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Health Insurance Exchanges: A Panacea or a Band-Aid?

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In 2010, the 111th Congress passed the first national health care reform in the United States, the Patient Protection and Affordable Care Act (ACA). This landmark legislation is intended to "fix" a health care system renowned for decreasing access and escalating costs. This paper examines one of the principal reforms in the ACA, the state health insurance exchanges. The author finds theoretical and empirical evidence to support the exchanges' potential (in conjunction with other relevant ACA reforms) to increase access, decrease insurers' excess profits and shift health care costs away from those least able to afford them. The exchanges fall short of becoming a panacea, however, as they leave a large number of people uninsured, even in optimal scenarios. Thus, the exchanges are essentially another band-aid for the system which covers additional people, yet does not cure the U.S. health care system's ills.

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First Advisor

Yavuz Yasar, Ph.D.

Second Advisor

Katherine Freeman

Third Advisor

Chiara Piovani

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by

Luisa Sanchez de Tagle

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Advisor: Yavuz Yaşar

Author: Luisa Sanchez de Tagle

Title: HEALTH INSURANCE EXCHANGES: A PANACEA OR A BAND-AID?

Advisor: Yavuz Yaşar

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In 2010, the 111th Congress passed the first national health care reform in the United States, the Patient Protection and Affordable Care Act (ACA). This landmark legislation is intended to “fix” a health care system renowned for decreasing access and escalating costs. This paper examines one of the principal reforms in the ACA, the state health insurance exchanges. The author finds theoretical and empirical evidence to support the exchanges’ potential (in conjunction with other relevant ACA reforms) to increase access, decrease insurers’ excess profits and shift health care costs away from those least able to afford them. The exchanges fall short of becoming a panacea, however, as they leave a large number of people uninsured, even in optimal scenarios. Thus, the exchanges are essentially another band-aid for the system which covers additional people, yet does not cure the U.S. health care system’s ills.

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INTRODUCTION

As the first national health care reform to become law, expectations and criticisms of the Patient Protection and Affordable Care Act of 2010 (ACA) abound. This paper will attempt to address expectations and criticism of a central part of the reform, the state health benefit exchanges. The exchanges are intended to improve access to health insurance and health care and are part of the cost-containment mechanisms in the ACA. Due to the complexity of the ACA and the health care system in the U.S., this paper will focus mainly on health insurance markets and the health insurance exchanges. Related areas, such as insurer-provider and provider-consumer interactions will be referenced indirectly as necessary to examine the health insurance market. To fully understand the functions of health insurance exchanges, the major ACA reforms affecting the exchanges will also be examined.

The first chapter of this paper, Historical Background, will provide a brief history of health care in the U.S. and introduce the concepts of the individual mandate and the health insurance exchange. The history of U.S. health care describes how the existing U.S. health care system was formed over time by policies reacting to the changing economic, political and social environment, rather than an overarching view of health care. This illustrates how health care in the U.S. evolved into a complex and disorganized system that excludes a portion of the population from obtaining affordable health insurance (and health care) as costs continue to rise. The following sections

describe the origins of the ideas of the health insurance exchange and the individual mandate, two of the central features of the ACA examined in this paper. The chapter concludes with an overview of the health care reform in the U.S. since the beginning of the 20th century, including recent proposals that include health insurance exchanges and the individual mandate. This section emphasizes the incrementalist approach that the U.S. has historically employed when attempting to reform the health care system. This section complements the earlier section on the history of the U.S. health care as it describes the reform efforts that occurred in response to, and because of, the conditions existing during different time periods.

In the second chapter, the economics behind the health care exchanges is discussed, and applied to the exchanges outlined in the ACA. First, the economic theory is applied to health insurance markets to explain why the current system fails to achieve certain outcomes, and how health insurance exchanges could correct these failures. Next, the main provisions in the ACA that affect the insurance exchanges, as well as regulations for the exchanges themselves are explained. Special emphasis is placed on the flexibility given to states in designing their exchanges. Finally, economic theory is applied to the health care exchanges in the ACA to make general predictions about the effects of various design choices.

The third chapter will explore existing models of the outcomes of the ACA in the U.S. that are based on economic theory. These models simulate the responses of individuals and businesses to different ACA regulations and exchange designs. Although the results of these models vary and must be interpreted with caution, their results are generally similar and in line with the economic theory described in the previous chapter.

These models will be used to discuss the potential results of implementing the current ACA reform, eliminating the individual mandate from the ACA, and the more radical approach of creating a single payer system. All of these scenarios represent currently possible implementations of the reform. The following section describes states' progress in establishing exchanges and their design choices as of the writing of this paper. This chapter will conclude with a closer examination of Colorado's health insurance exchange, including a simulation modified for Colorado-specific conditions. Finally, the author will answer the question in the title of this paper to conclude whether health insurance exchanges are a panacea or merely a band-aid.

Throughout this paper, the terms "health insurance exchange," "health benefits exchange" and simply "exchange" are used interchangeably. Health insurance companies are referred to as "health insurers," "insurers," or "insurance carriers." Health plans offered by health insurance companies are referred to as "health plans" or simply "plans."

HISTORICAL BACKGROUND

A Brief History of the U.S. Health Care System

The current U.S. health care system evolved from a series of historical events and political decisions over the last century. These were mostly the product of beliefs and circumstances particular to their time, rather than an overarching vision of health care, which has resulted in the complex and somewhat unmanageable system that exists today.

The Precursors to Modern Health Insurance: Early 20th Century

As the Industrial Revolution shifted work from rural farms to urban factories, the population also shifted towards the cities. This shift left the newly urbanized population exposed to the occupational hazards of factory life at a time when they were separated from the extended family networks which had previously provided them with support during times of need. During this time period, physicians usually visited patients at home and, given the still rudimentary state of medical technology, there was little they could do for many illnesses. As a result, medical expenditures were generally very low, and the amount lost in wages due to an accident or illness was often much greater than the cost of treatment. Thus, by the end of the 19th century, many workers obtained some type of accident, sickness or burial insurance that was offered by fraternal organizations, labor unions and private insurers (Austin and Hungerford 2009, 2). These insurance policies

were mostly indemnity plans which would distribute a predetermined amount of cash in the event of a serious illness or accident.

Although most insurance at the time protected against economic losses due to accidents, the first plans to actually cover medical services began to emerge, albeit slowly and in a very limited scope in the lumber, mining and railroad industries. The Western Clinic in Tacoma, Washington, is credited with being the first plan to cover medical services during the 1870s and 1880s. The plan paid doctors a fixed monthly fee to provide members with needed medical services. The very first group health insurance policy was created shortly thereafter, in 1910, and it offered employees of Montgomery Ward and Company an indemnity plan insuring against wages lost as a result of sickness or injury (Scofea 1994, 3).

The Beginning of Modern Health Insurance: The Great Depression and the Blues

Modern health insurance on a large scale was originally conceived as insurance to cover hospitals and providers against unpaid bills. In 1929, an executive of the Baylor University Hospital in Dallas, Texas noticed a large number of unpaid bills accumulated by local teachers. To relieve this burden from the hospital (and the teachers) the Baylor University Hospital created an insurance plan providing certain hospital services as needed to teachers who paid a monthly premium of \$6 (Melissa Thomasson 2010). As the Great Depression continued, the problem of unpaid hospital bills became even more pervasive as an increasing number of people were unable to pay for their hospital care. According to Laura A. Scofea of the Bureau of Labor Statistics, “more than 100 hospitals

nationwide had failed in the first years of the Depression and those that remained in business had only about a 50-percent occupancy rate” (Scofea 1994, 3).

Hospitals began offering insurance plans similar to the Baylor plan to stabilize their revenues. The American Hospital Association began creating Blue Cross plans, which allowed members access to most, if not all hospitals within a city. By 1939, 25 states had passed legislation enabling hospital insurance plans, many of which designated Blue Cross plans as charities and exempted them from various insurance regulations and taxes (Starr 1983, 298). Soon after, similar plans, called Blue Shield plans, were developed for physician services. As charitable community organizations, Blue Cross/Blue Shield plans (the Blues) typically used a community rating to determine premiums (as opposed to experience rating often used today). Under this arrangement all covered individuals within a plan pay the same amount, so those with the lowest health care costs subsidize those with higher health care costs.

At the same time, the first Health Maintenance Organizations (HMOs) were being developed on the West Coast. These provided a wider range of medical services to members from specific providers for a predetermined rate. The first of these was created in 1929 by two physicians, Donald Ross and H. Clifford Loos, who agreed to provide medical care for employees of the Los Angeles Department of Water and Power for a prepaid monthly fee. An HMO which would become one of the largest and most widely known in the country, Kaiser Permanente, was also formed during the 1930’s (Scofea 1994, 5). As the Blues proliferated and the first HMOs were being organized, the influential American Hospital Association (AHA) and American Medical Association (AMA) worked to stifle competition between providers and insurance plans which they

argued would threaten the financial stability of the health care industry. This was the beginning of what Bodenheimer and Grumbach call the “provider-insurer pact” which dominated the health care industry until the 1970s. (Bodenheimer and Grumbach 2008, 194)

Employer-Sponsored Health Insurance and Public Programs: WWII to 1960s

By 1940, 10% of the population of the United States was covered by some form of health insurance (Scofea, 1994, 6). As World War II progressed, and available domestic labor decreased, businesses which could no longer compete by increasing wages due to war-time controls began offering health insurance as a benefit to attract employees; this was even beneficial to employers as the Internal Revenue Service considered health insurance premiums paid by employers as necessary business expenses rather than taxable income received by the employee (codified in Section 106 of the Internal Revenue Code of 1945). Employer-offered or employer-sponsored insurance continued to grow during the post-war prosperity enjoyed by U.S. business which encountered strong demand for their products and weak competition from abroad. Unions, which were also gaining strength, were able to extract generous benefits, including health insurance, from employers. During this time, the provider-insurer pact assured the success of the Blues which dominated an uncompetitive and rapidly growing insurance market. The Blues, and eventually, new commercial health insurers, accepted generous reimbursement rules set by providers who were members of the AHA and AMA. Health care costs were driven up as hospitals invested in the newest and most expensive technologies and a greater number of physicians moved away from primary

care towards more profitable specialized medicine. The cost of hospital care, for example, doubled during the 1950s (Healthcare Timeline). Providers and insurers were able to pass these costs on to businesses and consumers because of the prosperous economy and the preferred tax treatment of employer contributions towards health insurance. According to National Health Expenditure Accounts data compiled by the Centers for Medicare and Medicaid Services, national health expenditures reached 5.2% of the Gross Domestic Product (GDP) by 1960. (National Health Expenditure Accounts)

The Blues' success convinced commercial insurers to enter the market. By the end of the 1950s, commercial health insurers were successfully competing against the Blues and cutting into their market share. Commercial plans undercut the Blues by using experience rating to set premiums, rather than community rating. Experience rating allowed commercial insurers to offer "healthier" individuals and groups lower premiums than the Blues, which did not adjust their premiums according to risk. Moreover, commercial health insurers used a variety of methods to prevent enrollment of sicker individuals into their plans, including outright refusal of coverage. Thus, not only were commercial insurers attracting healthier individuals away from the Blues, but they were also leaving them with the sickest and most costly individuals. This created an adverse selection problem for the Blues as they adjusted their premiums upwards to cover the costs of their sicker enrollees, which only intensified their problem as the remaining relatively healthier enrollees switched to cheaper commercial health insurance. In order to compete with commercial plans, the Blues were eventually forced to convert to experience rating to formulate premiums.

According to National Health Interview Survey (NHIS) data, the percentage of nonelderly persons (under age 65) with hospital insurance increased over 10% between 1959 and 1968, reaching 79.3% in 1968, mostly in employer-sponsored insurance (Cohen et al. 2009, 4). As the connection between employment and health insurance strengthened, certain segments of the population, particularly the elderly, low income workers and the unemployed, were unable to purchase health insurance or pay for medical care. Although insurance plans for individuals had been offered alongside group plans (they accounted for around 21% of all hospital insurance coverage by 1950¹) many were unable to afford these plans. During the 1950s this became a subject of serious social and political concern and resulted in federal aid through several initiatives. These efforts culminated in the passage of the Social Security Amendments of 1965, which created the Medicare and Medicaid programs to provide health care for the individuals over the age of 65 and low-income and disabled individuals.

The Rise of Managed Care and Industry Consolidation: 1970s to 2000s

Although health care costs had risen during the previous decades, these were generally absorbed by employers who were enjoying their relative prosperity. By the 1970s, however, U.S. industry was beginning to face competition from Western Europe and Japan which, combined with growing inflation, drastically changed the country's economic environment. As businesses and state and federal governments were forced to watch their budgets more closely, rising costs in the health care sector could no longer be

¹Calculations based on historical health insurance data in the U.S. Census Bureau's "Historical Statistics of the United States—Colonial Times to 1970," Vital Statistics and Health and Medical Care, Series B 401-412.

overlooked and became an area of major concern. Between 1960 and 1970, national health care expenditures increased from 5.2% to 7.2% of GDP—by 1980, this percentage grew to 9.2% (National Health Expenditure Accounts). This was the beginning of the end for the provider-insurer pact as conflicts between insurers and providers ensued. Insurance companies, facing increased pressure to contain rising premiums, demanded that hospitals and other providers lower their costs as well. The legal separation in 1972 of Blue Cross and the American Hospital Association, which had historically influenced the insurer's operations, exemplified the break between providers and insurers (Bodenheimer and Grumbach 2008, 196).

Businesses, which were now the main source of health insurance for individuals began to demand lower prices from health insurers. Many large employers moved towards self-insurance, an arrangement which allowed employers to bear the risk of their employees' health care expenditures while using health insurance companies for administrative tasks only. The federal and state governments also pressured insurers to decrease their costs through payment reforms in the Medicare and Medicaid programs. In an attempt to control costs, the health insurance industry moved towards managed care arrangements which included prospective payments to providers. Rather than paying providers a fee for individual services, plans made periodic (usually monthly) payments to provider per member to cover the costs of services provided during that time period. Managed care plans integrated “the financing and delivery of appropriate health care services to cover individuals” and used selective contracting among providers to foster competition and decrease costs. These plans also included substantial financial incentives for members to use providers in the provider network and procedures covered

by the plan. The passage of the HMO Act of 1973 led to a proliferation of HMOs as it provided federal subsidies for the creation of prepaid group practices and required certain employers offering health insurance to also offer an HMO plan if requested by employees. HMOs gained popularity until the 1990s when Preferred Provider Organizations (PPOs) attracted consumers away from the unpopular HMO restrictions; PPOs allowed a wider choice of providers and greater service flexibility. From 1968 to 1980, the percentage of nonelderly persons with private insurance remained steady at 79%. Due to population growth, however, the total number of nonelderly insured persons increased by 9.6% (Cohen et al. 2009, 4). After the initial growth of the Medicaid program following its implementation, the number recipients of public health assistance as a percentage of the nonelderly population reached 12% by 1988. The individual insurance market covered 9% of the nonelderly population and accounted for only 14% of health insurance market coverage (excluding public assistance).²

Changes in U.S. economic conditions, particularly the economic downturns during the early 1980s and early 1990s, affected the rate of employer-sponsored health coverage. Between 1988 and 1995, the percentage of nonelderly persons with employer-provided health insurance decreased from 66% to 64%.³ It is likely that a significant portion of this decrease was in insurance coverage by smaller employers for whom any cost increases or profit decreases would have a larger impact compared to larger employers. At the same time, the percentage of nonelderly individuals with public

² Calculations based on March 1998 Current Population Survey data found in the Employee Benefit Research Institute publication, EBRI Issue Brief "Update: Americans Without Health Insurance," July, 1990 No. 104. Totals may not equal 100% as some individuals may have multiple sources of insurance.

³ Calculations based on March 1998 Current Population Survey data in the EBRI Issue Brief No. 104 and on March 1996 Current Population Survey data found in the EBRI Issue Brief "Sources of Health Insurance and Characteristics of the Uninsured: Analysis of the March 1996 Current Population Survey," November 1996 No.179. Totals may not equal 100% as some individuals may have multiple sources of insurance.

insurance increased from 12% to 17%. As public insurance absorbed some of the decrease in employer-sponsored insurance, it mitigated the potential increase in uninsurance to only 1%, to reach 17% in 1995. Individual insurance market participation as a percent of all health insurance (excluding public assistance) decreased to 11%.³

In this economic environment, increased competition between insurers and between providers slowed the growth of health care costs during the 1990s (Healthcare Timeline). During the 1980s national health care expenditures as a percentage of GDP had increased by 3%, from 9.2% to 12.5%. Between 1990 and 1999, the growth in national health care expenditures slowed to 1.3%, increasing to 13.8% of GDP in 1999 (National Health Expenditure Accounts). The federal government passed payment reforms that allowed it to decrease Medicare and Medicaid inflation and employers were able to bargain with managed care organizations for lower premiums which cut into the profit margins of health care providers and insurers. To survive this competitive environment, both insurers and providers merged and consolidated to increase their bargaining power. Large health insurance plans purchased smaller plans and merged with other plans. Providers, particularly hospitals, also consolidated into multihospital systems or networks and the increasing number of physician specialists joined single-specialty groups (Bodenheimer and Grumbach 2008, 199). This increased their bargaining power, allowing them to counteract cost-containing pressure from purchasers.

Recent Trends Prior to the Affordable Care Act

As the U.S. economy improved in the latter half of the 1990s, the percent of nonelderly persons with employer-sponsored insurance increased to 67% in 2000, while

uninsureds dropped to 16%.⁴ During the 2000s however, a recession at the beginning of the decade, and increased international competition from developing economies, led to changes in the distribution of insurance coverage and to an overall increase in the rate of uninsurance. By 2010, only 59% of nonelderly persons had employer sponsored insurance, 7% purchased other private insurance, 22% were covered by public programs and 18% were uninsured.⁴ Once again, a rise in public health coverage mitigated potential increases in uninsurance. Although commercial insurers had seen their enrollment in employer-sponsored insurance shrink, many began serving Medicaid and Medicare over the last two decades as states and the federal government opened their programs to commercial insurers.

