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Conrad Keezer
University of Northern Iowa

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Health Savings Accounts: Benefits, Costs, and Potential Effects

Conrad Keezer

ABSTRACT. Health-care costs have been a significant topic in the U.S. in recent decades. Several ideas have been proposed to address rising costs, while still maintaining affordable insurance options for consumers. Consumer-Directed Health Plans have been one of these options, and when coupled with Health-Savings Accounts, these plans have significant potential to curb costs and increase the number of insured consumers. There may, however, be both positive and negative effects. The positive effects will likely outweigh the negative effects, and Consumer-Directed Health Plans, coupled with Health-Savings Accounts, should present a net gain to both consumers and the overall economy.

I. Introduction

One of three American healthcare dollars is wasted and for the past decade, all wage increases have been absorbed by healthcare costs.

-Don Berwick, Former administrator for the
Centers for Medicare and Medicaid Services

Health-care costs have taken an increasingly large share of the budgets of consumers, businesses, and the government. Increases in government spending on health care have even outpaced Social Security spending (Snell 2016). To date, no consensus has arisen as to the best method to control costs while still providing adequate choice for consumers. In 2003, however, the Medicare Modernization Act created a new instrument in health-care decision making: health-savings accounts. There are a number of benefits of health-savings accounts. These accounts may provide consumers with greater choice in health care, while also reducing health-care costs on a macro level. There may also be some downside to health-savings accounts that should be addressed. Significant changes will need to be made to address the large annual cost increases in the health-care industry. This paper will look at how health-savings accounts might become one of the best tools to meet this objective.

II. History and Definition of Terms

Health insurance has traditionally been provided through employers as a benefit. Employer-provided preferred provider organization (PPO) or health maintenance organization (HMO) plans currently cover about 60 percent of consumers (Cannon 2008, 1). These plans usually feature premiums that are shared by the employee and employer, plus a co-payment for services or products until a pre-determined deductible amount has been reached. Once the deductible is met, consumers often pay little to none of the costs of health-care for the remainder of that year.

Health-savings accounts (HSAs), by contrast, are tax-free, interest-bearing accounts that are fully owned by the consumer (Baicker, Dow, and Wolfson 2006, 464). These accounts are combined with high-deductible insurance plans with minimum deductibles of \$1,300 for an individual, and \$2,600 for a family as of 2015 (IRS Publication 969 2015). Consumers can contribute up to \$3,350 for single plans and \$6,650 for families per year, often in addition to contributions by their employers. These contributions are pre-tax, and any interest earned by these accounts is also tax-free, provided that the account is spent on qualifying health-related purchases.

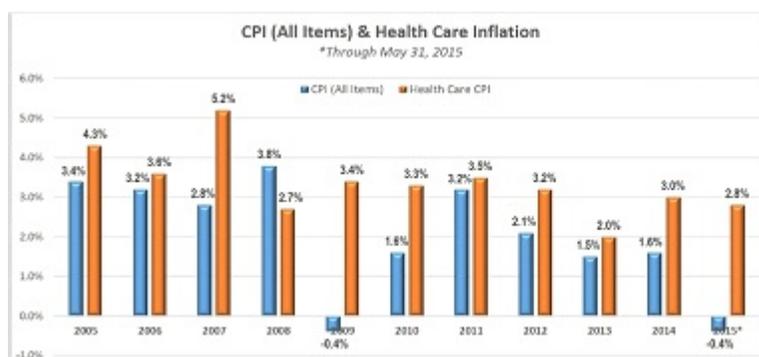
Health-savings accounts are one part of a broader portfolio of consumer-directed health plans (CDHP) that often feature high-deductible insurance plans coupled with a tax-advantaged account. The goal of CDHP plans is to encourage consumers to be more involved in their health care decision making (Parente, Feldman, and Christianson 2004, 2). Much of the literature has analyzed the effect of the general category of consumer-directed health programs. In this paper, it will be necessary to include the analysis of the broader consumer plans to fully appreciate the arguments for health-savings accounts.

As mentioned above, HSAs contrast with other accounts such as flexible-spending accounts (FSAs). FSAs originated in 1984 as an amendment to the IRS code, section 125 (Glied and Remler 2005, 2). FSAs feature a “use-it or lose-it” provision that requires consumers to spend the full amount in the account by the end of the year (Hadley 2013). Flexible spending accounts, while they feature tax savings for the consumer, have limited benefit for consumers and the economy because of the annual spending requirement (Hadley 2013). Another downside to FSAs is that the tax subsidy for coinsurance and deductibles is much smaller than the HSA program (Glied and Remler 2005, 2). Given these

limitations, much of the literature has focused instead on health-savings accounts. Thus, the analysis that follows will examine how consumer-directed health plans can improve choice and reduce costs in health-care, with an emphasis on health-savings accounts.

