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ABSTRACT

Tara Kirkpatrick

Biology

JUST WHAT THE DOCTOR ORDERED: REFORMATION OF THE U.S.
HEALTHCARE SYSTEM THROUGH A DOSE OF PREVENTIVE AND PRIMARY
CARE

(141 pages)

Advisor: Rita Axford

This thesis explores the current healthcare crisis in the United States (US) where more than \$2 trillion are spent each year on healthcare and 47 million Americans remain uninsured, and argues that to create realistic, sustainable change there needs to be a paradigm shift in the way Americans view health and healthcare. Currently, the focus of US healthcare is sickcare rather than the maintenance of wellness, which is evident in the allocation of healthcare resources to treat medical conditions after they have become complicated and expensive. This thesis proposes that by shifting healthcare resources from expensive secondary and tertiary care for a few to preventive and primary care for all, the US could use the current healthcare resources more efficiently to cover all Americans and create a healthier population. This thesis first presents a short history of healthcare in the US and briefly describes the different programs and procedures in place in the US healthcare system. It then considers the current problems in the system specifically in cost, quality and access. Next, using diabetes mellitus type II as a case study, the argument for primary and preventive care over sickcare is made. This thesis then explores reform possibilities drawing from models of different countries and initial

potential 2008 presidential candidates. The thesis is concluded with a short reform proposal from the author touching on key elements that she believes are necessary to create sustainable change in health and the healthcare system in the US.

JUST WHAT THE DOCTOR ORDERED: REFORMATION OF THE U.S.
HEALTHCARE SYSTEM THROUGH A DOSE OF PREVENTIVE AND PRIMARY
CARE

A thesis submitted to
Regis College
The Honors Program
in partial fulfillment of the requirements
for Graduation with Honors

by

Tara Kirkpatrick

May 2008

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INTRODUCTION: The Healthcare Crisis in the United States: A Healthcare Situation Spiraling Out of Control

Healthcare in the United States (US) is a two trillion dollar market, approximately the size of China's gross national product (GNP) (Herzlinger, 2007, p. 1). Although the United States spends at least 40% more on healthcare than any other country in the world (Stanhope & Lancaster, 2004, 51), the World Health Organization (WHO) ranked the United States healthcare system 37th of 191 countries (World Health Organization [WHO], 2000, Annex Table 1). The United States leads the world in technology and innovation, and since 1975 has won more Nobel Prizes in healthcare than all other nations combined (Gratzer, 2005, p. 124). Nonetheless, more than 47 million Americans¹ remain uninsured with no access to regular healthcare services (US Census Bureau, 2007). Billions of dollars are spent each year and new medical technology abounds. However, healthcare in the United States still remains problematic, demanding immediate attention, because the US continues to hold on to an antithetical idea of what healthcare should be. There is no doubt that that quality healthcare can be obtained in the United States; however, the paradigm under which healthcare is delivered and the beliefs about health in this country have created widespread problems throughout the healthcare system.

¹ While it is recognized that the term "America" technically refers to all countries in North, South and Central America, it is common usage to describe members of the population of the United States as such; this term will be used to throughout this thesis to refer to the United States.

In order to reduce healthcare expenditures in the United States and improve the state of health in this country, a new paradigm for healthcare must be created, and access to preventive and primary care services made available to all. In 1960, per capita healthcare expenditures were \$141 and 5.1% of the gross domestic product (GDP) (Shi & Singh, 2001, p. 210). By 2004, health expenditures had reached \$6,102 per capita and 15.3% of the GDP (Kingson & Cornman, 2007, p. 29). According to the US Department of Health and Human Services (2006), from 1960 to 2004 the proportion of obese adults in the country rose from 13% to 34%, coinciding with rising healthcare costs (p. 27). Obese individuals' healthcare expenses are on average 36% more than those who are not obese (RAND, 2002, p. 36). This is just one example of how a paradigm of sickness has pervades society and has had costly ramifications for the healthcare system.

Throughout the course of this thesis, it will become clear that reform of the healthcare system of the United States is needed. The direction in which that reform should proceed, however, is not as apparent, but a focus on health promotion through accessible primary and preventive healthcare for all is necessary. Movement in this direction has the potential to reduce costs and do the most to improve the health of the nation.

The Necessity of Health

How a society chooses to define health is important because it reflects the beliefs held by the public and determines what measures it will take in the pursuit of health. The World Health Organization (WHO) currently defines health as “a state of complete

physical, mental, and social well-being, and not merely the absence of disease or infirmity” (Stanhope & Lancaster, 2004, p. 323). Health is an essential component for a functioning population and a productive society. Philosopher and medical ethicist, Edmund Pellegrino describes the necessity of health:

To lack health and to need treatment is to be in a diminished state of human existence—a state quite unlike any other deprivations which can be borne if one is healthy. Serious illness changes our perceptions of ourselves as persons. It forces us to face the fragility of our own existence...health is a fundamental requirement for the fulfillment of the human potential and freedom to act and direct one’s life. (Pellegrino, 1999, p. 248)

The United States View of Health

Health and healthcare in the United States are viewed through the medical model, which presumes the existence of disease (Shi & Singh, 2001, p. 39). Through the medical model, health is seen in negative terms as the absence of disease, instead of affirmatively as the presence of a state of wellness. Under the current healthcare paradigm in the United States, focus and resources are concentrated on the restoration of health during a period of illness instead of taking proper measures to maintain a constant state of wellbeing (Shi & Singh, 2001, p. 39).

A great paradox exists in the current healthcare system of the United States. The United States was founded on values of freedom, independence and individual

determination; therefore, Americans are free to live in the manner they choose, which could be healthfully, destructively or somewhere in the middle of this continuum.

Generally, people desire freedom to decide how they live and then choose to exercise their liberty to live unhealthy lifestyles; however, under the cover of the medical model, they ultimately give up their freedom and their lives to the healthcare system, forfeiting their health through their behavioral choices. This attitude has led to the domination of sickcare rather than healthcare in the United States and has created a healthcare system that relies heavily on secondary and tertiary instead of primary and preventive care. The paradigm of sickness, the medical model and the values and beliefs that surround the two have had serious consequences for the health of our nation.

Types of Care Defined

The Institute of Medicine (IOM) defines primary healthcare as “the provision of integrated, accessible healthcare services by clinicians who are accountable for addressing a large majority of personal healthcare needs, developing a sustained partnership with patients, and practicing in the context of family and community” (Grumbach & Bodenheimer, 2003, p. 48). Primary care is generally provided in an office or clinic by various providers such as nurses, physicians, nurse practitioners (NP) or physician’s assistants (PA) and is “basic, routine and inexpensive” (Shi & Singh, 2001, p. 137). Secondary care is episodic, short-term care, involving expert or surgical authorities in the area; secondary care involves specialized surgery and rehabilitation performed in general hospitals (Shi & Singh, 2001, p. 234). Tertiary care is more complex than both

primary and secondary care; it is very specific for relatively rare ailments, technologically based and usually is performed in teaching institutions and specialized hospitals (Grumbach & Bodenheimer, 2003 p. 49; Shi & Singh, 2001, p. 235).

Different levels of preventive care precede primary, secondary and tertiary care. Primary prevention is the avoidance of disease before it begins, including the active promotion of health through activities and lifestyles that are meant to reduce the occurrence of illness in populations that are already relatively healthy (Shi & Singh, 2001, p. 594; Stanhope & Lancaster, 2004, p. 52). Secondary prevention serves to detect existing illness as early as possible and begin immediate treatment when it can be easily treated so that it does not develop into a chronic or disabling condition (Allender & Spradley, 2001, p. 11; Shi & Singh, 2001, p. 4; Stanhope & Lancaster, 2004, p. 52). Tertiary prevention includes rehabilitation and treatment that seeks to control the progression of an illness or injury in an effort to minimize further complications and maintain function once an individual has developed a health problem (Allender & Spradley, 2001, p. 11; Shi & Singh, 2001, p. 45).

The Importance of Primary Care

The majority of American medical expenses are spent on secondary and tertiary care although data has repeatedly shown that better primary care and health promotion movements have the greatest effect on establishing health throughout a population (Shi & Singh, 2001, pp. 49-50; Stanhope & Lancaster, 2004, pp. 3-4). For example, the United States Public Health Service estimates that only 10% of premature deaths can be

prevented by increasing secondary and tertiary care efforts, while population-wide public health movements can prevent nearly 70% of early deaths (Stanhope & Lancaster, 2004, p. 4).

The International Conference on Primary Health Care in AlmaAta, USSR defined the importance of primary care, articulating why it is crucial as the cornerstone of a good healthcare system and a healthy population:

Primary health care is essential health care based on practical, scientifically sound and socially acceptable methods and technology made universally accessible...at a cost that the community and country can afford to maintain at every stage of their development in the spirit of self-reliance and self-determination. It forms an integral part both of the country's health system, of which it is the central function and main focus, and of the overall social and economic development of the community. It is the first level of contact of individuals, the family and community with the national health system bringing health care as close as possible to where people live and work, and constitutes the first element of a continuing health care process. (WHO, 1978).

Recognizing of the importance of good primary care is the first step in reforming the healthcare system in the United States. By establishing the necessity of primary care, early medical intervention, health maintenance and Primary Care Provider (PCP)-mediated lifestyle changes will become the new paradigm of healthcare in the United States leading to a healthier nation.

Assumptions of the US World View and Challenges in Healthcare Reform

A shift towards primary health care in the United States will not be easy. The concept of sickcare and the medical model are deeply engrained in US national consciousness. Suggestions to increase primary care, ensure universal access to healthcare or improve public health come too close to American ideas of socialized medicine, which is largely incompatible with the worldview held by many in the United States (Shi & Singh, 2001, p. 94). The current American ethos places emphasis on the fulfillment of personal desires and individualism, making implementation of population-wide movements towards primary care and health promotion difficult. This thesis will examine the current healthcare situation in the United States and how this American belief system has led to a disastrous state of healthcare. It will attempt to argue why more primary care and a movement towards health promotion for all is needed in the healthcare system to reduce healthcare spending and provide essential healthcare to all citizens.

Overview of Chapters

Chapter One outlines the development of healthcare in the United States in order to follow the evolution of medicine and provide an understanding of how the medical model has become the dominant view in the US system. The current healthcare system in the United States is unique, unlike any other system in the world. It is a combination of private and public providers. How we have arrived at this current system is largely a function of the principles that the United States was founded upon. Ideals that have

formed the foundation our country such as freedom, independence and democracy have not escaped implementation into the healthcare system of the United States. Americans highly value the ideas of autonomy, self-interest and personal freedom (Shi & Singh, 2001, p. 90). These values are inextricably linked with the capitalist economy and practice of healthcare in the United States (Callahan & Wasunna, 2006, p. 56).

Chapter Two examines the fragmentation of healthcare and the numerous entities that aggregate to form healthcare in the United States. The history of US healthcare and the social, economic and political factors that have influenced its development have created a complicated and fragmented system (Callahan & Wasunna, 2006, p. 5). There are many different types of healthcare, numerous government programs and countless private healthcare companies and insurance organizations. By examining the different types of healthcare, payers, providers and methods of delivery, a greater understanding of the problem can be gained, and more effective reforms proposed.

The historical, economic, social and political factors examined in Chapters One and Two that have shaped the ideology of healthcare in the United States have led to problems in cost, access and quality.

Chapter Three presents some of the major problems in healthcare: cost, quality and access, and how these problems affect and compound each other. Annual per capita spending on healthcare in the United States is higher than any other nation in the world, 47 million Americans are uninsured with no access to regular healthcare services and Americans are increasingly unsatisfied with their healthcare experience (Stanhope &

Lancaster, 2004, p. 51; US Census Bureau, 2007). For example, those who cannot afford these rising prices or afford to have health insurance have difficulty gaining access into the system due to cost. This causes prices to rise for others receiving healthcare. If someone falls ill and cannot afford care, instead of receiving primary care, doctors' visits are postponed allowing the problem to worsen until it warrants a trip to the emergency room (ER). Once at the ER, they must be treated and the cost is then shifted to those who can pay (Hunynh, Schoen, Osborn, & Holgren, 2006). This example of the emergency room demonstrates how healthcare is delivered in our country. Each American needs to accept the responsibility for his or own her health and take initiative in order to prevent the complications that necessitate secondary and tertiary care.

Chapter Four presents a case study of type II diabetes mellitus (DMII) and how a paradigm shift towards health maintenance could potentially solve many of the nation's healthcare problems. Seventy percent of all DMII is attributed to obesity (American Diabetes Association [ADA], 2004, p. 1). Secondary causes include inactivity and excess calorie intake (ADA, 2004, p. 1). These are controllable factors that could have huge impacts on one's health; however, these changes need to be mediated by primary care professionals in order to be effective and sustainable.

Through arguments presented in the first four chapters of this thesis, it will become evident that substantial healthcare reform is needed. Some have suggested possible reform schemes ranging from health savings accounts to numerous insurance

reforms. Others advocate a single-payer model like Great Britain's National Health Service or Canadian Medicare.

Chapter Five briefly explores possible reform solutions to the healthcare problem in the United States. The chapter focuses primarily on models from other countries and reform plans from several of the initial 2008 presidential candidates in order to gain ideas about how to create a shift towards primary care in the United States.

Chapter Six consolidates these reform ideas. In doing so, this chapter concludes the thesis with a proposal focusing on primary care and health maintenance.

Conclusion

The healthcare system in the United States is very complex, making a single, definitive solution nearly impossible. To address the depth and complexity of the healthcare system in the United States would take volumes. This thesis provides background as to how we arrived at this particular place in healthcare, examines the current healthcare situation and finally proposes a model for improving healthcare in this country by investigating other systems around the world and experts' reform suggestions. This thesis will provide a glance at the healthcare system in America as a whole before the discussion is specifically confined to the provision of access to primary healthcare. The current healthcare system in the United States is exclusive, leaving a significant portion of the population without access to any healthcare. By making the overall system more efficient and effective through provision of universal access to primary and preventive care, the American healthcare system will improve for everyone.

CHAPTER ONE: Historical Developmental of Healthcare and the Medical Model in the United States

Historical Development Affects Healthcare Practice Today

In order to understand how the United States has arrived at its current healthcare dilemma, it is useful to examine the history and evolution of healthcare in this country. This chapter will establish the relevance of cultural values and the importance of the history of healthcare in the United States in the formation of the current system.

The development of healthcare in the United States and the cultural values that have directed its growth have created the current healthcare situation that has been outlined briefly in the introduction of this thesis. Ideals that have built the foundation of our country, including freedom, independence and democracy, have not escaped inclusion in the formation of the healthcare system of the US (Shi & Singh, 2001, p. 51). Americans highly value the ideas of autonomy, self-interest and personal freedom (Longest, 2001, p. 12; Shi & Singh, 2001, p. 90). They value these ideals in healthcare just as they value them in government, religion, education or the economy (Callahan & Wasunna, 2006, p. 8-9). Medical technologies have significantly changed in our country, but the ideals that directed the formation of our nation have remained equally influential in the healthcare system throughout its development, leading to the current medical model and paradigm of health that exist today.

Societies Have Unique Paths to Preserve Health

The ability of a population to function depends upon its members' capacity to contribute meaningfully to the economy and to other sectors of society (Shi & Singh, 2001, p. 38). A factor upon which members' contribution to society hinges is health; therefore, societies have pursued methods to maintain and restore health (Stanhope & Lancaster, 2004, p. 24).

Throughout its history, the United States has been no different in trying to preserve health, but has followed a unique path based on American ideals and values (Longest, 2001, p. 9, 12; Shi & Singh, 2001, p. 79). The United States has never had a definite, organized system of care like the socialized medicine of England or Canadian Medicare, but has a unique healthcare system that incorporates American values and has a goal of health for the people of the United States (Longest, 2001, p. 9).

The Colonial Beginnings of Healthcare

Healthcare in the United States began very simply during Colonial times. There were few doctors; healthcare was very informal, often performed in the home by female family members (Stanhope & Lancaster, 2004, p. 24). In 1751, the first hospital was built in Philadelphia, inaugurating the gradual rise towards acute, curative, sick care; however, hospitals were fairly rare before the end of the 19th century (Shi & Singh, 2001, p. 87; Stanhope & Lancaster, 2004, p. 24). Although hospitals were uncommon, the few that did exist were generally in poor condition, and were often staffed by inadequately trained, undereducated employees (Stanhope & Lancaster, 2004, p. 24). The rare,

isolated hospital reflected the missing institutional and systematic core of early healthcare in the United States (Shi & Singh, 2001, p. 81).

Until the mid-19th century, medical practice in the United States was very basic and minimal. Industrial science had yet to be applied to medicine, and sterile technique, anesthesia and inoculation had not been discovered. This left physicians generally guessing as to what an ailment was and how to treat it (Shi & Singh, 2001, p. 81). Physicians had little training, if any, and relied on observation and precedent to treat symptoms, making medicine more like a trade than a trained profession (Shi & Singh, 2001, p. 81).

As minimal as the practice of medicine was at this time, division of care had already led to a tiered system. The wealthy, middle and lower middle class generally afforded house calls from doctors when sick, while the poor relied on “charity care” if they fell ill (Smith, 1990, p. 487).

Urbanization Led to Changes in the Healthcare System and Public Health

As urban populations began to grow in the 19th century, and people and resources were consolidated in the cities, disjointed home-based care became insufficient (Allender & Spradley, 2001, p. 24). This initiated the formation of care systems for the sick, poor and mentally ill in the United States based upon the Elizabethan Poor Law of 1601 in England (Allender & Spradley, 2001, p. 24). As urbanization continued and communicable disease spread rampantly, there was a movement towards environmental concerns, public health and improving living conditions (Stanhope & Lancaster, 2004, p.

24). Government establishments called “pest houses” were formed as a means to quarantine infectious individuals and control outbreaks of disease (Shi & Singh, 2001, p. 82). In 1850, the Shattuck report was published by the Massachusetts Sanitary Committee, ordering renovations in public healthcare (Stanhope & Lancaster, 2004, p. 25). The precedents it set for issues such as health boards, sanitation, disease control, wellness care and preventive health measures in medical education were revolutionary at the time (thus not implemented in most states until years later) and are still used today (Stanhope & Lancaster, 2004, p. 25). With the exception of government health interventions, medical management of illness and injury remained relatively free of government intervention or third party payer-ship, and existed on a fee-for-service basis at this time (Shi & Singh, 2001, p. 83).

The Growth of Nursing and Community Health

The Industrial Revolution not only prompted the growth of cities and consolidated healthcare, but also created more jobs, especially for women in the field of trained nursing and community health. It was in the wake of the Industrial Revolution that Florence Nightingale began her work, creating competent nursing facilities and demonstrating that “capable nursing intervention could prevent illness and improve the health of a population at risk—precursors to modern community nursing” (Allender & Spradley, 2001, p. 24). In 1872, the American Public Health Association was established in an effort to encourage the implementation of public hygiene and collaboration of different health-related disciplines (Stanhope & Lancaster, 2004). In the second half of

the 19th century, nurses quickly became critical figures in community health education, and the public health sector began to grow in the United States (Stanhope & Lancaster, 2004, p. 25-26).

The Evolution of Modern Medicine

At the beginning of the 20th century, healthcare in the United States not only focused on public health, but also began to evolve into the practice of medicine that is seen today (Shi & Singh, 2001, p. 84-85). Among the greatest changes of the post-industrial era in medicine were the changing role of the physician, rising costs, systemic organization, growth of technology and the advent of government assistance programs (Shi & Singh, 2001, p. 84-85). Growing medical practices required that physicians become more prepared for the complexities of the profession. As medical doctors became more able to treat patients successfully, the number of patients rose dramatically.

The need for consolidation of physicians, nursing services and medical technology provoked the rise and prevalence of the hospital in the United States and started the institutionalized, acute-based method of care that is common in healthcare today (Shi & Singh, 2001, p. 86-87). Medical practice soon left the realm of the home, and hospitals became the center of medicine as more complex procedures and specialization emerged (Shi & Singh, 2001, p. 86).

The Changing Roles of Physicians

Physicians were primarily in independent practice at the beginning of the twentieth century, but were beginning to rely on one another for referrals and forming

cohesive networks of practice. The American Medical Association (AMA) was formed in 1847 as a national coalition of physicians in network to look out for the interest of the medical profession as a whole and "to promote the art and science of medicine and the betterment of public health" (American Medical Association [AMA], 2007). One of the initial goals of the AMA was to strengthen the medical profession. In order to accomplish this, medical education became more rigorous and licensing practices were implemented, creating higher standards of medical practice and increasing the prestige of the profession (Richmond & Fein, 2005, p. 108-109).

