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## Indorsing Infant Immunity: An Argument for Criminalizing Parents' Refusal to Immunize Their Children

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## INDORSING INFANT IMMUNITY: AN ARGUMENT FOR CRIMINALIZING PARENTS' REFUSAL TO IMMUNIZE THEIR CHILDREN

*Due to the increase in cases of once-rare childhood diseases in the United States, such as measles and whooping cough, parents who refuse to immunize their children should potentially face criminal charges if their decision not to immunize harms children. The Supreme Court has historically upheld legislation requiring the immunization of citizens, and courts could construe existing criminal law to apply to parents who refuse to immunize their children.*

### I. INTRODUCTION

Amy Parker's "health nut" mother did not immunize her, and she contracted measles, mumps, rubella, meningitis, scarlet fever, whooping cough, chickenpox, HPV, and annual cases of tonsillitis throughout her young life.<sup>1</sup> An outbreak of meningitis due to falling immunization rates in an Oklahoma school district forced doctors to amputate the arms, legs, and pieces of the eyelids, jaw, and ears of six-year-old Jeremiah Mitchell, because he was too young to receive the meningococcal vaccine.<sup>2</sup> Diseases that were once avoidable due to advances in the field of immunizations, such as measles, mumps, and whooping cough, are becoming more and more frequent.<sup>3</sup> Statutory law across the country supports citizens receiving immunizations while also providing the necessary exceptions for people with weakened immune systems or allergies to vaccine components to forego immunization.<sup>4</sup> However, wide exploitation of personal belief exemptions that often accompany mandatory immunization of schoolchildren statutes has caused once-high immunization rates to drop.<sup>5</sup>

Falling immunization rates indicate that statutes that only encourage immunization are not sufficient to maintain a safely immunized population.<sup>6</sup> In order to decrease the

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1. Amy Parker, *Growing Up Unvaccinated*, SLATE (Jan. 6, 2014), [http://www.slate.com/articles/life/family/2014/01/growing\\_up\\_unvaccinated\\_a\\_healthy\\_lifestyle\\_couldn\\_t\\_prevent\\_many\\_childhood.html](http://www.slate.com/articles/life/family/2014/01/growing_up_unvaccinated_a_healthy_lifestyle_couldn_t_prevent_many_childhood.html).

2. Yamiche Alcindor, *Anti-Vaccine Movement Is Giving Diseases A 2nd Life*, USA TODAY (Apr. 8, 2014), <http://www.usatoday.com/story/news/nation/2014/04/06/anti-vaccine-movement-is-giving-diseases-a-2nd-life/7007955> (illustrating the need for immunizing older schoolchildren for meningitis to prevent elementary schoolchildren from contracting the disease, for which they cannot receive the immunization to prevent due to young age. The CDC currently recommends that eleven to twelve-year-olds receive the meningococcal vaccine).

3. Alexandra Sifferlin, *Here Are Some Diseases We're Seeing Thanks To Anti-Vaxxers*, TIME (Mar. 17, 2014), <http://time.com/27308/4-diseases-making-a-comeback-thanks-to-anti-vaxxers>.

4. CAL. HEALTH & SAFETY CODE § 120325 (1979); MO. REV. STAT. § 167.181.1 (2001); OKLA. STAT. tit. 70, § 1210.191 (2013).

5. Jessica E. Atwell et al., *Nonmedical Vaccine Exemptions and Pertussis in California, 2010*, 132 PEDIATRICS 624, 627-629 (2013).

6. Mark Fischetti, *Too Many Children Go Unvaccinated*, SCIENTIFIC AMERICAN (May 14, 2013), <http://www.scientificamerican.com/article/too-many-children-go-unvaccinated> ("parents are opting out of state

occurrence of diseases like measles, mumps, rubella, and other illnesses with the potential to kill children, courts should interpret the law to hold parents accountable, and particularly, criminally liable, for their role in contributing to the spread of deadly diseases when they refuse to immunize their children.

Parents of young children are inundated with false information from Anti-Vax celebrities spouting sound bites and writing self-serving memoirs claiming that vaccines cause autism.<sup>7</sup> Some religions reject the use of vaccines and prefer to use prayer and positive feelings to ward off disease.<sup>8</sup> However, diseases continue to spread at an alarming rate.<sup>9</sup> The current legal and academic discussion of holding parents accountable for choosing not to immunize their children only centers around the use of civil liability and damages in order to compensate parents of children who fall ill due to other parents' failure to immunize their own children.<sup>10</sup> While civil liability is a potential avenue for encouraging immunization, civil remedies for the injuries caused by refusal to immunize are not within the scope of this article.<sup>11</sup> This Article discusses the need for the law to encourage parents actively to immunize their children, as previous scholarship suggests, but this article also breaks new ground by arguing that expanding existing definitions of criminal liability is a viable avenue for encouraging immunization.<sup>12</sup> While the exploitation of personal belief exemptions is a problem in itself by allowing parents legally to refuse to immunize their children, this article can only directly address parents who fail to comply with required immunization statutes and personal belief exemptions due to existing legislation that allows for such exemptions.<sup>13</sup>

Part II of this Article discusses the vital need for the law to hold parents criminally liable when they refuse to immunize their children based on erroneous studies and unfounded fears of adverse vaccine side effects despite the recurring outbreaks of once-rare diseases.<sup>14</sup> Part III then discusses and analyzes existing criminal legal theory and criminal case law while exploring how courts can potentially utilize current criminal law to hold parents criminally liable if they refuse to immunize their children.<sup>15</sup>

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vaccination requirements for kids entering public school, despite a dearth of evidence that vaccines are not harmful or unnecessary.”).

7. See Jeffrey Kluger, *Jenny McCarthy on Autism and Vaccines*, TIME (Apr. 1, 2009), <http://content.time.com/time/health/article/0,8599,1888718,00.html>.

8. John D. Grabenstein, *What the World's Religions Teach, Applied to Vaccines and Immune Globulins*, 31 VACCINE 2011, 2015-16 (2013).

9. Sifferlin, *supra* note 3.

10. See generally Teri Dobbins Baxter, *Tort Liability for Parents Who Choose Not to Vaccinate Their Children and Whose Unvaccinated Children Infect Others* 82 U. CIN. L. REV. 103 (2013) (advocating tort liability as the answer for holding parents responsible for not vaccinating their children); Dorit Rubinstein Reiss, *Compensating the Victims of Failure to Vaccinate: What are the Options?*, 23 CORNELL J. L. & PUB. POL'Y 595 (2013) (discussing civil damages to compensate parents of children injured by unvaccinated children); Kevin Hooker, Note, *Exemptions to Vaccine Mandates: The Problem and Possible Remedies*, 14 HOUS. J. HEALTH L. & POL'Y 263 (2014) (discussing the civil liability of parents who do not vaccinate their children).

11. See *supra* note 10 and accompanying text.

12. See *supra* note 10 and accompanying text.

13. Atwell et al., *supra* note 5.

14. Deborah A. Gust et al., *Parents With Doubts About Vaccines: Which Vaccines and Reasons Why*, 122 PEDIATRICS 718, 723-24 (2008); AJ Wakefield et al., *RETRACTED: Ileal-lymphoid-nodular hyperplasia, non-specific colitis, and pervasive developmental disorder in children*, 351 THE LANCET 637 (1998).

15. MODEL PENAL CODE §§ 211.2, 230.4 (2015).

## II. BACKGROUND

A. *The Necessity of Immunization and Herd Immunity*

Immunization of all citizens who are medically able to undergo vaccination is vital for the well-being of the health and safety of the public.<sup>16</sup> However, immunization rates of children are falling due to the rise in numbers of parents refusing to immunize their children, leaving the public, especially children too young to receive immunizations, susceptible to disease.<sup>17</sup> Experts hypothesize that if parents continue to refuse immunization of their children, outbreaks of deadly diseases may be imminent.<sup>18</sup>

## 1. A Case of the Measles

To demonstrate the catastrophic consequences of parents leaving their children unimmunized, the re-emergence of measles in America is particularly illustrative, since the Centers for Disease Control and Prevention (“CDC”) declared measles eradicated in the United States in 2000.<sup>19</sup> In 2010, an unvaccinated seven-year-old caused the second measles outbreak in San Diego in the last twenty years, which resulted in 11 unvaccinated children to contract the disease while exposing an additional 828 people to measles.<sup>20</sup> The infected child had just returned from a vacation in Switzerland when he contracted the disease.<sup>21</sup> He then spread measles to his two siblings, who then exposed their classmates at the San Diego Cooperative Charter School.<sup>22</sup> When the infected children visited the Children’s Clinic of La Jolla, four more people contracted measles.<sup>23</sup> Of the four people infected at the Children’s Clinic, one of them flew on a plane to Hawaii, where officials quarantined her and tracked down all 250 airline passengers to warn them of the measles

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16. See generally *Vaccines: Why Immunize?*, CENTERS FOR DISEASE CONTROL AND PREVENTION (Sept. 23, 2014), <http://www.cdc.gov/vaccines/vac-gen/why.htm>.

17. *Herd at Risk*, THE ECONOMIST (May 5, 2012), <http://www.economist.com/node/21554252> (stating that in some places immunization rates have been falling each year for approximately a decade).

18. *Frontline: The Vaccine War*, (PBS television broadcast Apr. 27, 2010), available at <http://www.pbs.org/wgbh/pages/frontline/vaccines/view>.

19. *Measles (Rubeola): Measles History*, CENTERS FOR DISEASE CONTROL AND PREVENTION (Nov. 3, 2014), <http://www.cdc.gov/measles/about/history.html> (noting that the CDC declared measles eliminated in the United States in 2000 due to the “absence of continuous disease transmission for greater than 12 months.”); *Measles (Rubeola): Signs and Symptoms*, CENTERS FOR DISEASE CONTROL AND PREVENTION (Nov. 3, 2014), <http://www.cdc.gov/measles/about/signs-symptoms.html> (describing the symptoms of measles that begin between seven to fourteen days after a person is infected with a high fever, cough, runny nose, and watery eyes. Small white spots may appear inside the mouth two to three days after symptoms appear. A red rash begins to cover the body three to five days after symptoms appear. The rash starts on the face and spreads down to the neck, arms, legs, and feet. At this time, the infected person may experience a fever of up to 104 degrees Fahrenheit.); *Measles (Rubeola): Complications*, CENTERS FOR DISEASE CONTROL AND PREVENTION (Nov. 3, 2014), <http://www.cdc.gov/measles/about/complications.html> (describing the life-altering complications from measles that include ear infections in one out of every ten children that can result in permanent hearing loss. Severe complications include swelling of the brain, which can cause deafness or mental disability in children. The most common cause of death from measles is the complication of pneumonia, which one out of every twenty children with measles contracts).

20. Serena Gordon, *Measles Outbreak Triggered by Unvaccinated Child*, US NEWS & WORLD REPORT (Mar. 22, 2010), <http://health.usnews.com/health-news/family-health/infectious-diseases/articles/2010/03/22/measles-outbreak-triggered-by-unvaccinated-child> (noting that the first measles outbreak in San Diego since 1990 happened in 2008).