III. Current State of the Health-Insurance Industry

As mentioned in the introduction, the rising costs of health-care and insurance have been one of the focal points of national discussion in U.S. politics and business. Estimates from the year 2014 put health-care spending at \$3.1 trillion, or \$9,695 per person (Luhby 2015). This represents an increase of 5.5% from the previous year, with projections of increases of 5.8% per year from 2014 through 2024 (Luhby 2015). Since 2005, health-care spending has risen more than inflation for every year except 2008 (Patton 2015).



In 2014, the average annual premium for individual coverage was \$6,025 and the average annual premium for families was \$16,834. In a span of ten years, from 1996 to 2006, real per capita health spending rose 44 percent (Baicker, Dow, and Wolfson 2006, 1). In the ten year period from 2004 to 2014, the average premium for family plans rose 69 percent (The Henry J. Kaiser Family Foundation 2014). In total, health-care spending will make up about 20 percent of the U.S. economy by the year 2024 (as a percentage of GDP), and federal, state, and local governments will shoulder nearly half of these expenses (Luhby 2015).

Most of the growth of health-care expenditures in the previous decade (91%), can be traced to increases in the price of drugs, medical devices,

and hospital care (Patton 2015). As mentioned above, the federal government has probably shouldered some of those cost increases (drugs and medical devices) via Medicare; prescription drugs have become more prevalent, and the population continues to age, which would result in higher demand for both drugs and medical devices. For the purposes of this paper, however, the analysis of health-savings accounts will not apply to elderly Medicare patients. That said, expenses from drugs, devices and hospital care are applicable to the working-age adult population, and the effect of health-savings accounts on their care purchasing decisions could significantly determine future cost increases in the industry.

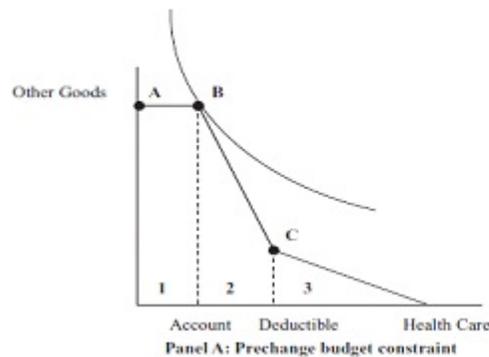
Given these trends, the main argument surrounding health care is focused on how to control rising costs. As costs have been outpacing wages and inflation (The Henry J. Kaiser Family Foundation 2014; Patton 2015), interest groups, consumer-advocacy organizations, and legislators have analyzed a variety of potential cost-reduction measures. In the mid 2000's, the Bush Administration tentatively explored some of these methods, which led to the creation of HSA's in 2003. Much of the literature on HSAs is from this period. In 2010, the Obama Administration successfully passed the Affordable Care Act, which sought to increase both the number of insured consumers and reduce future costs. Recent estimates have shown that the Affordable Care Act has resulted in some cost savings (Council of Economic Advisors 2013, 14) but overall, health-care spending is still projected to outpace inflation and wage increases (The Henry J. Kaiser Family Foundation 2014; Patton 2015). The conversation about cost reductions in health care is still very much alive, and health-savings accounts may play a significant role.

IV. The Mechanics of Health-Savings Accounts

As mentioned previously, health-savings accounts are one aspect of consumer-directed health plans, and function like other financial accounts, such as an IRA or a 401(k) (Jung and Tran 2011, 5). Funds in a health-savings account are deposited tax-free, accumulate interest tax-free, and can roll over the balances into the next year. This account must be linked to a high-deductible health plan, and the account holder must not be covered by other health insurance, Medicare, or listed as a dependent on another's taxes. The maximum annual contribution varies based on the current IRS rules, which as of 2016 are \$3,350 per year for singles, and \$6,750 for families. The funds in the account can only be

used for qualifying medical expenses, as defined by the plan. Any funds used for non-medical reasons are taxed at a rate of 10 percent. When the account holder reaches the age of 65, however, this tax penalty no longer applies (Jung and Tran 2011, 5).

In theoretical terms, consumer-directed health plans that feature individually-owned savings accounts (health-savings accounts as well as other accounts, such as flexible spending accounts), feature a unique budget constraint. One of the best (and easily understood) models is presented by authors Lo Sasso, Helmchen, and Kaestner (2010) in the *Journal of Risk and Insurance*. Their budget constraint has three regions: The spending account (region one), the “doughnut hole” (region two) and the out-of-pocket maximum limit, where the plan will shift to a “major medical” style of coverage (region three). Region one is the area of the constraint where the consumer will purchase care using funds from her health-savings (or flex-spending) account. Region two, known as the “doughnut hole”, is the region where the consumer’s account is exhausted, and she must pay the full cost of health care out-of-pocket until the deductible is met. Region three is the point at which the deductible is met, and the consumer pays a smaller portion of the costs (perhaps up to 10%) and the insurance provider will cover the rest (Lo Sasso, Helmchen, and Kaestner 2010, 89).



