

**ONE THING LEADS TO ANOTHER—EXAMINING THE RELATIONSHIP BETWEEN  
HEALTH INSURANCE STATUS AND ACCESS TO SELECTED SCREENING  
SERVICES BY WOMEN, AGED 45 TO 64**

by

**Anne-Elizabeth McGeary**

BSN, LaRoche College, 1981

MHA, Graduate School of Public Health,

University of Pittsburgh, 1985

Submitted to the Graduate Faculty of  
Graduate School of Public Health in partial fulfillment  
of the requirements for the degree of  
Doctor of Public Health

University of Pittsburgh

2008

UNIVERSITY OF PITTSBURGH

Graduate School of Public Health

This dissertation was presented

by

Anne-Elizabeth McGeary

It was defended on

January 31, 2008

and approved by

Dissertation Director: Edmund M. Ricci., PhD, M.Litt  
Professor of Sociology and Public Health  
Department of Behavioral and Community Health Sciences  
Graduate School of Public Health, University of Pittsburgh

Ravi K. Sharma, PhD, Assistant Professor  
Department of Behavioral and Community Health Sciences  
Graduate School of Public Health, University of Pittsburgh

Christopher R. Keane, ScD, MPH, Assistant Professor  
Department of Behavioral and Community Health Sciences  
Graduate School of Public Health, University of Pittsburgh

Evelyn O. Talbot, DrPH, MPH, Professor  
Department of Epidemiology  
Graduate School of Public Health, University of Pittsburgh

Copyright © by Anne-Elizabeth McGeary

2008

Edmund M. Ricci, PhD, M.Litt.

**ONE THING LEADS TO ANOTHER—EXAMINING THE RELATIONSHIP  
BETWEEN HEALTH INSURANCE STATUS AND ACCESS TO SELECTED  
SCREENING SERVICES BY WOMEN, AGED 45 TO 64**

Anne-Elizabeth McGeary, DrPH

University of Pittsburgh, 2008

Being without health insurance or being “underinsured” creates a variety of special problems for women aged 45 to 64, which is perhaps the most complex of all developmental periods in the lives of American women. “One Thing Follows Another. . .” explored the relationship between health insurance status and the utilization of primary screening services among women, aged 45 to 64. Secondary data drawn from the 1996 BRFSS was used to develop a non-experimental study that examined the association between health insurance status, and access to selected primary screening services as measured from their responses to the BRFSS and as compared to demographic covariates of interest.

Several key findings emerged: 1. Health insurance significantly affects a woman's use of primary health care services; 2. While insurance status or lack of coverage matters tremendously for women, it alone does not guarantee access to health care. Other determinants, such as income and educational levels, are important forces affecting health behaviors; 3. The rate of being uninsured in the 45-64 females cohort was slightly higher than the national averages in 1996; 4. Reduced rates of access were observed across all covariates when women did not have insurance but higher rates of poor outcomes were more consistently associated with uninsured

women who were of a race or ethnicity other than “White Non-Hispanic,” were unmarried, were unemployed and had lower levels of income and less years of education completed.

The public health significance of the study relates directly to one of the *Year 2010 National Health Objectives* -- to increase the proportion of persons with health insurance to 100 percent. To meet that goal, all Americans should be included in a comprehensive health care system that guarantees timely access to health care, assures a high quality of health services with adequate and stable reimbursement for health care providers and rationally apportion the costs of care. A major focus of that process should include current and immediate attention toward improving the health care of all women, with a special emphasis on those aged 45 to 64, who have inadequate insurance coverage. The final chapter includes a review of current state health care reform initiatives and several major approaches to extending coverage to midlife women. Public health and social policy implications along with suggestions for future research and the study’s limitations are also provided.

## TABLE OF CONTENTS

<b>PREFACE.....</b>	<b>XI</b>
<b>1.0 CHAPTER I ---INTRODUCTION AND SIGNIFICANCE .....</b>	<b>1</b>
<b>1.1 STATEMENT OF RESEARCH PROBLEM AND QUESTIONS .....</b>	<b>3</b>
<b>1.2 THEORETICAL FRAMEWORK AND HISTORICAL PERSPECTIVES .</b>	<b>4</b>
<b>1.2.1 THEORETICAL FRAMEWORK .....</b>	<b>4</b>
<b>1.2.2 HISTORICAL PERSPECTIVES.....</b>	<b>7</b>
<b>1.2.3 HEALTH CARE AND THE MID-LIFE WOMEN OF TODAY.....</b>	<b>19</b>
<b>2.0 CHAPTER II—CRITICAL REVIEW OF LITERATURE .....</b>	<b>25</b>
<b>2.1 RELEVANT WOMEN’S HEALTH CARE LITERATURE .....</b>	<b>26</b>
<b>2.1.1 WOMEN AND HEALTH CARE .....</b>	<b>26</b>
<b>2.1.1.1 Women’s health needs and health care utilization patterns change as they age.....</b>	<b>27</b>
<b>2.1.1.2 Certain populations of women experience higher rates of health problems and report more barriers when accessing care.....</b>	<b>28</b>
<b>2.1.1.3 Health care costs represent an increasing barrier to health care for many women.....</b>	<b>32</b>

2.1.1.4	While health care insurance status by type—public, private or lack of coverage—matters tremendously for all women, it alone does not guarantee access to health care. ....	33
2.1.1.5	Women who are ill face more obstacles in obtaining medical care.	36
2.1.1.6	Screening test rates for key preventative health procedures, such as mammograms, Pap smears, and cardiovascular disease have fallen since 2001. 37	
2.1.1.7	Physician-patient counseling about health risks and health promotion behaviors is worsening. ....	41
2.2	RELEVANT RESEARCH STUDIES.....	42
2.3	SUMMARY OF LITERATURE REVIEW .....	48
3.0	CHAPTER III---RESEARCH METHODOLOGY, DESIGN, DATA RESULTS AND CONCLUSIONS .....	51
3.1	RESEARCH METHODS AND DESIGN.....	51
3.1.1	Research Designs and Methods .....	52
3.1.2	Research Hypothesis, Major Variables, and Covariates of Interest .....	53
3.2	DATA DEVELOPMENT, RESULTS AND ANALYSIS.....	55
3.2.1	Data Development and Results.....	55
3.2.2	Results--Selected Demographic and Socioeconomic Characteristics of Women, Age 45 to 64 .....	56
3.2.2.1	Discussion, Tables 3.1 and 3.2.....	59
3.2.3	Results--Outcome Variables and Insurance Status .....	61
3.2.4	Specific Outcome Information.....	63

3.2.4.1	Perceived Health Status (Table 3.4).....	63
3.2.4.2	Access to Routine Physical Examination and Time When Needed to Visit Physician and Could Not Afford Services (Tables 3.5 and 3.6).....	66
3.2.4.3	Mammography and Insurance Status (Table 3.7).....	70
3.2.4.4	Pap Smear and Insurance Status (Table 3.8).....	73
3.2.4.5	Exercise and Insurance Status (Table 3.9).....	76
3.2.4.6	Smoking Status and Insurance Status (Table 3.10).....	80
3.3	DISCUSSION.....	83
3.4	CONCLUSIONS.....	85
4.0	CHAPTER IV----SYNTHESIS OF STUDY FINDINGS, POLICY IMPLICATIONS AND RECOMMENDATIONS FOR PENNSYLVANIA.....	87
4.1	REVIEW OF STATE INITIATIVES.....	87
4.1.1	California and Maine.....	89
4.1.2	Illinois and Maryland.....	91
4.1.3	Massachusetts.....	92
4.1.3.1	Components of the Massachusetts Health Reform Plan.....	92
4.1.3.2	Implementation Issues.....	94
4.1.4	Pennsylvania.....	97
4.1.4.1	Cover All Pennsylvanians.....	98
4.1.4.2	Pennsylvania Medicaid Program.....	99
4.2	REVIEW OF HEALTH INSURANCE POLICY ALTERNATIVES FOR MIDLIFE WOMEN.....	101
4.2.1	Increasing coverage through employer-sponsored insurance.....	101



4.2.2	Expansion of Medicare/ Increase Medicaid enrollment.....	105
4.2.2.1	Subsidization of individual insurance coverage.....	106
4.2.3	“Building the Health Care Barn”--The Family and Business HealthCare Security Act of 2007 for Pennsylvania .....	108
4.3	FINAL CONCLUSIONS, POLICY RECOMMENDATIONS AND SUGGESTIONS FOR FURTHER RESEARCH .....	112
4.3.1	Policy Recommendations.....	113
4.3.2	Suggestions for Further Research .....	114
APPENDIX A THE FAMILY AND BUSINESS HEALTH CARE SECURITY ACT OF 2007 .....		117
BIBLIOGRAPHY .....		120

## LIST OF TABLES

Table 3.1 Insurance Status by Age within Cohort, Race/Ethnicity, Marital Status, and Educational Level Completed.....	58
Table 3.2 Insurance Status by Age within Cohort, Employment Status, and Income Level.....	59
Table 3.3 Summary of Insurance Status and Outcome Variables, Female Respondents, Age 45 to 64, to the BRFSS.....	62
Table 3.4 Perceived Health Status - Percentage of Female Respondents Reporting "Fair" or "Fair to Poor" Health.....	65
Table 3.5 Have Not Had Checkup Within Past Year (or ever).....	68
Table 3.6 Needed to See Physician But Could Not Afford To.....	69
Table 3.7 Have Not Had Mammogram Within Last Two Years.....	72
Table 3.8 Have Not Had Pap Smear Within Last Two Years .....	75
Table 3.9 Current Physical Activity.....	79
Table 3.10 Current Smoking Status .....	82

## PREFACE

No dissertation that has been three years—indeed, far more—in the making can have been written without the support and encouragement of many special people, and it is a pleasure to mark here my gratitude to those who so richly deserve it.

First, I have been the beneficiary of extraordinary wisdom, immaculate professionalism and endless patience from the members of my doctoral dissertation committee: Edmund M. Ricci, PhD, Director, Ravi K. Sharma, PhD, Christopher R. Keane, ScD, and Evelyn O. Talbot, DrPH. They have been enormously generous to me with creativity and their time, as indeed they have been to many others before me. Dr. Ricci's encouragement, boundless optimism and belief in my ability and sensitivity to my goals and aims have been a gift beyond words.

Two special individuals have been vital to the writing of this dissertation and it would be an understatement to write they helped me in ways that have been invaluable. My thanks to Steven B. Larchuk, for his continued encouragement, friendship and support and to Carl T. Hasselman, MD, for both his outstanding medical care and his kindness.

A circle of cherished friends were crucial to seeing me through to the completion of this dissertation: Mary Ann Snyder, Rosalie Smith, and Nancy Heil have provided me with a real bedrock of affection and encouragement. Susan De Riggi-Bost, Catherine O'Friel and Maria Scuglia have been more supportive than words can express.

My greatest debt in every way is, and always had been to my late father—any inspiration or commitment of mine to public health is in honour of his profound humanity and love of learning.

## **1.0 CHAPTER I ---INTRODUCTION AND SIGNIFICANCE**

Over the past several decades, major progress has been made in improving the health of women and understanding the unique roles that they hold within the health care system. American women are patients, providers, caregivers, as well as the decision-makers for their families. Acknowledgment of this social trend has resulted in positive advancements in the health and well-being of women in the United States. Most American women report good health and are satisfied with their health care. For a sizable group of women, in particular those without health insurance and those who are “under-insured,” the benefits of modern healthcare developments are beyond their reach. They often struggle with poor health and face considerable economic and societal barriers in obtaining services. Women are forced to make difficult trade-offs between addressing their own health care needs and fulfilling commitments to their jobs, and their families’ many concerns. For many women, the loss of a job, divorce, the death of a spouse, a bout of illness or disability striking an aging relative can result in a dramatic change in their economic welfare and health care security.

Today, women can expect to live longer and use more health care services during their lives than their male counterparts. In spite of these factors, while the formation of health care policy is critical to sexes, its program planning and outcomes is often not gender appropriate. The complex health care needs of women, disproportionate reliance on publicly funded health

care programs, lower incomes, and multiple roles and responsibilities produce stakes in health policy development that are considerably higher for women.

Women without health insurance have increased affordability issues, especially with respect to preventative care and provider counseling, the extent of prescription drug purchase and consumption, and the use of reproductive health services and the health care experiences of menopausal women.

Being uninsured creates a variety of special problems for women aged 45 to 64, which is perhaps the most complex of all developmental periods in the lives of American women. They are often given social permission to work at precisely the time that their traditional responsibilities decline, change permanently or are completely rejected. Real difficulties can begin with the aging process--these are often the "sandwich" years, when many women finish raising their children and begin to care for their parents. Aging is a gradual process, and the changes that accompany aging are adaptive across the lifespan. During middle age, women may to some extent lose their roles of mother and partner, especially through death and divorce. A partner's retirement may force new adaptations. Distancing from parents is often replaced by establishing a commitment for parents' care. Loss of health insurance at this time may exacerbate personal stress to the point where health becomes compromised. Use of the health care system reflects their changing needs--moving from a focus on reproductive health in their younger years to an emergence of more chronic illnesses in their middle years, leading to higher rates of disability and physical problems during the senior years (Roberts & Newton, 1987).

## 1.1 STATEMENT OF RESEARCH PROBLEM AND QUESTIONS

The goal of this analysis is to explore the association between health insurance status and reported access to select screening services in women, aged 45 to 64. Responses from the national Behavioral Risk Factor Surveillance Survey (BRFSS) were used to compare the experiences of women of different ages within the cohort, with respect to income, race, ethnicity, marital, educational and health insurance status, and to determine or confirm the usefulness of the BRFSS as a statistical model for answering questions about these women.

Simply stated, the study's research questions are:

1. Can comparing the responses of these women to the Behavioral Risk Factor Surveillance Survey (BRFSS), which includes measures of access to primary health screening, provide improved understanding about insurance status and selected health behaviors, such as smoking or exercise?
2. What are the compositional and contextual demographic variations in the characteristics of mid-life American women, aged 45 to 64, and is there an association between health insurance status and certain demographic variables?
3. Adjusting for wide regional differences, is it possible to identify strategies at the state level and, in a broad sense, recommend health policies to improve access to care for these women?

## **1.2 THEORETICAL FRAMEWORK AND HISTORICAL PERSPECTIVES**

### **1.2.1 THEORETICAL FRAMEWORK**

Before beginning to address the research questions, consideration should be given to a broad review of the current health-care crisis and placement of the questions within a relevant theoretical framework.

The traditional, fee-for-service Medicare program has predominated the organization and financing of chronic illness care in the United States, and the anticipated economic costs to sustain any increased public spending program over the next 30 years could be staggering as the population continues to age (National Center for Health Statistics, 2003). In 2000, 4.2 million Americans were 85 or older, but by 2030 –the time that the baby-boom cohort will begin to reach age 85 –nearly 9 million will be over the age of 85. In addition to the demographic challenges of funding the general needs of an aging population, health care costs are expected to rise faster than the wages paid per worker into Social Security and Medicare, and the long-range costs for Medicare are projected to increase rapidly because of increased use and costs associated with serving a chronically ill population (Social Security and Medicare Board of Trustees, 2003).

Turning to economic evidence, Lave and Peele (2005) have written that the methods used to finance health care service play a major role in shaping a country's health care system, and in the case of the United States, have a significant impact on the nation's economy and the success or failure of business. Financing methods influence the terms under which citizens access the health care delivery system, the types of health care provided and the mechanisms used to



allocate health care services. Sources of financing also have a direct effect on how the costs of those services are distributed over the population by income and health status.

Individual Americans who can meet the expense may elect to use their own incomes to purchase health care services from health care providers (physicians, hospitals, laboratories, clinics and other firms or individuals). In most other markets in a free economy, this is the typical way that other goods and services are purchased. In the health care industry, other mechanisms such as private insurance plans, sickness funds, and national health insurance systems have been developed to pay for a significant proportion of health care services (Lave & Peele, 2005).

The demographic shift to an older population in the United States has resulted in increased life expectancy but has also transformed the process of illness and modified the whole American experience of aging. In 1900, the average life expectancy at birth was 47 years; by 1995, the estimated life expectancy reached 75.8 years (Berenson & Horvath, 2003). Over 100 years ago, communicable diseases –tuberculosis, diphtheria, and influenza – were the leading causes of death that largely contributed to infant and child mortality rates (Field & Cassel, 1997). The advent of antimicrobial therapy and major public health initiatives, such as vaccination and prenatal education, significantly reduced mortality in the early years of life. Diseases of chronicity –heart disease, cancer, stroke and lung disease – have displaced acute infectious diseases as the major causes of morbidity and mortality today (Brim, et al, 1970).

The experience of serious illness, and subsequently death and dying, has also been transformed from one that occurred earlier in life, was rapid, and largely unanticipated, into an ongoing series of events that are chronic and progressive. Heart disease, cancer, lung disease

and stroke have become the most prevalent serious health conditions, accounting for 70 percent of all deaths (Center for Disease Control, 2003). These diseases disproportionately affect older adults with approximately 80 percent of elders reporting at least one chronic condition resulting in pain and disability, loss of function, or limited activity (Lynn & Adamson, 2003). “Serious and eventually fatal chronic illness” is a phrase that has been introduced to describe a subset of chronic diseases that comprise organ system failures (e.g., heart, lung, and kidney), cancers, and stroke, which are marked by a progressive loss in health and functional status until death occurs. In contradistinction, other common, nonfatal chronic conditions, such as arthritis, hearing or vision loss, although disabling, rarely result in death (Duncan, et al, 1998).

The concept of trajectory was introduced by sociologist Anselm Strauss over 30 years ago to capture and describe the experience of chronic illness. Illness trajectory goes beyond depicting the physiologic unfolding of disease, and also encompasses the total organization of work done over the course of the illness, and the impact that this work has on those involved in the work and its organization (Lunney, et al, 2002). Work connotes the physical and emotional tasks performed by patients, their families, and those who care for them. Within life course theory, trajectories, as well as transitions and turning points, are core concepts. Trajectories are sequences or long-term patterns within a focal area (e.g., health, family, or employment situations) and are formed by examining states of being (e.g., health status, disability) and transitions across successive years. Trajectories are not individual events in time but are embedded in social pathways that are defined by social institutions and the relationships that provide social support. The classical example of “trajectories” was applied to the concept of “dying,” which has received renewed attention in understanding and improving end-of-life care.

Four dying trajectories –sudden death, terminal illness, organ failure, and frailty –vary in the timing and progression of health events, such as functional decline, but collectively, they depict the last phase of life for many persons (Strauss, et al, 1984).

Four examples of the concept of trajectory for mid-life phase of women include menopause, malignant neoplasm of the breast and cervix, obesity, and cardiovascular disease. Responses to the BRFSS can be used as health care footprints and when combined with socioeconomic factors can provide pathways that can assist social institutions in providing social and economic support for these health events.

## **1.2.2 HISTORICAL PERSPECTIVES**

In the United States, the evolution of women’s health care occurred, at times in parallel with the changing social roles of women in society and women’s health continues to be directly shaped by their socioeconomic status. Women’s consumer health activities began in the United States during the 1830s and 1840s. In the mid-19<sup>th</sup> century, women’s suffrage was accompanied by the Popular Health Movement, which demanded a total redefinition of “health” and health care. Abram’s (1986) historical perspective on women’s health care discusses Naphey’s 1870 work entitled *The Physical Life of Women: Advice to the Maiden, Wife and Mother*. Acclaimed as important scientific literature in its day, it limited a woman’s life to three phases and roles: maidenhood, matrimony, and maternity.

At the turn of the 20<sup>th</sup> century, it was commonly believed that the ovaries and the uterus were the controlling organs and the center of all disease in the female body and represented the

source of most female complaints, including headaches, indigestion, and sore throats (Ehrenreich & English, 1973). The stage was set for decades to come during which women's health care policy development would be plagued with sexism and ageism.

Women were encouraged to believe that they lacked control of their bodies. Many normal physiological processes were considered as diseases by organized medicine and society. For example, menstruation was regarded as a chronic problem, and pregnancy and menopause as serious disorders requiring medical intervention. Sexism in the health care system provided the basis for "oppression of women derived from her 'womaness,' her biological differences and her ability to bear children." These beliefs and concepts were used to fashion an ideology of female submissiveness and to "permit condescension toward women" (Marieskind, 1975). Further reinforcing this thinking, in 1905, the president of the Oregon State Medical Society stated, "Educated women could not bear children with ease because study arrested the development of the pelvis at the same time it increased the size of the child's brain, and therefore its head" (Bullough & Vought, 1973).

Ideological thinking of this kind also extended to mature women and lived on in social thinking for decades. As late as the 1970s, in the popular book, *Everything you always wanted to know about sex*, Dr. David Reuben described the menopausal woman as:

"To many women the menopause marks the end of their useful life. They see it as the onset of old age, the beginning of the end. They may be right. Having outlived their ovaries, they may have outlived their usefulness as human beings. The remaining years may be just marking time until they follow their glands into oblivion" (Reuben, 1970).

Major social changes erupted in the 1960s that were repeatedly fueled by societal unrest related to the lack of equality for all American citizens. The most significant and visible were the anti-war protests and the civil rights movement. Momentous changes for women also came into sight when the symbolic fuse was ignited in 1963 by Betty Friedan's historic book, *The Feminine Mystique*. Friedan wrote of women's disenchantment with their relationships, both personal and institutional (Friedan, 1963). After the phenomenal response to the book, the disillusionment that Friedan had described grew into the women's liberation movement, which addressed the cause of equal rights for women. Health care system change was strategic to women's liberation, because the system is an agent of social control equally restrictive as any political or economic system.

The women's health movement developed as a direct expansion of the women's liberation movement in the early 1970s as a grassroots organization with a common uniting goal. The early movement called for improved health care for all women and an end to sexism in the health care system. Activities centered on campaigns for access to contraception and abortion law reform which provided the initial cohesion from which the women's health movement could more powerfully emerge. In January 1973, the landmark Supreme Court decision in *Roe v. Wade* provided women with a legal right to abortion.

The women's health movement continued to focus on changing consciousness, providing health-related services, and struggling to change and improve established health institutions. The primary issue was that women wanted to own and control their bodies, not simply to be cured. In another landmark book, published by the Boston Women's Health Collective in 1971, *Our*

*Bodies, Our Selves*, women spoke out and asked for something different and better from their health care providers.

