

PUBLIC HEALTH POLICY: REVISITING THE NEED FOR A COMPENSATION SYSTEM FOR QUARANTINE TO MAXIMIZE COMPLIANCE

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I. INTRODUCTION

In the fall of 2014, the worsening Ebola epidemic in West Africa¹ led to concerns about the spread of Ebola into the United States. As states considered the risks posed by those traveling back to their homes after volunteering in Ebola inflicted zones, state governments made controversial decisions about quarantining²

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1. Somini Sengupta, *New Ebola Cases May Soon Reach 10,000 a Week*, *Health Officials Predict*, N.Y. TIMES, Oct. 15, 2014, at A21.

2. See Memorandum from Jason Sapsin, Ctr. for Law & the Pub.'s Health at Georgetown & Johns Hopkins Univ., Public Health Legal Preparedness Briefing Memorandum # 4, Overview of Federal and State Quarantine Authority, <http://www.publichealthlaw.net/Resources/ResourcesPDFs/4quarantine.pdf> (last visited Apr. 23, 2017); *State Quarantine and Isolation Statutes*, NAT'L CONF. ST. LEGISLATURES (Oct. 29, 2014), <http://www.ncsl.org/research/health/state-quarantine-and-isolation-statutes.aspx>. Quarantine and isolation relate to the state's power to restrict someone's freedom temporarily out of a concern for public health, safety, or welfare. *Id.* However, a distinction exists between "quarantine" and "isolation." *Id.* Quarantine is the separation of someone who has been exposed to a contagious disease until it can be determined that he or she will not become sick or pose a risk to others. *Id.* Isolation, on the other hand, involves separating someone who is known to be infected by a contagious disease from people who are not sick, in order to prevent them from transmitting the disease to others. *Id.* The focus of this Article is on quarantine, rather than isolation.

returning health care workers.³ New York and New Jersey, in particular, quarantined travelers returning from West Africa, including health care workers,⁴ and implemented new screening procedures in airports.⁵

Quarantining Americans exposed to Ebola gained popular public support. In one Reuter's poll, seventy-five percent of Americans surveyed agreed with the decision to quarantine health care workers returning to the United States, and eighty percent believed that the health care workers' movements should be controlled.⁶ This poll showed broad support for the stringent mandatory quarantine rules implemented by New York and New Jersey, requiring quarantine up to twenty-one days for anyone who had direct contact with the Ebola virus.⁷

Some health care workers quarantined, however, had a different opinion. For example, Kaci Hickox, a nurse, sought legal action after her own negative quarantine experience.⁸ Hickox had been volunteering in West Africa for Doctors Without Borders treating Ebola patients.⁹ Upon her return to the United States, she was placed into a medical tent in New Jersey for days despite showing no symptoms.¹⁰ After she returned to her home in Maine,

3. Benjamin Weiser & J. David Goodman, *The Flu, TB and Now Ebola: A Rare Legal Remedy Returns*, N.Y. TIMES, Oct. 27, 2014, at A1, A25.

4. *Id.*

5. *Americans Strongly Back Quarantine for Returning Ebola Health Workers*, REUTERS (Nov. 3, 2014, 6:55 PM), <http://www.reuters.com/article/2014/11/03/us-health-ebola-us-a-poll-idUSKBN0IN28820141103>.

6. *Id.*

7. *Id.* In a separate poll conducted by NBC and the *Wall Street Journal*, seventy-one percent of those surveyed were in favor of "mandatory" twenty-one day quarantines for Ebola health workers. Carrie Dann, *NBC/WSJ Poll: 71% Back Mandatory Quarantines for Ebola Health Workers*, NBC NEWS (Nov. 2, 2014, 8:48 PM), <http://www.nbcnews.com/storyline/ebola-virus-outbreak/nbc-wsj-poll-71-back-mandatory-quarantines-ebola-health-worker-s-n239576>. While the Trump administration's public health policies are unclear at this time, it is interesting to note that on August 1, 2014, in the midst of the Ebola crisis, President Trump tweeted "Stop the EBOLA patients from entering the U.S. Treat them, at the highest level, over there. THE UNITED STATES HAS ENOUGH PROBLEMS!" @realDonaldTrump, TWITTER (Aug. 1, 2014, 5:22 AM), https://twitter.com/realDonaldTrump/status/495182739310936064?ref_src=twsrc%5Etfw; see also Lena H. Sun, *New Administration Urged to Heed Public Health*, WASH. POST, Nov. 22, 2016, at A8 (commenting on President Trump's tweets).

8. Weiser & Goodman, *supra* note 3.

9. *Maine Nurse to Remain Advocate Against Ebola Quarantines*, CBS NEWS (Nov. 9, 2014, 11:21 AM), <http://www.cbsnews.com/news/ebola-outbreak-maine-nurse-kaci-hickox-to-remain-advocate-against-quarantines>.

10. *Id.*

the governor ordered her to be quarantined even though she tested negative for Ebola.¹¹ Hickox defied the order, gaining national media attention.¹² A judge ruled that the quarantine measures placed upon her were too restrictive and that she was not a threat unless she was showing symptoms.¹³ In the immediate aftermath, New Jersey proposed a bill that would provide income replacement and job security for health care workers, such as Hickox, while under quarantine.¹⁴ As soon as the Ebola health crisis ended, however, so did the momentum to provide any sort of formal mechanism for quarantine compensation for health care workers or others.¹⁵

The state's power to quarantine has been recognized for over a century as part of the general grant of police power that the Constitution gives to states.¹⁶ In *Jacobson v. Massachusetts*, decided in 1905, the U.S. Supreme Court "recognized the authority of a State to enact quarantine laws and 'health laws of every

11. *Kaci Hickox, Nurse Who Fought Ebola Quarantine, To Leave Maine: Report*, HUFFINGTON POST (Nov. 8, 2014, 6:05 PM), http://www.huffingtonpost.com/2014/11/08/kaci-hickox-leaving-maine_n_6127146.html.

12. *Id.* In an MSNBC poll, fifty-seven percent of those surveyed were opposed to Hickox's decision to defy the Ebola quarantine. Alicia Maule, *Do You Support Nurse Kaci Hickox's Decisions to Defy the Ebola Quarantine?*, MSNBC, <http://www.msnbc.com/msnbc/poll-do-you-support-nurse-kaci-hickox#54830> (last visited Feb. 24, 2017). Additionally, in a poll conducted by Monmouth University, New Jersey residents approved of Governor Chris Christie's handling of ebola fifty-three percent to twenty-seven percent, nearly a two-to-one ratio. PATRICK MURRAY & GEORGE KAPALKA, MONMOUTH UNIV. POLL, NJ: GOV. CHRISTIE GETS HIGH MARKS ON EBOLA 1 (Nov. 6, 2014), http://www.monmouth.edu/polling-institute/reports/MonmouthPoll_NJ_110614.

13. *Kaci Hickox, Nurse Who Fought Ebola Quarantine, To Leave Maine: Report*, *supra* note 11.

14. A3949, 216th Leg., Reg. Sess. (N.J. 2014); *cf.* Mark A. Rothstein, *From SARS to Ebola: Legal and Ethical Considerations for Modern Quarantine*, 12 IND. HEALTH L. REV. 227, 266 (2015) (describing the need for legislation to prohibit employment discrimination and provide income replacement for those in quarantine throughout the SARS epidemic).

15. Rothstein, *supra* note 14.

16. *See* *Compagnie Francaise de Navigation a Vapeur v. La. State Bd. of Health*, 186 U.S. 380, 385 (1902) (holding that the state board of health can "exclude healthy persons from a locality infested with a contagious or infectious disease"); *Gibbons v. Ogden*, 22 U.S. 1, 112–16 (1824) (describing the quarantine laws that a myriad of states had passed as a valid exercise of the state's police and commerce powers).

description.”¹⁷ Consequently, quarantine laws vary from state to state.¹⁸

Unlike the broad quarantine powers states enjoy as part of their constitutional police powers, the federal government’s limited quarantine authority is derived from the Commerce Clause,¹⁹ which provides the federal government the exclusive authority to regulate interstate and foreign commerce.²⁰ Federal authority has been delegated to the Centers for Disease Control (“CDC”), which may detain, medically examine, and release persons arriving into the United States and traveling between states that are suspected of carrying communicable diseases.²¹ The CDC can also assist states or local authorities in preventing the spread of communicable diseases if requested or intervene if states or local authorities cannot halt the spread of the disease.²²

Tension exists between the states and the federal government when it comes to quarantine policies due to the imbalanced nature of our dual public health system. For example, in the wake of the Ebola crisis, the Obama administration and the CDC tried to implement guidelines to provide some continuity to the diverse state laws regarding quarantine.²³ Several state governors objected based on their broad state police powers.²⁴

17. *Jacobson v. Massachusetts*, 197 U.S. 11, 25 (1905).

18. *Legal Authorities for Isolation and Quarantine*, CTRS. FOR DISEASE CONTROL & PREVENTION, <http://www.cdc.gov/quarantine/aboutLawsRegulationsQuarantineIsolation.html> (last updated Oct. 8, 2014).

19. U.S. CONST. art. I, § 8, cl. 3.

20. JARED P. COLE, CONG. RESEARCH SERV., RL33201, FEDERAL AND STATE QUARANTINE AND ISOLATION AUTHORITY I (Oct. 9, 2014), <https://fas.org/sgp/crs/misc/RL33201.pdf>; Alison Bruzek, *Here’s How an Ebola Quarantine Works in the U.S.*, NPR (Oct. 3, 2014, 3:59 PM), <http://www.npr.org/blogs/health/2014/10/03/353487190/heres-how-a-n-ebola-qu-arantine-works-in-the-united-states>.

21. Public Health Service Act, 42 U.S.C. § 264 (2012); 42 C.F.R. §§ 70–71; *see also Legal Authorities for Isolation and Quarantine*, *supra* note 18.

22. *Legal Authorities for Isolation and Quarantine*, *supra* note 18.

