

## *Is Mandatory Vaccination an Unjustified Limit on Human Rights?*

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*The horrors of many historically commonplace diseases are now in check thanks to vaccination. However, because the horror has dissipated, the public is no longer reminded of the importance of vaccines. Additionally, when people weigh risk against benefit under a voluntary vaccination scheme, they are far more likely to rely on anecdotal information than empirical scientific evidence. These factors, along with misinformation, have led to a strong anti-vaccination movement in many populations, which has in turn contributed to vaccination rates falling below important population thresholds. This article demonstrates the importance of maintaining high vaccination rates. It then explores which human rights are limited by a mandatory vaccination scheme. Drawing from the recent analogous decision in *New Health New Zealand Incorporated v South Taranaki District Council* on mandatory fluoridation, this article contends that such incursions upon rights are justified by the strong evidential foundation supporting vaccination.*

### I SETTING THE SCENE

I delivered [my daughter] when I was nineteen and while I was still in the maternity home they detected cataracts on her eyes. She had a heart murmur and they felt that the outlook was very bleak, they didn't think she would survive ... My daughter now is 34. She does not speak, she has no eyesight at all, she is completely deaf, her sensory input is through vibration and smell. One of her activities is doing puzzles, the sort of puzzles that you would give to a two-year-old. Wooden type puzzles, which she does all by touch ...

I find it so very sad that she is a human being in our society but doesn't participate in it at all. She is here, she just exists. For me if you have read this story there is no question about a choice of whether you immunise your children or not. The result, the potential result if you don't, is horrendous ...

—Beth<sup>1</sup>

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1 Immunisation Advisory Centre "Beth's story" (April 2017) <[www.immune.org.nz](http://www.immune.org.nz)>.

This was the experience of a young nurse who, at the age of 18, contracted rubella. Her daughter was born severely disabled by congenital rubella, which had devastating effects on the lives of the child, mother and entire family.

Rubella is now almost unheard of due to vaccination. Its shocking symptoms in infants no longer feature in the public consciousness, nor in anecdotal concern. Rubella rates dropped dramatically in New Zealand after the introduction of the vaccine in 1969 and remain extremely low today.<sup>2</sup> In fact, the Western world is now comparatively disease-free. However, this will not remain the case if vaccination rates continue to decline.<sup>3</sup>

The incidence of preventable disease outbreaks (like measles) has grown.<sup>4</sup> This, at least in part, can be attributed to a growing “anti-vaccination” movement, and the prevalence of misinformation and conspiracy-based disinformation online.

New Zealand currently has voluntary recommended vaccination. Some countries have chosen to combat falling vaccination rates through programmes of pseudo-mandatory vaccination (“mandatory” vaccination). However, neither of these schemes meet the necessary threshold of vaccinated persons to effectively prevent transmission of targeted diseases.

I argue that none of the current international positions on vaccination are sufficient. A more coercive scheme is needed to prevent otherwise inevitable outbreaks of preventable diseases. Such a scheme might be described as “actually mandatory” and will be discussed in light of the human rights implications it raises. After all, all rights are subject to reasonable limitation where such limits are necessary to prevent conflict of rights or for the common good.<sup>5</sup>

In *New Health New Zealand Inc v South Taranaki District Council* (*New Health* (SC)), the Supreme Court found that a medical treatment could be imposed upon the public without consent for sufficiently important public health reasons.<sup>6</sup> In that case, fluoridation was allowed because the prevention of tooth decay was sufficiently important to justify a limit on the right to refuse medical treatment. The science behind fluoridation is less settled than scientific consensus supporting vaccination. I argue that the reasoning contained in *New Health* can be extrapolated to support a hypothetical scheme of mandatory vaccination in New Zealand.

Whether a law empowering mandatory vaccination imposes a justified limit on human rights will be determined through the following process:

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2 Immunisation Advisory Centre “Rubella” (April 2017) <[www.immune.org.nz](http://www.immune.org.nz)>.

3 World Health Organization, UNICEF and The World Bank *State of the world's vaccines and immunization* (3rd ed, World Health Organization, Geneva, 2009).

4 Quinn Libson “Minnesota Health Officials Battle Anti-Vaccine Sentiments Amid Measles Outbreak” *Route Fifty* (online ed, Washington, DC, 1 May 2017).