This simple budget constraint, coupled with an indifference curve, represents the choice that consumers in a consumer-directed health plan have. There is a tradeoff between health care purchases and purchases of other goods, as represented by the indifference curve. The budget line is kinked, to display the discontinuities in prices between account spending

(A to B), out-of-pocket spending, (B to C), and the onset of insurance coverage (C onward). The choices of consumers depend on their willingness to pay for health care. Some consumers will locate along points A to B. Other consumers may be located on or between points B and C. A minority of consumers, (who may have more health problems) could be located from point C onward, where they would spend the full amount of the account, the deductible, and use the coinsurance provision of the plan.

V. Evidence Favoring Health-Savings Accounts

There are typically two main arguments made in favor of health-savings accounts in consumer-directed health plans: Controlling the increase of spending in health care, and increasing the number of insured consumers (Jung and Tran 2011, 2). There are a few other secondary arguments for health-savings accounts, but most of the arguments stem from these two primary goals.

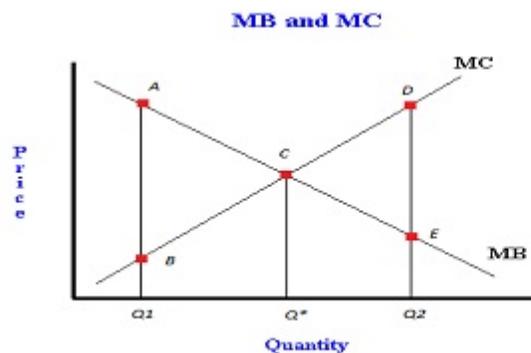
The first goal of these consumer-directed health plans is to shift the incentive for cost reduction to consumers through the use of high-deductible plans and health-savings accounts. Under this system, consumers will own these health-savings accounts, and they will be encouraged to be conscious of the cost of the services they choose by shopping around and comparing prices. “In theory, by combining a high-deductible health insurance plan with a health spending account, a CDHP creates incentives for enrollees to economize on their utilization of medical care” (Parente, Feldman, and Christianson 2004, 2). The idea behind this system is that when consumers are given ownership of the funds in these accounts, they will exercise more restraint regarding purchases, now that the money spent on care is coming out of an account they own.

The second goal of CDHP plans with HSAs is to reduce the number of uninsured consumers. CDHP plans coupled with accounts (such as health-savings or flexible spending accounts) are expected to lower the cost of insurance. The lower costs of insurance should allow more consumers to purchase these plans, and more businesses to offer them (Gates, Kapur, and Karaca-Mandic 2008, 4). A secondary benefit of the health-savings and flexible spending accounts is that these accounts will function more like cash and will be accepted by a wider range of care practitioners, thus expanding consumer access to care.

A. COST-REDUCTION

As stated earlier, the primary goal of consumer-directed health plans (and health-savings accounts, as a component of those plans), is to involve consumers more directly in their purchasing decisions (Parente, Feldman, and Christianson 2004, 1190) and make them more aware of the cost when they choose costly care options (Gates, Kapur, and Karaca-Mandic 2008, 2). The analysis in the current literature is usually focused on this goal primarily, or at the very least, include significant discussion of it as part of the research.

Much of the existing literature argues that traditional health-insurance plans do not accurately reflect the price of medical care to consumers. These plans artificially lower the relative prices of consumption, and thus result in consumption where costs are greater than their value (Cannon 2008, 8; Baicker, Dow, and Wolfson 2006, 1). In basic theory terms, consumers are purchasing care and coverage where the marginal cost is higher than the marginal benefit (point D on the graph below).



The counter-productive incentive effect of traditional plans is well-recognized. “Furthermore, there are increasingly large social welfare losses associated with the fact that these health care consumption decisions are not being made by individuals equating full marginal costs with the marginal benefits of each unit of care” (Baicker, Dow, and Wolfson 2006, 1). Also, “Since the 1940’s, tax law has excluded the value of employer-provided health insurance premiums from income and payroll taxation... This has resulted in the incentive to purchase health insurance characterized by low deductibles, low coinsurance rates, and

pre-paid coverage of elective and non-catastrophic care, all of which dull patient incentives to be cost-conscious consumers” (Baicker, Dow, and Wolfson 2006, 2). Researchers also believe that the higher cost-sharing associated with CDHP plans will result in lower total health spending, which actually improves public welfare (Baicker, Dow, and Wolfson 2006, 466).