The women's health movement challenged the issues of childbirth education, natural methods of childbirth, and birthing options, including father participation in labor and delivery and home births. Stimulated by consumer education in books, magazines, and networking meetings, women's requests from the health care system then grew beyond childbearing issues. Hospitals, informed by their marketing departments that women were their major customers as well as the primary health decision-makers for their families, began to market women services by establishing women's health resource centers, either within the hospital or as a freestanding center to provide specialized care and education in warm, homelike surroundings.

In response to these trends, women began to demand participatory health care decision-making, humanistic and holistic preventive care, and a wellness, rather than illness, orientation to care-- a trend that has never been reversed since that time. Women continued to advocate for health services and policies that addressed reproductive freedom, contraceptive options, domestic violence, and research on women's special health problems. Women's special health problems were finally identified as breast disease, menopause, osteoporosis, hormone replacement therapy, premenstrual syndrome, heart disease, and human immunodeficiency virus/acquired immunodeficiency syndrome (HIV/ AIDS).

Abortion rights remain a major legal and emotional issue for the nation to this day. *Roe v. Wade* is being debated by the current presidential candidates and the implications of reversing the constitutional right to abortion raises questions about state-by-state legislation, reproductive freedom, and access to safe medical care in the future.

Betty Friedan, speaking out on the new feminine mystique, asserts that the women's movement had been delayed by the general reversal of social progress in the United States during the 1980s and 90s. In her opinion, the rights women have won during the past 30 years are now in grave danger (Friedan, 1991).

By the 1990s women were recognized as the preeminent consumers of health care in the United States, measured by standards such as doctor's visits, medication prescriptions, surgery, hospitalization, and nursing home care (Southwick, 1990). Women were also responsible for spending two out of three health care dollars at that time. Seventy to 90 percent of all health care decisions were made by women for themselves and their family, and 60 to 70 percent of all hospital beds were filled by women in 1992. The National Center for Health Statistics reported that during this period, of the 20 most frequently performed surgeries, 11 were performed exclusively on women; none were performed exclusively on men. Women accounted for 63 to 66 percent of all surgeries (Wentz & Haseltine, 1992). It might have been concluded that they should have been receiving the best health care that the United States system had to offer but as the nineties drew to a close, not all American women were getting quality health care.

American women's health care resembled a "patchwork quilt with gaps" (Clancy, 1992) and for many women, access to care is still riddled with many barriers including excessive cost, limited availability of providers and services, insensitive attitudes in the paternalistic, male-dominated medical profession, lack of transportation, and a poorly-coordinated and disorganized system for referral.

Women's symptoms, rather than being taken seriously, continued to be ascribed to hormonal or psychiatric causes. Erroneous thinking of this type delays diagnosis and treatment

and may have serious consequences. According to Paula Doress, co-author of *Ourselves, growing older*, “If a man comes in with certain symptoms, its diabetes or heart disease. For women, menopause is the wastebasket diagnosis for everything” (Lempert, 1986). The combination of social inequities and a male dominated medical profession created a major effect on women's health referred to as “gender bias.” Two of the most common surgical procedures in the United States were caesarean births and hysterectomies and the number of caesarian births increased steadily from 10 percent in 1975 to 25 percent in 1990. One in four infants was delivered by caesarean section (National Center for Health Statistics, 1988).

Despite technological advances in perinatal health care, many women were unable to access routine care. In 1989 only 75.5 percent of women received early prenatal care, compared with 76.3 percent in 1980. According to 1989 data, the United States ranked behind 21 other nations in infant mortality, and 30 nations had fewer lower birth weight infants (National Commission to Prevent Infant Mortality, 1992).

In 1989 the overall U.S. infant mortality rate was 9.8 per 1000 live births (Grant, 1991). Among African-Americans it was 17.7 per 1000, and among whites it was 8.22 (National Commission to Prevent Infant Mortality, 1992). Tragically, the rate of infant mortality among African-American infants has been more than double that of white infants. Multiple social and health problems have contributed to these disgraceful statistics but to a great extent the dismal record can be attributed to severely inadequate access to prenatal care. Continued poor health status among rural mothers and infants is illustrative of the limited availability of obstetrical providers and limited access to specialized care for complicated pregnancies and deliveries (National Center for Health Statistics, 1978-88). In the United States in 1989, over six percent of



births were to women living in counties with no access to prenatal care (Office of Technology Assessment, 1990). In 1992 the United States spent more than \$808 billion for healthcare, yet made no commitment to ensuring prenatal care for every pregnant woman in the United States (Congressional Budget Office, 1993). Finally this became recognized as a significant political concern because women and children-- who represented more than half the population-- were generally not among our policy makers and women who often did not vote.

Politics also played a role in other women's health issues such as lack of health insurance coverage for in-vitro fertilization and bone marrow transplant for breast cancer, lack of research into women's unique diseases and in the ongoing challenge of abortion rights. Cancer, cardiovascular disease, and osteoporosis were recognized as the three leading causes of death and disability among American women in the 1990s. Insufficient research was directed toward women's unique and common health issues, especially studies of chronic diseases and their prevention in older women (U.S. Senate Commission on Labor and Human Resources, 1990).

A 1989 benchmark study of women's health research (Campaign for Women's Health, 1991) revealed three points that were especially disturbing:

1. Women had been excluded from large clinical trials, such as the study of aspirin and heart disease. Even when women were included, study results were not routinely analyzed for gender differences.
2. No gynecologic unit existed within the entire structure of the National Institute of Health (NIH) nor was there any central coordinating office for women's health matters.
3. Few women had achieved the top echelons of medicine and scientific research.

Even though women made up 52 percent of the US population, research on major diseases and the drugs to treat them was still mostly being done on “mice and men.” Researchers traditionally excluded women arguing that pregnancy and women's fluctuating hormone levels could significantly alter study results (Bhargaus, 1992).

In 1983, Dr. Edward N. Brandt, Jr., assistant secretary of health, commissioned a Public Health Services (PHS) task force to examine the status of women's health. His action acknowledged that cultural, economic, social, and environmental factors make it necessary to develop different approaches and strategies to provide adequate health care services that meet women's needs. In 1985, the task force findings were published in “*Women's Health: Report of the Public Health Service Task Force on Women's Health Issues*” (U.S. Public Health Service, 1985). Academics and government policy makers agreed, for the first time, that women were disadvantaged in terms of health care. The task force report made 15 recommendations that addressed six major areas:

- Promoting physical and social environments that are safe and healthful.
- Providing services to prevent and treat disease.
- Conducting research and evaluation.
- Recruiting and training women's health care personnel.
- Education and informing the public and disseminate research information.
- Designing guidance for legislative and regulatory measures.

Despite the startling conclusions of the PHS task force report, little action was taken, especially in eliminating the inequities in women's health research. In 1989, the Congressional Caucus on Women's Issues (CCWI), a bipartisan group of more than 125 members of Congress, was formed and officially requested an audit of the inclusion of women by the NIH in clinical

trials (a policy adopted as a result of the PHS task force recommendations into 1985). The report, issued in June 1990, found that the NIH was deficient in several serious areas: policies were not well communicated or understood, study results not been analyzed by gender and policy only applied to extramural, not intramural, research. When the NIH, the Congress, the media, and the public reacted to this report, changes began to occur, especially after multimedia coverage showed women's omission from research and reports focused on women's diseases. The CCWI developed a women's health legislative agenda for research, prevention, and services which was introduced in Congress as The Women's Health Equity Act in 1990 and continued beyond 1993.

Other milestones that contributed to a new focus on women's health during the 1990s included the formation of several groups: the Society for the Advancement of Women's Health Research, The Coalition for Women's Health Research, The Office of Research on Women's Health at NIH and the Office of Women's Health (in the office of the assistant secretary for health). Women also began to hold key positions: Bernadine Healy, M.D., director of the NIH; Antonia Novella, M. D., surgeon general; Jocelyn Elders, M. D., surgeon general; Vivian Pinn, M.D., director, Office of Research on Women's Health; and; Judith H. LaRosa, PhD., deputy director, Office of Research on Women's Health; Agnes Donahue, D.D.S., director, Office on Women's Health HHS; Donna Shalala, Ph.D., secretary of health and human services.

The Women's Health Initiative (WHI), started by the NIH in the 1990s, was the largest community-based clinical intervention and prevention trial ever conducted for women. The study had two major parts: first, to evaluate the effectiveness of three preventative approaches (hormone replacement therapy, vitamin D and calcium supplementation, and low-fat diet) on the

incidence of breast cancer, cardiovascular disease, and fractures related to osteoporosis; and second, to evaluate strategies to help women achieve health through positive lifestyles by improving diet, smoking cessation, achieving and maintaining optimal weight, maintaining physical activity, and having regular cancer screening (Healy, 1992). As a direct result of the WHI clinical trials, breast cancer incidence rates have dropped. Kuller and Ness (1996) reported that the supposed long-term benefits of estrogen or estrogen and progesterone therapy might, in part, be due to the characteristics of the women who took estrogen therapy, rather than to the hormones themselves. Multiple links between markers of estrogen and breast cancer were reported and higher bone mineral density, a marker of higher estrogen levels, were found to be a determinant of the risk of breast cancer. Higher serum levels of estrogen among women not taking hormone therapy were found to be associated with an increased risk of postmenopausal breast cancer years later. Postmenopausal obesity was shown to be a major determinant of postmenopausal blood estrogen levels and a major risk factor for postmenopausal breast cancer. The WHI results prompted many women to stop using postmenopausal estrogen plus progestin therapy which has now been demonstrated to translate into lives saved. The incidence of breast cancer declined in Pennsylvania, by 8 percent between 2001 and 2003 and twelve hundred fewer cases were diagnosed during that same time period.

Health care reform was at the top of the agenda for the Clinton administration. The Healthcare Task Force, directed by then-First Lady, Hillary Rodham Clinton, began with discussions focused on access to care for the uninsured, managed competition with Health Alliances (HA) and Accountable Health Plans (AHP) at the state level and a core of benefits for insurance policies emphasizing preventative care. The ill-fated plan proposed universal

coverage for a nationally defined benefit package with the primary source of funding to be drawn from a payroll tax of approximately 10 percent earmarked for health care. The Clinton plan had many drawbacks, chief among them, its complexity and its tremendous potential for creating waste, fraud and abuse, as well as generating new opportunities for litigation and lobbying involving health plans, health alliances and the proposed National Health Board (Fuchs, 1994). After a firestorm of criticism, the Clinton plan was abandoned in 1994. Even though health care reform faded from the domestic policy agenda, by 2000 the health care crisis had deteriorated into the “health care catastrophe.”

By 2001, 42.5 million people in households with health insurance were spending 10 percent or more of their household’s net income in medical expenses. Between 2000 and 2003, seven in ten adults who were driven into debt by medical expenses had insurance at the time. A new health care epidemic appeared, not a condition spread by pathogens but caused by increased premiums and co-payments and exacerbated by restricted coverage. The most-hardest hit were a new class of sufferers—America’s underinsured: the working-poor, making just too much to qualify for government programs that assist the poor, while not nearly affluent enough to pay their health care bills without incurring serious financial hardship or bankruptcy.

The Bureau of Labor Statistics calculates that health care costs in the United States have risen at twice the rate of inflation since 1970. Total costs amount to about \$2 trillion annually, with almost half of that attributed to government spending. The biggest components are:

- hospital care: \$571 billion,
- doctors services: \$400 billion,
- prescription drugs: \$189 billion,
- nursing home care: \$115 billion,

- private insurance: \$96 billion,
- financial services: \$82 billion,
- Home health care: \$43 billion.

Driven partly by these increases, insurance premiums have risen at an even faster annual rate of 9 percent in 2005. Premiums for family coverage in employer sponsored health insurance plans have increased by 73 percent since 2000. From 1997 to 1999, the health-insurance industry posted losses, as the cost of developing new plans grew more quickly than premiums. While insurers contend that their industry is caught between steep cost increases in areas like new medical technologies and pharmaceuticals and employers who refuse to pay increased premiums, health insurers claim to be interested in finding a new business model based on more realistic parameters.

While the health care debate in America forged on, the problem of access to care converged with the new “Holy Grail of public health”—disparity in health outcomes—and a new phrase entered the public health lexicon—“social determinates of health.” Racial disparities in health care and health outcomes represent a disturbing feature of the American health care system. Efforts to reduce or permanently eliminate these disparities must be based upon an understanding of the factors that underlie and contribute to them. Socioeconomic status is an important determinant of health and factors such as income or education have been found to be major determinants of the racial disparities in health. Disparities were found to be complicated by access to health insurance, geographic factors, and unhealthy behaviors. Geographic disparities, both regional and local, were also found to contribute to racial disparities in health. Current disparities in the health of a total population may reflect socioeconomic inequities that prevailed during their intrauterine, infant, or childhood development. Improving the quality of

medical care has become an important goal, not only of improving the health for all Americans, but of decreasing and eliminating the racial disparities in health that are so troubling today (Weisfeld & Perlman, 2005).

### **1.2.3 HEALTH CARE AND THE MID-LIFE WOMEN OF TODAY**

To understand the American health care system and its effect on the mid-life woman of today, it must be observed once again that health is made up of closely related pathways or trajectories. When the poet Stephen Spender wrote that “Living is movement in a certain direction and behavior should be judged by that to which it tends,” he was writing in reference to the problems of life as well as those of art (Spender, 1951). Direction exists in movement, which is living. Life is progressive and one thing does lead to another. For example, responses to stress in early childhood prepare for affiliation in social structures as adults. Cigarette smoking leads to respiratory problems and lung disease. Poor diet and inadequate exercise lead to obesity. Untreated morbidity leads to mortality. Risk factors along the pathways or within the trajectories also affects a wide range of other problems, such as how social or violent people become, the amount of ethnic or racial prejudice they display, the amount of drug or alcohol dependency, teenage pregnancies, learning disabilities-- the list goes on and on.

A major new source of insight into the way humans are affected by their social environments and the social structures in which they live have come to be defined as “social determinants of health.” Using health as a social indicator requires collecting information about the socioeconomic forces that may have shaped the lives of patients, such as the midlife women

of this study. Some intensely social factors (Wilkinson, 2005) are among the most important determinants of health in modern countries, including the nature of early childhood experience, the amount of anxiety and worry, the quality of social relationships, the amount of control over individual lives, and social status. By choosing which dimensions of health to consider and from what angle to analyze them, it becomes possible to choose what aspects of life the dimensions of health reveal information about. Wilkerson also theorizes that by examining not just the health of individuals but at data for entire societies or at differences between groups within the population, the variability of individual situations balances out to reveal wider and more reliable patterns and relationships.

Several major conceptual models have been advanced to organize the literature on life course socioeconomic position (SEP) and early versus late emergence of chronic diseases in adulthood. The first is the “latency effects” model, also called the “biological chains of risk” model, which posits that early-life SEP can influence adult health independent of intervening changes in SEP. The second is the “pathway” or “social chains of risk” model, which acknowledges the importance of early-life conditions for adult health, but stipulates that important intervening life events (like upward or downward social mobility as a result of divorce or widowhood), can alter health trajectories initiated in early childhood. The “cumulative burden” model, also called the “accumulation of risk” model hypothesizes that the health damaging effects of socioeconomic deprivation in both childhood and adulthood aggregate over the life course to significantly undermine health by middle adulthood (James, et al, 2006).

The growing understanding of the social determinants of health joined with insights regarding life course SEP models provides the ability to create a fundamental transformation in



health care policy development. By identifying the elements of the social structure that cause the most damage to health, programs of reform can be developed to improve delivery systems in the most meaningful, effective manner and improve the subjective social quality of life.

Combining health care perspectives with social and historical information about their life course provides a lens to examine the lives of women, aged 45 to 64 and identify their social determinants of health. A distinctive sociological way of understanding their behavior is to imagine that they were born inhabitants of a unique, dynamic social landscape within the United States whose lives were shaped by the waves of radical, social reform that began to wash over and transform women's lives after World War II. As the floodwaters of radical social reform began to recede after the 1990s revealing underlying transformed, socioeconomic terrain, and as these women passed through the years of growth and maturation, the influence of those social factors on their adult lives, and consequently on their health, have become visible for current speculation and analysis. Many of these women grew up when "politics" were the "culture," during such events as the Kennedy assassination, the Vietnam War, the civil rights movement, and the advancement of women.

The *Presidential Commission on the Status of Women* was created by the Kennedy administration, with Eleanor Roosevelt as its chair, and produced a report in 1963 that documented discrimination against women in virtually every area of American life. Subsequently, as a result of the combined efforts of many different activists, *Title VII of the Civil Rights Act* of 1964 was passed, which illegalized employment discrimination on the basis of sex as well as race, religion, and national origin.

As a reaction to what was perceived as a continued disregard for the spirit of the law, the National Organization for Women (NOW) was formed in 1966. The broad, overarching goal of NOW was to function as a legal “watchdog” for women of all races, similar to goals of the NAACP for Black Americans but it quickly developed a strong cultural voice as well. NOW and the NAACP were soon followed by the development of many other organizations addressing the needs of specific groups of women including Blacks, Latinos, Asian-Americans, lesbians, welfare recipients, business owners, aspiring politicians, and professional women of every sort.

In 1991, Anita Hill accused Clarence Thomas, an African-American man nominated to the Supreme Court, of sexual harassment that allegedly occurred a decade earlier while Hill worked as his assistant at the US Department of Education. Thomas denied the accusations and after extensive debate, the Senate voted 52 to 48 in favor of Thomas. The Hill and Thomas case brought attention to the ongoing presence of sexual harassment in the workplace and reinstated a sense of concern and awareness to many people who had assumed that sexual harassment and other related issues had been resolved.

In the mid-1980’s, feminist leaders like Gloria Anzaldúa, Chela Sandoval, Cherrie Moraga, Maxine Hong Kingston and many other feminists of color, called for a new subjectivity in feminine voice and sought to negotiate prominent space within feminist thought for consideration of race related subjectivities. The focus on the intersection between race and gender remained prominent through the Hill-Thomas hearings but began to shift with the Freedom Ride 1992. Freedom Ride 1992 was a drive to register voters in poor communities and was drenched with rhetoric that focused on empowering women.

Other important works of legislation which developed in the United States during their lifetimes include *Title IX* (1972), which enforced the involvement of girls in sports and athletics at school. The *Equal Rights Amendment*, which sought to guarantee equal rights under the law for Americans regardless of sex, was also developed during this time. The amendment was not ratified, due in part to the extreme difficulty of passing constitutional amendments of any kind. While the amendment was of a general nature and did not focus on specific rights, it attempted to provide a strong legal precedent for other changes and functions.

A parallel political stimulus of continued improvements in medicine without corresponding enhancement in access for all women encouraged female activists to play an increasingly consistent and determined role in health care reform in the 1970s. Patricia Roberts Harris, the first black woman to be the U.S. Secretary of Health and Human Services, convened the Secretary's Advisory Committee on the Rights and Responsibilities of Women (SACRRW). One of the earliest federal efforts expressly designed to benefit women; SACRRW was made up of 12 women members who were culturally and geographically diverse. The Committee was charged with examining current policies and programs that had a direct impact on women's health and to review the status of national health reform proposals currently debated in Congress at that time, and to advise the Secretary accordingly (U.S. Department of Health and Human Services, 1980). It was the conclusion of the Committee that legislative proposals pending at the time did not precisely address relevant concerns women have when considering health reform. The Committee went on to more fully investigate the complex issues of coverage, access, financing, and participation in a national health program.

It is interesting to note that many of the observations of the SACRRW from over 25 years ago continue to exist today. For example, because health insurance is linked with paid employment and the results are frequent discrimination against women. Women find themselves without coverage if they do not work continuously or full-time because of childbearing or family responsibilities. Many women are working in small businesses or service sector jobs where health insurance is not a covered benefit. Health insurance for women who work at home is often not available, except for women covered by Medicaid or Medicare or through a spouse. In 2007, as in the early 1980s, reproductive health and preventative health services are not consistently covered for most insured women and the same is true for preventative health care services.

The fundamental rights and programs gained by women during this lifetime--the creation of domestic abuse shelters, and the acknowledgment of abuse and rape on a public level, access to contraception and other reproductive services including the legalization of abortion, the creation and enforcement of sexual harassment policies for young women in the workplace, child care services, equal education and extracurricular funding for young women, women's studies programs, and much more have served to further shape the unique identity of these mid-life women. Consequently, the mid-life women were encouraged to understand aspects of their own personal lives as politicized and reflective of the American structure of power.

## **2.0 CHAPTER II—CRITICAL REVIEW OF LITERATURE**

In Chapter II, a review of the literature and significant research will attempt to elucidate and identify key behaviors, attitudes and statistics associated with mid-life American women who are without health insurance. Making these concepts evident for contemplation will facilitate evaluation of the subsequent policy recommendations.

A review of the relevant women's health care literature revealed that a great deal of research has been done on women and health care insurance. The studies published are highly relevant as primary source data but more ongoing research is required to solve the new as well as the continuing problems caused by the current lack of health care. Overwhelming social changes have affected traditional social bonds and weakened the family and community structures that provided support to uninsured women since the period when many of the studies were originally conducted. Also, an interesting void in the key articles and studies published in this area was noted. Research appeared concentrated on uninsured women either 50 or 55 years of age and older or 40 years of age and younger. The peri-menopause begins for most women around age 45, a time when women have an increased need for health education and access to appropriate health care, yet there is little evidence of evaluating uninsured women in the peri-menopausal years preceding Medicare within a more modern framework.

The first section of the literature review is focused on major areas of mid-life women's health, including women's health status, insurance status, and access to care, insurance costs, and relationships with providers. The second section of the review will examine evidence demonstrating that the Behavioral Risk Factor Surveillance Survey instrument has proved useful and reliable in monitoring behavioral health risks and providing valid statistical information regarding patient access to primary health services, especially self-reported screening procedures.

## **2.1 RELEVANT WOMEN'S HEALTH CARE LITERATURE**

### **2.1.1 WOMEN AND HEALTH CARE**

To understand how women are faring in the current health care environment, a review of the relevant women's health care literature was conducted. After examining the literature regarding the major areas of women's health policy, including but not limited to women's demographics, health status, access to care, health care costs and insurance coverage, the following seven, major, thematic key findings emerged.