During the first decade of the 20th century, medical schools were created, reformed and required to follow a stringent set of guidelines (AMA, 2007). As prescribed by the Flexner Report of 1910, medical education no longer solely consisted of apprenticeships, but began to become scientifically based college learning (Shi & Singh, 2001, p. 89). As medical education in the country was formalized, the status, prestige and cost of medicine increased (Richmond & Fein, 2005, p. 109; Shi & Singh, 2001, p. 89). The 1920s were a decade of growth in the professional sovereignty of physicians in the United States (Shi & Singh, 2001, p. 85). Affiliation with hospitals or insurance companies by physicians was highly discouraged in medical circles and by the AMA (Smith, 1990, p. 490).

Public Health Expansion

The medical field was not the only area of healthcare changing at this time; the realm of public health was expanding as well. At the start of the 20th century, thirty-eight

states had established public health departments (although only three states spent more than two cents annually per capita on public health) (Stanhope & Lancaster, 2004, p. 30). The government began to take an increasingly larger role in public health as the century continued, and in 1912 the National Organization for Public Health was created (Allender & Spradley, 2001, p. 28).

Public health departments were responsible for matters such as immunization, infectious and parasitic disease prevention and health education of the public (Stanhope & Lancaster, 2004, 30). Public health dealt with the epidemiology and control of communicable diseases such as typhoid and scarlet fever, the care of impoverished families, and vital statistics (Allender & Spradley, 2001, p. 28; Stanhope & Lancaster, 2004, p. 30-31). Public health began to take on a new role in commutative justice, as holes in the medical system were filled by public health services (Shi & Singh, 2001, p. 82).

AMA Forms Tumultuous Relationships

Increased association between the public health sector and the AMA bred a growing public fear of “socialized” medicine among some of the American public (Shi & Singh, 2001, p. 90-91). Factions of physicians and wealthier patients believed that conjunction between the AMA and public health organizations might generate a single controlling body over all of American medicine (Shi & Singh, 2001, p. 90).

Public health remained separate from the private practice of medicine, as it still does today, because of the skepticism of private physicians. Physicians realized that the

boards of health could be possibly be used to control the supply of physicians and to regulate the practice of medicine. Fear of government intervention, loss of autonomy, and erosion of personal incomes created a wall of separation between public health and private medical practice (Shi and Singh, 2001, p. 90).

As the United States became more and more industrialized, American workers began to organize unions. A branch of the socialist party, the American Association for Labour Legislation (AALL), began to demand workers' compensation and introduced several bills from 1912 to 1917 (Smith, 1990, p. 488). The AMA supported initial efforts by the AALL to gain workers compensation and health benefits; however, subsequent legislation attempts by the AALL were met with resistance by the AMA, as this seen as an encroachment on the power of the AMA (Richmond & Fein, 2005; Shi & Singh, 2001, p. 93-94; Smith, 1990).

Social Security Is Formed in Wake of the Depression

After WWI in the wake of the economic crisis of the 1930s, healthcare was greatly affected, as the system was not able to manage the healthcare needs of a growing impoverished population (Stanhope & Lancaster, 2004, p. 35). In an attempt to remedy the social healthcare shortages caused by the depression, the Social Security Act of 1935 was passed (Stanhope & Lancaster, 2004, p. 34). This legislation offered public health assistance to groups such as the blind, dependent, children and aged, but did not include compulsory health insurance due to influence by the AMA (AMA, 2007; Smith, 1990, p. 489). (In August 1920, a resolution by the House of Delegates for compulsory health

insurance was opposed by the AMA, who also openly rejected proposals by the Socialist party in the United States for national health insurance (AMA, 2007; Smith, 1990, p. 488)). This occurred concurrently with a growing fear of Communism in the United States during the first half of the 20th century.

A Growing Fear of Communism Emerges

Communism in its purest form, as Marx and Engels intended in *The Communist Manifesto*, is a form of government which advocates abolition of class struggles and disparities, and common ownership of wealth in a classless society (“Communism”, p. 37). This idea of communism directly conflicts with the American system of capitalism, which supports the rights to own property and pursue individual economic interests. In 1917, Vladimir and the Bolshevik party overthrew the Russian Monarch in a violent revolution and brought an oppressive dictatorship disguised under the name of communism. The Bolsheviks ruled under an administration of totalitarianism and terror, often acting on behalf of the government with little regard to the interests of the people, and initiated the first Red Scare of the late nineteen teens (Heineman, 2005, p. 43).

In 1924, Lenin died and Joseph Stalin continued communist rule of the Soviet Union, seeking a world communist revolution (Heineman, 2005, p. 37). Stalin continued to rule the Soviet Union through World War II (WWII). With growing totalitarian threats abroad in Germany and the Soviet Union, the US formed the House Un-American Activities Committee (HUAC) in 1938 to specifically locate and punish those with “un-American” or communist or fascist views in the United States (“Communism”, p. 38;

Heineman, 2005, p. 44). HUAC arose from the era of fear surrounding communist rule in the 1930s and used fear-inducing tactics such as intimidation, smear campaigns and even posed career threats to deter anti-American sentiment in the US. HUAC only grew in power during WWII and created a stigma and fear around anything associated or remotely-close to communism (“Communism”, p. 38-39).

The late 1940s breathed new life into HUAC activities with the decline of US relations with the Soviet Union and the beginning of the Cold War; this was a time when communism became the greatest enemy of the United States (“Communism”, p. 38). During this period the term “McCarthyism” emerged and referred to the over-zealous pursuit and accusation of instances of communism and treason. This movement was led by Senator McCarthy and produced the most extensive anti-communist legislation in US history with the passage of the McCarran Act of 1950 (“Communism”, p. 48; Heineman, 2005, p. 44). In the late 1950s and early 1960s, HUAC action began to be called into question. This committee was renamed the Internal Security Committee in 1969 and was abolished in 1975 (“Communism”, p. 44). Today an unspoken stigma still remains surrounding anything dubbed “communist” or “socialism”, which has resulted in the societal rejection of universal healthcare plans or “socialist” medicine such as the Clinton Reform of the 1990s.

The Birth of Health Insurance

As medical technology grew, costs also rose and the number of free, charity hospitals began to diminish (Shi & Singh, 2001, p. 96-97). In an age of rising medical

costs and changing social conditions, formal health insurance began (Shi & Singh, 2001, p. 96). In 1929, in an effort to ensure reimbursement from their patients, Baylor University Medical Center offered a group of public school employees an insurance program in exchange for a premium (Shi & Singh, 2001, p. 97). Similar plans soon became popular, giving birth to the community rating system and nonprofit insurance company, for example, Blue Cross Blue Shield (Herzlinger 2007, p. 54). The same year in Oklahoma, a prepaid group practice (PGP) was created but grew much more slowly, as it was met with resistance from local medical societies (Callahan & Wasunna, 2006, p. 25; Richmond and Fein, 2005, p. 34). It was not until 1942 that PGPs began to expand with the formation of Kaiser-Permanente and the birth of the today's health management organization (HMO) (Richmond & Fein, 2005, p. 33-38).

Following the birth of modern insurance in the 1930s, hospitals encouraged insurance plans in order to fill and pay for an increasing number of empty beds (Richmond & Fein, 2005, 38). With the growth of medical technology and increasing centrality of hospital care, healthcare became primarily focused on acute, episodic, curative care (Shi & Singh, 2001, p. 91; Stanhope & Lancaster, 2004, p. 35) to the detriment of health promotion and public health initiatives.

After World War II (WII), mandatory state-sponsored insurance began to grow throughout industrialized nations in Europe, while the United States continued to use public policy to encourage voluntary employer-sponsored insurance (Richmond & Fein, 2005, p. 36-38). In 1943, the Internal Revenue Service (IRS) ruled that money spent by

employers on health insurance would be exempt from taxes, causing employer-sponsored insurance enrollment to explode (Gratzer, 2005, p. 111). For example, in 1942 over 6 million people were covered by Blue Cross Blue Shield, a leading insurance company at the time. By the end of 1946, that number had grown to more than 18.9 million (Richmond & Fein, 2005, p. 38).

Debate about Federal Health Assistance

Throughout the 1950s medical costs continued to rise and private health insurance companies became the primary payer of healthcare services (Shi & Singh, 2001, p. 98). As health insurance grew in significance and necessity, those without it generally had no means to finance healthcare. This led to President Truman's proposals for universal healthcare, which were rejected until the end of the decade when debates on Social Security began (Richmond & Fein, 2005, p. 12). This was largely attributable to the unspoken fear of communism and the sweeping McCarthyism movement, which deterred any system of healthcare that provided universal coverage as it could be linked to communist ideas.

In 1960, the Kerr-Mills Act was passed, which provided federal funds to states for medically needy aged persons with incomes above poverty level in need of assistance, and began a new era in government financed healthcare (Richmond & Fein, 2005, pp. 43-51). In 1965, healthcare in the United States was drastically altered with the passage of Title XVIII and XIX of the Social Security Act (Center for Medicare and Medicaid Services [CMS], 2006; Richmond & Fein, 2005, pp. 43-51). This legislation included

Medicare, the national health insurance plan for the elderly, and Medicaid, coverage for at-risk groups other than the aged (CMS, 2006; Shi & Singh, 2001, pp. 98-100; Smith, 1990).

Creation of the Nurse Practitioner

Another significant turn in healthcare was the creation of the nurse practitioner (NP) in 1965, expanding the role of the nurse in the delivery of primary care (Allender & Spradley, 2001, p. 29). The movement of the NP began at the University of Colorado, where an NP was defined as “a public health nurse with additional skills in the diagnosis and treatment of common illnesses” (Stanhope and Lancaster, 2004, p. 41). The rise of the NP was in response to the need for healthcare in rural and underserved areas (Allender & Spradley, 2001, p. 29). The NP represented the changing power dynamics in medicine and brought a new characteristic to the traditionally physician-dominated medical field.

Healthcare Spending Begins to Increase

As insurance coverage expanded in the latter half of the 20th century, healthcare spending increased and primarily focused on acute, episodic, curative care without proportional growth in health promotion and disease prevention (Herzlinger, 2007, p. 55). The late sixties and early seventies were plagued with inflation from which healthcare was not exempt (Richmond & Fein, 2005, p. 58). In an effort to control rising prices, President Nixon enacted a series of price controls and after achieving little success, finally began to endorse HMOs through several key pieces of legislation (Shi & Singh,

2001, p. 102). The rationale behind the HMO was to increase efficiency and reduce wasteful spending by providing comprehensive healthcare at a predetermined cost in a tightly controlled spending environment (Gratzer, 2005, pp. 113-114). This period in healthcare was characterized by rising costs and a growing number of uninsured despite reform efforts. From 1960 to 1985, personal health care expenditures rose from \$24 billion to \$376 billion, while spending in Medicare and Medicaid rose from \$7.7 billion in 1967 to \$109.8 billion in 1985 (Richmond & Fein, 2005, p. 74). Ninety-five percent of these expenditures was devoted to medical care primarily financed through insurance, while only 5% was appropriated for public health promotion (Smith, 1990, p. 487). In the 1980s, third party payers began to realize this imbalance towards hospital care and took notice of the rising costs of inpatient service; the combination of these factors caused them to encourage outpatient services and primary care (Shi & Singh, 2001, p. 135).

Insurance Companies Rise to Power

Before the reforms of the 1980s, Medicare and most other insurance companies reimbursed healthcare service providers through a traditional retrospective cost-plus method (Shi & Singh, 2001, pp. 206-207). As healthcare costs continued to increase through the 1970s (especially Medicare hospital expenditures) this method of payment changed (Stanhope & Lancaster, 2004, p. 106). In 1983, the Social Security Act was passed which included a clause that replaced the cost-plus method with a prospective payment system (PPS) (Hamowy, 2000, p. 45; Stanhope & Lancaster, 2004, p. 116).

The PPS included 468 diagnosis-related groups (DRGs), which categorized patients with similar conditions adjusting for demographic indicators, and established a pre-set charge per patient rather than per diem (Shi & Singh, 2001, p. 207; Stanhope & Lancaster 2004, p. 115). This change created an incentive for hospitals to be as efficient as possible (Richmond & Fein, 2005, p. 45). Insurance companies refused payment for services that exceeded their established set price, so by the end of the 1980s, it was clear that health insurance had become a thriving industry in the United States even in the midst of rising healthcare costs (Richmond & Fein, 2006, p. 80).

The Growth of HMOs

The 1990s brought little change to the healthcare situation. Prices continued to rise along with the growing numbers of uninsured. Debate surrounding the healthcare system was largely financial and focused on controlling costs (Shi & Singh, 2001, pp. 102-103). In 1994, President Clinton's Health Security Bill, which proposed universal care through managed competition, was defeated largely due to its association with socialized medicine; but, HMOs continued to grow and dominate the healthcare market (Callahan & Wasunna, 2006, p. 43). Although HMOs initially appeared to be the solution to controlling prices and increasing coverage, by the late nineties they started to fall under attack for delaying and denying access to necessary care (Gratzer, 2005, p. 118). To some, HMOs represented a loss of patient choice and autonomy, and a loss of physicians' freedom to practice medicine, contributing to their decline in an independent and free society in the nineties (Gratzer, 2005, p. 118; Herzlinger, 2007, p. 38).

Due to this backlash against HMOs, traditional indemnity insurance became more popular (Gratzer, 2005, p. 119). However, by the turn of the 21st century there was resurgence in the popularity of Managed Care Organizations (MCOs). In 2000, more than 258 million Americans were enrolled in either an HMO or PPO (Callahan & Wasunna, 2006, p. 211).

Challenges in Modern Healthcare

Today, a shift from the paradigm of illness to one of wellness seems to have begun as demonstrated by the growth in managed care; however, this shift is still small and occurring slowly as the majority of healthcare is still delivered through the medical model (Shi & Singh, 2001, p. 19). The current challenges of healthcare are cost, quality and access. Solutions to these problems are limited by economic constraints. As Shi and Singh (2001) suggest, there has been a growing focus on the economic realities of the situation rather than on the social and political issues surrounding healthcare (p. 103). Technology, cost-shifting, demographic changes, an aging population and chronic disease have all led to rising medical costs (Shi & Singh, 2001, pp. 102-103). Rather than increasing preventive and primary care, the medical environment in the United States is primarily focused on acute, episodic secondary and tertiary care, which can be expensive and has contributed to the increase in disease in the US (Stanhope & Lancaster, 2004, p. 65).

Cost of healthcare has become a major concern as the healthcare market has become largely corporate, and the healthcare industry responds to financial incentives

(Shi & Singh, 2001, pp. 102-103). Complex networks, integrated care facilities, hospitals and private physicians, combined with multiple insurance companies and large health corporations have created an ever-growing, complex system (Shi & Singh, 2001, pp. 104-105). This brings the discussion to the current situation in the United States where prices are rising, quality, access and equity are falling, and countless reform possibilities exist. The situation begs examination and a solution to stop this spiraling disaster called we call a healthcare system.

CHAPTER TWO: The Current Healthcare System and Factors Influencing Healthcare Delivery

Complexity and Fragmentation Characterize Current System

The healthcare system in the United States is not as much a system as it is a fragmented assembly of various independent private and government organizations each covering different segments of the population. The World Health Organization defines a healthcare system as “all the activities whose primary purpose is to promote, restore or maintain health” (WHO, 2000, p. 22). Shi and Singh (2001) define a system as “a set of interrelated and interdependent components designed to achieve some goal” (pp. 26-27). Although healthcare in the United States is roughly coordinated to achieve greater health, it does not meet the other qualifications of a true system. Not only are there different sectors of healthcare to navigate through (i.e., primary, secondary, tertiary, preventive, acute, subacute, etc.), but also many different providers of these types of services. Hospitals, clinics, universities, state and federal governments, volunteer organizations and other service providers, must work with payers and patients to coordinate and deliver proper healthcare. Due to these complex, independent groups, achieving cohesive healthcare coordination is difficult.

The fragmentation and complex nature of healthcare in the United States creates a complicated economic and reimbursement scheme. Between the different sectors of care, around \$2 trillion is currently spent on healthcare in the United States each year, but where and how that money is spent is a tangled network (Herzlinger, 2007, p. 1).

Fragmentation of the system has largely been caused by its historical formation, as well as by political, economic and cultural factors that are present in the United States (Callahan & Wasunna, 2006, p. 5).

This chapter will outline the major components of the current healthcare system and explore the many different components and factors in the current system that make healthcare such a complicated issue in the United States. By examining the current plans and programs through which care is delivered, how these methods are financed and the current powers influencing American healthcare, a greater understanding of the healthcare problem can be gained in order that more effective solutions can be proposed.

Healthcare Delivered Through Medical Model

Although the healthcare paradigm in the United States has been slowly changing in recent years towards the promotion of wellness, healthcare is still primarily delivered under the medical model (Shi & Singh, 2001, pp. 51-52; Stanhope & Lancaster, 2004, p. 106). The medical model can be defined as “delivery of healthcare that places its primary emphasis on the treatment of disease and the relief of symptoms instead of prevention of disease and promotion of optimum health” (Shi & Singh, 2001, p. 590). One aspect of our complex healthcare system that is fairly constant across the United States is that the majority of money spent by payers and medical attention given by healthcare providers is acute and fixative by nature. For example, medical costs each year in the United States account for 97% of all healthcare expenditures, while public health accounts for just 3% of spending (Colwill, 2003, pp. 30-31; Stanhope & Lancaster, 2004, p. 108). Although

research suggests that societies with a greater focus on prevention and health promotion, rather than on care promoted under the medical model, are healthier, the United States continues to organize its healthcare system around the medical model.

Types of Care

Primary Care

Due to the practice of healthcare under the medical model, the majority of healthcare in the United States is primarily delivered as acute, episodic, curative care in secondary and tertiary care settings instead of preventive care in primary care or public health settings (Shi & Singh, 2001, pp. 102-103). Primary healthcare is defined by the Institute of Medicine as “the provision of integrated, accessible healthcare services by clinicians who are accountable for addressing a large majority of personal healthcare needs, developing a sustained partnership with patients, and practicing in the context of family and community” (Grumbach & Bodenheimer, 2003, p. 48). Primary care is generally provided in an office or clinic by various providers such as nurses, physicians, nurse practitioners (NP) or physician’s assistants (PA) and is “basic, routine and inexpensive” (Shi & Singh, 2001, p. 137). It includes routine checkups, care for general illnesses, some acute care and management of chronic disease. Primary care is not always delivered by a general practitioner (GP) or family practitioner, but can also be provided by a specialist focusing on primary care, such as an internist, pediatrician or obstetrician/gynecologist, and by NPs (Shi & Singh, 2001).

Unlike the objectives of secondary and tertiary care, the main goal of primary care is accessibility and convenience for all in the community, serving as an entrance point into the healthcare system (Grumbach & Bodenheimer, 2003, pp. 49-50). In our current medical system, primary care is not only provided at a private physician's office or community health center, but can also be provided through a managed care organization (MCO), which will be discussed later in the chapter. In the context of an MCO, all medical care is provided within one network or even one building and generally begins with primary care (Stanhope & Lancaster, 2004, p. 58). Consistent primary care helps maintain health and serves as an organizational point for specialized secondary and tertiary care (Grumbach & Bodenheimer, 2003, p. 49).

Secondary and Tertiary Care

Secondary care differs from primary care as it is generally more complex than the realm of primary care. Secondary care is episodic, short-term care, involving expert or surgical authorities in the area. Secondary care involves specialized surgery and rehabilitation performed in general hospitals, but is fairly routine compared with tertiary care (Shi & Singh, 2001, pp. 234, 597).

Tertiary care is more complex than both primary and secondary care as it is elaborate, complicated, and used for relatively rare ailments (Grumbach & Bodenheimer, 2003, p. 49). Tertiary care is very specific, technologically based and is usually performed in teaching institutions and specialized hospitals. Some examples include

burn and wound care, transplantation and large trauma centers (Shi & Singh, 2001, pp. 235, 598).

Preventive Health

Before a patient formally enters any of these levels of healthcare, there are preventive realms of care at each level. Primary, secondary and tertiary prevention all exist as a means to promote wellness and take appropriate measures to prevent or delay the onset of illness and stop the progression of disease. Primary prevention is the prevention of disease before it begins, which includes the active promotion of health through activities and lifestyles that are meant to reduce the occurrence of illness (Shi & Singh, 2001, p. 594; Stanhope & Lancaster, 2004, p. 52). Generally, primary prevention is applied to populations that are relatively healthy and used before the onset of disease (Allender & Spradley, 2001, p. 11). Primary prevention includes health measures from education programs and efforts promoting smoking cessation to immunization and hand washing (Allender & Spradley, 2001, p. 11; Shi & Singh, 2001, p. 45).

Secondary prevention serves to detect existing illness as early as possible and begin immediate treatment (Allender & Spradley, 2001, p. 11; Shi & Singh, 2001, p. 45; Stanhope & Lancaster, 2004, p. 52). The purpose of secondary prevention is prompt detection of an illness or injury when it can be easily treated so that it does not develop into a chronic or disabling condition (Allender & Spradley, 2001, p. 11; Shi & Singh, 2001, p. 45). Examples of secondary prevention include regular screenings for hypertension or cholesterol, pap smears, mammograms or education on regular testicular

or breast self-examinations (Allender & Spradley, 2001, p. 11; Stanhope & Lancaster, 2004, p. 52).