A conceptual illustration may help with this point. Consider a patient who has a typical employer-provided plan and pays a 20 percent copayment for services. Assume this patient has a cold virus. Further assume that this patient elects to seek medical attention for this virus. Let us also assume that the true cost of treatment for the symptoms of this virus (including the doctor visit and miscellaneous costs by the clinic) are \$200. The patient will only pay \$40 under a 20 percent copayment with a traditional insurance plan. Thus, the perceived cost of such services is only \$40. In the mind of the patient, the cost of the service might be at about point B on the MB and MC graph. If the true cost of the doctor visit for the cold was passed on to the patient however, the patient might see the \$200 charge as closer to point D on the MB and MC graph. This patient may then decide that the benefit from a \$200 doctor’s visit is less than the cost, and may forego the treatment. While this may be only a hypothetical scenario, the principle illustrated gets to the point behind the marginal benefit and marginal cost argument; consumers cannot make the best decision under the current insurance system because they don’t “feel” the costs involved.

In addition, some sources believe that traditional plans result in excess purchases of coverage (Cannon 2008, 1). “An individual reaches the optimal amount of insurance when the cost of an additional unit of coverage (including, in particular, the cost of additional moral hazard) is equal to the benefit of an additional unit of risk protection (Feldstein and Friedman, 1976)” (Cannon 2008, 7). As illustrated above, this can be conceptualized by the purchase of insurance options that the consumer may not need or want. Most employer plans feature a standard package of benefits which do not allow for much customization. In fact, as of 2007, a majority of consumers covered in such plans had only one plan choice (Cannon 2008, 6). This leads to a situation where a consumer is purchasing insurance for contingencies that may not apply to him. Health-savings accounts, on the other hand, allow individuals to purchase insurance according to their preferences, which increases efficiency (Cannon 2008, 22) and would also lead to less expensive plans.

It is important to acknowledge that theory does not always hold in reality. There are, however, some data to confirm the theory of consumer behavior in this case. Lo Sasso, Shah and Frogner (2010) conducted a large, three-year survey from a national health insurance company with 709 employers. They found that, (contrary to an earlier, smaller study by Parente, Feldman and Christianson (2005)), HSA account holders spent between five and seven percent less than traditional plan holders (Lo Sasso, Shah, and Frogner 2010, 1056). This would seem to agree with an overall survey of multiple studies on CDHP plans that found that these plans combined with savings accounts would reduce average health-care use by 2-7 percent (Buntin et al. 2006, 521). HSA holders also spent six to nine percent less on pharmaceutical purchases than traditional plan holders (Lo Sasso, Shah, and Frogner 2010, 1057). Given this data, and the theoretical underpinning of health-savings accounts, it seems logical to conclude that cost-reduction would be achieved with health-savings accounts and CDHP plans.

B. INCREASING THE NUMBER OF INSURED

While cost-reduction has been, perhaps, the primary goal of consumer-directed health plans, another positive effect of these plans could be an increase in the number of insured consumers, compared to the current system. Increasing the number of insured Americans has been a policy goal in recent decades. Based on several studies, health-savings accounts may help accomplish this task.

In general, health savings account plans are successful in insuring more consumers given sufficiently large contribution limits (Jung and Tran 2011, 3) and these plans will likely increase the number of insurance options available to individuals (Parente et al. 2005, 2). Smaller business may also use these plans as an instrument to offer low-cost coverage, whereas otherwise, they may not have provided coverage at all (Gates, Kapur, and Karaca-Mandic 2008, 4). Both of these outcomes could serve to increase the number of insured consumers. Also, since these plans are coupled with higher deductibles, they feature lower premiums, which should reduce the cost of insurance (Barabas 2009, 191). Following basic demand theory, these lower prices could increase the quantity-demanded of health-insurance plans.

One study found that a subsidy-based program of health-savings accounts could result in an additional 12.8 million consumers insured,

compared to the current system (Parente et al. 2005, 21). Another study found that health-savings accounts could cover almost all of the working-adult population (Jung and Tran 2011, 25). These are remarkable figures, given that the subsidy-based program in the first study would cost \$69.2 billion per year, (\$83.7 billion per year in 2016 dollars) (Parente et al. 2005, 21) which compares to the current cost of \$101.2 billion per year for the Affordable Care Act (Luhby 2015). The literature isn't conclusive about how many consumers would be insured by a nationwide implementation of subsidized health-savings accounts, or health-savings accounts in general. Yet most sources agree that the rate of uninsured would be much lower than it is currently.

VI. Evidence Against Health Savings Accounts

There is a great deal of information about the expected benefits of consumer-directed health programs that feature health-savings accounts, but there are also a number of drawbacks to this system discussed in the literature. Some of the major objections to CDHP plans include: Overall cost increases as a result of CDHP plans, higher rates of illness among CDHP plan holders, and the undesirable social effect of greater consumer cost sharing as a result of CDHP plans.