### **2.1.1.1 Women's health needs and health care utilization patterns change as they age.**

During women's lives, their use of health care reflects their health status, centered mostly on reproductive services during their younger years to an emphasis on more chronic illnesses in their middle years, to more invasive services and tests related to disability and physical limitations during their senior years. In a 2006 report produced by the Center for Disease Control and Prevention (CDC), National Health Interview Survey Family and Sample questionnaires from 2000 and 2003 were used to provide health characteristics of adults from four age groups. The report was used to highlight the health characteristics of four age groups of older adults in four categories- 55 to 64 years of age, 65 to 74 years of age, 75 to 84 years of age, and 85 years and over. Estimates by sex, race, and Hispanic origin, poverty status, health insurance status, and marital status were also analyzed. Prevalence rates for fair or poor health, chronic health conditions, sensory impairments, and difficulties with physical and social activities were found to increase with advancing age, doubling or even tripling between the age groups 55 and 64 and 85 years and over. About one in five adults, age 55 to 64 years of age, were in fair or poor health, rising to about one third of adults, age 85 and older. Men and women were about equally likely to be in fair or poor health across the age groups studied, but women were more likely to have difficulty in physical or social activity. Sociodemographic variations in health were noted across the age groups studied, but the most consistent and striking results were found for sex, poverty status and insurance coverage. Poor and near poor adults and those with public health insurance were, by far, the most disadvantaged groups of older adults in terms of health status, health care utilization, and health behaviors. Health status, health care utilization,

and health promoting behaviors among adults aged 55 and over varied considerably by age and other demographic characteristics. Identifying these variations can help government in private agencies pinpoint areas of greatest need and greatest opportunities for extending years of healthy life.

The incidence of chronic illness increases with age. Nearly six in 10 women in their senior years are dealing with either hypertension or arthritis and almost half with abnormal serum cholesterol levels. Older women (Bierman & Clancy, 2001) experience a high burden of chronic illness, disability, and co-morbidity, and this burden is highest among socioeconomically disadvantaged and minority women. The consequences of the mismatch between the organization, delivery, and financing of health care for older women and their actual needs fall disproportionately on low income and minority women. By improving the quality of clinical preventive services and the management of common chronic conditions and geriatric syndromes, it should be possible to improve functional health outcomes, prevent or postpone disability, and extend active life expectancy for all women while making progress towards eliminating health disparities among the most disadvantaged.

#### **2.1.1.2 Certain populations of women experience higher rates of health problems and report more barriers when accessing care.**

Women who are poor, sick, uninsured, or belong to a racial/ethnic minority are particularly at risk for experiencing barriers throughout the health care system. For many of these women, particularly those without health insurance, health care problems exacerbate other challenges. Corroborating process studies have found that the uninsured receive fewer preventative and



diagnostic services, tend to be more severely ill when diagnosed and receive less therapeutic care.

With respect to patterns of receipt of preventative services among middle-aged women, Woolhandler and Himmelstein (1988) analyzed data from the National Interview Survey in 1988 and found that lack of insurance was most prevalent among socioeconomically disadvantaged women at high risk for disease and was the strongest predictor of failure to receive screening tests. The relative risk of inadequate screening for uninsured compared to insured women was 1.60 (95 percent confidence interval CI, 1.40 to 1.83) for blood pressure check-ups, 1.55 (95 percent CI, 1.43 to 1.68) for cervical smears, 1.52 (95 percent CI, 1.41 to 1.63) for glaucoma testing, and 1.42 (95 percent CI, 1.33 to 1.51) for clinical breast examination. Controlling for demographic and health status variables did not diminish the effect of insurance coverage. Inadequate insurance coverage leads to “reverse targeting” of preventative care, in which high risk populations are the least likely to be screened. This construct compromises both the effectiveness and the cost-effectiveness of screening.

Schootman, Jeffe, Reschke and Aft (2003) examined whether disparities in mammography use between women of differing socioeconomic status (SES, income and education) and varying access to medical care (healthcare insurance and routine medical check-up) remained the same over time despite overall increased breast cancer screening. Analysis of changes over time were made using data from the 1992, 1996 and 2000 Behavioral Risk Factor Surveillance System data for 53,846 women from 50 to 69 years of age. The percentage of women from 50 to 69 years of age who never had a mammography declined 65 percent from 22.1 percent in 1992 to 7.7 percent in 2000. Significant disparities among women of differing

SES and among those with varying access to medical care remained based on multivariate analysis. Despite a substantial reduction in the proportion of women who never had a mammogram among 50 to 69 years of age from 1992 to 2000, low rates of mammography among women without health insurance or low socioeconomic status and non-white subgroups persisted.

Women living in rural areas may be less likely than women living in urban areas to obtain screening tests and rural women may face substantial barriers to receive preventative health care services. Couglin, Thompson, Hall, Logan and Uhler (2002) used data drawn from the Behavioral Risk Factor Surveillance System responses regarding both breast and cervical carcinoma screening practices of women living in the urban and rural areas of the United States from 1998 through 1999. The analysis of screening mammography and clinical breast examination was limited to women aged 40 years or older and their analyses of Pap testing limited to women aged 18 or older who have not had a hysterectomy. Geographic areas of residents were divided into rural areas and small towns, suburban areas and smaller metropolitan areas. Approximately 66.7 percent of the women aged 40 years or older who resided in rural areas had received a mammogram in the past two years, compared with 75.4 percent of women living in larger metropolitan areas. About 73 percent of women aged 40 years or older who resided in rural areas, had received a clinical breast examination in the past two years, compared with 78.2 percent of women living in larger metropolitan areas. About 81.3 percent of rural women aged 18 years or older who had not undergone hysterectomy had received a Pap test in the past three years, compared with 84.5 percent of women living in larger metropolitan areas.

The results underscore the need for continued efforts to provide breast and cervical carcinoma screening to women living in rural areas of the United States.

Despite the overall improvement in mammography screening technologies, studies have shown continued disparities in all stages of cancer diagnosis, mortality and screening by socioeconomic status, race and ethnicity in many populations. The aim of a 2002 study by Campbell, Bursac, Yerkes, Li, and Baker was to determine the portion of women age 50 and older who had received a screening mammography in the past two years and to examine what factors were associated with mammography screening in Oklahoma for the years 1997 through 2001. Using data from 4,338 women aged 50 and older interviewed for the 1997 through 2001 Oklahoma Behavioral Risk Factor Surveillance System, the researchers studied the proportion of women receiving mammography screening services and assessed the association between race, ethnicity, education, insurance status, marital status, income and household income and mammography screening. Among Oklahoma women age 50 and older, 17.5 percent had never received a mammogram and 14.9 percent of those who had received a mammogram had not done so in the past two years. Women without health insurance coverage, those of lower socioeconomic status and those engaging in risky health behaviors were most likely to never have received a mammogram, and if they were screened, not to have had a mammogram in the past two years.

With respect to the stage of disease at the time of diagnosis and survival (Ayanian, et al, 1993) compared to privately insured women, uninsured women with breast cancer were 1.6 times more likely to be diagnosed with distant disease and 1.49 times more likely to have died 54-89 months after diagnosis. In 2000 (Lee-Feldstein, et al, 2000), it was found that compared to

women with private insurance, uninsured and publicly insured women were 2.01 times more likely to be diagnosed with Stage III/IV breast cancer and 1.42 times more likely to have died from breast cancer after 53 months average follow-up time.

### **2.1.1.3 Health care costs represent an increasing barrier to health care for many women.**

According to a Kaiser Family Foundation survey (2005), the growth in health care costs are a “central women's health issue.” Two thirds of women who had no health insurance, and more than a quarter of young and middle aged US women, reported going without medical care because they could not afford it. A growing number of women are going without screening tests such as mammograms and Pap smears, and not talking with their physicians about important health issues such as smoking, exercise, alcohol use and calcium intake. The telephone survey of 2,766 women aged 18 and older was conducted in July through September of 2004 and 500 men were interviewed for a comparison group.

Many women cannot afford prescription drugs; they do not fill prescriptions or resort to skipping doses and splitting medications. Women with no health insurance fared the worst, with 67 percent saying that they delayed or missed medical care, including prescription drugs, because of cost. But 27 percent of women with private insurance, Medicare, or Medicaid coverage also did. “Women (56 percent) are more likely than men (42 percent) to use a prescription medication on a regular basis, and are also more likely to report difficulties affording those medicines,” the report reads. “In the past year, one in five women (20 percent) reports that they did not fill a prescription because of the cost, as compared to 14 percent of the

men. Eighty percent of US women reported they were in good health or better, but 38 percent said that they had a chronic condition such as asthma or diabetes that required ongoing medical treatment, which compared to 30 percent of men. Fewer than half of all women surveyed reported that they spoke to a health care professional in the past three years about smoking (33 percent), alcohol use (20 percent), and calcium intake (43 percent), but just over half have talked about diet, exercise, and nutrition (55 percent). The rate of women aged 40 to 64 per reporting a regular mammogram fell from 73 percent in 2001 to 69 percent in 2004. Only 40 percent of the uninsured women over 40 had a mammogram in the past year, compared to three quarters of women with private coverage (74 percent) or Medicare (73 percent). Seventy-six percent of women aged 18 to 64 received the recommended annual Pap smear for cervical cancer, as compared to 81 percent in 2001.

**2.1.1.4 While health care insurance status by type—public, private or lack of coverage—matters tremendously for all women, it alone does not guarantee access to health care.**

Women without insurance consistently fare worse on multiple measures of access to health care including contact with providers, obtaining timely care, access to specialists, and utilization of important screening tests. Insured women also face barriers to care, including delays for sacrificing care they believe they need. In *Women and Health Care: A National Profile* (2005), the Kaiser Women's Health Survey observed that nearly one in six non-elderly women were (17 percent) uninsured, as compared to 21 percent of men. Women who are Latinas, low-income, single, and young are particularly at risk for being uninsured. Uninsured

women are the least likely to have had a provider visit in the past year (67 percent), compared to women with either private (90 percent) insurance -- Medicaid (88 percent) and Medicaid (93 percent). Insured women also face barriers to care, including delaying or sacrificing care. One in six women with private coverage (17 percent) and one third of women with Medicaid (32 percent) stated that they postponed or went without needed health services in the past year because they could not afford it.

Examination of the individual and environmental factors associated with adherence to primary health screening practices provides evidence that although it is interconnected to health insurance status; other social factors continue to exert powerful influences. McAlerney (2005) published a study in *Cancer* (2005) that suggested that many women in the United States had no cancer screening because they do not understand their exact level of insurance coverage. When asked why they had not had a mammogram, a few women admitted that they were lazy and some women said they were embarrassed or fearful, but the most frequently cited reason was cost. Mammogram costs vary according to a patient's insurance coverage. Private insurance and Medicaid typically cover the full cost of the screening test while Medicare covers 80 percent, leaving the patient to pay about \$30 in out-of-pocket costs. To investigate women's perception of insurance coverage for mammography, McAlerney and her colleagues analyzed interviews with 897 women aged 40 years and older between 1998 and 2002 as part of a North Carolina intervention study to improve breast cancer screening rates in Robeson County. More than 53 percent of the women said that the cost of mammograms barred them from undergoing the screening test, yet 43 percent of them were found to be incorrect about their exact level of insurance coverage. It was recommended that physicians advise women to get mammograms

and provide them with information about the cost of the screening tests and specific information about their coverage. Women were also encouraged to take more responsibility for understanding their own level of insurance coverage.

Individual and environmental factors associated with compliance to mammography testing were studied by Phillips, Kerlikowske, Baker, Chang, and Brown (1998). A cross-sectional design was developed using a unique data set drawn from the 1992 National Health Interview Survey; a national mammography facility characteristics (National Survey of National Mammography Facilities, 1992); county-level data on 1990 market share; and county-level data on the supply of primary care providers (Area Resource File, 1991). Data was extracted and analyzed to examine the predictors of a sample of women aged 50-74 having ever had mammography, having had recent mammography, and adherence to guidelines. Women were categorized as adherent if they reported a lifetime number of exam appropriate for their age (based on screening every two years) and if they reported having had an exam in the past two years. Only 27 percent of women had the age-appropriate number of screening exams (range 16 percent to 37 percent), while 59 percent of women had been screened within two years. Women were significantly more likely to adhere to screening guidelines if they reported participating with their doctor in the decision to be screened; were younger; had smaller families, higher education and income, and a recent Pap smear; reported breast problems; and lived in an area with a higher percentage of mammography facilities with reminder systems group, no shortage of primary care providers, higher HMO market share, and higher screening charges. The study concluded that only a small percentage of women adhere to screening guidelines suggesting that adherence need to become a focus of clinical programmatic, and policy efforts.

The dynamics of health and the psychosocial factors with health services utilization among female heads of households are quite complex. Weinreb, Perloff, Goldberg, Lessard, and Hosmer (2006) examined the use of outpatient and emergency department services in homeless and low-income house mothers living in Massachusetts. High usage patterns were found at the beginning of the study and at the two-year follow-up point. Poor health status, non-white race, and fewer supportive relationships were significantly associated with frequent emergency department visits. Women with higher rates of ongoing outpatient medical care visits were more likely to have fewer social supports and more bodily pain than women with lower rates of ambulatory care usage. Mental-health and victimization were not found to be associated with service use patterns. To address women's health needs in a more effective and potentially less costly manner, health program planners must understand their need for social support and culturally responsive services.

#### **2.1.1.5 Women who are ill face more obstacles in obtaining medical care.**

Among the most counter intuitive findings about the health care system are the multiple challenges that women in poor health face-- including costs, lack of insurance, and limited access to specialists--in obtaining comprehensive health care. Problems of this kind exacerbate sick women's already difficult circumstances, and may serve to worsen their health by delaying diagnosis and treatment. According to the Kaiser Women's Health Survey (2005), over one-third of women in fair or poor health (37 percent) report that they delayed or went without care in the past year because they could not afford it. Compared to women in favorable health (12 percent), women in poorer health (27 percent) are twice as likely to report they could not get



access to specialty medical care. One-third (31 percent) of women in fair/ poor health express concern about the quality of care they received in the past year, compared to 18 percent of women in better health. Women in poorer health are also more likely to experience heavy stress from a range of health, economic, and family issues, including health problems of their family members, financial concerns, and career challenges.

#### **2.1.1.6 Screening test rates for key preventative health procedures, such as mammograms, Pap smears, and cardiovascular disease have fallen since 2001.**

Compared to women with insurance, uninsured women consistently report lower rates of screening for many conditions, including breast cancer, cervical cancer, high blood pressure, high cholesterol, and osteoporosis. Breast cancer, cervical cancer, and hypertension are conditions well known to be responsive to early detection and treatment. Screening tests are an important tool for early intervention, yet the use of some tests appears to be on the decline within certain subgroups of women.

Between 2001 and 2004:

- Mammography rates reported by women ages 40 to 64 dropped from 73 percent to 69 percent.
- Pap testing rates reported among women ages 18 to 64 fell from 81 percent to 76 percent.
- The rate of reported blood pressure checks dropped from 90 percent to 88 percent among women ages 18 to 64.

A retrospective analysis conducted by the Healthcare Cost and Utilization Project (HCUP) sponsored by the Agency for Healthcare Research and Quality (AHRQ) in 2007

revealed signs of improvement in some of these conditions. Significant differences in the quality of health care provided to men and women continue to persist.

- Women were more likely than men to be hospitalized for blood high blood pressure in 2003 -- 56 versus 38 per 100,000 population. Hospitalization for high blood pressure can usually be avoided if patients have good quality primary care and screening.
- Women aged 50 and older were less likely than men to receive recommended rectal cancer screening – 50 percent compared with 54 percent in 2003.
- Disparities persist among women by race and ethnicity. For example, although half of all white women are screened for colorectal cancer at age 50 or older, among Hispanic and black women, the rates are even lower – 38 percent and 44 percent, respectively.
- Only 71 percent of American Indian Alaska native, 76 percent of black, and about 78 percent of Hispanic women begin prenatal care in the first three months of pregnancy, compared with 86 percent of white women.

Adherence to screening guidelines is the single most important factor contributing to the success or failure of health promotion and disease prevention programs. The social, physical, and psychological factors that influence non-adherence are infinite, ranging from communication, child care, transportation, anxiety, personal beliefs or customs, illness, or countless other factors. Since the mortality rate from breast cancer continues to be significantly higher for African-American women than for white women, thoroughly investigating factors that may contribute to this persistent or racial disparity is crucial in order to find ways to close this gap. Perceived racial discrimination was not found to be directly associated with non-adherence to screening mammography guidelines among African-American women according to a recent study (Dailey, 2007). Researchers at Yale University prospectively studied 1,229 women between the ages of

40 and 79 years old who underwent an index screening mammography between October 1996 in January 1998 and completed baseline interviews in follow-up interviews an average of 29 months later. Sixty-one percent of the women were white and 39 percent were African American.

Perceived discrimination was measured using questions regarding lifetime experiences in seven possible situations. The situations included attending schools, looking for employment, obtaining medical care, at work, at home, situations in a public setting, and treatment by the police or the courts.

Non-adherence to screening recommendations was defined as failing to obtain at least one mammogram within two years of the index examination for subjects aged 40 to 49 years and failing to obtain at least two screenings within two years of the index examination of the subjects aged 50 years or older.

Lifetime racial discrimination was reported by approximately 42 percent of African American women and 10 percent of white women. The most frequent racial discrimination episodes were reported at work, by the police or in the courts. Overall, 47 percent of the total study population was non-adherent to screening mammography guidelines. African-American women were more likely to be non-adherent than white women. With multivariate analyses, no association was observed between perceived racial discrimination and non-adherence to age-specific mammography screening guidelines. Data from national surveys shows continued declines in mammography screening rates, so it is important to continue to research other factors that may diminish the full benefit of mammography. The role of neighborhood factors on non-adherence to mammography screening guidelines and the measurement of perceived

discrimination is complex and must be investigated further. Further methodological research addressing measurement of interpersonal and institutional racism is warranted in order to fully understand the influence of discrimination on health and health behaviors.

The most significant reason to enhance breast and cervical screening adherence (as well as any other disease screening) is early identification and subsequent reduction of mortality from those diseases. Considerable research has been conducted on barriers to screening and on methods to increase adherence to mammography and Pap smear screening recommendations. Many studies have emphasized the great variation in risk levels for cervical and breast cancers which accounts for the various differences in relative costs and benefits for screening among sub-groups of women. The cost effectiveness of various screening programs may vary 50-fold or more depending on the characteristics of the group screened.

With respect to cost-effectiveness evidence, it has been demonstrated (Colditz, et al, 1997) that a fully implemented program of triennial cervical cancer screening would be substantially more effective at preventing cancer and significantly less expensive than current screening patterns. Conversely, the more often a woman is screened, the more likely those false positive results could occur. Nearly half of all women may have a false positive mammogram or breast examination in ten-year tenure. Considerable monetary and psychological costs may result from false positive tests that may also have a strong negative impact on adherence. It can be reasonably concluded that programs to enhance screening adherence are more or less effective depending on the groups that respond to them.

### **2.1.1.7 Physician-patient counseling about health risks and health promotion behaviors is worsening.**

*Healthy People: 2010* calls for improvement in the delivery of clinical preventative services and while physicians value preventative health screening, their rates of prevention counseling continue to fall well below recommended standards. According to the Kaiser Women's Health Survey (2005), despite growing attention to the importance of early intervention and health promotion behaviors, a sizable share of women still do not receive counseling when they see their physician. Over half of the women surveyed (53 percent) cite health care providers as their primary source of health information, the Internet (15 percent), friends and family (16 percent), and books and periodicals (7 percent) are relied upon to a much lesser extent. Despite women's reliance on providers for information, just over half of women or 55 percent surveyed report discussing diet, exercise, and nutrition with a doctor or nurse during the past three years. Fewer than half of all women in the report having had conversations about other health behaviors, such as calcium intake (43 percent), smoking (33 percent), and alcohol use (20 percent) with a provider in the last three years.

Health promotion and counseling attitudes and practices by physicians have been studied to attempt to encourage and improve such behaviors. Perhaps the genesis for these behaviors lies within residency training. Madlon-Kay and other researchers (1994) studied health promotion counseling within residency training and attempted to identify reasons for failure to provide counseling. A patient "Health Habits Questionnaire" and matching patient education booklets were developed and distributed. After six grand round presentations on counseling were given, residency physicians completed questionnaires about their counseling ability. Despite good

personal health habits and positive attitudes towards counseling, it was found that the residency physicians had only moderate confidence in their counseling ability and infrequently documented counseling. The residents reported significant improvement in their ability to counsel patients about smoking cessation but overall, the curriculum appeared to have limited effect on actual health promotion.

Population-based approaches (Levine, 1992) that transfer key components of health teaching from physicians to community ownership and formally trained community health workers who provide health promotion counseling, monitoring, linkage, and referral services have been found to be successful.

## **2.2 RELEVANT RESEARCH STUDIES**

The relationship between health insurance status and access to health care has been the subject of hundreds of studies over the past several decades. Most of the evidence regarding the value of health insurance coverage comes from observational rather than experimental studies. Research studies adjust for variations among participants in types of health insurance coverage but three personal characteristics—perception of health status, race and ethnic identity, and socioeconomic status—are consistently related to having health insurance. A major source of information for those studies has been the Behavioral Risk Factor Surveillance Survey.

For more than 20 years, CDC's Behavioral Risk Factor Surveillance Survey (BRFSS) has helped states survey U.S adults to gather a wide range of behaviors that affect their health.

The primary focus of these surveys has been on behaviors that are linked to the leading causes of death—heart disease, cancer, stroke, diabetes and injury as well as other important health issues. Behaviors monitored by the survey include physical activity, use of seatbelts, being overweight, tobacco and alcohol use and access to preventative medical care, such as flu shots, mammograms Pap smears and other screening tests that can save lives. As a result of conducting these studies, CDC and the states have learned a great deal of information about these and other harmful behaviors. Public health programs at the state, national and local levels use this information for planning, conducting, and evaluating public health programs. Private health organizations also rely on the survey data to develop health promotion programs to reduce the prevalence of unhealthy behaviors and evaluate the effectiveness of these programs.

The BRFSS is a telephone survey conducted by the health departments of all states, the District of Columbia, Puerto Rico, the Virgin Islands and Guam with assistance from the CDC. Congress appropriated \$7.6 million for this system in fiscal year 2005. The BRFSS is the largest continuously conducted telephone health surveillance system in the world. Canada, Australia, Russia and several other countries have worked with the CDC to develop similar surveillance systems. States use BRFSS data to identify emerging health problems, to establish health objectives and track their progress toward meeting them, and to develop and evaluate public health policies and programs to address identified problems.

The BRFSS is the primary source of information for states and the nation on the health-related behaviors of adults. States collect data through monthly telephone interviews with adults aged 18 years and older. BRFSS interviewers ask questions related to behaviors that are associated with preventable chronic diseases, injuries and infectious diseases. The BRFSS is

flexible in allowing states to add questions specific to their needs and its standardized core questions enable health researchers to conduct studies and make comparisons among states and local areas and reach national conclusions (Remington, et al, 1988).