Tertiary prevention includes rehabilitation and treatment that seeks to control the progression of an illness or injury in an effort to minimize further complications and maintain function once an individual has developed a health problem (Allender & Spradley, 2001, p. 11; Shi & Singh, 2001, p. 45). Examples of tertiary prevention are rehabilitation of patients who have suffered a stroke or the management of diabetes to prevent complications of the disease (Allender & Spradley, 2001, p. 11). Tertiary prevention often involves changes in lifestyles to reduce the effects of illness on people's lives (Shi & Singh, 2001, p. 45).

Community-Based Health

Prevention is a large part of primary health care (PHC), public health or community-based primary care. These all describe population-based health movements focused on maintaining the health of a population (Allender & Spradley, 2001, p. 10). Community and population based health movements are “essential care made universally accessible”; they promote “self-care” and provide education so that people can maintain their own health (Stanhope & Lancaster, 2004, p. 9).

Public health promotion and prevention rely upon the knowledge of risk factors, behavior modification, therapy, and disease control. The goal of public and preventive health is to control the outbreak of disease and maintain the health of a population, using

immunization, education programs, smoking cessation campaigns, and sanitation and hygiene efforts (Shi & Singh, 2001, p. 46).

The Importance of Preventive Health

Preventive care is one of the most effective ways to maintain health. The National Center of Health attributes the 3.0% drop in mortality from all cancers from 1991-1995 to prevention and early detection and treatment efforts (Shi & Singh, 2001, p. 45). For instance, cervical cancer mortality alone declined by 9.7% due to increasing frequency of Papanicolaou (Pap) screenings (Shi & Singh, 2001, p. 45).

The Public Health Service estimates that only 10% of all premature deaths can be prevented by advances in healthcare, but that 70% of all early deaths can be prevented by population-wide health care movements (Stanhope & Lancaster, 2004, p. 4). Large improvements in the health of the population have historically followed public health changes such as improvements in sanitation and control of disease (Stanhope & Lancaster, 2004, p. 4). While the majority of healthcare in the United States is delivered as secondary and tertiary care, there have been efforts to increase the general health of the nation through increasing primary and prevention efforts.

Steps Towards Increasing Health

As one of the efforts towards increasing global health, in 1977 at the 30th WHO Health Assembly, all attending nations made a commitment to promote health throughout all populations (Stanhope & Lancaster, 2004, p. 42). As part of this movement, the United States government implemented Healthy People 1990, then Healthy People 2000

and most recently Healthy People 2010 (Stanhope & Lancaster, 2001, p. 42). The Healthy People program is a nation-wide effort to improve the general health of the nation. It identifies specific and measurable objectives to be met by a specific point in the future (Healthy People, 2007).

Healthy People 2010 is “a comprehensive set of disease prevention and health promotion objectives for the nation to achieve over the first decade of the new century” (Healthy People, 2007). The coalition of government departments and health agencies who authored 2010 defined two primary objectives: to increase the quality and average length of life, and to abolish healthcare disparities (Healthy People, 2007). In order to achieve these standards, four pillars of a healthy lifestyle were constructed: eat nutritiously, get plenty of physical activity, have health screenings performed and choose healthfully (Healthy People, 2007). The Healthy People incentives focus largely on preventive and primary care measures. According to the Office of Disease Prevention and Health Promotion, the program was on its way to fulfilling the goals of the program at the half-way analysis and is already showing improvement in nationwide health indicators (Healthy People, 2007).

When the lower levels of a healthcare system are more effective, the higher tiers have a greater capacity to improve health (Stanhope & Lancaster, 2004, pp. 1-2). Although healthcare is most effective in maintaining and promoting health when delivered through primary healthcare and preventive efforts, the majority of healthcare in

the United States is still delivered through secondary and tertiary care (Shi & Singh, 2001, pp. 39, 50-51; Stanhope & Lancaster, 2004, p. 3).

The Distribution of Medical Costs

The government is the single largest payer of all healthcare services, as it finances nearly half of the nation's healthcare expenditures through several prominent programs. Medicare, Medicaid, State Children's Health Insurance Program (SCHIP), the Veteran's Health Administration (VHA), military Department of Defense (DOD) TRICARE and Indian Health Services (IHS) are six of the major government health programs (Institute of Medicine [IOM], 2003). Within the United States Department of Health and Human Services (USDHHS) many other government agencies exist including the Center for Medicare and Medicaid Services (CMS), the National Institute of Health (NIH), and the Center for Disease Control and Prevention (Stanhope & Lancaster, 2004, pp. 172-179).

As an aggregate, these services make up the most significant portion of healthcare service expenses in the US. Of the 47.2% of healthcare funds spent by the government in 2006, 41.1% of these monies were spent through Medicare, 31.4% in Medicaid and the remaining 27.5% on other the other programs cited above (Center for Medicare and Medicaid Services [CMS], 2006).

Medicare

Medicare Is Largest US Healthcare Program

Medicare beneficiaries are the nation's single largest health service consumer. Total Medicare outlays in 2006 were \$381.9 billion (CMS, 2006). Medicare is a federal

insurance program for those who are eligible for social security (age 65 and over), for those eligible for Social Security with certain disabilities, and for those suffering from end-stage renal disease. While the government finances the program, care is delivered completely through the private sector. Medicare contracts private companies to provide and finance healthcare (CMS, 2006; IOM, 2003). Federal funding for Medicare comes through payroll taxes, premiums, investment interest earnings and various other federal taxes (CMS, 2007).

Hospital insurance (HI) or Medicare Part A provides the most basic coverage benefits that the program offers. Included under the plan are basic acute coverage, hospital care, some preventive care and nursing and hospice care (CMS, 2006; IOM, 2003). Part B or Supplementary Medical Insurance (SMI) is voluntary supplementary insurance available at a small premium from the enrollee that includes physician visits, outpatient hospitals, tests, equipment, some therapy, limited prescription drugs and a few other services. Although Part B is optional, about 94 % of Medicare enrollees choose to enroll in Part B as well (CMS, 2006). Effective January 1, 2007, optional Part D offers prescription drug benefits to voluntary enrollees. Medicare Advantage (MA) is an additional option in the program that offers prepaid health plans instead of the traditional fee for service (FFS) option most common to Medicare to those who are qualified (CMS, 2006).

Changes in Medicare Payment Scheme

Since its formation in 1965, traditional Medicare used cost-plus reimbursement, which established daily costs incurred by patients at hospitals, nursing facilities and home health care costs. Under this payment arrangement, Medicare retrospectively paid for patient care and operating costs, plus a portion of the capital costs involved in establishing the daily rate (Shi & Singh, 2001, pp. 206-207). This system provided financial incentives for hospitals to prescribe long hospital stays and unnecessary tests and procedures (Richmond & Fein, 2005, pp. 82-83).

As healthcare costs continued to rise in the 1970s, Medicare's method of payment changed. In 1983, the Social Security Act was passed which included a clause that replaced the cost-plus method with a prospective payment system (PPS) (Hamowy, 2000, p. 45; Stanhope & Lancaster, 2004, p. 116). The PPS included 468 diagnosis-related groups (DRGs), which categorizes patients with similar conditions adjusting for demographic indicators, and established a pre-set charge per patient rather than per diem (Stanhope & Lancaster, 2004, p. 115; Shi & Singh, p. 207). This change created an incentive for hospitals to be as efficient as possible because DRGs provided a spending maximum that Medicare would not exceed (Richmond & Fein, 2005, p. 45).

Chronic Disease and Medicare

A large portion of chronically ill patients in the US are covered by Medicare. The most prevalent conditions among beneficiaries are high blood pressure, pulmonary disease, asthma, diabetes, heart disease and stroke. Seventy-eight percent of Medicare

beneficiaries have at least one chronic disease and 63% have two or more chronic conditions (IOM, 2003).

Government programs, especially Medicare, have been criticized for prescriptive healthcare. Critics argue that protocol and approved expenditures are predetermined, taking the job of the physician and placing it in the hands of Congress (Herzlinger, 2007).

Medicaid

Expenditures by Medicaid, the second largest government healthcare program, are slightly lower than those of Medicare. Medicaid comprises 14.8% of healthcare expenditures with federal outlays in the program amounting to \$307 billion in 2006 (CMS, 2006). Medicaid is a joint federal-state insurance program available to low income citizens meeting specific criteria.

Pregnant women, children, certain low-income parents, disabled adults, federal Supplemental Security Income (SSI) recipients and medically needy (non-poor with extraordinary circumstances) comprise the majority of those who qualify (CMS, 2007; IOM, 2003). Fifty-four percent of beneficiaries are children and most are under six. Seventy-one percent of expenditures are for the aged/blind/elderly and over half of expenditures are for long-term care (CMS, 2007; IOM, 2003).

Medicaid Varies Across the Nation

Medicaid coverage and benefits vary greatly across the nation because the program is jointly financed by both federal and state governments, but administered independently in each state (CMS, 2007). Several different strategies are employed by

different states to insure health coverage, including FFS in the private sector, managed care, and community health centers. Coverage under Medicaid provides comprehensive care for both chronic and acute illness, as well as institutional care.

As in Medicare, there is a substantial population of chronic conditions seen within the program, as people with five or more chronic conditions account for two-thirds of Medicare expenditures (IOM, 2003). Medicaid is also the largest single source of payment for those with AIDS, amounting to \$11.4 billion in 2006 (CMS, 2006).

State Children's Health Insurance Program

Although Medicaid covers a number of children, approximately 1 in 7 children were uninsured in 1998 (CMS, 2006). Therefore, SCHIP was created as a form of insurance for children up to age 18 who are not poor enough to qualify for Medicaid, yet whose parents are not financially capable of providing private care for them (IOM, 2003). The federal government set aside \$40 billion in 1998 to finance the program for the following ten years.

SCHIP, like Medicaid, is largely under state control and currently operates as a block grant to the states under which they are given the option to combine it with Medicaid (CMS, 2006). A number of states choose to utilize managed care for children enrolled in SCHIP (IOM, 2003).

Veteran's Health Administration

In addition to SCHIP, Medicaid and Medicare, VHA, DOD TRICARE and IHS comprise the majority of remaining federal health spending. VHA coverage is delivered

through Veterans Integrated Service Networks. The network contains a specific number of care provider centers in each region. Coverage is not extended to all veterans, but is triaged according to available funds and given to those who have sustained compensable, service-connected disabilities and are low-income patients. In 2007, \$34.5 billion was appropriated to the VHA (VHA, 2007).

Military DOD TRICARE

DOD TRICARE is a combination between two of the health systems of the Department of Defense. TRICARE provides coverage to active personnel, their dependents, retirees under age 65 and their spouses as well as survivors. TRICARE for Life provides supplemental coverage, including prescription drugs to those who also qualify for Medicare. In 2002, DOD TRICARE expenditures reached \$14.2 billion and covered 8.4 billion recipients (IOM, 2003).

Indian Health Services

The final major government program is IHS, which is a branch of the department of Health and Human Services covering Alaskan Native and American Indian tribes. Within IHS, there is a unique government-tribe relationship. IHS is the main provider of healthcare services through tribally contracted programs. Facilities located nationwide are covered directly through health programs contracted and operated by the tribes, but financed by the federal government (IHS, 2007). Education levels among the tribes tend to be low and poverty levels tend to be high in these communities contributing to

poor health in many of the members (IOM, 2003). Annual federal financial appropriation to the program is approximately \$3 billion, which covers 1.8 million people (IHS, 2007).

Insurance

Insurance Serves as Primary Payer in Private Sector

The remaining 52.8% of healthcare costs is covered by the private sector, and like government financed healthcare, is generally funded by a third party. Private insurance accounts for 34.3% of all healthcare costs, 11.3% is paid for out-of-pocket, while the final 7.2% is financed by other private sources (CMS, 2006). Health insurance is the primary means by which people in the United States obtain healthcare (Shi & Singh, 2001, p. 185). In 1997, 13 million Americans relied upon individual private health insurance (Shi and Singh, 2000, p. 190). Insurance companies, managed care organizations and the government are known as third party payers because they neither give nor receive the care, but pay for it. Within the private sector there are many options for insurance and health service plans. The two most common payment schemes in healthcare are traditional indemnity insurance and Managed Care Organizations (MCOs). Traditional indemnity insurance is meant to provide protection in the case of a catastrophic event or illness, where MCOs place more emphasis on primary care.

Insurance Procedures

Insurance is a means of protection against risk, where risk is defined as “the possibility of a substantial financial loss from an event of which the probability of occurrence is relatively small” (Shi & Singh, 2001, p. 188). Underwriting is the

procedure used to identify this risk based upon an individual's health risk in relation to that of the national population determined by factors such as demographics and health status (Shi & Singh, 2001, pp. 188, 190). Based upon an individual's given risk, a premium is assigned (Shi & Singh, 2001, p. 190). A premium is the amount that is paid to the insurance company generally every month by either the beneficiary or the employer to insure against the determined risks (Shi & Singh, 2001, p. 191). There are some out-of-pocket costs in most healthcare insurance plans in addition to the premium paid to the insurance company each month. These costs are generally in the form of a deductible or co-payment (Shi & Singh, 2001, p. 192). A deductible is the amount that the beneficiary must pay in a given year before the insurance company begins to cover health care expenses. A copayment is set amount of cost sharing that the beneficiary must pay each time healthcare services are received generally up to a maximum liability known as the "stop-loss" provision (Shi & Singh, 2001, p. 192).

Different Types of Reimbursement

There are several reimbursement methods for ensuring payment. The fee-for-service method pays a set price established by the provider for one specific service. Each service such as an x-ray, admissions costs, medications and doctors' fees is individually listed on the bill and paid by the insurer. However, insurers generally will only pay what they feel to be a reasonable amount established by state norms, which can leave the beneficiary to cover the difference (Shi & Singh, 2001, p. 204). The insured generally pays minimal and routine healthcare costs on a fee-for-services (FFS) basis, along with a

set premium. Once the patient reaches the deductible, additional medical costs incurred by the patient are covered by the insurance company (Shi and Singh, 2001, p. 190).

Traditionally, retrospective payment methods have been used in healthcare, in which the doctor determines a price and charges the patient after reception of service. The charge is then submitted to the insurance company for reimbursement (Shi & Singh, 2001, p. 190). Fee-for-service reimbursement can provide incentive to prescribe unnecessary services, resulting in rising healthcare expenditures (Shi & Singh, 2001, p. 204).

Another method of reimbursement is bundled charges, which have one price for a package of related services, such as all of the expenses related with the normal delivery of a baby (Shi & Singh, 2001, p. 205). After Medicare replaced the retrospective, cost-plus method in 1984 and Medicaid in 1991, there was a major movement to manage healthcare costs with the introduction of the Omnibus Reconciliation Act in 1990 (Stanhope & Lancaster, 2004, p. 122). Under the Omnibus Budget Act, Medicare established a relative value method, which assigned a cost to each service or physician skill based upon region in order to reduce provider-induced demand (Shi & Singh, 2001, p. 206). It established the resource-based relative value scale, which projected a cost range for the given health conditions. This led to the practice of capitation, which is a pre-established amount that an insurance company will pay for any one “unit” of healthcare and also influenced insurance companies to implement the practice of pre-approval for services (Stanhope & Lancaster, 2004, pp. 121-122).

Managed Care Organizations

Managed Care Organizations (MCOs) are means of private health care provision. An MCO attempts to integrate the different aspects of healthcare provision within one setting, control utilization and manage costs. MCOs were primarily formed in response to rising healthcare costs in an effort to contain them, where cost is defined as “what it costs the provider to produce a service” (Shi & Singh, 2001, p. 584). MCOs presented a way to limit costs by controlling expensive specialty care, while simultaneously promoting health through a primary care physician (Stanhope & Lancaster, 2004, p. 119). Payment, delivery, insurance and financing are consolidated under one setting without the utilization of additional second and third parties (Shi & Singh, 2001, p. 320). MCOs promise to provide comprehensive medical service in exchange for a set pre-paid fee from the enrollee based upon health and demographic criteria and often a small co-payment at the time of service. By charging one cost for all services, providers have incentive to keep costs per enrollee to a minimum and provide quality care (p. 323).

MCOs Focus on Primary Care

MCOs focus on preventive and primary care, and they generally encourage regular examinations to maintain health and keep specialty costs low (Shi and Singh, 2001, p. 321). Health plans under MCOs provide routine services and emphasize primary care. Primary care providers then refer patients to more specialized care providers if needed, acting as the coordinator to ensure the patients navigate their way through the healthcare system and receive the care that they need (Shi & Singh, 2001, p. 236). This

function is often criticized as the “gatekeeper”, which prevents patients from obtaining needed, more expensive, specialized care (Herzlinger, 2007).

The Health Maintenance Organization

There are several different types of MCOs. One type is the Health Maintenance Organization (HMO), which is a vertically integrated structure that contains multiple health services all contained within the same organization. One of the best known is Kaiser-Permanente. According to Shi and Singh (2001) there are four main characteristics shared by HMOs. An HMO provides medical care for times of health as well as times of illness, comprehensive healthcare for a set fee each month, healthcare that must be received from providers associated with the HMO and the assurance of established standards of quality (p. 331). HMOs can either be affiliated with certain providers or the organization can employ its own healthcare personnel so that all aspects of care remain within the company (Shi & Singh, 2001, p. 332).

Preferred Provider Organization

Another type of MCO is the preferred provider organization (PPO), which is a network of independently affiliated physicians and hospitals that provide a discount to the company. Under a PPO, the organization has formed different agreements with various providers including hospitals, doctors, etc.; these are the preferred providers. The preferred providers give care for a discounted rate in exchange for payment arrangements with HMOs, like DRGs and bundled charges, which removes risk sharing from the providers. Patients have the option to see any provider under a PPO, but if they choose to

go outside of the preferred network then they often have to pay the difference (Shi & Singh, 2001, pp. 334-335). Exclusive provider organizations (EPOs) are like PPOs except the organization will only cover healthcare services received exclusively from the providers in the network (p. 336). The point of service plan (POS) combines traditional HMOs with PPOs. Each enrollee picks a primary care provider from the network; however, if the individual decides to see another physician, he or she can pay extra at that point (p. 337).

Different Payment Methods of MCOs

MCOs have several methods of reimbursement. The first is the preferred-provider method, which operates on a fee-for-service basis, but provides discounted rates for seeing physicians within the insurance network, much like a PPO (Shi & Singh, 2001, p. 206). Another method of payment is capitation where the provider is paid a set amount each month for each enrollee regardless of the services that the beneficiary receives. This method seeks to eliminate over-prescription of unnecessary procedures, but has the danger of creating incentive for providers to withhold necessary services (p. 206). A third method used by managed care organizations utilizes salaried physicians employed by the MCO (p. 206).

Employers are a Major Insurance Provider

Whether traditional indemnity insurance or managed care is utilized, the majority of private healthcare in the United States is provided through an employer. According to the US Census Bureau, 88% of those with private insurance in 2005 received coverage

from their employers (Rivlin & Antos, 2007, p. 158). Many employers issue group insurance, which is provided through a company or union and establishes cost based on distributed risk (Shi & Singh, 2001, p. 188). For employer-provided coverage, the employer and employee generally share the cost as the premium is paid through salary deductions and contributions from the employer (Shi & Singh, 2001, p. 191). Some large employers practice self-insurance. For large diversified companies, risk is well distributed; therefore, instead of paying private insurers to assume the medical risk of the company, the company budgets money each year to cover medical claims made by employees (Shi & Singh, 2001, p. 189).

Politics, Economics and Culture Affect US Healthcare

As outlined above, a complex network of payers and providers exist. They operate under many different plans and programs leading to the fragmented nature of the healthcare system in the United States. Political, economic and cultural factors all further complicate the situation. Sustainable, comprehensive healthcare reform in this country is very complicated because much of the debate surrounding healthcare is political, filled with rhetoric and agendas. Before serious discussion of reform can begin, the role of the government and politics in the healthcare system must be determined.

Government determines the healthcare policy made in our country and finances much of the current healthcare system (through taxes), but the people of the United States ultimately have the power to dictate the direction of reform (Stanhope & Lancaster, 2004, p. 173). Because the democratic system of government in the United States allows each

citizen to cast a vote to determine who is in office, the US population has a choice to elect officials who serve their constituents and carry out their wishes while in office. Therefore, healthcare reform theoretically rests on the will of the people. This is often more complicated than it seems because political platforms and rhetoric may cloud a politician's true agenda and their platform is not always carried out. As John Goodman and Devon Herrick, National Center for Policy Analysis, state:

...political competition inexorably leads candidates to adopt a specific position called the winning platform. The idea of a winning platform is a fairly simple one. It is a set of political policies that can defeat any other set of policies in an election. (Goodman and Herrick, 2004, p. 85-86).