23. *See* Rothstein, *supra* note 14, at 245 (discussing the executive orders issued by former President Obama and regulations promulgated by the CDC as a result of the Ebola crisis, as well as the difficulties in coordinating public health efforts among federal, state, and local officials); *Guidelines for Evaluation of US Patients Suspected of Having Ebola Virus Disease*, CTRS. FOR DISEASE CONTROL & PREVENTION (Aug. 1, 2014, 8:00 PM), <https://emergency.cdc.gov/HAN/han00364.asp> (providing guidance to health care providers and governmental health departments in determining who should be suspected of contracting Ebola and clarifying which specimens should be obtained, and providing hospital infection control guidelines); Betsy McKay et al., *CDC Rejects Mandatory Ebola Quarantines: Federal Officials Push for Voluntary Isolation of Those at High Risk*, WALL STREET J. (Oct. 27, 2014, 7:43 PM), <http://www.wsj.com/articles/federal-ebola-quarantine-guidelines-release>

There are also tensions between public health issues and individual rights. The CDC has adopted new regulations (pending review from the Trump administration) that provide for broader authority to impose quarantine, along with some further assurance for due process when imposing federal quarantine.²⁵ The regulations do not contain a mechanism to limit the economic insecurities resulting from quarantine, even though providing such compensation has been considered a key to success in containing the spread of communicable disease in other countries.²⁶

Although the Ebola crisis is over, quarantine presents legal, ethical, and socioeconomic issues that require a thoughtful balance between public health interests and individual and states' rights.²⁷ In our increasingly global society, there will be future outbreaks of communicable diseases.²⁸ Compounding concerns over future public health threats, is that the Trump administration's rhetoric concerning "pulling back on the United States' global responsibilities,"²⁹ may be antithetical to the long-standing public health belief that "a weak link in disease detection

d-by-cdc-1414443143 (discussing the Obama administration's guidelines, which called for "voluntary isolation and monitoring of travelers exposed to Ebola").

24. See *infra* notes 92–95 and accompanying text.

25. *Questions and Answers About the Final Rule for Control of Communicable Diseases: Interstate (Domestic) and Foreign*, CTRS. FOR DISEASE CONTROL & PREVENTION, <https://www.cdc.gov/quarantine/qa-final-rule-communicable-diseases.html> (last updated Feb. 14, 2017) ("The final rule is a significant improvement over previous regulations that contained no explicit due process protections. In response to public comment, the final rule added many strong due process protections for individuals subject to federal public health orders.").

26. *Id.* (noting the absence of economic security provisions from the CDC regulations). See generally Rothstein, *supra* note 14, at 236 ("Quarantine also can be extraordinarily disruptive on a societal basis, and it may cause, among other things, severe economic disruptions."); *id.* at 266 (discussing how in the wake of the SARS epidemic foreign countries enacted legislation protecting quarantined individuals from employment discrimination and providing those individuals with some form of income replacement).

27. Rothstein, *supra* note 14, at 236; Eugenia Tognotti, *Lessons from the History of Quarantine, from Plague to Influenza A*, 19 EMERGING INFECTIOUS DISEASES 254, 258 (Feb. 2013), <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3559034>.

28. The CDC's website tracks the spread of emerging diseases and illnesses, including the Zika virus outbreak (the response to which we are seeing battled in our political system) and the Chikungunya virus. See *Chikungunya Virus*, CTRS. FOR DISEASE CONTROL & PREVENTION, <http://www.cdc.gov/Chikungunya/index.html> (last updated Nov. 16, 2015); *Recent Outbreaks and Incidents*, CTRS. FOR DISEASE CONTROL & PREVENTION, <http://emergency.cdc.gov/recentincidents> (last updated June 9, 2016).

29. Sun, *supra* note 7.

and control anywhere can be a vulnerability everywhere.”³⁰ In order to protect Americans in our increasingly divided political realm, we must engage in rational bipartisan dialogue over public health quarantine policy at a time when we are not in the midst of a global public health crisis. Individuals quarantined during a public health crisis may face significant financial insecurities when they miss work due to quarantine.³¹ Providing compensation³² for quarantined individuals would financially protect those individuals subjected to quarantine and increase compliance.

This Article briefly examines the history of quarantine, the legal authority that relates to the government’s ability to order quarantine, and many of the adverse impacts related to quarantine. It explains how providing a mechanism for compensation limits the adverse impacts and furthers public

30. Thomas R. Frieden, *The Future of Public Health*, 373 NEW ENG. J. MED. 1748, 1750 (Oct. 29, 2015), <http://www.nejm.org/doi/pdf/10.1056/NEJMsa1511248>; see also Mark A. Rothstein, *The Moral Challenge of Ebola*, 105 AM. J. PUB. HEALTH 6, 7–8 (Jan. 2015) (describing the world’s public health system as only being “as strong as its weakest links”); Sun, *supra* note 7 (statement of CDC Director Tom Frieden) (“The plain truth is that we can’t protect Americans here without stopping diseases overseas.”).

31. Mark A. Rothstein, *Ebola, Quarantine, and the Law*, 45 HASTINGS CTR. REP. 5, 6 (Jan.–Feb. 2015).

32. In this Article, the term compensation (rather than income replacement) is generally used. However, in calling for future research, discussion, and bipartisan planning into receiving compensation for quarantine, the differences between a compensation scheme (similar to compensation for jury service) and income replacement will need to be explored more fully depending on which type of compensation scheme is adopted and what policies are important to legislators. See, e.g., Mark A. Rothstein & Meghan Talbot, *Job Security and Income Replacement for Individuals in Quarantine: The Need for Legislation*, 10 J. HEALTH CARE L. & POLY 239 (2007) (discussing limitations in current laws regarding income replacement and job security for quarantined individuals). To illustrate, the term compensation includes income replacement. See, e.g., *id.* at 252–56. All income replacement schemes are compensation schemes, but not all compensation schemes provide for income replacement, some just provide a flat rate without regard to employment status. See, e.g., *id.* at 244–56. So, some individuals may prefer a compensation scheme, similar to an award for jury service that would provide a flat compensation rate to any individual who undergoes quarantine. See, e.g., *id.* at 249–51, 255. This would provide for simplicity, ease of payment, and could be applied equally across the board to individuals quarantined, rather than providing additional compensation to those already more highly valued in the workforce. See *id.* at 255–56 (describing the Canadian program that provided a flat rate of compensation to those in quarantine). Others may argue that income replacement is more equitable because (1) we should compensate for verifiable employment-related losses to avoid economic insecurity and non-compliance; (2) an income replacement system does not provide a “windfall” for those not already employed; and (3) we want to avoid double-payments to individuals, such as those on a salary, who continue to be paid during a period of quarantine. See, e.g., *id.* at 243–57.

health goals. The Article then examines and evaluates existing federal, state, and international laws, as well as private employer-based compensation structures that could be used to compensate individuals undergoing quarantine, and concludes that a simple and accessible state-based approach via standalone legislation provides the most workable means of providing compensation. The Article asserts that bipartisan dialogue, compromise, and planning—before the next infectious disease crisis—will be essential to creating a system that is both workable and equitable.

II. HISTORY OF QUARANTINE

Quarantine has a long history that dates back to ancient times. For instance, quarantine is referenced in *Leviticus*³³ in the Old Testament for leprosy,³⁴ and discussed in Hippocrates's and other Greek scholars' writings in the fourth century BC with the advice, "avoid[] the contagious."³⁵ Likewise, in AD 549, the Byzantine Emperor Justinian isolated individuals who came from regions infected by the bubonic plague.³⁶ While there are many other cases of quarantine reported by medical historians during these early times, such examples appear informal in nature.³⁷

During the Middle Ages,³⁸ the first recorded formal system of quarantine, in response to the Black Death, was established in Venice.³⁹ This system of quarantine quickly spread to other coastal

33. *Leviticus* 14:4–8.

34. Rothstein, *supra* note 14, at 229 (discussing quarantine's origins in antiquity); Peter Tyson, *A Short History of Quarantine*, NOVA (Oct. 12, 2004), <http://www.pbs.org/wgbh/nova/body/short-history-of-quarantine.html>.

35. Karen Weathersbee, *Quarantine: Its Uses and Limitations*, A.B.A. 1, <http://www.americabar.org/content/dam/aba/migrated/adminlaw/awardsprogram/08GSwinneressay.authcheckdam.pdf> (last visited Feb. 24, 2017); *see also* Gian Franco Gensini et al., *The Concept of Quarantine in History: From Plague to SARS*, 49 J. INFECTION 257, 258 (2004).

36. Tyson, *supra* note 34.

37. *See id.* (noting that, despite the practice of quarantine existing since the Bible, the first formal system was not put in place until the fourteenth century).

38. Historians disagree exactly when, but agree that it was sometime between the twelfth and fourteenth centuries. *See* Rothstein, *supra* note 14, at 229 (noting that the first formal quarantine program began in Venice sometime between the twelfth and fourteenth centuries); Tyson, *supra* note 34 (stating that the first formal quarantine program was established in Venice in the fourteenth century).

39. Tyson, *supra* note 34. The Black Death resulted in the death of fourteen to fifteen million people, which is estimated to be twenty percent of the population. *Id.*

trading cities.⁴⁰ In fact, the word quarantine is derived from the Italian term *quarantana giorni*, which referred to the forty-day period ships entering the port of Venice were detained before being allowed to go onshore.⁴¹ Cities across Europe and Asia also began the practice of using armed guards to encircle and enforce quarantine of infected areas. By the seventeenth century, most European and Asian cities used these types of large-scale quarantine measures.⁴²

“European legal traditions, as well as diseases, were brought to the American colonies”⁴³ and similar quarantine patterns emerged in the United States. Medical historians report that in 1647,⁴⁴ the Massachusetts Bay Colony passed the first quarantine law that required ships stop at the entrance to Boston Harbor as a precaution to the plague.⁴⁵ In 1663, New York City passed a law forbidding entry to individuals coming from regions where there were small pox infections.⁴⁶ This resulted in other municipalities enacting similar land-based quarantine laws.⁴⁷

By the 1700s, quarantine laws gave local authorities the power to quarantine people as well as to provide care for those quarantined. For example, in 1783, in response to smallpox and yellow fever outbreaks, New York City set up a quarantine station on Bedloe’s Island—where the Statue of Liberty would later find her home—to place contagious passengers and crew arriving in the United States.⁴⁸ In 1793, an epidemic of yellow fever hit Philadelphia.⁴⁹ In response, the Commonwealth of Pennsylvania

40. Felice Batlan, *Law in the Time of Cholera: Disease, State Power, and Quarantines Past and Future*, 80 TEMP. L. REV. 53, 62–63 (2007).