21. *Id.*

22. *Frontline: The Vaccine War*, *supra* note 18.

23. *Id.*

outbreak.<sup>24</sup> Between the beginning and end of this 2010 measles outbreak, the government spent approximately \$180,000 to contain the outbreak and prevent the further spread of disease.<sup>25</sup>

## 2. Increasing Outbreaks

While the frequency of measles outbreaks has increased since 2010 without the fanfare of media attention, the year 2015 began with a renewal of the necessity of immunization due to the highly-publicized outbreak of measles centered on Disneyland in Orange County, California.<sup>26</sup> As of the close of January 2015, over eighty-five people in seven states and Mexico had contracted measles since mid-December 2014, and health officials linked forty-eight of those cases to Disneyland.<sup>27</sup> The California health department took the position that “unvaccinated individuals have been the principal factor” of the Disneyland outbreak.<sup>28</sup> Health officials determined that of the thirty-four California patients with measles whose immunization histories were discoverable, twenty-eight measles patients had not received the measles vaccine.<sup>29</sup>

However, some parents are reading vehemently Anti-Vax articles, such as *Afraid of the Disneyland Measles Outbreak? Don't Be Fooled by Mickey Mouse Science*, and still refuse to immunize their children in the wake of this outbreak because “[mainstream media] have skewed the facts in favor of trying to sell people more pharmaceuticals.”<sup>30</sup> These parents refuse to acknowledge that this measles outbreak is a direct result of parental refusal to immunize their children, leaving their own children vulnerable to this outbreak of measles.<sup>31</sup>

Usually, one dose of the MMR vaccine is approximately 95% effective at preventing measles, mumps, and rubella, and the CDC’s recommended second dose of the MMR vaccine later in life is almost 100% effective at preventing these diseases.<sup>32</sup> Yet, an infected individual with measles may spread the disease to a vaccinated individual following an intense, prolonged exposure, which could happen more frequently if there are fewer immunized people in a community.<sup>33</sup>

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24. *Id.*

25. *Id.* (noting that the costs of containing this outbreak of measles included the quarantining of 73 people).

26. Amy Hubbard et al., *Disneyland Measles Outbreak: How Far We've Come Since 1861*, LOS ANGELES TIMES (Jan. 22, 2015), <http://www.latimes.com/local/lanow/la-me-ln-disneyland-measles-outbreak-history-20150122-htlstory.html> (noting that though the CDC declared measles eliminated in the United States since 2000, cases of measles have increased between 2000 and 2010, and they have drastically increased between 2010 and 2015).

27. Carter Evans, *Measles Outbreak Traced To Disneyland Continues To Grow*, CBS NEWS (Jan. 24, 2015), <http://www.cbsnews.com/news/measles-outbreak-traced-to-disneyland-continues-to-grow>.

28. Jack Dickey, *Disney Measles Outbreak Puts Focus on Anti-Vaxxers*, TIME (Jan. 24, 2015), <http://time.com/3681398/disney-measles-outbreak>.

29. *Id.*

30. Andrew Gumbel, *Disneyland Measles Outbreak Leaves Many Anti-Vaccination Parents Unmoved*, THE GUARDIAN (Jan. 25, 2015), <http://www.theguardian.com/us-news/2015/jan/25/disneyland-measles-outbreak-anti-vaccination-parents> (quoting Los Angeles Anti-Vax parent Michelle Henney, who refuses to take her children to a pediatrician and relies on chiropractors and acupuncture for the health of her children).

31. *See generally id.*

32. *Measles – Q&A about Disease & Vaccine*, CENTERS FOR DISEASE CONTROL AND PREVENTION (Aug. 20, 2008), <http://www.cdc.gov/vaccines/vpd-vac/measles/faqs-dis-vac-risks.htm>.

33. Carole J. Hickman et al., *Laboratory Characteristics of Measles Virus Infection in Previously Vaccinated and Unvaccinated Individuals*, 204 JOURNAL OF INFECTIOUS DISEASES 549, 549 (2011).

### 3. Herd Immunity

Immunization is not safe for a small percentage of people due to factors such as allergies to vaccines' components, patients' compromised immune systems, and inappropriateness of a particular vaccine at a certain time due to youth or old age.<sup>34</sup> A concept known as "herd immunity" protects this small population from deadly diseases.<sup>35</sup> Herd immunity is the idea that if immunized individuals enter a population at random, then the occurrence of disease infection declines if the proportion of immunized individuals grows.<sup>36</sup> Therefore, increasing the percentage of people immunized against a disease in a population should result in people who cannot undergo immunization avoiding a deadly disease.<sup>37</sup> Conversely, when immunization rates drop, the population as a whole becomes more susceptible to disease.<sup>38</sup>

On average, the MMR, polio, hepatitis B, and chickenpox immunization rates of children across the country is slightly above 90%, which is the percentage of a population needed to ensure herd immunity.<sup>39</sup> However, small pockets of unimmunized populations have begun to emerge more frequently in areas that value holistic medicine or religious convictions that reject vaccines.<sup>40</sup> The Westside Waldorf School in Palisades, California, only forty-five miles from Disneyland, only has a 20% immunization rate for measles for all its students.<sup>41</sup> These small populations of unimmunized children, found in areas like Oregon and California, destroy the herd immunity in their communities and dramatically raise the risk of an outbreak of deadly disease.<sup>42</sup>

### 4. Not Just for Children

Young children are not the only section of the population at risk of parents' refusal to immunize.<sup>43</sup> Parents also deny adolescents preventative immunizations such as Tdap (the adolescent version of the DTaP vaccine), MCV4 (the quadrivalent meningococcal conjugate vaccine, which many universities require for their college students to prevent meningitis), and the HPV (human papilloma virus) vaccine.<sup>44</sup> In 2010, 21% of surveyed parents reported that their adolescent children were not up to date with the Tdap vaccine, 62.6% were not up to date with the MCV4 vaccine, and 75.2% were not up to date with the HPV vaccine due to unfounded parental fears that immunization of the HPV vaccine

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34. *Frontline: The Vaccine War*, *supra* note 18.

35. Paul Fine et al., "Herd Immunity": A Rough Guide, 52 *CLINICAL INFECTIOUS DISEASES* 911, 911-12 (2011).

36. *Id.* at 911.

37. *Id.*

38. *Id.*

39. Steven Reinberg, *Most U.S. Children Get Vaccines, But Some States Do Better Than Others*, CBS NEWS (Aug. 28, 2014), <http://www.cbsnews.com/news/most-us-children-get-vaccines-but-some-states-do-better-than-others> (citing the CDC's *Morbidity and Mortality Weekly Report*); *Herd at Risk*, *supra* note 17 (noting that herd immunity, depending on the specific disease, requires between an 85-95% immunization rate of a population).

40. *Herd at Risk*, *supra* note 17.

41. Gumbel, *supra* note 30.

42. *Herd at Risk*, *supra* note 17. See generally *Frontline: The Vaccine War*, *supra* note 18.

43. Paul M. Darden et al., *Reasons for Not Vaccinating Adolescents: National Immunization Survey of Teens, 2008-2010*, 131 *PEDIATRICS* 645 (2013); *Meningococcal Disease: Community Settings as a Risk Factor*, CENTERS FOR DISEASE CONTROL AND PREVENTION (Apr. 1, 2014), <http://www.cdc.gov/meningococcal/about/risk-community.html>.

44. Darden et al., *supra* note 43, at 645-46.

causes promiscuity in girls.<sup>45</sup> HPV, the human papilloma virus, is a sexually transmitted disease that researchers link to cervical cancer in women and oropharyngeal (throat) cancer in both men and women.<sup>46</sup> Between 2008 and 2010, parents' intent not to immunize their teenage daughters for HPV increased from 39.8% to 43.9%, despite the fact that 61% of all teenagers have had sexual intercourse before their 18th birthdays.<sup>47</sup>

#### B. Why Parents Refuse to Immunize

While vaccines are not 100% effective at preventing disease, some parents do not agree with the health benefits of vaccines.<sup>48</sup> Nor do these parents believe CDC's reports that most recommended vaccines are, on average, approximately 90% effective at preventing children from contracting diseases, such as measles, mumps, rubella, and whooping cough.<sup>49</sup> Parents who refuse to immunize their children are more likely to doubt the health benefits of vaccines.<sup>50</sup> Dr. Cynthia Cristofani, a noted pediatric intensivist, hypothesizes that "[p]arents choose not to vaccinate because they think there is no longer a threat . . . [;] [t]he community recollection for these diseases has largely disappeared because people who are parents nowadays are young enough to have been unlikely to have the diseases or seen the diseases in childhood."<sup>51</sup>

The research seems to agree with Dr. Cristofani.<sup>52</sup> In a study published in *Public Health Reports* that compared immunization rates with parents' beliefs about the effectiveness and risks of vaccines, doctors found that parents who declined to immunize their children cited the reason as, "too many shots. . . concerns about autism, vaccine effectiveness, vaccine side effects; or they had heard or read unfavorable reports about vaccines in the media."<sup>53</sup> In this study, 14% of 11,206 parents during the year of 2009 refused at least one of the ten recommended childhood vaccines.<sup>54</sup>

Five years later, immunization rates have not drastically improved despite the increasing dangerous outbreaks of disease.<sup>55</sup> The CDC's *Morbidity and Mortality Weekly*

45. *Id.* at 647; Robert A. Bednarczyk et al., *Sexual Activity-Related Outcomes After Human Papillomavirus Vaccination of 11- to 12-Year-Olds*, 130 PEDIATRICS 802 (2012) (noting that "HPV vaccination at ages 11 through 12 did not increase the likelihood of seeking medical attention for outcomes related to sexual activity with up to 3 years of follow-up.").

46. Gypsyamber D'Souza et al., *Oral Human Papillomavirus (HPV) Infection Among Unvaccinated High-Risk Young Adults*, 6 CANCERS 1691, 1692 (2014); Michael Wolwa et al., *Cervical Cancer Knowledge and Prevention Among College Women*, 38 J. COMMUNITY HEALTH 997, 997 (2013).

47. Darden et al., *supra* note 43, at 645; *American Teens' Sexual and Reproductive Health Fact Sheet*, GUTTMACHER INSTITUTE (May 2014), <http://www.guttmacher.org/pubs/FB-ATSRH.html>.

48. Philip J. Smith et al., *Parental Delay or Refusal of Vaccine Doses, Childhood Vaccination Coverage at 24 Months of Age, and the Health Belief Model*, 126 PUBLIC HEALTH REP. 135 (2011).

49. *Measles – Q&A about Disease & Vaccine*, *supra* note 32; *Mumps Vaccination*, CENTERS FOR DISEASE CONTROL AND PREVENTION (Jul. 2, 2012), <http://www.cdc.gov/mumps/vaccination.html> (stating that the mumps vaccine is 88% effective); *Pertussis Frequently Asked Questions*, CENTERS FOR DISEASE CONTROL AND PREVENTION (Dec. 19, 2013), <http://www.cdc.gov/pertussis/about/faqs.html> (stating that the DTaP vaccine is 85-90% effective).