While health insurance coverage declined, health care expenditures increased dramatically. From 2000 to 2010, total national health care expenditures as a percent of GDP increased from 13.8% to 17.9% (National Health Expenditure Accounts). Although the federal and state governments account for more than half of these expenditures, businesses have also encountered higher costs for providing health insurance. Small businesses especially, have struggled with these increases. According to the Kaiser Health Benefits Summary, the percent of employers with less than 200 employees offering health insurance benefits dropped from 68% to 59% between 2000 and 2010 (Employer Health Benefits 2011 Summary of Findings 2011, 5). This decrease does not account for employees who decided not to purchase offered insurance due to rising premiums. In their 1999 publication, Kronick and Gilmore examine the sensitivity of

⁴ Calculations based on March 2001 Current Population Survey data in the EBRI Issue Brief No. 240 "Sources of Health Insurance and Characteristics of the Uninsured: Analysis of the March 2000 Current Population Survey," December 2001. Totals may not equal 100% as some individuals may have multiple sources of insurance.

employees to changes in health care costs by modeling the probability of being insured as a function of the ratio of per capita health care expenditure to personal income and other demographic and employment characteristics. They find that increasing per capital health care expenditures account for most of the observed changes in health insurance coverage (Kronick and Gilmore, 1999 42). If low-income workers are no longer able to afford insurance offered by their employers, the individual health insurance market would even be an alternative since those prices are likely to be even greater. As a matter of fact, it seems unlikely that the individual insurance market has absorbed people who previously had employer-sponsored insurance since its enrollment has remained relatively steady at about 7% of the nonelderly population over the last two decades. Due to the decrease in group insurance, however, individual insurance participation increased slightly to 12% of all health insurance (excluding public assistance) in 2010.⁵

In all sectors of the health insurance market (both private and public), strong insurer bargaining power (and provider power to a certain extent) and the limited ability of businesses and the federal and state governments to absorb increasing costs, has resulted in a redirection of a growing portion of costs to consumers, who are generally price-takers. This has sparked a trend towards “consumer-directed” cost-containment measures aimed at increasing consumers’ sensitivity to medical care costs and include increased cost-sharing, as well as less expensive plans with less comprehensive benefits. These cheaper plans include low-premium, high-deductible health plans that allow people to pay for out-of-pocket expenses through tax-advantaged Health Savings Accounts and

⁵ Calculations based on March 2011 Current Population Survey data in the EBRI Issue Brief No. 347 "Sources of Health Insurance and Characteristics of the Uninsured: Analysis of the March 2011 Current Population Survey," September 2011. Totals may not equal 100% as some individuals may have multiple sources of insurance.

plans with limited health benefits. These types of plans often fail to cover all the health care services individuals need and render their purchase unaffordable. This inadequate health insurance is creating an ever growing group of “underinsured” persons (Austin and Hungerford 2009, 9). Thus, it is increasingly the case that health insurance purchasers, particularly in individual and small group markets who have little bargaining power are unable to afford high costs and become underinsured or completely uninsured.

Origins of the Health Insurance Exchange

The current concept of the health insurance exchange evolved from the idea of “managed competition,” which originated during the 1970s when the lack of competition and insensitivity to costs described in the previous section characterized the national health care sector. Although similar concepts were developed prior to Alain Enthoven’s first exposition, he is still regarded by most as the “father” of managed competition, since his has been the most thorough explanation of the concept.

The original inspiration for his and others’ early models was the Federal Employees’ Health Benefits (FEHB) Program. Through a combination of political circumstances rather than a distinct policy design, Congress adopted the FEHB Program in 1959 after a five-year battle between competing and well-organized interest groups to design a system to provide health benefits to federal employees. These represented the entire spectrum of interests, such as the American Medical Association, the Blues, employee unions, insurance companies, other health care prepayment plans and the federal government as an employer. As a result, many different alternatives were considered, ranging from a single indemnity-type medical plan for all employees, to pre-

determined government contributions for any kind of prepaid health plan an employee could find on the market. As the final compromise, the FEHB program was designed to offer a wide variety of competitive plan choices for employees, which reflected the wide variety of interests of its designers. Through the FEHB Program, the federal government began offering millions of its employees, retirees and dependents throughout the country a choice between hundreds of different health care financing and delivery plans.

Despite initial challenges, the overall success of the FEHB Program convinced various states like California and Minnesota to adopt similar programs for their employees and retirees. Moreover, it sparked interest in the feasibility of developing a similar program on a national scale to cover the rest of the population. In a 1967 publication, K. L. White suggests a similar system of organized competition in the United States that would include “multiple, local and regional competing systems” (White 1967, 7). In 1971, Ellwood, McClure and colleagues proposed a national “Health Maintenance Strategy” in which HMOs would become the main health insurance and health care providers for both the private and public spheres within a highly competitive private market. This paper was the basis of and the impetus for, the HMO Act of 1973, which removed many existing barriers to the creation of HMOs. While serving in the Department of Health, Education and Welfare during the Nixon administration in 1973, Scott Fleming designed a national health insurance model called “Structured Competition within the Private Sector.” In it, he described practical ways to extend the FEHB Program to the whole population. According to Enthoven, the works of Ellwood, McClure and Fleming served as the building blocks for his own national health plan

called the “Consumer Choice Health Plan,” which he proposed to the Carter administration in 1977 (Enthoven 1993, 27-28).

Although each of these health care reform ideas is unique, all are examples of what Charles Schultze, President Carter’s chair of the Council of Economic Advisors promoted as the most effective reform strategy in a series of essays titled, “The Public Use of Private Interest” in the 1970s. These essays described ways to achieve socially-desirable goals while minimizing direct government intervention in economic matters and discouraging command-and control strategies. The private and public actors (i.e., businesses and government) would create market-based incentives in areas where they do not already exist that would move individuals towards socially-desirable ends. White, Ellwood, et al., Fleming and Enthoven apply this strategy to the health care sector (some unknowingly) by promoting the creation of specific incentives for a private, market-based system in which health care providers and insurers compete on the basis of value and quality.

Since his original publication in 1977, Enthoven has modified and clarified his original description of the Consumer Choice Health Plan and managed competition several times to counter criticisms and misunderstanding. In his 1993 publication, he defines managed competition as “a purchasing strategy to obtain maximum value for money for employers and consumers” (Enthoven 1993, 29). Central to this strategy are what Enthoven calls “sponsors,” which act on behalf of a group of purchasers. Sponsors ensure that eligible individuals can obtain health care services at a reasonable price by managing the health insurance market. Through their various iterations, sponsors have also been called “purchasing cooperatives,” or “health alliances,” but are currently

referred to as “health insurance exchanges” or “health benefits exchanges.” Sponsors represent purchasers in a particular geographic area, and actively work to correct or mitigate health care market imperfections which have led to decreased competition, poorer health outcomes, limited access for those with the greatest health care needs, and increased costs. These market imperfections or market failures are more thoroughly explained in Chapter III.

The character of the sponsor is vital to the success of managed competition.

According to Enthoven, sponsors must have:

the ability to use judgment to achieve goals in the face of uncertainty, to negotiate, and to make decisions on the basis of imperfect information. It takes more than mere passive administration of inflexible rules to make this market work (Enthoven 1993, 29).

Enthoven describes five main tasks which sponsors are required to perform in order to create a structure of managed competition. First, they must establish and enforce rules of equity to ensure that all eligible individuals have access to health insurance. Ideally, sponsors would mandate that all plans accept any eligible individual and apply a community rating (or restricted departures from it), guarantee access (subsidized, if necessary) to a baseline plan, ensure continuous coverage once an individual is enrolled, and prohibit any limitations or exclusions based on pre-existing conditions. Second, sponsors should have some freedom to select participating plans based on factors such as price and covered benefits. Third, sponsors must be the only access point for eligible individuals to enroll in participating health plans and establish contractual payment terms with participants. Fourth, sponsors must create a competitive environment in which plans have an incentive to increase efficiency, quality and decrease their premiums. They may do so by ensuring that subsidies never exceed the lowest-priced plan so that there is

always an incentive to decrease the cost of a plan, standardize plans, publish quality information for participating plans and allow individuals to choose plans at an individual, rather than employment-group level. Finally, sponsors must manage risk selection so that all participating plans are compensated based on the relative riskiness of their enrollees so that plans do not have incentives to select individuals they believe have lower risks (Enthoven 1993, 31-35).

Enthoven's idea of managed competition is based on a purchasing agent actively working on behalf of a group of purchasers, both individuals and employers. Although current formulations of health insurance exchanges vary widely on the degree of "activity" performed by the exchanges, they are all built on Enthoven's central concept of a collective agent that facilitates the purchase of health insurance for those with limited or no access. It is interesting to note that Enthoven believes that health insurance is social insurance and that universal, or near universal health insurance coverage is necessary for the success of managed competition. Moreover, he believes that all, or as many as possible, of the individuals covered must participate in the financing of the system. Enthoven gives various methods to ensure financial participation, including a mandate on employers to provide coverage to their employees, a requirement that all households purchase insurance or taxation, but does not seem particularly inclined towards any one method.

Origins of the Individual Mandate

The individual mandate is an approach to achieving universal health care in a system in which health insurance is the main vehicle for obtaining health care. For some,

access to health care is a human right, for others it is an essential part of a just and humane society or a necessary prerequisite for equality of opportunity. In a system in which health care is purchased through health insurance, and uninsurance is often synonymous with no access to health care, all individuals must obtain health insurance to achieve universal access to health care. Although the idea of requiring health care insurance for all citizens is not new to health care policy discussions, it has generally been within the framework of a government-run health care system. Another related idea, of an “employer” mandate requiring all employers (usually above a specified size) to provide their employees with some minimum health benefit package, has also been discussed at the national level for some time. The individual mandate in the context of a private-sector health care system, however, was first described by Stuart M. Butler and Edmund Haislmaier describe in their 1989 publication, “A National Health System for America.”

The main goals of Butler and Haislmaier’s National Health System are to control rising health care costs and provide access to health care to a growing number of individuals unable to obtain needed care. Their plan to create a “consumer-oriented, market-based, comprehensive American health system” requires that every resident of the United States enroll in a minimum catastrophic health care plan, shifting the responsibility of obtaining health care coverage to families rather than employers, and limiting the government’s role to that of monitoring and encouraging competition in the private health care market and subsidizing needy individuals (Butler and Haislmaier 1989, 51-52). In order to foster more cost-conscious behavior by health care consumers, which they believe is essential to controlling costs, Butler and Haislmaier’s plan

eliminates the tax exclusion for payments made by employers for employee health insurance and replaces it with tax deductions or credits to personal income tax for out-of-pocket expenses. This would serve to disconnect employment from health insurance provision. Their plan also mandates that every individual purchase health insurance and pay most routine costs out-of-pocket. Butler and Haislmaier believe this combination of incentives would reduce the insensitivity to health care costs experienced by the insured. At the same time, the government would provide financial support to those unable to purchase insurance or pay for necessary health care on their own.

Butler and Haislmaier view the requirement that every resident purchase health insurance as part of a contract between these individuals and the U.S. government:

in return for the government's accepting an obligation to devise a market-based system guaranteeing access to care and protecting all families from financial distress due to the cost of an illness, each individual must agree to obtain a minimum level of protection (Butler and Haislmaier 1989, 52).

This would prevent any individuals with the ability to purchase insurance from becoming "free riders," who force their costs onto others in the case of an emergency.⁶ Although the authors maintain that the level of mandatory protection remains to be debated, they do mention that all households must protect themselves from large, unforeseen medical costs by purchasing health insurance or face a penalty or fee. They

⁶ As part of the Consolidated Omnibus Budget Reconciliation Act of 1986 (COBRA), Congress passed the Emergency Medical Treatment and Labor Act (EMTALA) to ensure public access to emergency services regardless of the ability to pay. In one of its provisions, EMTALA amends Section 1867 of the Social Security Act to require Medicare-participating hospitals with emergency departments to screen and treat the emergency medical conditions of patients in a non-discriminatory manner to anyone, regardless of their ability to pay, insurance status, national origin, race, creed or color. Charity care that was once provided by local and state governments was shifted to hospitals, who were now obligated to care for anyone one an emergency medical condition, effectively making EMTALA the national health care policy for the uninsured. Since hospitals do not receive direct funding from the Federal government for any such emergency care that they provide to the uninsured or underinsured "free riders," they shift those uncompensated costs onto other patients or payers.

viewed this individual mandate in the context of catastrophic insurance, rather than social insurance as in Enthoven's model.

In 1991, Pauly, Damon, Feldstein and Hoff published "A Plan for 'Responsible National Health Insurance,'" in which they propose their own national health insurance structure. Similar to the Heritage Foundation publication, Pauly et al. also require that everyone purchase at least a minimum level of insurance. They also argue for individually mandated insurance coverage on the basis that it is both more "humane" to provide health care on a timely and systematic basis for everyone rather than through "haphazard" uncompensated care and Medicaid eligibility. This would be less costly for society which would otherwise pay for this expensive haphazard care, usually given to the uninsured in late stages of illness. Like Butler and Haislmaier, they suggest changing the tax structure so that individuals receive tax credits, rather than employers, with employees enjoying the tax-free treatment of their health insurance costs. They also believe individuals will be more cost-conscious if they are purchasing their insurance themselves rather than paying a portion of the costs through their employer. Pauly et al. do, however, provide more details on the minimum coverage requirement set by the government, which would offer a combination of preventive and acute care services determined to be most cost-effective and beneficial. While the price of these plans would be tiered by income, those with the ability to do so would have the opportunity to purchase higher-cost plans with a more expansive benefit package. Low-income individuals could receive tax subsidies from welfare agencies who would then receive the individual's tax credit once it arrived.

Evolution of Health Care Reform: the Health Insurance Exchange and the Individual Mandate

Although serious national health care reform efforts did not begin until after the Great Depression, health reforms at more than a single-state level was being proposed as early as 1912 when Theodore Roosevelt campaigned for national health service as part of the Progressive party platform (Minor/Third Party Platforms: “Progressive Party Platform of 1912”). National health care reform efforts during the 1920s were limited and faced significant opposition as it was likened to Germany’s “socialized medicine” (Palmer, 1999). During the 1930s President Franklin D. Roosevelt considered, but did not officially propose, national health reform both before and after the passage of the Social Security Act in 1935 that included compulsory health insurance for residents of states deciding to participate in the system. In 1945, President Harry Truman introduced a proposal through which the federal government would provide universal, yet voluntary, health insurance to all citizens. Truman’s plan faced tremendous opposition and was criticized as being a gateway to socialism. Subsequently, health care reform efforts subsided as access to health care and health insurance expanded during the prosperous post-WWII years.

A resurgence of interest in national health care during the 1970s produced a wide variety of proposals, none of which succeeded in becoming law. Some plans, like two separate plans proposed by Senator Edward Kennedy and Representative Martha Griffiths in 1970 placed the federal government as the universal, single-payer for health insurance or the organizer of a top-down, strictly budgeted, health care system providing universal health care coverage for all citizens. Other proposals, like the Comprehensive

Health Insurance Act presented by President Nixon in 1974, and President Carter's Phase I National Health Plan proposal of 1979 included mandates that employers provide a minimum level of health insurance to their employees, usually referred to as "employer mandates." The federal government would provide health care insurance to the poor, aged and unemployed. Other reforms proposed some sort of income-tax credits dependent on family income levels that would be provided to individuals purchasing insurance, like the Fulton-Broyhill bill in 1970. Other notable bills, including a proposal by Senator Javits in 1970, expanded Medicare to all citizens (Sommers 1971, 127-134).

After another lull in health care reform efforts, President Bill Clinton made the next serious attempt at restructuring the national health care system through another Health Security Act which he presented in 1993. Some of its more radical provisions were:

- Employer mandate: required employers to make premium contribution payments equal to those of any eligible individuals they employ.
- Individual mandate: No "eligible individuals" could disenroll from a health plan before enrolling in a different plan or Medicare.
- Defined a minimum, standard benefit package and outlined three choices for cost-sharing arrangements that all plans must follow.
- Required the state to create at least one "regional alliance." These followed the principles of managed competition described by Enthoven and controlled the availability of health plans, enforced health budgets, enrolled employers and employees in the new system, collected premiums, and generally enforced the national insurance rules and regulations. Regional alliances would provide a selection of health plans, including at least one fee-for-service plan, from which eligible individuals could choose.
- Any individuals purchasing a plan providing wider benefits than the minimum benefit package could do so with their own after-tax dollars.

The Clinton Health Security Act proposed a radical change to the operation of the health insurance industry in the United States. For various reasons beyond the scope of this paper, the Clinton plan was defeated. Although it represented one of the first large-scale plans to include both an individual mandate and the idea of a health care exchange or managed competition, the inclusion of an employer mandate and requirement to contribute to employees' health insurance costs would have actually strengthen the relationship between employers and the provision of health care. This deviates significantly from the ideas of individual responsibility and cost-consciousness at the crux of Stuart's original concept of the individual mandate.

Republicans countered the Clinton Health Security Act with various proposals, a few of which included a provision requiring individuals to purchase some type of health insurance. At the time, conservatives presented the individual mandate, which supported ideal of individual responsibility, as a better alternative to the employer mandate in the Clinton plan as well as any government-run plans. Republican bills like Representative Rick Santorum and Senator Phil Gramm's "Comprehensive Family Health Access and Savings Act" and Representative Cliff Stearns and Senator Don Nickels' "Consumer Choice Health Security Act" possessed de facto individual mandates, although they were not called as such, through various penalties for lack of insurance (Latino 2011). The "Health and Equity Access Reform Today Act of 1993," sponsored by Republican Senator John Chafee is one of the more detailed republican proposals of that time. It explicitly required individuals to purchase health insurance, except for religious reasons.

Chafee's proposal would have created a federal Benefits Commission to set standards for health insurance plans. Each state would organize purchasing groups (not

more than one covering the same geographical area) to accept small employers, and eligible employees and individuals, market qualified plans to members, enter into agreements with qualified plans and small employers, and enroll eligible individuals in qualified plans. The purchasing groups would also disseminate information regarding available insurance plans. They could accept premiums on behalf of individuals, but were not held responsible in cases on non-payment. The proposal also required large employers to follow certain guidelines including providing a certain minimum number and types of plans and did not allow them to purchase health insurance through the individual and small employer purchasing groups. Although employers of all sizes would be required to provide health insurance options to their eligible employees, they were not required to make a contribution towards employees' health care coverage. Low-income individuals not enrolled in Medicaid would receive vouchers to help pay for health insurance premiums. Chafee's proposal essentially incorporated a health insurance exchange but limited its scope by excluding all large employers from participating. It is interesting to note, that the Massachusetts health exchange also excludes regular employees (not temporary or part-time employees) of large employers.