41. Rothstein & Talbott, *supra* note 32, at 239; *History of Quarantine*, CTRS. FOR DISEASE CONTROL & PREVENTION, <http://www.cdc.gov/quarantine/historyquarantine.html> (last updated July 31, 2014).

42. Batlan, *supra* note 40, at 63. The earliest quarantine laws included strict guidelines, such as a penalty for those who did not follow the guidelines that consisted of a fine and an isolation period equal to that of those quarantined. Philip A. Mackowiak, *The Origin of Quarantine*, 35 CLINICAL INFECTIOUS DISEASES 1071, 1072 (2002), <https://academic.oup.com/cid/article/35/9/1071/330421/The-Origin-of-Quarantine>.

43. Rothstein, *supra* note 14, at 230.

44. Batlan, *supra* note 40, at 63.

45. *Id.*

46. Tyson, *supra* note 34.

47. *See id.*

48. *Id.*

49. *Id.*

established the first Lazaretto⁵⁰ station to house contagious individuals.⁵¹

The federal government became involved in quarantine in 1796 when Congress enacted a quarantine law directing federal officers to help execute state quarantine law.⁵² In 1799, Congress passed an Act Respecting Quarantine and Health Laws that authorized the federal government to assist state officials with quarantine.⁵³ In 1893, following an outbreak of yellow fever and cholera,⁵⁴ Congress passed the National Quarantine Act—the first federal quarantine legislation that authorized a national system of quarantine to prevent contagious and infectious diseases, while still permitting state and local quarantines.⁵⁵ Quarantine practices evolved,⁵⁶ and, while quarantine was (and is) largely implemented by the states, the federal government gradually exerted more authority and control over quarantine.⁵⁷

Quarantine laws and policy have changed with medical and scientific advancement. By the late 1800s, scientists learned that germs and bacteria were responsible for diseases, which resulted in quarantine policy becoming more tailored.⁵⁸ Following the

50. *Id.* A Lazarretto is a quarantine hospital. *Id.* The term is likely derived from the New Testament story of Lazarus, the Patron Saint of Leprosy and Santa Maria de Nazareth, the church on the Venetian Island where the first quarantine hospital was opened. Rothstein, *supra* note 14, at 229.

51. Tyson, *supra* note 34.

52. Weathersbee, *supra* note 35, at 2; *see also* Katherine L. Vanderhook, A History of Federal Control of Communicable Diseases: Section 361 of the Public Health Service Act 4 (Apr. 30, 2002) (unpublished manuscript), <https://dash.harvard.edu/handle/1/8852098>.

53. Weathersbee, *supra* note 35, at 2. The 1799 Act repealed the 1796 Act. *Id.*; *see also* Vanderhook, *supra* note 52, at 6.

54. Weathersbee, *supra* note 35, at 2; *History of Quarantine*, *supra* note 41.

55. Tyson, *supra* note 34.

56. *Id.* In 1902, the Pan American Safety Bureau was established. *Id.* This was the first in a series of international health organizations that resulted in the creation of the World Health Organization in 1948, which now allows quarantine issues to be considered on a global scale. *Id.*

57. *See* Batlan, *supra* note 40, at 64–67 (describing the historical trend of the federal government exerting more power over quarantine). According to some scholars, the first large-scale federal quarantine was enforced during the Spanish flu outbreak of 1918–1919. *See* Tognotti, *supra* note 27, at 257. For example, medical historians report that during the outbreak, government officials imprisoned thought-of prostitutes in an effort to limit venereal disease—an action that has been called “the most concerted attack on civil liberties in the name of public health in American history.” Batlan, *supra* note 40, at 101.

58. Tyson, *supra* note 34.

discovery of antibiotics and the use of vaccines, public health officials began to consider “large-scale quarantines a thing of the past,”⁵⁹ and the CDC reduced the number of quarantine stations from fifty-five to eight.⁶⁰ However, in response to bioterrorism concerns triggered by the September 11 terrorist attacks, the 2003 severe acute respiratory syndrome (“SARS”) epidemic,⁶¹ and the 2009 Influenza Pandemic,⁶² the CDC increased the number of quarantine stations to its present level of twenty.⁶³ Current worries about bioterrorism and emerging diseases in our global society “threaten to resurrect the age-old custom” of large-scale quarantine.⁶⁴

III. LEGAL AUTHORITY FOR QUARANTINE

The United States recognizes the protection of public health to be a governmental responsibility.⁶⁵ This idea originated in English common law, continued in the American colonies, and was ultimately embodied in the federal Constitution as part of the states’ police powers.⁶⁶ However, this police power is subject to

59. *Id.*

60. *U.S. Quarantine Stations*, CTNS. FOR DISEASE CONTROL & PREVENTION, <https://www.cdc.gov/quarantine/quarantine-stations-us.html> (last updated July 31, 2014).

61. *Id.* (noting that the number of quarantine stations increased after the September 11 attacks in 2001 and the SARS outbreak in 2003).

62. KATHLEEN SWENDIMAN & NANCY LEE JONES, CONG. RESEARCH SERV., R40560, *THE 2009 INFLUENZA PANDEMIC: SELECTED LEGAL ISSUES 5–6* (Oct. 29, 2009), <http://research.policyarchive.org/19830.pdf>.

63. See Rothstein, *supra* note 14, at 244; *U.S. Quarantine Stations*, *supra* note 60.

64. Tyson, *supra* note 34. American concern over bioterrorism has changed drastically over the past fifteen years. In 2001, a poll conducted by the Harvard School of Public Health showed that eighty-two percent of respondents stated that they felt it was unlikely that they or their families would contract anthrax (a type A bioterrorism agent), while only ten percent felt that it was somewhat likely. Philip J. Hiltz, *A Nation Challenged: Public Attitudes; Americans Skeptical About Bioterrorism Risk*, N.Y. TIMES (Nov. 9, 2001), <http://www.nytimes.com/2001/11/09/us/a-nation-challenged-public-attitudes-americans-skeptical-about-bioterrorism-risk.html>. However, in 2007, a poll conducted by Trust for America’s Health found that seventy percent of participants viewed chemical terrorism as a major concern, which was an eighteen-point jump from the level of concern expressed the year prior. Laura Segal & Nicole Speulda, *New Poll Shows Dramatic Rise in Concern About Biological and Chemical Terrorism: Americans Continue to Rate Cancer as #1 Health Threat*, TR. FOR AM.’S HEALTH (Feb. 2, 2007), <http://healthyamericans.org/newsroom/releases/release020207.pdf>.

65. James A. Tobey, *Public Health and the Police Power*, 4 N.Y.U. L. REV. 126, 126 (1927).

66. See *Hennington v. Georgia*, 163 U.S. 299, 308–09 (1896) (describing health and quarantine laws as within the state’s “reserved power to provide for the health, comfort

constitutional limitations, such as due process and equal protection.⁶⁷

A. Federal Law

The federal government's authority to quarantine is derived from the Commerce Clause of the Constitution,⁶⁸ and legislated in the Public Health Service Act, which governs federal quarantine matters.⁶⁹ Section 361 of the Public Health Service Act authorizes the Secretary of Health and Human Services "to take measures to prevent the entry and spread of communicable diseases⁷⁰ from foreign countries into the United States and between states."⁷¹ This authority has been delegated to the CDC,⁷² which is authorized to detain, medically examine, and release persons suspected of carrying communicable diseases that are either arriving into the United States or traveling between states.⁷³ The CDC is also responsible for operating the twenty quarantine

and safety of its people"); *Gibbons v. Ogden*, 22 U.S. 1, 70–72 (1824) (describing the concurrent powers of the state and federal governments).

67. SWENDIMAN & JONES, *supra* note 62, at 30–31 (discussing the equal protection and due process concerns that arise with quarantine). "The unequal treatment of socially disfavored groups with regard to quarantine raises equal protection issues." *Id.* at 30. The most notable cases in this area are *Jew Ho v. Williamson* and *Wong Wai v. Williamson*. *Jew Ho v. Williamson*, 103 F. 10 (N.D. Cal. 1900); *Wong Wai v. Williamson*, 103 F. 1 (N.D. Cal. 1900). These cases involved a quarantine regulation enacted in 1900 that required only Chinese residents of San Francisco to be vaccinated against the bubonic plague because "this particular race is more liable to the plague than any other." *Wong Wai*, 103 F. at 7. The Court struck the resolution under the Equal Protection Clause. *Id.* at 9–10; *see also* HOWARD MARKEL, *QUARANTINE: EAST EUROPEAN JEWISH IMMIGRANTS AND THE NEW YORK CITY EPIDEMIC OF 1892*, at 2 (1997) (discussing the discriminatory quarantine of Russian Jewish immigrants in response to an outbreak of typhoid); Wendy D. Parmet, *Legal Power and Legal Rights—Isolation and Quarantine in the Case of Drug-Resistant Tuberculosis*, 357 *NEW ENG. J. MED.* 433, 434 (Aug. 2, 2007) (discussing quarantine practices used against marginalized and nonwhite persons).

68. U.S. CONST. art. I, § 8, cl. 3.

69. Public Health Service Act, 42 U.S.C. §§ 264–272 (2012).

70. *See* Exec. Order No. 13,295, 68 Fed. Reg. 17,255 (Apr. 4, 2003) (noting the communicable diseases that may require quarantine). The authority of the Secretary of Health and Human Services is limited by Executive Order 13,295, which "lists the communicable diseases for which this quarantine authority may be exercised." COLE, *supra* note 20, at 1–2.

