

**DEPARTMENT OF PUBLIC HEALTH
2005 SURVEY OF IOWA CONSUMERS**

SEPTEMBER 2005

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* THIS BRIEF VERSION OF THE REPORT DOES NOT CONTAIN THE FULL APPENDIX. PLEASE CONTACT ANNE KINZEL AT 515.271.5700 OR akinzel@selzerco.com TO OBTAIN A COPY OF THE APPENDIX.

IOWA DEPARTMENT OF PUBLIC HEALTH

SURVEY OF IOWA CONSUMERS AND THE IMPACT OF HEALTH CARE COST INCREASES ON IOWANS AND THE IOWA ECONOMY

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.

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.¹ 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.

The 2004 Iowa HRSA State Planning Grant Business Survey project 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.² A major theme in the 2004 study was the conflict

¹ 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.

² Schneider, J.E., A. Selzer, & A. Kinzel. 2004. *The Regional Economic Impact of Inflation in Health Expenditures on Iowa Businesses*. The 2004 research project was supported by an Iowa-HRSA State Planning Grant (#CFDA 93-56) awarded to Iowa by the Health Resources & Services Administration (HRSA), U.S. Dept. of Health & Human Services.

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.³

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

KEY FINDINGS

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.⁴) 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

³ 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%).

⁴ Schneider & Decker analysis of data from the Kaiser Family Foundation (Kaiser Family Foundation 2004, 2005).

businesses and the overall Iowa and regional economies.⁵ 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;
- ◆ 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

⁵ Schneider, J.E., A. Selzer, & A. Kinzel, 2004.

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.

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.⁶ The response was not surprising as numerous studies have shown the uninsured often delay seeking medical care.⁷ 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.⁸ 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.⁹ 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-

⁶ IA-SPG & The Lewin Group. Winter 2001. *Iowa Survey of the Uninsured*.

⁷ 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.

⁸ 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

⁹ 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.

sharing, and for some plans, a more restricted scope of benefits.¹⁰ 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 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.

“Under-insured” Iowans closely resemble the uninsured: They act against medical advice in response to rising health care costs. Table 1, 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 1. Actions Iowans Have Taken Against Medical Advice in Response to Rising Health Costs			
	<u>Insured Iowans</u> %	<u>Health Insurance No More Than Barely Adequate</u> %	<u>Uninsured Iowans</u> %
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

¹⁰ 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.

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

	<u>Employer-Sponsored Coverage</u> %	<u>Private Coverage</u> %
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

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 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

¹¹ 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.meps.ahrq.gov/MEPSDATA/ic/2003/Index203.htm July 2005.

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

The 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.

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 3, 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 3. 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 to 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	

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.

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 4. 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	10
\$50,000+	46	47	7
Insurance			
Employer-sponsored (self/spouse covered)	46	48	6
Private Coverage	60	24	16
Uninsured	68	20	12
Political Affiliation			
Democrat	52	40	8
Republican	48	42	10
Independent	48	44	8

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.

The Economic Impact of Increased Health Care Expenditures on Iowa Households

The IA-SPG commissioned University of Iowa Health Economics Professor John E. Schneider to examine from an economic standpoint how recent increases in health insurance costs affect the family budgets of Iowa residents.¹² Dr. Schneider and his colleague Professor Christopher S. Decker have taken the data from the 2005 Iowa Survey of Consumers and analyzed it in the context of a simple model of household resource allocation and the recent literature on the various effects of increased health care expenditures. The results of Dr. Schneider and Dr. Decker's work are summarized in the following pages. A full text of Dr. Schneider and Dr. Decker's preliminary (pre-publication) article "An Exploratory Analysis of the Regional Economic Impact of Increased Health Care Expenditures on Iowa Households" is included in the Appendix to this report.

The economic effects of rising health insurance premiums on individual behavior and regional economies are very complex. The scope of this analysis 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 the 2005 Iowa Survey of Consumers to generate preliminary estimates of the magnitude of the economic effects of rising health insurance expenditures.

