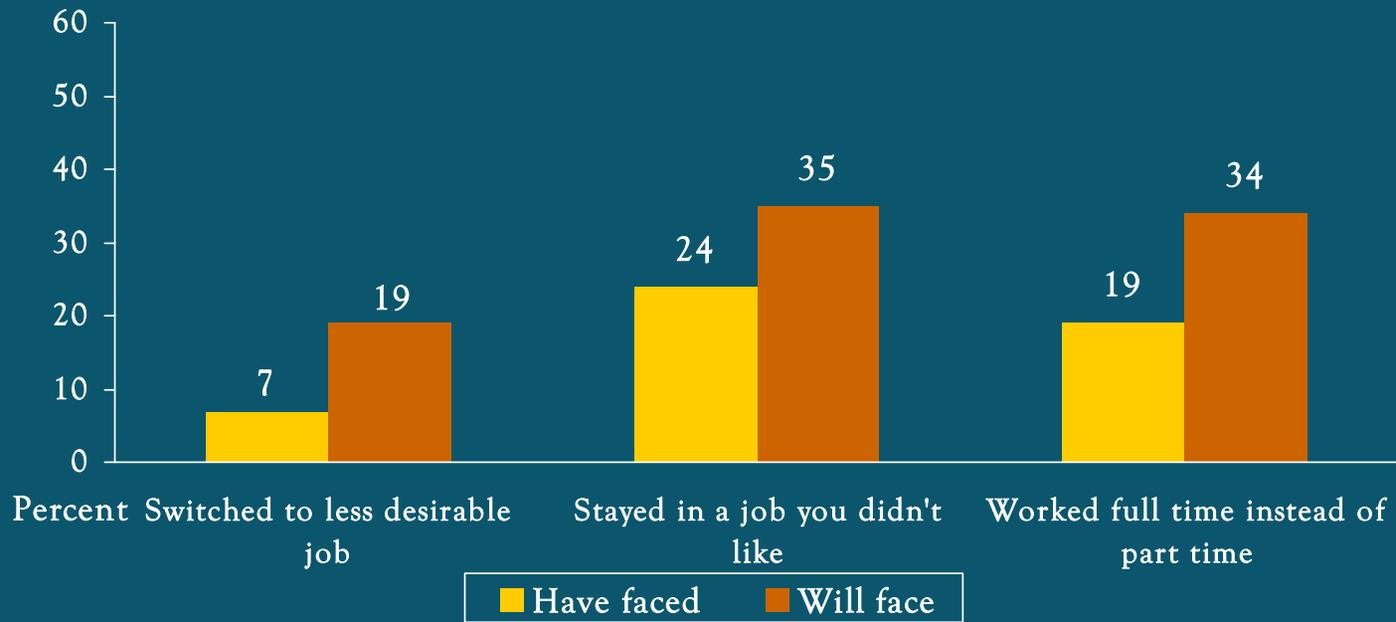
Insured Iowans in the childbearing years who say health insurance influences family decision-making



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Health insurance concerns limit job mobility and satisfaction.

Major career decisions influenced by health insurance



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The Economic Impacts of Increased Health Care Expenditures

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The State Planning Grant is always looking for the economic impacts of health care costs.

- 2004
 - ◆ Used a health economist to assess the impact of premium rate increases on Iowa businesses and the Iowa economy
- 2005
 - ◆ Focused on the impact of premium increases on households
 - ◆ Used the same health economist to take the 2005 survey findings and estimate the magnitude of the economic effects of rising health insurance expenditures on the Iowa economy

Rising health costs potentially threaten Iowa's economic future.

- Individuals view inflation in health care costs as a serious problem that broadly impacts their lives;
- Rising health costs are likely to have a negative impact on the Iowa economy in the form of increased prices and net wage reductions, but the losses are most likely offset by gains from growth in the health sector;
- Higher health costs lead to reduced consumption of health care, and past some threshold there will likely be a negative impact on health; and
- From a health economist's perspective, the secondary effects of increasing health costs are less employment mobility, dampened entrepreneurial incentives, and stress.

A Different Policy Response

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Health care reform can build on the value Iowans place on health insurance.