71. *Legal Authorities for Isolation and Quarantine*, *supra* note 18.

72. *Id.*

73. 42 C.F.R. §§ 70–71 (2017); *see also* COLE, *supra* note 20, at 3 (noting that regulations promulgated under the Public Health Service Act may be found in part 70, which "applies to interstate travel," and part 71, which applies "to foreign arrivals," of Title 42 of the Code of Federal Regulations).

stations that seek to prevent infected individuals from entering into the country by land, sea, or air and to provide the states with technical assistance, research, guidance, laboratory services, and other support.⁷⁴ Additionally, the CDC can intervene where a state's control measures are "insufficient to prevent the spread of any of the communicable diseases from such State or possession to any other State or possession."⁷⁵

While the CDC is the primary source for federal public health and quarantine, our public health structure is complex⁷⁶ in its organization.⁷⁷ For example, another source of federal

74. COLE, *supra* note 20, at 3. "While there are not CDC officials at every port of entry, various agencies in the Department of Homeland Security (DHS) are authorized to assist the CDC in the enforcement of quarantine rules and regulations." *Id.*; see also Rothstein, *supra* note 14, at 244 (discussing the CDC's twenty quarantine stations at points of entry and land border crossings).

75. 42 C.F.R. § 70.2. Under the delegation of authority to the CDC, interstate and foreign quarantine measures are now carried out by the CDC's Division of Global Migration and Quarantine. *Protecting America's Health at U.S. Ports of Entry*, CTRS. FOR DISEASE CONTROL & PREVENTION, <https://www.cdc.gov/nceid/dgmq/quarantine-fact-sheet.html> (last updated Dec. 23, 2016).

76. See Rothstein, *supra* note 14, at 279; Mark A. Rothstein, *Will America's Fragmented Public Health System Meet the Ebola Challenge?*, SCHOLARS STRATEGY NETWORK (Oct. 2014), <http://www.scholarsstrategynetwork.org/brief/will-americas-fragmented-public-health-system-meet-ebola-challenge>.

77. See 42 U.S.C. § 268(b) (2012). For example, section 268(b) provides that the following three agencies may aid the CDC in its enforcement of quarantine rules and regulations: Customs and Border Patrol, U.S. Immigration and Customs Enforcement, and the U.S. Coast Guard. *Id.* In addition, the CDC may also rely on other federal agencies, such as the Department of Transportation, the Food and Drug Administration, the National Institutes of Health, and the Department of Defense. COLE, *supra* note 20, at 3. Moreover, the CDC lists several laws as pertinent to a public health emergency. See, e.g., Homeland Security Act of 2002, 6 U.S.C. §§ 311–321 (2012) (merging twenty-two disparate agencies and organizations into the Department of Homeland Security); Post-Katrina Emergency Management Reform Act of 2006, 6 U.S.C. §§ 701 et seq. (enhancing FEMA's responsibilities and its autonomy within DHS, and providing for a national system for all-hazards emergency preparedness with authority at both the federal and state levels); Sandy Recovery Improvement Act of 2013, 42 U.S.C. §§ 5170, 5191 (authorizing the chief executive of a tribal government to directly request disaster or emergency declaration from the President); National Emergencies Act, 50 U.S.C. §§ 1621, 1631 (authorizing the President to declare a "national emergency"); Pets Evacuation and Transportation Standards Act of 2006, 42 U.S.C. §§ 5170(b), 5196 (addressing the needs of individuals with household pets and service animals in major disasters or emergencies); Emergency Management Assistance Compact of 1996, Pub. L. No. 104-321, 110 Stat. 3877 (1996) (facilitating resource-sharing among member states during an emergency); Homeland Security Presidential Directive-5 on Management of Domestic Incidents (Feb. 28, 2003) (identifying steps for improved coordination among federal, state, and local authorities, and tasks the Secretary of Homeland Security with developing a National Incident Management System and National Response Plan); Homeland Security Presidential Directive-8 on National Preparedness (Dec. 17, 2003) (establishing policies to

authority for implementing quarantine measures is outlined in the Robert T. Stafford Disaster Relief and Emergency Assistance Act, more commonly called the Stafford Act.⁷⁸ The Stafford Act establishes a system whereby state governors can apply for and obtain a presidential disaster declaration in the event of an overwhelming crisis;⁷⁹ thus authorizing the federal government to intervene and implement a wide range of public health and safety measures.⁸⁰ The Federal Emergency Management Agency (“FEMA”) then coordinates the federal government’s response in accordance with Title 42 of the United States Code.⁸¹

The President is authorized under 42 U.S.C. § 264⁸² to establish necessary measures to deal with infectious diseases.⁸³ Based on this authority, as well as the government’s other regulatory powers, the Obama administration responded to the Ebola crisis and laid out regulatory guidelines with regard to quarantine procedures.⁸⁴ The CDC ultimately established these regulatory guidelines to combat the harsh quarantine policies several states were implementing.⁸⁵ Under the 2014 CDC

strengthen the preparedness of the United States to prevent and respond to man-made and natural disasters and other emergencies); STACIE KERSHNER & GREGORY SUNSHINE, CTRS. FOR DISEASE CONTROL & PREVENTION, SELECTED LEGAL AUTHORITIES PERTINENT TO PUBLIC HEALTH EMERGENCIES (2009), <https://www.cdc.gov/phlp/docs/ph-emergenci es.pdf> (last updated Aug. 2014).

78. Robert T. Stafford Disaster Relief and Emergency Assistance Act, 42 U.S.C. §§ 5121–5206.

79. Michelle A. Daubert, Comment, *Pandemic Fears and Contemporary Quarantine: Protecting Liberty Through a Continuum of Due Process Rights*, 54 BUFF. L. REV. 1299, 1308 (2007); *see also Issue Insight: FEMA*, CTR. FOR DISASTER PHILANTHROPY, <http://disasterphilanthropy.org/issue-insight/fema> (last visited Feb. 16, 2017) (noting that the Federal Emergency Management Act will provide aid and relief in an emergency or major disaster only at the request of a state’s governor); *Our Role*, CTRS. FOR DISEASE CONTROL & PREVENTION, <https://www.cdc.gov/phpr/overview/ourrole.htm> (last updated Aug. 15, 2016) (describing the CDC’s role as supporting states and local entities in funding, technical assistance, and more).

80. 42 U.S.C. § 5170.

81. 42 U.S.C. § 243(a); *see also* Daubert, *supra* note 79.

82. 42 U.S.C. § 264.

83. *Id.*; *see also* Daubert, *supra* note 79, at 1306–07.

84. *Guidelines for Evaluation of US Patients Suspected of Having Ebola Virus Disease*, *supra* note 23.

85. *Id.* The previous CDC guidelines had people returning from affected countries screened when they returned to the United States, and if they were asymptomatic, they were asked to monitor themselves for twenty-one days. Michael McCarthy, *CDC Rejects Mandatory Quarantine for Travelers Arriving from Ebola Stricken Nations*, *BMJ* (Oct. 28, 2014), <http://www.bmj.com/content/349/bmj.g6499>.

guidelines, asymptomatic individuals were placed into four levels of risk: high risk, some risk, low risk, and no identifiable risk.⁸⁶ Those in high risk, which would include someone who worked with Ebola patients without protective gear, would be subject to direct, active monitoring for twenty-one days with a daily visit from a health official and asked not to go into public areas and to stay three feet away from people.⁸⁷ Those with some risk, such as those who worked with Ebola patients and wore protective gear, would have some direct monitoring.⁸⁸ Finally, those with low risk would not need direct monitoring, but they would receive a daily phone call for twenty-one days from a health official, and they would have no restrictions on their movement or travel.⁸⁹ The CDC chose not to support mandatory quarantines for all health care workers returning from the Ebola zone⁹⁰ on the basis that it could have a chilling effect on the number of volunteers who would go to Ebola stricken areas in need of medical assistance.⁹¹

While states are constitutionally permitted to have tougher quarantine laws than the federal government, some state laws conflicted with the 2014 CDC guidelines.⁹² For example, Governor Chris Christie of New Jersey criticized the CDC guidelines as not sufficiently strict, arguing that he, as governor, was primarily responsible for protecting people in New Jersey against Ebola.⁹³ In doing so, he implemented a mandatory twenty-one day quarantine policy.⁹⁴ The CDC acknowledged that the guidelines were just that, and the federal government could not force states to comply.⁹⁵ Most recently, the CDC adopted new regulations that broaden the scope of federal quarantine (within constitutional

86. McCarthy, *supra* note 85.

87. *Id.*

88. *Id.*

89. *Id.*

90. McKay et al., *supra* note 23.

91. *Id.*

92. Eugene Kontorovich, *Ebola Quarantines and State Powers*, WASH. POST: VOLKOH CONSPIRACY (Oct. 28, 2014), <http://www.washingtonpost.com/news/volokh-conspiracy/wp/2014/10/28/ebola-quarantines-and-state-powers>.

93. Heather Haddon, *Christie Calls Obama Administration's Ebola Guidelines 'Incredibly Confusing'*, WALL STREET J. (Oct. 28, 2014, 8:37 AM), <http://www.wsj.com/articles/christie-calls-obama-administrations-ebola-guidelines-incredibly-confusing-1414499829>.

94. *Id.*

95. McKay et al., *supra* note 23.

limits) and address due process concerns.⁹⁶ The new regulations fail to address compliance concerns, such as compensation.⁹⁷

B. State Law Provisions

The ultimate responsibility for quarantine, isolation, contact tracing, emergency services, law enforcement, and other crucial matters resides with the states.⁹⁸ The states largely exercise public health police power by creating boards of health or health departments, which usually carry out the role at the local level.⁹⁹

Because “[t]he essence of federalism¹⁰⁰ is that states must be free to develop a variety of solutions to problems and not be forced into a common, uniform mold,”¹⁰¹ each state has unique statutes and procedures with regard to enforcing quarantine.¹⁰² The majority of states authorize quarantine by a public health order.¹⁰³ These can take the form of administrative orders from a public health department or official, or they can be a less formal general grant of power to a public health official or department to order quarantine.¹⁰⁴ Often this power to quarantine contains no judicial oversight.¹⁰⁵ In some states, however, court orders are required before the state is permitted to forcibly quarantine someone.¹⁰⁶ State law also determines how long quarantines may last, but the length is usually determined by judging when the person is no longer a threat to public health.¹⁰⁷

96. Control of Communicable Diseases, 82 Fed. Reg. 6890 (Jan. 19, 2017) (to be codified at 42 C.F.R. pts. 70–71).

97. *Id.*; see also Memorandum from Jason Sapsin, *supra* note 2.