50. Smith et al., *supra* note 48, at 140, 143.

51. *Frontline: The Vaccine War*, *supra* note 18.

52. Smith et al., *supra* note 48, at 144.

53. *Id.* at 143.

54. *Id.* at 135, 139-40.

55. Rane Seither et al., *Vaccination Coverage Among Children in Kindergarten – United States, 2013-14 School Year*, 63 MORBIDITY AND MORTALITY WKLY. REP. 913 (2014), available at <http://www.cdc.gov/mmwr/pdf/wk/mm6341.pdf> (noting that though approximately 95% of each state's kindergarteners received immunizations of DTaP, MMR, and varicella vaccine, falling immunization rates

*Report* stated that for the 2013-14 school year, 5.3% of 4,252,368 American kindergarteners did not receive the recommended two doses of MMR.<sup>56</sup> The same report also noted that 5% of kindergarteners did not undergo immunization with the recommended DTaP (tetanus toxoid, diphtheria toxoid, and acellular pertussis) vaccine.<sup>57</sup> Therefore, just last year, the parents of over 200,000 American kindergarteners did not vaccinate their children for six potentially life-threatening diseases—a horrifying statistic when a Colorado study suggests that for every 1% increase of unimmunized children in a school, the risk of the school experiencing a pertussis outbreak increases by 12%.<sup>58</sup>

#### 1. The Fraudulent Wakefield Study

A central reason parents cite for refusing to immunize their children stems from the fear that vaccines will harm their children more than the risk of contracting the disease itself.<sup>59</sup> A 1998 fraudulent study (now retracted) by Andrew Wakefield and his accompanying press conference at the Royal Free Hospital caused seemingly irreparable damage to the movement to encourage the immunization of children.<sup>60</sup> In this unsubstantiated study from the United Kingdom, Wakefield observed only twelve children in order to suggest a connection between the administering of the MMR vaccine and children contracting Crohn's disease and autism.<sup>61</sup> At the February 1998 press conference discussing his research, Wakefield stated, “[w]hat we’ve been able to do here, by directly visualising and biopsying the bowel, is to confirm, at least in this group of children, that there is a link, it may well be a link between gut inflammation and behavioural abnormalities [of autism].”<sup>62</sup>

The General Medical Council (GMC) has since found Wakefield guilty of “serious professional misconduct” when he “dishonestly and irresponsibly” conducted his research in his 1998 study, and the GMC ultimately revoked Wakefield’s medical license.<sup>63</sup> Though an administrative court judge found one of Wakefield’s co-researchers, John Walker-Smith, innocent of professional misconduct while researching with Wakefield, Justice Mitting stated during the case that, “[t]here is now no respectable body of opinion which supports [Wakefield’s] hypothesis, that MMR vaccine and autism/enterocolitis are causally linked.”<sup>64</sup> In response to the Wakefield scandal, the President of the Royal College of Paediatrics and Child Health stated that the scare Wakefield caused over the

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clustered together within communities).

56. *Id.* at 913-14.

57. *Id.* at 913.

58. *See id.* *See generally* Daniel R. Feikin et al., *Individual and Community Risks of Measles and Pertussis Associated with Personal Exemptions to Immunization*, 284 J. AM. MED. ASS’N 3145, 3148 (2000).

59. Smith et al., *supra* note 48, at 143.

60. Wakefield, *supra* note 14.

61. *Id.* at 637, 639-41.

62. *Royal Free Facilitates Attack on MMR in Medical School Single Shots Videotape*, BRAIN DEER, <http://briandeer.com/wakefield/royal-video.htm>.

63. *See* Nick Triggle, *MMR Doctor Struck Off Register*, BBC (May 24, 2010), <http://news.bbc.co.uk/2/hi/health/8700611.stm> (noting that the GMC reached their conclusion that Wakefield conducted fraudulent research because, among other violations, he “did not have the ethical approval or relevant qualifications for such tests,” and that “he had been paid to advise solicitors acting for parents who believed their children had been harmed by the MMR.”).

64. Walker-Smith v. General Medical Council, [2012] EWHC 503 (U.K.).



MMR vaccine committed “untold damage to the UK vaccination programme.”<sup>65</sup>

## 2. Celebrity Indorsement

Wakefield’s study has not only harmed immunization rates in the United Kingdom, but his baseless claims continue to be repeated by American celebrities, who cheer on parents to leave their children unimmunized and susceptible to deadly diseases in the name of avoiding autism.<sup>66</sup>

### a. *Anti-Vax Spokeswoman, Jenny McCarthy*

Actor Jenny McCarthy is one of the loudest supporters of the Anti-Vax Movement, thanks to her television appearances, guest writing on notable media outlets like *The Huffington Post*, and her non-profit autism organization whose website she uses to market her public statements.<sup>67</sup> While Ms. McCarthy has lately attempted to backpedal on her Anti-Vax statements and has asserted that she is not against childhood vaccines, she has consistently used her celebrity to undermine the importance of parents immunizing their children.<sup>68</sup> Ms. McCarthy exuberantly continues to support Andrew Wakefield, despite his unethical research.<sup>69</sup> She issued the following statement to rationalize both *The Lancet* retracting Andrew Wakefield’s fraudulent study and the GMC questioning his research: “Dr. Andrew Wakefield is being discredited to prevent an historic study from being published that for the first time looks at vaccinated versus unvaccinated primates and compares health outcomes, with potentially devastating consequences for vaccine makers and public health officials.”<sup>70</sup> Her statement to *Time* in 2009 succinctly sums up her Anti-Vax position and the message that parents hear that encourages them to refuse childhood vaccines, while further spreading the misinformation that vaccines cause autism: “If you ask a parent of an autistic child if they want the measles or the autism, we will stand in line for the fucking measles.”<sup>71</sup>

### b. *More Anti-Vax Celebrities*

While not as associated with the Anti-Vax Movement as Jenny McCarthy, many other famous names, such as Donald Trump and reality star Kristin Cavallari, speak out through the media about their Anti-Vax beliefs and their own perceptions that vaccines cause autism.<sup>72</sup> Jim Carrey, ex-husband of Jenny McCarthy and famous comedian, wrote

65. Triggie, *supra* note 63.

66. Jenny McCarthy, *In the Vaccine-Autism Debate, What Can Parents Believe?* HUFFINGTON POST (Jan. 10, 2011), [http://www.huffingtonpost.com/jenny-mccarthy/vaccine-autism-debate\\_b\\_806857.html](http://www.huffingtonpost.com/jenny-mccarthy/vaccine-autism-debate_b_806857.html).

67. *Id.*; *Generation Rescue Latest News*, GENERATION RESCUE, <http://generationrescue.org/latest-news>.

68. *Why Jenny McCarthy Says She’s Not Against Childhood Vaccines*, GENERATION RESCUE, (Dec. 2, 2011), <http://generationrescue.org/latest-news/generation-rescue-news/why-jenny-mccarthy-says-she-s-not-against-childhood-vaccines>.

69. Jim Edwards, *Why You Should Ignore Jim Carrey and Jenny McCarthy’s Autism Delusions*, CBS NEWS (Feb. 10, 2010), <http://www.cbsnews.com/news/why-you-should-ignore-jim-carrey-and-jenny-mccarthys-autism-delusions>.

70. *Id.*

71. Kluger, *supra* note 7.

72. *Kristin Cavallari Defends Decision Not to Vaccinate Her Son*, FOX NEWS (Mar. 14, 2014), <http://foxnews.com/entertainment/2014/03/14/kristin-cavallari-defends-decision-not-to-vaccinate-her-son/>; Interview with Donald Trump, FOX NEWS (Apr. 2, 2014), *available at* <http://www.mediamatters.org/video/2012/04/02/on-fox-donald-trump-pushes-dubious-link-between/184590>

a blog post for the *Huffington Post* accusing the CDC and the American Academy of Pediatrics of “ignoring mountains of scientific evidence and testimony” that show a link between vaccines and autism.<sup>73</sup> Actress Alicia Silverstone posted on her lifestyle blog, *The Kind Life*, that researchers had published a study that “provides new evidence that vaccines given to pregnant women could be correlated with autism.”<sup>74</sup> If readers click through several links to find the original text of the study, which they would have to pay to read, readers would discover that this Danish study only shows a correlation between mothers having a viral or bacterial infection requiring hospitalization and autism.<sup>75</sup> This study nowhere mentions vaccines or immunization of pregnant women.<sup>76</sup>

### c. Parental Trust in Celebrities

Though the majority of American parents still trust their doctors’ opinions concerning the necessity of immunization for their children, a 2011 study of 1,552 parents indicated that 2% of surveyed parents trusted celebrities’ opinions on vaccines “a lot” and 24% trusted celebrities “some.”<sup>77</sup> Comparatively, only 23% of these parents put a lot of trust in government vaccine experts or officials.<sup>78</sup> This study also noted that mothers were more likely to put “some or a lot of trust in celebrities, television shows, magazines/news articles, and vaccine-safety information provided by parents who claim their child was injured by vaccines.”<sup>79</sup>

### 3. Philosophical Beliefs

In addition to the misguided fear of autism and listening to the claims of celebrities with no medical training, parents who do not immunize their children often look to religion as a basis for refusing immunization.<sup>80</sup> This philosophical basis for rejecting the use of vaccines is particularly troubling because all but two states allow their citizens to claim a non-medical exemption for religious beliefs that do not agree with the need for immunization, though more states are slowly eliminating non-medical exemptions.<sup>81</sup>

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(Donald Trump stating his position that several vaccines given to a child simultaneously causes autism, and he “couldn’t care less” that doctors and scientific studies have disproved Mr. Trump’s position).

73. Jim Carrey, *The Judgment on Vaccines Is In???*, HUFFINGTON POST BLOG (Nov. 5, 2009), [http://www.huffingtonpost.com/jim-carrey/the-judgment-on-vaccines\\_b\\_189777.html](http://www.huffingtonpost.com/jim-carrey/the-judgment-on-vaccines_b_189777.html).

74. Alicia Silverstone, *Are Vaccines Safe for Babies and Pregnant Women?*, THE KIND LIFE (Feb. 21, 2013), <http://thekindlife.com/blog/2013/02/dr-jay-gordon-vaccinations-safe-unsafe>.

75. Hjördis Ó. Atladóttir, et al., *Maternal Infection Requiring Hospitalization During Pregnancy and Autism Spectrum Disorders*, 40 J. AUTISM & DEVELOPMENTAL DISORDERS 1423, 1424, 1429 (2010) (Danish studies are particularly accurate in the field of disease because Denmark records the following information for all citizens born in the country: date of birth, date of immunizations, specific type of immunizations, and the date of disease diagnoses of each citizen).

76. *Id.*

77. Gary L. Freed et al., *Sources and Perceived Credibility of Vaccine-Safety Concerns Among Parents*, 127 PEDIATRICS 107, 108-09 (2011).

78. *Id.* at 110.

79. *Id.* at 109.

