



**NAVAL
POSTGRADUATE
SCHOOL**

MONTEREY, CALIFORNIA

THESIS

**THE AFFORDABLE CARE ACT: A PRESCRIPTION FOR
HOMELAND SECURITY PREPAREDNESS?**

by

Kimberly Ann Petersen

September 2014

Thesis Advisor:
Second Reader:

Christopher Bellavita
Alexander Garza

Approved for public release; distribution is unlimited

THIS PAGE INTENTIONALLY LEFT BLANK

REPORT DOCUMENTATION PAGE			<i>Form Approved OMB No. 0704-0188</i>
Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instruction, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188) Washington, DC, 20503.			
1. AGENCY USE ONLY (Leave blank)	2. REPORT DATE September 2014	3. REPORT TYPE AND DATES COVERED Master's Thesis	
4. TITLE AND SUBTITLE THE AFFORDABLE CARE ACT: A PRESCRIPTION FOR HOMELAND SECURITY PREPAREDNESS?		5. FUNDING NUMBERS	
6. AUTHOR(S) Kimberly Ann Petersen		8. PERFORMING ORGANIZATION REPORT NUMBER	
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) Naval Postgraduate School Monterey, CA 93943-5000		10. SPONSORING/MONITORING AGENCY REPORT NUMBER	
9. SPONSORING /MONITORING AGENCY NAME(S) AND ADDRESS(ES) N/A		11. SUPPLEMENTARY NOTES The views expressed in this thesis are those of the author and do not reflect the official policy or position of the Department of Defense or the U.S. Government. IRB protocol number ___N/A___.	
12a. DISTRIBUTION / AVAILABILITY STATEMENT Approved for public release; distribution is unlimited		12b. DISTRIBUTION CODE A	
13. ABSTRACT (maximum 200 words) Prior to implementation of the Affordable Care Act (ACA), tens of millions of U.S. citizens were without health insurance coverage. Without health insurance, health care can be unaffordable or inaccessible, or both. Our ability to obtain health care is part of the homeland security preparedness puzzle. If the Affordable Care Act increases health insurance coverage and helps to control costs as promised, it has enormous potential to bolster homeland security simultaneously. This thesis asks, "How will the implementation of the Affordable Care Act positively impact homeland security in its efforts to achieve its all-hazards preparedness goal?" This thesis first draws the links between health insurance coverage, health care and homeland security. Using empirical evidence and deductive analysis, it then forward-maps the positive impacts ACA implementation is likely have on homeland security in the areas of health and economic security. Recommendations aimed at enhancing the positive effects of the ACA are provided, including expanding ACA access and benefits to immigrants, better educating the public on the ACA tax penalty, and utilizing grants to encourage state participation.			
14. SUBJECT TERMS health care, healthcare, Obamacare, Affordable Care Act (ACA), homeland security, Medicaid, health surveillance, health insurance			15. NUMBER OF PAGES 103
			16. PRICE CODE
17. SECURITY CLASSIFICATION OF REPORT Unclassified	18. SECURITY CLASSIFICATION OF THIS PAGE Unclassified	19. SECURITY CLASSIFICATION OF ABSTRACT Unclassified	20. LIMITATION OF ABSTRACT UU

THIS PAGE INTENTIONALLY LEFT BLANK

Approved for public release; distribution is unlimited

**THE AFFORDABLE CARE ACT: A PRESCRIPTION FOR HOMELAND
SECURITY PREPAREDNESS?**

Kimberly Ann Petersen
Captain, Fremont, CA, Police Department
B.A., Stanford University, 1994

Submitted in partial fulfillment of the
requirements for the degree of

**MASTER OF ARTS SECURITY STUDIES
(HOMELAND SECURITY AND DEFENSE)**

from the

**NAVAL POSTGRADUATE SCHOOL
September 2014**

Author: Kimberly Ann Petersen

Approved by: Christopher Bellavita
Thesis Advisor

Alexander Garza, St. Louis University
Second Reader

Mohammed Hafez
Chair, Department of National Security Affairs

THIS PAGE INTENTIONALLY LEFT BLANK

ABSTRACT

Prior to implementation of the Affordable Care Act (ACA), tens of millions of U.S. citizens were without health insurance coverage. Without health insurance, health care can be unaffordable or inaccessible, or both. Our ability to obtain health care is part of the homeland security preparedness puzzle. If the Affordable Care Act increases health insurance coverage and helps to control costs as promised, it has enormous potential to bolster homeland security simultaneously. This thesis asks, “How will the implementation of the Affordable Care Act positively impact homeland security in its efforts to achieve its all-hazards preparedness goal?” This thesis first draws the links between health insurance coverage, health care and homeland security. Using empirical evidence and deductive analysis, it then forward-maps the positive impacts ACA implementation is likely have on homeland security in the areas of health and economic security. Recommendations aimed at enhancing the positive effects of the ACA are provided, including expanding ACA access and benefits to immigrants, better educating the public on the ACA tax penalty, and utilizing grants to encourage state participation.

THIS PAGE INTENTIONALLY LEFT BLANK

TABLE OF CONTENTS

I.	INTRODUCTION.....	1
A.	PROBLEM SPACE	1
B.	BACKGROUND	4
C.	PURPOSE OF THE RESEARCH.....	8
D.	RESEARCH QUESTION	9
II.	LITERATURE REVIEW	11
A.	GOVERNMENT DOCUMENTS	11
B.	POPULAR MEDIA	14
C.	MEDICAL RESEARCH.....	14
D.	POLICY WRITINGS	15
E.	METHOD	16
F.	CHAPTER OUTLINES	17
III.	HEALTH CARE AND HOMELAND SECURITY: DRAWING THE LINKS ..	19
A.	HOMELAND SECURITY REQUIRES A ROBUST, ACCESSIBLE HEALTH CARE SYSTEM.....	19
B.	BIOTERRORISM.....	20
1.	Bioterror and the Health Care Surveillance System	21
2.	Foodborne Illnesses and the Health Surveillance System	24
C.	DISEASE PREVENTION.....	25
1.	Influenza Virus.....	27
2.	History of Influenza Pandemics.....	29
3.	Combating Pandemic Influenza	30
D.	NATURAL DISASTERS	32
E.	PSYCHOLOGICAL RECOVERY	33
1.	Terror Attacks and PTSD	34
2.	Active-Shooter Incidents and Mental Illness.....	36
F.	ECONOMICS	38
G.	SUMMARY	40
IV.	WHAT IS THE PATIENT PROTECTION AND AFFORDABLE CARE ACT?	41
A.	SHARED RESPONSIBILITY	43
B.	EXPANSION OF MEDICAID	47
C.	CONTROLLING COSTS.....	49
D.	IMPROVING QUALITY OF THE HEALTH CARE SYSTEM.....	49
E.	SUMMARY	50
V.	ANALYSIS	53
A.	HOW IS ACA MOST LIKELY TO POSITIVELY IMPACT HOMELAND SECURITY EFFORTS TO ACHIEVE ALL- HAZARDS PREPAREDNESS?	53
B.	HEALTH SURVEILLANCE SYSTEM	55

C.	PREVENTIVE CARE	58
D.	DISASTER PREPAREDNESS.....	61
1.	Natural Disasters and Vulnerable Populations.....	64
2.	Strengthening of the Public Health System	65
3.	Mental Health Care	65
4.	Increased Economic Stability.....	66
E.	SUMMARY	70
VI.	WHERE DO WE GO FROM HERE?.....	71
A.	RECOMMENDATIONS AND POLICY ADJUSTMENTS.....	71
B.	EXTEND ACA BENEFITS TO IMMIGRANTS	71
C.	EDUCATE THE PUBLIC ON THE TRUE TAX PENALTY	74
D.	ADDRESS MEDICAID PREVENTIVE COVERAGE INEQUITY	75
E.	PROVIDE FINANCIAL INCENTIVES TO ENCOURAGE STATE PARTICIPATION IN ACA.....	76
F.	AREAS FOR FURTHER RESEARCH.....	77
G.	SUMMARY	77
	LIST OF REFERENCES.....	79
	INITIAL DISTRIBUTION LIST	89

LIST OF ACRONYMS AND ABBREVIATIONS

ACA	Affordable Care Act; same as Patient Protection and Affordable Care Act
ACIP	Advisory Committee on Immunization Practices
CBO	Congressional Budget Office
CDC	Centers for Disease Control
CHIP	Children’s Health Insurance Program
COMPARE	Comprehensive Assessment of Reform Efforts
CMS	Centers for Medicare and Medicaid Services
CRS	congenital rubella syndrome
DNA	deoxyribonucleic acid
EIP	Emerging Infections Program
EMTALA	Emergency Medical Treatment and Active Labor Act
FDA	Food and Drug Administration
FPL	federal poverty level
GAO	Government Accounting Office
HCERA	Health Care Education and Reconciliation Act
HHS	U.S. Health and Human Services Department
HMO	health maintenance organization
HPP	Hospital Preparedness Program
IRS	Internal Revenue Service
NIMH	National Institute for Mental Health
OECD	Organisation for Economic Co-operation and Development
OHP	Oregon Health Plan Standard
RNA	ribonucleic acid
PPACA	Patient Protection and Affordable Care Act; same as Affordable Care Act
PTSD	post-traumatic stress disorder
VA/VHA	Veterans Administration; Veterans Health Administration

THIS PAGE INTENTIONALLY LEFT BLANK

ACKNOWLEDGMENTS

I am both indebted and grateful to Dr. Christopher Bellavita for his encouragement and unyielding demand for quality analysis. Thank you to the entire Naval Postgraduate School staff—instructors and support personnel alike—for your dedication to your work and your investment in others. I am grateful to Dr. Alexander Garza for the gift of time and expertise given to a student both unmet and unseen. I thank my command staff for pushing me to take this on, and for giving me the time and support necessary to finish. Surely the one person most responsible for allowing me to complete this project was my wife, Lupita. Although you have always managed the kids and run the household, thank you for adding yard work, shopping, and even coaching to your endless list of things to do. You are the glue that holds it all together. I love you. Thank you.

THIS PAGE INTENTIONALLY LEFT BLANK

I. INTRODUCTION

Health care has not traditionally been considered part of the homeland security enterprise. But as the public becomes more aware of the complexities and relationships between the systems involved, our view of what comprises the homeland security enterprise expands as well.

A. PROBLEM SPACE

The great poet Virgil pointed to the paramount importance of physical wellness with his simple quote, “Our greatest wealth is health.” But maintaining our health often requires professional assistance or medical intervention. For the vast majority of United States residents, health care is an inevitability. In 2010 alone, 80 percent of U.S. adults saw a health care professional at least once during the year,¹ and Americans average 18 different doctors over a lifetime.² Our ability to obtain health care is part of the homeland security preparedness puzzle.

Homeland security’s mission has broadened since 2001 from a terror-centric focus to “a concerted national effort to ensure a homeland that is safe, secure, and resilient against terrorism and other hazards where American interests, aspirations, and way of life can thrive.”³ Much of this “all-hazards preparedness” mission has health care implications, such as protecting us from bioterror attack, identifying and mitigating emerging disease, or caring for the injured after a natural disaster. Ensuring that our “interests, aspirations and way of life can thrive” also necessitates some level of economic security.⁴

¹ Schiller et al., *Summary Health Statistics for U.S. Adults: National Health Interview Survey*, Center for Disease Control, 2010, http://www.cdc.gov/nchs/data/series/sr_10/sr10_252.pdf, 12.

² “Survey: During Lifetime, Average Person Sees Nearly 20 Doctors,” press release, Practice Fusion, April 127, 2010, <http://www.practicefusion.com/pages/pr/survey-patients-see-over-18-different-doctors-on-average.html>

³ U.S. Department of Homeland Security, *Quadrennial Homeland Security Review Report* (Washington, DC: U.S. Department of Homeland Security, 2010), 12.

⁴ *Ibid.*, 12.

In the United States, health care is not an entitlement, but rather it is a privately funded and for-profit industry. The most common methods of financing our health care costs are private health insurance policies, which are obtained via job benefits, followed by government entitlement programs.⁵

According to a Center for Disease Control report, health insurance is a key indicator for access to health care.⁶ It is well-documented that uninsured Americans wait longer to seek medical care, present at a more advanced state of illness, and consequently, have poorer health outcomes than the insured population.⁷ A 2012 U.S. Census Bureau report estimated that upwards of 48.6 million Americans lacked health insurance at the time of its issuance.⁸ This lack of health insurance is a significant gap in the homeland security preparedness effort, which leaves us vulnerable to homeland security-related threats, such as emerging disease, contagion and bioterror attacks.

Unfortunately, health care in America is an expensive proposition. As a nation, the U.S. currently spends 17.7 percent of its gross domestic product (GDP) on health care, while other economically advanced societies with some form of publicly-funded health care average only 9.3 percent of their GDP.⁹ U.S. health care costs increased three times faster than wages from 2000 to 2010,¹⁰ and half of all personal bankruptcies are caused in part by medical expenses.¹¹ As Harvard M.D. and noted health care expert

⁵ Carmen DeNavas-Walt et al., *Income, Poverty, and Health Insurance Coverage in the United States: 2011* (Washington, DC: U.S. Government Printing Office, 2012), <http://www.census.gov/prod/2012pubs/p60-243.pdf>.

⁶ Robin A. Cohen and Barbara Bloom, *Access to and Utilization of Medical Care for Young Adults Aged 20–29 Years: United States, 2008* (NHCS Data Brief no. 9) (Atlanta: GA, Centers for Disease Control and Prevention, 2010), <http://www.cdc.gov/nchs/data/databriefs/db29.PDF>, 1.

⁷ Andrew P. Wilper et al., “Health Insurance and Mortality in U.S. Adults,” *American Journal of Public Health* 99, no. 12 (2009): 2289.

⁸ “The 2012 Statistical Abstract,” U.S. Census Bureau, 2012, <http://www.census.gov/compendia/statab/2012/tables/12s0155.pdf>, 111

⁹ Organisation for Economic Co-operation and Development (OECD), *OECD Health Data 2013: How Does the United States Compare?* (Paris, France: Organisation for Economic Co-operation and Development, 2013), 1–2.

¹⁰ Health Care Cost Institute, *Health Care Cost and Utilization Report: 2010*, Health Care Cost Institute, 2012, www.healthcostinstitute.org/files/HCCI_HCCUR2010.pdf

¹¹ The Patient Protection and Affordable Care Act, H.R., 3590, 111th Cong. (2010), §1501 (E), 125; David U. Himmelstein et al., “Medical Bankruptcy in the United States, 2007: Results of a National Study,” *The American Journal of Medicine* 122, no. 8 (2009), 741–746.

Steffie Woolhandler stated, “Unless you’re a Warren Buffett or Bill Gates, you’re one illness away from financial ruin in this country.”¹² As a result, 15.7 percent of the population lack insurance altogether, and a combined 42 percent of adults (over age 18) are considered either uninsured or underinsured.¹³

In an effort to increase the number of uninsured Americans and reduce the overall costs of health care, the 111th United States Congress passed and President Barack Obama signed the Patient Protection and Affordable Care Act (PPACA, and hereafter referred to as “ACA”) into law on March 23, 2010. This federal law represents the largest health care overhaul since the introduction of Medicare and Medicaid in 1965. The legislation aims to expand health insurance coverage through a variety of means, including employer tax credits, subsidies, expansion of government insurance programs, regulations and mandates. Another primary aim is to control health care expenditures. Other goals of this lengthy and complex law include improved health care delivery, efficiency and transparency, and improved health care workforce training.¹⁴ The ACA survived Supreme Court review in June of 2012, and it goes into effect in stages through 2019.

Affordable, accessible health care has not, as of yet, reached the policy agenda of the homeland security community. This thesis will explore some of the likely impacts the implementation of the ACA will have on our homeland security system. The Affordable Care Act is potentially a substantial steppingstone towards achieving “all-hazards preparedness” and therefore warrants graduate-level research and focused attention.

¹² Theresa Tamkins, “Medical Bills Prompt More than 60 Percent of U.S. Bankruptcies,” *CNN*, June 5, 2009, <http://www.cnn.com/2009/HEALTH/06/05/bankruptcy.medical.bills/>

¹³ As used here, the designation of “underinsured” is determined by assessing financial risk against income (e.g., out-of-pocket medical expenses) totaled 10 percent of income or more. Cathy Schoen et al., “How Many are Underinsured? Trends among U.S. Adults, 2003 and 2007,” *Health Affairs* 27, no. 4 (2008):298–309, doi:10.1377/hlthaff.27.4.w298

¹⁴ Democratic Policy Communication Committee, *Patient Protection and Affordable Care Act: Detailed Summary*, accessed September 9, 2013, <http://www.dpc.senate.gov/healthreformbill/healthbill04.pdf>

B. BACKGROUND

Health care is an immense part of the United States' economy, infrastructure, and dialogue, in large part due to its enormous—and constantly growing—costs. In 2011, the U.S. spent 17.7 percent of its gross domestic product on health care, which is eight percentage points higher than the average for other developed countries (9.3 percent), according to the Organisation for Economic Co-Operation and Development (OECD).¹⁵ Even still, the United States is the lone industrialized nation in the world without a government-sponsored universal health care system.¹⁶ In the United States, health care is financed through a mix of private and employer-sponsored insurance, while specific groups are eligible for one of four entitlement programs: Medicaid, Medicare, the Veterans Health Administration, and Children's Health Insurance Program (CHIP).

Every other industrialized nation (e.g., France, the United Kingdom, Japan, Canada) in the world has some form of government-funded health care system in place. Each country's system differs in its delivery and funding mechanism, but the underlying concept is that the government takes action to ensure widespread—or “universal”—coverage and sets minimum standards of care. Generally, this is achieved through legislation and regulation, while funding is generally accomplished, in whole or in part, by taxation.

Some countries utilize a single-payer funding mechanism whereby the government, rather than privately-owned health insurance companies, pays for all health care expenses. The term “single-payer” refers to the fact that a single entity—the government—pays all costs.

In some countries, such as Canada, most hospitals and medical facilities are privately owned, and the doctors are contractors who receive reimbursement from provincially based “Medicare” funds.¹⁷ Medical care is mostly free at the point-of-use for

¹⁵ OECD, *OECD Health Data 2013*, 1–2.

¹⁶ Wilper et al., “Health Insurance and Mortality in U.S. Adults,” 2289.

¹⁷ “Public vs. Private Health Care,” *CBC News*, December 1, 2006, http://www.cbc.ca/news2/background/healthcare/public_vs_private.html

the care designated as “medically necessary.”¹⁸ Insurance companies are prohibited from selling coverage redundant to services already covered by the government; however, they may sell supplemental coverage.

In the United Kingdom, most health care facilities are owned by the government, and the health care providers are employed by the government. Both set-ups are considered single-payer systems. Both are funded primarily through taxation of the population.

The U.S. health care system uses a fee-per-service funding mechanism, meaning that medical providers charge fees based on the services rendered. One criticism of this structure is that it can encourage unnecessary testing and other procedures because the provider is able to charge more money for the same outcome.

The United States runs several health entitlement programs. Approximately 32.2 percent of all Americans are currently eligible for health coverage or care through these four programs.¹⁹ The following is a brief description of their origins:

- The Veterans Administration (VA) was established by Congress in 1930. The Veteran’s Health Administration (VHA) is a component of the VA that provides medical care.²⁰ This program provides direct medical care in its hundreds of medical centers, outpatient, outreach and rehabilitation clinics, and nursing homes to all military veterans and their families. These facilities are owned and operated by the U.S. government, and provide no-cost or very low-cost medical services, depending upon the type of care needed, and the patient’s income. For example, all services provided for an injury sustained during military service is comprehensive and no-cost. Other services and medications would entail minimal co-pay.
- In 1965, President Lyndon Johnson enacted two major health care entitlement programs:
 - Medicare was introduced as a medical insurance program for senior citizens, paid for by a federal tax collected over the life of the working retiree.

¹⁸ Canadian Institute for Health Information, *Exploring the 70/30 Split: How Canada’s Health Care System is Financed* (Ottawa, Canada: Canadian Institute for Health Information, 2005), https://secure.cihi.ca/free_products/FundRep_EN.pdf, 16.

¹⁹ OECD, *OECD Health Data 2013*, 1–2.

²⁰ U.S. Department of Veterans Affairs, “Health Programs for Veterans,” March 2014, <http://www.va.gov/health/programs/index.asp>

- Medicaid is a combined federal/state program, established as a safety-net for the poor. Individual states implement and manage discrete programs and are partially reimbursed by the federal government.
- In 1997, the States Children’s Health Insurance Program (SCHIP or CHIP) was established, a federally funded program that expanded medical coverage for children in families that earn up to 200 percent of the federal poverty level (FPL).

All of this matters because health care in America has become so costly, few can afford treatment without health insurance coverage or access to the entitlement programs. Cancer treatments of various forms range from a low of \$5,000 for the initial treatment of melanoma, to over \$100,000 for the initial treatment of brain cancer.²¹ In March of 2013, Steven Brill published an in-depth report in *Time* magazine highlighting the outrageous mark-ups on hospital charges for treatment, supplies, and medicine that oftentimes have no correlation whatsoever to their actual costs. Although a comprehensive look at health care charges is beyond the scope of this paper, repeated examples cited in the article show that consumers are routinely charged a mark-up of 10 times or more the actual cost of the item, with some mark-ups as high as 10,000 percent.²²

Some argue that America already provides universal health care coverage via the hospital emergency room. U.S. federal law requires U.S. hospital emergency rooms to provide care to all comers for emergency health care, vaccinations and treatment of communicable disease, regardless of immigration status or ability to pay.²³ This is a hidden cost ultimately shifted to the insured. According to the Institute of Medicine, when the uninsured cannot pay for their health care, eventually taxpayers shoulder the

²¹ Angela B. Mariotto et al., “Projections of the Cost of Cancer Care in the U.S.: 2010–2020,” *Journal of the National Cancer Institute* 103, no. 2 (2011): 117–128, doi:10.1093/jnci/djq495

²² The example on the cover of this article shows that one acetaminophen tablet costs about 1.5 cents, while one hospital marks it up 10,000 percent to \$1.50 per pill. Steven Brill, “Bitter Pill: Why Medical Bills are Killing Us,” *Time*, March 4, 2013, <http://www.uta.edu/faculty/story/2311/Misc/2013,2,26,MedicalCostsDemandAndGreed.pdf>

²³ Emergency Medical Treatment and Active Labor Act, Pub. L. No. 113–142, 42 U.S. Code §1395dd (1986).

burden.²⁴ It is true that more people are seeking treatment at the emergency room because of lack of other options;²⁵ however, with the average cost of a single emergency room visit at \$1,354 in 2011,²⁶ the emergency room often a last resort, especially for those who can least afford the bill.