While interest in sweeping national health care reforms waned after the failure of the Clinton Health Security Act individual states embraced the idea of increasing access to health insurance for underserved markets through health care exchanges. Small-group markets have been especially targeted as policy makers believed that health insurance exchanges or even purchasing pools or cooperatives would simplify and decrease the costs to small employers of offering health insurance. States like New York, Utah and Connecticut currently operate health insurance exchanges (either publicly, through a

public-private partnership or a not-for-profit entity). California's small business exchange, the Health Insurance Plan of California (HIPAC), later renamed PacAdvantage, began operations in 1993, but the high costs of its enrollees rendered the program unsustainable by 2006 (Kramer and Weinberg 2011, 2).

Despite the apparent popularity of health exchanges or purchasing pools for the small-business or individual markets, these mechanisms were rarely expanded to encompass a greater section of the population. In 2004, the District of Columbia insurance commissioner proposed legislation that would have created a state-wide insurance exchange. Maryland and Massachusetts proposed a similar model in 2006. All three state proposals allowed a much larger segment of the state population to benefit from the proposed exchange than previous proposals which were limited to small-groups. Unlike the Massachusetts reform which has now been implemented for 5 years, the D.C. and Maryland proposals did not include an individual mandate (or employer mandate). The Massachusetts's health exchange, named the Commonwealth Health Insurance Connector Authority (the Connector), provides health insurance options to low income individuals in public health programs like Medicaid and Children's Health Insurance Plan, who receive individual subsidies. Through a separate program, the Connector offers health insurance choices to individuals and families, young adults, employees, and small employers. Health plans must meet certain standards to participate in the Connector and are grouped into four categories based on actuarial value to facilitate comparisons for consumers. Individuals over the age of 18 must purchase health insurance, or face financial penalties. Exceptions are made based on religion, or financial hardship that makes even the cheapest plan unaffordable. While all employers with more

than ten full-time employees must also provide health insurance to employees or face financial penalties, only those with fewer than 50 full time employees may offer plans through the exchange.

In 2007, the next major national health reform, the Healthy Americans Act, was introduced by Democratic Senator Ron Wyden. It required all eligible adults to enroll in a health insurance plan, including a Healthy Americans Private Insurance Plan created through the bill. The bill did not pass in 2007, and Senators Wyden and Bennett reintroduced the legislation in 2009. Due to its support from both Republicans and Democrats, it was considered by many to be the only truly bipartisan alternative during the national health care reform debate that culminated in the passage of the Patient Protection and Affordable Care Act in 2010 (ACA).

The Wyden-Bennett proposal also included an individual mandate and set forth penalties for those who remained uninsured but did not qualify for an exclusion (i.e., for religious reasons). The plan would have gone the farthest to weaken the link between employment and health insurance as it required all individuals to purchase one of the insurance plans listed by state-run health insurance exchanges and provided generous tax deductions as well as sliding scale subsidies for low-income individuals. It also required employers to contribute towards employee health insurance costs if they provided them insurance, while eliminating the current tax exclusion for employer-sponsored insurance. At the same time, employers could increase worker wages by the amount of health insurance premiums instead of making health insurance contributions (Kaiser Family Foundation). While this bill more closely represented the concepts of the health care exchange and individual mandate than the alternatives, it was considered too radical by

many. Moreover, critics were concerned that the bill would not provide a long-term solution to the health care problem since some of the provisions in the bill were to be phased out after some years. Similar to this proposal, the national health care reform that finally passed in 2010, the ACA, also included an individual mandate and health insurance exchanges (at the state or multi-state level), but does much less to weaken the link between employment and health insurance. The ACA, which is currently being implemented (and debated) is explained in more detail in the following chapter.

ECONOMICS OF THE HEALTH INSURANCE EXCHANGE

Economic Theory and the Health Insurance Exchange

Perfectly Competitive Markets

Although unrealistic, the neoclassical ideal of the perfectly competitive market provides a great starting point for the evaluation of real-life markets. In a perfectly competitive market, rational economic actors act in their own self-interest, and in doing so, efficiently allocate available resources to produce goods valued by consumers. This market requires the following characteristics to reach economic efficiency:

- A large number of buyers and sellers. Due to their small size and small market share, prices are determined by supply and demand—they are all price-takers. No one seller nor buyer, may influence the market price of a good. In other words, each seller faces a horizontal demand curve so that changing its production would change the quantity sold, but not the price. As a result, a seller's average revenue is the same as the marginal revenue from each additional good so the market price is equal to marginal revenue. Similarly, each buyer faces a horizontal supply curve, so that changing the quantity of goods purchased does not affect the price. A buyer's average utility is the same as the marginal utility from each additional good, so the market price is also equal to the marginal utility. Thus, in the long run, both sellers and buyers maximize their gains. Moreover, demand and supply are independent so that suppliers cannot influence buyers' demand.
- Goods in the market are homogenous so that any one may be substituted for another.
- There is perfect information so that all sellers know the prices and costs of other sellers and all buyers know all sellers' prices. Additionally, all buyers have complete knowledge regarding the good they are purchasing and all sellers have access to the same technology.

- Firms do not encounter any barriers to the entry into, or exit from the market.
- There are no transaction costs so that neither buyers nor sellers incur additional costs when making a transaction.
- There are no externalities from the production or consumption of a good. All costs or benefits from a transaction are captured by its price.

If all conditions are satisfied, the market for a good is completely competitive and, according to Neoclassical theory, the market will function efficiently.

Health Insurance: Market Failure

Due to the complicated nature of the health care system, and the current emphasis on health care insurance as the main vehicle for receiving health care services, this paper will focus on the relationship between health care consumers and health care insurers while indirectly referring to issues regarding providers. More often than not, markets do not actually satisfy all conditions of perfect competition, in which case the markets “fail” to bring about economic efficiency. Although most markets experience market failures, the market for health care and health insurance is exceptional in that it does not satisfy any of the conditions for perfect competition. As a result, health care resources are not allocated efficiently and goods (i.e., health insurance and health care) are not produced in the appropriate quantity at the appropriate price to maximize the welfare of all participants. Moreover, goods are priced higher than in a perfectly competitive market and undersupplied. As will be explained below, the existing market favors the suppliers of health insurance over consumers, or potential consumers, of health insurance, allowing the former to reap substantial gains at the expense of the latter.

Size Matters: Industry Concentration

The health care system is largely characterized by a substantial level of concentration of providers, certain purchasers, and insurers. As mentioned in the previous chapter, large hospital systems and multi-physician groups have become quite common. Some large purchasers, such as the federal government, are able to set prices or establish restrictive pricing mechanisms through Medicare and FEHB, states through Medicaid, and some very large employers. Similarly, most health care researchers agree that the health insurer consolidations over the last few decades have resulted in highly concentrated health insurance markets. In a 2004 study James Robinson examined concentration in the health insurance industry for 47 states and the District of Columbia and found that the largest three insurance companies controlled at least 50% of the market in all but three states (Robinson 2004, 13). A study conducted by the AMA in 2007 using the Department of Justice and Federal Trade Commission guidelines, found that the combined HMO and PPO markets were highly concentrated in over 90% of metropolitan statistical areas (*Competition in health insurance: A comprehensive study of U.S. markets: 2007 update*, 5). A 2004 study by the Government Accountability Office focusing on the small group health insurance market also found a high degree of insurer concentration in most states (Austin and Hungerford 2009, 27-28).

The degree of concentration in the health insurance industry is aided by the presence of diseconomies of small scale and the nature of pooling. The unit costs for health insurers decrease as they increase in size, so a large number of competing insurers would result in higher unit costs. On the other hand, a monopolistic insurer would

probably exploit decreased unit costs and inflate its prices to increase its profit. In either scenario, the market would fail as some consumers would not be willing to pay the inflated prices for insurance. Various studies, however, have found that health insurer concentration allows them to extract lower prices from large hospital associations and other provider groups, thereby countering the potential bargaining power of providers (Melnick, Shen and Wu 2011, 1730). It is unclear whether insurers, especially commercial insurers responsible for increasing shareholder value, would pass lower costs on to smaller consumers. Several studies have found “little empirical evidence on competitive conduct by health insurance firms” (Dafny 2010, 1399). Leemore Dafny considered whether insurers can affect prices by examining their ability to extract rents from large employers when the latter experience positive profit shocks. Dafny concluded that insurers, even in markets with 10 or fewer insurers and particularly in markets with 6 or less insurers, were able to extract price increases from employers whose profits had increased.

This data supports the popular belief that the health insurance market is oligopolistic, with a few, large sellers dominating the market. As a result of their size, these large, dominant sellers no longer face a horizontal demand curve, but rather a downward-sloping curve, which allows them to influence prices by altering production. These sellers are able to price goods above their marginal costs such that the quantity demanded (and supplied) at this higher price is lower than what it would be in a perfectly competitive market. The high prices and low supply of health insurance resulting from

this structure are exacerbated further by the presence of additional failures in health insurance markets.

Insurance Product Heterogeneity

Health insurance products are many and varied. There are several types of health insurance plans represented by various letter combinations: HMOs, PPOs, CDHPs (Consumer Directed Health Plans) with HSAs, and whichever new products insurers are enthusiastically devising. This variety is compounded by the fact that these plans contract with different providers, who undoubtedly provide care of varying quality. According to Austin and Hungerford, the demand for health insurance is a function of an individual's level of risk aversion, the variability of medical expenses, the effectiveness and level of benefits covered by the insurance, income, premiums and the level of cost-sharing (Austin and Hungerford 2009, 15). Thus, the different insurance products which provide different benefits, and often different levels of cost-sharing, are not perfect substitutes.

Imperfect Information

Insurance products and the health care they cover are very difficult to understand. The heterogeneity of insurance products makes understanding products and product differences difficult for consumers. Moreover, insurance contracts are incredibly complex and insurance companies have been known to make them even more difficult to understand if they believed that it would increase their profits. At the same time,

information regarding the quality of benefits and providers covered by a plan is difficult to obtain and examine. Health and health care services are also difficult to understand and require many years of specialized training and certification. Thus, not only would average or even above average consumers find it incredibly difficult to understand insurance products, they would also find it difficult to know which health care services they need. As a matter of fact, consumers rely on physicians to tell them what services they need. This creates a “principal-agent” problem because the physicians may have incentives to act in their own best interest rather than their patients’. This is of particular concern in fee-for-service models where physician payment is positively correlated to the amount of services they provide, or if certain services are reimbursed above cost.

Asymmetries of information between consumers and insurers and the inherent uncertainty in future health care needs also result in adverse selection and moral hazard. Consumers have more information about their own health care needs than insurers. As a result, insurers may price premiums so that relatively healthier people are not willing to pay the premiums. If this occurs, the overall premiums for the remaining group of insured people will rise as the overall “health” of members is poorer. As premiums increase, those with lower expected health care costs will forego coverage. If this continues, insurers are forced to charge high premiums which leave high-risk consumers unable to afford the premiums and prevent lower-risk consumers who would be willing to pay for lower premiums, from purchasing insurance. Although only the latter case represents adverse selection, since a good that individuals would be willing and able to purchase is not offered, society generally disapproves of both types of uninsurance.

In order to avoid this, health insurers have tried to attract healthier customers through experience rating which calculates their premiums based on previous health care experience, and by offering cheaper, specialized insurance products. At the same time, they have tried to discourage enrollment of sicker customers by charging unaffordable premiums, refusing to cover expensive services based on pre-existing conditions or refusing to cover sicker customers altogether. This process of “skimming” or “creaming off” was used by commercial insurers to compete against the Blues who were left with the sickest and most costly enrollees. High-risk pools created by various states have had limited success due to adverse selection. Since sicker individuals are more likely to pay more for insurance, they increase the cost of care, while healthier, low cost clients who would help balance the risk pool, forego the expensive insurance. The insurer is thus left with only the most expensive, sicker enrollees. Research on the subject spanning three decades suggests that adverse selection is quantitatively large (Austin and Hungerford 2009, 17). Adverse selection is especially problematic in the individual and small group markets since the baseline for their premiums is higher than for the large group market.

Insurers' lack of information regarding the future health needs of their customers is exacerbated by moral hazard. Individuals' demand for health care may change once they are insured and result in their overconsumption of health care. Insured individuals, for example, may seek care for more minor conditions, more costly procedures, or additional discretionary care than they would if they were not insured. Moreover, they may engage in more risky behaviors or unhealthy habits since they know they may easily access health care if need. As a result, insurers may pay more for consumers' health care

than the consumers themselves, had the latter paid for services with their own money. In a similar vein, individuals may wait until they become sick to purchase health insurance or switch to a plan with more comprehensive coverage provided by unknowing insurers. Insurers attempt to prevent this by limiting enrollment periods to specific, limited time periods, usually only once a year. Providers may also engage in moral hazard if they alter their provision of health care based on differences in compensation they receive for different procedures. If they receive compensation above their costs for certain procedures, for example, they may recommend those procedures more often than they would otherwise and more often than procedures for which they receive a lower compensation.

Barriers to Entry and Exit

Entry into the health insurance market is incredibly difficult due to a variety of factors. The health insurance industry is complex and requires specialized knowledge. It would take significant education and training to understand insurance products as well as insurance financing and risk pooling. In order to enter the health insurance market, a firm would have to create a network of providers and bargain with pharmaceutical companies; it would have to compete against the generally large and established insurers with existing connections to physicians in the area. An entrant would also have to compete with existing firms for customers. It is not difficult to imagine large existing insurers dropping their prices to undercut a new entrant. Existing firms also have stable reputations and well-developed marketing campaigns, which would make it difficult for a

new entrant to become established. While entry into the market is obviously challenging, regulations preventing insurers from discontinuing coverage may also make it difficult to exit the market.

Transaction Costs

Transaction costs in the health insurance industry are relatively high. The cost of obtaining information on health insurance products and making an informed choice are inversely related to the size of the group seeking insurance. Larger groups are able to spread the cost of searching for the appropriate health insurance across more individuals, while the smallest group, an individual for example, must often work with an insurance broker who understands insurance products and charges customers a fee for using his knowledge. Similarly, health insurers include a loading fee in their premiums that includes administrative costs and profits. Larger groups enjoy economies of scale as loading costs can be spread across more enrollees, who pay a lower fee individually, compared to smaller groups. As a matter of fact, a recent study examined the loading fees for employers of varying sizes. On average, loading fees for employers with less than 100 employees were 34% of premiums while those for employers with 100 to 99,999 employees were 15%, and those for employers with 100,000 or more employees were 4% (Abraham, Karaca-Mandic and Phelps 2011, 181).

Externalities

Most researchers agree that there is a significant correlation between health insurance coverage, and access to health care and health outcomes. As a result, the provision of health insurance is closely related to the provision of health care, or lack thereof. The provision of needed health care has two significant positive effects on parties outside of the health care transaction and potentially society as a whole. First, healthy individuals are less likely to spread communicable diseases and are more productive workers. Second, as Donaldson and Gerard explain, certain members of society receive a “caring” externality from knowing that another person is receiving necessary health care. This is often characterized by the concern people may have for those who are less well-off (Donaldson and Gerard 2005, 41). Since health care is so intimately tied to well-being, many in society believe that access to necessary health care services should not be denied based on someone’s inability to pay. Just as the provision of health care has positive externalities, the lack of health care has negative externalities. If access to necessary vaccines or other services is denied, certain contagious diseases, for example, could spread throughout the population. If altruistic or caring persons find out that susceptible individuals are not receiving needed health care, they may be negatively affected. This group includes people who research and support changes in the health care system with the goal of improving access to care for those who would otherwise be neglected.

The provision of health insurance has an additional effect, as it prevents free-riding. Free riding occurs when individuals are unable to pay for the care they receive. This happens when the uninsured or underinsured encounter a medical emergency or illness and seek treatment. Although hospitals and physicians receive some public funds for uncompensated care through the Medicaid program, they may not be fully compensated for their services. As a result, hospitals and physicians increase their costs to regular consumers to offset their losses resulting from free riders. Ultimately, taxpayer funds allocated towards uncompensated care and premiums paid by the uninsured increase.

Role of Health Insurance Exchanges in Correcting Market Failures

According to Enthoven's conception of managed competition, "sponsors" or "health insurance exchanges" would be able to correct many of the market failures present in the health insurance and health care industries. By actively working on behalf of a group of buyers who would otherwise be fragmented, exchanges would essentially form a large buyer, converting the individual and small group markets into bilateral oligopolies (with a small number of buyers and sellers who have substantial market power). Exchanges could even create monopsonies to counteract the market power of the insurers if all purchasers in one market joined the exchanges. While Enthoven thoroughly described managed competition and the role of sponsors in correcting failures in health insurance markets, his explanation of the economic theory behind their workings was relatively superficial. Economic theory regarding bilateral oligopolies where a few

buyers and a few sellers have substantial market power is not as well developed as theory for perfect competition or where substantial asymmetries between sellers and buyers exist (i.e., there is one monopoly, one oligopoly, or imperfect competition among sellers) and can become complex and include bargaining or game theory. There is a growing interest, however, in theories and studies on the countervailing power of large buyers to offset the market power of existing, oligopolistic sellers. Although Enthoven did not discuss countervailing power, sponsors bear a striking resemblance to the consolidation of buyers which John Kenneth Galbraith believed would emerge to counteract the increasing market power of sellers.

The term “countervailing power” was coined by Galbraith in 1952 in his book on American Capitalism. Galbraith claims that American capitalism is no longer characterized by competition in its classical form, but rather is mostly controlled by large corporations which are able to exercise significant market power (Galbraith 1952, 109). Galbraith disagrees with the classical belief that competition is a self-generating force as the large profits derived by firms with market power inspire competition to obtain part of those profits. Instead, he argues that barriers to entry into markets with large existing firms are so great that competitors rarely enter those markets. A different self-generating force, however, does appear to restrain the power of the large corporation in the place of competition:

In fact, new restraints of private power did appear to replace competition. They were nurtured by the same process of concentration which impaired or destroyed competition. But they appear not on the same side of the market but on the opposite side, not with competitors but with the customers or suppliers... I shall call it *countervailing power*. (Galbraith 1952, 111)

Galbraith supports his theory of countervailing power by citing the abundance of strong buyers in the majority of non-retail U.S. industries. Galbraith also distinguishes his theory of countervailing power from bilateral monopoly, as countervailing power allows buyers to create competition between small groups of sellers in an otherwise uncompetitive market. This is one of sponsors' essential roles in Enthoven's model of managed competition. Thus, the author discusses existing literature on market structure and countervailing power to provide insights into the potential for sponsors (or health insurance exchanges) to foster competition and correct market failures.