A. COST-INCREASES AS A RESULT OF CDHP PLANS

Given that cost-reduction is one of the hallmark arguments of health-savings accounts, it is necessary to look at the counter-evidence. One source found that HSA's cannot limit health-expenditures in the long-run (Jung and Tran 2011, 4). This agrees with findings from others that CDHP plans will not significantly reduce expenditures (Parente, Feldman, and Christianson 2004, 1193). The result from Jung and Tran is based on a model that predicts positive income effects from the additional savings created by a HSA. This income effect leads consumers to spend more on their health in the long-run. So, as consumers save more of their income in tax-free accounts, national saving rises. That leads to more capital accumulation on a macro-level, which increases economic growth (Jung and Tran 2011, 3). Their prediction of capital accumulation and economic growth agrees with Cannon, and lines up with general macro-economic theory regarding national saving. Jung and Tran conclude that the introduction of HSA's would increase the steady-state capital stock by

nearly three percent, and increase output growth by nearly one percent (Jung and Tran 2011, 24). As a result of a national tax-free savings plan and increased rates of health insurance, spending on health care services would increase by more than one percent of GDP (Jung and Tran 2011, 25). But increased growth can hardly be considered a drawback. Health-care spending would be higher, but income would increase by more. It should be noted that the authors mention that the increased health spending could increase individual health, and by association, public welfare.

Another study presented by Mongan, Ferris, and Lee (2008) finds that the ability of health-savings accounts to effect cost-reduction could be limited. They note that about 10% of patients experience chronic illness, and that these patients account for 70% of health-care costs (Mongan, Ferris, and Lee 2008, 1510). This is echoed by Parente, Feldman, and Christianson (2004), who find that 7.7 percent of the population (under the age of 65) account for 56.8 percent of all medical spending (Parente, Feldman, and Christianson 2004, 1192). Mongan, Ferris, and Lee (2008) also note that these chronically ill patients may not act as informed consumers in selecting efficient treatment options. Chronically-ill patients will also exhaust their health-care savings accounts rapidly. This would place a significant financial burden on these consumers, which could result in socially undesirable distributional effects. This will be discussed in part C.

B. REDUCED QUALITY OF CARE AMONG CDHP HOLDERS

One article speculates that consumer-directed health plans could actually increase hospital use among CDHP plan holders when compared to traditional plan holders (Parente, Feldman, and Christianson 2004, 1203). The theoretical explanation behind this finding in their two-year study was that owners of consumer-directed health plans were more price conscious, as expected, and were reluctant to seek care until they became significantly ill and required the use of a hospital.

This article raises a serious issue for CDHP plans. CDHP plans, by design, force consumers to be more conscientious in their health-care purchases. If consumers do not have the ability or the information to make informed decisions about when and how much care they should receive, they could make decisions that are detrimental to their health, and actually result in higher health-care expenses to address their untreated

illness as the study suggests. Furthermore, the structure of the CDHP plans may result in consumers skipping physicals or other preventative care that may save money in the long-run.

Patient ability to determine the need for care is a contested issue (Barabas 2009, 190), but common sense dictates that consumers cannot possess perfect information with which to make health-care decisions, and will have less information than medical practitioners. Given this, it seems plausible that CDHP enrollees could be less healthy as a result of foregone care in the long run.

Parente, Feldman, and Christianson also found that CDHP holders were initially healthy, but had significantly higher rates of illness at the end of the study (Parente, Feldman and Christianson 2004, 1203). The researchers speculated that there could be two explanations for this. One, it could be due to an actual decrease in the health status of the sample. Two, it could be due to greater care use and diagnosis of illnesses among this sample, as a result of “pent-up” demand which could now be satisfied by the expanded choice of care practitioners that the CDHP plans allowed. An example they gave was a patient who expected to have elective surgery who chose a CDHP plan to allow a wider selection of practitioners to choose from. This too is an interesting counter-argument to HSA’s, due to the intertwined benefit within the problem. If this study is representative of the population, it likely validates one of the expected benefits, that consumers have more choice with CDHP plans, but could also tie into the first problem by creating higher or more severe rates of illness, which could lead to higher overall health-care costs with CDHP plans.

C. INCREASED CONSUMER LIABILITY

A third problem with CDHP plans, and one of the most controversial elements, is the greater cost-sharing associated with the plan. Since CDHP’s require higher deductibles by law, and feature larger out-of-pocket expenses, they also expose the consumer to more financial risk (Lo Sasso, Helmchen, and Kaestner 2010, 86). Early studies seem to indicate that citizens are generally more concerned with distributional effects such as this, and public support for health-savings accounts with higher deductibles may not be high among the general population (Barabas 2009, 211).