This "winning platform" may not always translate to action in healthcare reform in a direction that is best for or congruent with the will of the people.

Healthcare Policy is Determined by Politics

Healthcare policy is often caught between the public and private realms. There are often competing interests in the formation of healthcare policy; much of the policy surrounding healthcare is made within the private sector, even though healthcare is a public domain (Richmond & Fein, 2005, p. 163). For federal organizations such as the NIH, which depend heavily on private contributions, impartial policy formation is politically difficult (Richmond & Fein, 2005, p. 163). President Bill Clinton's reform proposal of 1993-1994 illustrates an instance of this. Clinton's plan was a bold incentive for that time, which proposed a universal healthcare system modeled after MCOs

(Herzlinger, 2007, pp. 41, 49). His plan included an increase in taxes, and although polls show that Americans would like universal health care coverage, they are generally unwilling to pay the cost (Shi & Singh, 2001, p. 95). As James Mongan, physician and experienced health strategist explains, "...the most important cause of healthcare reform's demise was that avoiding tax increases and their thinly veiled cousin, employer mandates, took priority over expanding coverage..." (Shi & Singh, 2001, p. 95).

What Role Should Government Play in Healthcare?

The government has had a substantial role in the complex healthcare system in the United States; however, the question of what their role ought to be and how much politics should play a part in healthcare remains debatable. Most economists agree that there needs to be balance between a free market and complete government regulation (Callahan & Wasunna, 2006, p. 41). Economist Regina Herzlinger outlines three crucial governmental regulation functions in a market-driven healthcare system. She includes prosecution of fraudulent providers and consumers, provision of healthcare to the poor, and inspection of performance by providers (Herzlinger, 2007, p. 215).

The United States is a democracy founded on individual choice and freedom, and healthcare is essential in order to participate in and contribute to a democratic society (Callahan & Wasunna, 2006, p. 11). The government provides a multitude of other services such as police protection, mail delivery, roads maintenance, etc. It would be economically feasible for the government to provide universal healthcare coverage as well, if the citizens of the United States chose to make healthcare a social priority

(Stanhope & Lancaster, 2004, pp. 65-68). For instance, Canada, the second largest spender on healthcare services in the world after the United States, spends 40% less on healthcare than the US and provides coverage for all Canadian citizens (Stanhope & Lancaster, 2004, p. 51). Implementation of universal coverage hinges on the will of the American people and the platforms of politicians.

The role of a democratic government is to protect personal liberty and attend to those common goods that liberty destroys when liberty turns to license. How this balance is to be achieved is a constant struggle of democratic societies and institutions. What is crucial in health care is that any moral claim must take cognizance of the common social good, the shared moral claim on medical knowledge, and the special nature of health care as human activity. (Pellegrino, 1999, p. 261).

Economic Issues in Healthcare

In politics, there are those who support completely market-driven reform in which the government surrenders power to the force of competition, and there are others who believe that government-directed healthcare would be the best solution (Callahan & Wasunna, 2006). However, in the current healthcare system in the US, it is unlikely that an exclusive form of either will emerge. Unlike a free market governed solely by supply and demand, the healthcare market differs in several regards, making it difficult to navigate economically.

The healthcare market in the United States is unique, not quite like any other market that exists in this country. In a traditional market, consumers determine whether or not the goods are worth the price and engage in the buying and selling of goods and services, or commodities (Heubel, 2000). The ability of healthcare to become a commodity is debatable, as by definition, a commodity is a product for sale which is priced according to its usefulness or satisfaction to the consumer (Pellegrino, 1999, pp. 244-245).

Commodities are used in the provision of medical care; however, healthcare is not classified as a commodity because it focuses largely on a human need fundamental to human existence, i.e. health. The healthcare market takes place in a competitive environment, but is driven by need, not demand (Shi & Singh, 2001, p. 480). The third party payer and lack of transparency in the healthcare system insulates consumers from the true cost of healthcare. This skews the traditional model of a market which is based upon demand and ability to pay (p. 481).

Heubel also argues that healthcare cannot be reduced to purely economic terms because of the uncertainty of demand, the inability of some aspects of healthcare to be treated purely as commodities (like health) and the inequality of exclusiveness (Heubel, 2000, pp. 243-246). Pellegrino (1999) also challenges the notion of commodification of healthcare in a traditional market. He argues that it is not possible to quantify the intangible outcomes of healthcare; he also points out the moral issues that arise in rationing healthcare strictly according to economic means, as health is an essential part of

being a functioning human (pp. 244-249). Perceiving healthcare in a strictly economic manner has the potential to limit access to only those who can pay and restrict needed care for those who cannot (Heubel, 2000, pp. 246-248). In a traditional market, prices control the production and distribution of commodities; however, in healthcare, rising prices do not mean that the demand or need for healthcare services will diminish. Prices are rationing factors in a traditional market, but within the healthcare sector, rationing and commodification of services may be considered an assault on ethical principles (Heubel, 2000; Pellegrino, 1999).

Culture and Societal Values Affect Healthcare Delivery

To further complicate the economic and political situations and to muddle the multitude of government and private programs faced by the consumer, exist the attitudes and cultural environment that surround healthcare in the United States. Shi and Singh (2001) suggest that cultural factors have some of the greatest impact on the delivery of healthcare (p. 51). Not only do cultural beliefs and values establish what is important and good for a society, they also determine which members of society will receive healthcare benefits and how medical care is delivered through general social consent (Shi & Singh, 2001, p. 53). In the United States, because the country has been inundated with multiple cultural influences, there are many views about healthcare. Several predominant ideals found in the dominant culture have shaped healthcare in the United States (Longest, 2001, p. 12).

The ideas of autonomy, choice, self-determination, and freedom have shaped the general consciousness of the American people, and these ideals have affected their attitudes towards healthcare as well (Longest, 2002, p. 12). Most Americans prefer to have the choice to control their healthcare. Even though the majority of Americans would like to have universal coverage, subconsciously this starts to resemble socialist medicine and becomes associated with communism (Shi & Singh, 2001, p. 95). Reforms that can be even distantly linked to the idea of “communism” are shunned by the American psyche as this is a complete contradiction to American ideals and principles.

When healthcare is examined in terms of capitalism, freedom, personal choice and liberty, often equity and ethical issues are dismissed as personal viewpoints. Although equality is highly valued in the United States, solidarity and societal responsibility often conflict with the individualistic pursuits of a citizen (Callahan & Wasunna, 2006, p. 113). For example, studies have consistently found that cost is a primary barrier to access among the poor in the United States. This diverges from the value of universal healthcare in other countries (Hunynh *et al.*, 2006). Due to the deeply rooted sense of individualism and capitalism in the United States, large scale reform towards universal care proves difficult and will likely require a paradigm shift in the attitudes of Americans towards healthcare.

The individualistic attitude of some can also be seen in the way that the healthcare system is utilized. In the fast-paced, demanding, capitalist culture of the United States, patients often demand control when accessing healthcare services. The medical

environment in the country is currently focused on secondary and tertiary care involving acute, episodic curative medicine, rather than primary care, prevention, chronic care, and alleviation of the cause of symptoms (Stanhope & Lancaster, 2004, pp. 3-5) as evidenced by cost outcomes. Americans apparently want the freedom to choose curative treatment.

Conclusion

Healthcare in the United States is a loose coalition of different healthcare providers with different structures, processes and goals. Political, economic and cultural factors influence the delivery of healthcare. The intricate matrix of government and private financing has been further complicated by an imperfect market and growing consumer demands. The numerous options for plans and programs have added to the disordered nature of American healthcare. Changing these structures or implementing successful healthcare reform is difficult as these beliefs and practices are deeply engrained in the American way of life. Increasing costs, decreasing access, lack of quality, inefficiency and a growing number of uninsured are all eminent dilemmas facing American healthcare. Now that the appropriate background information necessary to understand the direction of healthcare has been presented, the focus can be turned to the current problems facing healthcare in the United States and possible remedies to these issues.

CHAPTER 3: Ailments in the Healthcare System

Introduction

Healthcare in the United States has experienced serious problems for the last several decades. Problems with rising costs since the seventies, unreliable quality and increasing barriers to access, especially for underserved populations, have made their way into our modern healthcare system (Shi & Singh, 2001, p. 474). Although the United States spends more on health care than any other country in the world, \$2 trillion a year (Herzlinger, 2007, p. 1), it is plagued with inconsistency in quality, rising costs and limited access. These problems stem from the reality that the majority of these healthcare expenditures are spent on sickcare, not healthcare (Richmond & Fein, 2005, p. 144). Widespread problems faced by our healthcare system are largely due to the focus on eliminating sickness, instead of the maintenance of wellness and preservation of a constant state of health. Problems in cost, access and quality arise from commonly held cultural values and systemic constructions that have created a medical model of healthcare in the US (Richmond & Fein, 2005, pp. 144-146). It will take reexamination of the purpose of our healthcare system and a shift in its focus towards a paradigm of health to eliminate the problems of cost, quality and access within the healthcare system of the United States.

Problems in US Healthcare due to Paradigm of Sickness

One of the underlying problems in our healthcare system is that it relies on a medical model, which promotes sick care and acute treatment. The medical model has

had a negative effect on the way that Americans view the concept of healthcare. Under the current American healthcare paradigm, people view health not as constant state of wellness, but as a condition to return to after being “cured” or treated following a period of illness (Shi & Singh, 2001, p. 39). This has led to a healthcare environment that promotes curative treatment instead of preventing illness and maintaining health, and has allocated resources accordingly. A focus on curative medicine can create a sense of health that condones living unhealthy lifestyles and promotes entering the healthcare system to be treated and rehabilitated back to a state of health (Shi & Singh, 2001, p. 52).

This system paradigm has had detrimental consequences on the delivery of healthcare in the United States leading to problems with cost, quality and access. With an illness-centered focus, patients are more likely to postpone primary care, waiting until the condition becomes more serious before seeking medical attention, making effective, quality treatment more difficult and expensive (Allender & Spradley, 2003, p. 132). As illness-centered care predominates and becomes the primary means of healthcare, health maintenance tends to be ignored. Under this system, resources are primarily allocated to acute-type care, limiting prevention, health promotion and public health efforts (Allender & Spradley, 2003, p. 132). This chapter will examine the ailments in the current healthcare system and demonstrate how the current medical paradigm has led to problems in quality, in cost (as secondary and tertiary care is more expensive), and in access/equity as inefficient utilization of resources restricts healthcare to only those who can afford care.

American Values Have Created Medical Model

Ideals that underlie the culture of the United States and that have led to the formation of the medical model of healthcare in this country have created many of the problems faced by the healthcare system in cost, quality and access. The United States has been built on ideals of capitalism: entrepreneurialism, production and self-determination (Shi & Singh, 2001, p. 52). Although these beliefs drive our society and our economy, they also have created some of the problems seen in our modern healthcare system because they generate the desire for consumable services within the healthcare system and foster a spirit of individualism (Shi & Singh, 2001, p. 52). Consumerism can deter prevention and primary healthcare because these forms of healthcare do not generally provide large consumable items as do secondary and tertiary care; when seen as consumers, patients want the latest treatments in medicine (Callahan & Wasunna, 2006; Gratzner, 2005). The spirit of individualism in the United States tends to promote care of oneself rather than a focus on the care of the population as a whole, although research has shown the greatest health improvements are made when public health resources are used to cover an entire population at the levels of prevention and primary care (Stanhope & Lancaster, 2004, pp. 3-4).

Cost

Rising Costs Are Not Sustainable

The rising cost of healthcare services is one of the most pressing issues in healthcare. Cost can be defined as “what it costs the provider to produce a service” (Shi

& Singh, 2001, p. 584). The current cost of healthcare in the United States is estimated to be \$2 trillion a year, averaging \$6,096.20 annually per capita and 15.4% of the GNP (WHO, 2007). This is a drastic increase from 1980 when total healthcare expenditure in the United States was \$248.1 billion and just 9.1% of the GNP (Hamowy, 2000, p. 83). Healthcare costs are projected to continue to rise over the next decade, reaching \$4.1 trillion by 2016 (Kingson & Cornman, 2007, p. 29). Projections show that at the current rate of increase, by 2050, total healthcare spending in the United States will be close to 50% of the nation's gross domestic product (GDP) (Rivlin & Antos, 2007, p. 25). The rising cost of healthcare is not economically sustainable, nor is it providing appropriate healthcare to those who need it (Holtz-Eakin, 2006, p. 1).

Poor Lifestyles, Decreasing Health and Chronic Disease Have Fueled Rising Costs

The steady rise of healthcare spending over the last thirty-five years can be attributed to the sickness-promoting healthcare paradigm in the US, the decreasing health of Americans, the increased use of expensive technology, an aging population and the concentration of funds on specialty care (Rivlin & Antos, 2007, pp. 15-16; Stanhope & Lancaster, 2004, pp. 107-111). In order to reduce the cost of healthcare in the United States, appropriate care needs to be provided in a timely manner under a healthcare paradigm that promotes wellness. Currently, instead of spending healthcare monies on preventive and public health measures that would aim to preserve the health of the entire population, the majority of healthcare expenditures is spent on care and rehabilitation of the sick. Medical costs each year in the United States compose 97% of all healthcare

expenditures, while spending on public health accounts for just 3% (Stanhope & Lancaster, 2004, p. 108; Colwill, 2004, pp. 30-31). Research demonstrates that shifting healthcare resources away from sick care towards primary and preventive care, reduces overall spending and increases the health of the population (Colwill, 2004, pp. 30-31).

One of the primary reasons that spending on healthcare continues to rise in the United States is because of the growth of chronic disease, which in many cases can be attributed to poor lifestyle choices (Halverson, 2003, pp. 193-195). Chronic conditions such as stroke, high blood pressure, diabetes, asthma, osteoporosis and renal disease are all very expensive requiring treatment in multiple medical settings and many healthcare resources (IOM, 2003, p. 31). Currently, more than three-fourths of all medical costs in the United States are spent on treating and managing chronic disease (USDHHS, 2003, p. 3).

Not only are poor lifestyles and chronic conditions costing billions of healthcare dollars each year, but hundreds of thousands of lives as well. Chronic conditions are now the leading cause of illness and disability, and the majority of healthcare resources in the United States go to treat chronic disease (Stanhope & Lancaster, 2004, p. 111; Shi & Singh, 2001, pp. 447-448). Chronic diseases account for 70% of deaths in the United States (Rivlin & Antos, 2007, p. 43). The leading causes of death in the United States for 2005 are shown in Table 1.

Table 1. Top Ten Leading Causes of Death in the United States in 2005.

Cause of death	Number of deaths
Heart disease	649,399
Cancer (malignant neoplasms)	559,300
Stroke or cerebrovascular diseases	143,497
Chronic lower respiratory diseases	130,957
Accidents	114,876
Diabetes	74,817
Alzheimer's disease	71,817
Influenza/Pneumonia	62,804
Nephritis/Nephrotic Syndrome/Nephrosis	43,679
Septicemia	34,142

From “Deaths: Preliminary Data for 2005” Table B, by H.C. Kung, D.L. Hoyert, J. Xu, & S.L. Murphy, 2007, US Department of Health and Human Services, Center for Disease Control

The underlying causes of many of these diseases and causes of death are a combination of genetic make-up (which medicine is just beginning to understand) and a set of lifestyle choices such as improper diet and exercise habits, over-eating, obesity, tobacco use, over-consumption of alcohol and use of other drugs. For many, these disease antecedents may have been prevented through intervention, good primary care and modest lifestyle changes (Longest, 2001, p. 22; Shi & Singh, 2001, pp. 448-450).

One study, as cited in Rivlin and Antos (2007), found that 40% of all deaths could be attributed to poor lifestyle choices in 1990. This study directly linked 400,000 deaths to tobacco and another 300,000 deaths to poor diet and inactivity (McGinnis & Feoge, 1993). This data has only increased in recent years. Additional research has shown that 40 to 60 percent of all incidences of cancer and 35% of all cancer deaths (the second leading cause of death in the United States) are linked to diet (Shi & Singh, 2001, p. 50).

Healthcare Savings through Increased Prevention and Primary Care

A majority of the leading causes of deaths and healthcare expenditures are due to preventable conditions that could be eliminated through good primary care and modest lifestyle changes (Shi & Singh, 2001, p. 50). Obesity provides an excellent example. Research has found that people who are obese have estimated healthcare costs that are 36% higher than those of the general population (Rivlin & Antos, 2007, p. 59). The number of overweight and obese Americans has been doubling since the 1980s and the CDC now sees obesity as one of the top three health threats to the nation (USDHHS, 2003); yet, one study conducted in 2001 found that only 42.8% of obese people who had a check-up that year were encouraged by their primary care physician to lose weight (Mokdad, Bowman, Ford, Vincor, Marks & Koplan, 2001).

For lifestyle and behavioral changes to be realistically implemented, PCPs need to be involved. Returning to the example of obesity, Mokdad *et al.* (2001) suggests that individuals attempting to lose weight monitored by healthcare professionals have much more success than those without guidance from PCPs. One specific study, performed

through telephone interviews with 184,450 participants, found that although 72.9% of obese adults reported that they had modified their diets to reach their target weight, only 17.5% of these individuals had lowered their caloric intake and were following recommended exercise guidelines to actually meet their goal weight (Mokdad *et al.*, 2001). This demonstrates the need for education and intervention by PCPs and other healthcare professionals.

Other research has demonstrated how simple changes in daily lifestyle can translate to profound changes in health and medical savings. One study that directly compared the medical costs of overweight individuals with those who were of a healthy weight in an experiment with a sample size of 20,041, found that slightly increasing the amount of moderate exercise in adults (i.e. beginning a daily walking program) would translate to a direct annual healthcare savings of \$77 billion in 2000 (Pratt, Macera & Wang, 2000).

If modest exercise is projected to reduce healthcare costs in the United States that drastically, theoretically huge healthcare savings could be created by also including minor dietary changes, increasing medical screenings and receiving other primary and preventive care. Some examples of this can be seen in childhood immunization and California's smoking cessation campaigns. The Centers for Disease Control and Prevention estimate that regular immunization in children led to direct medical savings of \$9.9 billion annually, and the state of California estimates that its anti-smoking campaigns translated to \$8.4 billion in healthcare cost savings from 1990 to 1998 (Rivlin

& Antos, 2007, p. 60). Hypothetically, implementation of these campaigns in all 50 states could potentially lead to over \$50 billion in savings each year.

Necessity of Primary Care Illustrated by Inappropriate ER Use

Primary care delivered in the ER is estimated to be two to five times more expensive than the same care in a doctor's office; this is a significant factor contributing to the rising costs of healthcare (Rivlin & Antos, 2007, p. 58). Withholding primary care exacerbates problems of rising costs and overuse of the ER. Examination of emergency room-use data shows evidence that the United States lacks appropriate use of primary and preventive care. Over the past decade, ERs have seen a 26% increase in cases (Rivlin & Antos, 2007, p. 58). One third of the 114 million visits in 2003 were classified as non-urgent or only semi-urgent (Rivlin & Antos, 2007, p. 58). Patients may be forgoing primary care due to cost allowing their conditions to worsen and then seeking care from the ER, when the health problem could have been solved more simply and less expensively in an ambulatory or primary care setting (Shi & Singh, 2001, p. 584).

The majority of inappropriate ER cases are uninsured or Medicaid patients (Rivlin & Antos, 2007, p. 59). Through cost shifting from the primary care setting to the ER, paying patients often end up bearing the cost of inappropriate ER use for those who cannot pay (Young & Skylar, 1995, p. 671). This demonstrates the need for primary care for the entire population and reform of current programs like Medicaid if healthcare spending is expected to decrease.

Medicaid, which carries a large population of chronic disease and the subsequent complications, has been attempting to promote reform through HMOs (Rivlin & Antos, 2007, p. 43). New HMO programs have been created to target disease management for chronic conditions, such as diabetes, attempting to prevent expensive long-term complications and inappropriate ER use (Rivlin & Antos, 2007, p. 54-55). These reforms are in the early stages, but show promise in creating a successful paradigm shift favoring health maintenance through primary care and eventually lowering healthcare spending.

Technology Has Created Rising Medical Costs

In addition to inappropriate healthcare utilization, the growing arsenal of medical technology has also contributed to increasing healthcare costs. Advances in medical technology have increased the life expectancy and survival rates of people who develop serious, chronic, commonly deadly diseases; however, this ability has not come without a price and has led to a rising baseline in healthcare that is more expensive (Callahan & Wasunna, 2006, p. 250; Longest, 2001, p. 27; Stanhope & Lancaster, 2004, p. 111). Developing technology, purchasing the equipment and space to use it and training medical professionals to operate new technology are very expensive (Stanhope & Lancaster, 2004, p. 111). Current estimates calculate that 40-50% of healthcare expenses are spent on the use of medical technology (Callahan & Wasunna, 2006, p. 5).