98. Rothstein, *supra* note 14, at 239.

99. *Id.* at 239–40.

100. See generally Eang L. Ngov, *Under Containment: Preempting State Ebola Quarantine Regulations*, 88 TEMP. L. REV. 1 (2015) (discussing issues of federalism and preemption related to quarantine).

101. *Addington v. Texas*, 441 U.S. 418, 431 (1979).

102. See *State Quarantine and Isolation Statutes*, *supra* note 2.

103. COLE, *supra* note 20, at 6.

104. See *State Quarantine and Isolation Statutes*, *supra* note 2 (detailing each state’s grant of authority to impose quarantines).

105. See *id.* (describing many states’ public health departments as having complete control over quarantine measures, which are therefore not subject to oversight by the judicial branch).

106. COLE, *supra* note 20, at 6; see also *State Quarantine and Isolation Statutes*, *supra* note 2.

107. COLE, *supra* note 20, at 6–7.

Several attempts have been made to provide uniformity to state quarantine laws. The 2001 Model State Emergency Health Powers Act (“MSEHPA”)¹⁰⁸ and the 2003 Turning Point Model State Public Health Act (“Turning Point Act”)¹⁰⁹ serve as guides for states to update their own public health laws. MSEHPA was drafted by public health scholars James G. Hodge, Jr., and Lawrence O. Gostin, in response to a request from the CDC after the September 11 terrorist attacks and the anthrax mail contaminations that followed,¹¹⁰ to provide clear legal authority for emergency public health issues, such as quarantine.¹¹¹ The drafters later incorporated much of the quarantine provisions from MSEHPA into the Turning Point Act,¹¹² a more comprehensive public health model, which assists “state and local governments [in] assess[ing] their existing public health laws and update[ing] the laws to effectively address the entire range of modern public health issues.”¹¹³ Thus, the Turning Point Act addresses public health issues at large while incorporating the provisions of MSEHPA to address emergency situations.¹¹⁴ Both provide guiding principles for quarantine procedures that focus on the quarantined individual’s needs, ensuring adequate living arrangements, and respecting individual cultural and religious beliefs.¹¹⁵ Furthermore, these procedures include provisions for

108. THE MODEL STATE EMERGENCY HEALTH POWERS ACT (CTR. FOR LAW & THE PUB.’S HEALTH AT GEORGETOWN & JOHNS HOPKINS UNIVS., Proposed Official Draft Dec. 21, 2001) [hereinafter MSEHPA], <http://www.publichealthlaw.net/MSEHPA/MSEHPA2.pdf>; *see also* Rothstein, *supra* note 14, at 240–41 (discussing the drafting of the MSEHPA and the states’ responses).

109. THE TURNING POINT MODEL STATE PUBLIC HEALTH ACT (CTR. FOR LAW & THE PUB.’S HEALTH AT GEORGETOWN & JOHNS HOPKINS UNIVS., Proposed Official Draft Aug. 20, 2003) [hereinafter TURNING POINT ACT] <https://www.law.asu.edu/sites/default/files/multimedia/faculty-research/centers/phlp/turning-point-model-act.pdf>; *see also* Rothstein, *supra* note 14, at 243–44 (describing the principles and conditions contained in the Turning Point Act).

110. JAMES G. HODGE, JR. & LAWRENCE O. GOSTIN, CTR. FOR LAW & THE PUB.’S HEALTH AT GEORGETOWN & JOHNS HOPKINS UNIVS., THE MODEL STATE EMERGENCY HEALTH POWERS ACT—A BRIEF COMMENTARY 9 (2002), <http://www.publichealthlaw.net/MSEHPA/Center%20MSEHPA%20Commentary.pdf>.

111. *Id.*

112. *Id.* at 10.

113. *Id.* at 3.

114. MSEHPA, *supra* note 108, at 6; TURNING POINT ACT, *supra* note 109, at 7; Rothstein, *supra* note 14, at 239–46.

115. MSEHPA, *supra* note 108, at 28; TURNING POINT ACT, *supra* note 109, at 52; Rothstein, *supra* note 14, at 239–46.

adequate notice and hearings as well as substantive requirements for quarantine orders.¹¹⁶ Neither act, however, directly deals with the issue of compensation.

C. Due Process Concerns

Efforts to enact quarantines must be conducted in a manner that conforms to the federal constitution.¹¹⁷ One of the first cases to emphasize this concept with regard to a state's public health measure was the 1905 U.S. Supreme Court case, *Jacobson v. Massachusetts*.¹¹⁸ In that case, the Supreme Court evaluated the legality of compulsory vaccination.¹¹⁹ The Supreme Court upheld the statute authorizing mandatory vaccinations as a reasonable public health measure¹²⁰ and, in doing so, ruled that public health measures—including quarantine—must satisfy due process requirements.¹²¹ The Court concluded that the regulation was a reasonable way to protect the people of Cambridge from smallpox.¹²²

The Supreme Court has reaffirmed the principles in *Jacobson* numerous times over the years, reasserting a state's broad powers when it comes to the health of its citizens.¹²³ Due process law has evolved after *Jacobson*, yet the principle of broad state police powers with respect to public health matters has remained intact.¹²⁴ Even with developments in constitutional due process,

116. MSEHPA, *supra* note 108, at 28–30; TURNING POINT ACT, *supra* note 109, at 51–54; Rothstein, *supra* note 14, at 239–46.

117. *Jacobson v. Massachusetts*, 197 U.S. 11, 25 (1905).

118. *Id.*; see also *Compagnie Francaise de Navigation a Vapeur v. La. State Bd. of Health*, 186 U.S. 380 (1902) (upholding the power of the state to enforce quarantine laws in the absence of a contrary federal law); Lawrence O. Gostin, *Jacobson v. Massachusetts at 100 Years: Police Power and Civil Liberties in Tension*, 95 AM. J. PUB. HEALTH 576 (2005) (discussing the holding in *Jacobson*, which affirmed the basic power of government to safeguard the public's health).

119. *Jacobson*, 197 U.S. at 25–26.

120. *Id.* at 38.

121. *Id.*

122. *Id.* at 35.

123. Gostin, *supra* note 118, at 580.

124. *Id.* In *Mathews v. Eldridge*, the U.S. Supreme Court developed a three-factor balancing test to analyze due process claims. *Mathews v. Eldridge*, 424 U.S. 319, 321 (1976). These factors include: (1) the importance of the affected individual interests; (2) the value of procedural safeguards to the affected individual interests; and (3) the government's interests, which include the fiscal and administrative burdens that extra safeguards might entail. *Id.*

the judicial system tends to side with health officials in these types of public health matters as long as procedural requirements are followed.¹²⁵ On the other hand, as more effective treatment measures are developed, courts are more likely to challenge seemingly harsh or restrictive public health practices on due process grounds.¹²⁶

IV. REASONS SUPPORTING A COMPENSATION MODEL FOR QUARANTINE

The rise of modern globalization presents new challenges to control the risks associated with faster travel and the spread of communicable diseases across the world. In working to minimize these risks, we need to reexamine our quarantine policies to maximize fairness and compliance wherever possible. To date, much scholarly attention has been provided to implementing adequate measures for due process concerns. Issues of compensation, however, are increasingly important due to the link between economic security and quarantine compliance.

A. Economic Impact

Without question, many Americans, particularly those who are low-income, paid by the hour, or self-employed, face direct economic consequences if they are subjected to a quarantine

125. *See, e.g.*, *Compagnie Francaise de Navigation a Vapeur v. La. State Bd. of Health*, 186 U.S. 380, 391 (1901) (permitting involuntary quarantine of persons suffering from complications of communicable diseases); *Ex parte Culver*, 202 P. 661, 663 (Cal. 1921) (affirming conviction for removal of a placard from a house that was being quarantined for diphtheria because the “board of health has power to order the quarantine of persons . . . whenever in the judgment of said board such action shall be deemed necessary to protect and preserve public health”); *Barmore v. Robertson*, 134 N.E. 815, 819 (Ill. 1922) (upholding a quarantine order against an individual who was never ill with typhoid fever, explaining “[i]t is not necessary that one be actually sick, as the term is usually applied, in order that the health authorities have the right to restrain his liberties by quarantine regulations); *see also* *Washington v. Harper*, 494 U.S. 208, 235 (1990) (upholding a state policy that forced treatment of prison inmates against their will after balancing an inmate’s right to be free from medication with the state’s duty to run a safe prison and treat mentally ill inmates); Gostin, *supra* note 118, at 580 (noting that courts tend to side with health authorities). *But see* *State v. Kirby*, 94 N.W. 254 (Iowa 1903) (reversing a conviction for violating quarantine law after an individual quarantined for smallpox left confinement without permission because government officials had failed to provide notice of the quarantine).

126. *Daubert*, *supra* note 79, at 1324.

order. Missing work¹²⁷ due to quarantine may create economic insecurity.¹²⁸ Ironically, the decisions to quarantine are typically made by public health officials and high-level administrators who tend to be paid by salary—yet lower-wage, hourly employees and those who are self-employed have the most to lose economically.