This argument is discussed in some of the literature (Barabas 2009) but most empirical analyses presented dwell only on the numerical effects. On a philosophical and political level, it is important to consider how such systems could affect equality. “Given that a small minority accounts for a disproportionate share of medical costs (Berk and Monheit 2001), HSAs may exacerbate existing inequalities because unhealthy individuals will exhaust their contributions (Fronstin 2004; Swartz 2003:2005)” (Barabas 2009, 211). This minority may not be able to receive the level of care needed to treat their conditions once they exhaust their accounts and may need to spend out-of-pocket to reach their deductible. This could place a significant financial burden on those who can least afford it.

VII. Conclusions

There are a number of things to consider with regard to health-savings accounts as presented here. The literature is divided on the potential for cost savings, health and wellness of the consumer, and the distributional effects, but seems to acknowledge that overall, the rates of insured consumers would likely rise. Given this, the conclusion will seek to address the three most contested issues, and assume that rates of insurance will likely increase, based on evidence presented so far.

A. POTENTIAL EFFECTS ON COST-REDUCTION

As mentioned above, the literature is divided on the potential for cost savings with health-savings accounts (coupled with consumer-directed health plans). Parente, Feldman, and Christianson concluded that HSA enrollees spent significantly more on hospital admissions and general expenditures at the end of their two-year study (Parente, Feldman, and Christianson 2004, 1206). They also concluded that HSA holders experienced higher rates of illness, but presented possible caveats to those conclusions, such as “pent-up demand” for care that is now satisfied by health-savings accounts, and greater availability in choice among practitioners (Parente, Feldman, and Christianson 2004, 1204).

Other sources find that generous plans (such as the more traditional HMO and PPO plans provided by employers), result in greater spending than under CDHP plans with HSA’s (Baicker, Dow, and Wolfson 2006, 466). HSA plans could also result in spending reductions of an average

of five percent, when compared to traditional plans (Baicker, Dow, and Wolfson 2006, 474), while other estimates put this reduction even higher, between seven and nine percent (Lo Sasso, Shah, and Frogner 2010, 1041).

Jung and Tran's model predicts higher overall healthcare spending, but takes a "back-door" approach to this conclusion. Jung and Tran believe that the creation of HSAs on a large scale will improve the capital stock and increase economic growth, which *then* leads to higher real health-care spending. Yet this could be the case in any scenario with economic growth. As consumer incomes rise, it seems likely that consumers would decide to spend a share of that income on health-care related purchases. While Jung and Tran's model is extremely advanced in theory and impressive in implementation, it seems to me that their predictions of higher economic growth due to the presence of health-savings accounts is not an argument against HSAs. In addition, it does not address the results that other sources have regarding the outcome of health-savings accounts, which is a measureable cost reduction (Baicker, Dow, and Wolfson 2006, 474; Lo Sasso, Shah, and Frogner 2010, 1041; Gates, Kapur, and Karaca-Mandic 2008, 4; Buntin et al. 2006, 521).

An acknowledged point in the argument against health-savings accounts is the limitation of HSAs to address the main cost-drivers in health-care. The chronically-ill population accounts for the majority of health-care spending (Mongan, Ferris, and Lee 2008, 1510; Parente, Feldman, and Christianson 2004, 1192). In this demographic, a health-savings account will be quickly exhausted and patients will incur significant out-of-pocket expenses until their deductible is met. This issue will be compounded because deductibles "reset" every year. Depending on the amount of the deductible as set by the individual plan, this could represent thousands of dollars of out-of-pocket expenses every year for this group. The conclusion here is that an alternative insurance plan will likely be needed for this demographic. The details of such a plan, however, are beyond the scope of this research.

Given all of the information presented here, health-savings accounts are still a viable option for most consumers. A majority of sources claim overall cost reductions as a result of health-savings account programs. These reductions line up with basic consumer theory regarding care purchasing with HSAs. In summary, it seems likely that health-savings accounts do, and will, reduce total expenditures on health-care as a fraction of GDP.

B. POTENTIAL EFFECT ON QUALITY OF CARE

Parente, Feldman and Christianson (2004) discussed the issue of increased illness among CDHP plan-holders. As mentioned previously, they found that CDHP enrollees experienced higher rates of hospital use, and higher incidence of recorded illness than their counterparts in traditional plans (Parente, Feldman, and Christianson 2004, 1203). They did speculate that this could be due to the reluctance to seek care until more serious conditions were encountered, but also acknowledged that there was not enough evidence to determine the true cause of this.

This argument raises the point that patients may not have enough information to make informed decisions about their health (Barabas 2009, 190). That being said, work from Lo Sasso, Shah and Frogner would dispute this outcome, as they found that "...CDHP benefit designs affect decisions that are at the discretion of the consumer, such as whether to fill or refill a prescription, but have less effect on care decisions that are (more) at the discretion of the provider" (Lo Sasso, Shah, and Frogner 2010, 1057). Parente, Feldman, and Christianson also said that "... it is difficult to characterize a lack of access to physician consults and evaluation as the driver for higher admission rates in the CDHP population" (Parente, Feldman, and Christianson 2004, 1203). Another source reported that CDHP plan holders had increased rates of compliance with prescribed treatment plans, and exhibited increased use of preventive care (Buntin et al. 2006, 524) both of which would serve to enhance the quality of care, while also reducing costs from repeat visits to practitioners.