The use of technology in medicine is paradoxical. The more we use technology, the more effectively we can treat illness in many cases, yet medical technology is one the great culprits of rising costs. Increasing medical technology has the potential to promote

maintenance of poor health as curative treatments are becoming readily available for those who do not or cannot take advantage of health promotion/disease prevention opportunities and appropriate lifestyle changes. These individuals may then enter the healthcare system, expecting to be cured through the latest medical technology (Longest, 2001, p. 27). While there have been great advances in diagnostic technologies, the majority of medical technology has been to treat illness, not promote health and wellness, further promoting the current healthcare paradigm of sickness and curative medicine.

Growing Elderly Populations Are More Expensive to Treat Medically

An aging population is another cause of rising healthcare costs, as the elderly generally consume more healthcare resources than younger cohorts. The United States is currently experiencing a significant demographic shift towards an older population. This change has had a large effect on the costs paid by the general public, as many people over age sixty-five receive care through Medicare (Stanhope & Lancaster, 2004, p. 109). As people age, they generally tend to consume greater quantities and more expensive healthcare because they tend to develop a greater number of chronic conditions (IOM, 2003, pp. 29-31; Shi & Singh, 2001, p. 482). For example, in Medicare populations (ages 65 and older), 78% of recipients have at least one chronic condition, while 63% have two or more (IOM, 2003, pp. 30-31). Chronic conditions are generally the items that end up costing the most, accounting for a large portion of annual health expenditures as discussed above (Stanhope & Lancaster, 2004, p. 111).

Growth of Specialty Care Has Contributed to Increasing Healthcare Expenditures

A growing utilization of specialty care is also partially to blame for increasing healthcare costs. Specialty care is significantly more expensive than primary care and the distribution of resources is concentrated in the most expensive level of medicine, accomplishing the least in terms of health for the smallest number for a given expenditure (Stanhope & Lancaster, 2004, p. 4). Although data suggests that use of primary care instead of tertiary care leads to lower health costs, less frequent use of medication, higher overall health indications and lower mortality rates, utilization of tertiary care continues to rise (Callahan & Wasunna, 2006, p. 6). From 1997 to 2004, although the number of hospital admissions rose only 3%, total hospital costs for preventable conditions rose by 31% (Agency for Quality Healthcare and Reform [AHRQ], 2007, p. 83; Heavey, 2007). In 2005, \$611.6 billion was spent on hospital care, while only \$421.1 was spent on physician and clinical services (Heavey, 2007). This highlights the unbalanced nature of the American healthcare system and the focus on acute, episodic, curative care.

Barriers to Access in US Have Created a Serious Issues in Healthcare

Access is another significant problem with healthcare in the United States. Shi and Singh (2001) define access as “the ability to obtain needed, affordable, convenient, acceptable, and effective personal health services in a timely manner” (p. 493). Common barriers to healthcare access in the United States include cost, lack of information about low cost or free health care services, difficulty getting time off work or finding childcare,

lack of transportation and negative past experiences (Ahmed, Lemukau, Nealeigh & Mann, 2001, p. 446).

Minority groups, undereducated and low-income groups are the greatest populations at risk for not having access to healthcare services (Ahmed *et al.*, 2001, p. 445). Race, occupation and income are the three greatest predictors of access to healthcare (Shi & Singh, 2001, p. 500). Geographic barriers also exist, as only limited resources are often available in rural areas (Shi & Singh, 2001, p. 500). Although there are many common barriers to healthcare access, cost or lack of insurance is the primary barrier to healthcare access and is generally by far the most common and difficult barrier to overcome (Ahmed *et al.*, 2001, p. 445; Shi & Singh, 2001, p. 185).

Lack of Health Insurance/Cost Is the Most Common Barrier to Access

It is estimated from census statistics that there are over 47 million uninsured Americans, or approximately 16% of the population of the United States (U.S. Census Bureau, 2007). The number of uninsured in the United States continues to rise along with increasing insurance premiums. Since 2000, insurance premiums have risen 73% in comparison to inflation in wages of only 15% (Herzlinger, 2007, p. 19). This large increase limits the number of Americans who can afford health insurance, leading to large gaps in access for underserved and poor populations. The proportion of Americans that have trouble with access is high. For instance, nine percent of the British and 17% of Canadians report having problems of access due to cost, while 40% of Americans had

access problems for financial reasons (Kingson & Cornman, 2007, p. 29). Cost of care remains the greatest barrier to healthcare services in the United States.

Health insurance is one of the greatest predictors for reception of care as US healthcare operates through a third-payer system (Ahmed *et al.*, 2001, pp. 445-446). Low-income and minority groups are the most likely to be without health insurance coverage, hence, access to necessary healthcare services, such as primary care. For many of the uninsured, their only guaranteed access to healthcare services is through safety nets. A safety net can be defined as the services that allow people who would normally go without services because of constraints on their private financial resources to receive care (Shi & Singh, 2001, p. 596). Per the Emergency Medical Treatment and Active Labor Act passed in 1986, emergency departments are the only legally mandated safety net and point of access for the uninsured of a community regardless of their ability to pay (Begley, Vojvodic, Seo & Burau, 2006, p. 611). Because the uninsured have no insurance and cannot receive primary or preventive care through the traditional system, they enter through the emergency department, which serves a safety net.

Appropriate Healthcare Services Are Essential for All

Changing the way in which healthcare in the United is accessed and delivered could potentially lead to a healthier population, greater access for all and lower healthcare costs. Several studies have shown that the uninsured without a regular source for primary care are disproportionate users of emergency departments, costing healthcare costs to rise for everyone (Begley *et al.*, 2006, p. 611). If primary and preventive healthcare services

were accessible to all, health conditions could be more appropriately dealt with before dire, urgent situations develop. Due to the cost shifting that occurs when the uninsured access the healthcare system through the ER, those who can pay for their care eventually end up covering the cost. Therefore, it seems more effective for the health of the uninsured and less expensive for those financing the healthcare system, to pay for appropriate care by providing the uninsured with access into the healthcare system through primary care.

Quality: A Significant Issue in Healthcare

What is Quality?

Quality in a healthcare system is a difficult variable to measure due to the diverse needs of different populations and its subjective nature. There are several regularly used definitions of quality in healthcare. The AMA defines high-quality care as care, "which consistently contributes to the improvement or maintenance of quality and/or duration of life" (Blumenthal, 1996, p. 892). The Institute of Medicine defines quality as "the degree to which health services for individuals and populations increase the likelihood of desired health outcomes and are consistent with current professional knowledge" (p. 892).

Generally, quality in a healthcare system refers to effectively meeting the healthcare needs of a people in a manner that that is satisfactory to the patient while using resources efficiently. Efficiency is defined as the production of maximal output for a given amount of input; it suggests that there is no better way to combine the resources so that maximal results are achieved (Stanhope and Lancaster, 2004, pp. 100-101).

Effectiveness is the extent to which a system meets a set of objectives or needs of group (Stanhope & Lancaster, 2004, pp. 100-101).

How Can Quality Be Measured

Developing strategies for measuring the quality of healthcare can be difficult; however, there are methods employed to measure aspects of care such as patient satisfaction, outcomes, and improvements of health across a population. One way to examine the quality of healthcare is total quality management (TQM). TQM refers to all of the mechanisms in place to attain quality care throughout all aspects of healthcare and is a management philosophy which strives to continuously improve the quality of care (Allender & Spradley, 2001, p. 210; Shi and Singh, 2001, p. 505). Outcomes, or “quantitative measurements of a client’s response to care,” are another way to measure the level of quality in a given healthcare environment (Allender & Spradley, 2001, p. 217). Other methods that can be employed are audits (assessing the performance of peers), reviews or measuring client satisfaction (Allender & Spradley, 2001, pp. 218-222; Shi and Singh, 2001, pp. 540-507).

Examining Quality of the US System

Although the United States has some of the greatest medical technology in the world, it is not exempt from problems in faltering quality. Using the definitions cited above, the United States displays significant issues in healthcare quality. As mentioned in the introduction of this thesis, in the 2000 WHO Health Report, the United States ranked 37th out of 191 member nations although the US grossly outspends any other

nation (WHO, 2000, Annex Table 1). There are five criteria by which this assessment was made: “the overall level of health; the distribution of health in the population; the overall level of responsiveness; the distribution of responsiveness; and the distribution of financial contribution” (WHO, 2000, p. 27).

When it comes to quality of healthcare, more is not necessarily better nor does it make the healthcare system more efficient or effective. The United States is neither cost efficient nor effective. One study among Medicare recipients found that from 2000 to 2003, almost a third of the \$120 billion spent on the group over the period was unnecessary and did nothing to increase quality or extent of life (Kingson & Cornman, 2007, p. 30).

The deficiency in the US healthcare system can be summarized as the lack of equitable distribution of timely and appropriate healthcare for all. The quality problem in the United States can be reduced to inappropriate, inequitable, inefficient and ineffective care because resources are utilized in reverse fashion with acute, curative sick care as the focus. Preventive care and access to a regular physician are necessary for the delivery of quality care (Gauthier & Serber, 2005, pp. 19, 21).

If the criteria for quality healthcare per the WHO guidelines are used to measure the quality of the healthcare in the United States, then the system is not providing quality care. The WHO has outlined three intrinsic goals towards which all healthcare systems should work in order to ensure quality and five criteria to measure the attainment of these goals (as stated above). The first goal is "improvement of the health of a population"

(Tandon, Murray, Lauer & Evans, 2004, p. 2). The second goal is to obtain outcomes through the healthcare system that meet the expectations of the people. The last goal is to ensure equality in financing, which involves proportionally equalizing the amount that different socioeconomic groups pay and providing catastrophic coverage to all (Tandon *et al.*, 2004, pp. 2-3).

Improving Health of a Population

The first goal of quality healthcare under the WHO requirements is improvement of the health of a population. If the WHO, AMA and IOM definitions of quality are applied to healthcare in the United States for improvements in quality of life or health of the population, then the United States falls short. In 1980, the life expectancy from birth was 70.82 for white males and 78.22 for white females (USDHHS, 1985, p. 8). In 2003, the life expectancy was 75.3 for white males and 80.4 for white females (Arias, 2006, p. 1). As a nation, although the United States is prolonging life, it is questionable how effectively quality of life and overall health have been improved.

The number of Americans living with multiple chronic diseases has risen drastically over the last quarter century, making healthcare more expensive than ever. Thirty percent of the population ages 65-74 report limitations from at least one chronic condition, while for those age 75 or older, 50% report life limitations from chronic disease (IOM, 2003, p. 37). The proportion of children with chronic disease has more than tripled from 2% in 1960 to more than 7% in the late 1990s. These statistics do not demonstrate an improvement in the health of the population nor do they show that the

growing amount of healthcare resources are being used in the most efficient manner (IOM, 2003, p. 38).

A recent study by the Commonwealth Fund found that the United States ranks 15th out of 19 countries on “mortality from conditions that are preventable or treatable with timely, effective medical care” (Kingson & Cornman, 2007, p. 29). Restriction of care directly violates the definition of quality care as it limits care that is within the desires and expectations of the patient and is not safe. To improve health in the United States, appropriate, timely healthcare needs to be given at the proper time before conditions are allowed to worsen. By using of our healthcare resources to treat problems at the height of their complexity, it is difficult for the system to deliver quality. At the point of acute secondary and tertiary care, the problem has become much more expensive, lowering the efficiency of our healthcare system; and, at this point, individuals are in a state of sickness making it much harder for them to return to a state of health. Quality in the healthcare system of the United States could be more directly attained if resources were used efficiently by providing essential measures of preventive and primary care to the entire population.

Patient Satisfaction Is Decreasing

Patient satisfaction is the second piece of criteria for quality care according to the WHO guidelines, and is rapidly declining in the United States. The EBRI’s 2006 *Health Confidence Survey* showed that Americans’ dissatisfaction with the healthcare system has doubled since 1998, and satisfaction is certainly not increasing as it should to meet the

objectives of a quality healthcare system. In 1998, 15% of the population rated American healthcare as poor; in 2006, the poor rating had more than doubled to 31% and another 28% rated the system as only fair (Kingson & Cornman, 2007, p. 27).

Communication between a patient and healthcare provider is an indicator of healthcare quality and is linked to patient satisfaction. One study from the Commonwealth Fund found that the United States scored the lowest of five industrialized countries (United Kingdom, New Zealand, Australia, Canada and US) for patient-physician interaction and effective, understandable communication (Gauthier & Serber, 2005, Chart II-7). Gauthier and Serber (2005) posit that the US lacks the communication and disclosure of health information to patients that is necessary for quality care (p. 21).

Safety is also a quality concern for many patients in the United States. Research compiled by the Commonwealth Fund not only found that quality was inconsistent, but that in many cases medical errors have contributed to death (Gauthier & Serber, 2005, pp. 22-25). This research presented a study conducted by Jencks, Huff and Cuerdon that showed care quality differs significantly between states and was able to divide the US into four distinct quartiles of care quality (Chart II-2). The medical condition from which a patient is suffering also determines the quality of care that one receives. A study performed by McGlynn *et al.* found that adults in the US receive only 55% of the recommended care for a particular condition, and more specifically that patients suffering from diabetes get only 45% of the recommended care and patients who have a hip fracture receive only 23% (Gauthier & Serber, 2005, Chart II-1).

One study performed by the Commonwealth Fund found that among five countries (United Kingdom, New Zealand, Australia, Canada and US), the United States had the highest rate of incorrect test results and delays in result notification, which raises various safety concerns (Gauthier & Serber, 2005, Chart II-6). Among these same five countries, the US scored the highest for medical errors contributing to further health complications which made the patients sicker. This study found that 18% of patients in the US have been seriously affected by a medical error (Gauthier & Serber, 2005, Chart II-5).

Equity in US Healthcare System

Equity in distribution and financing for all is another key criterion for quality based on WHO guidelines, and one that currently is not met by the American healthcare system. According to the WHO specifications, the cost of healthcare should be directly related to income, so that all socioeconomic groups pay the same proportion of their incomes for healthcare (Tandon *et al.*, 2004, p. 2). In the United States, however, cost of healthcare is not based upon income, nor is it equitable. Forty-seven million Americans remain uninsured and 40% of the population avoids needed healthcare, treatment and medication due to cost (Kingson & Cornman, 2007, p. 29). The United States stands out among other countries for having gaping differences in healthcare experiences due to income, and cost remains the greatest barrier to access of healthcare services in the United States (Hunynh *et al.*, 2006, p. 10). In a study conducted by the Common Wealth Fund comparing the healthcare systems of Australia, New Zealand, Britain, the United

States and Germany, the US scored the lowest of the five countries for patient-centered care, efficiency, safety and equity, which are four essential indicators of quality care (Kingson & Cornman, 2007, p. 29).

The problem of equity in the United States can be attributed to an intrinsic quality of freedom and independence that exists within our society (Callahan & Wasunna, 2006, p. 11). In a sense, to suggest that healthcare be made available to all through public health undermines the capitalist values and independent spirit of our nation, because people tend to equate coverage for all to loss of choice. This is detrimental to our notion of democracy and freedom. As Callahan and Wasunna (2006) state, “choice is a leading value, the essence of economic and social freedom: among other things, the choice of a doctor...the choice of a health care system, and a personnel choice about how much to pay for healthcare” (p. 11). In the United States, personal choice and freedom are highly valued, but social equity and solidarity are more challenging to find, making provision of access to all and equity difficult under this ideological system (p. 13).

Conclusion

The healthcare system of the United States has the potential to provide exceptional care; however, the healthcare paradigm of poor health and the medical model in this country have led to rising costs, limited access and inconsistent quality. Americans need to change their conceptions about health and make appropriate lifestyle modifications for sustainable changes to be made in the nation’s healthcare system. Yet even the most intense health campaigns will not realistically produce substantial results.

Under the current paradigm and medical model, treatment regimes and lifestyle changes could be most effective when mediated by a doctor through appropriate preventive and primary care. It will take leadership from healthcare professionals to reverse the current paradigm and to heavily promote the idea that healthcare does not begin in the doctor's office or hospital, but in patients' homes in their daily lives.

By examining the incidence of diabetes mellitus type II in the United States in the next chapter it will be shown that problems in the healthcare system of the United States can be ameliorated through the proper preventive and primary care measures, and that many of the nation's healthcare problems are due to the paradigm of sickness.

CHAPTER FOUR: Diabetes Mellitus Type II as a Case for a Paradigm Shift Toward Health

The medical model of healthcare in the United States is principally inefficient in delivering health promotion and disease prevention services and outcomes. This model emphasizes secondary and tertiary care, essentially creating a culture of sickness (Shi and Singh, 2000, p. 483). By shifting the focus of healthcare from secondary and tertiary medicine to primary and preventive healthcare, healthcare costs can be lowered and the population made healthier (Shi and Singh, 2000, p. 483). There are many diseases and health conditions that could be used as cases to demonstrate the need to increase primary and preventive care; however, one disease that illustrates the need to increase quality primary care and embodies the problems of the healthcare system as outlined in Chapter Three particularly well is type II diabetes mellitus (DMII).

If the proper measures are not taken to control DMII, the disease can create costly complications. Heart disease, stroke and high blood pressure are all closely related to the existence of DMII (ADA, 2002, p. 1; CDC, 2005, p. 6). In 2002, the estimated cost of diabetes and its complications was \$132 billion (ADA, 2007; CDC, 2005, p. 8) or 1 out of every 7 healthcare dollars spent (Morewitz, 2006, p. 11). This chapter will provide evidence through the DMII model, that increasing primary and preventive care has great potential to lower healthcare costs in the United States and improve the health of many.

Growing Crisis of Diabetes in the United States

There is a growing incidence of chronic disease that can be linked to lifestyle and

behavioral choices. DMII is not an exception and exemplifies the effects of poor behavioral choices, as its incidence has risen 5% annually since 1990 (Wang & Gregg, 2007). Diabetes affects 7% of the population and is the sixth leading cause of death in the United States, listed as the primary cause of death on 74,817 death certificates in 2005 and as contributing factor for 224, 092 deaths (Kung, Hoyert, Xu & Murphy, 2007, Table B; CDC, 2005, p. 6). Diabetes is likely to be underreported by as much as 65% as the leading cause of death and up to 90% as an underlying cause of death (CDC, 2005, p. 6).

The incident of diabetes for those over twenty is 20.6 million or 9.6% of this group, which includes both DMI and DMII (CDC, 2005, p. 4). The prevalence of DMII is highest in adults over 60 years old, affecting 20.9% of this population nationwide (CDC, 2005, p. 4). DMII primarily occurs in adults and is linked to obesity, poor diet and lack of physical activity. Although the majority of diabetes in persons under 20 is DMI, the rate of DMII in younger individuals is increasing due to the increasing rates of obesity and decreasing health among children (USDHHS, 2003, p. 12). In 2005, 1.5 million new cases of diabetes were diagnosed in individuals over 20 years old with individuals between 40 and 59 years old most likely to be diagnosed with a new case of DMII (CDC, 2005, p. 6). Since 1990 the incidence of diabetes in the country has risen by 33% (Halvorson, 2003, p. 18).

The explosion of chronic disease and specifically diabetes in the United States can largely be attributed to poor lifestyle choices and lack of appropriate primary care. A

shift towards preventive care and intervention by primary care physicians is crucial in the effective management of DMII. DMII is a very costly health condition in our country in terms of financial costs, productivity and health and quality of life. Moderate lifestyle changes translate to large improvements in health and control of DMII, leading to decreased need for medication and costs due to complications (Rice, 2005, p. 327). This shift towards prevention will happen with increased intervention from primary care providers (Hogan, Dall & Nikolov, 2003, p. 930). By providing appropriate and quality care, patients with DMII are 40% less likely to suffer complications or death over those who are not provided quality healthcare (Halvorson, 2003, p. 19). Proper protocol and programs must be created, implemented and advocated by primary care physicians.

What is Diabetes?

Diabetes encompasses a group of metabolic diseases characterized by high blood glucose levels due to insufficient insulin production, insulin resistance or both (CDC, 2005, 1). There are multiple types of diabetes: diabetes mellitus type I (DMI), diabetes mellitus type II (DMII), diabetes type III (DMIII) and gestational diabetes (DMIV) (Scollan-Koliopoulos, 2004, p. 223). DMI or insulin-dependent diabetes mellitus (juvenile-onset diabetes) occurs when the immune system destroys the beta cells (β -cells) of the pancreas; therefore, the body becomes unable to produce insulin and regulate blood glucose levels. When this occurs, the cells of the body cannot effectively utilize glucose, essentially starving the cells of the body (CDC, 2005, p. 1). DMI generally first appears in children and young adults and accounts for 5% to 10% of all diagnosed cases of

diabetes (CDC, 2005, p. 1). There is currently no way to prevent DMI as the causes are thought to be genetic, autoimmune or environmental (CDC, 2005, p. 1).