5 Andrew Butler and Petra Butler *The New Zealand Bill of Rights Act: A Commentary* (2nd ed, LexisNexis, Wellington, 2015) at [6.5.1].

6 *New Health New Zealand Inc v South Taranaki District Council* [2018] NZSC 59 [New Health (SC)] at [126].

- (a) exploring its benefits to public health and demonstrable scientific support to establish an evidential basis for imposing a limit;
- (b) determining whether the proposed measure actually limits any rights; and
- (c) if so, assessing whether the purpose of the law is sufficiently important according to the accepted *Hansen* test, whether its means are rationally connected to that purpose, and whether the limitation is no more than is necessary and is proportionate to the objective.<sup>7</sup>

## II VACCINATION, HERD IMMUNITY AND MUTATION

A vaccine is defined as “a suspension of attenuated or killed microorganisms (bacteria, viruses or rickettsiae), or of antigenic proteins derived from them, administered for the prevention, amelioration, or treatment of infectious diseases”.<sup>8</sup> Vaccination is one of the most important medical discoveries in recent history. The measles vaccine alone is estimated to have saved over 17 million lives since 2000.<sup>9</sup>

An essential part of understanding why mandatory vaccination may be justified is understanding the effect of herd immunity. Herd immunity occurs when a population contains more protected (or immunised) members than the pathogen-specific “herd immunity threshold” (HIT).<sup>10</sup> Reaching that threshold greatly reduces the chances of contracting the disease.<sup>11</sup> Having fewer protected members than that threshold allows for the pathogen to come into contact with enough susceptible people to be transmitted and spread.<sup>12</sup>

Infectious pathogens (for present purposes these are limited to viruses and bacteria) have an identifiable “reproductive number”. This number dictates the average number of people to which the initial infected person will spread the disease, in a hypothetical population of susceptible people.<sup>13</sup> This in turn informs the HIT, as the average number of people infected indicates what percentage of individuals in the population must be immunised to successfully block transmission. Rigorously peer-reviewed literature abounds

7 *R v Hansen* [2007] NZSC 7, [2007] 3 NZLR 1 at [104].

8 WA Newman Dorland *Dorland's Illustrated Medical Dictionary* (28th ed, WB Saunders Co, Philadelphia, 1994) at [vaccine, n].

9 World Health Organization “Measles vaccination has saved an estimated 17.1 million lives since 2000” (12 November 2015) <www.who.int>.

10 Pedro Plans-Rubió “The vaccination coverage required to establish herd immunity against influenza viruses” (2012) 55 *Preventive Medicine* 72 at 73. See also Ministry of Health *Immunisation Handbook 2017* (9 March 2018) at 22.

11 Paul Fine, Ken Eames and David L Heymann ““Herd Immunity”: A Rough Guide” (2011) 52 *Clinical Infectious Diseases* 911 at 914; see also Kimberly Gittings and Kelly L Matson “Establishing herd immunity against Ebola through vaccination” (2016) 34 *Vaccine* 2644.

12 Plans-Rubió, above n 10, at 73.

13 Plans-Rubió, above n 10.

as to the established validity of herd immunity theory and effectiveness of vaccination.

For example, the HIT for measles and rubella has been assessed by the World Health Organisation (WHO) as 95 per cent.<sup>14</sup> While the figure differs between infectious diseases, many HITs are over 90 per cent.<sup>15</sup> In addition, it is crucial for people to receive the full course of the specific vaccination. European Centre for Disease Prevention and Control data showed that in Poland, in 44 per cent of their 632 reported cases of rubella, affected individuals had only been vaccinated with one of the two necessary doses.<sup>16</sup>

This understanding has a huge impact on how we discuss infringement of the right to refuse medical treatment. Through herd immunity, smallpox was eradicated. Through herd immunity, polio has almost vanished from the population; it is likely most other preventable diseases like measles, pertussis, diphtheria and rubella could be erased as well. In this article, the term “preventable disease” will be used to refer to diseases which are readily preventable through vaccination.

However, it is clear that voluntary vaccination is not enough to eradicate these diseases, or to prevent transmission and the potential for pandemic. But, perhaps even more important is an aspect of herd immunity that is rarely discussed: the importance of preventing an incubating population that could foster vaccine-resistant mutations.