The following studies provide examples illustrating how the BRFSS can be used to measure social determinants of health in the manner suggested by Wilkerson (2005). The BRFSS permits researchers to operationalize aspects of Wilkerson's conceptual ideas—by selecting different dimensions of health (e.g. risk for chronic disease, socioeconomic status) to consider and from what angle to analyze them, it becomes possible to choose what aspects of life the dimensions of health reveal information about. As previously noted, Wilkerson also theorized that by examining the data for whole societies or differences between groups within the population, the variability of individual situations balances out to reveal wider and more reliable patterns and relationships.

Jiles, et al, (2003) provides an example of how the BRFSS was used to examine data representative of the whole United States society to identify wider and more reliable arrangements and configurations. Data on health risk behaviors (e.g. cigarette smoking, binge drinking, and physical activity) for chronic diseases and use of preventative practices (e.g., influenza and pneumococcal vaccination for any adults aged greater than 65 years and cholesterol screening) drawn from the national BRFSS was studied to develop effective health education and intervention programs and policy policies to prevent morbidity and mortality from chronic diseases. Prevalence of high-risk behaviors for certain diseases, or awareness of certain medical conditions, and use of preventative health care services varied substantially by state/territory, and MMSA, and county. Twelve states and 65 counties achieved the Healthy



People (HP) 2010 objective to improve the proportion of adults who engage in full-time physical activity to 20 percent. Twenty states, 41 MMSAs and 63 counties achieved the HP 2010 goal of adults who engage in moderate physical activity for at least 30 minutes per day. The HP 2010 goal of adults who engage in vigorous physical activity was achieved by 17 states, 33 MMSAs, and 57 counties. Five states, one MMSA, and one county achieved the HP 2010 current cigarette smoking goal of 12 percent. One county achieved the HP 2010 binge drinking goal of 6 percent prevalence among adults. One MMSA and ten counties achieved the HP 2010 goal of 15 percent obesity prevalence. The HP 2010 goal for influenza/pneumococcal vaccination coverage of 90 percent was not achieved by any state, MMSA, or county. No state, MMSA, or county achieved the HP 2010 objective of 17 percent prevalence of high cholesterol among adults. Substantial variation in health risk behaviors in preventative services among adults were found at state and local levels, indicating a need for appropriate public health interventions and continued efforts to evaluate public health programs and policies.

The BRFSS was used to analyze dimensions of health from a “different angle” in a study by Brown, et al, (2001), which utilized data collected from 175, 850 adults who participated in the 2001 BRFSS. The independent relationship between recommended levels of moderate or vigorous physical exercise and four measures of health-related quality of life (HRQOL), as defined by the CDC was investigated. The proportion of adults reporting unhealthy days (physical or mental) was significantly lower among those who attained recommended levels of physical activity rather than physically inactive adults for all age, racial/ethnic, and sex groups. The relative odds of 14 or more unhealthy days (physical or mental) in those with the level of activity compared to physically inactive adults was 0.67 (95 percent CI: 0.60, 0.74) for adults

aged 34 to 44 years, 0.40 (95 percent CI: 0.36, 0.45) for adults aged 45 to 64 years, and 0.41 (95 percent CI: 0.36, 0.46) for 65 years or older. The results persisted even among adults with a chronic condition such as arthritis. Findings of this nature reveal the importance of the mind-body link and illustrate once again the importance of clear communication, empathy and optimism when planning and executing health care interventions.

Researchers at the University of Michigan (Kim & Beckles, 2003) used the BRFSS to investigate dimensions of health for differences between groups, in this case, populations at risk for cardiovascular disease. Cardiovascular risk reduction practices were compared between men and women after stratification by cardiovascular risk status (high, intermediate, low) in a cross-sectional analysis drawn from the 1999 BRFSS. The analysis included persons aged older than 40 years who answered questions regarding lipid and blood pressure screening, recommendations for lifestyle modification, exercise, reduced fat intake, and aspirin use. Risk status was defined according to Adult Treatment Panel III definitions. High cardiovascular risk was associated with lipid and blood pressure screening, lifestyle modification, and aspirin use in both men and women compared to intermediate-risk and low-risk. Among high-risk adults; men and women reported similar frequency of blood pressure and cholesterol measurement and physician advice on lifestyle modification; among intermediate- and low-risk adults, women reported slightly more frequent lifestyle modification than men. In all cardiovascular risk disease categories, women reported significantly more lifestyle modification than men. Among people at high-risk for cardiovascular disease, women report lifestyle modification more often than men, while men report use of aspirin more often than women. Information of this type can

be used to create specific, targeted interventions to reduce cardiovascular disease based on an appreciation of the different behaviors of men and women.

An example of how the BRFSS can be used to examine data for differences between groups within a population and have the variability of individual situations balance out to reveal wider relationships is provided by Sherman, et al (2005). National carcinoma rates by racial/ethnic groups and age (30 to 74 years) were estimated for 1992 to 2000 using data from the Surveillance, Epidemiology, and End Results Program and the BRFSS. Carcinoma incidence rates, uncorrected for hysterectomy prevalence, are higher among white women than black women. Hysterectomy prevalence was higher among black women than among Hispanic and white non-Hispanic women. Correcting for hysterectomy prevalence increased age-adjusted endometrial carcinoma rates per 10 (5) women years from 29.2 to 48.7 or (66.8 percent overall increase), from 14.6 to 28.5 or (95.3 percent increase) in black women, from 18.8 to 29.6 or (57.6 percent increase) in Hispanic women, and from 33.2 to 54.9 or (65.1 percent) in white non-Hispanic women. This correction reduced the rate ratio for white non-Hispanics compared with blacks from 2.27 to 1.93. Among blacks but not Hispanics, the endometrial carcinoma risk factors of obesity and diabetes were more prevalent among hysterectomized than nonhysterectomized women. Failure to correct for hysterectomy prevalence underestimates endometrial carcinoma risk, especially among black women. The high prevalence of hysterectomies among blacks with strong endometrial cancer risk factors may partly account for lower cancer rates in this group.

Finally, an example of how the BRFSS can be used to assess differences between groups--in this case, by ethnicity in receiving advice from providers to modify health practices--is

provided by a 2005 study conducted at the Deep South Center for Effectiveness Research in Birmingham, Alabama (Houston, et al, 2005). After adjusting for survey design, 69 percent of the 14,089 current smokers reported ever being advised to quit by a provider. Hispanics (50 percent) and African-Americans (61 percent) reported receiving smoking counseling less frequently than compared with whites. Ethnic minority status, lower education, and poor health status were found to be significantly associated with lower rates of advice to quit after adjustment for number of cigarettes, time from last provider visit, income, co-morbidities, health insurance, gender, and age. Smoking counseling differences between African-Americans and Whites were greater among those with lower income and those without health insurance and complex interactions of ethnicity were found within socioeconomic factors. Clearly findings of this nature, illuminate once again, the profundity of health disparities and, yet, used in a sensitive and intelligent way, this type of information could be used effectively to redesign educational programs for health care providers.

### **2.3 SUMMARY OF LITERATURE REVIEW**

Evidence found through a rigorous review of the literature on the association between health insurance and health outcomes comes makes a compelling case that health insurance enhances access to appropriate care for a range of preventative, chronic and acute care services for women. Based on the substantial consistency found within the majority of the research reviewed and evaluated, the following conclusions can be drawn:

1. Identification of the concept of “women at special risk” from the health care crisis emerged as an accepted truism by 2000, but its real birth was the result of studies conducted in the 1980s and 1990s, many of which focused on examining access to primary health screening.
2. Health insurance is associated with better health outcomes for midlife women and the receipt of appropriate care across a range of preventative, chronic and acute care services. Women without health insurance coverage or those who are underinsured experience greater declines in health status and die sooner than do women with continuous insurance coverage.
3. Women with chronic conditions and those in middle age stand to benefit the most from health insurance coverage in terms of improved health outcomes because of their greater need for services.
4. Racial and ethnic minorities and lower income women would particularly benefit from increased health insurance coverage because they more often lack stable health insurance coverage and have worse health status. Increased access to health coverage would reduce some of the racial and ethnic disparities in the use of appropriate health care services and may also improve the disparities in morbidity and mortality.
5. Health insurance that ensures adequate provider participation and includes preventative and screening services, outpatient prescription drugs and specialty mental health care is more likely to facilitate the receipt of appropriate care.
6. Strategies that include the entire uninsured and “underinsured” population of women would be more likely to produce benefits than would programs aimed only at those women who have already developed a serious illness.

The literature provided repeated evidence that primary to the movement toward improving access to primary care was an appreciation of social barriers, practical obstacles (such as transportation, child care), professional structures, different services cultures, and skillful communication. Improving access would require stabilizing mechanisms for flexible responses to the rapidly, changing health care system.

Any meaningful, permanent change to access to primary screening and the healthcare delivery system will take place within a considerable evolutionary process, however, the levels of disease and disability within certain subgroups has reached a crisis point that necessitate immediate intervention as demonstrated by continued failure to reach national public health goals and standards.

### **3.0 CHAPTER III--RESEARCH METHODOLOGY, DESIGN, DATA RESULTS AND CONCLUSIONS**

Chapter III includes the research methodology, design, and data results for the study. Measurement methods, procedures for data collection, and the analysis of results are included, as well as a review of methodological limitations.

#### **3.1 RESEARCH METHODS AND DESIGN**

During the summer of 2004, researchers from the Graduate School of Public Health, University of Pittsburgh, and the Allegheny County Health Department released to the Pittsburgh Post-Gazette, the findings of a study using BRFSS data for 2002. The total rate of uninsured respondents to the Allegheny County study was 10 percent -- actually slightly lower than the rest of Pennsylvania. The study was the first of its kind effort to develop baseline health information about residents for the Allegheny County Health Department. This researcher felt that a unique opportunity existed to build on this study and further analyze demographic information about uninsured midlife women in Allegheny County and compare this information against midlife women in other states.

National data from the 2002 BRFSS was originally attempted for analysis with the goal of comparing it to the 2002 Allegheny County study but because of the number of independent and dependent variables and the number of covariates of interest, after careful consideration, the 1996 BRFSS data set was used. While the data set is older, the 1996 study provided a higher, overall proportion of respondents from the 45 to 64 female population. The responses from the 1996 BRFSS were analyzed using SPSS, a statistical program for data analysis.

The sampling frame was defined as female respondents, aged 45 to 64 who were assigned to two groups-- those who currently had health insurance and those who had not had a continuous, regular form of insurance coverage within the past year as indicated by their response to BRFSS Questions, 868\_1 and 868\_2—"Do you have any kind of health care coverage?" The control group included women who had some form of medical insurance in 1996; the group of interest were women who reported being without continuous medical insurance for at least one year. For example, women who reported losing their coverage two months ago were excluded from the analysis.

### **3.1.1 Research Designs and Methods**

The BRFSS includes questions on socioeconomic and demographic characteristics, health status, and use of primary health screening services. Women with insurance were compared to those without insurance. For the purpose of the analysis, "Missing," "Did not know" or "Refused to Answer" responses were omitted from the calculations. Chi-square tests were used to examine the statistical significance of all categorical variables.



### 3.1.2 Research Hypothesis, Major Variables, and Covariates of Interest

The direction of the research study was defined by the following hypotheses—

*Null Hypothesis:  $H_0$ :* Any observation of difference in the women's responses to the Behavioral Risk Factor Surveillance System instrument between the two groups is purely the result of chance and not the result of being uninsured.

*Alternate Hypothesis:  $H_a$ :* Differences in the responses between the two groups of women to the Behavioral Risk Factor Surveillance System is the result of the real effect of being uninsured, plus some chance variation.

The major variables include:

*Independent variable:* Uninsured status for at least one year, as indicated by response to BRFSS Question 868.

*Outcome variables:* Outcome variables, as identified by women's responses to the BRFSS questions, include:

- Perceived health status
- Routine medical examination in the past year
- Time when could not afford to visit physician
- Mammogram in the past two years
- Pap smear in the last two years
- Current tobacco use
- Current exercise

Covariates of interest include:

- Age-within either 45 to 54 subgroup or 55 to 64 subgroup
- Race/ethnicity
- Marital status
- Educational level completed
- Income level
- Employment status

To answer the study's first research question--“Can comparing the responses of these women to the Behavioral Risk Factor Surveillance Survey (BRFSS), which includes measures of access to primary health screening, provide information about their utilization of health services?”-- responses to the following questions were analyzed for all of the women in the survey:

- **“Do you smoke cigarettes now?” (BRFSS Question 621)**

Yes

No

- **“How long has it been since your last mammogram?”(BRFSS Question 1984)**

Within the past year

Longer than past two years

- **How long has it been since your last Pap smear?” (BRFSS Question 3597)**

Within the past year

Longer than past two years

- **“During the past month, did you participate in any physical exercise?”**  
**(BRFSS Question 4347)**

Yes

No

- **“What is your perceived health status?” (BRFSS Question 4414)**

Excellent, very good or good

Fair or poor health

- **“Was there a time during the past 12 months when you needed to see a doctor, but could not because of the cost?” (BRFSS Question 4415)**

Yes

No

- **“Have you been to the doctor for a routine checkup within the last year?”**  
**(BRFSS Question 4416)**

Yes

No

## **3.2 DATA DEVELOPMENT, RESULTS AND ANALYSIS**

### **3.2.1 Data Development and Results**

As Wilkerson wrote and was previously cited, by selecting different data elements of different dimensions of health (e.g. socioeconomic status or risk for chronic disease) to consider and from

what angle to analyze them, it becomes possible to develop inferences about the different dimensions of health and perhaps by examining for groups, the variability of individual situations balance out to reveal wider or more reliable patterns and relationships. To follow Wilkerson's model, the data from the 1996 BRFSS is presented from a variety of vantage points.

### **3.2.2 Results--Selected Demographic and Socioeconomic Characteristics of Women, Age 45 to 64**

In 1996, a total of 72,997 women from all 50 states, responded to the BRFSS survey and 35,015 of those women were between the ages of 45 to 64. Selected demographic information about the women is presented in two tables. Table 3.1 contains frequency data, grouped by their age within cohort, by race/ethnicity, educational level completed and marital status. Table 3.2 provides data summarized according to their age within the cohort, by employment status and income level. Table 3.3 contains summary information about the outcome variables with respect to insurance status. Tables 3.4 through 3.10 present specific information for each outcome variable according to insurance status and demographic covariate. When a respondent is uncertain about the condition of her cervix post-hysterectomy, the CDC classifies the answer as "Don't Know." As a result, there were a high number of "Don't Know" responses in the Pap smear totals.

Among the female respondents, age 45-54 years, or 88.13 percent were insured and 2,442 women or 11.7 percent were without some form of coverage within the last two years. Among

the female respondents aged 55-64 years, 12,390 or 88.4 percent were insured and 1,629 or 11.6 percent were without some form of coverage within the last two years.

**Table 3.1 Insurance Status by Age within Cohort, Race/Ethnicity, Marital Status, and Educational**

**Level Completed**

	<u>"Yes"--Has Health Plan</u>			<u>"No"-No HealthPlan</u>		
		(n)	%	(n)	%	(N)
<b><u>Race</u></b>						
White Non-Hispanic	45 to 54	15,520	53.20%	1,819	6.20%	17,339
	55 to 64	<u>10,594</u>	<u>36.30%</u>	<u>1,251</u>	<u>4.30%</u>	<u>11,845</u>
	Total	26,114	89.50%	3,070	10.50%	29,184
Black Non-Hispanic	45 to 54	1,292	50.00%	254	9.80%	1,546
	55 to 64	<u>857</u>	<u>33.20%</u>	<u>182</u>	<u>7.00%</u>	<u>1,039</u>
	Total	2,149	83.10%	436	16.90%	2,585
Hispanic and Other	45 to 54	1,631	52.80%	359	11.60%	1,990
	55 to 64	<u>912</u>	<u>29.50%</u>	<u>189</u>	<u>6.10%</u>	<u>1,101</u>
	Total	2,543	82.30%	548	16.10%	3,091
<b><u>Marital Status</u></b>						
Married	45 to 54	12,435	55.30%	1,118	5.00%	13,605
	55 to 64	<u>8,141</u>	<u>36.20%</u>	<u>800</u>	<u>3.60%</u>	<u>8,955</u>
	Total	20,576	91.50%	1,927	8.50%	22,560
Divorced, Widowed or Separated	45 to 54	4,623	46.30%	1,033	10.30%	5,673
	55 to 64	<u>3,614</u>	<u>36.20%</u>	<u>716</u>	<u>7.20%</u>	<u>4,330</u>
	Total	8,237	82.50%	1,753	17.50%	10,090
Never Been Married, Part of Unmarried Couple	45 to 54	1,360	58.50%	272	11.70%	1,632
	55 to 64	<u>590</u>	<u>25.43%</u>	<u>104</u>	<u>4.50%</u>	<u>694</u>
	Total	1,950	83.80%	376	16.20%	2,326
<b><u>Educational Level Completed</u></b>						
Never attend to GR 8	45 to 54	428	26.90%	201	12.60%	629
	55 to 64	<u>719</u>	<u>45.20%</u>	<u>242</u>	<u>15.20%</u>	<u>961</u>
	Total	1,148	72.10%	444	27.90%	1,590
Grades 9-12	45 to 54	6,401	45.10%	1,198	8.40%	7,599
	55 to 64	<u>5,692</u>	<u>40.10%</u>	<u>908</u>	<u>6.40%</u>	<u>6,600</u>
	Total	12,093	85.20%	2,113	14.80%	14,199
College 1 to 3 yrs, College Graduate, & more years	45 to 54	11,593	60.90%	1,027	5.40%	12,621
	55 to 64	<u>5,934</u>	<u>31.20%</u>	<u>468</u>	<u>2.50%</u>	<u>6,402</u>
	Total	17,527	92.10%	1,504	7.90%	19,023

**Table 3.2 Insurance Status by Age within Cohort, Employment Status, and Income Level**

	<u>"Yes"-- Has Health Plan</u>			<u>"No" -- No Health Plan</u>		
		(n)	%	(n)	%	(N)
<b><u>Employment Status</u></b>						
Employed & Self Employed	45 to 54	14,829	62.70%	1,507	6.40%	16,336
	55 to 64	<u>6,578</u>	<u>27.80</u>	<u>722</u>	3.10%	<u>7,300</u>
	Total	21,407	90.60%	2229	9.40%	23,636
Not Employed	45 to 54	3,139	30.50%	854	8.30%	3,994
	55 to 64	<u>5,439</u>	<u>52.80%</u>	<u>865</u>	<u>8.40%</u>	<u>6,304</u>
	Total	8578	83.30%	1719	16.70%	10,298
<b><u>Income Level</u></b>						
0 to \$19,999	45 to 54	1,893	31.00%	1,009	16.50%	2,903
	55 to 64	<u>2,387</u>	<u>39.10%</u>	<u>816</u>	13.40%	<u>3,203</u>
	Total	4,280	70.10%	1,825	29.90%	6,106
\$20,000 to 49,000	45 to 54	7,867	54.00%	905	6.20%	8,772
	55 to 64	<u>5,346</u>	<u>36.70%</u>	<u>463</u>	<u>3.20%</u>	<u>5,809</u>
	Total	13,213	90.60%	1,368	9.40%	14,581
\$50,000 or greater	45 to 54	6,765	69.10%	186	1.90%	6,951
	55 to 64	<u>2,768</u>	<u>28.30%</u>	<u>76</u>	<u>1.00%</u>	<u>2,844</u>
	Total	9,533	97.30%	262	2.70%	9,795

**3.2.2.1 Discussion, Tables 3.1 and 3.2**

- **Race/ Ethnicity and Insurance Status**

More ‘Black Non-Hispanic’ (16.90 percent) and ‘Hispanic and Other’ (16.10 percent) women reported being uninsured than “White Non-Hispanic’ (10.50 percent) women.

- **Marital Status and Insurance Status**

Significantly more ‘Divorced, Widowed or Separated’ (17.5 percent) and ‘Never Been Married, Part of Unmarried Couple’ (16.20 percent) women reported being uninsured as compared to the

'Married' respondents of whom 91.5 percent reported having health insurance and only 8.5 percent reported having no health plan.

- **Educational Level and Insurance Status**

Health insurance coverage varies substantially with educational attainment. The percentage of uninsurance for the women who reported only primary education or less was 27.90 percent; for those who completed Grades 9-12, it was 14.8 percent and for women with some college or more the percent of uninsurance reported was 7.90 percent.

- **Employment Level and Insurance Status**

Among the employed respondents the percentage of insurance was 9.4 percent and the percentage of being uninsured was 16.9 percent.

- **Income Level and Insurance Status**

The percentages of insurance status associated with income level are interesting. At the lowest level of income, '0 to 19,999', 8.5 percent of the respondents were uninsured. As the level of income increased, the percentage of uninsured respondents rose as well. In the '20,000 to 49,900' category, 17.5 percent of the respondents were uninsured and in the '50,000 or More' category, 16.2 percent of the respondents reported being uninsured.



### **3.2.3 Results--Outcome Variables and Insurance Status**

Table 3.3 provides comparative data about insurance status and the outcome variables in summary form; the prevalence of the observed variations by insurance status and demographic category are the subject of more detailed analysis as follows.