KEY FINDINGS

- ◆ Individuals view inflation in health costs as a serious problem that broadly impacts their lives;
- ◆ 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;¹³
- ◆ 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

¹² This section of the report is taken from the paper, An Exploratory Analysis of the Regional Economic Impact of Increased Health Care Expenditures on Iowa Households, written by John E. Schneider, PhD, Department of Health Management & 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, & 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.

¹³ For the purposes of this analysis, the regional economy is defined as the state of Iowa as influenced by the economic entanglements and spillovers from, and with, all five bordering states.

- ◆ 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 Iowa's 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.

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.¹⁴ 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.¹⁵

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.¹⁶ 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.¹⁷ Do households make analogous decisions? If so, how do those decisions aggregate to the regional economy?

Economic Model

The effects of increase 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**. **H** refers to all products and services related to health care and **X** refers to all products and services other than health care. In other words, things like food, housing, utilities, education and entertainment are 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.

¹⁴ Bureau of Labor Statistics. 1994. Real Earnings in December 1993. Washington, D.C. U.S. Department of Labor. Bureau of Labor Statistics. 2004. Real Earnings in December 2003. Washington, D.C. Bureau of Labor Statistics. 2005. History of CPI-U U.S. All Items Indexes and Annual Percent Changes From 1913 to Present; Heffler, S., S. Smith, S. Keehan, C. Borger, M.K. Clemens, & C. Truffler. 2005. U.S. Health Spending Projections for 2004-2014. *Health Affairs Web Exclusive* (W5):74-85.

¹⁵ Kaiser Family Foundation. 2004. Employer Health Benefits. Menlo Park, CA & Chicago, IL: Kaiser Family Foundation / Health Research & 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., & 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.

¹⁶ Bureau of Labor Statistics. 2004. Real Earnings in December 2003. Washington, D.C. Bureau of Labor Statistics. Kaiser Family Foundation. 2005. State Health Facts: (www.kff.org).

¹⁷ Porter, 2004. Schneider, J.E., A Selzer, & A Kinzel. 2004. The Regional Economic Impact of Inflation in Health Expenditures on Iowa Businesses. Iowa Dept. of Public Health HRSA State Planning Grant.

Thus, the household's "budget constraint" can be expressed as $Y = p_h H + p_x X + S$. This means 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, meaning that a household cannot significantly change the level of its annual income (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 rise. Given the assumptions of the model, there are five possible adaptive responses at the household level:

- ◆ A decrease in non-health consumption;
- ◆ A decrease in health consumption;
- ◆ A decrease in the amount added to savings;
- ◆ Acceptance of a larger share of income in the form of health benefits rather than wages; or
- ◆ Increased 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 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 its spending 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.¹⁸ Therefore, 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.¹⁹

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, a reduction in the amount of health care 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 argued 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 employment compensation.²⁰

¹⁸ 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.

¹⁹ 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.

²⁰ 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.

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, in the form of personal loans, home equity loans, or by carrying 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. 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.²¹

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.²² 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.²³ 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.

Decreases in Non-Health Consumption

The IDPH survey 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

²¹ 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 & Madrian (1998) 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.

²² Higginbotham, B, & 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.

²³ 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 2005).

resources from the non-health sector of the economy.²⁴ 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.

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.²⁵ 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 1, below.

	Final-demand <u>Output</u> ² ($\$$)	Final-demand <u>Earnings</u> ³ ($\$$)	Final-demand <u>Employment</u> 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
<p><i>Notes:</i> (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. <i>Source:</i> 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.</p>			

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

²⁴ 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.

²⁵ 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.

(excluding health care) and health sector.²⁶ A simplified 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 model previously described, 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 affected 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.²⁷ 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.

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

²⁶ "Final demand" refers to output from a given sector demanded by the "final consumer" of that output, as opposed 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 manufacturing paper and paper products. The former would count as "final demand" where that latter would count as "intermediate demand."