By providing the pathogen with a ready supply of susceptible population members, and allowing transmission between these members, opposition to vaccination puts even the *vaccinated* population at risk. In populations where herd immunity has not been achieved, pathogens are transmitted between susceptible people. The pathogen spreads by incubating, where it rapidly multiplies and then infects a new host.<sup>17</sup> Each incubation and transmission event carries the risk of mutation.<sup>18</sup> Just one mutation is sufficient for a pathogen to take on a new form, against which the old vaccination is useless.<sup>19</sup> Places where opposition to vaccination have created “pockets” of a population with much higher susceptibility, like in the Minnesota Somali community,<sup>20</sup> raise this risk further through the action of population genetics and creation of more variation.<sup>21</sup>

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14 European Centre for Disease Prevention and Control “Bi-annual measles and rubella monitoring report” (October 2017) <[www.ecdc.europa.eu](http://www.ecdc.europa.eu)> at 16.

15 Roy M Anderson “The concept of herd immunity and the design of community-based immunization programs” (1992) 10 *Vaccine* 928 at 929.

16 At 13.

17 Kurzgesagt “Measles Explained – Vaccinate or Not?” (24 February 2015) YouTube <[www.youtube.com](http://www.youtube.com)>.

18 For an excellent explanation in lay-terminology, see Esther Inglis-Arkell “Why anti-vaxxers might be creating a world of more dangerous viruses” (1 January 2014) io9 <[io9.gizmodo.com](http://io9.gizmodo.com)>.

19 David A Kennedy and Andrew F Read “Why does drug resistance readily evolve but vaccine resistance does not?” (2017) 284(1851) *Proc R Soc B* 1.

20 Lynn Bahta and Asli Ashkir “Addressing MMR Vaccine Resistance in Minnesota’s Somali Community” (2015) 98(10) *Minnesota Medicine* 33.

21 Kennedy and Read, above n 19.

In short, allowing vaccine-preventable diseases to endure and proliferate raises the risk (although small) of new strains developing that are not prevented by existing vaccines. At that stage, it is not just the rights of the vulnerable, but the rights of the entire global population that are impacted by the choices of the few.

Aside from those who willingly choose not to vaccinate, or delay some or all vaccinations, there are some who suffer from legitimate medical conditions that make it dangerous or impossible to receive vaccinations.<sup>22</sup> Examples include people with depressed immune systems, such as those suffering cystic fibrosis, and those undergoing radiation therapy for different types of cancer. Herd immunity is needed to protect such vaccine-contra-indicated susceptible people.

A similarly vulnerable group comprises those too young to be vaccinated. Standard guidelines for vaccination do not recommend a first round of treatment until several months after birth. Those guidelines mean that even children who would otherwise be vaccinated are vulnerable to infection for several months, should they encounter others who carry a preventable disease. Accordingly, those too young to have been vaccinated also rely on herd immunity (if only temporarily). There are documented cases where babies who were yet to be vaccinated, and immunocompromised children, have died of preventable diseases because the parents of other children chose not to vaccinate.<sup>23</sup>

That there are people who cannot be vaccinated means herd immunity thresholds are harder to achieve. The silver lining is that such people form a sufficiently small portion of the population that herd immunity thresholds remain achievable, provided eligible members of the population are uniformly inoculated. It is *for* these innocently susceptible people that herd immunity is crucial.

In short:

- (a) herd immunity protects those in a community who cannot be vaccinated against preventable diseases;
- (b) herd immunity only occurs once a (relatively high) threshold of a given population is inoculated against each preventable disease;
- (c) opposition to vaccination threatens achievement of those high thresholds of inoculation;
- (d) opposition to vaccination objectively exposes those who cannot be vaccinated (because of youth or medical contraindications) to the risk of infection and possibly death from preventable disease; and

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22 World Health Organization "Contraindications" (14 February 2008) <[www.who.int](http://www.who.int)>.

23 Simona Ravizza "Vaccines: leukaemia child dies after catching measles" (23 June 2017) *Corriere della Sera* <[www.corriere.it](http://www.corriere.it)>; and Courtney Bembridge "Family of Perth baby who died of whooping cough hope to raise awareness, prevent further deaths" (18 March 2015) *ABC News* <[www.abc.net.au](http://www.abc.net.au)>.

- (e) a lower but still important risk is the threat posed to the vaccinated population by vaccine-resistant strains incubated in unvaccinated people.