**Table 3.3 Summary of Insurance Status and Outcome Variables, Female Respondents, Age 45 to 64, to the BRFSS**

	<u>Have Any Kind of Health Plan</u>			<u>chi-square</u> <u>p-value</u>
	<u>Yes</u> (n)	<u>No</u> (n)	<u>Total</u> (N)	
<u>Have had routine checkup within last two years</u>				
<i>Within past two years--</i>	26,497	2,652	29,150	***
%with health plan	86.30%	66.10%	84%	
<i>Longer than two years or never--</i>	4199	1361	5560	
%with health plan	13.70%	33.90%	16.00%	
<u>Perceived Health Status</u>				
<i>Excellent, very good &amp; good--</i>	25,939	2,984	28,923	***
%with health plan	84.10%	73.40%	82.90%	
<i>Fair or poor--</i>	4,893	1,081	5,975	
%with health plan	15.90%	26.60%	17.10%	
<u>Time when could not afford to see dr.</u>				
<i>Yes--</i>	2116	1,500	3,617	***
%with health plan	6.90%	37.00%	10.40%	
<i>No--</i>	28,752	2,555	31,307	
%with health plan	93.10%	63.00%	89.60%	
<u>How long since last mammogram</u>				
<i>Within past two years--</i>	13,690	1,100	14,791	***
%with health plan	44.40%	27.10%	42.40%	
<i>Longer than two years or never--</i>	2,076	582	2,658	
%with health plan	6.70%	14.30%	7.60%	
<u>How long since last Pap smear</u>				
<i>Within past two years--</i>	13,866	1,318	15,185	***
%with health plan	45.40%	32.70%	43.90%	
<i>Longer than two years or never--</i>	3,104	924	4,028	
%with health plan	10.20%	23.00%	11.70%	
<u>Current Smoking Status</u>				
<i>Do not currently smoke--</i>	23,705	2,637	26,343	***
%with health plan	76.90%	65.00%	75.50%	
<i>Currently regular smoker--</i>	7,120	1,423	8,543	
%with health plan	23.10%	35.00%	24.50%	
<u>Current Physical Activity</u>				
<i>Did phys. act for 20min. 3 x or more/wk--</i>	13,068	1,329	14,397	***
%with health plan	42.80%	32.90%	41.60%	
<i>No phys.act or less than 20min. . . /wk--</i>	17,467	2,709	20,177	
%with health plan	57.20%	67.10%	58.40%	

\*\*\* p<=0.0005

### **3.2.4 Specific Outcome Information**

The BRFSS data in this section of the study illustrates the substantial variation in the prevalence of selected health risk behaviors and preventative health practices among the female respondents, age 45 to 64, in relationship to the demographic categories of interest. Healthy patterns of behavior can result in substantial reductions of chronic diseases and improve morbidity and mortality rates in the United States. Preventative health practices help identify early stages of chronic diseases, reducing death rates from these leading causes of death among adults. Increased use of screening for chronic diseases and reducing high-risk behaviors are among the continuing goals of the nation's health objectives, so prevalence rates are included for each individual outcome.

#### **3.2.4.1 Perceived Health Status (Table 3.4)**

- **Background and Analysis**

The perceived health status question is important for two reasons. The most obvious reason is that it provides some basic understanding of the respondent's health status and their likelihood to seek medical treatment. The second reason relates to self-image and identity. The answer to the question related to perceived health status provides the researcher with an estimation of the respondent's potential ability and determination to raise above current health problems.

- **Results**

‘Excellent, very good and good health’ status was associated with being married. Irrespective of insurance status, the highest percentage of respondents to ‘Excellent, very good and good health’ (85 percent) of the respondents were married. The ‘Divorced/ Widowed/ Separated’ category had the highest percentage of ‘Fair to poor’ response- 22.7 percent for the insured and 27.6 percent for those without health insurance.

A higher percentage of White Non-Hispanics reported ‘Excellent, very good, and good health’ (85 percent) than Black Non-Hispanics (71.9 percent) and Hispanics and Other (71.4 percent).

Within the ‘Income 0 to 19,999’ category, results were observed that were very different from the trends in all the other categories, irrespective of insurance status. The percentages of responses to ‘Excellent, very good and good health’ and ‘Fair and poor’ were 59.4 percent and 40.6 percent respectively--values that are nearly equal. In all of the other variables, there were much wider differences between the values, typically 85 to 15 percent or 75 to 25 percent.

‘Excellent, very good and good health’ was associated with higher income. The highest percentage or 93.9 percent of ‘Excellent, very good and good health’ were found in the \$50,000 or more category.

Women with years of college education reported higher numbers of ‘Excellent, very good and good health’ than women with only primary education.

**Table 3.4 Perceived Health Status - Percentage of Female Respondents Reporting "Fair" or "Fair to**

**Poor" Health**

	<u>Uninsured</u>			<u>Insured</u>			<u>Total (N)</u>	<u>chi- square</u>
	<u>Total #</u>	<u># of Unins</u>	<u>%</u>	<u>Total #</u>	<u># of Insur</u>	<u>%</u>		<u>p-value</u>
<u>Marital Status:</u>								
Married	1,922	510	26.50%	20,560	2,742	13.30%	22,483	***
Divor/Widow/Sep	1,744	482	27.60%	8,217	1,778	21.60%	9,961	***
Never Mar/Unmar Cpl	377	83	22.00%	1,951	353	18.10%	2,328	(0.074)
<u>Race/Ethnicity:</u>								
White Non-Hisp	3,056	708	23.20%	26,010	3,623	13.90%	29,069	***
Black Non-Hisp	166	435	38.20%	2,136	557	26.10%	2,571	***
Hispanic and Other	546	198	36.30%	2,528	681	26.90%	3,074	***
<u>Income:</u>								
0 to 19,999	1,823	656	36.00%	4,247	1,808	42.60%	6,071	***
20,000 to 49,999	1,365	242	17.70%	13,195	1,832	13.90%	14,560	***
50,000 or more	265	21	7.90%	9,543	581	6.10%	9,808	(0.219)
<u>Employment Status:</u>								
Employed	2,236	380	17.00%	21,430	1,876	8.80%	23,666	***
Not-Employed	1,713	663	38.70%	8,529	2,786	32.70%	10,243	***
<u>Highest Educat Level:</u>								
Never attend sch/kindrg orGRs 1 to 8	443	237	53.50%	1,143	595	52.50%	1,577	(0.713)
GR 9-12 or GED	2,102	589	28.00%	12,062	2,553	21.20%	14,164	***
College 1-3yr or more	1,501	248	16.50%	17,541	1,722	9.80%	19,043	***

Excludes "Missing, Don't Know, and Refused."

\* p<=0.05

\*\* p<=0.005

\*\*\* p<=0.0005

### **3.2.4.2 Access to Routine Physical Examination and Time When Needed to Visit Physician and Could Not Afford Services (Tables 3.5 and 3.6)**

- **Background and Analysis**

Health insurance status and cost concerns are barriers to seeking medical treatment and obtaining preventative health services. Persons without health care coverage are more likely than those who are insured to report being in poor health and at risk for chronic disease. In 1996, 14 percent of adults that had reached 64 years reported that they did not have health care coverage, and 11 percent reported that cost was a barrier to obtaining health care. The percentage of adults who reported at least one time in the preceding year when they could not visit a physician because of the cost varied more than twofold in 1996, from 7.6 percent in Wisconsin to 16.7 percent in Texas (median: 12.6 percent). In 1997, the percentage varied 3.6 fold, from 7.3 percent in Wisconsin to 26.1 percent in Arizona (median: 11.2 percent).

- **Results**

Since these two variables represent elements of disposable income, the results are included together. Of the uninsured women who needed to see a physician but could not afford to, the value in the 'Income- 0 to 19,999' was 46.9 percent; for those with the lowest level of education, it was 43.4 percent for women who were 'Divorced/ Widowed or Separated,' it was 42.2 percent, for 'Black Non-Hispanic' women, it was 40.1 percent and for unemployed women, it was 42.3 percent.

The other variable related to disposable income 'Have not had a checkup within the past year' the responses of the uninsured women were again extremely high but provided a different profile. The rate of those not having had a checkup in the educational category was actually higher than those who had college education-- 38.3 percent, among those who had never attended school or kindergarten, the percentage was 30.20. With regard to employment status, those who were employed it was 37.4 as compared to those not employed at 29.3. The percentage of those not having had a checkup within the last year related to income ranged from 30.6 and 35.5 percent. With respect to race, 'White Non-Hispanic' had the highest rate at 36.7 percent, 'Hispanic and Other' at 31.4 percent and 'Black Non-Hispanic' at 17.2 percent. With respect to marital status, the 'Never Married/ Unmarried Couple' category was 41 percent, the 'Divorced/ Widowed/ Separated' category, was 34.3 percent, and the 'Married' rate was 32.1 percent.

**Table 3.5 Have Not Had Checkup Within Past Year (or ever)**

	<u>No Checkup within past yr (or ever)</u>			<u>No Checkup within past yr (or ever)</u>			<u>Total (N)</u>	<u>chi- square</u>	<u>p-value</u>
	<u>Total #</u>	<u># of Unins</u>		<u>Total #</u>	<u># of Insur</u>				
	<u>Uninsured</u>	<u>Responses</u>	<u>%</u>	<u>Insured</u>	<u>Respons</u>	<u>%</u>			
<u>Marital Status:</u>									
Married	1,885	608	32.10%	20,477	2,809	13.70%	22,373	***	
Divor/Widow/Sep	1,728	592	34.30%	8,184	1,072	13.10%	9,912	***	
Never Mar/Unmar Cpl	370	151	41.00%	1,939	303	15.60%	2,309	***	
<u>Race/Ethnicity:</u>									
White Non-Hisp	3,025	1,109	36.70%	25,893	3,770	14.60%	28,919	***	
Black Non-Hisp	430	74	17.20%	2,135	111	5.20%	2,565	***	
Hispanic and Other	535	168	31.40%	2,522	297	11.80%	3,057	***	
<u>Income:</u>									
0 to 19,999	1,794	636	35.50%	4,232	525	12.40%	6,027	***	
20,000 to 49,999	1,356	476	35.10%	13,148	1,930	14.70%	14,504	***	
50,000 or more	265	81	30.60%	9,512	1,280	13.50%	9,777	***	
<u>Employment Status:</u>									
Employed	2,209	827	37.40%	21,322	3,220	15.10%	23,531	***	
Not-Employed	1,691	496	29.30%	8,507	881	10.40%	10,199	***	
<u>Highest Educat Level:</u>									
Never attend sch/kindrg orGRs 1 to 8	430	130	30.20%	1,131	163	14.40%	1,561	***	
GR 9-12 or GED	2,079	656	31.60%	12,015	1,624	13.50%	14,094	***	
College 1-3yr or more	1,487	248	38.30%	17,464	2,401	13.70%	18,952	***	

Excludes "Missing, Don't Know, and Refused."

\*\*\* p<=0.0005



**Table 3.6 Needed to See Physician But Could Not Afford To**

	<u>Needed Dr. but could not afford</u>			<u>Needed Dr. but could not afford</u>				<u>Chi-square</u>
	<u>Total #</u>	<u># of Unins</u>	<u>%</u>	<u>Total #</u>	<u># of Insur</u>	<u>%</u>	<u>Total (N)</u>	<u>p-value</u>
	<u>Uninsured</u>	<u>Responses</u>		<u>Insured</u>	<u>Respons</u>			
<u>Marital Status:</u>								
Married	1,917	637	33.20%	20,572	1,132	5.50%	22,490	***
Divor/Widow/Sep	1,741	735	42.20%	8,231	822	10.00%	9,972	***
Never Mar/Unmar								
Cpl	373	123	33.00%	1,961	153	7.80%	2,335	***
<u>Race/Ethnicity:</u>								
White Non-Hisp	3,051	1,120	36.70%	26,036	1,626	6.20%	29,088	***
Black Non-Hisp	434	174	40.10%	2,140	189	8.80%	2,574	***
Hispanic and Other	543	198	36.50%	2,536	289	11.40%	3,079	***
<u>Income:</u>								
0 to 19,999	1,818	852	46.90%	4,269	732	17.10%	6,088	***
20,000 to 49,999	1,363	403	29.60%	13,209	865	6.50%	14,572	***
50,000 or more	265	35	13.20%	9,547	261	2.70%	9,812	***
<u>Employment Status:</u>								
Employed	2,229	732	32.80%	21,435	1,169	5.50%	23,664	***
Not-Employed	1,710	724	42.30%	8,554	859	10.00%	10,265	***
<u>Highest Educat Level:</u>								
Never attend sch/kindrg								
orGRs 1 to 8	440	191	43.40%	1,141	187	16.40%	1,581	***
GR 9-12 or GED	2,098	773	36.80%	12,075	905	7.50%	14,173	***
College 1-3yr or more	1,498	530	35.40%	17,559	1,014	5.80%	19,058	***

Excludes "Missing, Don't Know, and Refused."

\*\*\* p<=0.0005

### **3.2.4.3 Mammography and Insurance Status (Table 3.7)**

- **Background and Analysis**

Breast cancer is the most common site of new cancers among women and is second to lung cancer as the leading cause of cancer death among women. Breast cancer incidence increased during the early to mid-1980s, partially due to increases in early detection through use of mammography screening. Risk factors for breast cancer include advancing age, family history of breast cancer, early menarche, late menopause, nulliparity, the absence of breast-feeding, and obesity after menopause. The majority of currently identified risk factors are not easily amenable to changes in a woman's personal health habits so therefore, the main medical focus for breast cancer management has been on early detection through screening and effective treatment of diagnosed cases.

In 1997, an estimated 180,000 cases of breast cancer were diagnosed and approximately 43,000 women died from the disease. As with cervical cancer, early detection of breast cancer can lead to early treatment of the disease and consequently, reduce mortality. The rates of various breast cancer screening procedures were high in 1996 and 1997. Of women at 40 years, 84 percent reported ever having a mammogram; among women at 50 years, 72 percent reported having had a mammogram in the preceding two years.

The American Cancer Society recommends a yearly mammogram for women aged 50 years and over, and a mammogram every one to two years for women aged 40 to 49 years

(Holtzman, et al, 2000). Early screening is recommended for women with known increased risk for breast cancer.

- **Results**

Among the uninsured female respondents, 12.4 percent of married women, 17.6 percent of 'Divorced/Widowed/Separated' women, and 9 percent of the 'Never Married/Unmarried Couple' reported not having had a mammogram within the last two years.

With respect to race, 15.2 percent of 'White Non-Hispanic' women, 11.7 percent of 'Black Non-Hispanic' women, and 11.7 percent of 'Hispanic and Other' reported not having had a mammogram in the last two years.

In the income category, 16.7 percent of '0 to 19,999' category reported having had a mammogram within the last two years up compared to 12.2 percent in the '20,000 to 49,999' category and 11.3 percent in the '50,000 or More' category.

Among employed women, 13.9 percent of employed women reported not having had a mammogram within the last two years as compared to 14.8 percent of the employed women.

In the educational category, 12.4 percent of the women who never attended school kindergarten or attended grades one through eight reported not having had a mammogram within the last two years, the Grades 9 through 12 or GED category the total was 14.3 percent, and those in the college category the total was 14.9 percent.

**Table 3.7 Have Not Had Mammogram Within Last Two Years**

	<u>No mammogram within last 2 yrs</u>			<u>No mammogram within last 2 yrs</u>				<u>chi-square</u>
	<u>Total #</u>	<u># of Unins</u>		<u>Total #</u>	<u># of Insur</u>		<u>Total (N)</u>	<u>p-value</u>
	<u>Uninsured</u>	<u>Responses</u>	<u>%</u>	<u>Insured</u>	<u>Respons</u>	<u>%</u>		
<u>Marital Status:</u>								
Married	1,923	239	12.40%	20,599	1,227	6.00%	22,523	***
Divor/Widow/Sep	1,748	308	17.60%	8,241	706	8.60%	9,989	***
Never Mar/Unmar Cpl	377	33	9.00%	1,961	142	7.20%	2,338	***
<u>Race/Ethnicity:</u>								
White Non-Hisp	3,063	467	15.20%	26,066	1,785	6.80%	29,130	***
Black Non-Hisp	435	51	11.70%	2,144	117	5.50%	2,579	***
Hispanic and Other	546	64	11.70%	2,538	170	6.70%	3,084	***
<u>Income:</u>								
0 to 19,999	1,825	304	16.70%	4,277	449	10.50%	6,103	***
20,000 to 49,999	1,368	167	12.20%	13,218	933	7.10%	14,586	***
50,000 or more	265	30	11.30%	9,552	431	4.50%	9,817	***
<u>Employment Status:</u>								
Employed	2,238	312	13.90%	21,459	1,296	6.00%	23,697	***
Not-Employed	1,716	254	14.80%	8,567	726	8.50%	10,284	***
<u>Highest Educat Level:</u>								
Never attend sch/kindrg orGRs 1 to 8	443	55	12.40%	1,143	95	8.30%	1,586	***
GR 9-12 or GED	2,105	302	14.30%	12,096	933	7.70%	14,201	***
College 1-3yr or more	1,503	224	14.90%	17,571	1,045	5.90%	19,075	***

Excludes "Missing, Don't Know, and Refused."

\*\*\* p<=0.0005

#### **3.2.4.4 Pap Smear and Insurance Status (Table 3.8)**

- **Background and Analysis**

In 1997, an estimated number of 13,000 cases of invasive cervical cancer were diagnosed in U.S. women, and an estimated 5,000 deaths were reported. Between 1973 and 1990 the age-adjusted incidence rate and the mortality rate for invasive cervical cancer declined by 3 percent per year. Five year or relative or survival rates have remained stable at 67 to 69 percent since the mid-1970s.

Risk factors for cervical cancer include low socioeconomic status, early age at first intercourse, multiple sex partners, cigarette smoking, and certain sexually transmitted diseases.

Pap testing guidelines from the American Cancer Society recommend annual Pap testing for women aged 45 to 64.

- **Results**

In the 1996 BRFSS findings, 21.3 percent uninsured, married women reported that they had not had a Pap smear in the last two years and 9 percent of insured, married women have not had a Pap smear within the last two years. In the 'Divorced/Widowed/Separated' category, 26.5 percent of the uninsured women have not had a Pap smear within the last two years and 13.2 percent of the insured women reported not having had a Pap smear within the last two years. In the 'Never Married/Unmarried Couple' category, three percent of the uninsured women reported not having had a Pap smear within last two years as compared to 9.3 percent of the insured women.

There are also significant differences associated with race/ethnicity. ‘Black Non-Hispanic’ (15.5 percent) and ‘Hispanic and Other’ (15.8 percent) women had lower percentages having not had a Pap test within the last two years than ‘White Non-Hispanic’ women. These results are remarkably similar to the findings of the ACHD BRFSS analysis in 2002.

Predictably, insured women with income in the 50,000 or more level reported a percentage of 5.60 as compared to 15.5 percent uninsured women who had gone without Pap smear testing within the last two years or longer. The lower levels of income reported lower levels of Pap smear testing—in the ‘0 to 19,999’ category, 26.6 percent uninsured women and 17.6 percent insured women and in the ‘20,000 to 49,999’ category, 20.4 percent uninsured women and 10.9 percent insured women.

Among the ‘Employed Status’ results, there were 20.3 percent uninsured women who had not had a Pap smear within the last two years as compared to 8.6 percent. In the ‘Not-Employed’ category, there were 26.9 percent uninsured women who had not had a Pap smear within the last two years as compared to 14.2 percent insured, unemployed women.

There were significant differences noted between the insured and uninsured respondents with respect to highest educational level completed. In the ‘Never Attended School/ Kindergarten and Completed Levels One through Eight,’ 20.8 percent of the respondents were uninsured and 14.2 percent of the respondents were insured. In the ‘Grades Nine Through Twelve or GED Completed,’ of the uninsured women, 26.3 percent reported not having had Pap smear within the last two years or longer as compared to 12.8 percent of the insured women. Among the responses for ‘College One to Three Years or Longer,’ 18.8 percent uninsured

women reported not having had a Pap smear within the last two years in comparison to 8.1 percent of the insured women.

**Table 3.8 Have Not Had Pap Smear Within Last Two Years**

	<u>No Pap smear within last 2 yrs</u>			<u>No Pap smear within last 2 yrs</u>				<u>chi-square</u>
	<u>Total #</u>	<u># of Unins</u>		<u>Total #</u>	<u># of Insur</u>		<u>Total (N)</u>	<u>p-value</u>
	<u>Uninsured</u>	<u>Responses</u>	<u>%</u>	<u>Insured</u>	<u>Respons</u>	<u>%</u>		
<u>Marital Status:</u>								
Married	1,902	405	21.30%	20,396	1,835	9.00%	22,299	***
Divor/Widow/Sep	1,724	456	26.50%	8,122	1,074	13.20%	9,846	***
Never Mar/Unmar Cpl	376	57	3.00%	1,943	180	9.30%	2,319	***
<u>Race/Ethnicity:</u>								
White Non-Hisp	3,028	767	25.30%	25,794	2,687	10.40%	28,823	***
Black Non-Hisp	427	66	15.50%	2,092	150	7.20%	2,519	***
Hispanic and Other	543	86	15.80%	2,520	247	9.80%	3,063	***
<u>Income:</u>								
0 to 19,999	1,810	481	26.60%	4,189	739	17.60%	6,000	***
20,000 to 49,999	1,350	276	20.40%	13,091	1,424	10.90%	14,441	***
50,000 or more	264	41	15.50%	9,492	532	5.60%	9,756	***
<u>Employment Status:</u>								
Employed	2,232	452	20.30%	21,407	1,844	8.60%	23,639	***
Not-Employed	1,707	460	26.90%	8,518	1,210	14.20%	10,226	***
<u>Highest Educat Level:</u>								
Never attend sch/kindrg orGRs 1 to 8	438	91	20.80%	1,123	159	14.20%	1,561	***
GR 9-12 or GED	2,075	546	26.30%	11,910	1,526	12.80%	13,985	***
College 1-3yr or more	1,492	281	18.80%	17,435	1,404	8.10%	18,928	***

Excludes "Missing, Don't Know, and Refused."

\*\*\* p<=0.0005

### **3.2.4.5 Exercise and Insurance Status (Table 3.9)**

- **Background and Analysis**

The growing epidemic of obesity is a prime example of our society's failure to address the changing American diet and to make exercise "mainstream." Between 1991 and 2000, the prevalence of obesity in American adults increased by 61 percent—to 19.8 percent of all adults. The prevalence of morbid obesity—a body-mass index (BMI) of 40 or more—more than doubled in the same nine years, from 0.9 percent to 2.1 percent (Brown, et al, 2001). Americans are not only "digging their own graves with their teeth," they are winning the race for the world's fattest nation. For the 24 OECD developed nations, the U.S. ranks number one in obesity for both men and women.

In 1996, the percentage of adults who did not engage in any leisure-time physical activity (i.e., no exercise, recreation, or physical activities) during the previous month varied threefold among the states, from 17.1 percent in Utah to 51.4 percent in Georgia. In 1996, the prevalence of no leisure-time physical activity tended to be highest in southeastern states and lowest in Western states. The prevalence of no leisure-time physical activity (approximately 25 percent) has been nearly constant since 1990. Estimates of leisure-time physical activity do not account for work-related physical activity; as a consequence the BRFSS data most likely underestimates the total amount of physical activity engaged in by the adult population.



- **Results**

The percentages of women reporting 'Currently no exercise' were too high across all categories regardless of insurance status. With respect to 'Marital Status,' the percentages of uninsured women were higher than those who were insured. The percent of uninsured 'Married' women reporting no current exercise totaled 68.9, 'Divorced/Widowed/Separated' women was 66.3 percent and 'Never Married/Unmarried Couple' was 61 percent. The insured 'Married' women reported a rate of 56 percent, the 'Divorced/Widowed/Separated' women reported a rate of 59.8 percent and the 'Never Married/Unmarried Couple' category reported 57.80 percent.