The overwhelming majority of the other 90% to 95% of all cases of diabetes are DMII, also called non-insulin dependent diabetes mellitus (adult onset diabetes). DMII can be distinguished by two principle attributes: 1) insulin resistance, which prevents peripheral uptake of glucose and proper suppression of hepatic glucose production, and 2) impaired pancreatic β -cell function resulting in insufficient insulin production (McGarry, 2002, p. 7). New research has found that insulin levels in the brain decline as Alzheimer's disease advances, suggesting evidence of DMIII (Vardy, Rice, Bowie, Holmes, Grant & Hooper, 2007; Alzheimer's, 2005). Gestational diabetes is glucose intolerance experienced by some women during pregnancy, which generally subsides after the pregnancy ends (CDC, 2005, p. 1).

The Pathophysiology and Progression of DMII

DMII is a disease concerned with problems in the production and function of insulin. Insulin is a multi-function hormone produced by the β -cells of the pancreas. It facilitates the uptake of glucose from the blood into the cell through insulin-mediated glucose uptake, regulates the metabolism of fats and proteins and controls glucose homeostasis (Unger, 2007, p. 137). Insulin also inhibits conversion of glycogen stores to glucose in the liver through glycolysis and prevents gluconeogenesis (glucose formation from non-carbohydrate sources) (Unger, 2007, p. 141). Pre-diabetes is a condition that drastically increases the risk of developing DMII and is marked by irregular blood

glucose levels that are higher than normal, but not high enough to be considered diabetes (CDC, 2005, p. 2).

A variety of metabolic disorders such as insulin resistance (IR) and associated hyperglycemia, impaired glucose tolerance (IGT) and impaired fasting glucose (IFT) precede the onset of DMII and can eventually progress to DMII over a period of five to ten years (Morewitz, 2006, p. 34; Unger, 2007, p. 137). Pre-diabetes is defined by an individual whose Fasting Plasma Glucose Test (FPGT) is in the range of 100 mg/dl to 126 mg/dl or an Oral Glucose Tolerance Test (OGTT) of 140 mg/dl to 200 mg/dl after two hours (ADA, 2007; Rice, 2005, p. 328). Other indications of pre-diabetes include triglycerides higher than 150 mg/dl, abdominal obesity, high blood pressure and low HDL readings (Rice, 2005, p. 328). In a pre-diabetic state, pancreatic β -cells secrete growing amounts of insulin in an attempt to reestablish normal blood glucose levels, but cannot keep up due to IR caused by free fatty acids (FFAs) (Unger, 2007, p. 144). The condition becomes diabetes when the FPGT shows glucose levels greater than 126 mg/dl or an OGTT results in levels greater than 200 mg/dl (ADA, 2007).

DMII is closely linked to how the body metabolizes and stores fat and the biochemical processes that ensue (McGarry, 2002, p. 7). Fat is an essential means of energy storage in the body as its metabolism generates large amounts of adenosine triphosphate (ATP). There are several types of fat or adipose tissue: subcutaneous fat, which is found just under the skin and makes up 80% of total adipocytes, and visceral adipose tissue, fat found in the peritoneal cavity that cushions internal organs and makes

up 20% of adipocytes in the body (Unger, 2007, pp. 47, 51). Visceral fat, which is generally high in obese individuals, produces higher levels of circulating FFAs (Unger, 2007, p. 144). Studies have found that increased levels of FFAs in the blood contribute to the development of DMII and are linked to obesity, a lack of physical activity and to a diet high in saturated and trans fats and certain refined carbohydrates (McGarry, 2002, pp. 9, 12; Morewitz, 2006, p. 33).

Normal adipose tissue collects FFAs that have been generated from the metabolism of triglycerides into glycerol and fatty acids. The heart and skeletal muscle use these FFAs as a principal supply for energy, while the brain utilizes insulin-dependent uptake of glucose as primary source of fuel (Unger, 2007, pp. 47, 51). In times of starvation or low carbohydrate intake, the brain can use ketone bodies produced from fatty acid metabolism as an alternative energy source (Unger, 2006, p. 51). Although FFAs are an essential source of fuel during fasting, high levels of circulating FFAs over a period of a few hours can cause suppression of insulin-mediated glucose uptake into the cells, and induce IR and DMII over longer periods of time (McGarry, 2002, p. 8).

The mechanism behind the connection between DMII and FFAs is as follows. High FFAs modify receptors that are necessary for insulin mediated cellular uptake of glucose from the blood (McGarry, 2002, p. 10; Unger, 2007, p. 144). In normal cells, insulin binds to the insulin receptor on the cellular membrane, triggering a series of signaling cascades that eventually mobilize the GLUT4 transporter protein, which is

necessary for glucose to enter the cell (Unger, 2007, pp. 142-144). In DMII, elevated levels of FFAs modify the insulin receptor that activates the protein kinase C (PKC) pathway, altering the glucose receptor on the cellular membrane and inhibiting glucose uptake by the cell (Unger, 2007, p. 51). This mechanism is generally reserved for periods of starvation, when carbohydrates are reserved for use by vital organs and tissues (such as the brain), while elevated FFAs can be used for non-vital and voluntary functions. However, in DMII, when FFAs begin to accumulate in skeletal muscles, IR is triggered, even though there is a sufficient supply of carbohydrates (Unger, 2007, p. 52). Hyperglycemia follows due to decreased glucose utilization in the skeletal muscle or uptake by adipose tissue, and glucose output from the liver is increased, as glycolysis and gluconeogenesis are no longer inhibited due to impaired insulin function (Unger, 2007, pp. 140-141).

In pre-diabetic individuals, pancreatic β -cells over-secrete insulin in response to FFA-induced hyperglycemia (Unger, 2002, p. 7). However, as DMII progresses, the accumulation of FFAs in pancreatic β -cells leads to β -cell dysfunction in genetically susceptible individuals (McGarry, 2002, p. 13; Unger, 2007, pp. 137, 141). Insulin promotes the storage of FFAs, but as diabetes progresses and insulin-producing beta-cells fail, insulin production drops, and circulating FFAs increase. Pancreatic β -cell failure is induced due to a chronic state of hyperglycemia and infiltration and destruction of beta-cells by FFAs, eventually leading to hypoinsulemia (Unger, 2007, pp. 137-141). Oxidation of increased FFAs after β -cell failure produce large amounts of ketone bodies

(which are not used as a mass energy source in the body) and so ketoacidosis develops (Unger, 2007, p. 146). Another mechanism through which FFAs are thought to induce insulin resistance and complicate DMII is through peroxisome proliferators-activated receptors (PPARs). Activated PPARs control the expression of genes that regulate FFA storage and catabolism, adipocyte formation, insulin sensitization and have an influence on bodyweight (Morewitz, 2006, p. 35). Mutations in PPAR genes have been linked to insulin resistance and diabetes (Unger, 2007, p. 140).

Risk Factors Associated with Development of DMII

Risk factors for DMII include family history, obesity, inactivity, ethnicity, age, previous gestational diabetes and impaired glucose metabolism (CDC, 2005, p. 1). DMII has an underlying genetic basis that is not completely understood; however, there is a strong correlation between the penetrance of these genes and environmental factors (Morewitz, 2006, p. 26; Scollan-Koliopoulos, 2004, p. 224). A large portion of the relation between familial history of DMII in first degree relatives can be attributed to the similarity in lifestyles among family members, including diet and physical activity (Scollan-Koliopoulos, 2004, p. 224). In individuals with a genetic predisposition to diabetes, environmental factors such as obesity, age, diet and lack of exercise have been linked to the mutations that permit impaired glucose transport into and death of pancreatic B-cells (Unger, 2007, p. 141).

Research has attributed the majority of DMII cases to a combination of behavioral factors including obesity, physical inactivity, diet and smoking (Morewitz, 2006, p. 30).

The greatest risk factor for developing DMII is obesity (ADA, 2004, p. 1). Obesity can be defined as having a body mass index (BMI) greater than 30 kg/m² (Unger, 2007, p. 3). It is estimated that 75% of all risk associated with the development of DMII can be attributed to obesity, especially android obesity, characterized by excess weight through the midsection and upper body (Morewitz, 2007, p. 30; Unger, 2007, p. 141). Visceral fat, which is generally high in obese individuals, and ectopic fat deposition, both hallmark traits of DMII, produce higher levels of circulating FFAs, explaining the correlation between DMII and obesity (McGarry, 2002, p. 15; Unger, 2007, p. 144). Much of the pathogenesis of DMII is linked to obesity.

Secondary causes of obesity and DMII include inactivity and excess calorie intake (ADA, 2004, p. 1). It has been estimated that more than 90% of all DMII cases could be prevented with modest changes in exercise and eating habits, which will be discussed in depth later in the chapter (Morewitz, 2006, p. 31). Other research has shown a possible connection between the increased consumption of polyunsaturated fats, whole grains and fiber to the reduction in risk of developing DMII (Morewitz, 2006, p. 33). Exercise and diets lower in saturated fat have this effect as they lower levels of circulating fatty acids throughout the body (ADA, 2004, p. 2; McGarry, 2002, p. 15; Pronk, Boucher, Jeffry, Sherwood & Boyle, 2004, p. 250).

Ethnic and racial disparities have been linked to higher prevalence of DMII (Unger, 2007, p. 3). African-Americans, Hispanics and Native Americans are more likely to report higher incidence of diabetes as well as obesity, little physical activity and

overall poor health than other populations in the United States (CDC 2005, p. 4; Morewitz, 2006, p. 28). Socioeconomic status also has been found to have a profound effect on the development of DMII and correlated heart disease. One hypothesis posits that lower socio-economic status is linked to inadequate utilization of preventive and primary health care services, which allows the progression of the disease (Morewitz, 2006, p. 29).

Medical conditions that place patients at high risk for developing DMII include a history of hypertension, elevated triglycerides, vascular disease or metabolic syndrome (MS) (Unger, 2007, 3). MS is a cluster of metabolic and cardiovascular problems including insulin resistance, hypertension, dyslipidemia, increased risk for coronary and other vascular disease, which are linked to the development of DMII (Morewitz, 2006, p. 25; Unger, 2007, pp. 44-45). Other risk factors for DMII include previous gestational diabetes, fetal malnutrition and subsequent expression of the “thrifty gene”², smoking, drug-induced hyperglycemia, and age (Morewitz, 2006, pp. 27-39; Unger, 2007, pp. 3, 149).

Complications and Associated Costs of DMII

Disrupted insulin function and impaired peripheral glucose disposal eventually result in insulin resistance and hyperglycemia causing a multitude of health ramifications. Complications from DMII include high blood pressure, cardiovascular disease, stroke,

² The “thirty gene” is hypothesized to be a gene that maximizes efficient fat storage and utilization during periods of food shortage and starvation, but is linked to obesity during prolonged food abundance.

kidney disease, diabetic neuropathy, amputations, retinopathy, and periodontal disease (CDC, 2005, pp. 5-6; Unger, 2007, pp. 604-605). Other possibly life-threatening problems due to biochemical imbalances from DMII include ketoacidosis, coma and death, and those with DMII are also more likely to die from other illnesses such as the flu or pneumonia (CDC, 2005, p. 7; Halvorson, 2003, pp. 18-19). People with diabetes are twice as likely to die from any condition as those without diabetes with similar health given all other conditions are the same (CDC, 2005, p. 5). When DMII is allowed to progress and proper measures are not taken to control the disease, it can create costly complications.

Heart and Vascular Disease

Heart disease, stroke and high blood pressure are all closely related pre-existing conditions of DMII and account for 65% of all deaths in people with DMII (ADA 1, 2002, p. 1; CDC, 2005, p. 6; Unger, 2007, p. 604). Sufferers of DMII show higher prevalence of hyperlipidemia and higher levels of LDL (“bad cholesterol”) which drastically increase an individual’s risk for cardiovascular disease and high blood pressure (ADA, 2002, p. 2). Seventy-three percent of all individuals with DMII develop high blood pressure and are two to four times more likely to suffer from a stroke or have heart disease than individuals without diabetes (CDC, 2005, p. 6). The average yearly cost for a DMII patient who suffers a stroke is \$26,600 and \$24,500 for a heart attack (Unger, 2007, p. 507)

Nephropathy

Diabetic nephropathy is another serious complication from DMII and is distinguished by high blood pressure, protein in the urine and progressive kidney failure (Unger, 2007, p. 560). Over time, constant hyperglycemia and high blood pressure associated with DMII over-stresses the kidneys, eventually leading to microalbuminuria and end stage renal disease (ESRD) (ADA, 2007). In 2002, 153,730 DMII patients suffering from ESRD were receiving chronic dialysis or living with a kidney transplant (CDC, 2005, p. 5). In 2002 alone, 44,400 patients with DMII started treatment for renal failure and accounted for 40% of all new dialysis patients (CDC, 2005, p. 5; Morewitz, 2006, p. 11). The estimated annual cost of end stage renal disease in the United States is \$57,200 per patient (Unger, 2007, p. 507).

Neuropathy

In the United States, diabetes is the primary cause of not only kidney failure, but of amputation due to neuropathy and blindness (Halvorson, 2003, p. 18). Neuropathy is characterized by the degeneration of nerve fibers and loss of nerve density throughout the body. Although the exact mechanism is not completely understood, diabetic hyperglycemia can affect vascular and nervous function throughout the entire body, causing loss of feeling and utility (Unger, 2007, p. 514). Of those that suffer from DMII, more than 60% have some form of nervous system damage, and it is estimated that 50% to 75% of all non-traumatic lower limb amputations occur in people with DMII (CDC, 2005, p. 7; Unger, 2007, p. 513). In 2002, more than 82,000 non-traumatic lower limb

amputations were performed on people with DMII (CDC, 2005, p. 7). The annual cost associated with a single amputation is \$37,600 (Unger, 2007, p. 507).

Retinopathy and Blindness

Of people with DMII, 80% have signs of retinopathy or damage to the retina of the eye (ADA, 2007; Unger, 2007, p. 574). Microaneurysms, hemorrhages and retinal microvascular abnormalities are caused by the deposition of lipoproteins in the eyes of patients with DMII, which causes pressure build-up and damage to retinal blood vessels (ADA, 2007; Unger, 2007, p. 574). In severe diabetic retinopathy, the development of glaucoma can result in complete loss of the eye (Unger, 2007, p. 574). Twelve thousand to 24,000 new cases of blindness each year can be attributed to DMII (CDC, 2005, p. 5). The cost of a single event of retinopathy is estimated to be \$1,100 and annual costs for disability due to blindness, \$3,486 (Unger, 2007, p. 508).

Accumulating Costs of Diabetes

Many of the costs associated with DMII are not directly related to the function of metabolic progression of the disease, but rather with the adverse side effects that they can have (Hogan *et al.*, 2003, p. 5). These complications combined with the prevalence of DMII exhibited in the United States make it a very costly condition. In the US, 20.8 million children and adults, 7.0% of the population, are affected with diabetes and another 54 million people have pre-diabetes (ADA, 2007). Over 13.3 million people have been diagnosed with DMII, while it is estimated that another 5.5 million people remain undiagnosed for DMII (ADA, 2007). In 2002, the estimated total cost of diabetes

was \$132 billion (ADA, 2007; CDC, 2005, p. 8). Direct costs accounted for \$92 billion: \$23.2 billion to diabetes care, \$24.6 billion for chronic complications, and \$44.1 billion for extra general medical conditions associated with DMII (ADA, 2007; Unger, 2007, p. 202). Another \$40 billion in indirect costs related to diabetes was spent in 2002 for lost work-days, disability, mortality and restricted work activity (ADA, 2007; CDC, 2005, p. 8). In 2003, 11% of the nation's healthcare expenditures were on diabetes care (Rice, 2005, p. 327). The average of the medical expenditures for a person with diabetes was \$13,243 in 2005, which is 5.2 times greater than the expenditures of those without diabetes (Rice, 2005, p. 392). The cost of DMII is projected to rise to \$156 billion by 2010 and \$192 billion by 2020 (Hogan *et al.*, 2003, p. 917).

As evident by these figures, DMII and the associated complications can be extremely expensive. However, the majority of these expenses of the disease can be controlled through primary care when detected early enough. For example, in 2002 the greatest portion of expenditures related to chronic complications of diabetes was for cardiovascular disease (20% for adults aged 45-64) when the actual renal and metabolic costs (the primary elements of the disease) of the disease were less than 13% (Hogan *et al.*, 2003, p. 6). If DMII is treated promptly and properly, and not allowed to progress to the stage when kidney dialysis or a heart transplant is needed, many of these costs could be reduced.

Managing DMII

There are many possible options for patients who suffer from DMII to treat the causes of disease and prevent costly complications. For people with DMII, general lifestyle modifications, such as weight loss, increase in physical activity and adjustments in diet, can often prevent or even control DMII (Pronk *et al.*, 2004, p. 250). Among adults with DMII, 16% use insulin treatment, 12% use both insulin and oral medication, 57% only use medication, while 15% of DMII patients use neither insulin nor medication to control their condition (CDC, 2005, p. 2). Research has demonstrated that almost all cases of clinical or symptomatically detectable DMII can be prevented and the progression of the disease reversed with appropriate lifestyle changes and primary intervention (Pronk *et al.*, 2004; Scollan-Koliopoulos, 2004).

Insulin is an appropriate treatment approach for some patients with DMII who have developed IR or whose pancreatic β -cells no longer secrete insulin (ADA, 2007). Through insulin therapy, cellular glucose uptake can be stimulated and hyperglycemia reduced. Other pharmacological interventions include various drug treatments that seek to reduce glycemia to an acceptable range (Unger, 2007, p. 151). Some of these drugs, such as Sulfonlureas, function by stimulating higher insulin production in pancreatic β -cells, while other drugs reduce glycemia without increasing insulin concentrations (Unger, 2007, p. 156). Some of these drug classes, such as Metaformin, act as insulin sensitizers, while the use of PPAR antagonists (thiazolidinediones) decrease levels of circulating triglycerides, FFAs and glucose (McGarry, 2002, p. 15; Morewitz, 2006, p.

35; Unger, 2007, p. 170). Leptin is a hormone that regulates energy homeostasis through fat and carbohydrate metabolism (Unger, 2007, p. 148), and McGarry (2002) suggests its possible use to treat DMII in the future.

Lifestyle Changes: Effective DMII Management Strategies

While pharmacological intervention can be an integral part of a DMII management, healthy lifestyle behaviors should be at the core of any treatment plan. Making modest behavioral changes can have profound effects in DMII management. Research has demonstrated that by simply adding a moderate exercise regime, a patient suffering from DMII can significantly improve their condition. Even a single incident of exercise can promote carbohydrate metabolism and increase insulin sensitivity, lowering blood glucose; however, this is a transient effect, requiring regular exercise for prolonged benefit (Gorman & Nolan, 2005, p. 68; Unger, 2007, p. 454). Exercise also lowers concentrations of FFAs and triglycerides, can reduce levels of low-density lipoprotein (LDL) or bad cholesterol, and can lower blood pressure (O’Gorman & Nolan, 2005, p. 70; Unger, 2007, p. 454). Physical activity mediates body weight and can reduce obesity, which is a significant risk factor for the development and progression of DMII (Pronk *et al.*, 2004, p. 250). Exercise regimes need not be drastic for noticeable improvements to be made in a DMII patient; a routine of simply walking briskly for 30 minutes three to five times a week can make a significant difference in the patient’s health (O’Gorman & Nolan, 2005, pp. 70-75; Unger, 2007, p. 439).

In conjunction with increased physical activity and prescribed medical treatment, the American Diabetes Association emphasizes the importance of a healthy diet for individuals with DMII. They suggest a reduced calorie diet high in fruits and vegetables, lean protein, whole-grains and low in saturated and trans fat (ADA, 2004, p. 2). Dietary changes can aid weight loss and reduce hypertension, dyslipidemia and nephropathy (Unger, 2007, p. 436).

Studies have demonstrated that lifestyle changes and quality primary and preventive care have been effective in treating DMII and preventing costly complications associated with the disease (Pronk *et al.*, 2005; Rice, 2005, p. 327). One study conducted in Sweden among males with impaired glucose tolerance examined the feasibility and effectiveness of lifestyle changes in controlling and preventing DMII. The diet and exercise regime was practiced by all of the study participants over the study period of five years. The treatment group demonstrated a 63% reduction in DMII incidence, suggesting that moderate lifestyle changes are sustainable (Pronk *et al.*, 2004, p. 250). Another study in China demonstrated a 46% decrease in DMII incidence with increased exercise, while another study demonstrated a 58% reduction in DMII risk through coached lifestyle changes (Pronk *et al.*, 2004, p. 251).

The US Diabetes Prevention Program was a study that demonstrated how lifestyle intervention could be more important in DMII prevention than pharmacological intervention. Over the course of a year, one group of overweight men and women at risk for developing DMII underwent lifestyle alterations which included healthy dietary

changes, 150 minutes of moderate exercise each week, attending a DMII relevant health class and monthly meetings with a support group. Another group of at-risk individuals only took Metformin, an anti-diabetic drug taken to reduce cardiovascular problems in overweight patients with DMII. At the end of a year, those in the lifestyle transformation group had lost double the weight and lowered their risk of developing DMII by 58%. Those who just took Metformin lowered their risk by only 31% (Pronk *et al.*, 2004, pp. 251-252).