In a recent study by the Federal Reserve to determine individuals' preparedness for a small-scale financial disruption, respondents were asked if they could pay for a hypothetical emergency expense that would cost \$400.¹²⁹ Forty-seven percent of respondents reported that a sudden \$400 expense would be difficult to cover; specifically, fourteen percent indicated that they would simply be unable to pay the expense, and the remaining thirty-three percent would have to engage in some form of borrowing to cover the expense.¹³⁰

Deprivation of income for any period of time can create substantial economic difficulty for individuals. Despite the increase in remote work opportunities, many individuals may not be able to work from home or have paid sick leave.¹³¹ Without some form of compensation, asymptomatic quarantined individuals may weigh their opportunity costs and go to work, disregarding the government quarantine order.¹³² Statistics reinforce this conclusion: loss of income is often one of the most frequently cited obstacles to quarantine compliance,¹³³ and quarantine measures reach peak effectiveness at ninety percent compliance.¹³⁴ Providing compensation, therefore, reduces the

127. CARMEN DENAVAS-WALT & BERNADETTE D. PROCTOR, U.S. CENSUS BUREAU, INCOME AND POVERTY IN THE UNITED STATES: 2014, at 6 (2015), <http://www.census.gov/content/dam/Census/library/publications/2015/demo/p60-252.pdf>. In 2014, the median household income in America was \$53,657. *Id.*

128. *Id.* at 12.

129. BD. OF GOVERNORS OF THE FED. RESERVE SYS., REPORT ON THE ECONOMIC WELL-BEING OF US HOUSEHOLDS IN 2014, at 18 (May 2015), <https://www.federalreserve.gov/econresdata/2014-report-economic-well-being-us-households-201505.pdf>.

130. *Id.*

131. Sarah Pope et al., *Protecting Civil Liberties During Quarantine and Isolation in Public Health Emergencies*, L. PRAC. TODAY (Apr. 2011), http://www.americanbar.org/publications/law_practice_today_home/law_practice_today_archive/april11/protecting_civil_liberties_during_quarantine_and_isolation_in_public_health_emergencies.html.

132. Rothstein, *supra* note 14.

133. Rothstein & Talbott, *supra* note 32, at 243.

134. *Id.* (noting that there is reason for concern about compliance with a future quarantine in the United States); see also Anne M. Kavanagh et al., *Leave Entitlements, Time Off Work and the Household Financial Impacts of Quarantine Compliance During an H1N1 Outbreak*, BMC INFECTIOUS DISEASES 6 (Nov. 20, 2012), <http://bmcinfectdis.biomedcentr>

need to evade quarantine to prevent loss of income,¹³⁵ which, in turn, furthers the overall success rate of quarantine measures.

B. Psychosocial Impact and Compliance

Many individuals quarantined face significant psychological aftermath.¹³⁶ Following the Ebola crisis, an individual previously quarantined described her experience:

Although quarantine is, right now, nearly synonymous with Ebola, those of us who have been quarantined for other health reasons also know its psychological toll. . . . But it's also frightening to know that you could harm, unwittingly, each nurse who comes to help. It's frightening that although you want to see your family, doing so would mean putting them in danger.¹³⁷

This is consistent with the findings from a CDC study on the psychological effects of quarantine during the Toronto SARS outbreak.¹³⁸ It found that 28.9% of quarantined individuals experienced symptoms of post-traumatic stress disorder (“PTSD”) and 31.2% demonstrated symptoms of clinical depression.¹³⁹ There was a statistically significant increased rate of depression and PTSD in people who were either paid lower wages or had been isolated for longer than ten days.¹⁴⁰

A leading scholar in this area, Professor Mark Rothstein, applies an ethical framework for quarantine because of the “extreme limits” quarantine has on individual liberty.¹⁴¹ One

al.com/articles/10.1186/1471-2334-12-311 (finding approximately eighty-eight percent of households with access to leave from work were compliant with a quarantine resulting from the H1N1 virus); Pope et al., *supra* note 131.

135. Kavanagh et al., *supra* note 134, at 7; Rothstein, *supra* note 14.

136. Michele Lent Hirsch, *What Quarantine Feels Like*, THE ATLANTIC (Nov. 3, 2014), <http://www.theatlantic.com/health/archive/2014/11/what-quarantine-feels-like/381968>.

137. *Id.*

138. L. Hawryluck et al., *SARS Control and Psychological Effects of Quarantine, Toronto, Canada*, 10 EMERGING INFECTIOUS DISEASES 1206, 1209 (July 2004).

139. *Id.*

140. *Id.*

141. Rothstein, *supra* note 14, at 250.

important component of his ethical framework¹⁴² is the provision of human support services.¹⁴³ This includes providing necessary supplies and services such as food, medicine, a communication system, a transportation plan, and a disposal system for clothing, bedding, and other personal items.¹⁴⁴ An integral consideration of these support services is the “financial effect on individuals in quarantine.”¹⁴⁵

While we may not be able to fix all of the problems, the significant psychological and social impacts to quarantine are real. Empirical evidence illustrates that the most economically vulnerable individuals are more likely to develop long-term psychological distress and anxiety following quarantine due to loss of income.¹⁴⁶ Moreover, loss of income is a barrier to compliance with quarantine. Creating a system for compensation for quarantined individuals simultaneously effectuates short- and long-term public health issues by: (1) preventing the further spread of disease through the removal of an obstacle to compliance with quarantine, and (2) minimizing the need for future public health expenses and resources to treat the longer-term psychological impacts of quarantine.

C. Additional Public Health Impacts

Quarantine has been successful in many settings in halting and preventing the spread of communicable diseases.¹⁴⁷ In order to be effective, however, quarantine must be carefully applied and tailored. Overly broad or overly used quarantine can be counterproductive to public health by leading to public panic¹⁴⁸ or public mistrust.

142. *Id.* Professor Rothstein’s ethical considerations are: (1) necessity, effectiveness, and scientific rationale; (2) proportionality and least infringement; (3) human support services; and (4) public justification. *Id.*

143. *Id.* at 266.

144. *Id.* at 263.

145. *Id.* at 266.

146. Hawryluck et al., *supra* note 138.

147. Rothstein, *supra* note 14, at 251.

148. *See id.* at 252 (describing public panic resulting from many quarantines in Taiwan during the SARS epidemic). Professor Rothstein further describes this phenomenon during the SARS epidemic in Taiwan:

131,132 people were placed under home quarantine, but only twelve were found to have potential cases of SARS, and only two had confirmed cases

From the early uses of quarantine mentioned in the Old Testament to recent times when Thomas Eric Duncan's family and friends were quarantined via armed guards outside of their apartment,¹⁴⁹ "outwardly healthy persons, most often from lower classes, and ethnic and marginalized minority groups have been stigmatized and have faced discrimination."¹⁵⁰

Much of public health is based on utilitarianism, maximizing benefits for the public, often at the expense of the individual.¹⁵¹ For this reason, utilitarianism is considered to be "impartial because each 'unit' of utility . . . holds equal weight in the overall utility calculus."¹⁵² In the context of public health, utilitarianism attempts to achieve the greatest effect at the "population level" rather than the individual, and it is here where utilitarianism can sometimes negatively affect some individuals for the greater good of the population.¹⁵³

Public health officials are often required to provide ethical justifications for specific public health actions or policies when the law is unsettled or unclear.¹⁵⁴ The essence of public health ethics is

of SARS. Such unwarranted public health measures can do more than inconvenience the people placed in quarantine. Officials in Taiwan subsequently concluded that the aggressive use of quarantine contributed to public panic and thus proved counterproductive to public health.

Id. (footnotes omitted).

149. *Id.* at 229, 256–57.

150. Tognotti, *supra* note 27, at 258. To illustrate a more contemporary example in the context of isolation (rather than quarantine), in an article in the *New England Journal of Medicine*, Professor Wendy Parmet discusses a study about New York City's use of isolation orders for tuberculosis that reflected that "more than 90% of the people detained were nonwhite and more than 60% were homeless." Parmet, *supra* note 67, at 433–35. Professor Parmet opines:

Although these figures may reflect the democracy of noncompliant patients with tuberculosis in New York City at that time, the fact that the most potent public health tool was used primarily against marginalized, nonwhite persons underscores the need for legal oversight—if only so that affected communities can be assured of the absence of discrimination.

Id.

151. Rothstein, *supra* note 14, at 249.

152. INSTITUT NATIONAL DE SANTÉ PUBLIQUE QUÉBEC, UTILITARIANISM IN PUBLIC HEALTH (Jan. 2016), http://www.nccchpp.ca/docs/2016_Ethics_Utilitarianism_En.pdf.

153. *Id.*

154. Rothstein, *supra* note 14, at 236–39.

balancing individual and societal interests.¹⁵⁵ Justifying public health decisions in a democracy is key because the consent of the public legitimizes public health decisions.¹⁵⁶

Furthermore, a public health crisis tends to adversely and disproportionately affect the poor in the United States.¹⁵⁷ In a public health emergency, social justice must be considered and there should be special efforts to protect those who are most vulnerable.¹⁵⁸ In addition, because the state requires the individual to relinquish her individual rights for the prevention of potential harm to the public, it is only fair that an individual should be compensated for her sacrifice.¹⁵⁹

V. POSSIBLE COMPENSATION MODELS

Some existing federal and state protections offer possible avenues for compensation¹⁶⁰ for individuals subject to quarantine. Foreign countries and private employers have also implemented a range of solutions.

A. Federal Protections¹⁶¹

The broad scope of the Family Medical Leave Act (“FMLA”) may protect some employees who have been quarantined, as long as: (1) the employer has more than fifty employees; (2) the employee has been employed for at least a year; and (3) the employee has worked 1250 hours in the last twelve months.¹⁶² In such cases, an employer is obligated to hold an individual’s job open and let the employee return to the same

155. *Id.* at 249–50.

156. *Id.*

157. Rothstein, *supra* note 30, at 7.

158. *Id.*

159. *Id.* at 6–7.

160. *See supra* note 2 and accompanying text.

161. While some public health scholars argue that protections may be available under the Americans with Disabilities Act (“ADA”) or section 504 of the Rehabilitation Act of 1973, it is unclear whether someone who has only been exposed, but is not symptomatic, and may never be symptomatic, would qualify under either Act. *See generally* 29 U.S.C. § 794 (2012); Americans with Disabilities Act of 1990, 42 U.S.C. §§ 12101–213 (2012).