In the area for 'Race/Ethnicity,' the rates were higher. The 'Black Non-Hispanic' uninsured women responses were 73.7 percent, for the 'Black Non-Hispanic' insured women the rate was 68.4 percent.

In the 'Income' category, in the '0 to 19,999' the response of uninsured women was 69.2 percent as compared to 70.2 percent of the women who responded having insurance. For the '20,000 to 49,999' category, the rate of uninsured responses was 64.5 percent as compared to 58.8 percent of those women who have insurance.

The trend also continues with respect to employment status. Of the female respondents without insurance, 66.4 percent reported no current exercise as compared 56.5 percent of the employed, insured women.

The 'Highest Educational Level Completed' category contained truly disturbing information about current physical activity and it does not appear associated to insurance status. Among women 'Never Attending School/ Kindergarten or Attending Grades One through 8', the uninsured, inactive rate was 83.1 percent and for those inactive women with insurance, the

reported rate was 82.4 percent. Lack of current physical activity is also a problem for women in 'Completed Grades Nine through Twelve or Obtained a GED' - of the uninsured women, the percentage reporting no current exercise was 71.5 percent and the insured women reported 64.9 percent. The uninsured female respondents having 'One to Three Years of College or Longer' reported 56 percent no current exercise and of the insured women in the 'College with One to Three Years or Longer,' 50.2 percent reported no current exercise.

**Table 3.9 Current Physical Activity**

	<u>No current exercise, or less than 20 min, etc.</u>			<u>No current exercise, or less than 20 min, etc.</u>			<u>Chi-square</u>  <u>p-value</u>	
	<u>Total #</u>	<u># of Unins</u>	<u>%</u>	<u>Total #</u>	<u># of Insur</u>	<u>%</u>		
	<u>Uninsured</u>	<u>Responses</u>		<u>Insured</u>	<u>Respons</u>			<u>Total (N)</u>
<u>Marital Status:</u>								
Married	1,912	1,317	68.90%	20,367	11,409	56.00%	22,280	***
Divor/Widow/Sep	1,731	1,148	66.30%	8,133	4,866	59.80%	9,864	***
Never Mar/Unmar Cpl	373	228	61.00%	1,931	1,117	57.80%	2,304	(0.239)
<u>Race/Ethnicity:</u>								
White Non-Hisp	3,041	1,988	65.40%	25,773	14,398	55.90%	28,815	***
Black Non-Hisp	426	314	73.70%	2,090	1,430	68.40%	2,516	*
Hispanic and Other	545	391	71.70%	2,516	1,545	61.40%	3,061	***
<u>Income:</u>								
0 to 19,999	1,809	1,251	69.20%	4,226	2,968	70.20%	6,036	(0.568)
20,000 to 49,999	1,359	877	64.50%	13,062	7,678	58.80%	14,421	***
50,000 or more	263	150	57.00%	9,417	4,526	48.10%	9,680	**
<u>Employment Status:</u>								
Employed	2,225	1,478	66.40%	21,211	11,981	56.50%	23,436	***
Not-Employed	1,697	1,155	68.10%	8,447	4,884	57.80%	10,145	***
<u>Highest Educat Level:</u>								
Never attend sch/kindrg orGRs 1 to 8	439	365	83.10%	1,128	930	82.40%	1,567	(0.744)
GR 9-12 or GED	2,092	1,496	71.00%	11,964	7,767	64.90%	14,056	***
College 1-3yr or more	1,488	833	56.00%	17,349	8,705	50.20%	18,838	***

Excludes "Missing, Don't Know, and Refused."

\* p<=0.05

\*\* p<=0.005

\*\*\* p<=0.0005

### **3.2.4.6 Smoking Status and Insurance Status (Table 3.10)**

- **Background and Analysis**

Tobacco use, particularly cigarette smoking, is a leading cause of morbidity and mortality in the United States. In 1996, cigarette smoking became the first health behavior to be added to the list of nationally notifiable conditions reported to the CDC. The prevalence of cigarette smoking among adults (approximately 25 percent) has been consistent since 1991. The BRFSS findings suggest that for states that had smoking rates substantially higher than the median (e.g., Kentucky, Missouri, and, Nevada), tobacco control efforts are particularly important.

- **Results**

With respect to ‘Marital Status,’ the percentage of “Current Smokers’ among married, insured women was 29.6; of the uninsured, married women, the percentage was 19.7. The uninsured ‘Divorced/Widowed/Separated’ female response percentage rate was 40.8 as compared to 31.5 for the insured respondents. Among ‘Never Married/Unmarried Couple’ respondents, the percentages of “Current Smoking’ were 36 percent for those without insurance as compared to 23 percent of the women with insurance.

‘Current Smoking’ levels were also high with respect to race and ethnicity. The rate for ‘White Non- Hispanic’ was 37.2 percent for the uninsured females and 23.1 percent for the insured females. The number for the uninsured ‘Black Non-Hispanic’ females was 27.1 percent, for the insured ‘Black Non-Hispanic’ women was 19.8 percent.

Within the 'Income' category, among the '0 to 19,999' level, there were 34.6 percent uninsured, current smokers, in contrast to 25.4 percent insured, current smokers. In the '20,000 to 49,999' income level, there were 34.6 percent uninsured, current smokers as compared to 22.1 percent insured, current smokers. In the '50,000 or More' level, there were 24.9 percent uninsured, current smokers and 16 percent insured, current smokers.

Current smoking status also appeared to be related to employment and insurance status. Among uninsured, employed respondents, 34.6 percent were current cigarette smokers, and 22.1 percent of the insured females reported that they were current smokers.

Educational level also appeared to be associated with smoking status. The total of uninsured respondents in the 'Never Attended School/ Kindergarten or Completed Grades One through Eight' was 30.7 percent; the percentage of the insured respondents was 30.40. In the category of 'Grades Nine through Twelve or Completed a GED,' the percentage of uninsured, current smokers was 38.2 and the percentage of insured respondents was 28.8. In the 'College One to Three Years or Longer' category, there were 31.6 percent uninsured, current smokers and 18.7 percent insured, current smokers.

**Table 3.10 Current Smoking Status**

	<u>Currently smoke cigarettes</u>			<u>Currently smoke cigarettes</u>			<u>Total (N)</u>	<u>chi- square p-value</u>
	<u>Total #</u>	<u># of Unins</u>		<u>Total #</u>	<u># of Insur</u>			
	<u>Uninsured</u>	<u>Responses</u>	<u>%</u>	<u>Insured</u>	<u>Respons</u>	<u>%</u>		
<u>Marital Status:</u>								
Married	1,918	568	29.60%	20,554	4,054	19.70%	22,473	***
Divor/Widow/Sep	1,742	710	40.80%	8,215	2,585	31.50%	9,957	***
Never Mar/Unmar Cpl	377	135	36.00%	1,952	461	23.60%	2,329	***
<u>Race/Ethnicity:</u>								
White Non-Hisp	3,057	1,137	37.20%	26,007	6,003	23.10%	29,065	***
Black Non-Hisp	432	117	27.10%	2,137	574	26.90%	2,569	(0.924)
Hispanic and Other	545	160	29.40%	2,525	500	19.80%	3,070	***
<u>Income:</u>								
0 to 19,999	1,817	690	38.00%	4,266	1,400	32.80%	6,084	***
20,000 to 49,999	1,366	473	34.60%	13,187	3,347	25.40%	14,553	***
50,000 or more	265	66	24.90%	9,529	1,578	16.60%	9,794	***
<u>Employment Status:</u>								
Employed	2,233	773	34.60%	21,403	4,730	22.10%	23,636	***
Not-Employed	1,710	600	35.10%	8,545	2,143	25.10%	10,256	***
<u>Highest Educat Level:</u>								
Never attend sch/kindrg orGRs 1 to 8	443	136	30.70%	1,140	347	30.40%	1,583	(0.919)
GR 9-12 or GED	2,096	801	38.20%	12,067	3,476	28.80%	14,163	***
College 1-3yr or more	1,501	475	31.60%	17,524	3,276	18.70%	19,026	***

Excludes "Missing, Don't Know, and Refused."

\* p<=0.05

\*\* p<=0.005

\*\*\* p<=0.0005

### 3.3 DISCUSSION

Overall, the majority of the 1996 BRFSS female respondents, aged 45 to 64, had some form of health insurance and 11.6 percent of the female respondents were without continuous health insurance.

While previous studies have shown race and ethnic disparities in health insurance status, this analysis verifies those differences, most notably with respect to insurance status and race, low levels of education and income.

Many different factors may be confounding the underutilization of selected primary screening services by women, aged 45 to 64. Factors not analyzed in this report include: misconceptions regarding disease risk, survivability, treatment options, distrust of health care providers, failure to assess need for screening at every contact with a health care provider, fixed incomes creating barriers to access for older women, changes in health care coverage following changes in marital status, decreasing social support systems as women age, the fear of breast and cervical disease, general poor health behaviors, a lack of both provider and public knowledge about low-cost and no-cost screening services, a lack of resources to pay for diagnostic and treatment services, and a lack of access to comprehensive tertiary healthcare services.

The results of this report are subject to several methodological limitations. The BRFSS data was developed by analyzing responses to specific questions that are self-reported through telephone interview and therefore cannot be verified, which could make the information subject to recall bias. When telephone surveys are utilized, the interviewer cannot see the respondent's facial expressions, physical appearance, and body language or monitor the respondent's

environment. This creates the potential for eliciting a social desirability response set because the subjects have the opportunity to respond with more socially “acceptable” answers, which cannot be easily challenged. Self-reported measures including specific BRFSS questions have been the subject of numerous reliability and validity studies, however, which suggests limited bias. Over the years, estimates from BRFSS have been compared to face-to-face estimates from the National Household Interview Survey (NHIS). While different estimates may be noted within subgroups, the BRFSS provides overall estimates comparable to those from the NHIS, which may turn out to be a critical factor in the analysis of race and ethnicity sub-groups in this study.

Another significant concern is that the BRFSS is a telephone-based survey. Women of lower economic status, less likely to have health insurance are also less likely to have a telephone and may not be included in the survey process. As a result, the prevalence of screening procedures reported may be over estimated and the differences between various social, economic and demographic groups may actually be underestimated. Although the BRFSS is adjusted through statistical weighting methods, this limitation can never quite be discounted or eliminated. In fact, because of the cross-sectional data collection design of the BRFSS, the temporal relations and dynamic nature of primary screening participation can never be accurately proved, and the data should only used for evaluating possible associations.

The results provide evidence of the need to focus screening programs on women from lower economic status; in particular, programs that target women with limited household income, lower educational attainment, and women without insurance. Women at higher risk for poor, general health behaviors such as cigarette smoking and limited physical exercise are at increased risk for decreased access to screening procedures and should be considered for overall lifestyle



health programs. State and local public health officials, women's health policy makers and health insurance providers should consider that these groups may be under-screened and need to design prospective, targeted, age, and literacy sensitive programs that will eliminate disparities in access to screening. Physicians and other healthcare providers should recommend to all the uninsured, age-eligible women assistance in help obtaining primary health screening services no matter what their social economic or demographic characteristics. Providers of free or reduced cost services should make certain that their services are widely known to women who are without health insurance or those who may be under-insured and not simply target Medicaid-eligible recipients.

### **3.4 CONCLUSIONS**

In conclusion, four major findings from this analysis include:

- 1) The chi-square values calculated for the percentages of occurrences in each outcome variable (as found in Table 3.3) support the research hypothesis—that the differences in the responses between the two groups of female respondents to the 1996 BRFSS was the result of being uninsured. Therefore, it can be concluded that health insurance status significantly affects a woman's use of primary health services;
- 2) While insurance status or lack of coverage matters tremendously for women, it alone does not guarantee access to health care services--other determinants, such as income and educational levels (as found in Table 3.4) are having a confounding affect on access;

- 3) The BRFSS provides a useful statistical model for answering questions about this cohort of women, and;
- 4) Lower rates of access were observed across all covariates when women did not have insurance and percentages of poor outcomes were consistently associated with uninsured women who were of a race or ethnicity other than 'White Non-Hispanic,' unmarried, unemployed, had lower levels of income, and lower years of education completed.

The public health significance of this study relates directly to one of that *Year 2010 National Health Objectives*-- to increase the proportion of persons with health insurance to 100 percent. The findings of this report indicate that this goal is far from being met and a comprehensive health care system is needed to guarantee all Americans timely access to health care, assure a high quality of services provided with adequate and stable reimbursement for health care providers while rationally apportioning the costs of care.

#### **4.0 CHAPTER IV----SYNTHESIS OF STUDY FINDINGS, POLICY IMPLICATIONS AND RECOMMENDATIONS FOR PENNSYLVANIA**

In this chapter, discussion to answer to the study's third research question—"Adjusting for wide regional differences is it possible to identify strategies at the state level and recommend health policies to improve access to care?"—will begin with a review of current health reform in six states. Suggestions for future research, policy recommendations and the final conclusions of this study are presented in the final section.

##### **4.1 REVIEW OF STATE INITIATIVES**

In the United States, 2006 was a major year for state health care reform movement as more than ten states developed legislative options to insure that their residents had access to some form of medical coverage. Critical reforms to improve the health and quality of care of the states' citizens were also introduced, including measures to better coordinate their emergency delivery systems. The problem of caring for the uninsured has traditionally been regarded as a responsibility for the federal government to solve, and the issue has constantly arisen during political campaigns for the White House, Congress, and Senate.

In the 80s, the states began the process of examining how to best modify their Medicaid systems to increase coverage for the uninsured. Incentives for change originated with Congress enacting incentives and mandates under Medicaid for states to expand eligibility, particularly as it related to pregnant mothers and young children.

Congress, through the Omnibus Reconciliation Acts (OBRA) of 1986 and 1987, expanded eligibility under Medicaid for women and young children. The Medicaid Catastrophic Coverage Act of 1988 and additional OBRA legislation extended those provisions and made mandatory some of the options that had been previously and active at the state level. Providing coverage for the medically uninsured and what role the nation might play has constantly been an issue during political campaigns for the White House Congress, Congress, and Senate.

While a large number of states have health reform initiatives pending, only six had actually passed meaningful health reforms in the past few years. The following section provides a brief description of some of those state reforms, and conclusions drawn from the recent initiatives.

Immigration, affirmative action, multilingualism, ethnic diversity—California was a pioneer state at the forefront of these controversial policies and is now the center of political backlash against them. California's growing racial and ethnic diversity challenge social constructs about immigration and health care reform legislative options developed in California, the most populous state in the country, will require meticulous groundwork. The social complexity of policies debated and formulated in California may furnish the rest of the country with a predictive direction that national policy leaders may need to travel after the 2008 presidential election; therefore, a short summary of California reform activities are presented.

The Maine effort, the “Dirigo Health Reform Act,” which has been evolving since 2003 and by some experts estimate, has saved the state over 78 million dollars, is briefly reviewed here.

The reform efforts of Illinois and Maryland are also included in this section, most notably Maryland’s “Fair Share of Health Care Act,” which represents the first attempt by a state legislature to pass a “fair share” bill. The components of the Massachusetts Health Reform plan are reviewed in more detail, since some analysts believe that national policy reform (as well as Pennsylvania reform) will follow the Massachusetts model.

#### **4.1.1 California and Maine**

In 2003, California passed an employer mandate directed toward businesses with 50 or more employees. The California law required the employers to either “pay or play”—or choose between paying into a fund to provide coverage for uninsured state residents or by providing coverage for their employees. In 2004, however, the law was repealed in a close vote as a result of high profile, ballot initiative campaign that had unions and grassroots organizations squaring off against big business (DeGolia, 2006).

The single-payer approach to health care has also found significant support in California. A single-payer ballot initiative was soundly defeated in 1994 in a widely-publicized campaign that attracted national attention. In 1999, the California state legislature studied nine proposals for providing health care for all its citizens and concluded that a single-payer approach would be the most cost efficient. In August of 2006, both houses of the Legislature passed a single-payer bill, although a gubernatorial veto is expected.

In 2003, Maine passed the “Dirigo Health Reform Act,” a comprehensive bill that set an ambitious goal of universal coverage by 2009, utilizing a five-year, phased-in expansion of public and private coverage. Health care for all citizens was the top 2002 campaign promise of Maine's newly elected governor, who made good on that promise within five months of taking office. The Maine Reform Act was designed to address three key factors simultaneously: cost, quality and access. Cost controls and quality improvements were negotiated with hospitals and the sole insurance company that agree to participate in the program. A new mechanism, “the savings offset payment,” was developed to quantify and capture the savings generated so as to fund future expansion of publicly funded coverage. While this measure helped overcome the considerable opposition of hospitals to cost controls, the sole insurer has delayed implementation and the state is now seeking approval to self-fund health care. The state superintendent of insurance found that DirigoChoice--an insurance plan for small businesses and individuals that was created as part of the overall Maine reform effort--provides care to more than 15,000 Mainers and has saved the state \$78 million to date.

As in California, campaigns for single-payer universal health care preceded the passage of the DirigoChoice. After a single-payer bill nearly passed in 2002, the Maine legislature developed a Health Security Board to analyze the financing and implementation of single-payer universal health care. Despite projections indicating significant cost savings, startup costs were found to be a major impediment.

#### **4.1.2 Illinois and Maryland**

In Illinois, the “Healthcare Justice Act of 2004” (HCJA) was created to make major progress toward the goal of comprehensive health care for all citizens. The HCJA was developed by a coalition formed by consumer and business groups, together with health providers and insurers and lawmakers. Illinois passed the Health Care for All Children in November 2005, which established a program to ensure health insurance coverage for all the children in the state.

In addition to constructing a process to achieve a comprehensive health plan, the HCJA laid out a way to improve the plan’s chances for passage by building early political consensus. Public hearings have taken place in every Congressional district in the state, and in May 2006, a task force produced six reform proposals, which are currently being evaluated by a consulting firm. The timeline called for legislative approval of a plan by the end of 2006 and for implementation to begin by July 2007.

Maryland has enacted a more limited health reform bill but one with important symbolic and educational attributes. In January 2006, the state's Democratic legislature overrode a Republican governor's veto to pass the “Fair Share of Health Care Act.” To date, Maryland is the only state to pass a “fair share” bill, an employer mandate directed at very large employers (in Maryland’s case, employers of 10,000 or more). Wal-Mart is the only business that would be directly affected by the new law. Several court challenges brought on by businesses have indefinitely delayed implementation of the act.

The Fair Share Act is a part of a comprehensive package, the “Public-Private Partnership for Health Care for All Marylanders.” Some components of this package have

already passed, including a law to preserve the nonprofit status of Blue Cross/ Blue Shield, a prescription drug discount for lower-income uninsured state residents, and legislation strengthening the state's health care safety net (DeGolia, 2006).

### **4.1.3 Massachusetts**

On April 12, 2006, Massachusetts enacted legislation that would provide nearly universal health care to all state residents. The legislation combined the concept of individual responsibility through an individual mandate on the purchase of health insurance with government subsidies to ensure affordability. Implementation of the plan began at the end of 2006 and by May 2007, over 100,000 previously uninsured people had gained coverage.

#### **4.1.3.1 Components of the Massachusetts Health Reform Plan**

The Massachusetts Health Reform Plan (Kaiser Commission on Medicaid and the uninsured, 2007) included the following components:

- **Individual Mandate** The Massachusetts plan requires all adults in the state to purchase health insurance by July 1, 2007 and intends to impose financial penalty use of up to 50 percent of the cost of a health insurance plan on those who do not purchase health insurance via income tax filings.
- **Employer Requirements** By July 1, 2007, employers with 11 or more employees were required to provide health insurance coverage or pay a "fair share" contribution of up to \$295 annually per employee. Employers are additionally required to offer a Section 125 "cafeteria plan" that permits workers to purchase



insurance with pretax dollars or face a “free-rider” surcharge if employees make excessive use of uncompensated care.

- **Commonwealth Care Health Insurance Program** The provision of government funded subsidies to low-income individuals to assist with the purchase of health care has been included with the plan. The Commonwealth Care Health Insurance Program provides sliding scale subsidies to individuals with incomes up to 300 percent of the federal poverty level (or \$30,630 for an individual) for the purchase of health insurance. State residents with incomes less than 150 percent of the federal poverty level (\$15,315 for an individual) are not required to pay any premiums. Plans offered through Commonwealth Care do not have any deductibles, and are offered by the managed care organizations that participate in the Massachusetts Medicaid program. As of July 1, 2007, nearly 80,000 low-income adults had enrolled in Commonwealth Care plans.
- **Commonwealth Health Insurance Connector** A new state agency called “The Connector” connects individuals and small businesses with the private insurance plans that sell the coverage and make affordable, quality insurance plans available. The Connector was also created to help make coverage more affordable by helping to design affordable plans. The Connector Board approved plans offered by seven of the state's health insurers that provide a range of insurance options, including a specially designed, lower-cost product for 19 to 26-year-olds.
- **Insurance Market Reforms** Insurance market reform is also an important component of the plan. The plan will merge individual and small group insurance markets in July 2007. A recent study, mandated by the legislation, to assess the impact of merging these two insurance markets concluded that the cost of health insurance premium for small employers would increase by approximately 1.5 percent, while premiums for individuals would fall by 15 percent.
- **MassHealth Expansion** A strong, positive element in the program is that all legal Massachusetts residents with incomes below 100 percent of the poverty line

will now get publicly paid coverage due to increased Medicaid enrollment caps for adults. Less than 17 percent of uninsured people, however, in the state had incomes that low. Medicaid to children was expanded to 300 percent of the federal poverty level. Unfortunately, new federal Medicaid regulations that require proof of legal status will disenroll undocumented immigrants, as well as African Americans who lack birth certificates because they were born at home in the rural South. By March 2007, MassHealth enrollment had been increased by 53,000 members.

- **Modifications to the Safety Net** The plan includes funds to help a few safety net hospitals keep their doors open. It phases out the state's free-care pool, which has sustained safety net hospitals and covered many undocumented immigrants. The existing Uncompensated Care Pool, which reimbursed providers for uncompensated care, is being converted into a new Health Safety Net Trust Fund that will combine these funds with other Medicaid funds, including Medicaid Disproportionate Share Hospital funds. New fee schedules have been developed to standardize provider reimbursement. As more uninsured citizens gain coverage and uncompensated care levels drop, it should be possible to shift funds into the health insurance subsidy program.
- **Financing** For the upcoming fiscal year, Governor Deval Patrick (D) has requested \$1.725 billion to fund the program. Obtaining the complex financing is dependent on the redistribution of existing funding, including federal Medicaid payments previously paid to safety net providers and funds from the Uncompensated Care Pool. Additional new sources of funding will come from the employer contributions and General Fund revenues.