Inherent in the concept of a true universal health care system is the idea that people can obtain preventive care and routine care for non-emergency medical issues at a reasonable price. Here is where the U.S. health care system has evolved into what health care expert Paul Starr terms the “American health-policy trap.” As he explains in his book, *Remedy and Reaction*, most of the insured public is reasonably satisfied with their coverage until a major health-event occurs, they experience a change in coverage, such as job-loss, or they experience a rescission of their health insurance by an insurer.²⁷ Starr surmises the public may worry less about these types of occurrences than what would happen to their coverage in the event of major health care reform.²⁸ In addition, many of those who do have coverage feel they have “earned” the coverage, while others have not.²⁹ The idea of paying for anyone else’s health care seems dangerously close to socialism and possibly “un-American.” According to Starr, Americans seem to feel a moral sense that those with health insurance have earned it by maintaining employment, by serving in the military, or by reaching Medicare eligibility after a lifetime of work. On

²⁴ Institute of Medicine of the National Academies, *Uninsurance Facts and Figures: Uninsurance Costs the Country More than You Think* (Washington, DC: National Academies Press, 2004), <http://www.iom.edu/~media/Files/Report%20Files/2004/Insuring-Americas-Health-Principles-and-Recommendations/FactsheetSociety2.pdf>, 1.

²⁵ Renee M. Gindi, *Emergency Room Use among Adults Aged 18–64: Early Release of Estimates from the National Health Interview Survey, January–June 2011*, Centers for Disease Control and Prevention, May 2012, www.cdc.gov/nchs/data/nhis/earlyrelease/emergency_room_use_january-june_2011.pdf, 1.

²⁶ Agency for Healthcare Research and Quality, “Table 6: Emergency Room Services-Median and Mean Expenses per Person with Expense and Distribution of Expenses by Source of Payment: United States, 2011,” January, 2014, http://meps.ahrq.gov/data_stats/tables_compendia_hh_interactive.jsp?_SERVICE=MEPSSocket0&_PROGRAM=MEPSPGM.TC.SAS&File=HCFY2011&Table=HCFY2011_PLEXP_E&VAR1=AGE&VAR2=SEX&VAR3=RACETH5C&VAR4=INSURCOV&VAR5=POVCAT11&VAR6=MSA&VAR7=REGION&VAR8=HEALTH&VARO1=4+17+44+64&VARO2=1&VARO3=1&VARO4=1&VARO5=1&VARO6=1&VARO7=1&VARO8=1&_Debug=

²⁷ Paul Starr, *Remedy and Reaction: The Peculiar American Struggle over Health Care Reform* (New Haven, CT: Yale University Press, 2011), 324.

²⁸ *Ibid.*

²⁹ *Ibid.*, 237.

the other hand, people in other countries that do offer universal health care, such as Canada and the UK, consider it a right and a public need.

The American policy trap is ironic, especially in light of the fact that we already pay taxes in several ways to fund health care for those that have not “earned” it: the government gives generous tax benefits to businesses that offer health insurance; hundreds of thousands of employees of the U.S. government enjoy publicly-financed health care; entitlement programs such as Medicaid, Medicare, CHIP and VHA costs total billions of taxpayer dollars annually. In addition, when the uninsured are treated in an emergency room, unpaid costs are eventually shifted to the insured or the government.

C. PURPOSE OF THE RESEARCH

Decreased access or inability to pay for health care has significant homeland security implications: our ability to manage bioterror events, influenza pandemic, emerging disease, post-disaster care, and the mentally ill is hampered. It is my theory that the implementation of the Affordable Care Act will aid our homeland security efforts by expanding health insurance coverage, and thereby health care access, to millions of U.S. residents. In addition to positive economic influences, these effects will have positive impacts on our health security. The goal of this research is to describe the linkages between health care and homeland security, to provide an overview of the Patient Protection and Affordable Care Act, and to describe how its implementation will positively affect homeland security from two different perspectives: health security and economic security. Finally, I will make recommendations based on the research on implementation policies in order to improve the positive effects of the ACA on homeland security.

Although this research will no doubt also highlight potentially negative consequences or repercussions that are likely to result from ACA implementation, this thesis focuses primarily on one side of the issue in order to thoroughly explore how the ACA can potentially aid health care, and to better understand why health care matters in the overall homeland security puzzle. Further research is warranted to explore potentially negative outcomes of ACA implementation.

D. RESEARCH QUESTION

How will the implementation of the Affordable Care Act positively impact homeland security in its efforts to achieve its all-hazards preparedness goal?

THIS PAGE INTENTIONALLY LEFT BLANK

II. LITERATURE REVIEW

Because the ACA is new and has yet to be fully implemented, there is little to no secondary literature or research available on implementation outcomes. However, there is considerable literature on the topics and disciplines surrounding the research. There is the legislation itself (the Affordable Care Act) and the Supreme Court decision upholding it; government reports outlining homeland security strategy and goals; government reports estimating costs of the ACA; voluminous medical and health care research and policy writings from various sources; and of course, there is an endless amount of political, ideological, and popular discourse. Limited research is available on the direct relationship between homeland security and bioterrorism, emerging disease, and public health.

A. GOVERNMENT DOCUMENTS

The federal law Patient Protection and Affordable Care Act³⁰ is the main primary source in this literature review. The Patient Protection and Affordable Care Act is generally referred to as the Affordable Care Act (ACA), which is also known informally as “Obamacare.” This federal statute is considered by some to be the largest overhaul of U.S. health care since the enactment of Medicare and Medicaid in 1965.³¹ The legislative document outlines the overall goals of the law, as well as the myriad of strategies and regulations to be employed in an effort to achieve those goals. Over a year in the making, the final bill was essentially a synthesis of a White House health care proposal, a Senate health care bill, and another from the U.S. House of Representatives. These were combined and passed by the 111th Congress and signed by President Barack Obama on March 23, 2010.

At its core, the bill aims to increase the number of Americans covered by health insurance, control health insurance costs, and improve the overall health care system. The

³⁰ Patient Protection and Affordable Care Act, Pub. L. No. 111–148, 124 Stat. 119 (2010).

³¹ Sheryl Gay Stolberg and Robert Pear, “Obama Signs Health Care Overhaul Bill, with a Flourish,” *New York Times*, sec. Money & Policy, March 23, 2010, <http://www.nytimes.com/2010/03/24/health/policy/24health.html>; James Vicini and Jonathon Stempel, “U.S. Top Court Upholds Health Care Law in Obama Triumph,” Reuters, sec. Wrap Up, June 28, 2012, <http://www.reuters.com/article/2012/06/28/usa-healthcare-court-idUSL2E8HS4WG20120628>

main strategies outlined to achieve greater health insurance coverage are an expansion of Medicaid to higher income-earners, tax subsidies for employer-related coverage, the creation of state insurance “exchanges” where people can buy insurance on a sliding scale, and the “individual mandate,” which requires individuals to carry insurance or pay a penalty to the Internal Revenue Service (IRS). The ACA is multi-layered and complex. Its critics point to its massive length as one of its inherent problems.

The Health Care Education and Reconciliation Act³² (HCERA) is another primary source document that goes hand-in-hand with the ACA. This law allowed the legislature a vehicle for immediate changes and corrections to the original ACA bill, as well as created some room in the budget for the ACA by addressing unrelated student loan issues. This bill was signed into law on March 30, 2010 by President Obama exactly one week after the ACA. The ACA and the HCERA are referred to together because they are very much intertwined. Although the laws were written and signed separately, they have been combined into a single working document.

The ACA is a highly controversial piece of legislation and was fought by several entities all the way to the Supreme Court. On June 28, 2012, the Supreme Court announced a decision upholding the constitutionality of the core of the act. This decision, *National Federation of Independent Business v. Sebelius*,³³ outlines the court’s reasoning as to why it found the law constitutional. In its decision the Court referenced the Congress’ authority to collect taxes in order to aid the defense of the nation.³⁴ An *amicus curiae* (“friend of the court” brief) submitted to the Court in support of the ACA provided this argument. Legal scholar Philip Bobbitt argued in his *amicus* that the individual mandate is a reasonable form of taxation congress may impose to provide for the

³² Health Care and Education Reconciliation Act, Pub. L. No. 111–152, 124 Stat. 1029 (2010).

³³ “National Federation of Independent Business et al. V. Sebelius,” last modified 2014, *ScotUS Blog*, <http://www.scotusblog.com/case-files/cases/national-federation-of-independent-business-v-sebelius/>

³⁴ *Ibid.*, 5.

common defense of the nation. He linked the contemporary dangers of bioterror coupled with lack of insurance as something that jeopardizes the nation as a whole.³⁵

Several homeland security reports outlining homeland security strategies have been issued since September 11, 2001. These provide perspective on the homeland security mission and scope and their development since that defining moment on 9/11. Such documents include the Department of Homeland Security's *National Strategy for Homeland Security* reports from 2002 and 2010, the 2010 *Quadrennial Homeland Security Review Report*, and the Federal Emergency Management Agency's *Crisis Response and Disaster Resilience 2030* report. These reports show the evolution from the early, narrow focus on terrorism, to an ever-expanding view that includes topics such as emerging disease and disaster preparedness. These writings outline federal guidelines and policies aimed primarily at the Department of Homeland Security, but also give guidance to other government agencies and the public at large.

Other government reports such as those issued by the Center for Disease Control and the U.S. Census Bureau provide estimates for the numbers of Americans without health insurance and estimates on national health care spending. These reports are widely cited throughout the literature and seem to be considered the current, best estimates by parties on all sides of the health care debate. Although these numbers are always in flux, the estimates are updated annually based on U.S. Census Bureau surveys. In addition, they can be used to help inform cost estimates and help predict the impact of increased health insurance coverage on morbidity and mortality rates.

Government reports on cost-estimates abound and are updated regularly. The non-partisan Congressional Budget Office (CBO) and the Government Accounting Office (GAO) regularly issue reports projecting costs and impacts on the deficit. Each time a report is issued, the numbers are adjusted, depending on most recent estimates of uninsured, unemployed workers, families eligible for Medicaid, etc.

³⁵ Philip C. Bobbitt, *Brief for Professor Philip C. Bobbitt as Amicus Curiae in Support of Petitioners with Respect to the Individual Mandate* (No. 11-396), 2012, http://www.yale.edu/lawweb/jbalkin/files/Philip_Bobbitt_Healthcare_Brief.pdf

B. POPULAR MEDIA

One thing that does not change, regardless of future estimates, is the reports are then analyzed by the media in completely contradictory fashions depending on the interpreter's agenda. With each report comes popular media commentary and analysis—some, such as Conservapedia, reporting how the latest estimate shows an enormous increase in spending,³⁶ and the next article, such as found in the Washington Post, pointing out how the deficit will be reduced.³⁷ Even when both of these statements are true, the analyses are most often written in a highly partisan manner, either critical or supportive of the estimated impacts. The same process occurs within the political arena, and the political stance is distributed via newspaper, Internet or sound-bite. For example, some insurance plans eligible for the Exchange may cover drugs that treat erectile dysfunction. It is also true that convicted sex offenders and other convicts will be allowed to purchase health insurance on the Exchange. These facts have been framed by some opposed to the ACA as voting “use taxpayer dollars to pay for Viagra for convicted child molesters and sex offenders.”³⁸

Because of the biases and agendas, it is difficult to separate fact from fiction when reading popular media analyses. If the reader checks the “facts” outlined in the media report against the referenced CBO or GOA report, the actual numbers cited may be correct, but the conclusions reached based on the same numbers are disparate. However, because the ACA has only begun, any conclusions right now are only estimates or best-guesses. It will be years before anyone will truly know the financial and societal impacts of the Affordable Care Act.

C. MEDICAL RESEARCH

Medical research is widely available on topics relevant to this thesis, including: the relationship between health insurance (or lack thereof) to morbidity and mortality,

³⁶ *Conservapedia*, s.v. “Obamacare,” August 25, 2013, <http://www.conservapedia.com/ObamaCare>

³⁷ Ezra Klein, “11 Facts about the Affordable Care Act,” *The Washington Post*, June 24, 2012, <http://www.washingtonpost.com/blogs/wonkblog/wp/2012/06/24/11-facts-about-the-affordable-care-act/>.

³⁸ “Angle’s Shocking-and Misleading-Viagra Claim,” FactCheck, October 8, 2010, <http://www.factcheck.org/2010/10/angles-shocking-and-misleading-viagra-claim/>

health insurance and vaccination rates, vaccination rates to the spread of preventable contagious diseases, and contagious diseases to morbidity and mortality. These reports are available in science-based, peer-reviewed journals, such as *Journal of American Medical Association* and *Health Affairs*. Such documents provide rigorously researched evidence to back up their conclusions. Several of these studies were conducted pre-9/11, but are still looked to as the gold-standard on their topic.

D. POLICY WRITINGS

An enormous amount of research and writing is available in the policy arena. Articles linking the relationship between health care and homeland security can be found across policy journals of all types including legal, ethical, political, health care, and homeland security. The post-9/11 literature is most relevant to this thesis. A fraction of this research explores the direct nexus between health care and homeland security, most often in two particular areas: 1) health care and its relationship with bioterrorism; and, 2) health care and its relationship to emerging disease. Generally, the health care angle is limited to a single, specific slice of the health care pie. For example, an article in *Journal of Health and Human Services Administration* explores “Terrorism and Emergent Challenges in Public Health,”³⁹ while another article explores ethical challenges in preparing for bioterrorism,⁴⁰ and the issues that arise due to lack of universal health care access. There is also limited research available covering the connection between health care and disaster preparedness. These documents provided critical pieces of the information necessary for the writing of this paper. Although none speaks directly to the ACA, they provide an understanding of how health care impacts the homeland security mission, and how lack of access to health care creates substantial gaps in our security.

³⁹ Irene O’Boyle et al., “Terrorism and Emergent Challenges in Public Health, *Journal of Health Human Service Administration* 30, no. 4 (2008): 529–548.

⁴⁰ Matthew K. Wynia and Lawrence O. Gostin, “Ethical Challenges in Preparing for Bioterrorism: Barriers within the Health Care System, *Journal Information* 94, no. 7 (2004): 1096–1102.

E. METHOD

The goal of this research is to describe the linkages between health care and homeland security, to provide an overview of the Affordable Care Act, and to describe how its implementation will positively affect homeland security from two different perspectives: health security and economic security. The method used here involved researching the primary and secondary literature for evidence on how health care relates to homeland security, and how the ACA might positively impact homeland security preparedness. One method used to support claims and empirical evidence when available is deductive analysis. In conducting this research, the health and the economic perspectives were the most prevalent in the literature, and had the most data available. For these reasons, this thesis limits the discussion to these two areas.

Primary literature was identified quickly as the actual health care legislation upon which all of this is built: the Patient Protection and Affordable Care Act, in combination with the Health Care and Education Reconciliation Act (now known as Public Law 111-148). The secondary literature was identified initially through searches for direct links between health care and homeland security. Very little research was available in this area, with the exception of writings on bioterrorism. The writings on bioterror led this researcher to information on unintended health care disasters, such as influenza pandemic, and emerging disease. Much of this information was contained in scientific medical literature, public health journals, and health policy literature. This led to a review of the government homeland security strategic documents to gain a sense of health care's current role within the homeland security puzzle. Several case studies with health care implications were reviewed, such as the anthrax attack of 2001, the Aum Shinrikyo terrorist group actions in 1995, and the natural disaster in Joplin, Missouri in 2011.

Significant study was given to how health insurance affects health, mortality, and income. Most of this secondary research was found in medical journals and public health literature. Potentially negative effects of ACA implementation on homeland security are acknowledged in this thesis, but not fully explored primarily due to difficulty finding data showing how expanded access to health care might harm homeland security preparedness. For this reason, the focus was narrowed to positive impacts. The

potentially negative impacts are worthy of exploration as well, and further research in this area would be a valuable contribution to the overall picture.

Policy recommendations are given on ACA implementation with the aim of enhancing its positive influence on homeland security preparedness. It must be acknowledged that an enormous assumption has been made in conducting this research: that the Affordable Care Act will, at least to some degree, work as promised to expand health insurance coverage and improve access to health care for eligible parties. If the ACA is repealed before full implementation, or if it fails to expand health care coverage, then clearly the basis for this thesis disappears.

F. CHAPTER OUTLINES

In order to forward-map potential impacts of the ACA on homeland security, it is first necessary understand how health care, or lack thereof, relates to homeland security preparedness. Chapter III outlines explicit linkages as well as more subtle relationships between health care and homeland security.

Chapter IV is an overview of the Patient Protection and Affordable Care Act, describing its goals, strategies and timelines.

Chapter V provides an in-depth analysis on the various ways the research indicates the ACA will positively impact homeland security preparedness.

Chapter VI provides a summary of this thesis, policy recommendations to improve ACA implementation and enhance its positive impacts on homeland security preparedness, and recommends areas of further study.

THIS PAGE INTENTIONALLY LEFT BLANK

III. HEALTH CARE AND HOMELAND SECURITY: DRAWING THE LINKS

When boiled down to its essential purpose, the entire focus of the homeland security system is to ensure the physical health and safety of the U.S. population. So whether it is preventing conventional terror attacks, mitigating a bioterror or pandemic event, or recovering from a massive hurricane, a robust health care system is an integral part of the homeland security machine. The health care aspect of homeland security is often overlooked or seen as a totally unrelated system; however, health care is a foundational component of a functional homeland security enterprise.

A. HOMELAND SECURITY REQUIRES A ROBUST, ACCESSIBLE HEALTH CARE SYSTEM

The United States has twice been shown how critical the health of its soldiers is to fighting wars. During the Revolutionary War, American soldiers fell victim in large numbers to smallpox. Elizabeth Fenn estimates that smallpox killed more than 130,000 North Americans during that time period.⁴¹ British soldiers on the other hand, had developed some level of immunity through exposure to the disease in England and were barely affected.⁴² During World War I, the Spanish flu afflicted 294,000 allied troops, with 23,000 soldiers eventually succumbing.⁴³ Still, that number is a drop in the bucket compared to the number of Spanish flu deaths worldwide, which are estimated at over 50 million.⁴⁴

⁴¹ Elizabeth A. Fenn, *Pox Americana: The Great Smallpox Epidemic of 1775–82* (New York: Hill and Wang, 2001), 370.

⁴² Shane K. Green, “Bioterrorism and Health Care Reform: No Preparedness without Access,” *Virtual Mentor* 6, no. 5 (May 2004): 1. <http://virtualmentor.ama-assn.org/2004/05/pfor2-0405.html>

⁴³ Susan Peterson, “Epidemic Disease and National Security,” *Security Studies* 12, no. 2 (2002): 45.

⁴⁴ “Pandemic Flu History,” U.S. Department of Health & Human Services, accessed July 15, 2014, <http://www.flu.gov/pandemic/history/>

The contemporary “war on terror” involves all Americans—terrorists consider civilians to be legitimate targets, as evidenced by 9/11, the Underwear Bomber,⁴⁵ the Shoe Bomber,⁴⁶ and the Boston Marathon bombing.⁴⁷ If a terror group or a terrorist is willing to use biological or chemical weapons, it is likely we are all potential targets. In such an attack, health care will almost certainly play an important role in prevention, preparedness, detection, mitigation and recovery.

B. BIOTERRORISM

...the healthcare of all persons living in America is bound together: the protection of every American is no stronger than the weakest protection of any American.

–Philip Bobbitt⁴⁸

As Professor Philip Bobbitt argued in his *amicus curiae* to the Supreme Court in support of the Affordable Care Act,⁴⁹ health care is one of the bastions of homeland security defense. Detection, treatment, and even prevention of bioterror attacks are all functions of a robust health care system. Without an affordable health care system, accessible to all, homeland security suffers increased vulnerability to attacks utilizing bioweapons such as anthrax, smallpox, Ebola virus, or designer bioweapons. Potential weapons are not limited to distribution via inhalation or aerosolization, our open water supplies and unprotected food networks are vulnerable as well.

Advances in biotechnology and the Internet have taken the knowledge needed to synthesize bioweapons out of the hands of a few skilled professionals and put it in the

⁴⁵ On Christmas day, 2009, Umar Farouk Abdulmatallab attempted to detonate explosives hidden in his underwear while onboard Northwest flight #253 from Amsterdam to Detroit, Michigan. *Wikipedia*, s.v. “Underwear Bomber,” accessed July 15, 2014, http://en.wikipedia.org/wiki/Umar_Farouk_Abdulmutallab

⁴⁶ On December 21, 2001, Richard Colvin Reid attempted to detonate explosives packed into the soles of his shoes while onboard American Airlines flight #63 from Paris to Miami. *Wikipedia*, s.v. “Shoe Bomber,” http://en.wikipedia.org/wiki/Richard_Reid. Accessed July 15, 2014.

⁴⁷ On April 13, 2013, brothers Tamerlan and Dzhokhar Tsarnaev detonated two pressure cooker bombs near the finish line of the Boston Marathon, killing three people and injuring 264, *Wikipedia*, s.v. “Boston Marathon Bombing,” accessed July 15, 2014, http://en.wikipedia.org/wiki/Boston_Marathon_bombings

⁴⁸ Bobbitt, *Brief for Professor Philip C. Bobbitt*, 9.

⁴⁹ *Ibid.*, 1–12.

public arena. Full genomic sequences are available on the Internet for the avian flu,⁵⁰ West Nile virus,⁵¹ and countless others. Our own National Center for Biotechnology Information, part of the U.S. Library of Sciences, provides information on its website on how to sequence genomes, map chromosomes and do all sort of molecular biology that once was limited to specially trained researchers.⁵² Advances in DNA technology, such as polymerase chain reaction (PCR) techniques and recombinant DNA technology, have made gene manipulation commonplace. In the future, an average science student could be the next mass-murderer via designer disease.