Moderate behavioral changes can lead to a decrease in cardiovascular disease (the leading cause of death for those with DMII), lower blood pressure and decreased risk for stroke (ADA, 2002, p. 2). In addition to combating dyslipidemia, hypertension and obesity (all related to DMII), lifestyle modification including regular physical exercise can improve hyperglycemia by promoting cellular glucose uptake (ADA, 2005, p. 2). The majority of dialysis patients are affected by DMII, and Halvorson (2003) suggests that these individuals could have avoided kidney failure and dialysis with proper diabetes care through behavioral changes (p. 19). Proactive programs for diabetes are predicted to be able to reduce the deaths due to influenza complications in those with DMII by as much as 50% (Halvorson, 2003, p. 19). By reducing the incidents of DMII and its complications through simple lifestyle changes, expensive complication costs can be reduced and health for those with DMII improved.

Importance of Primary Care in Prevention and Management of DMII

There are many treatment options for DMII; however, behavioral modification and healthy lifestyles for disease management need to be mediated through a primary care provider before the disease is allowed to develop into a complicated, expensive, life-threatening condition. While behavioral changes are simple and can have profound effects in diabetes management, the majority of DMII patients do not follow recommended lifestyles changes with regard to diet and exercise. A 2001 DAWN (Diabetes Attitudes Wishes and Needs) study, which included 5,426 adults with diabetes and over 3,500 healthcare professionals, showed that the adherence rate to exercise regimes for DMII patients was only 35% and just 37% to dietary changes, while 78% of those on medication alone, stuck to their treatment schedule (Unger, 2007, p. 408). This demonstrates the need for greater mediation of behavior modification in DMII care that begins with primary care providers.

Maria Rudis, professor of emergency medicine at the University of Southern California Medical School explains the importance of education about disease management in primary care: “People don’t have opportunities for education regarding the importance of health and pharmaceutical care. So they don’t understand their illnesses and the importance of compliance...” (Young, 2007, p. 1675). Noncompliance is often mistaken with non-adherence. Noncompliance implies that the patient blatantly disregards medical advice, where non-adherence is not following or incorrectly following medical advice because of genuine confusion or lack of knowledge (Unger, 2007, p.

409). Without proper education and primary care to effectively manage DMII, prevalence and cost of the disease will continue to increase (Scollan-Koliopoulos, 2004, pp. 223-224). Increased access to primary care can help break this cycle through a provider-mediated care plan with appropriate education so that patients understand their condition, and therefore, want and are able to begin to take control of their disease.

Regular primary intervention is important for patients to understand their disease and sustain success in controlling and reducing DMII complications. Misconceptions about DMII or misunderstanding proper lifestyle adjustments are fairly common and only cause further complications. For instance, in one study 68% of those with DMII did not recognize the correlated risk of DMII to stroke and cardiovascular disease (ADA, 2002, p. 8). Another study found that patient education for those with hyperglycemia reduced blood sugar levels and delayed the need for insulin therapy (ADA, 2004, p. 12). In the study by Pronk *et al.* (2004), patients in a control group received education and some direction at the beginning of the study in how to make proper lifestyle changes to improve their DMII risk. Patients in the experimental groups received ongoing lifestyle coaching and had regular examinations by a physician. Those who received regular medical direction reduced their risk by more than 58% over the control group (p. 251).

DMII and Primary Care: A Case Study of the US and England

Diabetes is a serious illness in the United States that has contributed to the general decline of health in our country and the increasing costs of healthcare. By shifting to a new mindset, to a paradigm of health that is largely focused on primary care, these

problems can be greatly reduced. The problem of DMII in the United States has already been introduced, but it is useful and telling to compare our secondary and tertiary based system of care and the effects that it has for a disease such as DMII to a nation like the UK, which has national healthcare focused on a paradigm of health through primary care.

England has had a strong commitment to primary care since the 19th century. Advances in public health nursing, cleanliness and basic sanitation led by Florence Nightingale and the *Report on an Inquiry Into the Sanitary Conditions of the Laboring Population of Great Britain* in 1842 from Edwin Chadwick, “the father of modern public health,” established a focus on primary care, prevention and public health in England (Allender & Spradley, 2001, pp. 25-26, 95). By the beginning of the 19th century, England had “public health visitors” who were largely public health nurses or midwife-type figures who traveled to poor areas and provided primary care (Allender & Spradley, 2001, p. 26). This commitment to primary health care for all is seen in the modern English healthcare system.

The United Kingdom currently has a national health system called the National Health Service (NHS). Principles of primary care govern the NHS with a strong focus on community health practices (Shi and Singh, 2000, p. 25). The hospitals and staff of the NHS are owned or employed by the NHS. The priority of the NHS remains primary care, and health visitors still exist for outreach and education programs (Shi and Singh, 2000, p. 25). The government-run NHS pays for most services and prescription medication, with private insurance covering just 4% of medical costs each year (Hunynh *et al.*, 2006,

p. 2). Although the system provides universal coverage, it is often criticized for rationing care and long waiting times. However, according to a study performed by the Commonwealth Fund examining health care access, the UK was the highest in terms of universal access to care among the United States, Canada, New Zealand and Australia (Hunynh *et al.*, 2006, xii).

The emphasis on primary care may be a contributing factor to the lower prevalence of DMII in the UK, and is a likely contributor to the lower ratio of DMII to DMI than in the United States (ADA, 2007; Diabetes UK, 2007, p. 5). Seven percent of the US population has diabetes and another 54 million people have pre-diabetes, while prevalence in the UK is just 3.5%, half that of the United States (ADA, 2007; Diabetes UK, 2007, p. 5). The NHS is a practical model for demonstrating the need for more primary care specifically with DMII, but also with other chronic and preventable conditions. Through its commitment to primary care, the NHS of the UK prevents the incidence and costly complications of chronic disease. The cost of diabetes is estimated at 5% of all NHS expenditure or £1.3 billion (about \$2.7 billion) (Kingdom & Ferguson, 2006, p. 6). Much less is spent on diabetes care in the UK than in the US, equating to a substantial difference: 5% in the UK versus 11% in the US (Rice, 2005, p. 327).

In the UK, a large part of the cost of diabetes is related to direct diabetic complications (Kingdom & Ferguson, 2006, p. 6), where the United States spends a significant portion of diabetes spending on treating chronic conditions, not the actual disease (Hogan *et al.*, 2003, p. 925). In 2003, per capita healthcare spending was \$2,428

in the UK and \$5,711 in the US (WHO, 2006). Although less is spent on diabetes in the UK and on healthcare overall than in the United States, the outcomes related to diabetes are approximately the same. The mortality for individuals with DMII in the United States is about two times greater in any disease than those without diabetes given all other factors are the same (CDC, 2005, p. 6) and is just under two times greater mortality for those with DMII in the UK than those without DMII (Mulnier, Seaman, Raleigh, Soedamah-Muhu, Colhoun & Lawrence, 2006, p. 519).

Conclusion

Diabetes is a disease that exemplifies the strengths and importance of primary care. Early intervention and good primary care are crucial in identifying risk factors for preventing and managing DMII (ADA, 2002, p. 8; ADA, 2004, p. 12; ADA, 2005, p. 2). By providing appropriate and quality care, patients with DMII are 40% less likely to incur complications or death over those who are not provided quality healthcare (Halvorson, 2003, p. 19). Primary care providers generally serve as an entry point into the healthcare system and initiate treatment for serious and complex illnesses. Primary care physicians have the knowledge and responsibility to educate their patients of the effects of DMII and how patients can prevent it. With early detection of complications through regular primary care, the devastating and harmful effects of DMII can be reduced. Avoiding primary healthcare and/or neglecting prevention only exacerbates DMII and increases the severity of complications, making care much more urgent and expensive than if DMII would have been prevented or treated properly with primary care

(Weinick *et al.*, 2004, p. 508). As Halvorson (2003) suggests, we underpay for prevention and controlling complications, which eventually leads to decreasing health and increased costs (p. 19). Through guidance from primary care professionals, sustainable lifestyle changes can be implemented into the lives of those suffering from DMII and progress can be realistically made.

Diabetes mellitus type II is just one example of how costs of preventable chronic conditions could be controlled with greater primary care intervention. As previously discussed, DMII consumes a large amount of the healthcare budget in the United States each year. DMII is a disease that can largely be prevented and controlled by proper lifestyle choices and primary medical care. These changes, however, require leadership from medical professionals, who need to direct a paradigm shift towards primary care. When mediated by a primary care physician, lifestyle changes can have a monumental effect on health. If lifestyle changes and programs to prevent, detect and control the progression of disease were applied to all aspects of health, our nation would be much healthier, be able to reduce healthcare costs, and therefore, have the resources to extend primary care to all.

CHAPTER FIVE: Possible Reform Solutions for the US Healthcare Dilemma

The United States is by far the most fragmented healthcare system in the industrial world, has some of the worst health outcome data, spends the most, especially on secondary and tertiary care, and is in desperate need of reform. As discussed in Chapter Three, healthcare reform seeking to improve these outcomes can be classified into three categories: cost, quality and access. Not to negate the concerns about improving quality and safety, reform focused on cost reduction can concomitantly improve people's access to healthcare.

With the multitude of issues that exist in the current healthcare system, the reform possibilities are seemingly endless, and it is evident to many that reform needs to happen immediately (Holtz-Eakin, 2006, p. 8). Questions arise surrounding the nature of reform. Are reform measures best initiated through: public, government-led initiatives; private competition; single-payer systems; tax breaks; mandatory insurance; or health savings accounts? A single comprehensive, overhauling strategy is unlikely, but a sustainable, effective improvement to the system can be reached through gradual, manageable changes that work with the current system and attitudes of the American people toward an increase in preventive and primary care (Holtz-Eakin, 2006, p. 8; Rivlin & Antos, 2007, p. 43).

Reform Policy

When examining reform, there are many different factors that must be taken into account. Various cultural, economic, environmental and other demographic factors affect

health (Longest, 2001, p. 11). A healthcare system needs to consider the diversity of the patients that it will serve to produce an effective, efficient multivariable system. Different populations are unique, which can make it difficult to prescribe just one healthcare reform that works for all its members (Longest, 2001, pp. 10-11). This chapter will examine different possibilities for reform using models from other countries and 2008 presidential candidates' proposals.

Health policy is critical in shaping the health system of a community and the health of each individual in that community (Longest, 2001, pp. 10-11). Public policies are made in one of the three branches of government and generally have some authoritative or directive effect, i.e. laws from the legislative branch, rulings and operational decisions made by the executive branch and judicial rulings. Macro policies affecting the country at-large such as Medicare are another means for change (Longest, 2001, pp. 14-16). Private policy affecting healthcare systems can also be made by organizations such as the National Committee for Quality Assurance or the executives of a managed care corporation (Longest, 2001, pp. 12-13). In the United States, separation of public and private policy and the complexity of policy decision-making not only makes healthcare reform more difficult, but also reflects the general structure of the healthcare system and the general structure of government and private sectors. When these policies begin to affect the practice of healthcare and the states of health in the country, they become health policy (Longest, 2001, pp. 12-13).

It is useful to examine other countries for evidence of the applicability of healthcare reform; however, predicting the success of a system for the United States based upon another country's values, culture, political environment and economy remains challenging because reform will likely be accepted differently in the belief system of the US (Rivlin & Antos, 2007, p. 173). Most industrial nations have more universal, comprehensive systems of care than the United States. England, Germany and New Zealand are three countries that all have greater focus on universal care than the US and lie in different places along a continuum of government regulation of health care. No healthcare system is perfect, and it is unlikely that the United States will suddenly adopt a completely new model. Nonetheless, it is useful to understand each country's healthcare system to obtain possible ideas that could be realistically implemented in the United States. This will be the focus of Chapter Five.

Models from Around the World

Great Britain: The National Health Service

The foundation of healthcare in the United Kingdom (UK) is primary care and community health, and it is built upon the pursuit of comprehensive, universally available, publicly funded healthcare in order to improve the living standards of the population (Hatcher, 1997, p. 229). Britain's system operates under a publicly owned single-payer model financed through general taxes and is known as the National Health Service (NHS), which provides universal comprehensive services through a system of public trusts (Hatcher, 1997, p. 252; Shi & Singh, 2001, p. 23). Local governments are

granted power by the central UK government to levy taxes, which are then used to finance all public services of the area including education, social services and some healthcare (long-term nursing care). However, most health care is financed completely by the central government (Graig, 1999, pp. 158-159; Hatcher, 1997, p. 228). At the regional and local level, health authorities are responsible for purchasing healthcare, employing most NHS staff, and overseeing care operation (Hatcher, 1997, p. 228). The NHS owns and operates the hospitals, and employs most of the healthcare specialists and other staff of the hospitals on salary. General practitioners (GPs) and other healthcare providers who are not directly employed for the hospitals practice independently and then form service contracts directly with the NHS (Hatcher, 1997, p. 229; Shi & Singh, 2001, p. 25).

NHS Focuses on Primary Care

The NHS has a much greater focus on primary and preventive care than the United States. As stated in the National Health Service Bill of 1948, the goal of the NHS is to “secure improvement in health and the prevention, diagnosis and treatment of illness” (Hatcher, 1997, p. 229). Patients first visit their GP who is required to see registered patients within twenty-four hours and may then refer patients to specialists. The primary care providers in outpatient settings in the system are GPs, who are generally independently employed working under government contracts and supported by a team of privately employed nurses (Graig, 1999, pp. 160-161). GPs and their employed health staff are responsible for healthcare functions such as immunization, minor

illnesses, disease screenings, management of chronic disease and education (Shi and Singh, 2001, p. 25).

Primary Care is Advantage of the NHS

The NHS commitment to universal primary care is a desirable trait in a healthcare system. It has the potential to reduce costs and promote health. One study conducted by the Commonwealth Fund found that the UK had the lowest rate of unnecessary ER use for a condition that could have been treated through primary care. This can be compared to the US which had the highest rate of unnecessary ER use, especially among members of low-income groups. The same study also found that the UK had the lowest numbers of cost-related access problems. Again, the US had the highest numbers of cost-related access problems, especially among the poor (Hunynh *et al.*, 2006, p. 8). Although the UK model has been criticized in the United States as “socialized medicine,” reforms were implemented in 1990 which shifted the NHS to a public contract model in order to introduce more competition. Health authorities and other purchasing bodies contracted with specific providers and vertically integrated networks to create competing public trusts, which may be a more appealing way to implement primary care into the healthcare system of the US (Hatcher, 1997, p. 229).

Problems with the UK Model

Although the system offers comprehensive care for all citizens, long lines and insufficient provision of services is a common complaint made by British citizens (Shi and Singh, 2001, p. 25). Hospital care in the UK has much longer wait times than the

United States. Urgent conditions can take up to a month before treatment is received, and average waiting time for surgical services is thirteen weeks, although wait times of up to 18 months have been reported (Hatcher, 1997, p. 238).

UK-like comprehensive, social medical reform would be difficult in the US because there are “significant political, cultural and economic differences” between the two countries (Graig, 1999, p. 152). The NHS is much more centrally coordinated than the system of the US; therefore, implementation attempts in the United States could create a sense of autonomy loss (Graig, 1999, p. 153). The United Kingdom has a unitary government, meaning that the central government has executive power to create and implement government policies including healthcare (Hatcher, 1997, p. 228). Each of the four nations of the UK implements the healthcare system slightly differently, but the principles, functions and reforms of the system are the same throughout the four nations (Hatcher, 1997, p. 228). In the United States, each state has some freedom to administer government subsidized healthcare programs such as Medicaid which is based on need and social environment in the state (Hatcher, 1997, p. 264). Although UK-like healthcare reform is unlikely in the United States, the NHS sentiments of universal coverage and increased primary care need to be emulated in the U.S.

German Healthcare

Germany, like Britain, provides universal coverage to its citizens, but through a different system than the NHS. German healthcare is a combination of the government-run system of the UK and market-driven system of the US (Greiner & Van der

Schulenburg, 1997, p. 80). Some principles upon which the German system was founded upon are social solidarity, freedom of choice, mandatory insurance and sickness funds (Graig, 1999, p. 40; Greiner & Van der Schulenburg, 1997, p. 77). Germany has mandatory national health insurance for those earning approximately less than \$43,000 per year. Citizens above this yearly income have the choice to purchase private insurance if they choose, but the majority opts to utilize the sickness funds (Graig, 1999, p. 40).

Germany's mandatory national socialized health insurance is financed through the combination of employer and employee contributions and managed by nonprofit sickness funds (Shi & Singh, 2001, p. 24). The German system includes ambulatory, hospital care, preventive care, screenings, dental care, ophthalmology, medical supplies and other care (Brenner & Rublee, 2002, p. 131). Approximately 90% of the population uses national sickness funds while the other 10% chooses to purchase private health insurance or are covered by government workers insurance. The sickness funds form contracts with the hospitals, and the federal government controls spending through annual caps on physician services and hospital budgets (Shi & Singh, 2001, p. 24). There are over 750 sickness funds divided by region and occupation, each using different operational and reimbursement methods (Brenner & Rublee, 2002, p. 125). Federal law regulates mandatory health insurance and hospital financing, while the sickness funds have significant independence in specific spending and administration of care (Brenner & Rublee, 2002, p. 125).

Strengths of the German System

One way that Germany makes its healthcare system more efficient is through the use of information technology. Germany has implemented an electronic patient information system in which the patients carry a card with an electronic chip that includes all of their demographic information, health history, patient identification (ID) number and authorization information from the patient's sickness fund (Brenner & Rublee, 2002, p. 133). After patients visit a physician in an ambulatory setting, the physician is reimbursed by the regional sick fund to which they belong according to a point system for services provided up to the budget limit (Greiner & Van der Schulenburg, 1997, p. 84). Another way that spending is controlled is through the abundant supply of physicians, who are generally salaried and have strict restrictions to the domains in which they can practice (Brenner & Rublee, 2002, p. 133). Under this system, healthcare spending in Germany has remained relatively stable with expenditures hovering around 8% of the GDP since the 1970s (Greiner & Van der Schulenburg, 1999, p. 43). Annual per capita health spending has also remained fairly constant while the US has seen large increases (Giaimo, 2002, p. 17). Like the UK, during the 1990s, Germany attempted to introduce more competition into the system (Shi and Singh, 2001, p. 24). Germany was used as a model for the Clinton reform of the early 1990s and has caught the attention of health analysts worldwide (Graig, 1999, p. 71).

Drawbacks of the German Model

Germany's system has some aspects that could be useful for US reform, but there are cultural discrepancies between the two countries that would make implementation of German-like reform difficult in the US. Germany's healthcare system is unique in many ways. The system is a combination of capitalism and extensive social programs, which works for Germany because it was founded on principles such as social solidarity and obligatory insurance for all employees (Greiner & Van der Schulenburg, 1997, p. 77).

Germany has a much different historical and political background than the US, including a history spotted with changing boundaries, immigrant demography, Nazism, revolution, war and democracy (Eidson, 2001). While it shares some of the values of capitalism and freedom with the United States, in general, Germany identifies much more with socialism, nationalism and solidarity (Eidson, 2001, p. 852).

German medicine also tends to be more curative than preventive and has no public health system; the United States currently has a public health system and given the current system needs to focus its reform around preventive healthcare; the German model falls short in this area (Greiner & Van der Schulenburg, 1997, p. 91). Preventive healthcare, education and primary care could be increased in Germany through other healthcare professionals besides physicians; however, Germany's shortage of nurses is not conducive to this plan. Changing demographics including increasing numbers of aging, non-working retirees will be a drain on Germany's system as this group will not be

working but will be consuming healthcare. This also seems to be the population trend in the United States (Greiner & Van der Schulenburg, 1997, p. 96).

Although the German system may not be an exact fit for the United States, there are specific aspects which could be implemented in US reform. Germany's information technology (IT) reforms and universal insurance programs received much attention during the Clinton reform era of the 1990s and have been called "capitalism with a heart" (Graig, 1999, pp. 71; 41).

Tiered Medicine: New Zealand

New Zealand has a plan that is different from both the UK and Germany, as it has a unique federal funding system and a set of guaranteed core health benefits provided by the government (Scott, 1997, p. 164). In 1938, free inpatient treatment was introduced in New Zealand that included a government tax-funded system, which subsidized GPs, but also allowed them to set their own fees. GPs and other healthcare providers form local practice groups called Primary Health Organizations (PHOs) (Scott, 1997, p. 164). The physicians in these practice groups can be funded through a combination along a continuum of government and private funding (Scott, 1997, p. 164). While the government does not set prices, they have some influence over what GPs charge as they fund a set amount per consultation; these government funds to GPs are called "health benefits" (Scott, 1997, p. 165). The difference between the government's contribution and physician fees must be paid directly by the patient or private insurance. Health

subsidies cover all primary care and full or partial drug costs, lab tests, and diagnostic screenings (Scott, 1997, p. 165).