#### **4.1.3.2 Implementation Issues**

Critics have noted serious flaws in the plan. Eighty-three percent of the new coverage is of the "buy it yourself" variety. The linchpin of the bill is an individual mandate that forces the near-

poor and middle-income uninsured to purchase coverage or suffer tax penalties. Unfortunately, few of the uninsured can actually afford to purchase adequate coverage. A reasonably comprehensive health insurance policy in Massachusetts costs about \$6,000 annually for an individual or \$14,000 for a family. A wealthy uninsured person could afford that but few of the uninsured are wealthy. Only 23 percent of those without coverage make more than five times the poverty level (Woolhandler & Himmelstein, 2006).

With costs 30 percent above the national average, Massachusetts already has the highest per capita health care costs in the world and this legislation has no provisions to restrain further increases. Predictably rising costs will force more and more employers to drop coverage, while state funds will be reduced by the continuing costs increases in Medicaid, Medicare reductions and the private insurance subsidies for the near-poor. When the next recession hits, tax revenues will fall just as newly unemployed people flood the Medicaid program or apply for the insurance subsidies promised in the reform legislation. It is difficult to determine if the program will be financially sustainable over the long or even medium-term future.

The individual mandate will force working families to make different choices: pay premiums they cannot afford or buy stripped-down policies or both. The vast majority of the new money in the bill comes from the mandated premium payments of low to middle income families who are now uninsured. While families will pay these premiums to private insurance companies rather than to the government, they are in fact a highly regressive new tax: the wealthy contribute virtually no new money to the system, while the near-poor who were previously uninsured assume the bill.

Given its history in Massachusetts, universal coverage under a single payer system is currently a popular local option. A simple single payer plan would make coverage affordable by eliminating multiple, competing insurers that generate massive health administrative costs, currently at least 31 percent of total health care spending. Massachusetts Blue Cross spends only 86 percent of premiums paying for care. It spends the rest- more than \$700 million annually on billing, marketing, and other administrative costs. Harvard Pilgrim and Tufts Health Plan- Massachusetts's other largest insurers- are doing little better; each collected about \$300 million more in premiums than it paid out in benefits. These figures represent ten times as much overhead per enrollee as Canada's national health insurance program. If the Massachusetts bureaucracy, for example, were reduced to Canada's levels, \$9.4 billion would be saved annually, enough to cover all of the 748,000 uninsured in Massachusetts and improve coverage for the millions more who are currently underinsured (Woolhandler & Himmelstein, 2006).

A wide spectrum of researchers have concluded that single-payer is the only reform option that can expand coverage without increasing costs. In the 1980s, the Congressional Budget Office and the General Accounting Office estimated that universal coverage under single-payer was a breakeven proposition because administrative savings would offset new clinical costs. More recent studies conducted by the Lewin Group-conservative consulting firm- evaluated proposed State single-payer plans and reached the same conclusion. Another consulting firm engaged by the Massachusetts Medical Society estimated that single-payer plan could actually decrease spending while covering everyone residing in Massachusetts.

Despite millions spent by drugs and insurance firms on "think tanks" and public relations denigrating the single-payer option and tens of millions of dollars lobbying politicians to keep

single-payer off the table, it remains a popular option in Massachusetts. Nearly two thirds of Massachusetts physicians support it, along with the Massachusetts Nurses Association and dozens of other labor and consumer groups and seniors organization (McCromick, 2004).

Nationally, 62 percent of Americans favor a universal health insurance program, in which everyone is covered under a program similar to Medicare that is run by the government and financed by taxpayers.

#### **4.1.4 Pennsylvania**

Pennsylvania, a socially and geographically unique state, prevents many opportunities for success in improving outcomes related to prevention strategies and chronic diseases, especially in relation to disparities in health. In Pennsylvania, ‘Black Non-Hispanics’ constitute about 9 percent of the state’s population. Cardiovascular disease is the leading cause of death among African-Americans in this state. The heart disease rate for African-Americans in Pennsylvania is 298.5 per 100,000; the rate for their ‘White Non-Hispanic’ counterparts is 255.1 per 100,000. According to the CDC’s 2003 BRFSS, ‘Black Non-Hispanics’ also had a higher prevalence of higher blood pressure than ‘White Non-Hispanics’ or ‘Hispanics’ in the state (33.1 percent of ‘Black Non-Hispanics’ in Pennsylvania reported having been told they had high blood pressure versus 26 percent of ‘White Non-Hispanics’ and 24.2 percent of ‘Hispanics.’

Data from the 2003 BRFSS also indicates that in Pennsylvania, the rate of overweight and obesity was the highest among ‘Black Non-Hispanics’ at 76.4 percent. The rate of obesity (based on body mass index) for ‘Black Non-Hispanics’ was 35.1 percent, as compared to 23.1

percent for ‘White Non-Hispanics.’ The rate of obesity among ‘Black Non-Hispanics’ in Pennsylvania was also higher than the rate of obesity among ‘Black Non-Hispanics’ in the United States at 32.6 percent. ‘Black Non-Hispanics’ in Pennsylvania were less likely to participate in regular physical activity (71.7 percent) than ‘White Non-Hispanics’ (78.6 percent). ‘Black Non-Hispanic’ and ‘Hispanic’ Pennsylvanians are more likely to be smokers than their ‘White Non-Hispanic’ counterparts.

Compounding the problems associated with chronic disease prevention and management is the fact that health insurance premiums in Pennsylvania have risen 75.6 percent since 2000, compared with a 17 percent rise in inflation and a 13 percent increase in the median wage.

#### **4.1.4.1 Cover All Pennsylvanians**

In January 2007, Pennsylvania became the fifth US state to seek universal health coverage for its citizens when it unveiled a plan to provide health insurance for approximately three quarters of a million Pennsylvania residents who are currently uninsured. Like Massachusetts and California, Pennsylvania is joining a growing movement among other states to address the problem of residents without health insurance.

Pennsylvania Governor Ed Rendell said the plan called Cover All Pennsylvanians, will provide affordable basic health coverage to small businesses and uninsured individuals through the private health insurance market. Companies will be eligible if they have fewer than 50 employees and if workers earn less than the average state annual wage of \$39,000. The cost to

those employers will be approximately \$130 a month per employee. Qualified individuals can buy into the plan for between \$10 and \$70 per month.

Rendell, a Democrat, plans to implement the plan by January 2008. It will require the passage of 47 pieces of legislation, however, and numerous rule changes to become a reality. Unlike residents of Massachusetts and California, individuals will not be required to buy health insurance but Pennsylvania is considering the introduction of such a mandate after the first three years, depending on how many citizens buy into it voluntarily.

The plan will be paid for in part by a 3 percent payroll tax on all companies that do not provide health insurance. An exemption will be made for the first 50 employees in the first year, a number that should decline in subsequent years. Costs will also be met by federal matching funds, an increase in cigarette tax and a tax on smokeless tobacco products. Rendell predicts that the impact on the state budget will be limited (Reuters Health Information, 2007).

#### **4.1.4.2 Pennsylvania Medicaid Program**

According to Medicaid program statistics (Kaiser Family Foundation and Urban Institute, 2006); in 2003 nearly 19 million low-income women (19 to 64 years) were enrolled in Medicaid, the state-federal program for low-income individuals. Medicaid is only available, however, to low income women who are parents, pregnant, disabled, or over 65 and who also meet the program's very restrictive income eligibility criteria.

Medicaid disproportionately carries the weight of covering the sickest groups. One third (34 percent) of the non-elderly women on Medicaid rate their health as fair or poor, compared to

only 11 percent of low-income women covered by employer-sponsored coverage (Kaiser/HRET, 2006). Medicaid covers a broad range of services that are important for women including inpatient and outpatient care, prescription drugs, long-term care, prenatal care, family planning, and preventative services such as Pap smears and mammograms. In recent years, states have expanded Medicaid eligibility to assist certain low income uninsured women with the costs of family planning services (24 states) as well as breast and cervical cancer treatment.

While Medicaid represents the backbone of the nation's health care safety net, the program has been at the center of a national debate. Recent federal legislation has cut funding for Medicaid by \$10 billion over the next 10 years, and made policy changes that will give states far more latitude to charge low-income beneficiaries premiums and co-payments than they have had in the past.

In Pennsylvania 15 percent of the population is enrolled in Medicaid. In 2006, there were 1,833,769 Medicaid recipients in Pennsylvania in the average month. The total cost of the program last year was \$16.6 billion.

Since Medicaid is partially funded and administered by each state, the structure and reach of each state program differs widely. In Pennsylvania, Medicaid-covered health care is available through about 68,000 providers, including hospitals, long-term care facilities, physicians and dentists.

Children represent the largest portion of those enrolled in Pennsylvania's Medical Assistance program, covering nearly one-third of children in the Commonwealth. A closer look at the state on a county-by-county basis reveals a different picture, with the proportion of children covered in the different counties ranging from 12.3 percent to 63 percent in 2006.



While children and their families represent 61 percent of all Medicaid recipients, they account for only 24 percent of total expenditures. The elderly population of Pennsylvania (those over 65 years old) account for the largest share of Medicaid costs-- just over a third.

## **4.2 REVIEW OF HEALTH INSURANCE POLICY ALTERNATIVES FOR MIDLIFE WOMEN**

It has been argued by proponents of health care reform that current health spending levels are sufficient to pay for comprehensive health coverage for all Americans-- and still save money. The major obstacles are not matters of cost, but of politics. In this section, some major approaches to providing health coverage for mid-life women are evaluated here for their potential in addressing the problem of caring for the uninsured.

### **4.2.1 Increasing coverage through employer-sponsored insurance**

Approximately 20 percent of uninsured women have the option of enrolling in employer-based insurance but do not participate—one-third more than men. Since most of these women have low incomes, providing them with premium assistance, or using Medicaid or CHIPs to enable them to buy into their employer plan, could be effective in reaching this group of women. Employers “pool” all risks to make insurance more affordable, since they have a variety of employees of different ages and health status. Major proposals to expand employer-based

insurance attempt to accomplish this in two ways: by making the employee premium more affordable when coverage is offered and by increasing the “risk pool” or the number of employees who are offered coverage.

Although most women who are offered employer-sponsored insurance take it, the number who cannot afford the premium and consequently do not participate in the coverage has been increasing (Cooper & Schone, 1999). Most analysts believe that this has resulted from employers increasing the premium share employees must pay for their health plan. Not surprisingly, higher premiums shares have hit low-wage workers particularly hard (Gabel, et al, 2001). Some proposals would make job-based health coverage more affordable for tax deductions or credits (Merlis, et al, 2001). Others would use Medicaid or CHIPs funding to provide direct premium assistance to low-wage workers, as some states have already done, to help them pay their share of premium costs.

Premium assistance would help employed low-wage women afford coverage through their own job and, for married women, could provide more affordable access to family coverage through a spouse's job. A recent survey, found that a greater proportion of women than men (51 percent versus 48 percent) think that employers should continue to be the main source of health insurance coverage for workers (Duchon, 2000) which may reflect women's greater appreciation of the comprehensive set of services that employer-based insurance typically covers. This type of insurance is also usually less expensive than comparable coverage available through the individual insurance market, especially if the employer helps pay for it.

Women who do not participate in employer-based insurance are more likely than men to live on a low-income or below 200 percent of the poverty level. Tax deductions, which provide

the least subsidy to low-income workers, would therefore do little to make employer-sponsored insurance premiums affordable. Tax credit proposals to provide more assistance for low-income uninsured people, although they present administrative challenges such as timing of credits and income verification, could lessen their effectiveness at helping women afford employers insurance (Feder, et al, 2000). An alternative approach is to subsidize the family share of employer-sponsored insurance through CHIP or Medicaid, or through a premium assistance program. Some states have designed programs so that employers receive the funds directly, reducing problems with the “flow of funds” faced by low income families.

Policies targeting only uninsured low-income working women could be challenged on equity grounds. Excluding low-income women who are participating in employer plans from receiving a tax credit or other form of premium subsidy would be unfair: it would in effect penalize them for responsibly purchasing health insurance without benefit of the subsidy. On the other hand, including these workers would increase the cost of premium subsidies (Glied, 2001). A related concern is that employers who currently offer insurance will use the subsidy as an excuse to reduce their own contribution towards health insurance since the government will pick up the remainder. This unintended consequence would also increase the costs of this type of proposal.

Another way to expand employer-based coverage is to increase the number of people that have access to coverage. These proposals typically focus on the types of firms that do not offer coverage such as small firms or low-wage businesses. Tax credits or state funding could be used to encourage firms to offer insurance directly or to operate through purchasing coalitions (Curtis, et al, 2001). Other proposals focus on workers who are in eligible for the coverage offered by

their firms: part-time workers, temporary workers, employers still within the waiting period prior to receiving coverage, and people leaving jobs were those too old to qualify for dependent coverage.

Purchasing coalitions and other policies to encourage small businesses to offer health insurance have had limited success at reducing costs or increasing access, but still hold potential according to some analysts and could also help small businesses afford better health benefits than they offer today (Wicks, 2000). Small businesses usually offer fewer health benefits and have higher cost-sharing than larger firms. The increasing access to employer-based insurance for part-time workers holds even greater promise for helping uninsured women. Data suggest that women who work part-time workers are more likely to take employer-based insurance when offered than men: among part-time workers, 90 percent of women with access to job-based insurance are insured as compared with 85 percent of men.

Purchasing coalitions would need to be carefully designed in order to offer small firms broad advantages. Some purchasing coalition proposals would allow groups like churches or business associations to form their own coalitions rather than basing eligibility on geography. This feature could result in redlining, or exclusion of the type of firms most likely to employ sicker people – women-- such as beauty salons and restaurants. It could also have the affect all raising premiums for small businesses outside of the coalitions in firms with healthier employees opt in, leaving out firms with sicker employees. Proposals that extend purchasing coalitions from state benefit mandates could disproportionately affect women, who are the primary beneficiaries of laws that, for example, require coverage of maternity care or breast cancer treatment. A real concern exists with respect to the effect of increasing eligibility of part-time

workers and its potential effect on employment patterns. Such proposals would work by either encouraging firms to extend eligibility to part-time workers through subsidies, or requiring them to do so. The voluntary subsidies for firms would have to be generous to change behavior. Yet if they were too generous, they could create an incentive for employers to cut back the hours of full-time workers. On the other hand, requirements that firms offer health insurance to part-time workers could induce employers to outsource work to contract employees, hire temporary workers, or otherwise reduce their part-time labor force.

#### **4.2.2 Expansion of Medicare/ Increase Medicaid enrollment**

One option to providing health insurance to uninsured mid-life women is to expand existing public programs: Medicare or Medicaid. The increasing number of older Americans suggests the option of permitting uninsured women, aged 45 to 64, to obtain Medicare coverage by paying a premium. The eligibility rules within this age group for a Medicare buy-in proposal would vary according to the amount of premium assistance for lower-income, mid-life women and might include eligibility restrictions, such as limiting enrollment to women who lack employer-sponsored insurance or to displaced workers.

Since a greater percentage of older women are uninsured than older men, women would disproportionately benefit from a Medicare buy-in program. As couples near the age of Medicare eligibility, women married to older men are at higher risk of being uninsured. In a survey conducted by The Commonwealth Fund (Lambrew, 2001) one in four women who has an older spouse reported that she was uninsured when her spouse became eligible for Medicare. Of

these uninsured women, nearly 40 percent lost coverage when their husband enrolled in Medicare. Medicare expansion options would need to include premium assistance or premium rates would most likely still be too high for most uninsured older women. Private insurance could be made more available to the mid-life women, but doing so would require considerable regulation—for example, rating reforms for the individual market, or requirements that employers offer extended eligibility for COBRA coverage. Permitting mid-life women to purchase Medicare before age 65 alleviates the need for these regulations. A high-proportion of 50 to 64 year old women whose husbands are on Medicare is themselves uninsured, making this an attractive option.

The affordability of Medicare buy-in proposals is a concern for unemployed or low-income women. According to the Kaiser Family Foundation (2005), net premiums for a buy-in that is combined with a 25 percent tax credit would equal about 38 percent of the average income for an uninsured person age 62 to 64.

#### **4.2.2.1 Subsidization of individual insurance coverage**

Some policymakers propose to move away from the current work-based health insurance system and encourage purchase of individual health insurance policy (Zelenak, 2001). According to their rationale, linking insurance to work encourages “job-lock,” meaning that employees do not change jobs or work status for fear of losing coverage. They also predicted that health insurance

would become less accessible for certain groups, such as those who work part-time or are self-employed. Most proposals to expand individual health insurance coverage include a \$1,000 tax credit for individuals and a \$2,000 credit for families, which are phased out for higher-income cases.

Theoretically, all 15 million uninsured women would be eligible for individual insurance tax credits (assuming no upper-income eligibility limit). Only 21 percent of uninsured women, however, live in states that guarantee that they will not be denied coverage. About one of four uninsured women live in states with some type of rating reforms--more than 75 percent of uninsured women might not be able to access or afford an individual health insurance policy even with a tax credit.

The obvious advantage of individual health insurance is that it is not linked to employment and given women's weaker attachment to the labor force relative to men and their greater dependence on their spouses for insurance, having coverage that does not rely on either would benefit women.

Serious concerns exist with respect to accessibility and affordability. One study found that mild conditions such as hay fever were sufficient grounds for denial of coverage in the individual insurance market (Pollitz, et al, 2001). Since women are more likely to need and use health care and uninsured women are less healthy than men, they made be particularly vulnerable to being denied coverage.

Individual insurance may be unaffordable even with the tax credit. While older women typically are charged lower premiums than men, they are likely to face extra premiums if they have any history of health problems. A recent study found that the average individual premium

for a person age 60 is \$5,700 (Simantov, et al, 2001). The typical \$1000 tax credit would probably be insufficient to encourage an uninsured person to purchase this policy.

A tax credit could actually make job-based health insurance less affordable. The value of the credit is greater than the tax subsidy for employer-based insurance for low income taxpayers. As a result, healthier, low-income workers may switch from job-based coverage to individual insurance (or firms that employ such people may stop offering coverage and force them to do so). Since this would leave sicker workers in the employer plans, premiums for an employer plans could rise, resulting in more low-income women declining employer coverage.

Even if they were accessible and affordable, the benefits offered in the individual market may not meet women's health needs. Older adults with individual insurance are three times more likely than those with employer coverage to spend regularly more than \$100 per month on prescriptions. The same study found that older Americans not only pay high premiums for individual coverage but incur significant out-of-pocket costs due to the substandard coverage provided (Pollitz, et al, 2001).

#### **4.2.3 “Building the Health Care Barn”--The Family and Business HealthCare Security Act of 2007 for Pennsylvania**

In response to the annual double digit inflation in health care costs and the 44 million uninsured Americans in 2004, the American HealthCare Party was formed. The Party was created to exclusively promote comprehensive health care reform through the election to Congress of candidates committed to universal health care through a single payer system operating



independently of government control. The American HealthCare Party advanced a tri-partisan political approach to health care reform instead of the traditional bi-partisanship efforts which have failed for decades.

The American HealthCare Party was successful in getting a candidate on the ballot for the Pennsylvania 14<sup>th</sup> Congressional District in the November 2004 campaign. The candidate, Steven B. Larchuk, a Pennsylvania attorney, focused his campaign on the single and compelling issue of national health care reform. He called for “political barn raising” and invited everyone, regardless of party alliance, to support serious health reform. While the campaign received considerable interest and support, the international threat from terrorism dominated the concerns of voters in the fall of 2004 and the incumbent was re-elected.

In 2005, Mr. Larchuk joined with a physician from Philadelphia and a businessman from Lancaster, PA to found the Pennsylvania HealthCare Solutions Coalition with the goal of drafting model health reform legislation. The result of their efforts, a draft proposal, then called *The Balanced and Comprehensive Health Care Reform Act*, went on to receive the endorsement of the city councils of Philadelphia, Pittsburgh, and Erie and provided the basis for serious legislative discussion of health care reform in Pennsylvania. By February 2006, the proposal had been transformed into formal legislative language and introduced by Senators Ferlo, Fontana and Kitchen as SB1085. A few months later, it became HB2722 or *The Family and Business HealthCare Security Act of 2007* and was introduced in both houses of the Pennsylvania General Assembly with 10 percent of the legislators signing on as co-sponsors.

- **Review of Act**

*The Family and Business HealthCare Security Act of 2007* recommends a single-payor public trust which would collect revenues then promptly pay the health care providers with a minimum of processing and zero financial motive to manipulate incentives with patients or their physicians (A summary of the entire *Act* is provided in Appendix A).

Important elements in the balanced health care reform act are the following:

1. Portability: It would be independent of employment.
2. Commitment to wellness: HB2722 represents a new commitment to wellness acknowledging health education as one of the best methods for reducing cost of health care. A principal part of HB2722 is the establishment of a wellness curriculum in schools to raise the level of health and fitness education to match math and science in importance.
3. A fair, non-fault approach to compensating those injured by medical errors: HB 2722 includes a no-fault approach to compensating those injured by medical errors. Under *The Family and Business Health Security Act of 2007*, the following malpractice reforms are included:
  - a) Those who want to retain their traditional tort rights can, which would be similar to choosing full tort automobile coverage.
  - b) For everyone else, a no-fault system which issues fair and swift compensation for lost wages and pain and suffering without the need to sue or pay a lawyer a large portion of the award would be available.

- c) Participating physicians and hospitals will have their cost of medical malpractice insurance and Medicare assessment dropped to zero.
- d) When a participating health care provider is sued by patient who opted out of the no-fault system, the defendant will have \$3 million in insurance in their cost of defense paid through the health care trust (which is triple the amount of insurance that most physicians carry now).
- e) HB2722 recommends “transparency” and includes a safe approach or elimination of avoidable complications and mistakes. It is well documented, and even admitted by the healthcare industry, that there are hundreds of thousands of medical errors and avoidable infections and the cost of these mistakes and human suffering and expense is intolerable and inexcusable.

- **Status of current bill**

In October 2006, a statewide organization, the Health Leadership Committee was created to organize the separate advocacy groups who had been working independently towards health care reform and to actively “lobby” HB2722. The Health Leadership Committee

has a formal fund-raising arm, a nonprofit organization called the Health Education and Legislative Progress Fund of Pennsylvania.