Empirical studies based on Galbraith's theory of countervailing power in the health care system have generally concentrated on the relationship between insurers as the buyers and health care providers, particularly large hospitals, as the sellers of health care. Several studies find that large insurers are able to extract discounts or lower prices from providers. J.B. Herndon analyzes the interaction between managed care plans and physician unions in the market for health care. She finds that the traditional monopsony model (in which the monopsonists' ability to extract lower prices decreases the quantity of health care supplied by physicians) does not explain her observations of that market. Instead, Herndon suggests an "all-or-none" model of monopsony to illustrate how monopsony managed care plans are able to extract lower prices from physicians while maintain the same quantity of care. As the sole purchasers in the model, monopsonies are able to bargain with providers to reduce their prices for the same quantity of services. They are able to do so because providers know that if they are unable to contract with a monopsony, the monopsony can easily contract with a different group of providers.

(Herndon 2002, 200). Although the all-or-none model is applied to a monopsonistic market, the model may be extended to oligopsonistic markets. If single buyers represent a large enough portion of the market, they may force existing sellers to compete with each other and decrease their prices rather than lose that volume of sales to another seller. Similarly, Enthoven's sponsors would change the rules of the game and act as gatekeepers which allow insurers access to their market.

Other studies find empirical evidence that increased consolidation among health insurers has allowed them to extract lower prices in concentrated hospital markets (Moriya, Vogt and Gaynor 2010, and Melnick, Shen and Wu 2011). Gaynor, Moriya and Vogt examine how insurer and hospital market concentration affect the prices of hospital services using panel data spanning three years for transaction prices for health care services for over 11 million Americans with private insurance. The authors use the Herfindahl-Hirschman index (HHI) to measure industry concentration and find a statistically significant correlation between increased insurer concentration and decreased prices for hospital services. Interestingly, they find that increased hospital concentration is not significantly correlated with increases in the prices for hospital services. This may be because the hospital markets are already substantially concentrated. Melnick Shen and Wu use two years of data on prices of hospital services and managed care organizations (MCOs) covering 90% of the U.S. to examine the relationship between concentration among hospitals and among MCOs. They find that, despite the increase concentration among health insurers, more than 90% of hospitals still operate in markets where hospital concentration exceeds health plan concentration. In markets with the

greatest health plan concentration, however, hospital prices are approximately 12% lower than in more competitive health plan markets (Melnick, Shen, Wu 2011, 1730-1731).

These studies on the interaction of insurers and providers with different levels of market concentration indicate that an increase in buyer concentration can result in decreased prices for goods without decreasing the quantity supplied. This accepts the assumption that firms in more concentrated industries are able to reap larger than normal profits. In increasing the market power of buyers, some of the benefits enjoyed by the firms, in the form of excess profits, will be transferred to buyers, in the form of lower prices for goods. Thus, since the health insurance industry is significantly more concentrated than insurance purchasers, especially in the individual and small group markets, research suggests that health exchanges could potentially provide purchasers with substantial benefits through lowering premiums (prices). If exchanges are able to extract premium decreases from insurers, this would have the additional benefit of increasing access to care to those who are able to afford lower premiums.

Enthoven's model of managed competition gives health insurance exchanges (acting as "sponsors") substantial powers and responsibilities to mitigate or correct other market failures. As representatives of a large group of buyers, the market share of health insurance exchanges would allow them to use their countervailing power to change the rules of the health insurance market. To foster additional competition among health insurers, exchanges would encourage and support efforts of new insurers to enter the market. To foster competition among providers, exchanges would divide providers into competing units rather than allowing them to contract with most plans in their area.

Exchanges would also try to correct informational asymmetries by disseminating information to consumers on health plan contracts, benefits, costs, quality and customer satisfaction. They would select similar or standardized plans that would reduce the degree of heterogeneity in health insurance products. This would facilitate comparison shopping and limit adverse selection. To mitigate risk selection by insurers, exchanges would ensure that health plans are able to accurately price the health care costs for potential enrollees through appropriate risk rating and require continuity of coverage for enrollees. Exchanges would also provide subsidies to lower costs sufficiently so that individuals would be willing to pay for insurance rather instead of potentially needing a “free ride” in the future.

The Affordable Care Act and Health Insurance Exchanges

After a year-long debate in Congress between several competing proposals, President Barak Obama signed the first comprehensive national health care reform legislation, the Patient Protection and Affordable Care Act (ACA) on March 23, 2010 (Public Law 111–148). A week later, President Obama signed the Health Care and Education Reconciliation Act of 2010 (Public Law 111-152), which amended portions of the ACA (and included some student loan reforms). To limit potential confusion, the author refers to the amended health care reform law as the ACA.

General Provisions

The ACA includes a variety of reforms affecting most areas of the health care system, ranging from expansions of public programs to initiatives aimed at increasing the health care workforce, especially for the provision of preventive and primary care. The major areas of reform are summarized below:⁷

- An individual mandate requiring all U.S. citizens and legal residents to have a minimum level of health insurance coverage or face a tax penalty of “up to \$695 per year to a maximum of three times that amount per family or 2.5% of household income” that will be phased in through 2016 (Summary of New Health Reform Law 2011, 1).
- Provision of premium credits and cost-sharing subsidies to low-income individuals up to 400% of the Federal Poverty Level (FPL) on a sliding scale.
- A “play-or-pay” provision requiring employers with 50 or more full-time employees to offer health insurance coverage or pay a fee. Provides several levels of tax credits for small businesses with up to 25 employees depending on their size.
- Medicaid eligibility expansions (to be implemented by 2014) and increased federal financial participation for the newly eligible.
- Medicaid and Medicare payment reforms aimed at containing costs and increasing compensation for the provision preventive and primary care.
- Creation of various entities (federal, state, and non-profit) to research strategies to improve health care provision, financing and health outcomes.
- Provision of grants for public demonstration projects or research regarding health care innovations, particularly payment reforms, care coordination and value-based purchasing.

⁷ The Henry J. Kaiser Family Foundation provides an excellent summary of the ACA reforms in greater detail on its website at: <http://www.kff.org/healthreform/upload/8061.pdf>.

- Requirement that states create health insurance exchanges through which individuals and small-employers may purchase qualified coverage and outlines the exchanges' responsibilities. Establishment of a health insurance Navigator to help customers "navigate" the new exchanges.
- New regulations on insurers to protect consumers and decrease administrative waste. Standardization of various regulations across the individual and small-group health insurance markets, and the health insurance exchanges.
- A tax on insurers of employer-sponsored plans above a certain value, and annual fees on pharmaceutical manufacturers and health insurers.

The reforms contained in the ACA affect both the public and private spheres of the health care system by expanding public assistance and increasing regulations on private insurers. They emphasize increased access to health insurance while attempting to control costs through payment reforms. They support preventive and primary care and greater coordination in the provision of health care. While the focus of this paper is on health insurance exchanges, it is important to remember that the ACA contains a set of provisions beyond those specific to the exchanges which also influence their success. Thus, a more thorough explanation of these provisions, in addition to the health insurance exchanges, is included in the following section.

State Health Insurance Exchanges

The ACA allows states significant flexibility in designing their own health insurance exchanges, which has been maintained throughout subsequent guidance from the Secretary of the U.S. Department of Health and Human Services (the Secretary) on their implementation.

Establishing Health Insurance Exchanges and Operational Requirements

Section 1311 of the ACA provides grants to states to establish an American Health Benefits Exchange (for individuals) and a Small Business Health Options Program (SHOP Exchange) by January 1, 2014, and outlines most of their operational and oversight requirements. States may choose between establishing their exchanges as a new governmental entity, as part of an existing State agency, or as a separate non-profit entity. They may also decide not to establish an exchange, in which case the Department of Health and Human Services (HHS) will “work with the State” to establish an exchange (Initial Guidance to States on Exchanges 2011). States may also merge their individual and SHOP exchanges into one state exchange or collaborate to form regional or multi-state exchanges. U.S. citizens and legal aliens (who are not incarcerated) not offered qualified health insurance through their employers, or businesses with up to 100 employees may participate in the exchanges. States have the option to limit small-business participation to those with up to 50 employees until 2016. Exclusions from the individual mandate can be made based on financial hardship or religion.

Exchanges must facilitate the purchase of qualified health plans and ensure that all offered plans meet certain requirements by:

- Certifying and recertifying or decertifying offered plans to ensure they meet certain criteria.
- Operating a website to disseminate information and operating a toll-free call center.
- Providing information on public programs like Medicaid and the Children’s Health Insurance Program and offered plans, including price and quality ratings based on a standard methodology, benefit options, actual costs of benefits after taking into account applicable tax credits and cost sharing and in-network providers.

- Providing plan practice data and quality improvement activities specified by the Secretary, such as “claims handling policies, financial disclosures, enrollment and disenrollment data, claims denials, rating practices, cost sharing for out of network coverage” (Initial Guidance to States on Exchanges 2011).
- Developing a single application for public medical assistance programs and premium credits and cost-sharing subsidies which can be accessed through a web-portal or submitted in person, by phone or by mail.
- Engaging in significant outreach activities to reach potential enrollees and organizing annual open enrollment periods. Once enrolled, performing a customer satisfaction survey and publish the results.
- Certifying if an individual is exempt from the individual mandate.
- Providing data on its own operations, such as administrative expenditures, etc.
- Developing easily understandable, standardized formats to present the different sets of information described.

Although the ACA includes many specific and detailed requirements, states are given the greatest flexibility in one essential operational detail of their exchanges—the level of involvement in plan selection. According to the Secretary’s guidance,

States have a range of options for how the Exchange operates from an “active purchaser” model, in which the Exchange operates as large employers often do in using market leverage and the tools of managed competition to negotiate product offerings with insurers, to an “open marketplace” model, in which the Exchange operates as a clearinghouse that is open to all qualified insurers and relies on market forces to generate product offerings (Initial Guidance to States on Exchanges 2011).

As states have begun planning their exchanges, the amount of flexibility allowed has resulted in a variety of different operational structures. The decision between creating an active purchaser or a clearinghouse is highly political and often contentious, dividing public officials along bipartisan lines. The different arrangements that have been enacted or planned by states are described in further detail in the following chapter.

The Federal government has supported states through this process by providing grants to 48 states and the District of Columbia to begin planning their exchanges and will provide additional grants to fund their actual establishment. Once operational, however, the federal government will no longer provide funding to states and will expect the exchanges to be self-funding (they may collect fees or otherwise generate funding for their operation).

Health Insurance Products and Public Subsidies

The ACA includes various health insurance market reforms which effectively standardize important regulations across the health insurance exchanges, the individual health insurance market, and the small-group health insurance market. Although the reforms described below cover major areas of differences between these markets, states may decide to implement further regulations affecting the health insurance exchanges and apply those also to the individual and small-group markets in their states. Section 1251 of the ACA phases in provisions that will require guarantee issue and renewability of new health plans by 2014 by eliminating pre-existing conditions exclusions, annual and lifetime limits on the dollar value of coverage. The ACA also requires health plans to defend annual premium increases and gives states the authority to deny “unreasonable” increases (as defined by HHS with input from states, the insurance industry and consumers).

Section 1301 of the ACA specifies requirements for “qualified health plans” which may be offered through the exchange: 1) they have been certified by the exchange;

2) they provide the essential benefits package defined by states; 3) they are offered by a health insurer licensed in the appropriate State; 4) the insurance company offers at least one qualified health plan in the silver level and the gold level through the exchange; 5) they charge the same premium rate for the same plan offered through the exchange and an outside market; and 6) they comply with any other necessary regulations developed after the passage of this legislation. Additionally, states must offer at least two multi-state plans through each exchange, one of which must be offered by a non-profit entity (Summary of New Health Reform Law 2011, 4).

According to the Center for Consumer Information and Insurance Oversight, “non-grandfathered plans in the individual and small group markets both inside and outside of the Exchanges, Medicaid benchmark and benchmark-equivalent, and Basic Health Programs must cover the EHB [Essential Health Benefits] beginning in 2014” (Essential Health Benefits Bulletin 2011, 1). Self-insured health plans and plans provided through the large group market are also exempt from this requirement. Similar to many other provisions, the federal government has refrained from prescribing reform details that states must follow. The ACA lists 10 categories of service which must be covered in a state’s essential benefits package. Recent guidance from HHS recommends four possible benchmark plans which are likely to cover the essential health benefits. These include the largest insurance products (by enrollment) in the state’s small group insurance market, offered to state employees, offered by the FEHB Plan, and offered by a non-Medicaid HMO.

While all plans offered through the exchange must cover the essential health benefits, states have the option to offer additional benefits, although these would not be eligible for additional federal financing. In order to standardize the insurance market while allowing a variety of choices, all newly offered insurance plans must fall within four actuarial value levels, or offer only catastrophic coverage (for younger adults only). A plan's actuarial value is determined by the percent of expenses covered by a plan for a standard population. Hence, a plan with a lower actuarial value would require greater cost-sharing than a plan with a higher actuarial value. The following types of plans will be available on January 1, 2014:

- Bronze Plan - 60% actuarial value, with current Health Savings Account (HSA) out-of-pocket limits (these were \$5,950 for individuals and \$11,900 for families in 2010). This plan is the benchmark for minimum creditable coverage tied to the individual mandate.
- Silver Plan – 70% actuarial value, with current HSA out-of-pocket limits.
- Gold Plan - 80% actuarial value, with current HSA out-of-pocket limits.
- Platinum Plan - 90% actuarial value, with current HSA out-of-pocket limits.
- Catastrophic Plan – Available only to individuals up to age 30 or those exempt from the individual mandate. Provides catastrophic coverage and limited preventive and primary care (exempt from deductibles) at current HSA coverage levels.

While plans must meet the specified actuarial standards, specific cost-sharing and benefits structures may still vary between different plans since insurers may use a combination of differed copayments, coinsurance and deductibles.

The ACA also includes provisions for premium credits and cost-sharing subsidies for U.S. citizens and legal immigrants with family incomes up to 400% FPL. Premium

contributions are limited to certain percentages of income on a sliding scale such that premium contributions for the lowest income group, up to 133% FPL, are capped at 2% of income and for the highest income group, 300 - 400% FPL, are capped at 9.5% of income. Cost-sharing is also subsidized, which effectively increases the actuarial value of a plan. Table 1 below lists the available plan tiers and the effects of subsidies on the actuarial value provided by plans.

Plan Tier	Applies to	Out-of-Pocket Maximum	Actuarial Value
Bronze	All individuals and small businesses	HSA Level	60%
Silver	All individuals and small businesses	HSA Level	70%
Silver	Incomes 300 – 400% FPL	2/3 HSA Level	70%
Silver	Incomes 250 – 300% FPL	1/2 HSA Level	70%
Silver	Incomes 200 – 250% FPL	1/2 HSA Level	73%
Gold	All individuals and small businesses	HSA Level	80%
Gold	Incomes 150-200% FPL	1/3 HSA Level	85%
Platinum	All individuals and small businesses	HSA Level	90%
Platinum	Incomes 100 – 150% FPL	1/3 HSA Level	94%

Table 1: Actuarial Values and Cost-Sharing Subsidies in the ACA from The Henry J. Kaiser Family Foundation. *Focus on Health Reform: What the Actuarial Values in the Affordable Care Act Mean*. April 2011.

The ACA also provides states with the option to create a “Basic Health Plan” for uninsured individuals with family incomes between 133 – 200% FPL, who would otherwise receive premium credits and cost-sharing subsidies through the exchange. Basic Health Plans must offer the essential benefits package and may not impose greater cost-sharing than a plan that would have included the credits and subsidies for that level of income.

Consumer Operated and Oriented Plans

Section 1322 of the ACA creates the Consumer Operated and Oriented Plan (CO-OP) program to “foster the creation of qualified nonprofit health insurance issuers to offer qualified health plans in the individual and small group markets in the States in which the issuers are licensed to offer such plans” (Public Law 111-148). In order to receive federal grants and loans, these member-run CO-OPs must not be an existing health insurer and must fulfill several requirements such as being independent from the state or local governments, be held responsible to a majority vote of its members and use its profits to lower premiums. As of March 29, 2012, a total of 10 non-profits offering coverage in 10 states have been awarded \$845,012,408 in low-interest loans (New Loan Program Helps Create Customer-Driven Non-profit Health Insurers 2012).

Risk-Rating and Risk-Adjustment

Modified community rating of plans is allowed in the ACA but only on the basis of age (limited to a 3 to 1 ratio), geographical area, family composition and tobacco use (limited to a 1.5 to 1 ratio) (Summary of New Health Reform Law 2011, 5). This means that insurers may increase premiums for older enrollees, but by no more than three times the amount they charge the youngest enrollees. Similarly, insurers may increase premiums for smokers to up to 150% those of non-smokers.

Sections 1341 – 1343 outline the basic requirements for the implementation of the reinsurance program, risk-corridors and a risk-adjustment program. The goal of these

regulations is to better spread financial risk between insurers to mitigate incentives to select healthier individuals. These programs are applied to all insurers in the relevant markets and attempt to limit each insurer's losses from insuring high-risk individuals and gains from insuring lower-risk individuals. Final rules released by HHS in March 2012 provide states with substantial guidance for establishing these programs by January 1, 2014. The reinsurance program is intended to operate between 2014 and 2016, although it may continue operating thereafter if available funds remain. Similar to existing reinsurance, the ACA reinsurance program is an insurance policy for insurers in individual markets inside and outside the exchange to protect them from specific-high cost individuals. States have the option to establish their own reinsurance program. Otherwise, HHS will administer reinsurance, even if the state is operating its exchange. The program will collect contributions from all insurers on a per capita basis. States have the option to collect contributions from self-insured plans, large group health plans and fully insured plans. Insurers providing non-grandfathered individual policies inside and outside of the exchange will receive reinsurance recoveries for claims paid on behalf of high-risk individuals for any service covered by the plan, even if these are beyond the essential health benefits.

The risk corridors will be administered by HHS between 2014 and 2016 and apply to all qualified health plans offered through the exchange, and may include qualified health plans offered outside the exchange if these are substantially similar. The risk corridor program will apply at the benefit plan level, and attempt to limit insurers' gains or losses through the exchange within a certain range or "corridor" (Winkelman et.

al. 2012, 2). Through the program, the benefit costs (not including administrative costs) will be compared to a “target amount” of the earned premiums (also excluding administrative costs) for a plan year. The costs must fall within a 3% range above or below the target amount. If plans pay over 103% of the target amount, HHS pays plans for the additional claims. Conversely, if a plan pays under 97% of the target amount in claims, the plan pays HHS the difference (Merlis, 2011).