80. Grabenstein, *supra* note 8.

81. Y. Tony Yang & Vicky Debold, *A Longitudinal Analysis of the Effect of Nonmedical Exemption Law and Vaccine Uptake on Vaccine-Targeted Disease Rates*, 104 AM. J. PUB. HEALTH 371, 371 (2014); Letter from Sarah Royce, Director and State Health Officer of the California Department of Public Health, to Interested Parties (July 2, 2015), available at <http://www.immunizeca.org/wp-content/uploads/2015/07/SB-277-Letter-2016-Effective-Date-070215-final.pdf> (noting that California will no longer permit personal belief immunization exemptions for children in child care, public schools, and private schools starting July 2016).

Though some religions like Judaism, Buddhism, Hinduism, and Islam do not reject the use of vaccines and even encourage using immunization to protect life, other religions provide less support for vaccines, and their followers often claim the non-medical exemption to immunizations that most states offer.<sup>82</sup>

While the Christian faith as a whole does not reject the use of vaccines, some small denominations of Christianity discourage immunization in their doctrines.<sup>83</sup> The Church of Christ, Scientist, in particular, has rejected the use of vaccines upon their practitioners since Mary Baker Eddy founded the denomination in 1879.<sup>84</sup> Christian Scientists believe that prayer, not medicine, must combat disease.<sup>85</sup> The sects of Faith Tabernacle, Church of the First Born, Faith Assembly, and End of Time Ministries also hold beliefs that focus on healing through faith rather than medicine.<sup>86</sup> Jehovah's Witnesses strongly opposed immunizations until 1952, and they did not start encouraging their practitioners to immunize their children until the 1990s.<sup>87</sup>

### C. Vaccine Safety

In sum, various misinformation inundates parents with messages that tell them to leave their children susceptible to disease by causing a false fear that their children could become autistic, while other messages encourage parents that their religious practices will protect their children from disease.<sup>88</sup> However, vaccines are generally safe to use on children, due in part to the strict standards the government uses to regulate vaccines; and parents should use vaccines to prevent the spread of more serious diseases.<sup>89</sup>

#### 1. Vaccine Approval and Review

While no medical procedure is completely flawless, government and independent research centers strictly scrutinize and test vaccines for human safety from the developmental stage of the vaccine to tracking the side effects of the vaccine when administered to the public.<sup>90</sup>

##### a. United States Government Process for Vaccine Approval

The U.S. Food and Drug Administration's (FDA) Center for Biologics Evaluation and Research, the sole regulator of vaccines in the United States, imposes a highly rigorous process with high standards ensuring vaccine safety.<sup>91</sup> The process the FDA uses to approve a vaccine following the manufacturer's extensive clinical trials consists of: (1) an Investigational New Drug application; (2) pre-licensure vaccine clinical trials; (3) a

82. Grabenstein, *supra* note 8, at 2013-15.

83. *Id.* at 2015.

84. *Id.*

85. *Id.*

86. *Id.* at 2016.

87. Grabenstein, *supra* note 8, at 2016.

88. *Id.* at 2015-16; Wakefield, *supra* note 14; McCarthy, *supra* note 66.

89. *Vaccine Testing and Approval Process*, CENTERS FOR DISEASE CONTROL AND PREVENTION (May 1, 2014), <http://www.cdc.gov/vaccines/resdev/test-approve.htm>.

90. *Id.*

91. *Vaccine Product Approval Process*, U.S. FOOD AND DRUG ADMINISTRATION (Jun. 18, 2009), <http://www.fda.gov/BiologicsBloodVaccines/DevelopmentApprovalProcess/BiologicsLicenseApplicationsBLAPProcess/ucm133096.htm>.

Biologics License application; (4) an inspection of the vaccine's manufacturing facility; (5) a presentation of the safety, effectiveness, and appropriate use of the vaccine to the FDA's Vaccines and Related Biological Products Advisory Committee; and (6) testing of the vaccine's product labeling.<sup>92</sup>

*b. Independent Studies of Vaccine Safety*

In addition to the United States government's regulation of the production of the nation's vaccines, American doctors and researchers constantly conduct their own independent studies to determine the safety of vaccines.<sup>93</sup> In 2012, a study showed that administering over 700,000 vaccines that prevent mumps, measles, rubella, and varicella did not increase children's risk for febrile seizures.<sup>94</sup> In a 2013 study, researchers examined 256 children with autism who received childhood immunizations before the age of two such as MMR, DTaP, DTP, etc. compared with 752 children who had received the same immunizations without developing autism.<sup>95</sup> The researchers determined that "parental concerns that their children are receiving too many vaccines in the first 2 years of life or too many vaccines at a single doctor visit are not supported in terms of an increased risk of autism."<sup>96</sup>

*c. Global Monitoring of Vaccine Safety*

Not only are United States organizations concerned about making vaccines as safe for Americans as possible, international entities like the World Health Organization's (WHO) Global Advisory Committee on Vaccine Safety (GACVS) also work to ensure the safety of vaccines around the world.<sup>97</sup> Since its founding in 1999, the purpose of the Global Advisory Committee on Vaccine Safety is to "provide[] independent, authoritative, scientific advice to WHO on vaccine safety issues of global or regional concern with the potential to affect in the short or long term national immunization programmes."<sup>98</sup> During the GACVS's meeting in December 2013, the GACVS reviewed a study from the *BMJ* (formerly the *British Medical Journal*) observing that 200,000 American women did not show any increased incidence of contracting an autoimmune disease following administration of the HPV vaccine.<sup>99</sup>

As a part of the GACVS' function of reviewing potential vaccine side effects, it reviewed data from the Vaccine Adverse Effect Reporting System that showed that for every 200,000 doses of Rotarix (the rotavirus vaccine) there were only six cases of the adverse side effect of intussusception, a condition in which a part of the intestine slides

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92. *Id.*

93. *Vaccine Safety: Examine the Evidence*, AMERICAN ACADEMY OF PEDIATRICS (Apr. 2013), <https://www2.aap.org/immunization/families/faq/vaccinestudies.pdf>.

94. Nicola P. Klein et al., *Measles-Containing Vaccines and Febrile Seizures in Children Age 4 to 6 Years*, 129 *PEDIATRICS* 809, 811-13 (2012).

95. Frank DeStefano et al., *Increasing Exposure to Antibody-Stimulating Proteins and Polysaccharides in Vaccines Is Not Associated with Risk of Autism*, 123 *PEDIATRICS* 561 (2013).

96. *Id.* at 563.

97. *The Global Advisory Committee on Vaccine Safety*, WORLD HEALTH ORGANIZATION (2014), [http://www.who.int/vaccine\\_safety/committee/en](http://www.who.int/vaccine_safety/committee/en) [hereinafter GACVS 2014].

98. *Id.*

99. Global Advisory Committee on Vaccine Safety 11-12 December 2013, *Weekly Epidemiological Record*, No. 7, at 58-59 (Feb. 14, 2014) [hereinafter GACVS December 2013].

into an adjacent part of the intestine, leading to infection and death of bowel tissue.<sup>100</sup> While not a pleasant side effect, the GACVS' review determined that a 0.003% risk of intussusception was worth the immunization against rotavirus, which causes severe dehydration and diarrhea that kills 453,000 infants worldwide per year.<sup>101</sup> The GACVS also suggested in December 2013 that WHO create a "vaccine safety monitoring manual" to better monitor the effects of immunizations and the follow-up actions regarding vaccines internationally.<sup>102</sup>

## 2. Compensation for Vaccine Injury

While adverse side effects from the CDC's recommended immunizations are rare, the United States has statutory procedures in place to compensate the small percentage of patients harmed by vaccines: the National Vaccine Injury Compensation Program.<sup>103</sup> The vaccines protected under the National Vaccine Injury Compensation Program consist of all the CDC's recommended childhood vaccines, including MMR, DTaP, and DTP.<sup>104</sup> In addition to ensuring that the small section of immunized patients who unfortunately experience negative side effects from vaccines receives compensation, this program also contains a Mandate for Safer Childhood Vaccines and a Recording and Reporting of Information section.<sup>105</sup> These provisions mandate that vaccine manufacturers and physicians make and use safe vaccines while reporting to the Secretary of Health and Human Services when adverse effects occur.<sup>106</sup>

## 3. Vaccine Education

Although vaccines are safe and becoming even safer as researchers continue to study them, some parents hesitate to accept the information explaining the safety of vaccines and encouraging parents to immunize their children.<sup>107</sup> By law, the Secretary of Health and Human Services must "develop and disseminate vaccine information materials for distribution by health care providers to the legal representatives of any child" for every vaccine covered by the National Vaccine Compensation Program.<sup>108</sup> However, a 2014 study showed that the 1,759 surveyed parents who refused to immunize their children were unlikely to change their minds and immunize after online resources gave them medically accurate information about vaccines.<sup>109</sup> In fact, of the surveyed parents who felt the least favorable towards vaccines, the medically accurate information about the benefits and

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100. *Id.* at 57-58; *Intussusception Definition*, MAYO CLINIC (Dec. 14, 2012), <http://mayoclinic.org/diseases-conditions/intussusception/basics/definition/con-20026823>.

101. GACVS December 2013, *supra* note 99, at 58; *Rotavirus*, MAYO CLINIC (Feb. 3, 2014), <http://www.cdc.gov/vaccinesafety/vaccines/RotaVSB.html>.

102. GACVS December 2013, *supra* note 99, at 60.

103. 42 U.S.C. § 300aa-11 (2014).

104. *Id.* § 300aa-14.

105. *Id.* § 300aa-25, 27.

106. *Id.*

107. Brendan Nyhan et al., *Effective Messages in Vaccine Promotion: A Randomized Trial*, 133 PEDIATRICS 1, 6-7 (2014) (stating that though scientifically accurate information on vaccines did not alter the perceptions of non-vaccinating parents, researchers did not discover the reason why these parents' perceptions did not change).

108. 42 U.S.C. § 300aa-26.

109. Nyhan et al., *supra* note 107, at 2, 6-7.

safety of vaccines made these parents even less likely to immunize their children.<sup>110</sup>

More research is needed on this topic to determine the reason why parents become less likely to immunize after receiving favorable evidence about vaccines, but the most recent studies have shown that a lack of education is not the issue when parents decide not to immunize their children.<sup>111</sup> Most of these parents who refuse to immunize their children consist of families living in a suburban household with a mother who graduated from college, is married, and has a family income greater than 400% of the federal poverty level.<sup>112</sup> Therefore, many parents who refuse to immunize their children reject the use of vaccines with full knowledge that their child could contract a deadly disease or infect another parent's child with disease.<sup>113</sup>

Parents who refuse to immunize their children *knowingly* put their children and other parents' children at risk for disease; they have the education and monetary resources to provide immunization, and they still refuse to immunize their children.<sup>114</sup> Though approved vaccines pose little risk and the United State government and other national and international entities work tirelessly to continue to improve the safety of vaccines, some parents still reject immunization.<sup>115</sup> Instead of relying on science to make decisions about their children's health and the overall health of the public, these parents look to one fraudulent study, Anti-Vax celebrities with no medical training, and their own philosophical beliefs when they refuse to immunize their children.<sup>116</sup> Since education about vaccines and the United States' stringent measures to ensure that vaccines are as safe as possible are not enough to encourage these parents to immunize their children, courts may interpret existing criminal law in order to take more drastic measures to encourage these parents to immunize their children.<sup>117</sup> To this end, courts could expand existing interpretations of criminal law to criminalize parents' refusal to immunize their children when such refusal does not meet statutory exemptions.