162. 29 U.S.C. § 2611 (defining eligible employees and employers under this Act); Suzanne Lucas, *Your Employee Is Under Ebola Quarantine. Now What?*, INC. (Oct. 29, 2014), <http://www.inc.com/suzanne-lucas/your-employee-is-under-ebola-quarantine-now-what.html>.

or a similar position.¹⁶³ These FMLA protections should apply both when the employee is actually sick and when he or she is quarantined merely out of precaution.¹⁶⁴ The FMLA also provides that an employee may receive twelve weeks of unpaid leave if the employee or their spouse, child, or parent has a serious health condition.¹⁶⁵ Whether the “serious health condition” requirement would cover an asymptomatic individual in quarantine (as opposed to an isolated individual who has contracted a serious disease) is in question. In addition, while relief available under FMLA wouldn’t necessarily provide for economic security in the form of compensation or income replacement, it could provide job security to a quarantined individual, which may minimize some level of stress. Unfortunately, this would not alleviate many of the economic hardships individuals face when quarantined.¹⁶⁶

B. State Protections

State laws vary widely on the issue of compensation for time spent in quarantine. Under state law, health care workers and others could obtain compensation in the event of a quarantine via state statute, workers’ compensation, or under the legal theory of wrongful discharge.¹⁶⁷ Several states also have statutes that prohibit disability discrimination.¹⁶⁸

A few states have statutorily provided protection for quarantined individuals. Specifically, Delaware, Iowa, Kansas, Maryland, Minnesota, New Mexico, and South Carolina prohibit employers for terminating employees under quarantine.¹⁶⁹

163. Lucas, *supra* note 162.

164. *Id.*

165. Jane E. Jordan et al., *Legal, Operational, and Practical Considerations for Hospitals and Health Care Providers in Responding to Communicable Diseases Following the 2014 Ebola Outbreak*, 23 U. MIAMI BUS. L. REV. 341, 358 (2015).

166. *Id.* (noting that the leave that the FMLA provides for is *unpaid*).

167. See Rothstein & Talbott, *supra* note 32, at 256–57 (acknowledging that compensatory schemes exist under wrongful discharge actions, workers’ compensation, and state laws addressing job security, but arguing that they are insufficient and ineffective to help individuals under quarantine).

168. MARK A. ROTHSTEIN ET AL., EMPLOYMENT LAW 323 (3d ed. 2004).

169. DEL. CODE ANN. tit. 20, § 3136 (2013); IOWA CODE § 139A.13A (2014); KAN. STAT. ANN. § 65-129 (2015); MD. CODE ANN., HEALTH-GEN. § 18-906(e) (LexisNexis 2015); MINN. STAT. § 144.4196(a) (2011); N.M. STAT. ANN. § 12-10A-16 (2011); S.C. CODE ANN. § 44-4-530(e) (2016); see also JARED COLE ET AL., CONG. RESEARCH SERV., R43829, EBOLA: SELECTED LEGAL ISSUES 5 (2014), <https://fas.org/sgp/crs/misc/R43829.pdf>; Rothstein, *supra* note 14.

Minnesota also allows a civil action for reinstatement or lost wages for employees either terminated or penalized due to quarantine.¹⁷⁰ New York provides compensation for state employees under quarantine.¹⁷¹ Massachusetts enacted legislation in 1907 that provides for up to two dollars per day in compensation for a worker complying with quarantine.¹⁷² Alaska provides a claim for compensation if an individual was improperly quarantined or received negligent medical treatment while in quarantine.¹⁷³

During the Ebola outbreak,¹⁷⁴ the New Jersey legislature proposed new laws to protect health care workers who are quarantined,¹⁷⁵ which, if enacted, would have provided a compensation program.¹⁷⁶ A similar bill has been proposed in

170. MINN. STAT. § 144.4196(b) (2011).

171. N.Y. CIV. SERV. LAW § 28-1.11 (McKinney 2015).

172. MASS. GEN. LAWS ch. 111, § 95 (2015).

173. ALASKA STAT. § 9.50.250 (2008). Further, a claim under this statute must be made against the State or state employees. *Id.*

174. See Marc Santora & Anemona Hartocollis, *In New York, Protections Offered for Medical Workers Joining Ebola Fight*, N.Y. TIMES (Oct. 30, 2014), http://www.nytimes.com/2014/10/31/nyregion/new-york-state-offers-protections-for-medical-workers-joining-ebola-fight.html?_r=0. The Governor of New York also announced a policy where the state would provide employee protection and financial guarantees to health care workers returning home after caring for victims of Ebola abroad. *Id.* It does not appear that policy was ever enacted. *Id.*

175. Susan K. Livio, *If You're Quarantined for Ebola, You'll Get Paid, Proposed NJ Bill Says*, NJ.COM (Jan. 16, 2015, 9:05 AM), http://www.nj.com/politics/index.ssf/2015/01/following_ebola_scare_nj_assembly_panel_approves_b.html.

176. A3949, 216th Leg., Reg. Sess. (N.J. 2015). The bill provides:

a. A health care worker or first responder that is placed in isolation or quarantine and unable to work shall be paid the health care worker's or first responder's regular compensation for the entire period of time that the employee is held in isolation or quarantine.

b. No employer shall discharge from employment or take any adverse action against any health care worker or first responder with respect to compensation, terms, conditions, or other privileges of employment because the health care worker or first responder is not actively working and performing all regular duties due to the fact that the health care worker or first responder is placed in isolation or quarantine. Notwithstanding any State law or regulation to the contrary, no employer shall require a health care worker or first responder to use any sick, personal, or other leave provided by the employer, whether paid or unpaid, for any time that the health care worker or first responder is unable to work due to the isolation or quarantine.

Ohio, which guarantees those health care workers who are quarantined will have jobs upon their return and that they will be paid by their employer without having to use vacation or sick days.¹⁷⁷

Given our dual public health system that has the states retaining most of the power in this area, the simplest and most effective method would be to create a uniform act with a compensation model, such as MSEHPA or the Turning Point Act, that states could adopt. This could be done for health care workers, such as we saw in the proposed New Jersey bill,¹⁷⁸ or done on a broader scale for any individual subject to quarantine. There are several barriers, however, with this model.

First, federalism allows the states “to develop a variety of solutions to problems and not be forced into a common, uniform mold.”¹⁷⁹ The concept behind federalism dictates that constituents derive a greater benefit from self-rule than national rule on certain issues.¹⁸⁰ Constituents should benefit more by reserving the authority to quarantine to the states rather than grant the primary power to quarantine to the federal government. In this area, even though many states have enacted parts of MSEHPA or the Turning Point Act, there is no guarantee that the states would comply with a proposed uniform law. If we continue to leave these public health policy questions to the states, we may continue to see policy being made for political purposes rather than being based on reasonable medical and scientific facts. This is concerning because overly broad imposition of quarantine can lead to mass panic or non-compliance.

A second problem would be funding. In this day and age, few state governments—which already have significant budgetary constraints and often have balanced budget provisions—would have the resources to undertake this type of policy.¹⁸¹ It is

177. Jackie Borchardt, *Health Care Workers Quarantined by Ebola Threat Should Be Paid While Away from Work, Lawmaker Says*, CLEVELAND.COM (Oct. 28, 2014, 2:32 PM), http://www.cleveland.com/open/index.ssf/2014/10/health_care_workers_quarantine.html.

178. *See supra* notes 175–76.

179. *Addington v. Texas*, 441 U.S. 418, 431 (1979).

180. Guy-Uriel E. Charles & Luis Fuentes-Rohwer, *Race, Federalism, and Voting Rights*, 2015 U. CHI. LEGAL F. 113, 113–14, (2015). In discussing this issue in the context of quarantine, Professor Ngov stated:

Since neither the presumption against preemption nor state police powers are sufficient barriers against preemption, the federal government

important to remember, however, that any compensation scheme need not be fully funded at inception. The funds could be reserved until such time as a public health emergency, that may require mass quarantine, exists.

Another avenue to consider is that various state workers' compensation schemes provide income to those who suffer an injury or illness related to their employment,¹⁸² which arguably could be used as a means to compensate individuals quarantined, particularly health care workers. Workers' compensation provides benefits to workers who are injured on the job or who contract a work related illness.¹⁸³ Benefits include medical treatment for work-related conditions and cash payments that partially replace lost wages.¹⁸⁴ The programs vary across states in terms of who is allowed to provide insurance, which injuries or illnesses are compensable, and the level of benefits.¹⁸⁵ The insurer pays all of the workers' compensation benefits, but employers are responsible for reimbursing the insurer for those benefits up to a specified deductible amount.¹⁸⁶

There are concerns about relying on workers' compensation with quarantine. First, if an individual is quarantined but never became ill, he or she cannot make a workers' compensation claim because there is no illness or

could employ obstacle and field preemption to override state quarantine regulations, arguing that they frustrate federal objectives and there is a dominant federal interest in containing Ebola. State regulations impede the establishment of uniformity for quarantine regulations, which is essential to the containment of any disease, because multiple regulations can cause confusion and inconsistent responses.

Ngov, *supra* note 100, at 41–42.

181. *See, e.g.*, NAT'L CONFERENCE OF STATE LEGISLATURES, NCSL FISCAL BRIEF: STATE BALANCED BUDGET PROVISIONS (Oct. 2010), http://www.ncsl.org/documents/fiscal/state_balancedbudgetprovisions2010.pdf.

182. Mark A. Rothstein & Meghan Talbott, *Encouraging Compliance with Quarantine: A Proposal to Provide Job Security and Income Replacement*, 97 AM. J. PUB. HEALTH S49, S54 (2007) (discussing alternate sources of income due to the substantial risk that individuals will disobey quarantine requests or orders and instead attempt to earn money for themselves and their families).

183. ISHITA SENGUPTA ET AL., NAT'L ACAD. OF SOC. INS., WORKERS' COMPENSATION: BENEFITS, COVERAGE, AND COSTS, 2004, at 1 (July 2006), https://www.nasi.org/usr_doc/NAI_Workers_Comp_2004.pdf.