States have the option to administer their own risk adjustment programs if they have established an approved exchange, or allow HHS to administer the program. The ACA also allows states to develop their own methodology for calculating the transferred payments, although HHS will publish their official methodology, which states may adopt. The risk adjustment program will apply to all non-grandfathered in plans in the individual and small-group markets. Following a methodology based on a plan’s average risk score across all enrollees, risk adjustment programs will make transfers from plans with relatively low-risk populations to plans with relatively high-risk populations. Successful risk adjustment programs will be able to mitigate risk selection by ensuring that plans’ are adequately compensated relative to the “riskiness” of their enrollees. Unlike reinsurance and the risk corridors, the risk adjustment program is not a temporary program, but is intended to operate in conjunction with the exchanges to mitigate adverse selection and ensure the financial viability of the exchange and individual and small-group markets.

The reinsurance, risk corridors and risk adjustment programs established in the ACA must account for new medical loss ratio requirements. The medical loss ratio is

generally calculated as the ratio of claims expenditures to a plan's earned premiums. Thus, higher medical loss ratios demonstrate that a higher portion of premiums paid by enrollees are being used to fund their care. Conversely, lower medical loss ratios can indicate high administrative costs or profits which the insurer is not using to fund health care for its enrollees. States currently have a range of medical loss ratio requirements imposed on health insurance markets. The ACA would change the traditional calculation to add quality improvement expenses in the claims expenditures in the numerator and remove taxes, licensing and regulatory fees from the earned premiums in the denominator.⁸ Insurers with the highest number of enrollees must meet minimum medical loss ratios of 80% for the individual and small group markets and 85% for the large group market. Insurers with fewer enrollees are allowed lower medical loss ratios and those with the smallest number of enrollees (less than 1,000 life years) are presumed to meet the ACA medical loss requirements (Explaining Health Care Reform: Medical Loss Ratio (MLR) 2012, 3). These requirements are intended to limit excessive profits for insurers and incentivize administrative efficiency while acknowledging limitations to small insurers who would otherwise be at a disadvantage in lowering their overhead costs.

Economic Benefits and Potential Problems for Health Insurance Exchanges

State health insurance exchanges, combined with reforms in the ACA, are intended to change the "rules of the game" which have prevented a portion of the

⁸ *ACA Medical Loss Ratio* = $\frac{(\text{Health Care Claims} + \text{Quality Improvement Expenses})}{(\text{Premiums} - \text{Taxes, Licensing \& Regulatory Fees})}$

population from accessing affordable health insurance and obtaining necessary health care. Or, as Nichols states, “enable all Americans to have access to the same economies of scale, product choice, and risk pooling that workers in large firms have” (Nichols 2010, 1154). The overall success of the exchanges in improving access and lowering costs will depend on a variety of factors. The individual mandate, which is currently being debated by the U.S. Supreme Court, and public subsidies, will have the greatest effect on access to insurance, as well as the average cost of insurance for enrollees. Specific state design choices, between an “active purchaser” and a “clearinghouse,” separating or merging the individual and small group exchanges, and the size of small businesses allowed to participate, will influence premiums, costs and access. Exchanges’ success in risk pooling and managing risk between insurers will determine whether they can substantially mitigate adverse selection to improve the insurance environment for individuals and small groups. Finally, exchanges must operate efficiently in carrying out the substantial administrative tasks designated to them by the ACA and ensure that they are providing value to their enrollees.

Individual Mandate and Public Subsidies

In March 2012, the U.S. Supreme Court heard arguments for a lawsuit put forth by the State of Florida, and supported by 25 states, disputing the constitutionality of the individual mandate (as well as Medicaid expansions) in the ACA. The Supreme Court is expected to provide its opinion by June 2012. If the individual mandate is struck down as unconstitutional, but deemed “severable” from the remainder of the ACA, it is

questionable whether state exchanges will succeed in substantially increasing access to health insurance. The individual mandate will essentially maximize potential enrollment in the exchanges and the size of their risk pools. It will also “do more to reduce adverse selection than any of the other strategies” (The New York State Health Policy Research Center 2009, 9). By mandating that everyone purchase insurance, relatively healthier individuals with lower costs must enter the market, thereby making the overall insured population “healthier” and decreasing the average cost of insuring enrollees. Most health care researchers agree that exchanges have historically attracted less healthy enrollees than the market at large (Jost 2012, 270). Without the individual mandate, it is unlikely that currently uninsured and relatively healthier individuals will purchase insurance, unless the remaining ACA reforms are able to decrease their premiums substantially. The exchanges, and the ACA as a whole, could become less than half as effective at decreasing uninsurance without the individual mandate (Buettgens and Carroll 2012, 3).

To make mandated insurance affordable, the ACA also includes substantial premium credits, cost-sharing subsidies and out-of-pocket limits for low-income individuals, and provides tax credits for small employers. Medicaid expansions will also increase the number of people eligible for public benefits. As a result, low income individuals with family incomes up to 400% FPL, not eligible for Medicaid or CHIP, will benefit substantially from the credits and subsidies provided through the exchanges. Without this public financing, many of them would remain uninsured. At the same time, individuals with higher incomes who would rather pay a penalty, which is capped at 2.5% of household income, may remain uninsured. Middle-income families above 400% FPL,

however, may have difficulty paying for mandated insurance, especially if the exchanges are unable to contain premium growth. This could create perverse incentives for individuals and families to remain below the 400% FPL threshold for public financial assistance. In addition, the requirement that employers with 50 or more employees provide health insurance to full-time employees to avoid paying a penalty, could also steer employers towards converting full-time employees to part-time employees or contractors (Richardson 2009, 345 and Tully 2010). This would benefit employers and low-income employees as employers would be exempt from providing health insurance benefits, and employees would be more likely to qualify for public credits and subsidies.

The resulting shift of health care expenditures from private payers to the public sector, however, could pose problems for the federal government, which is already facing an enormous budget deficit and increased pressure to reduce its spending. Moreover, families benefiting from credits and subsidies will be financially removed from their health care costs. This could lead to additional utilization and greater health care expenditures in the system. Some argue, however, that insensitivity to health care costs does not necessarily result in increased utilization as visiting the doctor or going to the hospital are not experiences most people would undergo unless necessary.

Exchange Design

One of the most critical design features of the health insurance exchanges is also one of the most politically charged decisions facing states—the level of involvement in selecting the plans offered through the exchanges. States which would like to create an exchange

with the potential use its market leverage to bargain with insurers on the basis of prices and quality may design them to act as “active purchasers.” Some of these may also use a competitive bidding process to select plans offered through the exchange. On the other hand, states which would like to limit the powers of their exchange and leave plan selection to the “modified” insurance market may create a “clearinghouse” which will offer any willing qualified plan. As stated in previous sections, theory and empirical evidence suggests that an exchange that enrolls a substantial number of individuals and small groups to capture a large share of the market could extract lower premiums from insurers.

Although the creation of an “active purchaser” would likely result in lower premiums for enrollees, it is difficult to predict whether, or how, these lower premiums will be transferred to providers. If insurers must lower their premiums, they may attempt to transfer the loss in premiums to providers by lowering their compensation, or attempting to control utilization, which could negatively impact the provision and the quality of health care. The provision and quality of health care from providers may not be negatively impacted if the decrease in their compensation does not go below their costs. Thus, the ability of active purchasers to decrease premiums without adverse effects on other actors in their supply-chain will depend on whether insurers and providers (and other health care products or equipment providers) have excess profits. If this is the case, exchanges could exercise their market power to transfer these profits to consumers through lower prices. If states design exchanges to function as clearinghouses, the ACA’s new regulations may still foster sufficient competition among

insurers to benefit enrollees. Exchanges will offer enrollees more plan choices and provide standardized, understandable information on offered plans which will facilitate comparison shopping.

Plan choices and premiums will also depend on whether states decide to maintain separate individual and group exchanges (and risk pools) or merge these to provide plans through one exchange with one risk pool. Maintaining separate exchanges and separate risk pools would maintain the difference in premiums between the two markets. The level of premiums in this scenario is dependent on the exchanges' ability to increase its enrollment to healthier consumers. Simply merging the pools, in conjunction with the ACA's other insurance reforms like modified community rating and guarantee issue, however, will likely decrease average premiums in the individual market significantly. Since the individual market generally suffers from adverse selection and attracts the most medically-needy and high-cost individuals, premiums tend to be higher in this market compared to other markets, including the small group market. Thus, merging the two markets and limiting experience rating of premiums would decrease the average premium for the high-cost individuals in the market. It is unclear whether premiums will fall substantially for small groups, and the larger of these may actually see their premiums rise, although by less than the premium decreases for individuals (Lischko and Manzolino 2010, 3).

Allowing small businesses with up to 100 employees, rather than just those with up to 50 employees, to provide insurance through the exchange would also increase the size of the exchange's risk pool. This could potentially decrease average premiums if the

additional businesses include relatively healthier employees. Allowing more enrollees would also make exchanges more attractive for health insurers and provide “active purchaser” exchanges additional bargaining power if they are able to capture a larger share of the market.

Risk Management

The ACA provides three main mechanisms for exchanges and the federal government to manage risk among insurers. Since the federally-run risk corridor and the reinsurance programs are temporary, the risk adjustment program will become the main mechanism for states to mitigate adverse selection. The ACA allows states to include all individual and small group plans offered within and outside of the exchange in their risk adjustment program, but excludes self-insured plans and plans grandfathered into the new system. Most grandfathered plans will be offered by large employers, while a smaller portion will be provided through the small group market.

Risk adjustment programs will compensate plans with disproportionately sicker enrollees while preventing plans with disproportionately healthier enrollees from reaping excessive benefits, thereby minimizing incentives for risk selection by plans. Risk adjustment programs will also have to mitigate any “sliced” risk selection arising if relatively healthier enrollees gravitate towards less expensive plans (i.e., Catastrophic Plans, or Bronze or Silver Plans) (Jost 2012, 270). Successful risk adjustment programs will stabilize average premiums at a lower rate than what is available currently in the individual and small group markets. Requirements that the insurers charge the same

premiums for the same plans inside and outside the exchange and the uniform application of insurance regulations will also mitigate adverse selection. The exclusion of grandfathered-in plans and self-insured plans from risk adjustment programs, as well as several new ACA regulations may provide incentives for small businesses to self-insure. Since it is less expensive for businesses with relatively healthier employees to self-insure compared to businesses with relatively sicker employees, there is still potential for adverse selection.

Operations and Administration

Health insurance exchanges will be required to perform a variety of tasks ranging from information collection and dissemination, to enrollment in the exchange, Medicaid and CHIP, to the administration of subsidies, to premiums collections for small groups. Thus, while exchanges will assume many administrative functions for individuals and small groups with the potential for economies of scale, they will also be incurring costs of their own. The magnitude of the services exchanges must provide could result in an extremely large organization with increased opportunities for waste and unnecessary bureaucracy. States or their non-profit designees will be challenged to create systems to operate their exchanges efficiently and smoothly. Most exchanges are expecting to begin charging fees in 2015 when they will no longer receive federal funding for their operations and must become self-sustaining. Since the federal and state governments are unlikely to decide to charge fees to enrollees, they will probably charge fees to insurers to participate in the exchanges. In turn, insurers may pass these fees along to enrollees

through premiums. Thus, exchanges must ensure that they provide valuable services to their enrollees. While individuals will easily benefit from using exchanges, small businesses, which have the option to self-insure and avoid tedious regulations, must receive substantial value from the exchanges to compensate for the additional administrative burden of complying with exchange regulations and the potential passing along of the exchanges' administrative fees. States must make sure to avoid diseconomies of small scale which have plagued smaller insurers and contributed to insurance industry consolidation. The ACA does provide states the option of creating regional exchanges that could substantially mitigate potential diseconomies of small scale. Regional exchanges would have the ability to enroll a greater number of individuals and small groups, thereby allowing them to lower their average administrative or overhead costs per enrollee compared to a single state exchange.

IMPLEMENTATION OF HEALTH INSURANCE EXCHANGES

Anticipated Outcomes

In projecting the effects of the ACA reforms, particularly the health insurance exchanges, many researchers have focused on microsimulation models. Through these models they simulate the behavior of various agents (i.e., businesses and families) in response to the ACA to project the potential outcomes of the reform. As described above, the ACA gives states a great deal of flexibility in the implementation of their exchange. It is impractical to study the effectiveness of state exchanges outside of the context of the other ACA reforms and most researchers examine the ACA as a whole. Thus, models also account for the other ACA reforms that support the functions of the exchange. In this section, several of these models will be examined to compare three different scenarios representing possible variations in state exchanges. First, models simulating the implementation of existing ACA reforms will be examined to determine whether the legislation may achieve its intended goal. Second, models simulating implementation of the ACA reforms without the individual mandate will be examined since the U.S. Supreme court may still strike that part of the ACA. A third scenario, involving the implementation of a single-payer system, which at least one state is planning on implementing, will also be examined as a point of comparison. All of the

models focus on nonelderly populations and exclude the Medicare-eligible populations over 64 years of age from their analyses.

Implementing the Existing ACA Reform

Eibner et al. of the RAND Corporation use a microsimulation developed at RAND, the Comprehensive Assessment of Reform Efforts (COMPARE) model to simulate health insurance coverage and health care costs for businesses offering insurance inside and outside the exchange. They run multiple simulations varying different assumptions reflecting states' design differences to estimate their potential effects. They use data from a variety of sources to piece together a synthetic population reflecting the characteristics of the national population and businesses. These data include, the U.S. Census Bureau's 2001 Survey of Income and Program Participation (SIPP) Medical Expenditure Panel Survey, the Household Component (MEPS-HC) from 2002 and 2003, the 2006 Kaiser Family Foundation and Health Research and Educational Trust Employer Health Benefits Annual Survey (Kaiser/HRET). All data was modified to reflect projected population characteristics for 2010 and 2019. Due to sample-size limitations, Eibner et al. modeled one national exchange, rather than individual state exchanges. Thus, the results of their simulations will be more indicative of outcomes in large states with characteristics similar to the nation as a whole, than in small states with unique characteristics.

The COMPARE model uses utility maximization functions to simulate individuals' and businesses' decisions. Individuals' behavior is determined by their

eligibility for the expanded Medicaid program and the utility associated with being uninsured and obtaining different types of insurance (a standardized employer-sponsored plan and each of the plan tiers offered through the exchange). Individuals' utility is a function of their out-of-pocket health expenditures, premiums, their level of risk aversion and the utility associated with consuming health care services. Firm behavior is modeled using a utility function based on aggregate worker utility, the weight firms place that utility and the cost of offering insurance. The model assumes that firms that do not offer insurance will pass a fraction of the costs of insurance back to their employees through higher wages and that some employees may prefer higher wages rather than employer-sponsored insurance. If a large number of employees qualify for Medicaid or premium and cost-sharing subsidies through the exchange, employers may decide against offering insurance. The model produces price elasticities ranging from $-.54$ for firms with 10 or fewer employees to $-.07$ for firms with more than 100 employees, which are well within the range reported in previous studies (Eibner et al. 2010, 13). According to this model, even small firms are not very sensitive to price as their demand is relatively inelastic.

Eibner et al. include the main provisions of the ACA in their model. However, they make some assumptions that other modelers do not. They do not account for the possibility of remaining individual grandfathered in plans and assume the traditional individual market for health insurance disappears. They assume that employer contribution rates remain at the current level and allow firms to offer only one plan. In their first simulation, they model the status quo in 2016 by projecting population and business characteristics and health care costs and insurance coverage under existing

regulations. In their second simulation, which they call their “baseline” simulation, Eibner et al. model an exchange that allows employers with 100 or fewer employees to participate, combines the individual and small group markets in the exchange, includes the employer and individual mandate penalties but excludes the tax credit for small businesses, and assumes exchanges will have administrative costs equaling 12% of plan premiums.

Eibner et al. find that the uninsurance rate would drop from 19% in the status quo scenario to 6% in the baseline scenario, with 26% of those insured obtaining coverage through the exchange (Eibner et al. 2010, 20). The share of employers offering health insurance would increase from 59% to 81% of all employers so that the percent of workers in firms offering insurance would increase from 85% to 95% (Eibner et al. 2010, 18). Of workers with health insurance, 75% would be offered traditional employer-sponsored insurance outside of the exchange. Although 13% of previously offering firms would no longer do so in the baseline model, no firms with over 50 employees would drop coverage. Premiums for employer-sponsored, single coverage would decrease slightly in the baseline scenario. At the same time, the premiums for all plans offered through the exchange in the baseline model would be lower than the estimated individual premium under the status quo. The most expensive plan, the Platinum plan, is estimated to have an annual premium of \$6,000 compared to the status quo estimate of the average premium for individual plans of \$6,086 (in 2010 dollars) (Eibner et al. 2010, 22). This supports existing theory that merging the individual and small group markets would decrease premiums for individuals. At the same time, the model predicts that the Bronze,

Silver and Gold plans in the merged markets would also be cheaper than the estimated employer-sponsored plan in the baseline scenario since these have a lower actuarial value than the existing employer-sponsored plans (Eibner et al. 2010, 22).

The COMPARE model also predicts that aggregate employer spending would only decrease by 2% from the status quo to the baseline scenario (from \$722 billion to \$705 billion in 2010 dollars) (Eibner et al. 2010, 23). This is mostly due to firms switching to plans with lower actuarial values, although some employers drop insurance coverage. The model also predicts that government spending would increase by \$123 billion per year under the baseline scenario (Eibner et al. 2010, 24). This accounts for premium and cost-sharing subsidies, Medicaid expansions and the individual and employer mandate penalties. This does not take into account new taxes and fees imposed on insurers.

Eibner et al. also model a scenario in which any business may offer insurance through the exchange. In this scenario, total enrollment in the exchange more than doubles, and the number enrolled through their employer in the exchange almost triples. At the same time, employers offer more lower-actuarial value plans, making Medicaid more attractive to eligible workers and decreasing aggregate employer expenditures to \$608 billion (in 2010 dollars) (Eibner et al. 2010, 29). This could be indicative of an increase the number of underinsured persons since the lower-actuarial value plans may not offer sufficient coverage for some individuals.