²⁷ Pauly, 1995 & 2003.

costs escalate, such that reductions often result in negative health effects.²⁸ Due to high health care costs, Survey of Consumer respondents indicated, variously, that they would take the following actions: 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.²⁹

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. However, it appears that 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 into 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, 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.³⁰ We also know that rising health insurance premiums can result in a larger number of uninsured as people drop coverage altogether.³¹

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.”³² Hadley also found 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%.³³ 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.³⁴

²⁸ Hadley, J., & J.D. Reschovsky. 2002. Small Firms' Demand for Health Insurance: The Decision to Offer Insurance. *Inquiry* 39 (2):118; Schoen, et al., 2005.

²⁹ Schoen et al., 2005.

³⁰ 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.

³¹ Kronick, R, & T Gilmer. 1999. Explaining the Decline in Health Insurance Coverage, 1979-1995. *Health Affairs* 18 (2):30-47.

³² Hadley, 2002.

³³ 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.

³⁴ 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 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.

Decreases in Savings

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

Savings has two important 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 plants and equipment, thereby supporting ongoing economic growth.³⁵

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 (Marquis and Long 2001). 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 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.³⁶ In sum, it is not likely that regional economies are impacted significantly by a decline in the personal savings rate.

Decreases in Wages

Economists have long argued that health benefits should be treated as an alternate form of compensation, the amount of which varies by firm size, degree of unionization, regulated versus unregulated industries, local labor market conditions, employee age, employee education, and whether employees have working spouses.³⁷ 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.³⁸

There is ample empirical evidence to support compensating wage theory with respect to health benefits. 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.³⁹

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 2003.⁴⁰ Based on the findings of Baicker and

³⁵ Marquis, M.S., & S.H. Long. 2001. Employer Health Insurance and Local Labor Market Conditions. *International Journal of Health Care Finance & Economics* 1 (3-4):273; Ferguson, R.W. 2004. Questions and Reflections on the Personal Savings Rate. Paper read at National Bankers Association, at Nashville, Tennessee.

³⁶ Marquis & Long 2001.

³⁷ Marquis & Long 2001.

³⁸ Wall Street Journal. 2003. Many Would Choose Benefits Over an Increase in Salary. 10/15/03, Online.

³⁹ Baicker, K., & 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.

⁴⁰ Iowa Department of Revenue. 2004. Iowa Individual Income Tax Annual Statistical Report: 2003 Returns Filed in 2004. Des Moines, IA: State of Iowa Department of Revenue, Tax Research & Program Analysis Section.

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.⁴¹ Assuming a 4% average marginal tax rate, the net result is a reduction in state tax revenue of \$48 million. 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.⁴²

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.⁴³ 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 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.⁴⁴ Such estimates have been empirically generated, and have consistently shown that, in the aggregate, 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.⁴⁵

One important caveat, however, is that purchasers of health insurance have little, if any, flexibility in choosing quality levels. Even if cost increases reflect quality improvements, there still may be non-trivial economic burdens associated with a gap between the purchaser's desired level of quality and willingness to pay. Forcing everyone to buy a BMW might be a neutral proposition for those who 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.

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 in the U.S. over the past 30 years, from about 16% of disposable income in 1960 compared with more than 20% in 1996, a large part of which is credit card debt.⁴⁶

⁴¹ Baicker, K., & A. Chandra. 2005.

⁴² Iowa Department of Revenue. 2004.

⁴³ 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.

⁴⁴ Cutler, D.M., M. McClellan, & 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.

⁴⁵ Cutler, D.M., & M. McClellan. 2001. Is Technological Change in Medicine Worth It? *Health Affairs* 20 (5):11-29; Cutler, D.M., M. McClellan, & J.P. Newhouse, 1999; Lichtenberg, F.R. 2001. Are the Benefits of Newer Drugs Worth Their Cost? Evidence From the 1996 MEPS. *Health Affairs* 20 (5):241-251.