### III. ANALYSIS OF CURRENT LAW FAVORING MANDATORY IMMUNIZATION

While no blackletter law in the United States currently exists that specifically imposes criminal penalties upon parents who refuse to vaccinate their children, the U.S. Supreme Court has determined that mandatory immunizations with criminal penalties for refusal are constitutional under states' police powers in order to promote the health of the public and has consistently upheld such statutes throughout the twentieth century to the present.<sup>118</sup> In addition, a broad interpretation of the Model Penal Code and criminal case law allows for potential criminalization of parents who refuse to immunize their children.<sup>119</sup>

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110. *Id.* at 6.

111. *Id.* at 1-2.

112. Smith et al., *supra* note 48, at 139-40, 143.

113. *Id.*

114. *Id.*

115. 42 U.S.C. § 300aa-11 (2014); GACVS 2014, *supra* note 97; *Vaccine Product Approval Process*, *supra* note 91; *Vaccine Safety: Examine the Evidence*, *supra* note 93.

116. Grabenstein, *supra* note 8; Wakefield, *supra* note 14; McCarthy, *supra* note 66.

117. *See generally* Nyhan et al., *supra* note 107, at 6-7. *Vaccine Product Approval Process*, *supra* note 91.

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

119. MODEL PENAL CODE §§ 211.2, 230.4 (2015).

A. *Statutory Beginnings of Mandatory Vaccinations*

States began passing mandatory immunization laws featuring criminal penalties to ensure that citizens received protection from deadly diseases in the early 1900s, and the practice has continued into the twenty-first century.<sup>120</sup>

1. *Jacobson v. Massachusetts* (1905): The First Mandatory Immunization Case

In 1905, *Jacobson v. Massachusetts* came before the U.S. Supreme Court to review the conviction of the defendant for refusing to comply with the state's immunization law.<sup>121</sup> This disputed law called for the mandatory immunization of the smallpox vaccine to all unimmunized adults in order to contain a smallpox outbreak in Cambridge, Massachusetts.<sup>122</sup> Within this criminal case, the defendant contested the constitutionality of the Massachusetts mandatory immunization law by arguing that the state forcing him to undergo immunization by use of criminal penalties resulted in an unreasonable invasion of his liberty, and that mandatory immunization laws were "unreasonable, arbitrary, and oppressive."<sup>123</sup>

The Court recognized that to determine this mandatory immunization statute as unconstitutional would mean that any future "compulsory vaccination could not, in any conceivable case, be legally enforced in a community . . . however widespread the epidemic of smallpox, and however deep and universal was the belief of the community and of its medical advisers[] that a system of general vaccination was vital to the safety of all."<sup>124</sup> Therefore, the Court affirmed the defendant's conviction and ruled that the Massachusetts mandatory immunization statute was constitutional.<sup>125</sup> The reasoning of the *Jacobson v. Massachusetts* Court to uphold the immunization statute determined that states have the authority within their police powers to enact legislation to protect the health and safety of its citizens—including mandatory immunizations.<sup>126</sup>

2. *Zucht v. King* (1922): Mandatory Immunization Upheld

As time passed and schools began instituting mandatory immunizations for children before they could enter school, another case concerning a government's ability to require immunization of citizens came before the U.S. Supreme Court in 1922.<sup>127</sup> *Zucht v. King* concerned a plaintiff-student who appealed the decision of the Texas appellate court that upheld a San Antonio, Texas, ordinance preventing the plaintiff from attending both a public and a private school because she refused to undergo immunization.<sup>128</sup> The plaintiff claimed that there was no reason for the city government to require immunization, that the ordinance deprived her of her liberty without due process of law, and that the ordinance

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120. *Jacobson*, 197 U.S. 11.

121. *Id.* at 23, 39.

122. *Id.* at 22-24.

123. *Id.* at 26.

124. *Id.* at 37.

125. *Jacobson*, 197 U.S. at 39.

126. *Id.*

127. *Zucht v. King*, 260 U.S. 174 (1922).

128. *Id.* at 175.

was void because it gave the Board of Health the discretion to enforce the ordinance.<sup>129</sup>

However, the trial court, the appellate court, and the U.S. Supreme Court all dismissed the plaintiff's claims.<sup>130</sup> The U.S. Supreme Court dismissed the plaintiff's claim by using similar reasoning to *Jacobson v. Massachusetts*: the ordinance requiring schoolchildren to submit to immunization was a reasonable exercise of a state's police powers to protect the public health.<sup>131</sup>

### 3. *Phillips v. City of New York* (2015): A Contemporary Case of Mandatory Immunization

In 2014, a federal judge in *Phillips v. City of New York* cited *Jacobson v. Massachusetts* while upholding New York City's policy that bans unimmunized children from public school during outbreaks of vaccine-preventable diseases, such as chicken pox.<sup>132</sup> The two plaintiffs who took advantage of New York's religious exemption from immunization claimed that banning their children from school based on their lack of immunization violated their First Amendment right to freedom of religion and their Fourteenth Amendment right to equal protection.<sup>133</sup> During the trial, the plaintiffs argued that *Jacobson v. Massachusetts* should not apply to this case because "[t]here's no way that court anticipated that children would be subjected to the vaccines they must get today."<sup>134</sup> The court did not agree, and it ruled in favor of the City of New York.<sup>135</sup>

Upon appeal in January 2015, the Second Circuit Court of Appeals affirmed the trial court's decisions and noted that New York's immunization statute "goes beyond what the Constitution requires by allowing an exemption for parents with genuine and sincere religious beliefs. Because the State could bar [the plaintiff's] children from school altogether, *a fortiori*, the State's more limited exclusion during an outbreak of a vaccine-preventable disease is clearly constitutional."<sup>136</sup>

### 4. Past Mandatory Immunization Law and Future Interpretations of Criminal Law

Even though the U.S. Supreme Court and lower courts have upheld mandatory immunization laws for over a century in order to protect the health and safety of the public, state and local mandatory immunization laws that usually contain broad non-medical exemptions are not enough to encourage parents to immunize their children in the twenty-first century.<sup>137</sup> While applying criminal sanctions to all parents who refuse to immunize their children for a non-medical reason would be the ideal solution to encourage a drastic increase in immunization rates to ensure herd immunity for the country, these non-medical

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129. *Id.*

130. *Id.* at 175-76.

131. *Id.* at 176-77.

132. Benjamin Mueller, *Judge Upholds Policy Barring Unvaccinated Students During Illnesses*, N.Y. TIMES (Jun. 22, 2014), <http://www.nytimes.com/2014/06/23/nyregion/judge-upholds-policy-barring-unvaccinated-students-during-illnesses.html>.

133. *Id.*

134. *Id.*

135. *Id.*

136. *Phillips v. City of New York*, No. 14-2156-cv, 2015 WL 74112 (2d Cir. Jan. 7, 2015).

137. *Id.*; *Jacobson v. Massachusetts*, 197 U.S. 11 (1905); *Zucht v. King*, 260 U.S. 174 (1922); Yang & Debold, *supra* note 81.



exemptions that most immunization statutes feature still exist in legislation.<sup>138</sup> This argument for criminalizing parental refusal to immunize children most likely cannot legally apply to these statutory exemptions.<sup>139</sup> However, some parents may not fully comply with the statutory exemption procedures, and some states have begun removing personal belief exemptions from their immunization statutes following current disease outbreaks.<sup>140</sup> The following argument of interpreting existing criminal law becomes more applicable to parents who refuse to immunize their children as legislatures strike these exemptions from their mandatory immunization statute.<sup>141</sup> This argument directly applies to parents who refuse to immunize their children while failing to fulfill the requirements of non-medical exemptions.<sup>142</sup>

Combining the position of the U.S. Supreme Court, government officials, doctors, and researchers that the immunization of citizens who are medically able to undergo immunization is of vital importance to the overall health and safety of the public, the law may be able to do more to encourage parents to immunize their children.<sup>143</sup> Broad interpretations of criminal law, such as the Model Penal Code, give the criminal justice system the ability to apply existing laws that criminalize the endangerment of others to parents who refuse to immunize their children.<sup>144</sup> The Model Penal Code specifically contains two types of crimes under which prosecutors could penalize parents who recklessly endanger their children by refusing to immunize them.<sup>145</sup>

#### B. *Argument for the Constitutionality of Criminal Penalties for Refusing to Immunize*

Before discussing how the criminal law can hold parents liable for immunization refusal, it is worth noting that parents who refuse to immunize their children and then face criminal penalties could argue that an interpretation of criminal law that requires them to immunize their children to avoid criminal penalties violates their constitutional rights, including the rights to freedom of religion and equal protection.<sup>146</sup> However, such arguments would likely fail, as first seen in *Jacobson v. Massachusetts* and more recently

138. *States With Religious And Philosophical Exemptions From School Immunization Requirements*, NATIONAL CONFERENCE OF STATE LEGISLATURES (Feb. 23, 2015), <http://www.ncsl.org/research/health/school-immunization-exemption-state-laws.aspx> [hereinafter *Exemptions*].

139. *Id.*

140. The Times Editorial Board, *How To Immunize More Kids: California Needs To Ban Personal-Belief Exemption For Vaccinations*, LOS ANGELES TIMES (Jan. 27, 2015), <http://www.latimes.com/opinion/editorials/la-ed-exemption-20150128-story.html>; Ashley Fantz, *Father Asks California School District To Ban Children Who Haven't Been Immunized*, CNN (Jan. 30, 2015), <http://www.cnn.com/2015/01/29/health/california-boy-vaccine-school/index.html>; Letter from Sarah Royce, *supra* note 81.

141. Sheila V. Kumar, *Oregon Considers Banning Most Vaccine Exemptions*, ABC NEWS (Feb. 28, 2015), <http://abcnews.go.com/Health/wireStory/oregon-considers-banning-vaccine-exemptions-29295304> (noting that if this legislation passes, "Oregon would join Mississippi and West Virginia as the only states allowing exemptions solely for medical reasons, and no longer for religious, philosophical or personal reasons." This article was published prior to California passing legislation banning non-medical vaccine exemptions); Letter from Sarah Royce, *supra* note 81.

142. *See supra* note 141 and accompanying text.

143. *Jacobson v. Massachusetts*, 197 U.S. 11 (1905); *Zucht v. King*, 260 U.S. 174 (1922); *Frontline: The Vaccine War*, *supra* note 18.

144. *See* MODEL PENAL CODE §§ 211.2, 230.4 (2015).