184. *Id.*

185. *Id.*

186. *Id.* at 27.

injury.¹⁸⁷ Second, if the employee does become ill, it may be difficult to show that the employee contracted the disease in the scope of their employment rather than from the general public.¹⁸⁸ This phenomenon occurred during the early days of the AIDS epidemic, where health care workers who tested positive for HIV after caring for infected patients had their lifestyle and history investigated and scrutinized before being able to collect on a workers' compensation claim.¹⁸⁹ Future public health crises may create similarly difficult and potentially hurtful causation questions.

Lastly, state courts may provide an avenue for quarantined individuals to recover their losses via a claim for wrongful discharge.¹⁹⁰ Quarantined individuals could file a lawsuit against their employers should they lose their jobs, claiming a wrongful discharge in violation of public policy.¹⁹¹ However, no court has held that an employer who discharges a quarantined individual from their job has violated public policy.¹⁹²

C. Unemployment Protections

A system of unemployment insurance is another potential way of compensating quarantined individuals because it provides income relief from the federal and state government to those who meet various eligibility requirements.¹⁹³ "The federal-state Unemployment Compensation . . . program provides income support to eligible workers through the payment of . . . benefits during a spell of unemployment."¹⁹⁴ In most states,

187. Rothstein & Talbott, *supra* note 32, at 253.

188. *Id.*

189. See Nikita Williams, *HIV as an Occupational Disease: Expanding Traditional Workers' Compensation Coverage*, 59 VAND. L. REV. 937, 938 (2006) ("Over time, HIV has come to be recognized as an occupational disease . . . [but] it remains difficult for infected workers to prove that their contraction of the disease resulted from the performance of their jobs.").

190. See Rothstein & Talbott, *supra* note 182, at S50.

191. *Id.*; see also COLE ET AL., *supra* note 169, at 18 ("[A]n employee's isolation or quarantine during a pandemic in some states could possibly provide a public policy exception to the at-will rule of employment.").

192. Rothstein & Talbott, *supra* note 182, at S50.

193. Rothstein & Talbott, *supra* note 32, at 254; Rothstein & Talbott, *supra* note 182, at S54.

194. JULIE M. WHITTAKER & KATELIN P. ISAACS, CONG. RESEARCH SERV., RL33362, UNEMPLOYMENT INSURANCE: PROGRAMS AND BENEFITS 1 (Oct. 20, 2016), <https://www.fas.org/sgp/crs/misc/RL33362.pdf>.

unemployment benefits are available for a maximum of twenty-six weeks.¹⁹⁵ However, unemployment insurance only applies to those who do not currently have a job, whereas quarantined individuals may still have a job but are simply unable to actively work.¹⁹⁶ In addition, health care providers who work as self-employed individuals would not be covered by unemployment insurance.¹⁹⁷

D. International Protections

Outside of the United States, foreign governments have used compensation measures to help with economic harm, encourage compliance, and discourage the spread of infectious diseases. For example, in the wake of the SARS outbreak in 2003, Ontario citizens (not just health care providers) suffering from lost income due to quarantine were reimbursed up to Can\$6000.¹⁹⁸ The Canadian federal government provided a total of Can\$330 million to the government of Ontario to pay for the compensation it provided to quarantined individuals.¹⁹⁹ Specifically, Canada amended its employment insurance regulations and implemented a flat-rate payment system.²⁰⁰ Part-time and full-time health care workers, who were not eligible for the employment insurance program, received a flat-rate weekly payment of Can\$200 and Can\$400, respectively.²⁰¹ Ontario provided higher weekly payments to part-time and full-time health care workers who were quarantined, as well as payments to those who took care of someone who was quarantined.²⁰² In addition, individuals could receive more funds if they could show they

195. *Id.*

196. Rothstein & Talbott, *supra* note 32, at 254.

197. *Id.*

198. THE SARS COMM'N, SECOND INTERIM REPORT: SARS AND PUBLIC HEALTH LEGISLATION 254 (2005), http://www.biotech.law.lsu.edu/blaw/sars/Interim_Report_2.pdf; *see also* Rothstein & Talbott, *supra* note 32, at 243 (describing Canada, among other similarly-situated countries, as one of the most affected by SARS and more communitarian than the United States); Rothstein & Talbott, *supra* note 182, at S50 (discussing the Canadian law that provided income relief for those that were ineligible for unemployment insurance).

199. Elizabeth Weeks, *After the Catastrophe: Disaster Relief for Hospitals*, 85 N.C. L. REV. 223, 259 (2006).

200. Rothstein & Talbott, *supra* note 32, at 255.

201. *Id.* at 255–56.

202. THE SARS COMM'N, *supra* note 198; Rothstein & Talbott, *supra* note 32, at 256; Rothstein & Talbott, *supra* note 182, at S53.

suffered greater losses.²⁰³ The Canadian SARS Commission found that the compensation programs contributed to the overall success in defeating the SARS epidemic.²⁰⁴

Likewise, the Employees Compensation Ordinance in Hong Kong provides that an employee “suffering incapacity arising from an occupational disease” is entitled to compensation.²⁰⁵ This only applies to diseases that are tied to an individual’s employment, which would provide at least some level of protection for health care workers.²⁰⁶

Other countries that provided some protections include China, where employers in Beijing and Shanghai were responsible for paying quarantined employees during the SARS outbreak;²⁰⁷ Singapore, where its workers’ compensation act was amended to include SARS patients, and self-employed and employees of small businesses were paid approximately \$41 per day if forced to close because of quarantine;²⁰⁸ and Taiwan, where employers were required to pay for leave for all quarantined employees with a federal act that funded the payments.²⁰⁹

E. Private Employer Protections

Recently, efforts were made by private institutions to secure compensation for health care workers who treated individuals

203. Rothstein & Talbott, *supra* note 182, at S54.

204. Rothstein & Talbott, *supra* note 32, at 256. In response to the SARS outbreak in Canada, Dr. James Young found that:

One of the important ways of getting people to abide by [quarantine] was by offering financial compensation so they would in fact abide by it and stay in quarantine if and when they were ordered by the medical officer of health. . . . [The compensation program] resulted in us being able to manage the quarantine in an effective manner.

THE SARS COMM’N, *supra* note 198, at 256.

205. LABOUR DEP’T, A CONCISE GUIDE TO THE EMPLOYEES COMPENSATION ORDINANCE (WITH FREQUENTLY ASKED QUESTIONS ON COMMON EMPLOYEES COMPENSATION ISSUES) 5 (Mar. 2015), <http://www.labour.gov.hk/eng/public/ecd/pco360.pdf>.

206. *Id.* Although Ebola was not added as an occupational disease, SARS and tuberculosis are both included in the Hong Kong ordinance as occupational diseases. *Id.* at 36–37.

207. Rothstein & Talbott, *supra* note 182, at S53.

208. *Id.* at S53–S54.

209. *Id.*

suffering from Ebola. The following are two private policies crafted in large part as a response to the concerns of health care workers who, after helping to fight Ebola abroad, came home to face quarantines and missed time at work. First, the University of Michigan Health System agreed to a contract that protects nurses who treat Ebola patients.²¹⁰ The contract contains a clause that guarantees that nurses who were quarantined after treating Ebola patients would be paid while in quarantine and would not have to use sick or vacation days.²¹¹ In addition, the contract guarantees them their jobs so they can return to work.²¹² Second, Emory University Hospital also implemented measures for health care employees affected by the Ebola outbreak.²¹³ Emory's policy provided that health care workers who contracted Ebola would be covered by workers' compensation for medical expenses and missed work.²¹⁴ Also, workers who contracted Ebola could receive treatment in the event that they suffered from PTSD.²¹⁵

An employer mandate that would result in policies like those adopted by the University of Michigan Health System and Emory University would be the most direct and effective route. In the context of health care providers, this would also have the benefit of providing incentive to employers to ensure that health care workers delivering direct care receive the best training and personal protective equipment available. However, the reality of requiring private employers to provide additional coverage may create a hardship on small businesses.

VI. CONCLUSION

The only certainty we have in public health is that there will be future outbreaks of disease. While significant due process improvements are in the process of being implemented in our federal quarantine system, missing from our public health quarantine policies is comprehensive planning and funding for

210. Robin Erb, *U-M Nurses to Get Pay in Case of Ebola Quarantine*, DETROIT FREE PRESS (Nov. 11, 2014, 11:57 AM), <http://www.freep.com/story/news/health/2014/11/11/u-m-nurses-contract-pay-ebola-treatment/18851497>.

211. *Id.*

212. *Id.*

213. Jordan et al., *supra* note 165.

214. *Id.* at 358.

215. *Id.*

equitable quarantine policies, such as compensation. Individuals and, in particular, health care workers, who may be quarantined during a public health crisis, may face financial insecurities when they miss work due to quarantine.²¹⁶ Providing compensation for quarantined individuals would financially protect those individuals subjected to quarantine and increase compliance. Because a public health crisis will likely disproportionately affect poor and working class individuals, special efforts should be considered to protect against unnecessary vulnerabilities. Principles of fairness further dictate that were an individual to relinquish her individual rights for the prevention of potential harm to the public, she be compensated for her sacrifice.

Implementing such a mechanism will be difficult. However, even with the obstacles that currently exist, we cannot wait until the next outbreak occurs to have the necessary discussions, debate, and dialogue to come up with workable legislation. We need to create quarantine policies that will prevent the spread of disease and ensure that affected individuals receive attention and treatment.²¹⁷

Given the dual nature of our public health system that has the states retaining most of the power in this area, proposed uniform legislation (such as MSEHPA or the Turning Point Act) should be drafted so that states can incorporate it in whole or relevant part to adopt a workable compensation model. To be effective, however, the legislation will need to be simple and easily accessible. In addition, there will need to be significant education provided to the states, particularly on issues of how to fund a compensation mechanism. However, we cannot wait for the next crisis to begin this process. Now is the time for rational, bipartisan dialogue about our public health quarantine policies so that public health experts—both at the state and federal levels—can engage in comprehensive planning to implement a structure to provide for compensation for individuals ordered into quarantine.

216. Rothstein, *supra* note 31.

217. Memorandum from Jason Sapsin, *supra* note 2, at 2.