The *Family and Business HealthCare Security Act* is under review by the Pennsylvania legislation at this time, and it is questionable how it will fare relative to ‘Cover all Pennsylvanians.’ It would be difficult for a single-payer public trust approach to displace an existing system comprised of powerful self-interest groups of health insurance organizations, especially if the initial implementation would require a tax increase.

#### **4.3 FINAL CONCLUSIONS, POLICY RECOMMENDATIONS AND SUGGESTIONS FOR FURTHER RESEARCH**

“One Thing Follows Another” examined the relationship between health insurance status and access to selected primary health screening tests in midlife women. Health insurance clearly enhances access to a range of preventative services and to chronic and acute services. The female respondents to 1996 BRFSS, age 45 to 64, who are uninsured, of a race/ethnicity other than “White Non-Hispanic”, have lower incomes, are not married, and completed lower levels of education fared the worst on the dependent outcome variables. These women are undoubtedly living with hardships due to these health disparities. The high rates of smoking and low rates of exercise indicate failure of major prevention messages to this age cohort.

The BRFSS was found to be a useful model for testing the relationship between insurance status, the selected outcome variables, and the covariates of interest. Comparative information about the insured vs. the uninsured women and the outcome variables were suggestive of a clear relationship in most cases when examined on a national basis. For behaviors such as current smoking or current exercise that are not subject to variable interpretation, the BRFSS is an excellent model for identifying segments of the population at risk and a reliable source of information for developing educational targets. The BRFSS model was less useful for measuring behaviors that have more variable elements and are more difficult to generalize across the national population, such as Pap smear screening compliance or ability to afford to visit physician.

#### **4.3.1 Policy Recommendations**

For fiscal year 2007, Congress allocated \$1.3 million to fund expansion of WISEWOMAN, a program funded in 1995 by the CDC to help women with little or no health insurance gain access to screening and lifestyle interventions that can reduce their risk for heart disease and chronic diseases. Women who qualify for this program are participants in the National Breast and Cervical Cancer Early Detection Program (NBCCEDP) who are aged 40-64 and have little or no health insurance. WISEWOMAN emphasizes a range of interventions, including smoking cessation and provides tools and information to assist the participants in making healthy lifestyle choices. Since the program's initial three state projects in 2005, WISEWOMAN expanded to 14

states by June 2006. After only one year, smoking rates decreased between 5.9 and 10.0 percent among the participants. To effectively reduce the rates of poor health behaviors identified in this study, it is recommended that the WISEWOMAN program should be expanded to women in Pennsylvania and every other state.

Pennsylvania legislators should put party alliances aside and “Build the Healthcare Barn” by adopting HB2722. “Cover all Pennsylvanians” does not create a single ‘risk pool’ and thereby protects the interests of large health care insurance companies by continuing to preserve the status quo.

Alternate strategies such as drop-down expansion of Medicare eligibility to include women from aged 54 to 64 or increase Medicaid enrollment by increasing Medicaid caps for adult women would be helpful but not effective in reaching 45 to 54 aged women. Increasing the affordability of employer-based insurance and subsidizing individual insurance through tax credit are obviously unavailable to women who are unemployed.

#### **4.3.2 Suggestions for Further Research**

During the course of conducting this study, the need for further research was identified to determine why certain results were observed. Most notably, there exists a continued need to better understand the failure of prevention, especially with respect to women, age 45 to 64, with lower levels of education completed. Uninsured women have little or no personal exposure to individual health education since they are not visiting a health care provider for health care.

Women without insurance who may possess poor reading and comprehension skills are less likely to independently seek the information needed for healthy living and disease prevention.

As demonstrated by the results of the study, there remains an urgent need to continue to conduct research to understand the complex, multifaceted forces that lead to the women's poor outcomes. Studies should be initiated to analyze interventions that can reduce the disparities in a cost-effective manner. A comprehensive, mixed method study should be designed using both quantitative and qualitative research techniques to more clearly define the barriers to access to health care for women, aged 45 to 64. Since insurance coverage was found not to guarantee access to the screening services, women with insurance should be included in the respondents. Briefly summarized, the study would begin with a quantitative study confirming the association between insurance status and utilization of primary care services by the cohort of women, aged 45-64, in the state where the study is to be conducted. After relevant demographic information is collected and analyzed, a large sample of women, aged 45 to 64, should be drawn from a local community or state (not conducted on a national scale). A cross-sectional survey instrument should be created, consisting of multiple-choice response options and two final open-ended questions. The questions should focus on health insurance status, access to health care services, demographic information and family/social information. One of the open ended questions should be "Is there anything you would like to tell us," or "Is there anything else you would like us to know?" To avoid "invisible" human responses and to add depth to the study, the survey would be administered in three ways—sending out a return-mail questionnaire, by telephone interviewers and through face to face, personal interviews. Collecting reliable information about low screening rates and health behaviors with modifiable attributes would justify the expense of

this type of study, especially when considering that breast and lung cancer are among the cancers with the highest economic burdens.

Research studies should also be directed to the cascade of other problems—such as insufficient resources, ineffective provider communication, and geographic barriers to services--with the continued goal of improving our knowledge of the interrelationship of these impediments and insuring that every woman, and every person, has equal access to health care.



## **APPENDIX A**

### **A.1 THE FAMILY AND BUSINESS HEALTH CARE SECURITY ACT OF 2007**

#### **SUMMARY**

- I. Comprehensive universal health coverage, single-payer, no deductibles or co-pays, and no caps. Covers all cost of hospitalization, physician, prescription drugs, dental, mental, group, emergency transport, addiction, transplants, durable medical equipment, hospice, long-term care services, etc. No coverage for purely cosmetic procedures. Replaces all private insurance, Medicaid, Adult Basic, PaSCHIP, and all other government programs excepting Medicare and VA. The Plan plugs holes in the Medicare VA coverage. Parties to collective bargaining agreements with benefits as least as generous as the Balance Plan may opt out. Private insurers may cover anything not covered by the Plan.
- II. Replace the current malpractice system with a consumer choice between:
  - (1) An administrative no-fault program providing a reasonable and immediate set of benefits to anyone injured by their medical care regardless

of how careful the health care provider may have been, and (2) Retaining their traditional fault-based remedies, the Plan will essentially eliminate malpractice insurance premiums for health care providers except for those who elect to purchase additional coverage to ensure traditional claims exceeding the \$3 million limit provided by the Plan.

- III. \$1000 per year tax rebates for active volunteer firefighters, EMTs, and rescue workers.
- IV. Medical care reduction through an aggressive and fully funded program to investigate all claims of errors, to order and enforce better practices to reduce avoidable health care related injuries, and to seek license revocation where appropriate.
- V. Cost-containment through a certificate of need requirement to avoid wasteful and duplicative capital investment in medical equipment or services in over served areas while encouraging development in underserved parts of the Commonwealth.
- VI. Total commitment to establishing a culture of wellness through: (1) A fully funded K through 12 health education and physical fitness curriculum that is considered no less important than any other “core” subject, and (2) Identifying and eliminating environmental health risks.

- VII. Generous transitional assistance to employees displaced by the move to a single-payer system. Adoption of this legislation will also create tens of thousands of excellent new jobs in health care, education, substance abuse treatment, and long-term care.
- VIII. Preservation of the private health care system and the right of patients to choose their doctor.
- IX. The funding of a 21<sup>st</sup> Century digital medical record system that will be cost- efficient, eliminates redundant testing, and will reduce prescription and treatment errors.
- X. Dedicated funding of the program through a 10 percent Health Care Levy on payrolls (including the self-employed) plus a 3 percent Wellness Tax on all personal income.
- XI. Exercising the collective purchasing power of 12 million Pennsylvanians to lower the cost of prescription drugs and durable medical equipment.

## BIBLIOGRAPHY

- Abrums, M. (1986). Health care for women. *Journal of Obstetrics, Gynecologic and Neonatal Nursing*, 3, 250-255.
- Agency for Healthcare Research and Quality. (2007). *Mixed Results in eliminating gender disparities in healthcare quality*. Rockville, MD.
- Allegheny County Health Department & Graduate School of Public Health. (2004). *The 2002 Social and Behavioral Risks, Allegheny County*. Pittsburgh: Allegheny County Health Department.
- Ayanian, J.Z., Kohler, B.A, Abe, T., & Epstein, A.M. (1993). The relationship between health insurance coverage and clinical outcomes among women with breast cancer. *The New England Journal of Medicine*, 329, 326-31.
- Berenson, R.A., & Horvath, J. (2003). Confronting the barriers to chronic care management in Medicare. *Health Affairs*, 37, 33-53.
- Bhargaus, S.W. (1992). Finally, a healthy interest in women. *Business Week* 1992; July 88-89.
- Bierman, A.S., & Clancy, C.M. (2001). Health disparities among older women will result in identifying opportunities to improve quality of care and functional health outcomes. *Journal American Med Womens Assoc.* 4, 155-88.
- Boston Women's Health Collective. (1971). *Our bodies, Our selves*. New York: Simon & Schuster.
- Brim, O.G., Friedman, H.E., Levine, S., & Scotch, N.A. (1970). *The dying patient*. New York: Russell Sage Foundation.
- Brown, D.W., Balluz, L.S., Heath, G.W., Moriarty, D.G., Ford, E.S., Giles, W.H., & Mokdad, A, H. (2003). Associations between recommended levels of physical and health-related quality of life. Findings from the 2001 Behavioral Risk Factor Surveillance System (BRFSS). *American Journal of Preventative Medicine*, 5, 520-8.

- Bullough, V., & Vought, M. (1973). Women, menstruation, and nineteenth century medicine. *Bulletin of Historical Medicine*, 1, 47.
- Campaign for Women's Health. (1991). *Improving women's health: a challenge for the 1990s*. Washington DC: Older Women's League.
- Campbell, J., Bursac, Z., Yerkes, A., Peng, L., & Baker, K. (2002). Self-reported mammography screening among Oklahoma women age 50 and older: Oklahoma Behavioral Risk Factor Surveillance System 1997-2001. *Journal of the Oklahoma State Medical Association*, 10, 646-652.
- Center for Disease Control. (2003). *Healthy aging: preventing disease and improving the quality of life among older Americans*. Atlanta (GA): Department of Health and Human Services, Centers for Disease Control.
- Clancy, C.M., & Massey, C.T. (1992). American women's health care: a patchwork built with gaps. *Journal of the American Medical Association* 1992, 14, 268.
- Colditz, G.A., Hoaglin, D.C., & Berkey, C.S. (1997). Cancer incidence and mortality: the priority of screening and population coverage. *Milbank Quarterly Journal*, 75, 147-48.
- Congressional Budget Office. (1993). *A CBO study: Projections of national health expenditures*. Washington, DC.
- Cooper, P. F. & Schone, B.S. (1997) More offers, fewer takers for employment-based health insurance: 1987 and 1996. *Health Affairs*, 16, 142-149.
- Coughlin, S.S., Thompson, T.D, Hall, H.I., Logan, P., & Uhler, R, J. (2002). Breast and cervical carcinoma screening practices among women in rural and nonrural areas of the United States, 1998/1999. *Cancer*, 11, 2801-12.
- Curtis, R.E., Neuschler, E., & Forland, R. (2001) Private purchasing pools to harness individual tax credits for consumers. *Inquiry*, 38, 159-176.
- Dailey, A. (2007). Perceived racism does not explain low mammography rates. *American Journal of Epidemiology*, 165, 1287-1295.
- DeGolia, R. (2006). *Moving beyond political deadlock: health reform initiatives in states*. Cleveland: Universal Health Care Action Network.
- Duchon, L. (2000). *Listening to workers: findings from the Commonwealth Fund 1999 national survey of workers health insurance*. New York: The Commonwealth Fund Task Force on the Future of Health Insurance.

- Duncan, G.J., Brooks-Gunn, J., Yeung Y.W., & Smith, J.R. (1998). How much does childhood poverty affect the life chances of children? *American Sociological Review*, 63, 406-23.
- Ehrenreich, B., & English, D. (1973). *Complaints and disorders: the sexual politics of sickness*. New York: Feminist Press.
- Feder, J., Uccello, C. & O'Brien, E. (1999). *The difference different approaches make: comparing proposals to expand health insurance*. Washington, DC: The Henry J. Kaiser Family Foundation.
- Field, M.J., & Cassel, C.K. (1997). *Approaching death*. Washington, (DC): National Academies Press.
- Friedan, B. (1963). *The feminine mystique*. New York: W.W. Norton.
- Friedan, B. (1991). The dangers of the new feminine mystique. *McCall's 1990*; November, 78-86.
- Fuchs, V. (1994). The Clinton plan: a researcher examines reform. *Health Affairs*, 4, 102-114.
- Gabel, J.R., Ginsburg, P.B. & Hunt, K. (1997) Small employers and their health benefits, 1988-1996: an awkward adolescence. *Health Affairs*, 16, 103-110.
- Glied, S. & Stabile, M. (1999). Covering older Americans: forecast for the next decade. *Health Affairs*, 18, 208-213.
- Grant, J.P. (1992). *The state of world's children*. New York: Oxford University Press.
- Healy, B.P. (1992). The women's health initiative. *The Female Patient*, 17, 36-38.
- Holzman, D., Powell-Griner, E., Bolen, J., & Rhodes, L. (2000). State-and sex specific prevalence of selected characteristics-- Behavioral Risk Factor Surveillance System, 1996 and 1997. *MMWR CDC Surveillance Summary*, 49 (6): 1-39.
- Houston, T.K., Scarinci, I.C., Person, S.D., & Greene, P.G. (2005). Patient smoking cessation advice by health care provider—the role of ethnicity, socioeconomic status and health. *American Journal of Public Health*, 6, 1056-61.
- James, S.A., Van Hoewyk, J., Belli, R.F., Strogatz, D.S., Williams, D.R., & Raghunathan, T.E. (2006). Life-course socioeconomic position and hypertension in African American men: the Pitt county study. *American Journal of Public Health*, 96, 812.

- Jiles, R., Hughes, E., Murphy, W., Flowers, N., McCracken, M., Roberts, H., Ochner, M., Balluz, L., Mokdad, A., Elam-Evans, L., & Giles, W. (2005). Surveillance for certain health behaviors among states and selected local areas—Behavioral Risk Factor Surveillance System, United States 2003. *MMWR Surveillance Summary*, 8, 1-116.
- Kaiser Commission on Key Facts. (2005). *Women and health care: a national profile*. Washington, DC: The Henry J. Kaiser Family Foundation.
- Kaiser Commission on Key Facts. (2007). *Medicaid and the uninsured*. Washington, DC: The Henry J. Kaiser Family Foundation.
- Kim, C., & Beckles, G. (2004). Cardiovascular disease risk reduction in the Behavioral Risk Factor Surveillance System. *American Journal of Preventative Medicine*, 1, 1-7.
- Kuller, L.H., & Ness, R. (2006, December 27). Breast cancer prevention has turned the corner, but there's still a way to go. *Pittsburgh Post-Gazette*, A-1.
- Lambrew, J. (2001). *Health insurance: a family affair--a national and state-by-state analysis of uninsured parents and their children*. New York: The Commonwealth Fund Task Force on the Future of Health Insurance.
- Lave, J.R., & Peele, P. (2005). Health Care Financing. In (Second Ed.), *Encyclopedia of Biostatistics*, (pp. 2314-2315). Chichester (England): John Wiley & Sons, Ltd.
- Lee-Feldstein, A., Feldstein, P.J., Buchmueller, T., & Katterhagen, G. (2000). The relationship of HMOs, health insurance, and delivery systems to breast cancer outcomes. *Medical Care*, 7, 705-18.
- Lempert, L.B. (1986). Women's health from a women's point of view: a review of the literature. *Health Care Women International*, 7, 255-275.
- Levine, D.M., Becker, D.M., & Bone, L.R. (1992). Narrowing the gap in health status of minority populations: a community-academic medical partnership. *American Journal of Preventative Medicine*, 5, 313-23.
- Lunney, J.R., Lynn, J., & Hogan, C. (2002). Profiles of older Medicare decedents. *Journal of American Geriatric Society*, 50, 1108-12.
- Lynn, J., & Adamson, D.M. (2003). *Living well at the end of life, adapting health care to serious chronic illness in old age*. Santa Monica (CA): Rand Health.
- Madlon-Kay, D.J., Harper, P.G., & Reif, C.J. (1994). Health promotion counseling in residency training. *Journal of General Internal Medicine*, 8, 465-7.

- Marieskind, H. (1975). The women's health movement. *International Journal of Health Services*, 5, 217-223.
- McCromick, D. (2004). Single-payer national health insurance: physicians' views. *Archives of Internal Medicine*, 164, 300-304.
- Merlis, M. (2001). Public subsidies for employee contributions to employer-sponsored insurance. *Inquiry*, 38, 121-132.
- Naphey, G. (1870). *The physical life of women: Advice to maiden wife, and mother*. (Fourth Edition). Philadelphia: George Maclean.
- National Center for Disease Statistics. (1991). Advanced report of final natality statistics, 1989. *Monthly Vital Statistics Report*, 40, 8.
- National Center for Health Statistics. (1992). Advance report of final mortality statistics, 1989. *Monthly Vital Statistics Report*, 40, 8.
- National Center for Health Statistics. (1978-1988). *Vital statistics of the United States: Volume I. Natality*. Washington, DC: U.S. Public Health and Service, U.S. Government Printing Office.
- National Center for Health Statistics. (1978-88). *Vital statistics of the United States: Vol. II. Mortality*. Washington, DC: U.S. Public Health Service, U.S. Government Printing Office.
- National Center for Health Statistics. (2003). *Health, United States, 2003*. Hyattsville (MD): US Department of Health and Human Services.
- National Commission to Prevent Infant Mortality. (1992). *Troubling trends persist: shortchanging America's next generation*. Washington, DC.
- Office of Technology Assessment. (1990). *Health care in rural America* (OTA Publication No. H435). Washington, DC: U.S. Government Printing Office.
- Phillips, K.A., Kerlikowske, K., Baker, L.C., Chang, S.W., & Brown M.L. (1998). Factors associated with women's adherence to mammography screening guidelines. *Health Services Review*, 33, 29-53.
- Pollitz, K., Sorian, R. & Thomas, K. (2001). *How accessible is individual health insurance for consumers in less-than-perfect health?* Washington, DC: The Henry J. Kaiser Family Foundation.



- Remington, P.L., Smith, M.Y., Williamson, D.F., Anda, R.F., Gentry, E.M., & Hogelin, C.G. (1988). Design, characteristics and usefulness of state-based behavioral risk factor surveillance. *Public Health Reports*, 103, 366-375.
- Reuben, D. (1970). *Everything you always wanted to know about sex*. New York: David McKay.
- Reuters Health Information. Confusion about cost may lower mammogram rates. May 9, 2005.
- Reuters Health Information. Pennsylvania launches health insurance plan. 2007.
- Roberts, P., & Newton, P.M. (1987). Levinson's studies of women's adult development. *Psychology and Aging*, 2, 154-163.
- Rodriquez-Trias, H. (1992). Women's health, women's lives, women's rights. *American Journal of Public Health*, 82, 45-50.
- Salgananicoff, A., Ranji, U.R., & Wyn, R. (2005). *Women and health care: a national profile. Key findings from the Kaiser Women's Health Survey*. Washington, DC: Kaiser Family Foundation.
- Schoenborn, C.A., Vickerie, J.L., & Powell-Griner, E. (2006). Health characteristics of adults 55 years of age and over: United States, 2000-2003. Advance data, 370, 1-31. U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Health Statistics, Division of Health Interview Statistics, Hyattsville, MD.
- Schootman, M., Jeffe, D.B., Reschke, A.H., & Aft, R.L. (2003). Disparities related to socioeconomic status and access to medical care remain in the United States among women who never had a mammogram. *Cancer Causes Control*, (5), 419-25.
- Sherman, M.E., Carreon, J.D., Lacey, J.V., & Devesa, S.S. (2005). Impact of hysterectomy on endometrial carcinoma rates in the United States. *Journal of the National Cancer Institutes*, 22, 1700-2.
- Simantov, E., Schoen, C. & Bruegman, S. (2001) Market failure? Individual insurance markets for older Americans. *Health Affairs*, 20, 139-149.
- Social Security and Medicare Board of Trustees. (2003). *Status of the Social Security and Medicare Programs*. Washington, (DC).
- Southwick, K. (1990). Women confront second-class health care. *Healthweek 1990*; August, 40-42.

- Spender, Stephen. (1994). *World Within World*. (First U.S. Edition.), (p. 313). New York: St. Martin's Press.
- Strauss, A.L., Corbin, J.M., & Fargerhaugh, B.G. (1984). *Chronic illness and the quality of life*. St. Louis (MO): Mosby.
- U.S. Department of Health and Human Services. (1980). *Women and national health insurance: where do we go from here? The secretary's advisory committee on the rights and responsibilities of women*. Washington, DC: U.S. Government Printing Office.
- U.S. Public Health Service. (1985). *Women's health: Report of the public health service task force on women's health issues: Vol. II* (DHHS Publication No. PHS 85-50206). Washington, DC: U.S. Government Printing Office.
- U.S. Senate Committee on Labor and Human Resources. (1990). *The health care crisis: A report to the American people*. Washington, DC: U.S. Government Printing Office.
- Weinreb, L., Perloff, J., Goldberg, R., Lessard, D., & Hosmer, D.W. (2006). Factors associated with health services utilization patterns in low-income women. *Journal Health Care Poor & Underserved, 17*, 180-99.
- Weisfeld, A., & Perlman, R.L. (2005). Disparities and discrimination in health care: an introduction. *Perspectives in Biolog Med, 48*, Su.1-9.
- Wentz, A.C., & Haseltine, F.P. (1992). Editorial. *Journal of Women's Health 1992, 1*, 1.
- Wicks, E. K. (2004) Health purchasing coalitions struggle to gain bargaining clout: small size and lack of support from health plans a factor. *Health Care Financing and Organization Findings, and Brief 4*.
- Wilkinson, R. (2005). *The impact of inequality*. New York: The New Press.
- Woolhandler, S., & Himmelstein, R. (1988). Reverse targeting of preventative care due to lack of health insurance. *Journal American Medical Association, 259*, 2872-2874.
- Woolhandler, S., & Himmelstein, D.U. (2006). The new Massachusetts health reform: half a step forward and three steps back. *Hastings Cent Rep, 5*, 19-21.
- Young, F.E. (1987). Proceedings of the national conference on women's health. *Public Health Reports: Journal of the U.S. Public Health Service, 4 (Suppl.1)*, 7.
- Zelenak, L. (2001) A health insurance tax credit for uninsured workers. *Inquiry, 38*, 106-120.