1. Bioterror and the Health Care Surveillance System

The initial identification of a bioterror attack requires a functional health care surveillance system. Unless the attacker(s) announces the specifics of the attack, or the country's biosensors are activated by the biological weapon, it is likely we would only become aware of a biological attack via the health care system's surveillance program. Hospitals, health care providers and clinical laboratories around the U.S. routinely report infectious disease diagnoses and food and water-borne illnesses to the Centers for Disease Control and Prevention (CDC). The CDC manages the Emerging Infections Program (EIP) as part of its Division of Preparedness and Emerging Infections. The EIP is a network of 10 state health departments⁵³ and their collaborators that include local health departments and health care providers, clinical laboratories, academic institutions, and other federal agencies. These institutions gather data on disease outbreaks and foodborne illnesses. The EIP compiles data and analyzes it. Once it spots clusters or

⁵⁰ Guang-Wu Chen et al., "Genomic Signatures of Human versus Avian Influenza A Viruses," *Emerging Infectious Diseases* 12, no. 9 (September 2006): 1353–1360, doi: 10.3201/eid1209.060276

⁵¹ Robert S. Lanciotti, Gregory D. Ebel, Vincent Deubel, Amy J. Kerst, Severine Murri, Richard Meyer, Michael Bowen, Nancy McKinney, William E. Morrill, Mary B. Crabtree, Laura D. Kramer, and John T. Roehrig, "Complete Genome Sequences and Phylogenetic Analysis and West Niles Virus Strains Isolated from the United States, Europe and the Middle East," *Virology* 298, no. 1, June 20, 2002, 96–125, http://ac.els-cdn.com/S0042682202914492/1-s2.0-S0042682202914492-main.pdf?_tid=5bd11b66-179a-11e4-ae5f-00000aacb35f&acdnat=1406691426_5f9b0d3d7741a04199a96b2f2ebf5d2d.

⁵² National Center for Biotechnology Information, U.S. National Library of Medicine, "Genome," accessed March 28, 2014, <http://www.ncbi.nlm.nih.gov/genome>

⁵³ California, Colorado, Connecticut, Georgia, Maryland, Minnesota, New Mexico, New York, Oregon, and Tennessee

identify outbreaks, it communicates and collaborates with state and local health care networks and regulatory agencies such as the Food and Drug Administration (FDA) in an effort to trace the origin of the disease and find appropriate treatments.⁵⁴

Strength of the health care surveillance system aside, if the sickened do not report for diagnosis and treatment, the entire system is rendered ineffective. And if the sickened merely wait longer to report for treatment because they lack health insurance, they are more likely to have poor health outcomes, which can worsen the overall effect of the outbreak.⁵⁵ A perfect example would be the anthrax attack of 2001, which occurred only one week after the defining act of terrorism against America. With anthrax infection, early diagnosis and treatment are critical factors in determining whether the victim lives or dies.⁵⁶ In the 2001 event known as “Amerithrax,”⁵⁷ 22 individuals were infected with the anthrax spores, five of whom died, after a still unconfirmed suspect⁵⁸ sent the spores through the mail. Anthrax is treatable via antibiotics if correctly diagnosed early enough in the progression of the illness. In order to diagnose the disease, the stricken must present to a health care provider. Decades of research has shown a strong association between health insurance and access to health care.⁵⁹ In other words, if people have health insurance, they are more likely to go to the doctor when they are ill. Conversely, a

⁵⁴ Centers for Disease Control and Prevention, “Emerging Infections Programs,” October 11, 2011, <http://www.cdc.gov/ncezid/dpei/eip/index.html>.

⁵⁵ Wilper et al., “Health Insurance and Mortality in U.S. Adults,” 2289–2295.

⁵⁶ The other critical factor is whether the victim suffers from inhalation infection a more virulent form of the disease; *Wikipedia*, s.v. “Anthrax,” last modified July 25, 2014, <http://en.wikipedia.org/wiki/Anthrax>

⁵⁷ “Amerithrax” was the FBI’s name for the 2001 anthrax investigation. *Wikipedia*, s.v. “Amerithrax,” last modified August 3, 2014, <http://en.wikipedia.org/wiki/Amerithrax> Citation?

⁵⁸ Federal prosecutors declared in August of 2008 that Bruce Ivins, a scientist at a government biodefense lab, was responsible for the attack. Ivins committed suicide in July of 2008. Whether he was actually responsible for the attacks is still a major controversy. *Wikipedia*, s.v. “Amerithrax,” last modified August 3, 2014, <http://en.wikipedia.org/wiki/Amerithrax> Citation?

⁵⁹ Catherine Hoffman and Julia Paradise, “Health Insurance and Access to Health Care in the United States,” *Annals of the New York Academy of Sciences* 1136 (June, 2008): 149–160, <http://onlinelibrary.wiley.com/doi/10.1196/annals.1425.007/pdf>

lack of health insurance equals worse health outcomes because patients wait longer to seek care and present at a later stage of illness.⁶⁰

Anthrax is not contagious; a person sickened with anthrax cannot pass the disease to another person. If a bioattack involves a contagious disease, early identification and treatment are even more critical. In such a case we would be vulnerable to the initial infections as well as the ensuing spread. Without accessible health care, the lack of assessment, isolation and quarantine would allow the disease to spread unchecked.

An example of how 48 million uninsured Americans create a homeland security gap would be a low-tech suicide attack, such as one where a terrorist self-infects with an Ebola virus. The various Ebola viruses have mortality rates ranging from 34 percent to 90 percent.⁶¹ Early detection, reporting, and treatment would be critical to minimizing deaths. By waiting longer to seek treatment, the stricken would continue infecting others and exacerbate the rate of spread, particularly during the incubation period. The results could be devastating. Christopher Chyba and Alex Greninger highlight this danger in their article, “Biotechnology and Bioterrorism: An Unprecedented World,” in which they point out that

because most dangerous contagious pathogens (smallpox, plague, SARS) have incubation periods longer than international flight travel times, it is crucial that international disease surveillance and response be improved along with its domestic counterpart.⁶²

A similar scenario was dramatized in the 1995 movie *Outbreak* starring Dustin Hoffman fighting an Ebola-like viral epidemic. This was a life-imitates-art event, as an Ebola outbreak occurred in Zaire only a few months after the film’s release, killing 250

⁶⁰ Wilper, et al., *Health Insurance and Mortality in U.S. Adults*, 2289; Jack Hadley, “Sicker and Poorer—The Consequences of being Uninsured: A Review of the Research on the Relationship between Health Insurance, Medical Care Use, Health, Work, and Income,” supplemental issue, *Medical Care Research and Review* 60, no. 2 suppl (June 2003), 3S–75S.

⁶¹ Joseph F. Wamala et al., “Ebola Hemorrhagic Fever Associated with Novel Virus Strain, Uganda, 2007–2008,” *Emerging Infectious Disease* 16, no. 7 (July 2010): 1087–1092, <http://wwwnc.cdc.gov/eid/article/16/7/09-1525.htm>

⁶² Christopher F. Chyba and Alex L. Greninger, “Biotechnology and Bioterrorism: An Unprecedented World,” *Survival* 46, no. 2 (2004): 146.

people, out of 315 infected patients.⁶³ This translated to a mortality rate of 81 percent. An intentional Ebola attack was nearly a reality that same year when the Japanese cult-turned-terrorist organization Aum Shinrikyo was found in possession of a stolen Ebola virus.⁶⁴ Fortunately, authorities interceded before the Ebola virus was used, but not before Aum Shinrikyo conducted a successful chemical-weapon attack using the nerve agent sarin. In March of 1995, the cult conducted a spectacular chemical attack on five Tokyo subway trains simultaneously. Participants left 11 plastic bags filled with sarin on the ground and poked holes in the bags with umbrellas to release the chemical. Twelve people were killed, and more than 5,500 people reported injuries.⁶⁵

2. Foodborne Illnesses and the Health Surveillance System

The health surveillance system is critical in identifying foodborne or water-borne illnesses as well, whether accidental or intentional. In 1984, followers of Bhagwan Shree Rajneesh sprinkled the salad bars with salmonella in 11 restaurants in a town in Oregon. Their intention was to incapacitate the voting population of the area so their own candidate would win the local election. In the incident, 750 people were severely sickened with food poisoning, although there were no fatalities.⁶⁶ In this case, the health surveillance system did not solve the mystery or prove culpability in the Rajneesh attack, but it did trace the source of the salmonella to the salad bars. Bioterror is here, and the health care surveillance system has an important role in our ability to detect it.

FoodNet is the health surveillance program tasked with watching for food and water-borne illnesses. It is part of the Emerging Infections Program administered by the Centers for Disease Control. FoodNet is constantly identifying and alerting us to less

⁶³ Centers for Disease Control and Prevention, "Ebola Hemorrhagic Fever," accessed July 15, 2014 <http://www.cdc.gov/vhf/ebola/resources/outbreak-table.html>

⁶⁴ William Rosenau, "Aum Shinrikyo's Biological Weapons Program: Why Did It Fail?" *Studies in Conflict and Terrorism* 24, no. 4 (2001): 289–301.

⁶⁵ Gavin Cameron, "Multi-Track Microproliferation: Lessons from Aum Shinrikyo and Al Qaida," *Studies in Conflict and Terrorism* 22, no. 4 (1999): 277–309.

⁶⁶ Mara Bovsun, "750 Sickened in Oregon Restaurants as Cult Known as the Rajneeshees Spread Salmonella in Town of the Dalles," *New York Daily News*, sec. News, June 15, 2013, <http://www.nydailynews.com/news/justice-story/guru-poison-bioterrorists-spread-salmonella-oregon-article-1.1373864#commentpostform>

sinister foodborne outbreaks in the U.S.⁶⁷ A visit to the Food and Drug Administration's Food Recalls and Outbreaks webpage lists five foodborne disease outbreaks investigated in 2010, seven in 2012, and five at the mid-point of 2013.⁶⁸ FoodNet is perhaps a non-traditional partner in the homeland security system, but its mission is to protect the public from foodborne infections and to prevent similar situations from happening in the future.

The health surveillance system's role in drug safety in the U.S. was displayed in an event that began in the summer of 2012. In September of that year the health surveillance system identified several fungal meningitis outbreaks clustered in the northeastern states of the U.S. As of July, 2013, 749 people were sickened and 61 people had died related to a non-contagious fungal meningitis. In cooperation with state and local health departments and the Food and Drug Administration, the Centers for Disease Control investigated the clusters. The CDC determined the outbreak was linked to the use of injectable steroids from lots mixed by the New England Compounding Center, located in Framingham, Massachusetts.⁶⁹ It was determined the compounding company was not following proper sterilization procedures in mixing the drugs. Although these food and drug-related outbreaks were not attacks or even intended events, they demonstrate the critical role the health care surveillance system plays in maintaining our country's health security.

C. DISEASE PREVENTION

Another way that a robust and accessible health care system aids homeland security is through prevention. Vaccines are one of the tools used to prevent bioattacks, or at least to manage a successful attack. Homeland security experts have long considered

⁶⁷ A "foodborne outbreak" as defined by the FDA is when two or more people contract the same illness after eating or drinking the same contaminated food or drink. Food and Drug Administration, "Voluntary National Retail Food Regulatory Program Standards," U.S. Department of Health and Human Services, January, 2013, <http://www.fda.gov/downloads/food/guidanceregulation/retailfoodprotection/programstandards/ucm372411.pdf>, 1–3.

⁶⁸ Food and Drug Administration, "Food Recalls and Outbreaks," U.S. Department of Health & Human Services, <http://www.fda.gov/Food/RecallsOutbreaksEmergencies/Outbreaks/ucm349461.htm>, accessed July 2013.

⁶⁹ Centers for Disease Control and Prevention, "Multistate Fungal Meningitis Outbreak Investigation," 2013, <http://www.cdc.gov/hai/outbreaks/meningitis.html>

smallpox a potential bioweapon, hence the stockpiling of the smallpox vaccine since 9/11. Smallpox is an infectious disease caused by the virus variola major or variola minor. The more common and more virulent form, variola minor, has a mortality rate of about 30 percent.⁷⁰ The disease was present throughout the world for tens of thousands of years, but was eradicated via a worldwide vaccination program prior to 1980. The smallpox virus only exists now in laboratory stockpiles.⁷¹ One of the concerns post-9/11 was the stockpiles would be pilfered and used to intentionally reintroduce the virus to humans. The U.S. currently has 300 million doses of smallpox vaccine in stockpiles around the U.S.—enough to vaccinate nearly the entire population. Recently, the U.S. government purchased enough of a new smallpox medication to treat two million people.⁷² However, for the vaccination process and the treatment process to be successful in the event of an outbreak, the population will need access to health care providers. The Department of Homeland Security’s fact sheet on what to do in the event of a bioterror directs us as follows: “People in the group or area that authorities have linked to exposure who have symptoms that match those described should seek emergency medical attention.”⁷³

It is likely in the event of such a dramatic scenario as a smallpox attack, the U.S. government will set up emergency distribution centers, where all people will receive prophylaxis antibiotics, without regard for health insurance or payment, as outlined in the Center for Disease Control’s *Smallpox Response Plan and Guidelines*.⁷⁴ So perhaps the smallpox vaccination program serves as a model for universal health care access.

⁷⁰ Centers for Disease Control and Prevention, “Smallpox: Fact Sheet,” 2004, <http://www.bt.cdc.gov/agent/smallpox/overview/disease-facts.asp>.

⁷¹ Ibid.

⁷² Donald G. McNeil, Jr., “Wary of Attack with Smallpox, U.S. Buys up a Costly Drug,” *The New York Times*, sec. Health, March 12, 2013, <http://www.nytimes.com/2013/03/13/health/us-stockpiles-smallpox-drug-in-case-of-bioterror-attack.html?pagewanted=all>

⁷³ National Department of Engineering, National Research Council, and Department of Homeland Security, *Biological Attack: Human Pathogens, Biotoxins and Agricultural Threats* (Washington, DC: National Academy of Sciences, 2004), http://www.dhs.gov/xlibrary/assets/prep_biological_fact_sheet.pdf, 46.

⁷⁴ Centers for Disease Control and Prevention, *Smallpox Response Plan and Guidelines* (Atlanta, GA: Centers for Disease Control and Prevention, 2002).

1. Influenza Virus

Perhaps one of the best examples of health care and homeland security linkages is the influenza virus, commonly known as “the flu.” The flu’s presence is so consistent it has its own season. In addition, it annually kills more people than all those felled by terrorism combined. Influenza pandemics have killed literally millions of people during the last century alone.⁷⁵

As Malcolm Gladwell wrote in 2001:

That we have chosen to worry more about anthrax than about the flu is hardly surprising. The novel is always scarier than the familiar, and the flu virus, as far as we know, isn’t being sent through the mails by terrorists. But it is a strange kind of public-health policy that concerns itself more with the provenance of illness than with its consequences; and the consequences of flu, year in, year out, dwarf everything but the most alarmist bioterror scenarios.⁷⁶

While it is true that the general public tends to ignore the security implications of the flu, the homeland security community does not. Rather, those tasked with homeland security understand the deadly nature of influenza and its potential to devastate our health, our economy, and our society. Mitigating influenza pandemic is part of homeland security planning in many industrialized nations. Although this fight lacks the glamour of combating bioterror, the reality is influenza pandemic is much more likely to occur. In fact, it is inevitable.

People are familiar with influenza symptoms as most people likely have experienced the respiratory illness at least once in their lifetime: the fever, the sore throat, the chills, achy muscles and the vomiting or diarrhea. For many, the disease progresses into pneumonia, dehydration, and for some, life-threatening complications. There is no cure for influenza. Antiviral medications have only recently become available to speed up the virus’s cycle or to inhibit its ability to replicate, which shortens the duration of the illness. However, antivirals are not a cure.

⁷⁵ Standing Senate Committee on Social Affairs, Science and Technology, *Canada’s Response to the 2009 H1N1 Influenza Pandemic* (Ottawa: Canadian Senate, 2010), <http://www.parl.gc.ca/content/sen/committee/403/soci/rep/rep15dec10-e.pdf>

⁷⁶ Malcolm Gladwell, “Talk of the Town,” *New Yorker*, October 29, 2001, 33.

Influenza is an RNA virus⁷⁷ of the family orthomyxoviridae. It is an infectious disease carried in both the avian and mammal populations. RNA viruses regularly mutate as they replicate; they evolve quickly, re-assorting into new subtypes. When new strains appear, they spread more easily and cause more illness because there is less immunity among the human host.

Influenza viruses are categorized by their type (or strain) and subtype. The types or strains are classified as A, B, or C. Types A and C can be carried by humans or animals. Type A is easily transferred from human to human and considered the greatest risk for pandemic. The type B strain only affects humans, but it has not been associated with global pandemic. Type C tends to produce only mild illness in humans and has not been associated with global pandemic.⁷⁸

Strains are further categorized by their two surface proteins into subtypes: the hemagglutinin, or “H” protein, and the neuraminidase, or “N” protein. There are 16 H types and 9 N types that can combine in any manner.⁷⁹ One example is the modern “H1N1.” The influenza subtypes currently circulating in the human population are the H1 and the H3.⁸⁰ Because these strains have been around during this generation’s lifetime, most humans have built up some resistance. However, because the RNA virus is constantly re-assorting, the H1N1 virus people caught in their childhood is not exactly the same H1N1 virus circulating today. If they are infected with today’s H1N1, their bodies will have antibodies from the earlier bout. These will not be able to prevent the new illness, but they will help people fight the current strain, moderating symptoms and shortening the length of the infection.

Other influenza subtypes, such as H5 and H7 are primarily carried in birds and pigs, hence the nicknames “bird flu” and “swine flu.” Although influenza is ubiquitous in

⁷⁷ An RNA virus has ribonucleic acid as its genetic material, as opposed to DNA, or deoxyribonucleic acid.

⁷⁸ Centers for Disease Control and Prevention, *Smallpox Response Plan and Guidelines*.

⁷⁹ Health Canada, *Highlights from the Canadian Pandemic Influenza Plan for the Health Sector*, 2006, http://www.phac-aspc.gc.ca/cpip-pclcpi/hl-ps/pdf/CPIP-highlights-2006_e.pdf, 6.

⁸⁰ Richard J. Webby and Robert G. Webster, “Are We Ready for Pandemic Influenza?” *Science* 302, no. 5650 (2003): 1519.

the avian population, it does not generally cause birds to become sick. On occasion, genetic re-assortment allows the virus to make the jump from the bird or pig population to the human population. This most often occurs when humans are in close contact with carriers, such as in the poultry or pork industries. Viruses that make the jump to the human population are extremely lethal because humans have no resistance to the strains imparted by the animals. Humans infected by avian flu suffer mortality rates as high as 60 percent.⁸¹ As of yet, no avian or swine flu strain that has jumped from the animal reservoir to the human population has proven contagious. An avian or swine flu that can transmit from human-to-human would be a worst-case scenario for world health.

Human-to-human transmission of contagious influenza viruses occur when an infected person coughs or sneezes droplets into the air or onto surrounding surfaces. An uninfected person can breathe in the droplets, or touch them with a hand and transfer them to his or her own eye or mucus membranes, which gives the virus a portal into the body. The flu virus is very hardy, and it can survive for more than 24 hours on certain hard surfaces.⁸²

2. History of Influenza Pandemics

When a virulent influenza virus causes a global outbreak, this is called a pandemic.⁸³ Several major flu pandemics have made their way around the world during the past century. For example, the 1918 influenza pandemic is referred to as the Spanish flu. This was caused by a strain of the H1N1 virus and was estimated to have infected one third of the global population; it caused anywhere from 25–100 million deaths.⁸⁴ In 1957, a novel H2N2 virus caused a pandemic and was coined the Asian flu. This strain circulated among the population until replaced in 1968 by the H3N2 Hong Kong flu virus. The most recent pandemic was caused in 2009 by another H1N1 subtype. The

⁸¹ U.S. Department of Health & Human Services, *2009 H1N1 Influenza Improvement Plan* (Washington, DC: The White House, 2012).

⁸² Centers for Disease Control and Prevention, *Smallpox Response Plan and Guidelines*.

⁸³ U.S. Department of Homeland Security, *Pandemic Influenza Preparedness, Response, and Recovery Guide for Critical Infrastructure and Key Resources* (Washington, DC: The White House, 2006), 11.

⁸⁴ Centers for Disease Control and Prevention, *Smallpox Response Plan and Guidelines*.

resurfacing of the H1N1 virus in 2009 was a surprise to the worldwide homeland security community, as almost all recent planning had focused on a human-to-human transmissible avian flu virus (H5N1) that was predicted to appear.

Homeland security organizations around the world recognize the influenza pandemic as a legitimate threat to their country's ability to function and survive. In the U.S. Homeland Security's 2006 *Pandemic Influenza Guide for Critical Infrastructure and Key Resources* report, the situation is painted as dire:

The mounting risk of a worldwide influenza pandemic poses numerous potentially devastating consequences for critical infrastructure in the United States. A pandemic will likely reduce dramatically the number of available workers in all sectors, and significantly disrupt the movement of people and goods, which will threaten essential service and operations within and across our nation's CI/KR sectors.⁸⁵

Flu pandemics generally appear in waves over the course of several months or even years. Often each wave of illness lasts between six and eight weeks.

3. Combating Pandemic Influenza

Because there is no cure for influenza, generally accepted strategies to combat pandemic include health surveillance and identification, vaccine research and production, antiviral medication, social distancing, and individual risk-reduction techniques. These strategies are specifically promoted by the U.S. homeland security agencies.

Early detection and identification of new influenza strains is critical to the management and mitigation of the disease. Most industrialized nations take part in health surveillance reporting partnerships. Communication goes hand-in-hand with surveillance. These organizations compile and track reports and communicate their analysis to other health care participants, other reporting agencies, and various levels of government worldwide.

As new outbreaks are spotted, the viruses are sent for testing and identification. Antigenic drift makes the influenza virus a moving target for vaccinations; this year's

⁸⁵ Ibid., 2.