145. *See Id.*

146. *See generally* Phillips v. City of New York, No. 14–2156–cv, 2015 WL 74112 (2d Cir. Jan. 7, 2015); Mueller, *supra* note 132.

in *Phillips v. City of New York*.<sup>147</sup> The court would likely conduct a constitutional analysis of the statutes that require the immunization of children by applying a rational basis test.<sup>148</sup> A rational basis test is appropriate for mandatory immunization laws because mandatory vaccination of all children who are able to undergo immunization without allergic reactions does not discriminate against a suspect class.<sup>149</sup> A parent's argument that mandatory immunization statutes violate their fundamental right to childrearing must fail because the state has a rational interest in requiring parents to immunize their children in order to promote the health of the public, which meets the rational basis test's requirement that the law be rationally related to a legitimate government interest to withstand a constitutional challenge.<sup>150</sup>

### C. Theory of Reckless Endangerment

Current criminal law may constitutionally hold parents criminally liable for endangering their children when they refuse to immunize them.<sup>151</sup> The Model Penal Code prohibits the reckless endangerment of other human beings, including children, in Section 211.2: "A person commits a misdemeanor if he recklessly engages in conduct which places or may place another person in danger of death or serious bodily injury."<sup>152</sup> Section 211.2, a short, broad rule, gives the justice system the opportunity to interpret the Code to prohibit parents from recklessly endangering their own and others' children by refusing to immunize their own children.<sup>153</sup> In the Explanatory Note for Section 211.2, the Code editor notes that this section "deals with reckless endangerment by any means, i.e., situations where the actor's conduct recklessly places or may place another person in danger of death or serious bodily injury."<sup>154</sup> Therefore, since parents' refuse to immunize their children despite the accessible studies regarding the safety of vaccines and the necessity of immunization to protect children from disease, laws prohibiting reckless

147. *Jacobson*, 197 U.S. at 39; *Phillips*, 2015 WL 74112.

148. *Maack v. Sch. Dist. of Lincoln*, 241 Neb. 847, 860 (1992) (holding that in this case of the plaintiffs arguing that excluding their unimmunized children from school during an outbreak of measles violated their equal protection rights under the Fourteenth Amendment, the court should use the rational basis test. The court reasoned that "[s]ince the classifications about which Maacks complain do not thwart the exercise of fundamental right nor present categories based on a constitutionally suspect characteristic, the classifications in Maacks' case are examined in reference to a rational basis test. When considered under a rational basis test, the classifications of excluded students do not violate Maacks' equal protection rights.")

149. *Friedman v. Clarkstown Cent. Sch. Dist.*, 75 F. App'x 815 (2d Cir. 2003) (upholding the district court's ruling that dismissed the plaintiff's complaint that alleged that her son's school district denied her a religious exemption to the mandatory immunization the school district required for her son to attend school under a rational basis review).

150. *Hadley v. Rush Henrietta Cent. Sch. Dist.*, 2007 U.S. Dist. LEXIS 30586 (W.D.N.Y. Apr. 25, 2007) (noting that "[w]hen a law or rule that is neutral on its face is challenged because it allegedly has a discriminatory impact on a protected class of persons, courts will uphold the law as long as there is a 'rational basis' for the adoption of the law or rule" in the court's decision to uphold the constitutionality of a public school district's policy of excluding a high school student from playing lacrosse due to parental refusal to immunize the student for tetanus).

151. MODEL PENAL CODE § 211.2 (2015).

152. *Id.* §§ 2.02, 211.2 (defining "recklessly" as, "when [a person] consciously disregards a substantial and unjustifiable risk that the material element [of the offense] exists or will result from his conduct. The risk must be of such a nature and degree that, considering the nature and purpose of the actor's conduct and the circumstances known to him, its disregard involves a gross deviation from the standard of conduct that a law-abiding person would observe in the actor's situation.")

153. *Id.* § 211.2.

154. *Id.*

endangerment may apply.<sup>155</sup>

Case law that further defines the crime of reckless endangerment also allows for an interpretation that potentially criminalizes parental refusal to immunize children.<sup>156</sup> The case law gives many different elements to the crime of reckless endangerment, depending on the state.<sup>157</sup>

In Utah, reckless endangerment requires reckless conduct that created a serious risk of death to another person.<sup>158</sup> In the case of *State v. Merrill*, the court determined that probable cause of reckless endangerment was present when the defendant chose to co-sleep with his infant son in the same bed immediately preceding the child's death.<sup>159</sup> This case defined reckless conduct as, "when he is *aware of but consciously disregards a substantial and unjustifiable risk* that the circumstances exist or the result will occur."<sup>160</sup> In addition, "the risk must be of such a nature and degree that its disregard constitutes a gross deviation from the standard of care that an ordinary person would exercise under all the circumstances as viewed from the actor's standpoint."<sup>161</sup>

In Pennsylvania, the language of the Model Penal Code serves as the basis for the state's statute prohibiting reckless endangerment, providing that "[a] person commits a misdemeanor of the second degree if he recklessly engages in conduct which places or may place another person in danger of death or serious bodily injury."<sup>162</sup> Pennsylvania law defines the *mens rea* of recklessness as "a conscious disregard of a known risk of death or great bodily harm to another person."<sup>163</sup> In *Commonwealth v. Cordoba*, a case in which the HIV-positive defendant had oral sex with the alleged victim without revealing his HIV status, the court held that the prosecution had established a *prima facie* case of reckless endangerment.<sup>164</sup> The *Cordoba* court determined that the defendant's choice to expose the alleged victim to HIV constituted a "gross deviation from the standard of conduct that a reasonable person would observe."<sup>165</sup> These examples of reckless endangerment illustrate the ability to prosecute parents for either recklessly endangering their own children by refusing to immunize them, or recklessly endangering other children by putting their unimmunized child into social situations such as school or daycare that could lead to an outbreak of disease.<sup>166</sup>

### 1. Reckless Endangerment of an Anti-Vax Parent's Own Child

Much of the case law defining the Model Penal Code's requirements of reckless

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155. *Id.*; Klein, *supra* note 94; GACVS 2014, *supra* note 97.

156. MODEL PENAL CODE §§ 211.2, 230.4 (2015).

157. *Commonwealth v. Cordoba*, 902 A.2d 1280 (Pa. 2006); *State v. Merrill*, 269 P.3d 196 (Utah Ct. App. 2012).

158. *Merrill*, 269 P.3d at 205.

159. *Id.* (holding that the trial court did not err when denying the defendant's motion to quash the bindover child abuse homicide and reckless endangerment charges because a magistrate could reasonably conclude that an ordinary person would not co-sleep with an infant like the defendant in this case. The autopsy on the child showed several possible causes of death from asphyxia to meningitis, but no confirmed cause.).

160. *Id.*

161. *Id.*

162. 18 Pa. Cons. Stat. § 2705 (1973).

163. *Commonwealth v. Cordoba*, 902 A.2d 1280, 1288 (Pa. 2006).

164. *Id.* at 1289-90.

165. *Id.* at 1289.

166. *Id.*; *State v. Merrill*, 269 P.3d 196, 205 (Utah Ct. App. 2012).

endangerment tends to focus on the need for the defendant to “consciously disregard” the risk to another person, which is particularly relevant to the phenomenon of parents refusing to immunize their own children.<sup>167</sup> When parents knowingly make the choice to disregard the risk of leaving their children unvaccinated out of the misguided belief that vaccines cause autism, despite the easily accessible information that no (valid) study has ever linked vaccines and autism, they are meeting the “conscious disregard” element of reckless endangerment.<sup>168</sup> These parents know they are risking their own children’s health of contracting a deadly disease, but they choose to believe false studies and celebrities’ claims of the dangers of vaccines rather than legitimate studies and doctors whose endorsement of vaccines is well-supported.<sup>169</sup> Therefore, courts could criminally penalize parents for recklessly endangering their own children.<sup>170</sup>

*a. Reckless Endangerment via Refusal to Immunize*

Like in the *State v. Merrill* case in which the defendant co-slept with his infant son and caused his death, these Anti-Vax parents choose to raise their children in a dangerous manner in the hopes that their child will receive some benefit from their choice.<sup>171</sup> The *Merrill* court determined that the defendant’s choice to co-sleep with his child constituted reckless endangerment because the defendant disregarded a “substantial and unjustifiable” risk to his son.<sup>172</sup> Though the defendant claimed that the risk he created when he chose to co-sleep with his child was justified due to the benefits of co-sleeping, the *Merrill* court determined that that the defendant’s conduct was unjustified.<sup>173</sup> In addition, the defendant argued that his conduct could not be a “gross deviation from the standard of care” because “25-50% of parents are co-sleeping with their infant.”<sup>174</sup> However, the *Merrill* court agreed with the State that because the defendant chose to co-sleep with his child when the defendant knew that he would not easily wake up created unjustifiable circumstances in which a reasonable person would not have made a similar decision.<sup>175</sup>

Just like parents who can go online and see Internet articles from numerous parenting websites that claim that children benefit from co-sleeping, Anti-Vax parents are reading web articles describing the benefits of refusing to immunize their children.<sup>176</sup> Though

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167. See generally *People v. Usman*, 582 N.Y.S.2d 105 (N.Y. App. Div. 1992) (affirming the defendant’s conviction for reckless endangerment because his conduct evidenced a conscious disregard of a substantial and unjustifiable risk of death); *Williams v. State*, 100 Md. App. 468 (Md. Ct. Spec. App. 1994) (noting that the *mens rea* of recklessness is a conscious disregard or indifference to creating a substantial risk of death); *Commonwealth v. Chapman*, 763 A.2d 895 (Pa. 2000) (emphasis added) (holding that “we find an implicit recognition that parents at times can make mistakes in judgment and that their children may be harmed as a result. However, for such mistakes to rise to the level of criminal culpability, parents must knowingly allow their children to be at risk with awareness of the potential consequences of their actions or of their failure to act.”).

168. *Frontline: The Vaccine War*, *supra* note 18.

169. *Id.*

170. *Herd at Risk*, *supra* note 17.

171. *State v. Merrill*, 269 P.3d 196 (Utah Ct. App. 2012).

172. *Id.* at 206.

173. *Id.* at 203-04.

174. *Id.*

175. *Id.* at 203-06.