⁴⁶ Garner, C.A. 1996. Can Measures of the Consumer Debt Burden Reliably Predict an Economic Slowdown? *Federal Reserve Bank of Kansas City: Economic Review* Fourth Quarter:63-76.

Debt is an important part of the economy, the effects of which depend on the nature of the debt. Economists view the use of debt financing to acquire appreciating assets, such as housing, as generally desirable as long as the magnitude of the debt is not disproportionate to the income necessary to service it. Other kinds of debt, such as credit card debt, can also benefit the economy by decoupling temporal differences in consumption and income. However, too often 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 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.⁴⁷

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.⁴⁸ Although the Commonwealth survey used different questions to get at the same problem, the results from the Iowa Survey of Consumers 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 \$250.⁴⁹

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.⁵⁰ Other studies have reached similar conclusions.⁵¹

Other Effects

The Survey of Consumers 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 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

Guimaraes, T., Y. Yoon, & A. Clevenson. 1997. Empirically Testing ES Success Factors in Business Process Reengineering. *International Journal of Production Economics* 50:245-259.

⁴⁷ Carlson, K.M. 1993. On the Macroeconomics of Private Debt: Federal Reserve Bank of St. Louis.

Garner, C.A. 1996. Can Measures of the Consumer Debt Burden Reliably Predict an Economic Slowdown? *Federal Reserve Bank of Kansas City: Economic Review* Fourth Quarter:63-76.

⁴⁸ Doty, M.M., J.N. Edwards, & A.L. Holmgren. 2005. Seeing Red: Americans Driven into Debt by Medical Bills. In *Issue Brief #837: The Commonwealth Fund*.

⁴⁹ May, J.H., & P.J. Cunningham. 2004. Tough Trade-Offs: Medical Bills, Family Finances and Access to Care. In *Issue Brief #85*. Washington, DC: Center for Studying Health System Change.

⁵⁰ May, J.H., & P.J. Cunningham. 2004.

⁵¹ Tu, H.T. 2004. Rising Health Costs, Medical Debt and Chronic Conditions. In *Issue Brief #88*. Washington, DC: Center for Studying Health System Change.

serious concern among insured working Iowans, despite national evidence that the prevalence and severity of job lock is likely to be quite small.⁵²

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, 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.⁵³ The Survey of Consumers 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 failed to find strong evidence of reduced entrepreneurial activity attributable to health insurance. 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.⁵⁴

Summary

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 2005 Survey suggest that all of these effects are to varying degrees observed among the Iowa population.

In the previous paragraphs we have discussed how these effects might impact the regional economy. We conclude:

- ◆ Individuals view inflation in health costs as a serious problem that broadly impacts their lives;
- ◆ High rates of increases 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;

⁵² Kapur, K. 1998. The Impact of Health on Job Mobility: A Measure of Job Lock. *Industrial & Labor Relations Review* 51 (2):282.

⁵³ Goetzel 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, & 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 & Environmental Medicine* 40 (10):843-854.

⁵⁴ Holtz-Eakin, D., J.R. Penrod, & H.S. Rosen. 1996. Health Insurance and the Supply of Entrepreneurs. *Journal of Public Economics* 62:209-235.

- ◆ 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
- ◆ The secondary effects of inflation in health care costs are less employment mobility, dampening of entrepreneurial incentives, and stress.

Based on simulations and estimations, it appears 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.

Policy makers should be cautious in inferring 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 Iowa) 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.⁵⁵ 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. The finding that insured persons on the margins, that is those who rate their policies as no more than barely adequate, are behaving in much the same way as uninsured persons in their consumption of health care signals potential risk that over the long run increasing numbers of Iowans will have inadequate access to necessary health care.

⁵⁵ Kapur, 1998; Morrisey, M.A., G.A. Jensen, & 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, R, & T Gilmer. 1999. Explaining the Decline in Health Insurance Coverage, 1979-1995. *Health Affairs* 18 (2):30-47.