H1N1 vaccination will not work as well against next year's H1N1 virus. For this reason, it is impossible to stockpile vaccinations long-term. And vaccine production takes time—six months is considered a realistic amount of time to produce large-scale amounts of vaccine. When a new strain appears and begins to sicken people or birds, the virus needs to be identified immediately so that vaccine production can be initiated as soon as possible.

Antiviral medications are new to the war on influenza. The 2009 pandemic was the first pandemic where antiviral medications were available.⁸⁶ As noted earlier, these medications cannot cure the disease, but they can moderate the virulence and shorten the duration of the cycle. It is possible to stockpile antiviral medications.

Social distancing is another strategy for managing pandemic. Limiting a sick person's contact with other people is an obvious way to limit the influenza's spread. More aggressive social distancing techniques include quarantine, prohibitions on large social gatherings, canceling school, limiting travel and work, or even closing borders. Individual flu prevention techniques include the time-honored recommendations such as frequent hand-washing, avoiding touching your eyes or nose, coughing and sneezing into a tissue or sleeve rather than the hand, frequently disinfecting surfaces, and staying home when sick.

The U.S. has done significant planning for influenza pandemic. Many of the mitigations require a robust, accessible health care system: early vaccinations, medications, and treatment allocated in a way that will help sustain the community's ability to treat patients and prevent societal breakdown. This translates to ensuring the care of the health care workers, public safety personnel, and essential infrastructure employees early on so that these systems continue to function properly throughout the pandemic.

⁸⁶ Ibid., 21.

D. NATURAL DISASTERS

The health care system is central to the mitigation of natural disasters. Major natural disasters often result in substantial loss of life, accompanied by multitudes of injuries. Injured parties need medical treatment, which is always provided at the local level during the early stages of response.⁸⁷ Local hospitals cannot request state and federal help until their own capacity is exceeded.

“Surge capacity” is an idea central to disaster preparedness. The American College of Emergency Physicians defines surge capacity as “a measurable representation of ability to manage a sudden influx of patients.”⁸⁸ The general concept is that all hospitals and health care facilities should be able to accommodate a sudden increase in patients due to a mass casualty incident, pandemic, etc. Quantitative benchmarks for surge capacity as outlined by the Hospital Preparedness Program include the ability to care for 500 patients per million for infectious disease events and 50 per million in other mass-casualty events.⁸⁹

Events such as the Joplin, Missouri, tornado demonstrate the need for a robust, accessible health care system. On May 22, 2011, an EF-5⁹⁰ tornado struck Joplin, Missouri and killed 161 people and injured approximately 1371 more.⁹¹ This is considered the deadliest U.S. tornado since 1947. In addition to rendering total destruction along a path three-quarters of a mile wide and six miles long through central Joplin, the tornado destroyed a hospital and a high school. The damage at the hospital, St. John’s Medical Center, was catastrophic. Windows imploded, injuring nearly all occupants. Several patients were sucked out of the emergency room windows, and power

⁸⁷ Amy H. Kaji, Kristi L. Koenig and Roger J. Lewis, “Current Hospital Disaster Preparedness,” *Journal of the American Medical Association* 298, no. 18 (2007): 2188–2190.

⁸⁸ American College of Emergency Physicians, “Clinical Practice and Management,” October 2011, <http://www.acep.org/Clinical---Practice-Management/Health-Care-System-Surge-Capacity-Recognition,-Preparedness,-and-Response/>

⁸⁹ Centers for Disease Control and Prevention, *Smallpox Response Plan and Guidelines*.

⁹⁰ This is the highest tornado rating possible on the Enhanced Fujita tornado scale, used in the United States and Canada to measure tornado strength based on the damage they cause.

⁹¹ Federal Emergency Management Agency, *The Response to the 2011 Joplin, Missouri, Tornado Lessons Learned Study* (Washington, DC: Federal Emergency Management Agency, 2011).

to the hospital was knocked out. Patients dependent on ventilators quickly died. Other patients were evacuated to the parking lot, and a triage area was set up for current patients as well as those arriving from the community post tornado.

Emergency medical response to Joplin in the immediate aftermath was impacted because ambulance service was partially controlled by the damaged St. John's Hospital. Patients from all over began arriving via personal cars and pickups. Other triage centers were established throughout the city, and hundreds of people were treated early on after the event. Medical supplies ran low, and ambulances provided by outside communities began treating on-site, rather than transporting patients to hospitals.⁹²

During the longer-term recovery phase, Joplin tornado survivors not only had to deal with the loss of their homes, but many also faced substantial medical bills incurred from the treatment of injuries sustained in the disaster. The financial hardship brought on by medical bills was often compounded by the loss of jobs.⁹³ As a final, circular insult, job loss sometimes resulted in the loss of health insurance.

Although FEMA disaster funds are available to assist individuals with disaster-related injuries on a case-by-case basis,⁹⁴ medical bills are not FEMA's primary area of focus. FEMA is not meant to be a supplemental health insurance agency. Increased access to affordable medical care would clearly aid in natural disaster recovery.

E. PSYCHOLOGICAL RECOVERY

Within the priorities of the homeland security community, psychological care has not historically been high on the list. With increased frequency and awareness of terrorist attacks and the ever-upward trend toward active-shooter incidents, more focus has been placed on post terror-attack psychological care and the care and treatment of the mentally ill in general. Psychological care can be an important component of post terror-attack

⁹² Ibid.

⁹³ Jamie Rodriguez, *How Legal Aid of Western Missouri Is Helping the Community Recover from the Joplin Tornado* (Chicago, IL: Sargent Shriver National Center on Poverty Law, 2012), <http://povertylaw.org/communication/advocacy-stories/rodriguez>

⁹⁴ Jesse Preussner, "Examination of FEMA and the Relationship with a Community after a Disaster" (Master's thesis, Kansas State University, 2012), 10.

healing for some survivors and witnesses, even to those that witness it from thousands of miles away.⁹⁵ Recent mass-homicide events such as the Batman shooting,⁹⁶ the Sandy Hook shooting,⁹⁷ and the Washington Navy Yard⁹⁸ incident have prompted public calls for revamping, or at least revisiting, how we deal with mental illness and our delivery of care to the mentally ill population.

Psychological care—or any medical care, for that matter—is not cheap. A quick Internet search on the out-of-pocket cost to visit a psychiatrist shows advertisements for about \$75 per session. Fees can range much higher, of course, with many Internet advertisements for care beginning at \$250. Under the current health care model, Americans with health insurance coverage pay some combination of monthly premiums plus co-pays for each health care visit and medications. Health insurance coverage makes psychological care more affordable in most cases, at least giving the option of treatment to a person in need of care.

1. Terror Attacks and PTSD

The purpose of terrorism is the infliction of psychological pain upon the targeted group.⁹⁹ It is certainly evident from our country's reaction to 9/11 that a terror attack does exactly what it is intended to do: sow fear. A nationwide longitudinal study conducted one year after 9/11 showed that two months after the attack, more than 17

⁹⁵ Roxane Cohen Silver, E. Alison Holman, Daniel N. McIntosh, Michael Poulin, and Virginia Gil-Rivas, "Nationwide Longitudinal Study of Psychological Responses to September 11," *Journal of the American Medical Association* 288, no. 10 (2002): 1235–1244, <http://mysite.du.edu/~dmcintos/PDF/Silver%20et%20al.%20Responses%20to%209-11,%20JAMA,%202002.pdf>

⁹⁶ On July 20, 2012, James Holmes carried out a mass shooting at the showing of film *The Dark Night Rises* in Aurora, Colorado. Twelve people were killed, and 70 were injured; *Wikipedia*, s.v. "Aurora Shooting," accessed July 27, 2014, http://en.wikipedia.org/wiki/Batman_shooting

⁹⁷ On December 14, 2012, Adam Lanza shot and killed 20 children and six adults at Sandy Hook Elementary School in Newton, Connecticut; *Wikipedia*, s.v. "Sandy Hook Shooting," accessed July 27, 2014, 2014http://en.wikipedia.org/wiki/Sandy_Hook_Elementary_School_shooting

⁹⁸ On September 16, 2013, Aaron Alexis shot and killed 12 people and injured three others at the headquarters of the Naval Sea Systems Command in Washington, DC; *Wikipedia*, s.v. "Navy Yard Shooting," accessed July 27, 2014, http://en.wikipedia.org/wiki/Navy_Yard_Shooting

⁹⁹ Adrienne S. Butler, Allison M. Panzer and Lewis R. Goldfrank, "Developing Strategies for Minimizing the Psychological Consequences of Terrorism through Prevention, Intervention, and Health Promotion," in *Preparing for the Psychological Consequences of Terrorism: A Public Health Strategy*, National Research Council (Washington, DC: The National Academies Press, 2003), 99.

percent of those surveyed outside of New York City reported some 9/11-related post-traumatic stress. That number later dropped to 5.8 percent after six months had passed.¹⁰⁰ The point to note is that those affected did not need to be actual victims or first-hand witnesses: “the psychological effects of a major national trauma are not limited to those who experience it directly.”¹⁰¹

A *Time* magazine article examined the literature on chronic psychological problems that developed as a result of terror attacks.¹⁰² Prospective and longitudinal studies showed that a proportion of terror-attack survivors develop post-traumatic stress disorder¹⁰³ (PTSD) or other chronic psychological problems, although rarely exceeding 30 percent.¹⁰⁴ Even at less than 30 percent, the numbers of people potentially at risk for developing PTSD or other chronic conditions could be quite large.

Using the recent Boston Marathon bombing as an example, official tolls of the number of wounded was set at 264.¹⁰⁵ By taking 20,000 race participants into account and around 500,000 spectators, scores of people who were not physically wounded could be considered survivors. If we are to use the estimate of 5.8 percent found in the longitudinal study authored by Roxanne Silver et al., out of the 264 wounded, we would expect about 15 people would eventually develop PTSD. If we were to expand that percentage to other runners and spectators who were not wounded, but were present at the race, the number of persons at-risk for PTSD could jump into the tens of thousands (30,313) quite quickly.

¹⁰⁰ Silver et al., “Nationwide Longitudinal Study,” 1235.

¹⁰¹ *Ibid.*, 1235.

¹⁰² Ruth Davis Konisberg, “9/11 Psychology: Just How Resilient Were We?” *Time*, Sept. 8, 2011.

¹⁰³ According to the National Institute of Mental Health (NIH), post-traumatic stress is an anxiety disorder that some people develop after seeing or living through a traumatic event. National Institute of Mental Health, “Post-Traumatic Stress Disorder (PTSD),” U.S. Department of Health & Human Services, 2013, <http://report.nih.gov/nihfactsheets/ViewFactSheet.aspx?csid=58>

¹⁰⁴ Silver et al., “Nationwide Longitudinal Study,” 1235.

¹⁰⁵ Deborah Katz, “Injury Toll from Marathon Bombs Reduced to 264,” *The Boston Globe*, sec. Health & Wellness, April 24, 2013, <http://www.bostonglobe.com/lifestyle/health-wellness/2013/04/23/number-injured-marathon-bombing-revised-downward/NRpaz5mmvGquP7KMA6XsIK/story.html>

According to the National Institute for Mental Health (NIMH), the proper treatment for PTSD is psychotherapy, medications, or both.¹⁰⁶ In cases where PTSD sufferers do not have health insurance, psychotherapy and medications may be financially out of reach. A 2012 report from the Congressional Budget Office reported that a year of treatment for recent combat veterans diagnosed with PTSD cost \$8,300 for the first year of treatment alone.¹⁰⁷ Other options, such as treatment in hospitals and private clinics, could cost substantially more than seeing a regular psychiatrist. Medications as a form of treatment could range from hundreds to thousands of dollars, depending on the type of medicine, whether generics are available, the course of treatment, etc. Costs could quickly become unmanageable without health insurance coverage, leaving thousands of people without the ability to obtain affordable mental health care.

2. Active-Shooter Incidents and Mental Illness

Since Dylan Klebold and Eric Harris roamed the halls of Columbine High School in 1999 killing 12 people and injuring 21, mass-homicide or “active-shooter” events have captured the attention of the public. Besides Columbine, some of the more memorable events in the past decade were Virginia Tech (2007),¹⁰⁸ Northern Illinois University (2008),¹⁰⁹ and more recently, the Batman Shooting (2012), Sandy Hook Elementary (2012), and the Navy Yard shooting (2013). These tragedies and others not listed here involved a suspect that exhibited signs of severe mental illness well before their actions culminated in mass-murder. With each tragedy of this nature, there are renewed cries for stronger gun-laws and better management of the severely mentally ill.¹¹⁰

¹⁰⁶ National Institute of Mental Health, “Post-Traumatic Stress Disorder (PTSD).”

¹⁰⁷ Congressional Budget Office, *The Veterans Health Administration’s Treatment of PTSD and Traumatic Brain Injury among Recent Combat Veterans* (Washington, DC: Congressional Budget Office, 2012).

¹⁰⁸ On April 16, 2007, student Seung-Hui Cho shot and killed 32 people and injured 17 others at Virginia Polytechnic Institute. *Wikipedia*, s.v. “Virginia Tech Massacre,” accessed July 27, 2014, http://en.wikipedia.org/wiki/Virginia_Tech_massacre

¹⁰⁹ On February 14, 2008, former student Steven Kazmierczak shot and killed five people and injured 21 more on the campus of Northern Illinois University in DeKalb, Illinois. *Wikipedia*, s.v. “Northern Illinois University Shooting,” accessed July 27, 2014, http://en.wikipedia.org/wiki/Northern_Illinois_University_shooting

¹¹⁰ As used here, “severe mental illness” includes but it not limited to psychiatric conditions such as schizophrenia, major depression, bi-polar disorder, etc.

Health insurance is an important factor mental health treatment for the mentally ill. A study from 2001 showed that over 36 percent of a group of people diagnosed as “seriously mentally ill” said that one reason they did not receive treatment was that their “health insurance would not cover treatment,” while 44 percent said that treatment was “too expensive.”¹¹¹

In the early 1970s in the United States, a combination of factors led to the closing of residential psychiatric hospitals nationwide.¹¹² As a result, thousands upon thousands of mentally ill persons were returned to the community with little or no follow up care or medication.¹¹³ Michael Biasotti’s 2011 Naval Postgraduate School thesis on the mentally ill noted,

Mentally ill individuals released into the community without resources or treatment many times became homeless or involved in otherwise preventable criminal activity. The criminal justice system as a whole has thus seen significant increases in: police interactions with the mentally ill, increases in the size of the mentally ill population in prisons and jails, and the size of the mentally ill homeless population.¹¹⁴

Severe mental illnesses are conditions that can respond to treatment, but they rarely “go away.” Most severe psychiatric diseases are life-long conditions characterized by relapse and remission; however, they are treatable and often manageable. According to the National Alliance on Mental Illness Fact Sheet, “Treatment outcomes for people with even the most serious mental illnesses are comparable to outcomes for well-established general medical or surgical treatments for other chronic diseases. The early treatment success rates for mental illnesses are 60–80 percent.”¹¹⁵

¹¹¹ Ronald C. Kessler et al., “The Prevalence and Correlates of Untreated Serious Mental Illness,” *Health Services Research* 36 (December 2001), <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1089274/pdf/hsresearch00007-0020.pdf>, 996.

¹¹² David Mechanic and David A. Rochefort, “Deinstitutionalization: An Appraisal of Reform,” *Annual Review of Sociology* 16 (1990): 301–327.

¹¹³ Michael C. Biasotti, “Management of the Severely Mentally Ill and its Effects on Homeland Security” (master’s thesis, Naval Postgraduate School, 2011) 2.

¹¹⁴ *Ibid.*, 17.

¹¹⁵ National Alliance on Mental Illness, *Mental Illness: Treatment Saves Money and Makes Sense*, 2007, <http://www.nami.org/Template.cfm?Section=Policy&Template=/ContentManagement/ContentDisplay.cfm&ContentID=44613>, 1.

When an active-shooter or mass-homicide event does occur, the victims face physical injuries and sometimes economic hardships if they are lucky enough to survive. An article in the *Mercury News* in July of 2012 highlighted the enormous medical bills facing survivors of the Batman shooting who were uninsured.¹¹⁶ Although it is not known precisely how many victims were uninsured at the time of the shooting, local demographics suggested a high rate of uninsurance. According to the article, one out of three people in Colorado are either uninsured or underinsured, and the highest rate of uninsurance is among the 18–34 age group, the same age range of many of the Batman shooting victims.¹¹⁷ One victim highlighted in the *Mercury News* article was Caleb Medley, who at the time of the article was in critical condition with a head wound. His family was working to raise \$500,000 to cover medical bills and other expenses. Fortunately for the Batman victims, three of the five hospitals that treated the wounded in this case either limited or forgave the medical bills altogether. While this generosity is admirable, it is the exception rather than general practice.

F. ECONOMICS

The economics of health care matters because of its enormous cost to the federal government, state governments, and individual Americans. Growth in health care spending is “one of the central fiscal challenges facing the federal government,” according to the Congressional Budget Office.¹¹⁸ An aging population, increased enrollment in Medicare and Medicaid programs, and overall rising health care costs continue to drive spending projections higher.

In 2011, the U.S. spent 17.7 percent of its gross domestic product on health care, which is eight percentage points higher than the average for other developed countries (9.3 percent), according to the Organisation for Economic Co-Operation and

¹¹⁶ Colleen Slevin and Kristen Wyatt, “Medical Bills Loom in Colorado,” *San Jose Mercury News*, sec. Local, June 27, 2012.

¹¹⁷ *Ibid.*

¹¹⁸ Congressional Budget Office, “Health Care,” accessed July 29, 2014, <http://www.cbo.gov/topics/health-care>

Development (OECD).¹¹⁹ Per capita spending averaged \$8,508, which was two-and-a-half times more than the OECD average, and more than double per capita spending as compared to other relatively rich countries, such as France and Sweden, which averaged \$5,600 per capita.¹²⁰

In 2011 alone, the government spent \$549.1 billion on Medicare coverage for 48.7 million recipients. This accounted for roughly 15 percent of the national budget and 21 percent of overall U.S. health care spending.¹²¹ States participating in the ACA will expand Medicaid eligibility, increasing costs for the state/federal partnership further. Estimated costs for expansion will be explored in Chapter V.

With health care cost rising so rapidly, even those with employer-sponsored insurance are feeling the effects. For example, between 1999 and 2008, the total premium for insurance (employer plus employee share) for single-person coverage increased 114 percent, from \$2,196 to \$4,704.¹²² The employee's share alone increased 127 percent from \$318 to \$721.¹²³ During that same time period, the total premium for family coverage increased 119 percent from 1999 to 2008: \$5,791 to \$12,680.¹²⁴ The employee share increased from \$1,543 to \$3,354, an increase of 117 percent.¹²⁵ This matters because more and more of the American paycheck is dedicated to health care, and this threatens to undermine our ability to receive affordable care without sacrificing in other areas. In 2008, the Social Security Advisory Board report on health care costs warned,

¹¹⁹ OECD, *OECD Health Data 2013*, 1–2.

¹²⁰ *Ibid.*

¹²¹ The Medicare Newsgroup, “Medicare FAQs,” July 29, 2014, <http://www.medicarenewsgroup.com/news/medicare-faqs/individual-faq?faqId=bddee68a-7fef-4d85-bc4d-2cb8ea1c59db>

¹²² Kaiser Family Foundation and Health Research and Educational Trust, *Employer Health Benefits: Annual Survey 2008* (Menlo Park, CA: Henry J. Kaiser Family Foundation, 2008), <http://kaiserfamilyfoundation.files.wordpress.com/2013/04/7790.pdf>, 30.

¹²³ *Ibid.*, 1.

¹²⁴ *Ibid.*

¹²⁵ *Ibid.*

“we believe that the rising cost of health care represents perhaps the most significant threat to the long-term economic security of workers and retirees.”¹²⁶

Affordable, accessible health care for all individuals could substantially improve individual economic security; currently half of all personal bankruptcies are caused in part by medical expenses.¹²⁷ As individuals age, they tend to get sicker, consume more health care, and need more medications. These lead to greater out-of-pocket costs, right at the time of life where income either levels off (retirement) or begins to decrease.

G. SUMMARY

This chapter illustrates several of the primary connections between health care and homeland security and makes the case for why health care should be considered a homeland security issue. Some connections are obvious, such as the need for victims of a bioterror attack to access health care, the role vaccinations might play in mitigating a smallpox outbreak or an influenza pandemic. Other connections are less intuitive, such as the role health care can play in managing mental illness, PTSD, recovery from acts of terrorism, or potentially preventing mass-shootings. The pillars of homeland security preparedness are prevention, preparedness, mitigation, response, and recovery; health care has a significant role within each component. It is clear that accessible, affordable health care is a critical part of the homeland security system and a foundational element of the all-hazards preparedness puzzle.

The next chapter will focus on the Affordable Care Act itself and provide an overview of its primary goals and strategies for achieving those goals.

¹²⁶ Social Security Advisory Board, *The Unsustainable Cost of Health Care*, 2009, http://www.ssab.gov/documents/TheUnsustainableCostofHealthCare_508.pdf, 1.

¹²⁷ *The Patient Protection and Affordable Care Act*, §1501 (E), 125; Himmelstein et al., “Medical Bankruptcy in the United States,” 741–746.

IV. WHAT IS THE PATIENT PROTECTION AND AFFORDABLE CARE ACT?

The health care system in the United States is a combination of public and private organizations with different funding mechanisms. Hospitals in the U.S. are split between non-profit (2,894), for-profit (1,068) or government owned (1,037).¹²⁸ Most public and private hospitals, medical facilities, and health care providers bill patients on a fee-per-service basis, meaning that they charge a certain fee for each service rendered. Generally speaking, fee-per-service health care in the U.S. is extraordinarily expensive, but it is made more affordable via health care insurance. Some private hospitals and medical facilities are part of a health maintenance organization (HMO) or managed care facilities. In these arrangements, the HMO acts as a liaison between the patient and health care provider and/or health insurance company on a pre-paid basis. The medical provider agrees to treat patients according to the HMO's guidelines, while the patient pays a monthly fee, rather than paying a fee-per-service.