176. Jan Hunt, *Ten Reasons to Sleep Next to Your Child at Night*, THE NATURAL CHILD PROJECT, [http://www.naturalchild.org/jan\\_hunt/familybed.html](http://www.naturalchild.org/jan_hunt/familybed.html) (claiming that sharing a bed with a child can prevent SIDS and the only danger to a baby while co-sleeping is suffocation due to sleeping on a waterbed or if the parent is under the influence of drugs/alcohol. It is noteworthy that the author of this article is not a medical doctor); Svea Boyda-Vikander, *10 Things Wrong With Anti-Bed-Sharing Campaigns*, BIRTH WITHOUT FEAR BLOG (Oct. 1,

online articles exist that encourage co-sleeping and not immunizing children, physicians do not support either practice.<sup>177</sup> Prosecutors could make an even stronger case of reckless endangerment against parents who live in areas such as California and Oregon, where herd immunity continues to plummet.<sup>178</sup> In the case of a parent who refuses to immunize her child while living in an area where an outbreak is likely to occur and the child then actually contracts a vaccine-presentable disease, a strong case for reckless endangerment exists because a parent would be knowingly leaving their child vulnerable to an outbreak of disease.<sup>179</sup>

*b. Reckless Endangerment via Placing Unimmunized Child in Infected Community*

Prosecutors could potentially have difficulty prosecuting parents for recklessly endangering their child if the child does not contract a disease or die from disease, due to courts not wanting to punish parents when the child does not actually contract a vaccine-preventable disease.<sup>180</sup> However, the law could more easily allow for conviction for reckless endangerment when parents place their unimmunized child into contact with other children during an outbreak of disease.<sup>181</sup> A court may be unlikely to allow the spread of disease among other parents' children in exchange for one child attending school, so a prosecutor could more easily argue for a conviction of reckless endangerment.<sup>182</sup>

The case of *Phillips v. City of New York*, which this article previously discussed, most recently brought this situation to the attention of the public.<sup>183</sup> The plaintiffs contested the city ordinance that banned their children unimmunized for chickenpox from attending school when several other children in the school had contracted chickenpox.<sup>184</sup> If these parents had not complied with the city ordinance and sent their unimmunized children to their infected school, a court could consider their conduct reckless endangerment of their children for knowingly exposing their children to a potentially dangerous disease.<sup>185</sup> Complications from chicken pox, which are more likely to occur in

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2012), <http://birthwithoutfearblog.com/2012/10/01/10-things-i-hate-about-anti-bed-sharing-campaigns> (claiming that Anti-Bed-Sharing Campaigns make false analogies, denigrate other parents' choices, do not link to reputable studies, focus on the negative, and more); Dr. Joseph Mercola, *Drugs and Vaccines Are More Dangerous for Children*, <http://articles.mercola.com/sites/articles/archive/2014/04/26/vaccines-adverse-reaction.aspx> (claiming that vaccines are the cause of the United States' high infant mortality rate).

177. Rachel Y. Moon, *SIDS and Other Sleep-Related Infant Deaths: Expansion of Recommendations for a Safe Infant Sleeping Environment*, 128 PEDIATRICS 1341, 1350 (2011); Dr. Michael J. Breus, *Infant Co-Sleeping Increases Despite Risks and Recommendations*, THE HUFFINGTON POST (Oct. 28, 2013), [http://www.huffingtonpost.com/dr-michael-j-breus/infant-co-sleeping\\_b\\_4150354.html](http://www.huffingtonpost.com/dr-michael-j-breus/infant-co-sleeping_b_4150354.html) (noting that the American Academy of Pediatrics recommends that "infants sleep on their backs, and that they not share a bed with parents, caregivers, or other children[]").

178. Reinberg *supra*, note 39.

179. State v. Merrill, 269 P.3d 196 (Utah Ct. App. 2012) (in which the infant actually died from the defendant's reckless conduct); *Herd at Risk*, *supra* note 17.

180. Commonwealth v. Cordoba, 902 A.2d 1280, 1286 (Pa. 2006) (noting the definition of reckless endangerment usually requires the victim to suffer actual harm).

181. MODEL PENAL CODE § 211.2 (2015); *see generally* Phillips v. City of New York, No. 14-2156-cv, 2015 WL 74112 (2nd Cir. Jan. 7, 2015) (holding that neither the First Amendment, the Equal Protection Clause of the Fourteenth Amendment, the Due Process Clause of the Fourteenth Amendment, nor the Ninth Amendment prohibited mandatory immunization).

182. *Phillips*, 2015 WL 74112.

183. *Id.*

184. Mueller, *supra* note 132.

185. MODEL PENAL CODE § 211.2 (2015).

an unimmunized person, include streptococcal infections, blood stream infections, bone infections, and inflammation of the brain that can result in death.<sup>186</sup> An infected person can spread chicken pox through the air when he coughs or sneezes; and an infected person can spread the disease one-to-two days before the disease's signature rash appears.<sup>187</sup> By sending their children unprotected into a school full of children who will not show signs of chicken pox for several days while extremely contagious, these parents could be recklessly endangering their children.<sup>188</sup>

## 2. Reckless Endangerment of Children Infected by an Unimmunized Child

Not only does parental refusal to immunize hurt their own children, but this reckless choice also endangers other children by weakening the herd immunity in a community.<sup>189</sup> Model Penal Code Section 211.2 is particularly relevant to the issue of immunization because some parents who refuse to immunize do not agree that choosing to leave their children susceptible to disease affects anyone but their own children, when refusing immunizations recklessly endangers all citizens, especially other children.<sup>190</sup> In the PBS documentary, *The Vaccine War*, a public health officer asked mothers of unvaccinated children and community leaders of the Anti-Vax movement if they think they are affecting other children when they refuse to vaccinate their own children.<sup>191</sup> The co-leader of the Rogue Valley Holistic Mom's Network answered, "I do not believe that I am causing harm by not vaccinating my child. No, I don't. Because if the vaccines work, who am I putting at risk?"<sup>192</sup>

But experts in infectious diseases see the risk.<sup>193</sup> These experts publish articles in reputable medical journals, give interviews to respected news sources, and communicate directly with Anti-Vax parents, but these parents refuse to believe that the risk of a deadly outbreak of measles is greater than the unsupported chance that their children will develop autism or other side effects from a vaccine.<sup>194</sup> In addition, parents who immunize their children see a risk when their immunized children socialize with unimmunized children.<sup>195</sup> In a 2014 survey, 74% of parents would consider removing their children from

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186. *Chickenpox (Varicella): Complications*, CENTERS FOR DISEASE CONTROL AND PREVENTION (Nov. 16, 2011), <http://www.cdc.gov/chickenpox/about/complications.html> (noting that many of the adult deaths caused by chicken pox have resulted from parents contracting chickenpox from their unvaccinated children. Other complications from chickenpox include dehydration, pneumonia, bleeding problems, joint infections, and toxic shock syndrome.).

187. *Chickenpox (Varicella): Transmission*, CENTERS FOR DISEASE CONTROL AND PREVENTION (Nov. 16, 2011), <http://www.cdc.gov/chickenpox/about/transmission.html>.

188. *Id.*

189. *Frontline: The Vaccine War*, *supra* note 18.

190. *Id.*; MODEL PENAL CODE § 211.2 (2015).

191. *Frontline: The Vaccine War*, *supra* note 18.

192. *Id.*

193. *See generally* COMMITTEE ON THE ASSESSMENT OF STUDIES OF HEALTH OUTCOMES RELATED TO THE RECOMMENDED CHILDHOOD IMMUNIZATION SCHEDULE, THE CHILDHOOD IMMUNIZATION SCHEDULE AND SAFETY: STAKEHOLDER CONCERNS, SCIENTIFIC EVIDENCE, AND FUTURE STUDIES (2013) [hereinafter IMMUNIZATION SCHEDULE].

194. *See generally* IMMUNIZATION SCHEDULE, *supra* note 193. *See* Nyhan et al., *supra* note 107; *Frontline: The Vaccine War*, *supra* note 18.

195. University of Michigan C.S. Mott Children's Hospital, *Parents Support Daycare Policies to Get Kids Up-To-Date on Vaccines*, 22 NATIONAL POLL ON CHILDREN'S HEALTH 1 (2014) [hereinafter *Daycare Policies*] (noting that the research method of the study consisted of surveying 614 parents that closely resembled the United States' population with a child aged zero to five years).

a daycare center when one in four children did not have the CDC's recommended immunizations.<sup>196</sup> An additional 11% of parents would consider removing their children from such a daycare during an outbreak of disease.<sup>197</sup> Parents who reject immunizing their children do so while knowing that governmental organizations, independent researchers, and even other parents condemn immunization refusal out of the fear of an imminent future outbreak.<sup>198</sup> Yet, these Anti-Vax parents still refuse to immunize and then want their children to encounter other children during an outbreak though experts and other parents openly express the need for the immunization of all children.<sup>199</sup>

Based on the assertion that parents knowingly put other children in danger of contracting a life-threatening disease due to the information available to parents that highlights the danger of such conduct, courts could rule that reckless endangerment is present similar to cases in which a person knowingly has HIV while having intercourse with a non-suspecting victim.<sup>200</sup> In *Commonwealth v. Cordoba*, the court held that the Commonwealth established a *prima facie* case of reckless endangerment by presenting evidence that the defendant knew of his HIV status and did not disclose the HIV status to the alleged victim prior to engaging in oral sex.<sup>201</sup> In order to establish its *prima facie* case, the court required the Commonwealth to establish that the defendant's conduct "may have placed [the victim] in "danger," and the court defined "danger" as: "the possibility of suffering harm or injury."<sup>202</sup> Even though the alleged victim consented to the sexual contact at the time of the sexual encounters, and he did not contract HIV from the sexual encounters with the defendant, the court in *Cordoba* still found that the "Commonwealth had presented sufficient evidence to establish its *prima facie* case that [defendant]'s decision to have oral sex with the victim without informing him that [defendant] was HIV-positive constituted a "gross deviation from the standard of conduct that a reasonable person would observe."<sup>203</sup>

*Commonwealth v. Cordoba* is analogous to parents allowing their unimmunized child to interact with immunized children, thus committing a *prima facie* case of reckless endangerment.<sup>204</sup> Like an HIV-positive individual whose condition is likely invisible to the public, unimmunized children do not outwardly appear unimmunized.<sup>205</sup> In addition, like the *Cordoba* victim who likely would not have consented to sexual contact with the defendant if he had known of the defendant's HIV-positive status, many pro-immunization parents would not allow their children to be in physical proximity to unimmunized children

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196. *Id.* at 1.

197. *Id.* (noting that additional findings of the study include that 74% of parents think that daycare providers should check vaccination records of their children once every year to make sure their vaccines are current, and 66% of parents think that their daycare should notify them of the number of children at the daycare who are not up-to-date with immunizations).

198. *Id.* See generally IMMUNIZATION SCHEDULE, *supra* note 193; *Frontline: The Vaccine War*, *supra* note 18.

199. Mueller, *supra* note 132.

200. *Commonwealth v. Cordoba*, 902 A.2d 1280 (Pa. 2006).

201. *Id.* at 1289.