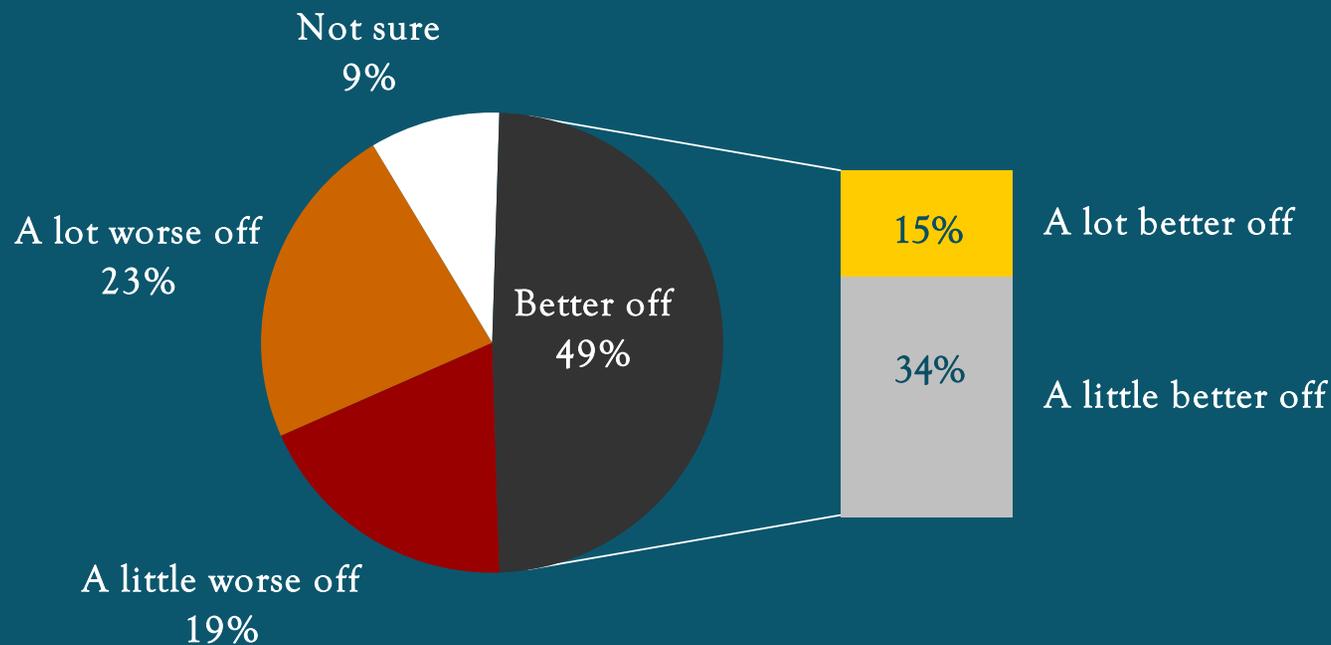
- 89% of insured Iowans say their plan provides good access to quality health care providers (55% very good).
- 83% rate the quality of their coverage as good (38% very good).
- 81% of uninsured Iowans say they would benefit from having coverage.

A new focus for health care reform: financing health care while limiting risk.

- The plan we tested would do the following:
 - ◆ Require all Iowans to carry a high deductible catastrophic insurance policy to cover major medical expenses (\$150 per month for family of four)
 - ◆ Require employers to contribute \$3,000 per year into an MSA for each employee, but relieve them of buying health insurance
 - ◆ Allow employees to use these accounts to pay for ordinary health care expenses
 - ◆ Allow excess money to roll over yearly and earn untaxed interest
 - ◆ Provide government support for low-income Iowans, in lieu of Medicaid

A near majority believe they would be better off under the tested approach.

Reaction to a conceptual approach for financing health care and limiting health risk



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Summary

- While the number of uninsured persons appears stable, Iowans face increasing vulnerability in financing their health care.
- As policymakers assess uninsured issues, it is important not to lose sight of the insured and how cost increases impact their health care access and use.
- Insured Iowans appear willing to support some change in health care delivery and finance, as evidenced by how they are already changing their behaviors in response to rising costs.

SELZER & COMPANY
RESEARCH • KNOWLEDGE • WISDOM

The Impact of Rising Health Insurance Costs

Prepared for
Mary Hansen, Director
Iowa Department of Public Health
September 2005

A HRSA State Planning Grant Sponsored Project

SELZER & COMPANY