The majority of the U.S. population obtains private health insurance through employer-sponsored insurance for the employee (or the employee's family member) or through government entitlement programs. A small percentage purchase private insurance out-of-pocket, and the rest are uninsured. Here is the breakdown of health insurance coverage in America according to the U.S. Census Bureau report in 2011:¹²⁹

- 63.9 percent are covered by private insurance—197.3 million people
 - 55.1 percent have employer-sponsored coverage—170.1 million people
 - 8.8 percent buy coverage out-of-pocket—27.2 million people
- 32.2 percent are covered by government insurance—99.5 million people
- 15.7 percent are uninsured—48.6 million people

The Patient Protection and Affordable Care Act was passed by Congress and signed into law on March 23, 2010. It was almost immediately amended by the Health

¹²⁸ American Hospital Association, "Fast Facts on U.S. Hospitals," (Chicago, IL: Health Forum, 2014), accessed July 23, 2014, <http://www.aha.org/research/rc/stat-studies/fast-facts.shtml>, 1.

¹²⁹ DeNavas-Walt et al., *Income, Poverty, and Health Insurance Coverage*, 21.

Care Education and Reconciliation Act, signed one week later on March 30, 2010. Although the two were passed and signed as separate laws, they work and are referred to together. Passage of the ACA and HCERA are considered by many to be most significant reforms to health care in America since the 1965 introduction of Medicare and Medicaid.¹³⁰ In its combined bill form, the ACA and the HCERA make up a 906-page tome; its length and complexity are daunting. This chapter outlines the most fundamental framework of the law in order to provide a baseline understanding of how it will affect homeland security, as covered in the next chapter.

The primary goals of the ACA are to expand insurance coverage to all eligible U.S. residents, control health care costs, and improve the overall functioning of the health care system.¹³¹ The ACA is set out in 10 separate titles, with the first nine addressing one component of reform, and Title X listing amendments to the law. The intended goal of each section is self-evident by title:

- Title I: “Quality, Affordable Health Care for All Americans”
- Title II: “Role of Public Programs”
- Title III: “Improving the Quality and Efficiency of Health Care”
- Title IV: “Prevention of Chronic Disease and Improving Public Health
- Title V: “Health Care Workforce”
- Title VI: “Transparency and Program Integrity”
- Title VII: “Improving Access to Innovative Medical Therapies”
- Title VIII: “Community Living Assistance Services and Supports”
- Title IX: “Revenue Provisions”
- Title X: “Strengthening Quality, Affordable Health Care for all Americans”

In designing the ACA, the authors chose two primary strategies for expanding health insurance coverage. The first is through a concept termed “shared

¹³⁰ Stolberg and Pear, “Obama Signs Health Care Overhaul Bill;” Vicini, Stempel, and Biskupic, “U.S. Top Court Upholds Health Care.”

¹³¹ Jeanne S. Ringel et al., *Analysis of the Patient Protection and Affordable Care Act (HR 3590)* (Santa Monica, CA: Rand, 2010), http://www.rand.org/content/dam/rand/pubs/research_briefs/2010/RAND_RB9514.pdf, 2.

responsibility,”¹³² which mandates that individuals and employers do their part in expanding insurance coverage across the population.¹³³ The second major strategy aims to expand state Medicaid coverage.¹³⁴

A. SHARED RESPONSIBILITY

The concept of “shared responsibility” is a fundamental underpinning of the ACA. In order to be financially sustainable, the insurance pool must be expanded across the entire population. If insurance companies are allowed to pick and choose clients from only the young and healthy population, then the sick and elderly will suffer from lack of coverage. In contrast, insurance companies must expand its coverage of the young and healthy, in order to underwrite costs for the sick and elderly.

The “individual mandate” is the most controversial part of the ACA. Effective January 1, 2014, it requires all individuals to carry some “minimum level” of insurance coverage or pay a penalty to the Internal Revenue Service at tax time. Section 26 U.S.C. §5000A(a) states: “An applicable individual shall for each month beginning after 2013 ensure that the individual, and any dependent of the individual who is an applicable individual, is covered under minimum essential coverage for such month.” The penalty for not maintaining coverage will be \$95 in 2014, \$350 in 2015, \$750 in 2016, and indexed thereafter, to be paid to the Internal Revenue Service at tax time.¹³⁵ For those under age 18, the penalty will be one-half the amount for adults, levied against the adult responsible for that juvenile. The ACA provides tax credits to people with lower incomes on a sliding scale in order to subsidize insurance purchases made on an exchange.

The individual mandate was upheld by the Supreme Court in its ruling on June 28, 2012. At issue was whether the individual mandate was an illegal tax. Chief Justice

¹³² Patient Protection and Affordable Care Act, Pub. L. No. 111–148, 124 Stat. 119 (2010), §5000A(b).

¹³³ Democratic Policy Communication Committee, *Patient Protection and Affordable Care Act: Detailed Summary*.

¹³⁴ Patient Protection and Affordable Care Act, Pub. L. No. 111–148, 124 Stat. 119 (2010), §1396a(a)(10)(A)(i)(VIII).

¹³⁵ The actual penalties are the flat fee or one percent of income, whichever is higher. This will be further explored in Chapter VI.

John Roberts delivered the majority opinion that “the (individual) mandate may be upheld as within Congress’s power to “lay and collect Taxes,”¹³⁶ and that “Congress may also ‘lay and collect Taxes, Duties, Imposts and Excises, to pay the Debts and provide for the common Defence and general Welfare of the United States.’”¹³⁷ Put simply, “Congress may tax and spend.”¹³⁸ There are several exceptions to compliance with the individual mandate: religious objectors, Native American tribe members, taxpayers with incomes less than 100 percent of the federal poverty level (FPL), those without coverage for less than three months, those with an approved hardship waiver, the incarcerated, and individuals in the country illegally are not required to purchase insurance.¹³⁹

The ACA imposes several regulations upon the business community to increase insurance coverage as part of the shared responsibility tactic. One rule mandates that larger businesses with over 200 employees must automatically enroll new employees in a qualifying health insurance plan. Another rule targets small businesses that employ 50–200 people and allows them to buy insurance through the exchanges. Employers that do not follow the guidelines will pay penalties at tax time ranging from \$350–\$3,000 per un-enrolled employee. Employers that do follow the guidelines will receive tax credits. Originally, this part of the ACA was set to go into effect starting January 1, 2014. However, on July 2, 2013, President Obama announced a delay in the implementation of this portion of the law until 2015. On the *White House Blog* post titled, “We’re Listening to Businesses about the Health Care Law,” senior advisor to the president, Valarie Jarrett, wrote, “we’re giving businesses more time to comply.”¹⁴⁰ This delay has created a lot of confusion that has yet to be sorted out.

¹³⁶ “National Federation of Independent Business et al. V. Sebelius,” last modified 2014, *ScotUS Blog*, <http://www.scotusblog.com/case-files/cases/national-federation-of-independent-business-v-sebelius/>, 2.

¹³⁷ U.S. Const., Art. I, §8, cl. 1.

¹³⁸ “National Federation of Independent Business et al. V. Sebelius,” 5.

¹³⁹ Patient Protection and Affordable Care Act, Pub. L. No. 111–148, 124 Stat. 119 (2010).

¹⁴⁰ Valarie Jarrett, “We’re Listening to Businesses about the Health Care Law,” *The White House Blog*, July 2, 2013, <http://www.whitehouse.gov/blog/2013/07/02/we-re-listening-businesses-about-health-care-law>

The ACA requires fully-participating states to establish a health benefit exchange to help individuals and small employers obtain coverage. The exchanges are managed by the states but are really just central gathering points for private insurers. In order for health insurance companies to qualify for an exchange they must offer plans that meet the essential benefit requirements as spelled out by the Department of Health and Human Services. This will allow consumers to make “apples to apples” comparisons across insurance packages in deciding on coverage plans. As of this writing, 16 states and Washington, DC, are operating their own exchanges.

For those living in states that choose not to create exchanges, Health and Human Services has established a national public option exchange, called the Health Insurance Marketplace. This can be accessed at <https://www.healthcare.gov/>. Seven states have chosen not to stand up their own exchange but have entered into a state/federal partnership, where the state’s customers access the National Public Option Exchange, but the state conducts the plan management and consumer service. Seven other states have a similar partnership with the federal government, wherein the state is only responsible for plan management. In addition, 19 states have declined to have any involvement in exchanges, and their residents must access the National Public Option Exchange without the state’s participation. One state—Utah—runs a small-business marketplace exchange, while its residents utilize the National Public Option Exchange for the individual marketplace. See this website for up-to-date information on state exchange participation: <http://www.commonwealthfund.org/Maps-and-Data/State-Exchange-Map.aspx>.

Health insurers qualifying for the exchange offer four distinct levels of health insurance coverage: bronze, silver, gold and platinum. Each provides increasing percentages to be paid by the insurer, ranging from 60 percent at the bronze level up to 90 percent at the platinum level. A fifth level—a lower benefit catastrophic plan—is available only to those under age 30 (a population considered to be healthier on average) and to those otherwise exempt from the individual mandate. As of this writing, the state of Washington is the only participating state that does not offer catastrophic coverage plans.

Individual purchasers earning below 400 percent of the FPL are eligible to buy insurance at the exchange if they are not eligible for insurance through their employers, or otherwise eligible for one of the entitlement programs. Subsidies in the form of tax credits will be given to those eligible for exchange purchases on a sliding scale for those earning between 100 percent and 400 percent of the FPL.¹⁴¹ Illegal immigrants are not eligible for exchange purchases or tax credits. Additionally, legal immigrants must live here legally for five years before becoming eligible for exchange purchases.

Another ACA reform allowing coverage expansion of the insurance pool permits young people to stay on their parents' insurance up to the age of 26. This part of the law became effective September 23, 2010 and has already contributed to significant gains in health insurance coverage for adults between the ages of 19–25. This will be discussed further in the next chapter.

The ACA put several regulations into place to ensure that health insurance companies cannot cherry-pick only from the healthy population:¹⁴²

- Insurance companies cannot refuse coverage based on health status (physical or mental), pre-existing conditions, claims experience, genetic information, history of domestic violence or other health-related factors¹⁴³
- Insurance companies may not cancel or rescind policies
- Premiums can vary only by age, family structure, geography, actuarial value, tobacco use, and participation in a health promotion program, but not by more than a three-to-one ratio
- No lifetime limits on benefits
- Eliminates unreasonable annual limits on benefits

¹⁴¹ The Federal Poverty Level determined by HHS based on U.S. Census information on a yearly basis, and published under Federal Poverty Guidelines at <http://aspe.hhs.gov/poverty/13poverty.cfm>. Amounts vary slightly in some states. For 2013, the FPL in the 48 contiguous states and the District of Columbia for a family of one is \$11,490, increasing with the addition of each family member. The FPL for a family of four is \$23,550.

¹⁴² Patient Protection and Affordable Care Act, Pub. L. No. 111–148, 124 Stat. 119 (2010).

¹⁴³ *Ibid.*

B. EXPANSION OF MEDICAID

The second major prong of the insurance expansion effort is state Medicaid expansion. Medicaid is a state/federal program, primarily funded by the federal government, and managed by the states. Nationwide, Medicaid funding averaged 23 percent of the states' total spending in fiscal year 2011, the largest portion of states' budgets.¹⁴⁴ Medicaid began in 1965 as a safety-net for the poor, but it has expanded to now cover a broader set of the population. Each state is managed differently and has some flexibility in whom it covers. Generally speaking, most state Medicaid programs cover low income women with children, pregnant women, children in low-income families, the elderly (over 65), and people with certain disabilities, such as blindness.¹⁴⁵ The median threshold for Medicaid eligibility for working parents as of January, 2012 was 63 percent of the FPL.¹⁴⁶ Furthermore, 17 states limit Medicaid eligibility to parents earning less than 50 percent of the FPL.¹⁴⁷ Some states choose to cover low-income, childless adults, while others do not.

As originally written, the ACA directed all states to expand their Medicaid coverage to childless adults earning up to 133 percent of the FPL.¹⁴⁸ The penalty for not doing so was to potentially lose their state Medicaid funding altogether. This part of the bill was intended to motivate states to participate in the ACA; however, many saw the tactic akin to blackmail.

This highly controversial piece of the law was finally decided upon by the Supreme Court. Chief Justice John Roberts in the majority opinion concluded, "The Medicaid expansion violates the Constitution by threatening States with the loss of their

¹⁴⁴ U.S. Government Accountability Office, *Medicaid Expansion: States' Implementation of the Patient Protection and Affordable Care Act* (GAO-12-821) (Washington, DC: U.S. Government Accountability Office, 2012).

¹⁴⁵ *Ibid.*

¹⁴⁶ *Ibid.*

¹⁴⁷ *Ibid.*

¹⁴⁸ Because five percent of an applicant's income is disregarded, the effective threshold is 138 percent of the FPL. Therefore, the literature sometimes uses 138 percent as the eligibility threshold number for Medicaid eligibility.

existing Medicaid funding if they decline to comply with the expansion.”¹⁴⁹ This means that each state may individually decide whether to expand its Medicaid program.

In states that choose not to expand Medicaid, individuals and families with incomes between 100–400 percent of the FPL will be eligible for federal subsidies on the exchange, whereas in states choosing to expand, only people earning between 133 and 400 percent FPL are eligible for the subsidies. In order to offset the states’ costs of Medicaid expansion, from 2014 to 2017, the federal government will pay for 100 percent of the difference between a state’s current Medicaid eligibility level and the ACA minimum. Federal contributions to the expansion will drop to 95 percent in 2017 and remain at 90 percent after 2020.¹⁵⁰ This applies to the newly-covered population only. This means that states with low numbers of Medicaid recipients stand to gain the most money in expanding their program. At the time of this writing, 26 states plus DC are participating, 21 are not, and three are undecided.¹⁵¹ There is no provision prohibiting states from choosing to expand Medicaid at a later date.¹⁵²

In addition to expanding Medicaid, the ACA mandates that the states maintain income eligibility levels for Children’s Health Insurance Program (CHIP) through September of 2019. CHIP is another state/federal cooperative entitlement program aimed at covering children in low-income families. Children in families earning less than 200 percent of the FPL are eligible. Services provided through CHIP are more comprehensive than those generally provided to adults. Additionally, services include dental and vision, in addition to general health care and preventive care. The ACA will increase federal funding match rate by 23 percent between 2014 and 2019.¹⁵³

¹⁴⁹ “National Federation of Independent Business et al. V. Sebelius,” 3.

¹⁵⁰ Kansas Health Institute, *ACA Medicaid Expansion: Enrollment and Cost Estimates for Kansas Policymakers* (Topeka, KA: Kansas Health Institute, 2012), <http://m.khanet.org/criticalissues/kancareexpansion/kancareexpansionresources/k101289.aspx>, 2.

¹⁵¹ The latest information on the state-participation count with a daily update can be found here:<http://www.advisory.com/daily-briefing/resources/primers/medicaidmap>, accessed March 18, 2014.

¹⁵² “Where the States Stand on Medicaid Expansion,” *The Daily Briefing*, May 28, 2014, <http://www.advisory.com/daily-briefing/resources/primers/medicaidmap>

¹⁵³ “Children’s Health Insurance Program Financing,” Centers for Medicare and Medicaid Services, accessed July 16, 2014, <http://www.medicaid.gov/Medicaid-CHIP-Program-Information/By-Topics/Financing-and-Reimbursement/Childrens-Health-Insurance-Program-Financing.html>

C. CONTROLLING COSTS

The ACA puts several regulations into place aimed at controlling the ever-rising costs of health care. The below list is not comprehensive, but it illustrates some of the highlights:¹⁵⁴

- A qualified plan offered through the Exchange must limit its cost sharing in such a way that annual deductibles cannot exceed the amounts allowed in health savings accounts (\$2,000 for an individual, and \$4,000 for a family of four)
- Insurance companies may only use the following factors to set premiums: age, family structure, geography, actuarial value, tobacco use, and participation in a health promotion program. Premiums may not vary more than three-to-one.
- The ACA places a cap on insurance company administrative expenditures
- Requires no cost-sharing for certain preventive services and immunizations
- Enhances the Medicare Part D prescription drug benefit coverage, a.k.a. the “donut hole”

The ACA increases funding for community clinics as a method of providing some level of health care to those without insurance coverage. These clinics are open to all comers, including illegal immigrants. It is hoped that by increasing the number of low-cost or no-cost community clinics, more uninsured will choose to be treated there, rather than at the higher-cost emergency rooms.

D. IMPROVING QUALITY OF THE HEALTH CARE SYSTEM

The ACA contains several guidelines and regulations aimed at improving the overall quality of the health care system:¹⁵⁵

- The President shall establish a council to be known as the “National Prevention, Health Promotion and Public Health Council”¹⁵⁶

¹⁵⁴ Patient Protection and Affordable Care Act, Pub. L. No. 111–148, 124 Stat. 119 (2010).

¹⁵⁵ *Ibid.*

¹⁵⁶ *Ibid.*, §4001.

- The Secretary of Health and Human Services will establish a national strategy to improve health care service delivery, patient outcomes and public health
- The President will convene an Interagency Working Group on Health Care Quality to collaborate on the development and dissemination of quality initiatives consistent with the national strategy
- Medicare and Medicaid payments will be linked to quality health outcomes
- Specifically encourages the development of new patient care models
- Focuses improvements on rural care
 - Providers in rural areas eligible for increased fees
 - More funding for ground and air ambulances in rural areas
- Creates a new program to develop community health teams to improve community-based, coordinated care

The ACA attempts to improve the U.S. health care system in a multitude other ways, such as increasing the size and capability of the health care workforce, preventing chronic disease, and improving public health. It is beyond the scope of this thesis to enumerate all the regulations and intricacies of a 906-page law; however, this chapter provides the basic outline of the main objectives and mandates.

E. SUMMARY

The Affordable Care Act is the most significant health care reform effort in the past generation, written with the lofty goals of 1) expanding health care to all eligible U.S. residents, 2) controlling health care costs, and 3) improving the overall quality of health care in America. The term “homeland security” is not mentioned anywhere in the expressed legislative goals. In fact, the term is used only a handful of times (10) throughout the document and only then to identify some of the participants to specific councils or to specify how a person is required to prove his or her immigration status and eligibility for participation. Regardless, if the ACA does succeed in expanding health insurance coverage, controlling costs, and improving health care, these achievements will

have the secondary effect of also improving homeland security's all-hazard preparedness efforts, particularly from the health perspective and the economic perspective, as will be outlined in the next chapter.

THIS PAGE INTENTIONALLY LEFT BLANK

V. ANALYSIS

A. HOW IS ACA MOST LIKELY TO POSITIVELY IMPACT HOMELAND SECURITY EFFORTS TO ACHIEVE ALL-HAZARDS PREPAREDNESS?

The fact that millions of U.S. residents do not possess health insurance negatively affects our collective safety and homeland security preparedness level. The consequences of uninsurance and its relation to homeland security are discussed here. Implementation of the Affordable Care Act will expand health insurance to millions of U.S. residents not currently covered. This expansion has significant potential to positively impact homeland security preparedness in a variety of ways. These potential impacts are explored in this chapter, both from the health perspective and the economic perspective.

According to a report by the Institute of Medicine, 43 percent of working-age adults who did not have health insurance reported that they chose not to see a doctor for a medical problem in a one-year time period; in contrast, only 10 percent of working-age adults who did have coverage for the entire year reported not seeing a physician for a medical issue.¹⁵⁷ Jack Hadley's comprehensive analysis of 51 studies in *Sicker and Poorer—The Consequences of Being Uninsured: A Review of the Research on the Relationship between Health Insurance, Medical Care Use, Health, Work, and Income* finds “the uninsured receive fewer preventive and diagnostic services, tend to be more severely ill when diagnosed, and received less therapeutic care.”¹⁵⁸ Numerous studies over the long-term have shown that uninsured Americans are less likely to obtain preventive health care, care for chronic conditions and more likely to suffer from undiagnosed medical conditions. As a result, uninsurance is associated with a higher rate of mortality¹⁵⁹ and decreased access to health care.¹⁶⁰

¹⁵⁷ Institute of Medicine of the National Academies, *Uninsurance Facts and Figures*.

¹⁵⁸ Hadley, “Sicker and Poorer,” 3S.

¹⁵⁹ Centers for Disease Control and Prevention, “Emerging Infections Programs.”

¹⁶⁰ Nicole Lurie et al., “Termination from Medi-Cal: One Year Later,” *New England Journal of Medicine* 314, no. 19 (1986): 1268.

In the *National Strategic Narrative*, authors Captain Wayne Porter and Colonel Mark Mykleby promote the idea that security means more than physical safety, “for Americans, security is very closely related to freedom, because security represents freedom from anxiety and external threat, *freedom from disease and poverty*... [emphasis added].”¹⁶¹ They urge us to focus on, among other things, “quality health care and education”¹⁶² and the prioritization of “a sustainable infrastructure of education, health and social services to provide for the continuing development and growth of America’s youth.”¹⁶³ While Porter and Mykleby do not advocate for any particular type of health care system or structure, they point out that health care is an integral part of a secure and prosperous society. Griffen Trotter echoes the idea that basic health care provides a foundation for a physical infrastructure that promotes “a social and physical that enhances the quality and security of ordinary lives...”¹⁶⁴ Health, in and of itself, contributes to one’s sense of security, and health care is a component of maintaining one’s health.

The Congressional Budget Office estimates that the ACA will bring down the proportion of uninsured, nonelderly adults in the U.S. from 20 percent to 11 percent.¹⁶⁵ Some early proof that implementation of the ACA will equate to health insurance coverage gains can already be found. As noted earlier in this paper, the ACA goes into effect in stages. One of the earliest prongs of the law went into effect on September 23, 2010. This aspect of the ACA allowed young adults to remain on their parents’ insurance

¹⁶¹ Wayne Porter and Mark Mykleby, *A National Strategic Narrative* (Washington, DC: Woodrow Wilson Center, 2011), 6, <http://www.wilsoncenter.org/sites/default/files/A%20National%20Strategic%20Narrative.pdf>

¹⁶² *Ibid.*, 10.