In summary, while the information is mixed, several sources find that quality of care isn't significantly lower under CDHP plans than traditional plans. It is also important to note that the study from Parente and others showing increased illness among CDHP holders was drawn from a sample size limited to one employer over two years. Given the small sample, and the caveats that Parente and others added to their conclusion that rates of illness were higher, this counter-argument seems to be somewhat weak. That being said, further research on this topic is clearly needed to make any significant conclusions.

C. TOTAL EFFECTS OF INCREASED COST-SHARING AND CONSUMER LIABILITY WITH CDHP'S

Lo Sasso, Helmchen, and Kaestner (2010) argue that consumers will bear more financial risk under CDHP plans. This claim is not disputed. By definition, CDHP plans seek to expose the consumer to more of the cost associated with medical care, to help them purchase care where the marginal cost for one more unit of care is closer to the marginal benefit. Barabas (2009) raises the question regarding social acceptance of this consumer risk, which is a valid concern. There are, however, some counter-arguments to consider.

In their 2005 study of price responses to CDHP plans, Parente et al. (2005) document consumer response to the “doughnut-hole” provision of CDHP plans. “An interesting finding is the greater elasticity of coinsurance (-.5405) compared with the donut hole (-.2430), or the difference between the deductible and the health account... This finding may challenge some detractors of CDHP plans who suggest consumers will not embrace a plan design with obvious increased cost sharing in the form of a large potential deductible, compared with coinsurance, a much more conventional method of cost-sharing” (Parente et al. 2005, 12). In essence, their study found that the demand with coinsurance was more elastic than the demand in the “donut hole” (the point at which a CDHP consumer has exhausted account funds and must pay out-of-pocket before the deductible is reached). Given that coinsurance is a typical feature of most employer provided plans, this study suggests that consumers might react more favorably towards CDHP plans than otherwise predicted. While this finding is encouraging for the CDHP argument, it is important to note that just because consumers demonstrate a greater price response to coinsurance than the cost-sharing mechanism of CDHP plans, this does not mean that they will favor CDHP's politically or socially.

A second counter-argument to consider is the positive effects on economic growth that increased cost sharing bring. In a 2013 report to the Obama Administration, the Council of Economic Advisors found that the increased rates of cost-sharing was helping to reduce spending growth, by as much as twenty percent from 2009-2011 (Council of Economic Advisors 2013, 13). This cost-sharing was brought on by a number of factors, (specifically, it is the impact of the Affordable Care Act that is applicable here), but could bring with it many economic benefits. Some include: lower federal budget deficits, improved national saving, (which

increases capital accumulation and leads to higher output in the economy), and higher wages to workers as reductions in the cost of health benefits allows employers to pass some of that savings on to employees (Council of Economic Advisors 2013, 21-22). Increases in national saving have also been argued as a by-product of health-savings accounts (Cannon 2008, 20). Current data seem to validate this, with an estimated 14.5 million health-savings accounts that held greater than \$28 billion in assets (Carrns 2016). Thus, in the context of the report from the Council of Economic Advisors, the economic side effects of CDHP's and health-savings accounts could be significant via cost reduction and increased national saving. While this point does acknowledge that consumers are exposed to more financial risk in CDHP plans, it can be argued that this individual risk comes with an offsetting collective benefit to the economy as a whole.

D. BRIEF SUMMARY AND CLOSING

The CDHP plan and health-savings account are relatively new constructs in the sphere of health-care policy. There will be increased individual risk associated with these plans, and there may be potential for higher incidence of illness among the policy holders. Given that these plans are such a new development, there will need to be more research done to conclusively determine if the benefits outweigh the costs. The material presented to date suggests that CDHP plans with HSA's provide a mechanism to control rising healthcare costs, increase the number of insured consumers by making plans more affordable, and serve to expand the consumer's choice of practitioners. These plans may also provide beneficial spillover effects by increasing national saving, which can lead to higher economic output, and improved standards of living. Future research should focus more specifically on the chronically-ill population and how to most efficiently treat them. This segment of the population accounts for the majority of the spending on health-care (Mongan, Ferris and Lee 2008, 1510; Parente, Feldman, and Christianson 2004, 1192) and any significant cost-reduction goals will need to find a way to manage the costs in this demographic.