In another scenario, Eibner et al. model the effects of separate individual and small group risk pools in the exchange. This model predicts that insurance coverage

would shift from the individual market in the exchange to small group coverage in the exchange yet not alter the total number of insured. Since people enrolled in exchanges as individuals tend to be less healthy than those whose employers offer insurance through the exchange, the premiums for the individuals are about 40% higher than those in the small group market under this scenario. The number of insured persons remains the same despite the rise in individual market premiums because government subsidies would limit the portion of increased costs passed on to individuals. Thus, government spending under this scenario would increase by \$10 billion due to increased subsidies (Eibner et al. 2010, 31).

Eibner et al. model additional scenarios that have a minimal effect of the overall outcomes the ACA. The employer penalties and small employer tax credits do not significantly increase the number of people insured since employers already have high offer rates under the baseline simulation. This suggests that employers value their employees' preferences above the costs of offering insurance. This may be related to the existing association between employment and insurance coverage and employers' desire to be seen regarded in a positive light. Since the model does contain a parameter that directly affects the weight employers give to employee preferences, however, this may just be the result of the magnitude of that parameter. Additional simulations model the effects of changes in the exchange's administrative costs to 8% and 18% of premiums. The effect on exchange enrollment is relatively small in these simulations, suggesting that varying administrative costs within a "reasonable range" does not significantly alter the effects of the ACA (Eibner et al. 2010, 30). Eibner et al. also examine the effect of

one final variable, inertia, or “bias toward the status quo in decision making” on exchange enrollment. This variable is difficult to anticipate and quantify since preferences towards maintaining the status quo or a dislike of change are not well explained in economic theory. Research suggests, however, that inertia is a common phenomenon which would decrease enrollment in exchanges to a level below its potential (Eibner et al 2010, 31).

Buettgens, Bowen and Holahan of the Urban Institute use a similar model, the Health Insurance Policy Simulation Model (HIPSM) to simulate the ACA as if fully implemented in 2010. They compare the results of that simulation to a simulation of the pre-reform environment. The HIPSM model uses many data sources, including the March 2009 and 2010 Current Population Survey (CPS) Annual Social and Economic Supplement (ASEC), the February 2005 CPS Contingent Work and Alternative Employment Supplement, 2006-2008 pooled MEPS-HC data sets, the 2010 Kaiser/HRET and America’s Health Insurance Plan (AHIP) surveys and Congressional Budget Office data and National Health Expenditure Accounts. Similar to Eibner et al., Buettgens, Bowen and Holahan use this data to create a synthetic population with current U.S. population and business characteristics which they model using one exchange. They also use the Massachusetts Health Insurance Survey to build parameters for individual behavioral effects under the individual mandate. HIPSM uses a utility-based framework similar to that of the COMPARE model. Individuals’ utility depends on disposable income, out-of-pocket health care spending, health care spending paid by insurers, the government or uncompensated care and level of relative risk aversion. It also attempts to

capture family preferences like aversion to public program participation and sociodemographic characteristics (Urban Institute, 6). Employers' utility is a function of whether they anticipate the employees' aggregate utility from insurance offers to exceed the cost of offering and the number of employees who gain value from being offered insurance. The range of price elasticities of firms is greater in HIPSM than in the COMPARE model. Firms with fewer than 10 employees experience a price elasticity of -1.16 while firms with 500 to 1000 employees experience a price elasticity of -.047 (Urban Institute, 18). Hence in this model, smaller firms are much more sensitive to insurance price increases as a 1% increase in price would result in a proportionately larger decrease in demand of 1.16%. At the same time, large firms are generally insensitive to price increases.

Buettgens, Bowen and Holahan model most of the ACA provisions but make some assumptions that are different from other models. They assume that administrative costs are increase to 20%, the ACA limit under the reform yet remain at 15% without the reform. They also allow employers with up to 100 employees to participate in the exchange, separate the individual and small group risk pools in the exchange and maintain the traditional individual market outside of the exchange. The model also simulates behavior under the individual mandate, which is based on the applicable financial penalty, additional disutility of non-compliance (resulting from a desire to comply with the law or avoid enforcement) and a small spill-over effect that results in increase insurance coverage for individuals exempt from the mandate (Urban Institute, 18).

Using HIPSM, Buettgens, Bowen and Holahan find that the uninsurance rate decreases from 18.6% to 8.3% with the implementation of the ACA and that 17.8% of those insured individuals would obtain coverage through the exchange.⁹ The percentage of the population covered by employer-sponsored insurance outside of the exchange decreases from 56.6% to 48.7% with the reform. Individual coverage outside of exchange drops from 5.5% to 1.2% of population, while coverage through the exchange increases to 8.7% (Buettgens, Bowen and Holahan 2010, 4). Although their model does maintain an individual market outside of the exchange, Buettgens, Bowen and Holahan observe that it may be difficult for insurers in this market to differentiate themselves, especially since subsidies are only available through the exchange. If they fail to do so, the individual market outside of the exchange may disappear entirely.

Interestingly, the model predicts that 41% of the individuals who would be uninsured without the reform would remain uninsured once the ACA is implemented; 38% of the remaining uninsured would be eligible for Medicaid or CHIP but not enroll, 26% would be undocumented immigrants unable to participate in the exchange and not subject to the individual mandate, 8% would meet affordability exemption requirements and 28% would be subject to the individual mandate, yet refuse to comply or pay the penalties (Buettgens, Bowen and Holahan 2010, 5). This suggests that even under the best circumstances in which exchanges function optimally and the ACA's other regulations are well implemented, a number of people would remain uninsured voluntarily or remain excluded from the system.

⁹ Calculations based on simulation results in Buettgens, Bowen and Holahan's "America Under the Affordable Care Act," Table 1: Health Insurance Coverage Distribution of the Nonelderly in Baseline and Reform.

Under the ACA reforms, Buettgens, Bowen and Holahan estimate that government spending would increase by \$69 billion if the ACA were fully implemented in 2010 (Buettgens, Bowen and Holahan 2010, 6). This accounts for premiums and cost-sharing subsidies, employer subsidies and individual and employer mandate penalties. This does not take into account additional revenues from new taxes and fees or any savings from Medicare or Medicaid reforms and cost-control provisions. The net effect of the reform on aggregate employer spending is less than 1%. Aggregate individual spending would increase due to an increase in insurance coverage and individual mandate penalties. While spending for individuals with family incomes below 200% FPL would decrease by 12.5% due to public subsidies, spending for those between 200 and 399% FPL would increase by 12.5% and spending for at or over 400% FPL would increase by 16.3% (Buettgens, Bowen and Holahan 2010, 6).

The Congressional Budget Office (CBO) has modeled the effects of the ACA multiple times since the legislation was introduced and has recently updated these estimates. The CBO's Health Insurance Simulation Model (HISM) works similarly to the COMPARE model and HIPSM to project individual and business behaviors of a synthetic population mirroring the U.S. population. The CBO uses data from the May 2002 SIPP, the 2004 Medicaid Expenditure Panel Survey Insurance Component (MEPS-IC), the Bureau of Labor Statistics (BLS) National Compensation Survey, the 2000 National Health Expenditure Accounts, the Actuarial Research Corporation, and the National Bureau of Economic Research's tax simulation model, TAXISM. Unlike the COMPARE model and HIPSM, HISM uses an elasticity-based approach to estimate

behavioral changes based on past experience and computes premiums exogenously based on certain factors (age and sex, health status, the prior year's spending, geographic variation and a base used to convert the previous factors into dollars) (Congressional Budget Office 2007, 8). Firms' expenditures are estimated based on employees' spending and modified to account for premium loading costs, state premium regulations and the relative value of plans. The model allows employer contributions to vary based on firm-level data. The CBO's model assumes that the ACA will be fully implemented in 2016.

Based on existing literature, the average elasticity of relative plan value for individuals is $-.35\%$ which is considered to be relatively inelastic (Congressional Budget Office 2007, 16). The model modifies this elasticity so that individuals with lower incomes will have larger elasticities than those with higher incomes. The price elasticity for employers of offering insurance in this model is similar to the elasticities in the HIPSM model. They range from -1.14 for businesses with fewer than 25 employees to 0 for businesses with over 1000 employees (Congressional Budget Office 2007, 18). Specific assumptions used in the CBO's model such as the size of firms allowed to participate in the exchange, or whether the small group and individual risk pools are combined are not made explicit in the CBO's public documents. Since the CBO's estimates are often used as a benchmark for other models of legislation, some of the main results are included in this section.

The CBO's estimates also provide a different perspective compared to the other models discussed because they focus on cumulative effects over ten years, and the

projected impact on the federal budget. In January 2011, they estimated that the reform would decrease the federal deficit by \$210 billion over 2012-2021 (Elmendorf 2011, 3). This includes projected increases in federal spending due to Medicaid expansions, premium and cost-sharing subsidies, small business tax credits and administrative costs to federal agencies. The projection also includes sources of decreased federal spending such as provisions directed at reducing costs in federal programs, and sources of increased federal revenues from mandate penalties and new taxes and fees. In March 2012, the CBO and Joint Committee on Taxation (JTC) released “Updated Estimates for the Insurance Coverage Provisions of the Affordable Care Act.” Their estimates build on their March 2011 estimates and incorporate new legislation, a more conservative economic forecast and updated projections of health insurance premiums. They estimate that the net cost of the insurance provisions of the ACA would be just under \$1.1 trillion over 2012-2021, which is \$50 billion lower than their previous estimates (Congressional Budget Office 2012, 1). They project that the uninsurance rate in 2016 would be 9% with the implementation of the ACA and 20% without the reform. At the same time the percentage of the population with employer-offered insurance would drop by 2%, while exchanges would cover 7% of the population. At the same time, Medicaid and CHIP enrollment would increase from 12% to 18% of the population.¹⁰

Although the specifications of the RAND, Urban Institute and CBO models differ, they arrive at similar results which agree with theoretical predictions. They all estimate that the uninsurance rate would decrease by almost half with the implementation

¹⁰ Calculations based on CBO’s data in its March 2012 “Updated Estimates for the Insurance Coverage Provisions of the Affordable Care Act,” Table 3.

of existing ACA reforms, to levels between 8% and 11% of the population. Although this is a significant decrease in uninsurance, there are still a number of people uninsured. Almost a third of those uninsured are undocumented immigrants who cannot participate in the exchanges. Many argue that undocumented immigrants should be allowed to participate, and doing so would increase the potential population enrolled in exchanges. According to Buettgens, Garrett and Holahan, two thirds of the individuals still uninsured after the implementation of ACA would be eligible for Medicaid or CHIP or subject to the individual mandate. At the same time, Eibner et al. discuss the possibility that businesses and individuals may not take advantage of ACA regulations due to a preference for the status quo or an aversion to change (or the ACA itself). As a matter of fact, the CBO's March 2012 estimates of the impact of the ACA included a decrease in expenditures for small business tax credits to account for lower than anticipated preliminary tax data (Congressional Budget Office 2012, 8). Both of these factors are difficult to predict and measure, but could substantially decrease the benefits of state exchanges and the ACA and increase the potential for adverse selection, especially in smaller states. These models also demonstrate that enrollment and premiums in state health exchanges could vary substantially based on their design choices. In particular, the decision to combine or maintain separate individual and small group markets in the exchange could result in great variation. It is interesting to note that none of these models examine states' choice to design their exchange as an active purchaser or clearinghouse. This may be due to the difficulties in modeling bargaining power in concentrated markets that is discussed in prior sections.

Eliminating the Individual Mandate

One of the most, if not the single most, controversial provision in the ACA is the individual mandate. This provision requires almost all legal residents of the U.S. to purchase a minimum health insurance package or face financial penalties. Theoretical discussions in previous sections of this paper indicate that this provision could be a determining factor in the overall success of health exchanges and the ACA as a whole. There is a possibility that the Supreme Court may decide to strike the individual mandate provision in the ACA. If this is the case, they will also decide whether the provision is essential for the remaining reforms' success or if it can be severed from them. Many researchers have attempted to answer this question by simulating what would happen if the ACA were implemented without the individual mandate. Some of those analyses are discussed in this section, including some using the models discussed in the previous section, as well as an additional model by Jonathan Gruber.

Eibner and Price of the Rand Corporation examine the effects of the ACA with and without an individual mandate. They use the COMPARE model described earlier to complete this analysis of the projected effects in 2016, when they assume the ACA will be fully implemented. They maintain separate small business and individual risk pools for the exchange and only model a market for large, grandfathered in plans outside of the exchange. They model a first scenario estimating the effect of the individual mandate by increasing the cost (or disutility) of uninsurance by the penalty amount. In a second model, they project the effects of the ACA without an individual mandate. They find that the uninsurance rate under the ACA would increase from 8.8% to 13.4% of the

population without the mandate.¹¹ Although the provision of insurance through all sources would decrease (i.e., Medicaid, Exchanges, employer-sponsored, etc.), the majority of the decrease would occur in the exchange. This is not unreasonable since the majority of increases in enrollment under the current ACA legislation would occur in the exchange as this would be the main option for coverage for the previously uninsured who do not qualify for Medicaid or CHIP.

The COMPARE model used by Eibner and Price predicts that the average premiums for individual exchange plans without the individual mandate would rise by approximately 9.3% (Eibner and Price 2012, 6). Eibner and Price, however, estimate that the majority of this increase is due to variation in age composition of enrollees due to the elimination of the individual mandate. Without the individual mandate, fewer relatively healthy enrollees would purchase coverage under the ACA's modified community rating, so the remaining enrollees would be relatively less healthy. When the premiums without the individual mandate are adjusted for age, the average premiums increase by only 2.4% (Eibner and Price 2012, 7). Although this increase is statistically significant, Eibner and Price believe its effect would be relatively small (about \$140 annual increase for the individual silver plan) (Eibner and Price 2012, 7). Eibner and Price conclude that, due to other ACA reforms, particularly premium and cost-sharing subsidies, eliminating the individual mandate would not necessarily lead to an adverse selection problem that would destabilize exchanges.

¹¹ Calculations based on data in Eibner and Price's 2012 "The Effect of the Affordable Care Act on Enrollment and Premiums, With and Without the Individual Mandate," Tables 1 and 2.

Their conclusion may be the result of maintaining separate individual and small group markets in the exchange. This allows insurers to charge different premiums for each market that reflect the relative differences in each populations' health (individual market enrollees are generally relatively less healthy than small group market enrollees). Since enrollment in the individual market would decrease much more than enrollment in the small group market in the absence of the individual mandate, premiums in the individual market are also affected more than premiums in the small group market. If the two markets were combined, however, the decreased enrollment of relatively healthier individuals would affect individual as well as small group premiums in the merged market. To the extent that price-sensitive small groups would exit the exchange as a result of the premiums increase, premiums would increase further, leading to additional individuals and small businesses leaving the exchange.

Although Eibner and Price project that eliminating the individual mandate would have a relatively small effect on individual market premiums, this is mostly at the expense of the federal government. Since the individual mandate does not affect the provision of premium and cost-sharing subsidies, the number of individuals eligible for these subsidies would remain the same under both scenarios. As premiums rise due to the lower enrollment of relatively healthier individuals without the individual mandate, the amount the federal government must provide in the form of subsidies increases. Eibner and Price estimate that new government spending per newly insured individual would more than double from \$3,659 to \$7,468 (Eibner and Price 2012, 8). Due to the lower number of newly insured without the individual mandate, total government

spending would only rise by around 2.5% and total health spending by all agents would decrease by 2.3%.¹²

Buettgens and Carroll use the Urban Institute's HIPSM to examine the effect of eliminating the individual mandate from the ACA as if the reform were fully implemented in 2011. They model four different scenarios: 1) the current ACA reform with the individual mandate; 2) the ACA without the individual mandate but with robust exchange enrollment; 3) the ACA without the mandate with lower preference for exchange coverage; and 4) the previous scenario with lower subsidy take-up rates. The different scenarios in Buettgens and Carroll's analysis represent a range of behaviors in response to the ACA which are difficult to predict and quantify, yet could have a large impact on the results of the ACA. The second scenario represents the optimal outcome without the individual mandate, while the third and fourth scenarios represent possible shortcomings of the exchanges (in terms of marketing or the web interface, etc.) (Buettgens and Carroll 2012, 2). In this model, Buettgens and Carroll maintain separate individual and small group markets (since a majority of states have kept them separate) and account for anticipated guidance from HHS regarding the affordability exception to the individual mandate. The latter had the effect of increasing the number of uninsured relative to the previously cited iteration of HIPSM.

Without the individual mandate, Buettgens and Carroll estimate that the uninsurance rate would increase from 9.8% to 14.8%, even with robust exchange enrollment (Buettgens and Carroll 2012, 3). Thus, without the individual mandate, the

¹² Calculations based on data in Eibner and Price's 2012 "The Effect of the Affordable Care Act on Enrollment and Premiums, With and Without the Individual Mandate," Tables 5 and 6.

ACA would be less than half as effective at decreasing uninsurance, even in the best case scenario (Buettgens and Carroll 2012, 3). The additional impact of ineffective outreach, low exchange preference and low subsidy take-up is relatively small. In the fourth scenario, for example, the uninsurance rate increases to only 15.7% (Buettgens and Carroll 2012, 3). Similar to Eibner and Price's simulation, Buettgens and Carroll find that insurance coverage through all sources decreases. Compared to the ACA with the individual mandate, the percentage of the population enrolled in the exchange decreases by 2% without the mandate and by 5.9% in the fourth scenario with the lowest exchange enrollment (Buettgens and Carroll 2012, 3). The decrease in exchange enrollment in the latter scenario is partially mitigated by increased coverage through employers and the individual market outside of the exchange.