¹⁶³ *Ibid.*, 13.

¹⁶⁴ Griffen Trotter, “Emergency Medicine, Terrorism and Universal Access to Healthcare: A Potent Mixture for Erstwhile Knights-Errant,” in *In the Wake of Terror: Medicine and Morality in a Time of Crisis*, ed. Jonathan D. Moreno (Cambridge, MA: MIT Press, 2003), 143.

¹⁶⁵ Congressional Budget Office, *Estimates for the Insurance Coverage Provisions of the Affordable Care Act Updated for the Recent Supreme Court Decision* (Washington, DC: Congressional Budget Office, 2012).

plans up to age 26.¹⁶⁶ This is a gain of seven years beyond when children “aged-out” of coverage prior to the ACA.

A study published in *Health Affairs* journal in January of 2013 studied the early effects of the ACA on health insurance coverage and access to care for young adults. The study by Benjamin Sommers et al. notes that between September of 2010 and December of 2011, approximately three million uninsured adults between the ages of 19–25 gained health insurance coverage as a result of the ACA.¹⁶⁷

This particular study demonstrated that not only did more young adults enjoy coverage gains, but also enjoyed increased access to care, which is ultimately one of the primary goals of the law.¹⁶⁸ As Shane Green noted in 2004, “A nation’s greatest defense against bioterrorism, both in preparations for and in response to an attack, is a population in which an introduced biological agent cannot get a foothold, i.e., healthy people with easy access to care.”¹⁶⁹

By expanding health insurance to 33 million more people through the implementation of the ACA, the results of these studies support the likelihood that this newly insured population will overall seek medical care earlier on, be in a better state of health when seen, and have better health outcomes. This will have positive ripple effects for homeland security in dealing with emerging disease, bioterror, flu pandemic, mental illnesses, and potentially economic security.

B. HEALTH SURVEILLANCE SYSTEM

An effective health surveillance system requires that those stricken by illness or disease—whether accidentally contracted or intentionally afflicted—seek treatment from

¹⁶⁶ “A group health plan and a health insurance issuer offering group or individual health insurance coverage that provides dependent coverage of children shall continue to make such coverage available for an adult child (who is not married) until the child turns 26 years of age.” Patient Protection and Affordable Care Act, Pub. L. No. 111–148, 124 Stat. 132 (2010), §2714(a).

¹⁶⁷ Benjamin D. Sommers, Thomas Buchmueller, Sandra L. Decker, Colleen Carey, and Richard Kronick, “The Affordable Care Act has Led to Significant Gains in Health Insurance and Access to Care for Young Adults” *Health Affairs* 32, no. 1 (January 2013), 165.

¹⁶⁸ *Ibid.*, 170.

¹⁶⁹ Green, “Bioterrorism and Health Care Reform: No Preparedness without Access,” 2.

a health care professional. The health care professional works to diagnose the problem, prescribe care, mitigate further spread, and report the illness as necessary to the health care community and possibly the government. This process is critical to our nation's security in the event of a bioterror attack, such as with an Ebola virus or anthrax attack. The same holds true in managing contagious diseases such as influenza or newly emerging diseases. The sooner an illness or disease is correctly diagnosed, the more options remain available to help mitigate the spread or effect. Delays in diagnoses and therefore the development of appropriate treatments can have a limiting effect on both the health care community's and the homeland security community's choices and options in managing the spread and effect of the affliction.

Jack Hadley's analysis showed statistically significant and positive support for the hypothesis that having health insurance or greater medical care use improves health: seven of the 10 natural experiments analyzed, six of the seven longitudinal studies, 29 of 35 of the observational studies showed "statistically significant results consistent with a positive relationship between health insurance or medical care use and health."¹⁷⁰

According to author G. Kenny, the uninsured received only 55 percent of the medical services received by the insured.¹⁷¹ Increased health insurance coverage correlates with an increased use of health care services,¹⁷² which is likely to increase the chance of earlier identification and mitigation of disease. This is good news for homeland security. The uninsured are more than four times more likely than the insured to delay needed medical care or forego it altogether due to cost concerns.¹⁷³ By increasing the number of insured Americans, we also increase the likelihood that those with contagious diseases will seek treatment earlier on, allowing health professionals to identify, treat and mitigate disease spread more successfully. This would include diseases of concern to the

¹⁷⁰ Hadley, "Sicker and Poorer," 14S.

¹⁷¹ Genevieve M. Kenney, Stacey McMorrow, Stephen Zuckerman, and Dana E. Goin, "A Decade of Health Care Access Declines for Adults Holds Implications for Changes in the Affordable Care Act," *Health Affairs* 31, no. 5 (2012): 899–908.

¹⁷² Institute of Medicine of the National Academies, *Uninsurance Facts and Figures*.

¹⁷³ Patient Protection and Affordable Care Act, Pub. L. No. 111–148, 124 Stat. 132 (2010), §2714(a).

homeland security community such as influenza virus, or any disease that has the ability to spread from person-to-person.

A 2012 report from the Office of the Director of National Intelligence focused on “megatrends” and future possibilities for the global world in the year 2030.¹⁷⁴ One area of focus was the increasing likelihood that viruses previously unknown in humans would continue to cross over from the animal reservoir to humans due to increased livestock production and human encroachment into the jungles. Examples of prior occurrences include a prion disease in cattle that jumped to humans in 1980 to cause variant Creutzfeldt-Jacob disease in humans and the bat corona virus transferring to humans in 2002, known now as SARS.¹⁷⁵ These diseases can be devastating to the human population, due to the lack of prior exposure, as well as the lag-time required to diagnose the disease and develop treatments.

The same is true for any emerging disease, regardless of source. Early detection, identification, and mitigation are particularly critical with emerging diseases. New viruses appear on a daily basis. Viruses utilize RNA rather than DNA in the reproductive process. The RNA process is not as exact as the DNA process, and the reproductions vary in their genetics compared to the parent. This phenomenon is termed “antigenic drift,” and it makes viruses a moving target in terms of vaccination and treatment. As an example, there are multiple strains of the rhinovirus (the common cold) circulating at any one time. By the time a rhinovirus has passed through a given population, it will be genetically different than the strain that touched off the contagion.

Early medical care, diagnosis, and treatment are particularly critical when dealing with newly emerging diseases that are more dangerous than the rhinovirus, such as hemorrhagic viruses like the Ebola virus. These viruses have an extremely high mortality rate, as high as 90 percent in some cases,¹⁷⁶ and for many there are no known cures. When there are no cures for such deadly diseases early identification and quarantine

¹⁷⁴ Office of the Director of National Intelligence, *Global Trends 2030: Alternative Worlds*.

¹⁷⁵ Ibid.

¹⁷⁶ Anthony Sanchez et al., “Reemergence of Ebola Virus in Africa,” *Emerging Infectious Diseases* 1, no. 3 (July, 1995), doi: 10.3201/eid0103.950307, <http://wwwnc.cdc.gov/eid/article/1/3/95-0307.htm>

become the primary management tools. Increased health insurance coverage makes the U.S. better positioned to find and manage emerging diseases earlier on in an outbreak.

The same holds true for the health surveillance system as it relates to food safety: an increase in the number of Americans with health insurance is likely to increase the health surveillance system's ability to help us in spotting food-safety issues. More insured people will seek medical care earlier on, which allows the surveillance system to pick up on patterns sooner.

One subtitle of the ACA is specifically aimed at improving the public health surveillance system: Subtitle C—Strengthening Public Health Surveillance Systems, § 2821, “Epidemiology-Laboratory Capacity Grants.” The section appropriates funding (subject to availability) for a grant program that would award grants to state, local, and tribal health departments “to assist public health agencies in improving surveillance for, and response to, infectious diseases and other conditions of public health importance by,”¹⁷⁷

- (1) Strengthening epidemiologic capacity for identifying and monitoring for infectious disease;
- (2) Enhancing laboratory practices including reporting processes;
- (3) Improving information and information exchange systems; and,
- (4) Developing and implementing prevention and control strategies.

C. PREVENTIVE CARE

Another way the ACA would accomplish improved health security for U.S. residents is through increased access to preventive care. The ACA mandates that insurers cover certain preventive services, as recommended by the U.S. Preventive Services Task Force. This task force is comprised of “an independent panel of non-Federal experts in prevention and evidence-based medicine and is composed of primary care providers (such as internists, pediatricians, family physicians, gynecologists/obstetricians, nurses, and health behavior specialists).”¹⁷⁸ The task force makes recommendations for primary

¹⁷⁷ Patient Protection and Affordable Care Act, Pub. L. No. 111–148, 124 Stat. 119 (2010), §2821.

¹⁷⁸ U.S. Preventive Services Task Force, “U.S. Preventive Services Task Force,” <http://www.uspreventiveservicestaskforce.org/index.html>, accessed July 31, 2014.

care providers and health systems aimed at improving health. It assigns grades “A,” “B,” “C,” “D,” or “I” to its own recommendations, indicating the certainty that providing the service is beneficial.

For example, the task force recommends blood pressure screening in adults, and it assigns that specific recommendation a grade of “A.” This indicates that a high-level of certainty that the net benefit of providing blood pressure screening to adults is substantial. Any recommendation given a grade of “B” indicates either a high certainty that the net benefit is moderate, or a moderate certainty that the net benefit is moderate to substantial.¹⁷⁹ § 1001 of the ACA mandates Medicare, new and existing private individual plans, and new and existing small-group plans to cover all “A” and “B”-rated preventive recommendations without cost-sharing; there are now 53 “A” or “B”-rated services.¹⁸⁰

The ACA also mandates that certain specified vaccinations be offered without cost-sharing.¹⁸¹ The Advisory Committee on Immunization Practices is a group of medical and public health experts that develop recommendations on how to use vaccines to control disease in the U.S.¹⁸² The ACIP develops the vaccination schedules for child and adult populations. Currently, they recommend 23 different vaccines, such as measles/mumps/rubella (MMR), influenza, smallpox, etc.¹⁸³ Of these 23 vaccines, 10 are mandated by the ACA to be covered with no cost sharing.¹⁸⁴

- Hepatitis A
- Hepatitis B

¹⁷⁹ Sara E. Wilensky and Elizabeth A. Gray, “Existing Medicaid Beneficiaries Left Off the Affordable Care Act’s Prevention Bandwagon,” *Health Affairs* 32, no. 7 (July, 2013): 1188.

¹⁸⁰ “Grandfathered” plans are not subject to this requirement. A current list of these services can be accessed here: <http://www.uspreventiveservicestaskforce.org/uspstf/uspsabrecs.htm>.

¹⁸¹ Patient Protection and Affordable Care Act, Pub. L. No. 111–148, 124 Stat. 119 (2010), §2713.

¹⁸² Centers for Disease Control and Prevention, “Advisory Committee on Immunization Practices (ACIP),” <http://www.cdc.gov/vaccines/acip/>, accessed July 31, 2014.

¹⁸³ Centers for Disease Control and Prevention, “Vaccine Recommendations of the ACIP,” last modified March 7, 2014, <http://www.cdc.gov/vaccines/hcp/acip-recs/index.html>.

¹⁸⁴ For a current list of no-cost vaccinations, go to: <https://www.healthcare.gov/what-are-my-preventive-care-benefits/>

- Herpes zoster
- Human papillomavirus
- Influenza (flu shot)
- Measles, mumps, rubella
- Meningococcal
- Pneumococcal
- Tetanus, diphtheria, pertussis
- Varicella

Expanding insurance to a larger percentage of the population, combined with mandating no-cost vaccinations will very likely result in an increased number of Americans who receive the recommended vaccinations. A Canadian study conducted in 2008 is provided below as support for this conclusion.

Kwong et al. conducted a widely-cited study in 2008 on a Canadian vaccination program: In 2000, Ontario, Canada implemented a universal influenza immunization program and provided free flu vaccines to the entire population age six months and older. As a result, vaccination rates rose from an average of 18 percent of the population (the average in 1996–1997) to 38 percent of the population from 2000–2004. Since the introduction of that universal vaccination program, the researchers found that influenza-associated deaths decreased 74 percent, and influenza-associated use of health care facilities also decreased.¹⁸⁵ It is reasonable to predict that by increasing free access to 10 different vaccines to millions more people, an increase in those vaccination rates is likely, as was seen in Canada.

Another way the ACA will likely increase the U.S. influenza vaccination rate is via increasing reimbursement rates to physicians. In 2013 and 2014, the ACA will increase reimbursements to physicians who provide specified vaccinations up to 100 percent of the Medicare level. Currently, the reimbursement to doctors barely covers the

¹⁸⁵ Jeffrey C. Kwong et al., “The Effect of Universal Influenza Immunization on Mortality and Health Care Use,” *PLoS Medicine* 5, no. 10 (2008): 3.

cost of the vaccine itself, which means that the doctor sometimes ends up subsidizing it.¹⁸⁶

D. DISASTER PREPAREDNESS

If its mandates are implemented as written, the ACA is likely to bolster our disaster preparedness efforts is through its push for an increase in number of health care workers, and its push for increased training. Title V of the ACA, “Health Care Workforce,” Subtitle A, § 5001 spells out the goals of this section:¹⁸⁷

The purpose of this title is to improve access to and the delivery of health care services for all individuals, particularly low income, underserved, uninsured, minority, health disparity, and rural populations by:

1. gathering and assessing comprehensive data in order for the health care workforce to meet the health care needs of individuals, including research on the supply, demand, distribution, diversity, and skills needs of the health care workforce;
2. increasing the supply of a qualified health care workforce to improve access to and the delivery of health care services for all individuals;
3. enhancing health care workforce education and training to improve access to and the delivery of health care services for all individuals; and
4. providing support to the existing health care workforce to improve access to and the delivery of health care services for all individuals.

The law dedicates hundreds of pages spelling out specific strategies and funding designed to increase the supply of the health care workforce, such as federally supported student loan funds,¹⁸⁸ a nursing student loan program,¹⁸⁹ recruitment and retention programs for specialty health care workers, such as pediatric health care providers, grants

¹⁸⁶ Association of State and Territorial Health Officials, *Increase in Vaccine Administration Rates: Summary of State Stakeholder Meetings*, 2012, <http://www.astho.org/Programs/Immunization/Increase-in-Vaccine-Administration-Rates>

¹⁸⁷ Patient Protection and Affordable Care Act, Pub. L. No. 111–148, 124 Stat. 119 (2010), §5001.

¹⁸⁸ *Ibid.*

¹⁸⁹ *Ibid.*, §5202.

for states and local programs,¹⁹⁰ and funding for a National Health Services Corps.¹⁹¹ If these mandates are realized, the health care workforce will see real increases in its numbers and improvements in its training. All of these things continue to be identified as areas where the U.S. health care system must focus in order to truly prepare for inevitable natural disasters.

Specific to disaster preparedness, §5210 establishes the Ready Reserve Corps for service in time of national emergency. The purpose of such a corps “is to fulfill the need to have additional Commissioned Corps personnel available on short notice ...to assist regular Commissioned Corps personnel to meet both routine public health and emergency response missions.” The ACA states that the Ready Reserve Corps shall “be available and ready for involuntary calls to active duty during national emergencies and public health crises, similar to the uniformed service reserve personnel.”¹⁹²

An Internet search for the Ready Reserve Corps quickly leads to the United States’ Public Health Service’s website, <http://ccmis.usphs.gov/ccmis/readyreserve.aspx>, which describes the origin and mission of the Ready Reserve Corps. Health care professionals may sign up on that site to become a Ready Reserve Corps member and subject to active duty upon activation by the Surgeon General for the purpose of disaster relief.

At a philosophical level author Griffen Trotter argues that improved access to health care enhances disaster preparedness by improving the relationship between health care seekers and providers by increasing trust and kinship “because health care personnel are more apt to be viewed as public servants.”¹⁹³ He also argues that greater government involvement and control of the health care system could improve “political pathways” to build-in disaster preparedness into the health care system and possibly even increase the sense of ownership for disaster planning by the average citizen.¹⁹⁴ These claims lack

¹⁹⁰ Ibid., §5206.

¹⁹¹ Ibid., §5207.

¹⁹² Ibid., §5210.

¹⁹³ Griffen Trotter, “Emergency Medicine,” 144.

¹⁹⁴ Ibid.

evidence at this time, but perhaps deserve further attention as ACA implementation comes to fruition.

A common theme in the disaster preparedness arena is the need for improvement in surge capacity. “Surge capacity” describes the ability to provide adequate medical evaluation and care during events that exceed the limits of the normal medical infrastructure of an affected community.¹⁹⁵ It is the ability of hospitals—emergency rooms (ER) in particular—to accommodate an influx of patients due to any sort of natural disaster, mass casualty, or major medical event. While most of us assume that the health care system is prepared to provide adequate care during major health events, the reality is that the current trend toward “just-in-time” delivery of supplies has actually decreased health care’s surge capacity.

Three primary elements influence a hospital’s surge capacity: staff, supplies/equipment, and structure. The term “staff” includes doctors, nurses, technicians, and anyone else related to providing health care in the hospital setting. “Supplies and equipment” would entail any sort of medical supplies necessary to provide medical treatment, such as wound care items, blood and plasma, medications, diagnostic equipment, beds, etc. Finally, “structure” refers to the physical location, as well as the health care infrastructure, to include pre-planning, response protocols, use of the Incident Command System, etc.

The Hospital Preparedness Program (HPP) is a federally managed program that sets guidelines and benchmarks to help local hospitals prepare for public health emergencies. The HPP is overseen by the Assistant Secretary of Preparedness and Response, under the U.S. Department of Health and Human Services. According to its website, the HPP “provides leadership and funding through grants and cooperative agreements to States, territories, and eligible municipalities to improve surge capacity and enhance community and hospital preparedness for public health emergencies.”¹⁹⁶

¹⁹⁵ U.S. Department of Health & Human Services, “What is a Medical Surge?” in *Medical Surge Capacity Handbook* (Washington, DC: U.S. Department of Health & Human Services, 2014), <http://www.phe.gov/Preparedness/planning/mscc/handbook/chapter1/Pages/whatismedicalsurge.aspx>

¹⁹⁶ Public Health Emergency, “Hospital Preparedness Program,” July 16, 2014, <http://www.phe.gov/Preparedness/PLANNING/HPP/Pages/default.aspx>

The benchmark for hospital surge capacity as outlined by the HPP is 500 patients per one million for infectious disease events and 50 patients per one million for mass casualty events.¹⁹⁷ In layman's terms, a hospital must be able to manage overflow capacity when a major health event occurs. This requires extra bed space, medical supplies, and staff. The reality is that many ER's are constantly overloaded on a day-to-day basis. The 1986 Emergency Medical Treatment and Active Labor Act (EMTALA) requires all emergency rooms¹⁹⁸ to provide emergency health services to patients, regardless of citizenship, legal status, or ability to pay.¹⁹⁹ When the uninsured are sick, they go to the emergency room. In the end, the general public underwrites the cost via taxes.

1. Natural Disasters and Vulnerable Populations

During a response to natural disasters, caring for victims already in poor health presents an added level of challenge. According to the CDC, "lack of access to routine health care is a leading cause of mortality after disasters."²⁰⁰ Those suffering from chronic diseases, such as cancer, diabetes, heart disease, stroke, or chronic respiratory disorders, need routine medical care and regular access to medicines in addition to care for whatever injuries were sustained in the emergency. Other vulnerable populations include pregnant women, the elderly, and those with disabilities. When natural disasters strike, managing injuries to those with special medical needs is more difficult, and it also requires more medical resources than a healthy person would with similar injuries. The ACA promises to increase access to health care. As has already been shown earlier in this

¹⁹⁷ Kaji et al., "Current Hospital Disaster Preparedness," 2188.

¹⁹⁸ The EMTALA requires all hospitals that accept Medicare payments from Health & Human Services to provide emergency health care, regardless of ability to pay. Because nearly all hospitals accept Medicare payments, nearly all hospitals are affected.

¹⁹⁹ Centers for Medicare and Medicaid Services, "Emergency Medical Treatment & Labor Act," March 26, 2012, <http://www.cms.gov/Regulations-and-guidance/Legislation/EMTALA/index.html?redirect=/EMTALA/>

²⁰⁰ Ali H. Mokdad et al., "When Chronic Conditions Become Acute: Prevention and Control of Chronic Diseases and Adverse Health Outcomes during Natural Disasters," *Prevention of Chronic Diseases* 2, no. Supplemental 1 (2005): 1.

thesis, better access to health care leads to a healthier population. Moreover, a healthier population is overall more resilient to natural disasters.

2. Strengthening of the Public Health System

The American Public Health Association's 2011 publication on the ACA's implications for public health improvement spells out all the various ways the ACA intends to positively impact overall public health by transforming "our 'sick care' system into one that focuses on prevention and health promotion."²⁰¹ This report points out the critical need to focus on establishing a "sufficiently sized, adequately trained workforce" needed to "promote and protect the nation's health."²⁰² As noted earlier in this chapter, several sections of the ACA focus directly on these topics.

3. Mental Health Care

The ACA requires eligible insurance plans to provide a certain level of mental health services. It also prohibits rejection based on prior health conditions, including mental health diagnosis. It is difficult to predict how this will affect the homeland security system; however, it is unlikely to impact it in a negative manner. Major lone wolf attacks often involve subjects with a long history of documented mental illness, as outlined in Edward Welch's Naval Postgraduate School master's thesis, "Preventing School Shootings: a Public Health Approach to Gun Violence." Welch's thesis systematically sets out an argument that lone wolves are a homeland security issue.²⁰³ Whether one accepts this as a homeland security issue or not, it is difficult to see how increased access to mental health care could have a negative impact on homeland security.

Under Title V Health Care Workforce of the ACA § 5306 entitled, "Mental and Behavioral Health Education and Training Grants," aims to increase the numbers of

²⁰¹ Taryn Morrissey, *The Affordable Care Act's Public Health Workforce Provisions: Opportunities and Challenges* (Washington, DC: American Public Health Association, 2011): 3.

²⁰² Ibid.