Subsidized GPs act as gatekeepers for the hospital system. The majority of hospitals is owned by the federal government, which establishes a set budget based in regional demographic information and health care needs (Scott, 1997, p. 164), and has the potential to reduce unnecessary and wasteful hospital spending. There is some competition between the public and private sectors of hospital care (although public hospitals generally cover urgent and emergency care, private hospitals provide the majority of elective procedures) (Scott, 1997, p. 176). A public health sector also exists in New Zealand, which finances free maternity care and children's dental care for those who cannot afford private care.

The US Could Borrow New Zealand Ideas about Universal Primary Care

New Zealand has a national focus on primary care as it provides a set of core health benefits for all citizens. In 2000, the government implemented the New Zealand Health Strategy with goals of increasing health of the population through equitable, quality primary care for all (King, 2001, p. 3). The reform was focused largely on community and public health due to the thought that making improvements and increasing equality in access would have the largest benefits for overall health (King, 2001, p. 3). The reform included thirteen objectives including health goals such as decreasing the number of smokers, improving nutrition, increasing physical activity and reducing the incidence and affects of diabetes (King, 2001, p. 13). To implement these

changes, district health boards were given responsibility for organizing and directing care, and funding for primary care was changed from a fee-for-service basis to a more global approach that appropriated funds based upon the needs of individual populations (King, 2001, p. 16).

New Zealand's focus on primary care has translated to low levels of unnecessary ER use for conditions that could have been treated by a primary care physician: only 6% in New Zealand compared to 15% in the United States (Hunynh *et al.*, 2006, p. 8).

Healthcare Problems in New Zealand

While the United States could borrow ideas from New Zealand's primary care reform to reduce unnecessary emergency spending and improve the health of the nation, there are some fundamental problems with New Zealand's system that make it less than ideal in the "American" mind. There are problems with waiting times for publicly funded surgical care (Scott, 1997, pp. 175-176). Inequality also remains a large issue. Statistical research has shown that several minority groups have lower health indications and higher mortality rates (Ministry of Health, 2007). The United States already has significant inequality issues as evident by the 47 million US residents who remain uninsured without access to healthcare (Rivlin & Antos, 2007, p. 138).

Quality in the public sphere is another issue in the New Zealand system. Government reimbursement to hospitals is capitated, which has the potential to reduce provision of unnecessary services, but sometimes can encourage hospitals to provide too few treatments and withhold necessary care for financial reasons (Scott, 1997, p. 175).

New Zealand's healthcare system is not perfect, nor are New Zealanders the healthiest people in the world; however, they do have much fewer problems with access to primary and preventive care services than the United States (Hunynh *et al.*, 2006). Their system includes basic universal coverage and still provides the choice of private care for those who can afford it, which would be welcomed in the culture of the United States.

2008 Presidential Candidates' Healthcare Reform Plans

The 2008 presidential race provides a unique forum for healthcare reform. Each of the prospective candidates has examined the healthcare issues in the United States and proposed reforms that they feel would best eliminate problems while fitting into the culture of the United States. Candidates' reforms incorporate some of the ideas from other countries in the context of the values, culture, government and specific needs of the US. Through their proposals, various approaches can be examined to improve the state of health in the United States.

Democratic Proposals

At the start of the race for the democratic nomination in the winter of 2007, the leading candidates were Hillary Clinton, John Edwards and Barack Obama. Each of these candidates' platforms had similar goals: to increase prevention and public health through primary care, health education programs and chronic disease management programs. Increasing transparency, eliminating unnecessary, ineffective spending, and establishment of a national institute dedicated to finding the most evidence-supported

treatment were also components of each of the democratic candidates' plans (Blumenthal, 2007, chart 1). Although the methods of implementation for each of the democratic candidates' plans differ slightly, the main principles of their reforms are largely the same.

Hillary Clinton: American Health Choices Plan

Hillary Clinton's plan seeks to provide "quality, affordable health care for Americans." Her plan seeks to provide coverage for the 47 million uninsured Americans and those at risk for losing their coverage (Clinton, 2007, p. 1). Under her plan, Americans who are satisfied with their coverage can keep their current plans, but the uninsured or those who are unhappy with their current coverage have the option of choosing from the same plans that members of Congress have or a public plan similar to Medicare (p. 1). Much like the system of New Zealand, her system seeks to increase equality in the health system, reduce costs by focusing on prevention and primary care and promote shared responsibility among all who participate in the health care system through tax reform and financial restructuring (pp. 1-3).

Clinton's plan offers three coverage options aimed at decreasing the number of uninsured in the United States. The first option allows citizens to keep their current coverage, but with lower costs due to seamless coverage and the elimination of high premium taxes resulting from cost shifting (Clinton, 2007, p. 4). The second option makes congressional insurance plans available for purchase by the general public. This will provide many sub-options, which have an increased focus on preventive care in an attempt to lower long-range health care costs and improve the health of the population.

The third option is affordable, Medicare-like coverage made available to all citizens and is less expensive than the other two choices. By using the same structure as Medicare, bureaucratic and administrative costs could be reduced through this plan (p. 4).

Under Clinton's plan, expanded coverage will be provided through financial reforms and system restructuring. A large component of her plan is the introduction of health information technology, which would consolidate patient information, increase coordination of care, reduce medical errors, lower inefficiency and reduce bureaucratic costs. This is estimated to produce at least \$35 billion in savings each year (Clinton, 2007, p. 11). Unnecessary Medicare and Medicaid costs will be reduced by phasing out over-payment to managed care organizations, producing an estimated savings of \$17 million annually. By increasing market access to generic drugs and giving Medicare power to negotiate with drug companies, another \$4 billion in savings will be generated under the Clinton plan. Clinton also plans to eliminate the tax cuts for the top income brackets implemented by the Bush administration and limit other high-income tax breaks, which is predicted to generate \$54 billion each year that will be used to finance the healthcare system (p. 11). These potential savings amount to \$110 billion, which under Clinton's plan will be used to increase public health and extend coverage to groups previously unable to afford care (Blumenthal, 2007, chart 1).

Barack Obama: Plan for a Healthy America

Fellow Democratic candidate, Barack Obama shares many similar ideas with Clinton in his health care plan. The three main tenants of Obama's plan are: "quality,

affordable and portable coverage for all,” “modernizing the U.S. health care system to reduce costs and increase quality” and “promoting prevention and strengthening public health” (Obama, 2008). Obama aims to cover the uninsured through a new national health plan that is similar to coverage available to federal employees. Although his plan does not mandate insurance coverage for adults, by making insurance affordable for all, his plans seek to provide healthcare for every American. His plan also would extend SCHIP and Medicaid, and provide federal subsidies to families who do not qualify for these programs but who need financial assistance to afford healthcare. Large businesses would also be required to provide substantial health coverage or pay a percentage of their payroll to finance the national plan (Blumenthal, 2007, chart 1; Obama, 2008).

Obama proposes modernization of the healthcare system to improve efficiency and lower costs. He proposes offering federal reinsurance to employers to reduce the burden of catastrophic healthcare spending (Obama, 2008). Like Clinton, Obama also suggests implementation of a health information technology system, which is projected to save \$77 billion each year (Blumenthal, 2007, chart 1). His plan also seeks to increase quality care and lower health costs by increasing competition amongst insurance and drug companies (Obama, 2008). Obama’s plan will also promote prevention and public health movements. By expanding prevention and public health funding through educational campaigns in schools, families, communities and workplaces, his plan seeks to promote behavioral changes and individual responsibility for health (Obama, 2008).

John Edwards

John Edwards' suggested a plan similar to those of both Obama and Clinton. Edward's principle goal is to provide universal care that reduces costs and increases quality. The Edwards plan would mandate insurance for every American, but would provide a choice between private or a new Medicare-like option that operates on a sliding scale (Blumenthal, 2007, chart 1). Like the Clinton plan, Edwards proposes eliminating tax cuts for those with annual incomes over \$200,000 and implementing health information technology to support increased coverage (Blumenthal, 2007, chart 1). Edwards' proposal also emphasizes primary care, purports free preventive services and proposes creation of diabetes prevention programs (Blumenthal, 2007, chart 1).

Republican Health Plans: Increasing Competition and Choice

Just as the democratic candidates have similar ideas about the direction healthcare reform should take in this country, the leading Republican candidates share similar reform platforms. There was much less information available covering Republican plans; the information that could be found tended to be much less extensive and more ambiguous than the Democratic proposals. Candidates such as McCain, Huckabee and Romney shared similar ideas and their plans sought to improve healthcare through privatized reform and personal health responsibility (Blumenthal, 2007, chart 3). They advocate increasing competition between insurers and providers, allowing consumers to choose, which theoretically forces healthcare agencies to improve the quality of their services (Blumenthal, 2007, chart 3).

John McCain

The focus of John McCain's plan is on controlling costs. He proposed to do this through elimination of employer-sponsored healthcare, and provision of tax credits (\$2,500 for individuals and \$5,000 for families) and health saving accounts (HSAs) so that people can choose their own healthcare coverage. By providing freedom and choice, the plan seeks to increase competition between providers and insurance companies and to lower costs (Blumenthal, 2007, chart 3; McCain, 2008). McCain also advocates increasing prevention and personal responsibility for health in order to prevent the costly complications of chronic disease and improve the health of Americans (McCain, 2008).

Mike Huckabee: Building a "Health" System

Huckabee's plan for health in the United States involves giving Americans choices for their healthcare. He advocates separating health insurance from employers in order to make insurance more portable for Americans and also to make American business more globally competitive (Huckabee, 2008). His proposal will reportedly reduce healthcare costs from 17% to 11% of the GDP and save over \$700 billion a year (Blumenthal, 2007, chart 3). Huckabee proposes to do this through better preventive care and "health" promotion, medical liability reform, electronic record keeping, HSAs and tax credits (Blumenthal, 2007, chart 3). His plan would "encourage the private sector to seek innovative ways to bring down costs and improve the free market for health care services" (Huckabee, 2008).

Health Savings Accounts

Many of the Republican candidates, such as McCain, Huckabee and Giuliani, advocated consumer driven health care reform through health savings accounts (HSAs), which provide all citizens with the capability to purchase the healthcare that they chose (Blumenthal, 2007, chart 3). HSAs are accounts to which contributions are made either by employees or their employer, much like a savings account, that are used to pay for small health expenditures. HSAs are coupled with high deductible indemnity insurance plans for unexpected health costs and serious illness (Gratzer, 2006, p. 122). The balance of these accounts is carried over from year to year, attempting to encourage responsible health choices and reduce wasteful spending. One study found that people who spent their own funds on healthcare through high deductible insurance took steps to lead a healthier lifestyle, used fewer healthcare resources and had less wasteful healthcare consumption (Gratzer, 2006, pp. 112-113).

Health Maintenance Organizations and Reform

HMOs, another possible direction for reform, are centered on primary and preventive healthcare. Although HMOs have received criticism for limiting patient choice and withholding care, studies have shown that patients' health in HMOs is not nearly as jeopardized as some public thought seems to suggest (Giaimo, 2002, p. 181). Studies have found that quality of care under HMOs is comparable to care received through other insurance plans or on a fee-for-service basis (Giaimo, 2002, p. 182). Due

to the public attitude towards them, HMO-based reform would be difficult, although reform efforts could use HMOs' focus on increasing preventive and primary care.

Prevention and Primary Care: The Common Denominator

Most of the countries and candidates examined for potential reform ideas shared one common idea: increased preventive and primary care. Healthcare reform in the United States is not a simple problem, has no simple solution and will likely take the combination of several strategies for successful reform to be found. The United States is one-of-a-kind and possesses a unique culture, values, government and set of healthcare problems, and reform must consider all of these factors. In order to increase health in this country, there needs to be a greater focus on preventive and primary care. It is unlikely that the United States will be able to simply replicate a model from another country, become completely privatized or turn to sole government regulation. Balance must be achieved. Our current system is tilted towards secondary and tertiary care. Taking examples from other countries and using potential 2008 presidential candidates' suggestions for increased preventive and primary care will push the scale back in the other direction. In the following chapter, I will propose a possible reform scheme drawing upon the reform possibilities previously discussed.

CONCLUSION: Where Do We Go From Here? One Student's Reform Plan

Benjamin Franklin once said, "An ounce of prevention is worth a pound of cure."

This adage speaks volumes about healthcare. In order to improve the health of our nation, we need more emphasis on the components of our healthcare system that prevent disease and promote wellness. Our system needs to be restructured. The current healthcare system in the United States is like an inverted pyramid because the majority of resources are used to provide expensive secondary and tertiary care for only a few. The pyramid of healthcare in the US can and must be re-inverted. By increasing the focus of our system to universal promotion of health, billions of dollars could be saved each year on costly sick care and reinvested in the healthcare system to provide appropriate coverage for all. The following is my attempt at a reform solution drawing from the previous chapters in support of my proposal.

Increasing Efficiency

As demonstrated in previous chapters, the healthcare system is wasteful and needs to become more efficient. To increase efficiency, preventive and primary care are logical places to begin as they are the cheapest and most effective way to improve health. By redistributing wasteful spending on health conditions that should have been prevented, coverage could be extended to all in the United States. Under this reform proposal, healthcare insurance would be mandated for all, but through the reduction of expensive secondary and tertiary care, affordable options would be available for each citizen.

Elimination of Employer Sponsored Insurance

One way to consolidate and improve efficiency in the US system is through the elimination of employer provided health insurance. Employers currently purchase the majority of healthcare in the United States because of legislation passed in 1943 that gave employers tax exemptions on money spent on healthcare for their employees (Gratzer, 2006, p. 111). While this practice provides many Americans with insurance coverage, employees are offered little choice. Employer-provided insurance plans rarely take into account the individual needs of employees, benefit only those who choose to participate in the program and penalizes those who independently purchase insurance (Herzlinger, 2007, pp. 98-103). If the sponsored healthcare benefits do not meet the needs of employees or have premiums that are too expensive, employees who choose not to partake in the program essentially lose twice. They take a pay cut that others receive through benefits and then have to purchase healthcare with their own taxable money. Employer-provided plans often remove healthcare choices from the insuree and place it into the hands of the employer. Generally, only several options exist per company, none of which may perfectly fit the unique health care needs of each employee.

Tax Free Money Directly to Employees

Under this reform proposal, tax breaks would still be given to employers, but the money would be granted directly to employees so that they could choose healthcare plans that best fit their needs. The amount of money that employers would have spent on healthcare would still be allotted to the employees so that they could make their own

choice about how to purchase healthcare. Much like Germany, employees would be required to use this employer provided money on healthcare, promoting the maintenance of health. Employers could still use the benefits to entice workers and maintain tax breaks. Employers would also be given the option to let employees to purchase their own healthcare plans and then reimburse them for a set amount, such as 75%, with tax-free money depending on the needs of the individual employees. This change would make healthcare more efficient because people would be getting what they needed, not a blanket option that their company was willing to buy.

Expansion of Medicare Would Provide an Affordable Option for All

Currently there are federal mechanisms in place that selectively provide healthcare to some groups of people including Medicare and Medicaid (see Chapter 2). Medicare is not the comprehensive system that some may seem to think it is. Medicare Part A provides the most basic coverage benefits that the program offers. Included under the plan is basic acute coverage, hospital care, some preventive care and nursing and hospice care (CMS, 2007; IOM, 2003). To receive coverage for regular physician visits, outpatient hospitals, tests, equipment, some therapy, limited prescription drugs and a few other services, enrollees must pay a premium and purchase Part B (CMS, 2006). While having multiple options for coverage provides choice, the basic Part A package included in the program is very limited and does not cover much primary or preventive care, which encourages use of secondary and tertiary medicine. Much like Hillary Clinton suggests, if Medicare was expanded and made more comprehensive, similar to Part B, a greater

focus on health would be promoted. My plan advocates creating a new Medicare for all Americans and eliminating other federal healthcare programs.

How the New Medicare Would Work

Medicare would operate as it currently does, and a fee-for-service/DRG payment structure would still be used in order to prevent wasteful and unnecessary healthcare. Medicare would be the sole government-funded healthcare program and A, B, D and advantage benefits would be consolidated into one option. Medicaid and other government-sponsored programs would be eliminated as a way to consolidate and cut transitional costs. This new public Medicare would operate on a sliding fee basis, much like John Edwards has proposed. A person's income and number of dependents would be accounted for, and individuals and families would only be required to pay what they could reasonably afford for the plan (even if that amount was just \$5). A sliding scale would allow all Americans to have healthcare without taking advantage of free coverage or be tempted to fall into lower income brackets in order to receive benefits. The sliding scale function of the new Medicare plan would allow even the poorest members of our society to have healthcare without Medicaid as a separate program. The funds currently used for Medicaid would be transferred over to Medicare. Individuals who work for a company that does not provide benefits or those who are not formally employed could choose to purchase private insurance or the new Medicare plan from the government. Current administrative structures and systematic procedures could be kept in place, and all Americans would have the opportunity to receive healthcare.

New Program Would Accommodate Culture of US

Much of the current system would be maintained in order to reduce unnecessary restructuring costs. By maintaining similarities to the current system, there is a greater chance that the American public would accept the system, as choice and freedom would be maintained while access is made universal. Most analysts agree that the United States could not effectively have a system of socialized medicine because our society is capitalistic. This reform would combine aspects of capitalism that improve markets, such as competition, promotion of innovation and efficiency. Like the current system, private practitioners would still provide care. This effort would maintain competition and reduce the stigma and rejection of socialized medicine that would most likely occur with heavy regulation or government controlled staffing.

A Focus on Health for the New Medicare

The new Medicare would focus more on health and wellness care with allowances for increased primary and preventive care measures. As incentive for providers to accept and treat Medicare enrollees and in order to promote health maintenance among the providers who accept Medicare, financial incentives would be given to physicians who kept their patients the healthiest. To promote maintenance of health, insurance coverage would be mandatory. These types of changes will gradually reverse the paradigm of sick care in our country and promote health.

Financing the New Universal System

Adding universal care initially will cost more until our priorities in health care change and utilization of expensive secondary and tertiary care decreases. Eventually, my proposal will translate to lower healthcare costs. To cover initial expenses of the program, savings will be used from elimination of unnecessary ER visits, an information technology system, Medicare premiums and removal of tax cuts for the very wealthiest in our country. Other small measures could be taken to help finance the new healthcare system. For example, generic drugs will be allowed to compete with larger drug companies and Medicare will be allowed to negotiate for the lowest priced drugs.

Eliminating Cost Shifting

Through cost shifting, the insured eventually end up paying for medical costs accumulated by the uninsured. By providing universal healthcare, we are contributing to a healthier, more equitable society. Under a sliding scale and mandatory insurance reform plan, all people would have health insurance reducing the incidence of unnecessary ER visits. Because these ER visits are so ineffective and much less efficient than primary care, money could be saved and used to finance the universal Medicare. Eventually universal coverage and increased focus on primary and preventive care will lead to a healthier society and fewer chronic diseases. Improvements in health and reduction of chronic disease and its expensive complications will lower healthcare costs.

Information Technology

Much like the German system, the implementation of information technology is estimated to reduce healthcare costs from \$35-70 billion a year (Blumenthal, 2007, chart 3). Not only would the system reduce the administrative costs associated with paper and increase efficiency, but it also has the potential to increase the quality of healthcare. For example, if a patient's history was consolidated and could be pulled up at the push of a button, current medication, allergies, family predisposition and disease history could be easily accessed, making it less likely that a medical error would be made by a physician or exclusion in a record would be made by a patient. These changes will lead to safer, cheaper, more efficient system.

Medicare Premiums

Financing will also come from Medicare premiums. Funding for elderly care will come from income taxes, but those under 65 who choose Medicare, will have to pay a premium according to a sliding scale. While these premiums may be small, collectively, they will cover the majority of the costs of the system.

Removing Tax Cuts for the Wealthiest

My plan for universal healthcare also proposes eliminating tax cuts implemented by the Bush administration for the upper 1%. By eliminating tax breaks for the top 1% of the United States under President Bush's 2001 plan, over \$52 billion is estimated to be saved (Clinton, 2007, p. 11). If these tax cuts are eliminated, money currently going to the wealthiest 1% could be used to provide healthcare for the rest of the nation.

Conclusion

Many issues burden the current healthcare system in the United States. By implementing reforms that focus on primary and preventive care, our society will be healthier, eventually lowering the cost of healthcare. Through reforms that mandate insurance coverage and provide affordable options for all, everyone will be able to find an appropriate plan that fits their needs. My proposed reform focuses on primary and preventive care because they have been shown to be the most important factors in a healthy society (Stanhope & Lancaster, 2004, p. 83). By maintaining many of the existing structures and systematic features, money is saved, and a smoother transition can be made. Through this reform, accessible, affordable, quality healthcare will be created for all people in the United States. Health is a crucial factor for participation in our society, and under this reform plan, health is what will be promoted.

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