Buettgens and Carroll estimate that premiums inside and outside the exchange would be different. Due to ACA regulations for plans offered through the exchange, Buettgens and Carroll must be assuming that different plans would be offered outside the exchange. In this case, they believe that most of the individuals already purchasing insurance through the traditional individual market that are ineligible for subsidies would remain outside the exchange. Buettgens and Carroll also assume that these individuals would be relatively healthier than the new exchange enrollees, making premiums inside the exchange 6.1% higher than those outside the exchange with the individual mandate (Buettgens and Carroll 2012, 6). When the individual mandate is removed but exchange enrollment is robust, premiums inside the exchange would increase by 10% while premiums outside the exchange would only increase by 4%. If the individual mandate is

removed and individuals and businesses have a lower exchange preference and low subsidy take-up, premiums inside the exchange would rise by 25% (and 14% outside the exchange) (Buettgens and Carroll 2012, 6). Since initial exchange enrollment may grow slowly, it may actually resemble Buettgens and Carroll's third and fourth scenarios. Given the results of these scenarios, it is not difficult to imagine that exchanges would suffer from adverse selection in the absence of the individual mandate

Buettgens and Carroll also estimate the effects of the ACA with and without the individual mandate on government spending. With the individual mandate, the ACA would decrease the level of uninsurance by 48% relative to current conditions, while government spending would increase by 34% (Buettgens and Carroll 2012, 5). Without the individual mandate the level of uninsurance would decrease by only 21% relative to current conditions, while government spending would increase by 30% (Buettgens and Carroll 2012, 5). Thus, while eliminating the individual mandate would cut the ACA's effect on uninsurance by more than 50%, the level of government spending would only decrease by 3% to 8%. With the individual mandate, increased government spending is more effective and affects a larger number of people.

The CBO has also presented brief results from modeling the effects of implementing the ACA without the individual mandate using HISM for the 2011-2012 period. The CBO estimates that the modified reform would reduce the federal budget deficit by \$252 billion (Congressional Budget Office 2010, 1). This is slightly more than the CBO estimate for the 2012-2021 period of \$210 with the current ACA regulations. The CBO estimates that eliminating the individual mandate would almost double the

number of uninsured under the ACA (Congressional Budget Office 2010, 2). Without the individual mandate, the CBO estimates that insurance coverage among relatively healthier people would experience a greater decrease than insurance coverage among relatively less healthy people. Thus, the average enrollee would be less healthy, leading to adverse selection. The CBO estimates a significant amount of adverse selection which would increase premiums in the individual markets (inside and outside the exchange) by 15% to 20% (Congressional Budget Office 2010, 2).

Another influential health care researcher, Jonathan Gruber, estimates the effects of the ACA without the individual mandate using the Gruber Microsimulation Model, GMSIM. The model relies on multiple data sources to create a synthetic population representative of the U.S. national population. The data sources include, the 2005 CPS, MEPS-IC, state regulatory data, TAXISM, BLS data on firms and wages and data on undocumented immigrants from the Pew Hispanic Center. The GMSIM determines policy outcomes by simulating the behaviors of firms, which then impact individual behaviors. As a final step, regulatory actions are then applied after voluntary behaviors have been modeled. Similar to the CBO's HISM, the GMSIM estimates individuals' health care costs using their age, sex and health rating. Firms' decisions are dependent on elasticities which are based on empirical literature. Firms' elasticity of providing insurance with respect to the net income tax subsidy to the firms' employees plays a central role in their decision to offer insurance. These range from -.96 for firms with less than 200 employees to -.1 for firms with more than 1000 employees (Gruber, 9). A firm's decision to offer insurance is a function of the firm's elasticity of providing

insurance, in combination with any tax penalties for not offering insurance and expected expenditures per worker if offering insurance. The GMSIM accounts for changes in the actuarial value of plans offered, but maintains higher average actuarial values for employer-sponsored insurance compared to insurance in the individual markets.

Individuals' decisions to purchase offered insurance is dependent on a health-related parameter affecting their health care costs, their elasticity of demand (which varies by individual), the percent change in the price due to a policy change and their income. These are then modified to account for other insurance take-up parameters. Individuals' elasticity depends on a variety of factors. Uninsured individuals, for example have an average elasticity of -0.5 when facing a 50% reduction in the price of insurance in the individual market (Gruber, 18). Uninsured individuals who are offered employer-sponsored insurance have a relatively less elastic demand as they are more willing to pay large contributions for the offered insurance. Similarly, individuals already eligible for employer-sponsored insurance also have low price elasticity when deciding to reenroll with their employer.

Gruber uses the GMSIM to estimate the impact of removing the individual mandate provision from the ACA in 2019. Like the CBO models described above, the particular design of the exchanges modeled by Gruber are not explicitly stated, such as the size employers allowed to participate in the exchange or whether the individual and small group market are combined. Gruber's model still offers valuable insights as it maintains the general provisions of the ACA and undoubtedly represents one of the exchanges designed by states. Gruber estimates that the number of newly insured

individuals will decrease by three quarters in the absence of the individual mandate while premiums in the individual market increase by 27% (Gruber 2011, 2). These estimates are substantially higher than those of the previous models discussed. This suggests that the parameters of the GMISM model include higher price elasticities for both firms and individuals as any initial increase in premiums would result in a larger decrease in demand which would further increase premiums due to adverse selection. Like the other models discussed in this section, the GMISM model estimates that eliminating the individual mandate would decrease coverage by 50% to 75% while only decreasing government spending by 25% to 30% (Gruber 2011, 2).

It is difficult to believe that the ACA without the individual mandate would be “successful.” Although “success” is a relative term, most researchers agree that the effectiveness of the ACA in decreasing uninsurance will be cut by at least half. Perhaps the ACA would then be half as successful. Moreover, eliminating the individual mandate would have other adverse effects like increasing premiums in the individual markets while lower new government spending aids a disproportionately smaller number of people. Although the results from the models discussed above vary in magnitude, it seems clear that the individual mandate is an essential part of the ACA. Without the individual mandate, the implementation of the remaining ACA reforms must be perfect to achieve the results that approach what they would be otherwise. If people are not compelled to purchase insurance by financial penalties, it becomes more important that health insurance exchanges perform optimally by educating and enrolling a large number of people, especially relatively healthier people, to mitigate adverse selection and create a

well-functioning market. It seems unlikely that the implementation of the exchanges and other important reforms such as the risk adjustment program will not encounter any obstacles. Without the individual mandate to act as a safeguard against these obstacles, there is more uncertainty regarding the effects of the ACA.

The Single Payer Option

Although states were given a great deal of flexibility in implementing the health insurance exchanges in the ACA, some states have become interested in a more radical reform requiring even more flexibility—creating a single payer health care system. In 2011, Vermont passed legislation that would establish its state exchange according to the ACA, and then transform it into a single payer-system within a few years. The proposal and model that provided the foundation for the Vermont legislation will be examined in this section, along with a study prepared by consultants from the Lewin Group for the state of Maryland in 2000. These models not only provide an interesting contrast to the previous sections on the ACA with and without the individual mandate, but may become important if states like Vermont are able to implement them successfully.

In response to a study commissioned by the Vermont legislature in 2010, Hsiao, Kappel and Gruber recommended a public-private single payer system that they believed would drastically improve Vermont's health care landscape. The proposed system was designed to accomplish six goals: 1) maintain, if not decrease the current level of overall health spending; 2) include a minimum benefits package that at least covers the average benefits currently enjoyed by Vermont residents; 3) maximize federal revenues; 4)

maintain overall net income for Vermont providers; 5) increase the supply of providers through “targeted investments”; and 6) implement payment reforms to incentivize the provision of high quality care and efficiency and eliminate perverse incentives created by fee-for-service arrangements (Hsiao, Kappel and Gruber 2010, ix).

In this single payer system, Medicaid and Medicare benefits would not change, but payments for these programs would be made through the same claims administration process as for the privately insured. The standard benefits package provided to everyone privately insured would include cost sharing for individuals with family incomes at or above 200% FPL. Payroll contributions towards health insurance costs would be shared between employers and employees, but insurance coverage would no longer be offered through employers. The single payer system would reimburse providers through a capitation-based payment method. Many of the Vermont state agencies currently performing similar functions would be responsible for determining eligibility for the system, collecting payroll contributions, licensing of providers and patient safety regulation. The independent governing Board of the system, however, would represent the different actors in the health care system including providers, employers and consumers and be responsible for determining the benefits package and payment rates. Hsiao, Kappel and Gruber suggest that the Board contract the claims administration component to a private company to take advantage of their knowledge and efficiency.

In order to evaluate the effects of their recommendation, Hsiao, Kappel and Gruber first model the impact of the ACA on Vermont and then model the impact of their single payer proposal in 2016. They pool three years of CPS data combined with MEPS-

IC data to create a synthetic population reflecting Vermont-specific conditions to perform their analysis using the GMSIM. In modeling the ACA, they do not specify the specific characteristics of the Vermont exchange such as merging the small group and individual markets or the size of employers allowed to participate, but do mention the other main ACA provisions. In modeling their single payer proposal, Hsiao, Kappel and Gruber assume that the single payer plan covers all Vermont residents who are U.S. citizens or documented legal immigrants. These would be part of a single state-wide risk pool. Their model also includes a standard benefit package that excludes long-term care, includes limited vision and dental benefits, and requires certain copayments. They exempt both the employee and employer share of payroll contributions for employees earning less than 200% FPL (Hsiao, Kappel and Gruber 2010, 137). Hsiao, Kappel and Gruber also use the Regional Macroeconomic Model (REMI) to estimate their effects on Vermont's economy. Due to the scope of this paper, this model is not explained in detail, but it attempts to account for additional factors such as investments in primary and preventive care education, incentives towards the provision of primary and preventive care and towards healthy lifestyle choices.

Hsiao, Kappel and Gruber estimate that the ACA would decrease the uninsurance rate in Vermont by around 40%, leaving approximately 31,000 uninsured in 2016.¹³ Under the single payer system, all legal residents would be automatically enrolled in the standard benefits package. The only remaining uninsured would be undocumented immigrants and new Vermont residents who could not yet prove their residency status.

¹³ Calculation based on data in Hsiao, Kappel and Gruber's 2010 "Act 128: Health System Reform Design. Achieving Affordable Universal Health Care in Vermont," page 78.

To calculate the impact on total health care spending, they assume that the various incentives in the ACA will result in health care payment and delivery reforms. Those reforms, in conjunction with the health insurance exchange and other ACA reforms, would actually decrease health expenditures by up to \$60 million (Hsiao, Kappel and Gruber 2010, 79). Total health expenditures under their single payer proposal are projected to be \$770 million lower than expenditures under the ACA, or \$5.7 billion (Hsiao, Kappel and Gruber 2010, 150). The model also projects that total premiums for employer-sponsored insurance, including both the employer and employee shares, would reach 13.4% of payroll under the ACA and 12.5% with the single payer proposal (Hsiao, Kappel and Gruber 2010, 151). Under the ACA, the net costs to households with incomes over 400% would be \$96, much lower than the costs under the single payer system of \$552 (Hsiao, Kappel and Gruber 2010, 82).

Sheils and Haught model a similar single payer program for the state of Maryland. Their plan would cover all legal residents of the state, including those currently covered under Medicare, Medicaid, CAMPUS and the FEHB Program (Sheils and Haught 2000, 2). Medicaid beneficiaries, however, would retain any benefits not covered under the single payer benefits package. Their single payer program would attempt to control costs by using a gatekeeper model of managed care and establish annual global budgets for health care services covered through the program. The program would be financed using existing local and federal funding, a payroll tax, increase taxes on tobacco and alcohol, and an increase in the state personal income tax (Sheils and Haught 2000, 4). The financial impact of the single payer program on the federal, state and local governments,

employers and households is estimated using the Lewin Group Health Benefits Simulation Model (HBSM). The model uses adjusted data from the Maryland subsample of the March 1999 CPS, merged with the 1987 National Medical Expenditures Survey (NMES) to represent Maryland's projected population in 2001. Health care expenditure data is based on estimates developed by the Maryland Health Services Cost Review Commission.

The HBSM uses this data to estimate impacts on the number of employers, businesses and dependents affected, costs to different agents, and health care utilization. The largest changes in health care spending would result from increased efficiency in administrative functions performed by insurers, physician and hospitals and increased utilization due to increase health insurance coverage. Administrative expenditures in the system would decrease by \$1,085.4 million, with over half of that amount being savings for insurers. The increase in health care utilization for previously insured and underinsured individuals would result in additional \$675.9 billion in expenditures (Sheils and Haught 2000, 11). Sheils and Haught estimate the single payer plan would decrease the projected total health care expenditures of \$20,759 million under current regulations by \$345.8 million (Sheils and Haught 2000, 9-10). In their model increases in utilization due to increased health insurance coverage are more than offset by reductions in administrative costs and payment reforms. Sheils and Haught estimate that the single payer program would result in a decrease in total household spending on health care by \$161 million, accounting for decreased premiums and out-of-pocket payments as well as increase tax payments and lost wages (Sheils and Haught 2000, 31). These decreases in

household spending accrue mostly to families with incomes under \$100,000, which is above 500% FPL.¹⁴

These simulations agree that the single payer model results in substantial administrative efficiencies as payments throughout the health care system are standardized and streamlined. These are assumed to outweigh any additional costs from managing the new system. At the same time, the problem of uninsurance disappears, as all legal residents are generally included in the system. The financing of these systems, however, involve substantial cost-shifting between those with higher incomes to those with lower incomes. Similarly, savings or benefits from the system are enjoyed disproportionately by those with lower incomes, or the previously uninsured. This subsidization has been a source of philosophical and moral debate in the U.S. Although it has historically prevented the implementation of other single payer proposals, the system implemented in Vermont could alter these perceptions if it is successful.

Existing and Ongoing Implementation Efforts

Implementation of the health benefits exchanges outlined in the ACA has varied greatly by state. According to the Kaiser Family Foundation, which has been tracking state progress in implementing the ACA reforms, two states, Louisiana and Arkansas, have decided against implementing an exchange for their state. Three other states have plans to establish an exchange, 20 are studying their options and 12 have not taken any significant actions regarding this aspect of the ACA. The Kaiser Family Foundation

¹⁴ Calculation based data from Sheils and Haught's 2000 "Analysis of the Costs and Impact of Universal Health Care Models for the State of Maryland: The Single-payer and Multi-payer Models," page 34, and the 2001 HHS Poverty Guidelines, assuming that the average household size is 4 people.

categorizes state exchanges based on two criteria: the source of state activity and the structure of the exchange. The source of state activity refers to the type of entity the exchange whether it is a non-profit, a quasi-governmental entity or operated by the state. The structure of the exchange refers to whether the exchange will operate as an active purchaser or a clearing house for any qualified health plan. Utah and Massachusetts had already established an active purchaser and a clearinghouse exchanges, respectively, prior to the ACA. Of the 12 states that have established their state health insurance exchange because of ACA, six are active purchasers (Rhode Island, Vermont, California, Connecticut, District of Columbia, and Oregon), while two (Hawaii and Colorado) are clearinghouses. Four states (West Virginia, Nevada and Washington) have yet to decide whether their exchange will be an active purchaser or act only as a clearinghouse for qualified plans. Most exchanges are quasi-governmental entities or operated by the state. Only one exchange, Hawaii's, is a non-profit entity. Appendix A contains a short summary of the progress of health insurance exchanges established by states as of March 1, 2012.

Implications for Colorado

Colorado's Existing Insurance Market

Colorado's insurance market mirrors the U.S. as a whole. Since Colorado has fared better than other states during the recent economic recession, however, general insurance levels in the state are higher than for the U.S. population. Compared to the

national average for 2010, uninsurance in Colorado was 3% lower, while employment-based insurance was 3% higher. At the same time, a larger portion of Colorado's population, almost 13%, was covered by individual health insurance (Division of Insurance 2011, 7). In an initial report for the State of Colorado presenting an analysis of the potential impact of its health insurance exchange, Jonathan Gruber draws a useful picture of Colorado's uninsured population. A significant portion of Colorado's uninsured population is employed, approximately 60%, around two-thirds of which is offered and eligible for, employer-sponsored insurance. Approximately 60% of uninsured individuals have family incomes below 200% FPL, supporting the existence of a large group of uninsured, working poor. An estimated 12.5% of Colorado's uninsured population, however, has a family income greater than 400% FPL. Gruber finds a wide age distribution among the uninsured, although the most common age group is 25-34 year olds (Gruber 2012, 7).

Similar to individual markets in other states, Colorado's individual insurance market faces less restrictive regulations than the markets for group plans. Insurers may use experience rating to underwrite health plans. While Colorado's Division of Insurance does require that plans cover certain basic benefits, these are fewer in number than for other markets. Also, Colorado does not require insurers to sell standardized policies in the market. Colorado does operate subsidized high risk pools with very limited enrollment for individuals who would otherwise be denied insurance due to pre-existing conditions. In contrast to the individual market, Colorado's small group market is the most heavily regulated market in the state requiring certain benefits, guaranteed

renewability and modified community rating (*2011 Colorado Health Cost Report 2011*, 12-13).

Colorado's insurance markets have also followed the national trend towards consolidation among insurers. In 2007, the AMA found that the two largest insurers in 6 of the largest Metro areas of Colorado dominated between 50% and 81% of the market (*Competition in health insurance: A comprehensive study of U.S. markets: 2007 update*, 8). A report based on data from the U.S. Census Bureau and HHS found that family health insurance premiums in the private market rose 4.2 times faster than median earnings between 2000 to 2009 (*Costly Coverage: Premiums Outpace Paychecks In Colorado*, 1). Thus, Colorado has not been immune to the trend towards insurer consolidation and health care cost increases that have affected the country as a whole. This suggests ample opportunity for ACA reforms and a well-designed exchange to improve the health insurance markets in Colorado.

The Colorado Health Benefit Exchange

Governor John Hickenlooper signed SB 11-200 into law on June 1, 2011, establishing the Colorado Health Benefit Exchange as a “nonprofit unincorporated public entity” (Colorado Senate 2011, SB 11-200). The 12-member Board of Directors governing the Exchange is responsible for considering and determining the structure of the Exchange, but does not have the authority to promulgate rules or perform any of the duties of the state's Insurance Commissioner. The bipartisan Legislative Health Benefit Exchange Implementation Review Committee, however, may offer bills or other

recommendations related to planning or establishing the Exchange to the legislative council and approve financial and operational plans submitted by the Board.

Colorado's exchange is explicitly prohibited from soliciting bids or acting as an active purchaser and will thus function as a clearinghouse for all qualified plans offered by any insurance carrier authorized to conduct business in the state. The Exchange will maintain separate individual and small-group markets, although these may be combined under the Board's recommendation. The Exchange Board recently voted to limit the small employer exchange to employers with 50 or fewer employees until 2016 when all exchanges must accept employers with up to 100 employees (Colorado Health Benefit Exchange). The Colorado Health Benefit Exchange is expected to become operational in October 2013.