²⁰³ Edward Welch, "Preventing School Shootings: A Public Health Approach to Gun Violence" (master's thesis, Naval Postgraduate School, 2013).

mental health care workers and improve their training.²⁰⁴ This section authorizes the Secretary of Health and Human Services to establish and award grants to institutions of higher education “to support the recruitment of students for, and education and clinical experiences of the students in” obtaining baccalaureate, master’s or doctoral degrees, internships, and residency programs for behavioral and mental health services. If this portion of the ACA is successfully implemented, it is likely to have a positive effect on the overall numbers of mental health providers, as well as improving their access to training. While the resulting impact on homeland security is not immediately quantifiable, it will be a step in the right direction.

4. Increased Economic Stability

Health care costs for individuals, for employers, and the nation have grown at alarming rates. Since 1960, spending on health care has increased an average of 2.3 percentage points more than gross domestic product (GDP) growth on an annual basis. In 1960, national health expenditures were measured at five percent of the GDP; however, in 2011, national health expenditures had climbed to nearly 18 percent,²⁰⁵ according to a December, 2013 health policy report in the *New England Journal of Medicine*. The most surprising news recently regarding the rising costs of health care is that this trend appears to be slowing. Real spending for health care grew only 0.8 percent in 2012,²⁰⁶ a slowdown in growth that has taken analysts by surprise.

Experts do not agree on the causes of the slowed growth in costs. Some believe that it is explained by the recession, as health care cost trends generally mirror general economic trends; others theorize that efforts to control costs, including aspects of the ACA, might be responsible.

The drivers of cost increases are better understood. General inflation, technology and research costs, tax-subsidies for employer insurance, entitlement program costs, and

²⁰⁴ *Patient Protection and Affordable Care Act*, §5306.

²⁰⁵ David Blumenthal, Kristof Stremikis and David Cutler, “Health Care Spending—A Giant Slain Or Sleeping?” *The New England Journal of Medicine* 369, no. 26 (2013): 2551, <http://www.nejm.org/doi/pdf/10.1056/NEJMhpr1310415>

²⁰⁶ *Ibid.*

the supply-and-demand (for profit) system in the U.S. have all been shown to influence health care costs ever upward.²⁰⁷ According to the Government Accounting Office, the aging population will be the primary driver of health care spending increases through 2029. The number of baby-boomers who turn 65 and become eligible for Medicare will increase from 7,600 per day in 2011, to 11,000 per day in 2029.²⁰⁸

The non-partisan Congressional Budget Office has studied the potential economic effects of the ACA on federal government spending repeatedly since 2009. Its initial cost estimate report was done in November of 2009, prior to the Supreme Court decision in June of 2012 that essentially allowed states to opt out of Medicaid expansion.²⁰⁹ In July of 2012, the CBO updated its estimate to take this change into account. As the CBO authors admit, precise calculations are impossible at this time. Even so, rough estimates have repeatedly indicated that in the aggregate, federal spending outlays will increase initially over the first few years of ACA implementation but will be offset by savings on health care spending and revenues, which will result in a net deficit savings between the years 2012–2022.²¹⁰ After 2022, spending and the federal deficit will increase, but at a slower rate than it would without ACA implementation.²¹¹

States have legitimate concerns regarding how the ACA will affect their bottom line. According to the Government Accountability Office’s 2012 report, across fiscal years 2012–2020, state budget directors believe that three aspects of Medicaid expansion will contribute to increased costs:²¹²

- 1) administration costs for Medicaid enrollment;
- 2) information technology system costs to support enrollment; and
- 3) enrolling previously eligible, but not enrolled individuals.

²⁰⁷ Ibid.

²⁰⁸ U.S. Government Accountability Office, *The Federal Government’s Long-Term Fiscal Outlook: Fall 2012 Update* (GAO-13-148SP) (Washington, DC: U.S. Government Accountability Office, 2012): 14.

²⁰⁹ Congressional Budget Office, *Patient Protection and Affordable Care Act: Cost Estimate, 2009* (Washington: DC: 2009), http://www.cbo.gov/sites/default/files/cbofiles/ftpdocs/107xx/doc10731/reid_letter_11_18_09.pdf.

²¹⁰ Congressional Budget Office, *Estimates for the Insurance Coverage*, 21.

²¹¹ Ibid.

²¹² U.S. Government Accountability Office, *Medicaid Expansion*.

Effects of the ACA on state spending, particularly in regard to Medicaid expansion, is still an unanswered question, but several renowned research groups are researching the possible outcomes. Carter Price, Associate Mathematician, and Christine Eibner, Senior Economist at the RAND Corporation, have published an article in *Health Affairs* in June of 2013 that compares the financial effects on states' spending under both "opt-in" (to Medicaid expansion) and "opt-out" scenarios, as well as some other hypothetical scenarios for partial expansions that are not actually allowed under current law. Price and Eibner used the RAND Comprehensive Assessment of Reform Efforts (COMPARE) micro-simulation tool to model the effects of different implementation scenarios. Although full details of this study will not be reported here, in summary, the RAND researchers found that Medicaid expansion provided participating states an overall a higher rate of insurance coverage, lower short-term (state/local) costs for delivering uncompensated care, and a higher federal revenues, taxes and ACA-related benefits.²¹³ According to the authors, "We conclude in terms of coverage, cost, and federal payments, states would do best to expand Medicaid."²¹⁴

Another way states stand to gain from the ACA is from lower spending on health care for the uninsured. Expanded health insurance coverage translates to less cost for uncompensated care. Jack Hadley et al. found that uncompensated care for the uninsured population cost \$56 billion in 2008.²¹⁵ When taking medical inflation into account, this number will be approximately \$80 billion in 2016.²¹⁶ The same study estimated that states and local governments pay about 30 percent of this amount. So even though the states are not paying to cover the uninsured via entitlement program, they still pay an enormous bill for their health care costs.

At an individual level, increased health care coverage has been found to have a positive effect on the pocketbook. Jack Hadley's comprehensive study from 2003

²¹³ Carter C. Price and Christine Eibner, "For States that Opt Out of Medicaid Expansion: 3.6 Million Fewer Insured and \$8.4 Billion Less in Federal Payments," *Health Affairs* 32, no. 6 (2013): 1035.

²¹⁴ *Ibid.*

²¹⁵ Jack Hadley et al., "Covering the Uninsured in 2008: Current Costs, Sources of Payment, and Incremental Costs," *Health Affairs* 27 (2008): 399–415.

²¹⁶ *Ibid.*

concludes: “This review finds that there is a substantial body of research supporting the hypotheses that having health insurance improves health and that better health leads to higher labor force participation and higher income.”²¹⁷ Increased health insurance would reduce bankruptcies related to health events. Hadley finds that improving health status from “fair or poor to very good or excellent” would increase both work effort and annual earnings by approximately 15 percent to 20 percent.²¹⁸

The initial implementation of the ACA at the beginning of 2014 left everyone confused about how it would affect individuals financially. Patterns were not immediately apparent. Some individuals and families purchasing insurance on the exchanges experienced significant increases over what they were paying before, while others were relieved to find they would save money. Further adjustments will occur in late 2014 when insurance companies set their rates for 2015. It will be some time before patterns emerge and rates stabilize.

Two Brookings Institute researchers recently conducted an in-depth study on how the ACA might affect income distribution across income classes by the year 2016. Although income redistribution was not one of the stated goals of the health care law, the researchers found that “the ACA may do more to change the income distribution than any other recently enacted law.”²¹⁹ They estimate that the ACA will boost the net incomes of the poorest 20 percent of U.S. residents by about six percent, and the net income of the bottom 10 percent by seven percent. Net income will fall slightly (less than one percent) across other income classes.²²⁰ The authors of this particular study point out the myriad of limitations in their own study, due to the ACA’s length and complexity. Only time will tell the true financial impact of ACA implementation.

²¹⁷ Hadley, “Sicker and Poorer,” 60S.

²¹⁸ *Ibid.*, 3S.

²¹⁹ Henry J. Aaron and Gary Burtless, *Potential Effects of the Affordable Care Act on Income Equality* (Washington, DC: Brookings Institute, 2014): 1.

²²⁰ *Ibid.*, 1–44.

E. SUMMARY

Expanding health insurance coverage, controlling health care costs, and improving the quality of health care are primary goals of the ACA. According to the studies researched here, this will likely have positive ripple effects for homeland security in dealing with emerging disease, bioterror, flu pandemic, mental illnesses, and economic security.

VI. WHERE DO WE GO FROM HERE?

As outlined to this point, the Affordable Care Act has significant potential to bolster the homeland security goal of all-hazards preparedness. The ACA will not, by itself, fully protect the U.S. population from all biological threats, emerging diseases, or food and water-borne illnesses. Health insurance and expanded health care access do not provide a magical shield from such dangers. However, the ACA is an important step toward improved access to affordable health care for eligible U.S. residents and is a foundational improvement for homeland security all-hazards preparedness.

A. RECOMMENDATIONS AND POLICY ADJUSTMENTS

As currently written, the ACA contains some clear gaps that could be addressed through policy adjustments. Through these policy changes, the positive influence on homeland security could be further enhanced from both the health and economic perspectives. Here are several recommendations aimed at increasing the ACA's positive impact on homeland security preparedness:

- Allow illegal immigrants to purchase health insurance on the Exchanges
- Treat legal immigrants as equal to U.S. residents in regards to ACA mandates and benefits
- Educate the public on the true tax penalty for those who do not purchase health insurance
- Correct the inequity of Medicaid preventive coverage for new beneficiaries vs. existing beneficiaries
- Design and implement grant programs to encourage greater state participation in efforts to expand health insurance coverage

B. EXTEND ACA BENEFITS TO IMMIGRANTS

One of the most notable gaps in the Affordable Care Act is its failure to cover the immigrant population. Over 11 million illegal immigrants are not eligible for any of the ACA benefits, and they are specifically prohibited from purchasing health insurance on the exchanges. Even legal immigrants must establish residency for five years before gaining eligibility for ACA benefits. According to Shane Green, communities without

access to care “are more vulnerable to infectious diseases and therefore might be considered the nation’s Achilles’ heel in a bioterrorism attack.”²²¹ The same is true for any infectious disease, regardless of source.

A specific example is the outbreak of rubella that occurred in a primarily immigrant community in Westchester County, New York, in 1997. Rubella, also known as the German measles or the three-day measles, is common childhood disease caused by the rubella virus. The disease is characterized by a red bumps in the form of a rash on the face, trunk, and limbs, and it is usually mild, resolving within three days. However, in some cases severe—even fatal—complications can occur. The biggest concern with rubella is with pregnant women. If a pregnant mother contracts rubella during the first 20 weeks of pregnancy, the virus can cause congenital rubella syndrome (CRS) in the fetus, and the pregnancy ends in miscarriage 20 percent of the time.²²² Infants surviving the CRS often suffer a variety of birth defects and problems and continue to harbor the virus, which endangers other newborns and pregnant mothers with further contagion.²²³ Rubella vaccines were developed in 1969. They are currently administered in the United States as part of the measles/mumps/rubella (MMR) series, and overall have proven quite successful.

In 1997, however, a rubella outbreak occurred in a close-knit, immigrant community in New York. Between December of 1997 and May of 1998, 95 cases of rubella were reported in Westchester County, primarily to foreign-born Hispanics (63 percent)²²⁴ from countries where rubella vaccination programs either did not exist or were newly implemented. Foreign-born victims (88) had no history of inoculation, and hailed from Guatemala, Colombia, Mexico, Ecuador, and Portugal. The seven U.S. born victims also had no history of vaccination.

²²¹Green, “Bioterrorism and Health Care Reform: No Preparedness without Access,” 2.

²²² *Wikipedia*, s.v. “Rubella,” March 28, 2014, http://en.wikipedia.org/wiki/Rubella#Signs_and_symptoms

²²³ “Rubella Outbreak—Westchester, New York, 1997–1998, *Morbidity and Mortality Weekly Report* 48, no 26(1999): 560, <http://www.cdc.gov/mmwr/preview/mmwrhtml/mm4826a2.htm>

²²⁴ *Ibid.*

Alarmed, local health authorities ramped up vaccination education and efforts. Health officials identified leaders in the Hispanic communities and developed partnerships to educate the population. Public education materials were published in Spanish and English, and vaccines were distributed at work sites throughout the county. By May of 1998, more than 4,500 rubella vaccinations were distributed, and the last confirmed case of rubella in that community was reported in May of 1998.²²⁵

This outbreak in an immigrant community provides a case study for why it makes more sense from a homeland security perspective to extend ACA eligibility (and therefore access to recommended vaccines) to all U.S. residents, regardless of immigration status. A vulnerable population can serve as an unnecessary reservoir of otherwise preventable disease. Disease does not check immigration status—vulnerability to disease within the illegal immigrant population increases the risk of disease for everyone. In addition, the effectiveness of the health surveillance system is diminished when 11 million illegal immigrants have less access to health care, as outlined in Chapter III.

Allowing illegal immigrants to purchase plans on the exchanges makes sense for the entire U.S. population. It would do several things: further spread the financial risk inherent in the insurance industry; increase access to vaccination and preventive care; and give the U.S. a better chance of spotting emerging disease, bioterror attacks, or food and water-safety issues at an earlier stage. All of these benefits could be realized at little cost to the government or taxpayer, since illegal immigrants would not be eligible for the expanded Medicaid programs, nor the tax credits available to U.S. citizens.

The U.S. Congress should consider expanding all ACA mandates and benefits to all legal U.S. residents, rather than requiring residency for five years, as this would enhance homeland security from both the health and economic perspective in the same ways outlined above. In addition, from an ethical standpoint, someone who is in the U.S. legally should be extended the same rights and protections as U.S. citizens, as they are in other areas of law, such as in criminal law.

²²⁵ Ibid.

A state senator in California is currently attempting to extend some ACA benefits to illegal immigrants at the state level. California State Senator Ricardo Lara of Bell Gardens is carrying Senate Bill 1005, which would provide two avenues for undocumented immigrants to obtain health insurance. First, the bill would expand Medi-Cal (California's Medicaid program) eligibility to undocumented immigrants and allow those earning less than 138 percent of the federal poverty level to apply. Second, the bill would create a separate exchange program where undocumented immigrants who earn more than 138 percent of the FPL could purchase insurance plans.²²⁶ Senator Lara's team has not yet provided cost estimates for the bill, but it is currently being reviewed in committee.

C. EDUCATE THE PUBLIC ON THE TRUE TAX PENALTY

Another recommendation for enhancing the positive homeland security implications for the ACA is to develop a nationwide program that is aimed at educating the public regarding the tax penalty assessment for those that do not obtain health insurance.

The commonly-held wisdom regarding the penalty is that in 2014, the penalty for failing to carry health insurance is a \$95 flat fee, rising to \$325 in 2015, \$695 in 2016, and adjusted for inflation after that.²²⁷ This flat fee seems like a cheap alternative to some healthy people, many of whom have decided to forego health insurance and pay the penalty. What they are learning now is that the penalty is actually the *greater of either* \$95 or one percent of the yearly household income. Only the amount of income above the tax filing threshold (\$10,150 for an individual) is used to calculate the penalty. The maximum penalty is the national average yearly premium for a bronze plan.

To calculate the tax penalty for 2014, a single adult with a household income below \$19,650 would pay the \$95 flat rate and \$47.50 for each uninsured child under 18,

²²⁶ Laurel Rosenhall, "More Could Get Care," *San Jose Mercury News*, sec. Local, February 16, 2014.

²²⁷ Patient Protection and Affordable Care Act, Pub. L. No. 111-148, 124 Stat. 119 (2010).

up to a maximum of \$285.²²⁸ A single adult with a household income above \$19,650 would pay an amount based on the one percent rate, capped at the national average of the bronze plan. If household income is below \$10,150, then no penalty is owed. Higher household income requires that the calculation be done using the one percent rate, which potentially increases the penalty as high as \$4500–\$5000²²⁹—depending on the national average yearly premium for a bronze plan. In 2015, the flat fee penalty will increase to \$325 per person or two percent of income for higher earners. In 2016 and later years the flat fee penalty will be \$695 per person or two-and-a-half percent of income. After that, it will be adjusted for inflation.

The take-home lesson is that for higher income earners, the tax penalties will be substantially higher than the flat fees being advertised. Educating the public on the true potential tax penalties might incentivize choosing health insurance over penalties.

D. ADDRESS MEDICAID PREVENTIVE COVERAGE INEQUITY

As noted in Chapter V, § 1001 of the ACA mandates that new and existing private individual health insurance plans, new and existing small-group insurance plans, and Medicare cover all “A” and “B”-rated preventive recommendations without cost-sharing. In contrast, the rules for Medicaid are different. States that choose to expand Medicaid do not have to cover *existing* beneficiaries for these same preventive services. States are only required to extend the no-cost sharing coverage to *new* Medicaid beneficiaries.

The fact that some states have chosen not to expand such no-cost benefits to *current* Medicaid beneficiaries is not only a gap in the homeland security puzzle, but also a needless imbalance and ethical dilemma—why should newly eligible Medicaid patients receive better benefits than current patients? Future legislative adjustments to the ACA should eliminate this disparity by requiring states that expand Medicaid to provide no-cost sharing preventive care to both current and new beneficiaries.

²²⁸ “The Fee You Pay if You Don’t Have Health Coverage,” U.S. Centers for Medicare and Medicaid Services, accessed March 28, 2014, <https://www.healthcare.gov/what-if-someone-doesnt-have-health-coverage-in-2014/>

²²⁹ “The Lowdown on the Health Insurance Penalty,” November 22, 2013, Kiplinger, <http://m.kiplinger.com/article/insurance/T027-C001-S003-the-lowdown-on-the-health-insurance-penalty.html>

E. PROVIDE FINANCIAL INCENTIVES TO ENCOURAGE STATE PARTICIPATION IN ACA

One of the primary goals of the ACA is to expand health insurance coverage. As has been shown in this thesis, expanding health insurance coverage confers significant gains to the homeland security preparedness efforts. Achieving these gains is tied to the expansion of health insurance coverage but not necessarily to the ACA as the vehicle. If health insurance coverage gains are achieved through other means, this would also confer benefits on homeland security preparedness.

Since the Supreme Court offered its split decision in 2012 that supported the individual mandate but struck down penalties designed to force Medicaid expansion, only 16 states plus Washington, DC, have chosen to open their own exchanges, and 26 states plus Washington, DC, have chosen to expand Medicaid.²³⁰ Many of the states that have declined to run an exchange or expand Medicaid have the highest per capita uninsured populations in the country, as well as low health ratings. Texas, New Mexico, Mississippi, Louisiana, and Nevada have the top-five highest rates of uninsurance in the country.²³¹ The Commonwealth Fund Scorecard ranked Texas, Mississippi, Nevada and Louisiana in the bottom quartile of states in regards to health care quality, access, cost and outcomes in a 2014 report, and New Mexico in the third-lowest quartile.²³² Texas, Louisiana and Mississippi have declined to either run an exchange or expand Medicaid.²³³ Without delving too deeply into the politics of this situation, these states are also highly Republican with little political appetite for implementing the ACA.

The federal government should consider developing other means to motivate these states in particular to expand health insurance. One idea is to tie grant money to

²³⁰ The latest information on the state-participation count with a daily update can be found here:<http://www.advisory.com/daily-briefing/resources/primers/medicaidmap>, accessed March 18, 2014.

²³¹ Gallup Well Being, "Uninsured: Highest Percentage in Texas, Lowest in Mass." August 19, 2009, <http://www.gallup.com/poll/122387/uninsured-highest-percentage-texas-lowest-mass.aspx>

²³² "Common Wealth Fund Ranks States' Health, Finding Big Differences," *The Daily Briefing*, May 2, 2014, <http://www.advisory.com/Daily-Briefing/2014/05/02/Commonwealth-Fund-ranks-states-health-finding-big-differences>

²³³ "Health Insurance Marketplaces," Common Wealth Fund, accessed July 30, 2014, <http://www.commonwealthfund.org/Maps-and-Data/State-Exchange-Map.aspx>.

health insurance coverage. For example, the Health and Human Services Department could offer grants to states that either increase their insured population by a certain percentage or to reach a certain threshold. This tactic would remove the political connotations associated with the ACA. States would be free to develop their own programs for increasing health insurance coverage in a manner acceptable for that political climate.

Another idea is to develop a homeland security media campaign aimed at helping the general public make the connection between health and homeland security. For example, Health and Human Services could develop commercials with messages such as, “Do your part to protect America: get vaccinated!” or, “Anyone can help fight terrorism. It starts with you: get health insurance and get healthy.” Such messages might help Americans better understand the links between health care, health insurance and security, and move us beyond the political rhetoric associated with the ACA.

F. AREAS FOR FURTHER RESEARCH

The research conducted here was focused only on the potentially positive effects of the ACA on homeland security preparedness. To be sure, there are many potentially negative effects as well. One important example is the possibility that increased government spending on health care will reduce the amount of funding available for homeland security. There is also a chance that by expanding health care to a larger population that we will actually *decrease* the overall quality of our health. Increased health care accessibility could lead to overloaded health care facilities, increased wait times, and lower quality care. Increased health care cost controls through the ACA could lower the financial incentive for people to go into the health care fields, which would again negatively affect our health care and therefore our homeland security preparedness. All of these arguments remain unresolved and deserving of future research.

G. SUMMARY

As Shane Green notes in his article, “Bioterrorism and Health Care Reform: No Preparedness Without Access,”

With the U.S. presently engaged in a ‘war on terror,’ in which not only soldiers but also civilians are targets, a healthy fighting force is no longer enough to ensure national security; the time has come for this country to take up reforms that promote the health of *all* Americans.”²³⁴

The perspective on health care must change so it becomes viewed as part and parcel of homeland security preparedness by the civilian community and the government.

Health care and homeland security are inextricably linked. Investment in health care confers benefits upon U.S. homeland security all-hazards preparedness because increased health insurance coverage through the ACA equals increased access to health care, which equals improved health. This in turn equals improved homeland security preparedness and a more resilient population. The Affordable Care Act is already considered the largest health care reform in America in one-hundred years, and only time will tell if it is a game-changer for homeland security preparedness as well. But if the Affordable Care Act does deliver even in part on its promise to improve access to health care, then homeland security all-hazards preparedness is likely to improve in kind. The health of homeland security depends on the health of our population: the ACA promises to improve both.