References

- Baicker, Katherine, William H. Dow, and Jonathan Wolfson.** 2006. "Health Savings Accounts: Implications for Health Spending*." *National Tax Journal* vol. 59, no. 3:463-475.
- Barabas, Jason.** 2009. "Not the Next IRA: How Health Savings Accounts Shape Public Opinion." *Journal of Health Politics, Policy and Law* vol. 34 No. 2: 182-217.
- Buntin, Melinda Beeuwkes, Cherly Damberg, Amelia Haviland, Kanika Kapur, Nicole Lurie, Roland McDevitt, and M. Susan Marquis.** 2006 "Consumer-Directed Health Care: Early Evidence about Effects on Cost and Quality." *Health Affairs*. Jul-Nov 2006. W516-W530. Retrieved from <http://search.proquest.com/docview/817481747?accountid=14691>
- Cannon, Michael.** 2008. "Large Health Savings Accounts: A Step Toward Tax Neutrality for Health Care." *Forum for Health Economics & Policy: The Cato Institute*. Vol. 11, Issue 2 Article 3.
- Carrns, Ann.** 2016. "Understanding Health Savings Accounts." *The New York Times*. January 13. Accessed March 26, 2016. http://www.nytimes.com/2016/01/14/your-money/understanding-health-savings-accounts.html?_r=0
- Gates, Susan M., Kanika Kapur, and Pinar Karaca-Mandic.** 2008. "Consumer-Directed Health Plans and Health Savings Accounts: Have They Worked for Small Business?" In *Forum for Health Economics & Policy*, vol. 11, Issue 2 Article 4.
- Glied, Sherry A., and Dahlia K. Remler.** 2005. "The Effect of Health Savings Accounts on Health Insurance Coverage." *New York: The Commonwealth Fund*. Accessed May 2, 2016. http://authoring.commonwealthfund.org/~media/files/publications/issue-brief/2005/apr/the-effect-of-health-savings-accounts-on-health-insurance-coverage/811_glied_effect_hlt_savings_accounts_coverage-pdf.pdf
- Jung, Juergen, and Chung Tran.** "The Macroeconomics of Health Savings Accounts." 2011. *Center for Applied Economics and Policy Research Working Paper Series*. Working Paper No. 2010-12.
- Lo Sasso, Anthony T., Lorens A. Helmchen, and Robert Kaestner.** 2010. "The Effects of Consumer-Directed Health Plans on Health Care Spending." *Journal of Risk and Insurance* 77, no. 1 (2010): 85-103.
- Lo Sasso, Anthony T., Mona Shah, and Bianca K. Frogner.** 2010. "Health Savings Accounts and Health Care Spending." *Health Services Research* 45, no. 4 (2010): 1041-1060.
- Luhby, Tami.** 2015. "Obamacare will cost less than thought." *CNN Money*. March 9. Accessed March 20, 2016. <http://money.cnn.com/2015/03/09/news/economy/cbo-obamacare-costs/>
- Malcolm, Hadley.** 2013. "Health Savings vs. Flexible Spending Accounts." *USA Today*. October 7. Accessed March 26, 2016. <http://www.usatoday.com/story/money/personalfinance/2013/10/07/comparing-health-savings-plans-flexible-spending-accounts/2843953/>
- Mongan, James J., Timothy G. Ferris, and Thomas H. Lee.** 2008. "Options for Slowing the Growth of Health Care Costs." *The New England Journal of Medicine* 358, no. 14 (2008): 1509-1514.

- Parente, Stephen T., Roger Feldman, Jean Abraham, and Jon B. Christianson.** 2005. "Assessing the Impact of Health Savings Accounts on Insurance and Coverage Costs." *National Bureau of Economic Research*. (2005): 10.
- Parente, Stephen T., Roger Feldman, and Jon B. Christianson.** 2004. "Evaluation of the Effect of a Consumer-Driven Health Plan on Medical Care Expenditures and Utilization." *Health Services Research* 39, no. 4p2 (2004): 1189-1210.
- Publication 969** (2015), Health Savings Accounts and Other Tax-Favored Health Plans. "Publication 969 (2015), Health Savings Accounts and Other Tax-Favored Health Plans." Accessed March 19, 2016. <https://www.irs.gov/publications/p969/ar02.html>
- Snell, Kelsey.** 2016. "Booming Health Care Costs and Growing Deficits Create Budget Headache for Republicans." *The Washington Post*. January 25. Accessed March 20, 2016. <https://www.washingtonpost.com/news/powerpost/wp/2016/01/25/booming-health-care-costs-and-growing-deficits-create-budget-headache-for-republicans/>
- U.S. Executive Office of the President. Council Of Economic Advisors.** 2013. "Trends In Health Care Cost Growth And The Role Of The Affordable Care Act." https://www.whitehouse.gov/sites/default/files/docs/healthcostreport_final_noembargo_v2.pdf
- 2014 Employer Health Benefits Survey. "2014 Employer Health Benefits Survey."** *The Henry J. Kaiser Family Foundation*. Accessed March 12, 2016. <http://kff.org/report-section/ehbs-2014-summary-of-findings/>