202. *Id.*

203. *Id.*

204. *Id.*

205. *What are the symptoms of HIV/AIDS?*, NATIONAL INSTITUTE OF CHILD HEALTH AND HUMAN DEVELOPMENT (Jun. 4, 2013), <http://www.nichd.nih.gov/health/topics/hiv/conditioninfo/Pages/symptoms.aspx> (noting that "[a]t first, a person with HIV will not have any visible symptoms. A few weeks after infection, many people have flu-like symptoms, which then disappear after a while.").

if their unimmunized status was known.<sup>206</sup> The court in *Cordoba* did not require that the Commonwealth prove that the defendant's conduct actually injured the victim.<sup>207</sup> Under such case law, prosecutors could make a *prima facie* case of reckless endangerment against parents who allow their unimmunized children to be in contact with immunized children without disclosing their children's unimmunized status, even if they do not injure the immunized children.<sup>208</sup> Moreover, if a court is not open to the theory of reckless endangerment, the court could consider the theory of child endangerment.<sup>209</sup>

#### D. Theory of Child Endangerment

The Model Penal Code also specifically protects children from their parents who knowingly choose a course of conduct that endangers them.<sup>210</sup> Unlike the theory of reckless endangerment, which the court can construe to criminalize parents' refusal to immunize their own child, as well as criminalize endangering other parents' children who encounter the unimmunized child, the theory of child endangerment can only pertain to the endangerment of a parent's own child.<sup>211</sup> Section 230.4 of the Model Penal Code, that criminalizes the endangerment of the welfare of children, states that "[a] parent, guardian, or other person supervising the welfare of a child under eighteen commits a misdemeanor if he knowingly endangers the child's welfare by violating a duty of care, protection, or support."<sup>212</sup> Since courts could only apply the theory of child endangerment to the parent who knowingly endangers the child he supervises, a prosecutor would not have as many methods to pursue in order to hold parents criminally liable as the theory of reckless endangerment.<sup>213</sup> However, the crime of child endangerment is a potential avenue of criminalizing a failure to immunize children in order to give courts the widest array of interpretations of the law to encourage immunization and protect children.<sup>214</sup>

Case law that defines the crime of child endangerment further supports the potential criminalization of parents who refuse to immunize their children.<sup>215</sup> In *Walker v. Superior Court*, the appellate court affirmed the trial court's decision to deny the defendant's motion to dismiss a charge of felony child endangerment resulting from her using prayer rather than medical attention while her child died from meningitis, even though the California Penal Code allowed an exemption for use of prayer treatment.<sup>216</sup>

##### 1. Child Endangerment via Refusal to Immunize

A conviction of child endangerment for knowingly refusing to immunize a child would work similarly to a conviction for reckless endangerment because "knowledge" is

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206. *Cordoba*, 902 A.2d at 1289; *Daycare Policies*, *supra* note 195, at 1.

207. *Cordoba*, 902 A.2d at 1289.

208. *Id.*

209. MODEL PENAL CODE §§ 211.2, 230.4 (2015).

210. *Id.* § 230.4.

211. *Id.* §§ 211.2, 230.4.

212. *Id.* § 230.4.

213. *Id.*

214. MODEL PENAL CODE § 230.4 (2015).

215. *Walker v. Superior Court*, 763 P.2d 852 (Cal. 1988).

216. *Id.*



a central element of both crimes.<sup>217</sup> The major difference is that a parent could only be liable for the crime of child endangerment of their own child when refusing to immunize them.<sup>218</sup> While a crime limited to punishing harm against a parent's own child, the crime of child endangerment for refusing to immunize could be powerful encouragement to parents to immunize their children rather than leaving children's health in the hands of parents' personal beliefs.<sup>219</sup> Such prosecutions would be similar to cases against parents who pray over their sick child rather than taking her to the hospital, resulting in great harm or death to the child.<sup>220</sup>

In *Walker v. Superior Court*, the defendant was a member of the Church of Christ, Scientist religion, a belief system that rejects both medical treatment and immunizations.<sup>221</sup> Her child contracted flu-like symptoms and a stiff neck, conditions consistent with meningitis.<sup>222</sup> Rather than take her to the hospital for this life-threatening illness, the defendant chose to treat her child according to her religious beliefs and contacted a Christian Science prayer practitioner to pray for her child.<sup>223</sup> The defendant's child died from meningitis after seventeen days without medical treatment.<sup>224</sup> The People charged the defendant with involuntary manslaughter and child endangerment.<sup>225</sup>

The defendant claimed that the exemption for prayer treatment found in California Penal Code § 270, Failure to Provide for Child, prohibited the People from prosecuting her for involuntary manslaughter and child endangerment.<sup>226</sup> The court did find that the People could not prosecute the defendant for failing to provide for her child.<sup>227</sup> However, the court held that “[t]he plain language, purpose, and legislative history of section 270. . .fail[ed] to establish a discernible legislative intent to exempt prayer treatment, as a matter of law, from the reach of the manslaughter and felony child-endangerment statutes” due to the court's reasoning that “silence [regarding incorporation of another legislative section's exemption] [was] an insufficient basis to infer that the Legislature, by amending a misdemeanor support provision, actually exempted from felony liability all parents who offer prayer alone to a dying child.”<sup>228</sup> While comparing other civil procedures regarding child welfare intervention and statutory protections of the individual's right to practice their chosen religion, the court ultimately came to this conclusion: “the expression of legislative intent is clear: when a child's health is seriously

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217. MODEL PENAL CODE §§ 2.02, 211.2, 230.4 (2015) (defining the culpability of “knowingly” as the defendant “is aware that his conduct is of that nature or that such circumstances exist” and “he is aware that it is practically certain that his conduct will cause such a result.”). In the context of immunizations, parents are aware that refusing to immunize creates a practical certainty that their child will contract a potentially deadly disease like measles, which was rampant before the advent of vaccines, because immunization is the main defense against such diseases. Like Jenny McCarthy stated in her crusade against vaccines, she will stand in line for her child to catch measles before she immunizes her child based on the junk science that states vaccines cause autism. Kluger, *supra* note 7; see also text accompanying note 71.

218. *Id.* § 230.4.

219. *Walker*, 763 P.2d 852.

220. *Id.*

221. *Id.* at 855.

222. *Id.*

223. *Id.*

224. *Walker*, 763 P.2d at 855.

225. *Id.*

226. *Id.* at 856.

227. *Id.* at 858.

228. *Id.* at 862.

jeopardized, the right of a parent to rely exclusively on prayer must yield.”<sup>229</sup> The court held that “we reject the proposition that the provision of prayer alone to a seriously ill child cannot constitute criminal negligence as a matter of law. Whether this defendant’s particular conduct was sufficiently culpable to justify conviction of involuntary manslaughter and felony child endangerment remains a question in the exclusive province of the jury.”<sup>230</sup>

The *Walker* case allows the prosecution of parents for committing child endangerment even with a statutory exemption for religious beliefs.<sup>231</sup> While the *Walker* court did not determine whether the defendant engaged in child endangerment, it is important to note that the court recognized the legality of prosecuting a parent under the theory of child endangerment for using personal beliefs to treat medical conditions of their children.<sup>232</sup> Parents who refuse to immunize their children and resort to prayer or other personal belief practices in hopes that their children will not contract potentially deadly diseases like measles or whooping cough are similar to the *Walker* defendant, because they both reject the medical necessity of treating their children with modern medicine when their lives are at stake.<sup>233</sup> Therefore, courts can potentially hold parents who refuse to immunize their children criminally liable under the theory of child endangerment for any resulting harm or death to their own children as recognized in *Walker v. Superior Court*.<sup>234</sup>

## 2. Child Endangerment via Placing Unimmunized Child in an Infected Community

While related to endangering children by refusing to immunize them, another option for courts is to hold parents criminally liable for child endangerment when they place their unimmunized children in an infected community.<sup>235</sup> Such circumstances would include parents allowing their unimmunized children to attend school, go to daycare, visit a theme park, or participate in a classmate’s birthday party when a vaccine-preventable disease is present within the population.<sup>236</sup> By allowing their unimmunized children to be in the physical proximity of diseases such as measles, chicken pox, and whooping cough, parents would be knowingly failing to protect their children from a potentially deadly disease in violation of Model Penal Code Section 230.4.<sup>237</sup>

The analysis of child endangerment by placing an unimmunized child in an infected community would likely be identical to the crime of recklessly endangering the parent’s own child by placing the child in an infected community as discussed earlier in this article.<sup>238</sup> In both crimes, parents would knowingly be exposing their unimmunized

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229. *Walker*, 763 P.2d at 866.

230. *Id.* at 869.

231. *Id.* at 873.

232. *Id.*

233. *Id.*

234. MODEL PENAL CODE § 230.4 (2015); *Walker*, 763 P.2d at 873.

235. MODEL PENAL CODE § 230.4 (2015).

236. Phillip Ross, *Measles Outbreak: In US Schools, What’s The Risk Of Mixing Unvaccinated Kids With Vaccinated Ones?*, INT’L BUSINESS TIMES (Feb. 3, 2015), <http://www.ibtimes.com/measles-outbreak-us-schools-whats-risk-mixing-unvaccinated-kids-vaccinated-ones-1804160> (discussing the likelihood of an unimmunized child contracting measles at school during an outbreak – 90%).

237. MODEL PENAL CODE § 230.4 (2015).

238. *Id.* §§ 211.2, 230.4.

children to the potential of great harm or death by contracting a deadly disease.<sup>239</sup> As such conduct is a common occurrence, evidenced by the wide-scale outbreak of measles at Disneyland and cases like *Phillips v. City of New York*, criminalizing parents who intentionally allow their unimmunized children to interact with an infected community during an outbreak could be an effective deterrent of such behavior, because this conduct falls in the Model Penal Code's prohibition of endangering children.<sup>240</sup>

#### IV. CONCLUSION

The rise of vaccine-preventable diseases is a direct result of many parents' refusal to immunize their children.<sup>241</sup> Since educating parents on the many benefits and slight risks of vaccines is not slowing the Anti-Vax movement, courts may consider a more drastic avenue of encouraging parents to immunize their children.<sup>242</sup> The more children who undergo immunization, the higher the herd immunity of the population.<sup>243</sup> A high herd immunity protects the small percentage of the population who cannot medically undergo immunization and are at risk of contracting a vaccine-preventable disease.<sup>244</sup> Courts have favored mandatory immunization legislation from the early 1900s to the present in order to protect the health and safety of the public.<sup>245</sup> By interpreting existing criminal law, such as laws prohibiting reckless endangerment and child endangerment, to encompass parents' refusal to immunize their children, parents could recognize the potentially dire consequences of the choice not to immunize.<sup>246</sup> Existing law may not be able to criminalize parents who comply with the religious or personal belief exemptions that often accompany mandatory immunization legislation, but courts that recognize the importance of children's health over personal beliefs, like the court in *Walker v. Superior Court*, may still determine that religious and personal practices cannot bar liability if a child were to die from such practices.<sup>247</sup> In addition, the possibility of criminal prosecution paired with state legislatures considering the abolishment of personal belief exemptions could further encourage parents to immunize their children.<sup>248</sup> While criminalizing parents' refusal to immunize their children is a drastic avenue to encourage parents to immunize their children, the rising occurrence of vaccine-preventable diseases may make such criminalization a viable option to encourage widespread immunization of children.<sup>249</sup>

*Megan Elyse Waterman*

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239. *Id.*

240. *Phillips v. City of New York*, No. 14–2156–cv, 2015 WL 74112 (2d Cir. Jan. 7, 2015); Hubbard et al., *supra* note 26.

241. Alcindor *supra*, note 2.

242. Freed et al., *supra* note 77.

243. *Herd at Risk*, *supra* note 17.

244. *Id.*

245. *Jacobson v. Massachusetts*, 197 U.S. 11 (1905); *Phillips v. City of New York*, No. 14–2156–cv, 2015 WL 74112 (2d Cir. Jan. 7, 2015).

246. MODEL PENAL CODE §§ 211.2, 230.4 (2015).

247. *Exemptions*, *supra* note 138.

248. *See supra* note 141 and accompanying text.

249. Sifferlin, *supra* note 3.