Impact of Colorado's Exchange

Colorado is still at the beginning stages of establishing its Exchange and its Board of Directors has many decisions to make. The initial decision to design the Exchange as a clearinghouse for any willing plan, suggests that the Exchange may not be as effective in obtaining premium decreases for its enrollees as it could be as an active purchaser. Using a variety of data sources, including the Current Population Survey, the Colorado Household Survey collected through Colorado's Department of Health Care Policy and Financing and data from the private insurance market, Gruber models the effects of Colorado's Exchange on insurance coverage and premiums in 2016 using the GMSIM described in detail in previous sections.

Gruber compares the results of his model, which is based on assumptions of how the various actors will react to ACA regulations and the Exchange, to a counterfactual scenario without the reform. He estimates that the number of uninsured individuals would fall by around 45% with the exchange and finds that the number of enrollees in the individual market would grow substantially just after the Exchange's implementation and continue growing afterwards (Gruber 2012, 9). Gruber's model also finds that the majority of newly insured people would have incomes below 400% FPL (receiving premium subsidies), enroll in Medicaid or enroll in insurance through the small group exchange because of the small business tax credits. Meanwhile, the Exchange and ACA reforms would actually result in some previously insured individuals losing insurance, around 8%, as a result of their employer dropping insurance, or because of premium increases in either the individual market or for their employer-sponsored insurance. This suggests that the Exchange will adversely affect a small number of individuals.

Gruber also models the effect of the Exchange on premiums. They account for the effects of the essential benefits, minimum actuarial value (60%) and minimum loss ratio requirements, the movement of Colorado's existing high risk pool to the exchange, increased competition among insurers, and the modified community rating requirements. They find that average premiums in the individual market would actually rise around 19%, which may be partially mitigated as they will be around 11% more generous on average. This increase is partly the result of individuals choosing more comprehensive health plans which are made more affordable by public credits and subsidies.

Despite the average increase in premiums, Gruber estimates that 70% of current enrollees in the individual market will benefit from reduced premiums costs, 17% will not experience any substantial change to their premiums cost, while 6% will experience a rise in premiums costs of less than 10% and 7% will experience a rise of over 10%. Overall, the number of people experiencing net benefits from the Exchange and ACA regulations is more than three times the number of people experiencing net losses (Gruber 2012, 14-15). Gruber's analysis and results are logical and consistent with the general theory relating to health insurance Exchanges. Thus, as long as the individual mandate provision remains in the ACA, it seems like Colorado's exchange, despite its inability to use its market power to bargain with insurers, will result in social benefits that outweigh social losses, although this will be mostly due to public subsidies assuming increased costs for many enrollees.

CONCLUSION

The question of whether the Health Insurance Exchanges mandated by the ACA are a panacea or a band-aid seems complex, yet after careful examination, the answer is simple—they are not. They are intended to correct the many market failures in health insurance markets and in doing so, increase health insurance coverage and mitigate cost increases. Theoretical and empirical evidence, and simulations based on this evidence, suggests that exchanges' ability to correct market failures, especially adverse selection, is questionable. Even in the best case scenario, in which the individual mandate maximizes the potential number of exchange enrollees and the exchanges function optimally, uninsurance rates are estimated to decrease by just 50%. Although this is a substantial improvement over current conditions, this does not qualify as the result of a "panacea" as a number of people will remain uninsured. If the U.S. Supreme court decides that the individual mandate is severable from the rest of the ACA and strikes that provision, the reform's ability to decrease uninsurance rates will be cut in half. In this environment, it is even more important that exchanges perform well and increase their enrollment to avoid adverse selection that could render them unsustainable. The remaining state design options affect enrollment and costs, but the effect of the individual mandate (or lack thereof) overshadows their effects.

The effectiveness of exchanges is also limited by provisions in the ACA which maintain and even strengthen the connection between employment and insurance

coverage like the employer mandate and small business tax credits. Additionally, large employers with over 100 employees are prohibited from offering coverage from exchange, and individual and small group markets are allowed to exist outside of the exchange in most states. This substantially reduces the number of potential enrollees in the exchanges to less than half the population, which limits the exchanges' ability to increase health care coverage. The ACA retains the main components of today's system, and only adds the exchanges to cover those who are currently left outside the system, which act like a band-aid for them. Most researchers project that the level of adverse selection would increase as the level of exchange enrollment decrease, despite the implementation of risk adjustment programs. Thus, the exchanges' ability to increase coverage is limited to only a portion of those who would otherwise remain uninsured, mostly because the ACA fails to give it additional capacity by maintaining existing insurance coverage sources.

An alternate solution that is discussed briefly, a single payer system, completely removes the need to consider uninsurance since all legal residents are automatically enrolled in the system. Theoretical and empirical evidence suggests that significant administrative efficiencies can also be achieved in this type of system. Increased bargaining power would also allow the system to better control costs and implement payment reforms. With this description it would seem like a single payer system would be the panacea, yet it is not without its own challenges. The U.S. population has generally opposes this type of system due to a dislike of the high level of subsidization from higher income groups to lower income groups, its limited choices for consumers,

concerns about possible rationing and a fear of government bureaucracy and the expansion of government powers. Analysis of the single payer system, however, does indicate that a “panacea” to cure the ailing U.S. health care system would require more radical changes to the systems’ structure, rather than follow the incrementalist approach reforms have historically followed that are essentially just another band-aid for the system.

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APPENDIX A: STATES' PROGRESS ON HEALTH INSURANCE EXCHANGE IMPLEMENTATION

Health Benefits Exchanges Established Prior to the Affordable Care Act

Massachusetts

On April 12, 2006 Governor Mitt Romney signed “An Act Providing Access to Affordable, Quality, Accountable Health Care,” a comprehensive reform of the state’s health care system. The legislation included an individual mandate, requirements that employers provide a certain level of insurance coverage or face financial penalties, and established a health care exchange, the Commonwealth Health Connector Authority (the Connector). The Connector is legally separate from the Commonwealth and is governed by an 11-member board, four of which are ex-officio members, representing both private and public stakeholders. (Commonwealth Health Insurance Connector Authority Board). The Connector is an active purchaser that uses specific criteria to ensure that all plans offered receive its “Seal of Approval.” The Connector offers insurance through two programs, Commonwealth Care and Commonwealth Choice. Commonwealth Care offers three tiers of subsidized health insurance for uninsured individuals (they cannot be eligible for Medicaid) aged 19 years or older, with family incomes up to 300% FPL.

Commonwealth Choice offers three types of insurance plans to a wider range of consumers, and catastrophic coverage to young adults. Insurance plans are grouped into three tiers based on the level of cost-sharing. Businesses with up to 50 employees may offer insurance through the Commonwealth Choice program. Since the Massachusetts reforms greatly influenced the federal health care reform, it is not surprising that a legal

review found that the Connector currently has the authority to perform the functions of a health insurance exchange as outlined in the ACA. Thus, the state is currently working to ensure that the Connector and the state's other health reforms comply with ACA (State Exchange Profiles: Massachusetts, uploaded February 22, 2012).

Utah

Utah passed several pieces of legislation in 2008 and 2009 that organized efforts to research health care sector reforms. These culminated in the creation of the Utah Health Exchange, which began operating in 2010. The Utah Health Exchange is administered by the Office of Consumer Health Services, which is part of the Governor's Office of Economic Development. The existing exchange in Utah acts as an online clearinghouse, offering any willing plan to small businesses and their employees (Utah Health Exchange Overview). These small businesses are limited to those with 50 or fewer employees, including self-employed individuals and their families. While employers determine the amount they would like to contribute towards their employees' benefits, employees have a wide variety of choices, using the exchange to compare various plans and enrolling in their chosen plan electronically. While Utah's existing exchange provides a solid basis from which to fulfill the ACA requirements regarding small-group insurance, it requires significant modifications to fulfill federal regulations regarding the individual market. The Health System Reform Task Force, which developed the existing exchange, is currently exploring various options to modify and enhance the Utah Health Exchange so that it satisfies regulations in the ACA.

Health Benefits Exchanges Established as a Result of the ACA: State Operated Active Purchasers

Rhode Island

During the 2011 Rhode Island legislative session, a bill was introduced which would have established a health benefits exchange. After the legislature failed to pass this bill, Rhode Island Governor Lincoln Chafee established the Rhode Island Health Benefits Exchange through Executive Order 11-09 on September 19, 2011. To avoid legislative involvement, the Executive Order created the state's exchange as a division within the Executive Department. The Exchange is governed by a 13-member Board, which receives guidance from various workgroups representing industry experts and stakeholders (State Exchange Profiles: Rhode Island, uploaded February 17, 2012). Although development of the Exchange is still far from completed, the Rhode Island Exchange will be an active purchaser, contracting with carriers and determining which insurers are allowed to participate. The Rhode Island Healthcare Reform Commission, which provides guidance to the Rhode Island Exchange Board, recommended two models based on the FEHB and the Massachusetts Health Connector for the Rhode Island exchange to follow (Rhode Island Healthcare Reform Commission 2011).

Vermont

Out of all states, Vermont has proposed the most radical changes in its health insurance and health care markets. These will begin with the creation of the state's health benefits exchange, and culminate in the creation of the first single-payer system in the

United States. Governor Peter Shumlin passed the landmark bill containing this plan, HB 202, on May 26, 2011. It created a publicly financed program called Green Mountain Care designed to provide all Vermont residents with comprehensive, affordable and high-quality health care while containing health care costs. It also created the state-operated Vermont Health Benefits Exchange in the Department of Vermont Health Access (DVHA) to comply with ACA regulations effective in 2014. In 2017, the state plans to request a waiver from the Centers for Medicare and Medicaid Services to transition to Green Mountain Care which will provide coverage to all its residents. In the meantime Vermont's exchange will be administered by DVHA and overseen by the Green Mountain Care Board, which is responsible for the state's health care system's progress towards the realization of Green Mountain Care (State Exchange Profiles: Vermont, uploaded February 6, 2012).

The Vermont exchange will selectively contract with health plans, including at least two private insurers and two multi-state plans, as long as these meet requirements set by the DVHA Commissioner. Although HB 202 mandates that health insurers charge the same premium if the same plan is offered both inside and outside the exchange, HB 559, which was introduced in January 2012, would completely ban insurance sales to individuals and small employers outside of the exchange. The bill also defines small businesses as those with up to 100 employees and merges the small group and individual insurance markets. These measures would essentially maximize the exchange's potential bargaining power (without including the large group market which will continue to operate outside of the exchange) against health insurers. A competing bill, SB 208, was

also introduced which would set the size of small employers to those with 50 or fewer employees and require that health insurance be available for the individuals and small groups both inside and outside the exchange.

Health Benefits Exchanges Established as a Result of the ACA: Quasi-governmental

Active Purchaser

California

Former Governor Arnold Schwarzenegger signed two bills (SB 900 and AB 1602) establishing the California Health Benefit Exchange on September 10, 2010, making the state the first in the nation to pass legislation to create a health insurance exchange under ACA. The Exchange was created as an independent public entity within the state government, and is overseen by a 5-member Board. The Board is currently collaborating with stakeholders and contracting with consulting firms to develop minimum requirements for health plans participating in the Exchange. State legislation requires all carriers participating in the Exchange or operating in the private market to offer at least one health plan at each of four coverage levels. Additionally, health insurance carriers may offer catastrophic plans through the exchange only. California is hoping that these measures will reduce the risk of adverse selection which could threaten the sustainability of their state exchange.

California's exchange will draw upon the state's previous experiences as an active purchaser for existing programs like its small-business purchasing pool and state employee purchasing pool, and selectively contract with insurance carriers to "provide

health coverage choices that offer the optimal combination of choice, value, quality and service” (State Exchange Profiles: California, uploaded March 26, 2012). Although California is currently developing two separate exchanges to cater to individual and small-groups, state legislation allows the Board to reevaluate this structure in 2018.

Connecticut

The Connecticut Health Insurance Exchange was established by SB 921, signed by Governor Dan Malloy on July 1, 2011. The Exchange is a quasi-governmental organization, defined as “a body politic and corporate, constituting a public instrumentality and political subdivision of the state... which shall not be construed to be a department, institution or agency of the state” (Connecticut Senate 2011, Senate Bill No.921). The Board is currently comprised of 14 members, although legislation has been introduced that would add two additional Board members. The Exchange will function as an active purchaser, using criteria developed by the Board to select plans to offer through the exchange to ensure that individuals and employers are provided an “adequate” number and selection of choices. Participating carriers must offer certain, minimum plan types and charge the same premiums if they offer the same plan outside of the Exchange. Carriers must also publicly justify premium increases for plans offered through the Exchange.

The Board’s first set of recommendations for the development of the exchange was released at the beginning of 2012. The Board’s recommendations include combining the individual and small group exchanges while maintaining separate risk pools for each

market, maintaining the definition of a small employer to those with 50 or fewer employees, rather than accepting the ACA's larger definition of a small employer, and implementing a small assessment on premiums to help fund the Exchange (State Exchange Profiles: Connecticut, uploaded March 15, 2012).

District of Columbia

On January 17, 2012, Mayor Vincent Gray signed Act 19-269, establishing the District of Columbia Health Benefit Exchange Authority as an "independent authority of the District government" (State Exchange Profiles: D.C., uploaded March 21, 2012). The Exchange is governed by an 11-member board which, similar to the Connecticut exchange board, will act as an active purchaser to ensure that individuals and employers using the Exchange have an adequate number and selection of choices. Carriers participating in the Exchange must provide certain, minimum plan types in the individual and small-group exchanges. The same plan offered outside of the exchange must charge the same premium as the same plan offered within the exchange. The Health Reform Implementation Committee, which advises the Exchange Board, continues to meet and is still formulating its recommendations for the exchange structure, including those regarding the separation or combination of the individual and small-group markets, risk pooling, plan requirements, and others.

Oregon

Governor John Kitzhaber signed SB 99 into law on June 22, 2011, establishing the Oregon Health Insurance Exchange Corporation. The Corporation is a “public corporation performing government functions and exercising governmental powers” and governed by a 9-member board (Oregon House 2011, H.B. 3137). Oregon’s exchange can act as an active purchaser and limit the number of qualified plans offered through the exchange as long as the same restrictions are applied to all carriers. The Legislature recently passed HB 4164, which approved the Corporation’s business plan. Like a majority of other states, Oregon’s exchange will not combine the individual and small-group markets but does ensure that premiums for the same plan outside and inside the exchange are the same. The small-group market will also function based on a defined contribution design that will allow employers to set their contribution amount and allow employees to choose an appropriate plan from those offered through the exchange. Although no specific methods are outlined, Oregon is researching possible risk adjustment programs to manage potential adverse selection. The plan also includes the assessment of an administrative fee on insurance carriers to fund the Exchange after 2014 once its federal grant funding decreases.

Health Benefits Exchanges Established as a Result of the ACA: Non-profit Clearinghouse

Hawaii

The Hawaii Health Connector was established in SB 1348, signed by Governor Neil Abercrombie on July 11, 2011. Unlike most other state exchanges, the Connector is a non-profit corporation governed by a 15-member board appointed by the Governor with the consent of the Senate. The Connector will operate as a clearing house for information on all qualified plans listed or offered through the Connector. The Hawaii Insurance Commissioner will maintain regulatory jurisdiction over health plans and will determine whether plans meet federal qualifications, and thus participate in the Connector. The individual and small-group market (of employers with up to 50 employees) will be served through two separate programs and with separate risk pools. Insurance carriers offering plans in the small-group market will be required to also offer plans in the individual market.

One of Hawaii's greatest concerns with the implementation of health care reform is preserving the Hawaii Prepaid Health Care Act (PPHCA) of 1974. The act created the only employer mandate in the U.S., which required an exemption from ERISA by then-President Nixon. The act requires all employers to provide health insurance for any permanent employee working at least 20 hours a week for four consecutive weeks in Hawaii. It required certain employer contributions and limited employee contributions based on income. The Connector Board has stated its intent to seek waivers from any federal policies that may conflict with PPHCA (Hawaii Health Connector Interim Board of Directors Report to the 2012 Legislature, 2011).

Health Benefits Exchanges Established as a Result of the ACA: Quasi-governmental Clearinghouse

Colorado

Colorado enacted legislation established a quasi-governmental clearing house in the spring of 2011. Further details are provided in the main section of this paper.

Other State Exchanges

Washington

Washington Governor Christine Gergoire signed SB 5445 into law on May 11, 2011, establishing the Washington Health Benefit Exchange as a “self-sustaining public-private partnership separate and distinct from the state” (State Exchange Profiles: Washington, uploaded March 15, 2012). It is governed by an 11-member Board that receives substantial assistance from the Washington Health Care Authority, which currently operates various public health programs. HB 2319, which clarifies some features of the Exchange, was just recently passed and signed by the Governor. It prohibits carriers from offering any catastrophic plans outside of the Exchange. It also requires that carriers offer qualified individual or small-group plans outside of the Exchange in order to participate in the Exchange. The legislation also gives the Board the authority to determine whether benefit packages meet the minimum standards for qualified health plans, which will be pegged to the largest small group plan in the state.

Maryland

On April 12, 2011, Governor Martin O'Malley signed SB 182/HB 166, creating the Maryland Health Benefit Exchange as a "public corporation and independent unit of state government" (State Exchange Profiles: Maryland, uploaded February 22, 2012). The Exchange is governed by a 9-member Board whose research into the possible structure and operation of the Exchange has been included in legislation that was introduced in December 2011. The legislation would allow any eligible plan to participate in the Exchange in 2014. After its first year of operation, the Exchange would gain the authority to become an active purchaser and engage in competitive bidding and negotiate with insurance carriers. The individual and small-group markets (employers with up to 50 employees) would remain separate until 2017, when the Exchange may decide to combine these markets. In the established legislation, carriers participating in the Exchange must offer certain plans outside of the exchange and may not charge different premiums for the same plan inside and outside of the Exchange. The proposed legislation would also require carriers with revenues over a certain threshold to offer products through the Exchange.

Nevada

Nevada's Silver State Health Insurance Exchange was established by SB 440, and signed by Governor Brian Sandoval on June 16, 2011. The exchange was created as a quasi-governmental organization governed by a 10-member board. The Board is

currently researching the structure of their Exchange (State Exchange Profiles: Nevada, uploaded February 23, 2012).

West Virginia

The West Virginia Health Benefits Exchange was established through SB 408, and signed by Governor Earl Ray Tomblin on April 5, 2011. The West Virginia exchange was established as an entity within the Offices of the Insurance Commissioner, governed by a 10-member board (State Exchange Profiles: West Virginia, uploaded February 17, 2012). West Virginia is still in the process of appointing board members and the Office of the Insurance Commissioner is researching the structure and rules for their Exchange.