²³⁴ Green, “Bioterrorism and Health Care Reform: No Preparedness without Access,” 1; Fenn, *Pox Americana*, 1.

LIST OF REFERENCES

- Aaron, Henry J. and Gary Burtless. *Potential Effects of the Affordable Care Act on Income Equality*. Washington, DC: Brookings Institute, 2014.
- Association of State and Territorial Health Officials. *Increase in Vaccine Administration Rates: Summary of State Stakeholder Meetings*. 2012.
<http://www.astho.org/Programs/Immunization/Increase-in-Vaccine-Administration-Rates>
- Biasotti, Michael C. "Management of the Severely Mentally Ill and its Effects on Homeland Security." Master's thesis, Naval Postgraduate School, 2011.
- Blumenthal, David, Kristof Stremikis, and David Cutler. "Health Care Spending—A Giant Slain or Sleeping?" *The New England Journal of Medicine* 369, no. 26 (2013): 2551–2557. <http://www.nejm.org/doi/pdf/10.1056/NEJMhpr1310415>
- Bobbitt, Philip C. *Brief for Professor Philip C. Bobbitt as Amicus Curiae in Support of Petitioners with Respect to the Individual Mandate* (No. 11–396). 2012.
http://www.yale.edu/lawweb/jbalkin/files/Philip_Bobbitt_Healthcare_Brief.pdf
- Bovsun, Mara. "750 Sickened in Oregon Restaurants as Cult Known as the Rajneeshees Spread Salmonella in Town of the Dalles." *New York Daily News*, sec. News. June 15, 2013. <http://www.nydailynews.com/news/justice-story/guru-poison-bioterrorists-spread-salmonella-oregon-article-1.1373864#commentpostform>
- Brill, Steven. "Bitter Pill: Why Medical Bills are Killing Us," *Time*, March 4, 2013.
<http://www.uta.edu/faculty/story/2311/Misc/2013,2,26,MedicalCostsDemandAndGreed.pdf>
- Butler, Adrienne S., Allison M. Panzer and Lewis R. Goldfrank. "Developing Strategies for Minimizing the Psychological Consequences of Terrorism through Prevention, Intervention, and Health Promotion." In *Preparing for the Psychological Consequences of Terrorism: A Public Health Strategy*, National Research Council (99–134). Washington, DC: The National Academies Press, 2003.
- Canadian Institute for Health Information. *Exploring the 70/30 Split: How Canada's Health Care System is Financed*. Ottawa, Canada: Canadian Institute for Health Information, 2005. https://secure.cihi.ca/free_products/FundRep_EN.pdf
- Cameron, Gavin. "Multi-Track Microproliferation: Lessons from Aum Shinrikyo and Al Qaida." *Studies in Conflict and Terrorism* 22, no. 4 (1999): 277–309.
- CBC News*. "Public vs. Private Health Care." December 1, 2006.
http://www.cbc.ca/news2/background/healthcare/public_vs_private.html

- Centers for Disease Control and Prevention. *Smallpox Response Plan and Guidelines*. Atlanta, GA: Centers for Disease Control and Prevention, 2002.
- Chen, Guang-Wu, Shih-Cheng Chang, Chee-Keng Mok, Yu-Luan Lo, Yu-Nong Kung, Ji-Hung Huang, Yun-Han Shih, Ji-Yi Wang, Chiayn Chiang, Chi-Jene Chen, and Shin-Ru Shih. “Genomic Signatures of Human versus Avian Influenza A Viruses.” *Emerging Infectious Diseases* 12, no. 9 (September 2006): 1353–1360. doi: 10.3201/eid1209.060276
- “Children’s Health Insurance Program Financing.” Centers for Medicare and Medicaid Services. Accessed July 16, 2014. <http://www.medicare.gov/Medicare-CHIP-Program-Information/By-Topics/Financing-and-Reimbursement/Childrens-Health-Insurance-Program-Financing.html>
- Chyba, Christopher F. and Alex L. Greninger. “Biotechnology and Bioterrorism: An Unprecedented World.” *Survival* 46, no. 2 (2004): 143–162.
- Cohen, Robin A. and Barbara Bloom. *Access to and Utilization of Medical Care for Young Adults Aged 20–29 Years: United States, 2008* (NHCS Data Brief no. 9). Atlanta: GA, Centers for Disease Control and Prevention, 2010. <http://www.cdc.gov/nchs/data/databriefs/db29.PDF>
- Congressional Budget Office. *Estimates for the Insurance Coverage Provisions of the Affordable Care Act Updated for the Recent Supreme Court Decision*. Washington, DC: Congressional Budget Office, 2012.
- Congressional Budget Office. *The Veterans Health Administration’s Treatment of PTSD and Traumatic Brain Injury among Recent Combat Veterans*. Washington, DC: Congressional Budget Office, 2012.
- The Daily Briefing*. “Common Wealth Fund Ranks States’ Health, Finding Big Differences.” May 2, 2014. <http://www.advisory.com/Daily-Briefing/2014/05/02/Commonwealth-Fund-ranks-states-health-finding-big-differences>
- The Daily Briefing*. “Where the States Stand on Medicaid Expansion.” May 28, 2014. <http://www.advisory.com/daily-briefing/resources/primers/medicaidmap>
- DeNavas-Walt, Carmen, Bernadette D. Proctor, and Jessica C. Smith. *Income, Poverty, and Health Insurance Coverage in the United States: 2011*. Washington, DC: U.S. Government Printing Office, 2012. <http://www.census.gov/prod/2012pubs/p60-243.pdf>.
- Federal Emergency Management Agency. *The Response to the 2011 Joplin, Missouri, Tornado Lessons Learned Study*. Washington, DC: Federal Emergency Management Agency, 2011.

- Fenn, Elizabeth A. *Pox Americana: The Great Smallpox Epidemic of 1775–82*. New York: Hill and Wang, 2001.
- Food and Drug Administration. “Voluntary National Retail Food Regulatory Program Standards.” U.S. Department of Health and Human Services. January, 2013. <http://www.fda.gov/downloads/food/guidanceregulation/retailfoodprotection/programstandards/ucm372411.pdf>
- Gindi, Renee M. *Emergency Room Use among Adults Aged 18–64: Early Release of Estimates from the National Health Interview Survey, January–June 2011*. Centers for Disease Control and Prevention. May 2012. www.cdc.gov/nchs/data/nhis/earlyrelease/emergency_room_use_january-june_2011.pdf
- Gladwell, Malcolm. “Talk of the Town.” *The New Yorker*. October 29, 2001.
- Green, Shane K. “Bioterrorism and Health Care Reform: No Preparedness without Access.” *Virtual Mentor* 6, no. 5 (May 2004): 1–3. <http://virtualmentor.ama-assn.org/2004/05/pfor2-0405.html>
- Hadley, Jack. “Sicker and Poorer—The Consequences of being Uninsured: A Review of the Research on the Relationship between Health Insurance, Medical Care Use, Health, Work, and Income.” Supplemental issue. *Medical Care Research and Review* 60, no. 2 (2003): 3S-75S. doi:10.1177/1077558703254101.
- Hadley, Jack, John Holahan, Teresa Coughlin, and Dawn Miller. “Covering the Uninsured in 2008: Current Costs, Sources of Payment, and Incremental Costs.” *Health Affairs* 27 (2008): 399–415.
- Health Canada. *Highlights from the Canadian Pandemic Influenza Plan for the Health Sector*. 2006. http://www.phac-aspc.gc.ca/cpip-pclcpi/hl-ps/pdf/CPIP-highlights-2006_e.pdf
- Himmelstein, David U., Deborah Thorne, Elizabeth Warren, and Steffie Woolhandler. “Medical Bankruptcy in the United States, 2007: Results of a National Study.” *The American Journal of Medicine* 122, no. 8 (2009): 741–746.
- Health Care Cost Institute. *Health Care Cost and Utilization Report: 2010*. Health Care Cost Institute. 2012. www.healthcostinstitute.org/files/HCCI_HCCUR2010.pdf
- Hoffman, Catherine and Julia Paradise. “Health Insurance and Access to Health Care in the United States.” *Annals of the New York Academy of Sciences* 1136 (June, 2008): 149–160. <http://onlinelibrary.wiley.com/doi/10.1196/annals.1425.007/pdf>

- Institute of Medicine of the National Academies. *Uninsurance Facts and Figures: Uninsurance Costs the Country More than You Think*. Washington, DC: National Academies Press, 2004.
<http://www.iom.edu/~media/Files/Report%20Files/2004/Insuring-Americas-Health-Principles-and-Recommendations/FactsheetSociety2.pdf>
- Jarrett, Valarie. “We’re Listening to Businesses about the Health Care Law.” *The White House Blog*. July 2, 2013. <http://www.whitehouse.gov/blog/2013/07/02/we-re-listening-businesses-about-health-care-law>
- Kaiser Family Foundation and Health Research and Educational Trust. *Employer Health Benefits: Annual Survey 2008*. Menlo Park, CA: Henry J. Kaiser Family Foundation, 2008.
<http://kaiserfamilyfoundation.files.wordpress.com/2013/04/7790.pdf>
- Kaji, Amy H., Kristi L. Koenig, and Roger J. Lewis. “Current Hospital Disaster Preparedness.” *Journal of the American Medical Association* 298, no. 18 (2007): 2188–2190.
- Kansas Health Institute. *ACA Medicaid Expansion: Enrollment and Cost Estimates for Kansas Policymakers*. Topeka, KA: Kansas Health Institute, 2012. <http://m.khanet.org/criticalissues/kancareexpansion/kancareexpansionresources/k101289.aspx>
- Katz, Deborah. “Injury Toll from Marathon Bombs Reduced to 264.” *The Boston Globe*, sec. Health & Wellness. April 24, 2013.
<http://www.bostonglobe.com/lifestyle/health-wellness/2013/04/23/number-injured-marathon-bombing-revised-downward/NRpaz5mmvGquP7KMA6XsIK/story.html>
- Kenney, Genevieve M., Stacey McMorrow, Stephen Zuckerman, and Dana E. Goin, “A Decade of Health Care Access Declines for Adults Holds Implications for Changes in the Affordable Care Act,” *Health Affairs* 31, no. 5 (2012): 899–908.
- Kessler, Ronald C., Patricia A. Berglund, Martha L. Bruce, J. Randy Koch, Eugene M. Laska, Philip J. Leaf, Ronald W. Mandersheid, Robert A. Rosenheck, Ellen E. Walters, and Philip S. Wang. “The Prevalence and Correlates of Untreated Serious Mental Illness.” *Health Services Research* 36 (December 2001): 996–1007.
<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1089274/pdf/hsresearch00007-0020.pdf>
- Klein, Ezra. “11 Facts about the Affordable Care Act.” *The Washington Post*. June 24, 2012. <http://www.washingtonpost.com/blogs/wonkblog/wp/2012/06/24/11-facts-about-the-affordable-care-act/>
- Konisberg, Ruth Davis. “9/11 Psychology: Just How Resilient Were We?” *Time*, Sept. 8, 2011.

- Kwong, Jeffrey C., Thérèse A. Stukel, Jenny Lim, Allison J. McGeer, Ross EG Upshur, Helen Johansen, Christie Sambell, William W. Thompson, Deva Thiruchelvam, and Fawziah Marra. "The Effect of Universal Influenza Immunization on Mortality and Health Care Use." *PLoS Medicine* 5, no. 10 (2008): 1–13.
- Lurie, Nicole, Nancy B. Ward, Martin F. Shapiro, Claudio Gallego, Rati Vaghaiwalla, and Robert H. Brook. "Termination from Medi-Cal: One Year Later." *New England Journal of Medicine* 314, no. 19 (1986): 1266–1268.
- Mariotto, Angela B., K. Robin Yabroff, Yongwu Shao, Eric J. Feuer and Martin L. Brown. "Projections of the Cost of Cancer Care in the U.S.: 2010–2020." *Journal of the National Cancer Institute* 103, no. 2 (2011): 117–128.
doi:10.1093/jnci/djq495
- McNeil, Jr., Donald G. "Wary of Attack with Smallpox, U.S. Buys up a Costly Drug." *The New York Times*, sec. Health. March 12, 2013.
<http://www.nytimes.com/2013/03/13/health/us-stockpiles-smallpox-drug-in-case-of-bioterror-attack.html?pagewanted=all>
- Mechanic, David and David A. Rochefort. "Deinstitutionalization: An Appraisal of Reform." *Annual Review of Sociology* 16 (1990): 301–327.
- Mokdad, Ali H., George A. Mensah, Samuel F. Posner, Eddie Reed, Eduardo J. Simoes, and M. M. Engel. "When Chronic Conditions Become Acute: Prevention and Control of Chronic Diseases and Adverse Health Outcomes during Natural Disasters." *Prevention of Chronic Diseases* 2, no. Supplemental 1 (2005): 1–4.
- Morrissey, Taryn. *The Affordable Care Act's Public Health Workforce Provisions: Opportunities and Challenges*. Washington, DC: American Public Health Association, 2011.
- National Alliance on Mental Illness. *Mental Illness: Treatment Saves Money and Makes Sense*. 2007.
<http://www.nami.org/Template.cfm?Section=Policy&Template=/ContentManagement/ContentDisplay.cfm&ContentID=44613>
- National Department of Engineering, National Research Council, and Department of Homeland Security. *Biological Attack: Human Pathogens, Biotoxins and Agricultural Threats*. Washington, DC: National Academy of Sciences, 2004.
http://www.dhs.gov/xlibrary/assets/prep_biological_fact_sheet.pdf
- O'Boyle, Irene, James A. Johnson, Michelle Simms, and Robert Metzroth. "Terrorism and Emergent Challenges in Public Health." *Journal of Health Human Service Administration* 30, no. 4 (2008): 529–548.

- Organisation for Economic Co-operation and Development. *OECD Health Data 2013: How Does the United States Compare?* Paris, France: Organisation for Economic Co-operation and Development, 2013.
- Peterson, Susan “Epidemic Disease and National Security.” *Security Studies* 12, no. 2 (2002): 45. 43–81.
- Porter, Wayne and Mark Mykleby. *A National Strategic Narrative*. Washington, DC: Woodrow Wilson Center, 2011.
- Preussner, Jesse. “Examination of FEMA and the Relationship with a Community after a Disaster” Master’s thesis, Kansas State University, 2012.
- Price, Carter C. and Christine Eibner. “For States that Opt Out of Medicaid Expansion: 3.6 Million Fewer Insured and \$8.4 Billion Less in Federal Payments.” *Health Affairs* 32, no. 6 (2013): 1030–1036.
- Ringel, Jeanne S., Federico Girosi, Amado Cordova, Carter C. Price, and Elizabeth A. McGlynn. *Analysis of the Patient Protection and Affordable Care Act (HR 3590)*. Santa Monica, CA: Rand, 2010.
http://www.rand.org/content/dam/rand/pubs/research_briefs/2010/RAND_RB9514.pdf
- Rodriguez, Jamie. *How Legal Aid of Western Missouri Is Helping the Community Recover from the Joplin Tornado*. Chicago, IL: Sargent Shriver National Center on Poverty Law, 2012. <http://povertylaw.org/communication/advocacy-stories/rodriguez>
- Rosenau, William. “Aum Shinrikyo’s Biological Weapons Program: Why Did It Fail?” *Studies in Conflict and Terrorism* 24, no. 4 (2001): 289–301.
- Rosenhall, Laurel. “More Could Get Care.” *San Jose Mercury News*, sec. Local. February 16, 2014.
- “Rubella Outbreak—Westchester, New York, 1997–1998. *Morbidity and Mortality Weekly Report* 48, no 26 (1999): 560–563.
<http://www.cdc.gov/mmwr/preview/mmwrhtml/mm4826a2.htm>
- Sanchez, Anthony, Thomas G. Ksiazek, Pierre E. Rollin, Clarence J. Peters, Stuart T. Nichol, Ali S. Khan, and Brian W. J. Mahy. “Reemergence of Ebola Virus in Africa,” *Emerging Infectious Diseases* 1, no. 3 (July, 1995): 96. doi: 10.3201/eid0103.950307.
- Schiller, Jeannine S., Jacqueline W. Lucas, Brian W. Ward, and Jennifer A. Peregoy, *Summary Health Statistics for U.S. Adults: National Health Interview Survey*. Center for Disease Control. 2010.
http://www.cdc.gov/nchs/data/series/sr_10/sr10_252.pdf

- Schoen, Cathy, Sara R. Collins, Jennifer L. Kriss, and Michelle Doty. "How Many are Underinsured? Trends among U.S. Adults, 2003 and 2007." *Health Affairs* 27, no. 4 (2008): 298–309. doi:10.1377/hlthaff.27.4.w298
- Slevin, Colleen and Kristen Wyatt. "Medical Bills Loom in Colorado." *San Jose Mercury News*, sec. Local, June 27, 2012.
- Silver, Roxane Cohen E. Alison Holman, Daniel N. McIntosh, Michael Poulin, and Virginia Gil-Rivas. "Nationwide Longitudinal Study of Psychological Responses to September 11." *Journal of the American Medical Association* 288, no. 10 (2002): 1235–1244.
<http://mysite.du.edu/~dmcintos/PDF/Silver%20et%20al.%20Responses%20to%2009-11,%20JAMA,%202002.pdf>
- Social Security Advisory Board. *The Unsustainable Cost of Health Care*. 2009.
http://www.ssab.gov/documents/TheUnsustainableCostofHealthCare_508.pdf
- Sommers, Benjamin D., Thomas Buchmueller, Sandra L. Decker, Colleen Carey, and Richard Kronick. "The Affordable Care Act has Led to Significant Gains in Health Insurance and Access to Care for Young Adults" *Health Affairs* 32, no. 1 (2013): 165–174.
- Standing Senate Committee on Social Affairs, Science and Technology. *Canada's Response to the 2009 H1N1 Influenza Pandemic*. Ottawa: Canadian Senate, 2010.
<http://www.parl.gc.ca/content/sen/committee/403/soci/rep/rep15dec10-e.pdf>
- Starr, Paul. *Remedy and Reaction: The Peculiar American Struggle over Health Care Reform*. New Haven, CT: Yale University Press, 2011.
- Stolberg, Sheryl Gay and Robert Pear. "Obama Signs Health Care Overhaul Bill, with a Flourish." *New York Times*, sec. Money & Policy. March 23, 2010.
<http://www.nytimes.com/2010/03/24/health/policy/24health.html>
- Tamkins, Theresa. "Medical Bills Prompt More than 60 Percent of U.S. Bankruptcies." *CNN*. June 5, 2009.
<http://www.cnn.com/2009/HEALTH/06/05/bankruptcy.medical.bills/>
- Trotter, Griffen. "Emergency Medicine, Terrorism and Universal Access to Healthcare: A Potent Mixture for Erstwhile Knights-Errant." In *In the Wake of Terror: Medicine and Morality in a Time of Crisis*, edited by Jonathan D. Moreno (143–166). Cambridge, MA: MIT Press, 2003.
- U.S. Department of Health & Human Services, *2009 H1N1 Influenza Improvement Plan*. Washington, DC: The White House, 2012.

- U.S. Department of Health & Human Services. “What is a Medical Surge?” In *Medical Surge Capacity Handbook*. Washington, DC: U.S. Department of Health & Human Services, 2014.
<http://www.phe.gov/Preparedness/planning/mscc/handbook/chapter1/Pages/whatismedicalsurge.aspx>
- U.S. Department of Homeland Security. *Pandemic Influenza Preparedness, Response, and Recovery Guide for Critical Infrastructure and Key Resources*. Washington, DC: The White House, 2006.
- U.S. Department of Homeland Security. *Quadrennial Homeland Security Review Report*. Washington, DC: U.S. Department of Homeland Security, 2010.
- U.S. Government Accountability Office. *The Federal Government’s Long-Term Fiscal Outlook: Fall 2012 Update* (GAO-13-148SP). Washington, DC: U.S. Government Accountability Office, 2012.
- U.S. Government Accountability Office. *Medicaid Expansion: States’ Implementation of the Patient Protection and Affordable Care Act* (GAO-12-821). Washington, DC: U.S. Government Accountability Office, 2012.
- Vicini, James and Jonathon Stempel. “U.S. Top Court Upholds Health Care Law in Obama Triumph.” Reuters, sec. Wrap Up. June 28, 2012.
<http://www.reuters.com/article/2012/06/28/usa-healthcare-court-idUSL2E8HS4WG20120628>
- Wamala, Joseph F., Luswa Lukwago, Mugagga Malimbo, Patrick Nguku, Zabulon Yoti, Monica Musenero, William Mbabazi et al. “Ebola Hemorrhagic Fever Associated with Novel Virus Strain, Uganda, 2007–2008.” *Emerging Infectious Disease* 16, no. 7 (July 2010): 1087–1092. <http://wwwnc.cdc.gov/eid/article/16/7/09-1525.htm>
- Webby, Richard J. and Robert G. Webster. “Are We Ready for Pandemic Influenza?” *Science* 302, no. 5650 (2003): 1519–1522.
- Welch, Edward. “Preventing School Shootings: A Public Health Approach to Gun Violence.” Master’s thesis, Naval Postgraduate School, 2013.
- Wilensky, Sara E. and Elizabeth A. Gray, “Existing Medicaid Beneficiaries Left Off the Affordable Care Act’s Prevention Bandwagon,” *Health Affairs* 32, no. 7 (July, 2013): 1188–1195.
- Wilper, Andrew P., Steffie Woolhandler, Karen E. Lasser, Danny McCormick, David H. Bor, and David U. Himmelstein. “Health Insurance and Mortality in U.S. Adults.” *American Journal of Public Health* 99, no. 12 (2009): 2289–2295.

Wynia, Matthew K. and Lawrence O. Gostin. "Ethical Challenges in Preparing for Bioterrorism: Barriers within the Health Care System. *Journal Information* 94, no. 7 (2004): 1096–1102.

THIS PAGE INTENTIONALLY LEFT BLANK

INITIAL DISTRIBUTION LIST

1. Defense Technical Information Center
Ft. Belvoir, Virginia
2. Dudley Knox Library
Naval Postgraduate School
Monterey, California