Of course, all vaccines carry a risk of negative side effects. These effects vary depending on the type of vaccine used. Attenuated (weakened) pathogens are associated with worse side effects than vaccines that use dead pathogens, or use only the pathogen's coat proteins.<sup>24</sup> Common side effects include swelling and pain at the injection site.<sup>25</sup> Mild symptoms of the preventable disease in question can also be a side effect (as part of the normal bodily immune response to encountering the pathogen).<sup>26</sup> A less common side effect is an allergic reaction to other components of the vaccine.<sup>27</sup> To pass health regulation standards, however, the incidence of these adverse effects must be very low.<sup>28</sup>

### III THE PSYCHOLOGY OF THE ANTI-VACCINATION MOVEMENT AND VACCINE HESITANCY

When the benefits of vaccination are so clear and are supported by substantial scientific consensus,<sup>29</sup> why would anyone *not* want to vaccinate their children? Part of the answer lies in the well-known medical scandal of the (now debunked) *Lancet* article, alleging a link between vaccination and autism.<sup>30</sup> Its fraudulence is now known to be one of the greatest errors in scientific publication of all time — countless rigorous scientific studies have disproved its findings.<sup>31</sup> Despite this, some still believe that vaccines cause autism.

The understandable concern created by this event has fuelled a movement of fervent “anti-vaxxers” who believe and perpetuate many other discredited myths about vaccination. Often it is difficult to reason with these

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24 Jon Cohen “Looking for Vaccines that Pack a Wallop Without the Side Effects” (2002) 298 *Science* 2314. See also Pedro F C Vasconcelos and others “Serious adverse events associated with yellow fever 17DD vaccine in Brazil: a report of two cases” (2001) 358 *Lancet* 91 at 96.

25 Selam Tosun, Ali Ilgin Olut and Nermin Tansug “Adverse effects of single-component measles vaccine in school children” (2017) 35 *Vaccine* 7309 at 7309.

26 Immunisation Advisory Centre “The immune system and immunisation” (April 2017) <[www.immune.org.nz](http://www.immune.org.nz)>. See also Health Navigator “Measles, mumps and rubella vaccine” (29 March 2019) <[www.healthnavigator.org.nz](http://www.healthnavigator.org.nz)>.

27 Tosun, Olut and Tansug, above n 25, at 7309.

28 Ministry of Health “Vaccine safety” (13 February 2019) <[www.health.govt.nz](http://www.health.govt.nz)>.

29 Sander L van der Linden, Chris E Clarke and Edward W Maibach “Highlighting consensus among medical scientists increases public support for vaccines: evidence from a randomized experiment” (2015) 15:1207 *BMC Public Health* 1. See also Deborah Gust and others “Physicians Who Do and Do Not Recommend Children Get All Vaccinations” (2008) 13 *Journal of Health Communication* 573.

30 A J Wakefield and others “Ileal-lymphoid-nodular hyperplasia, non-specific colitis, and pervasive developmental disorder in children” (1998) 351 *Lancet* 637.

31 The Editors of *The Lancet* “Retraction — Ileal-lymphoid-nodular hyperplasia, non-specific colitis, and pervasive developmental disorder in children” (2010) 375 *Lancet* 445.

individuals or groups. This is because a common feature of their opposition to vaccination is the rejection of scientific evidence.<sup>32</sup>

There is also growing awareness of the prevalence of people who, rather than fervently opposing vaccination, are described as “vaccine-hesitant”. These are people who request to delay doses of vaccines or pick and choose certain vaccines to receive.<sup>33</sup> Concerned parents searching for information about “risks” of vaccination are more likely to encounter false material that recommends against vaccination.<sup>34</sup> This is due to factors such as search-term biases in internet researching. These people often remain open to reasoned discussions about their decisions and encouragement (through medical outreach) to comply with properly informed vaccination recommendations.<sup>35</sup>

The perceived frequency of adverse side effects contributes to such opposition and hesitancy towards vaccination. In a world of solely voluntary vaccination, accurate reporting of adverse effects is important to allow the public to correctly assess risk-benefit ratios when deciding whether to receive a vaccination.<sup>36</sup> However, vaccination’s own success has significantly impaired accurate perception and assessment of risk. People tend to weigh anecdotal evidence or more accessible information disproportionately compared to objective empirical evidence — a phenomenon similar to the availability heuristic.<sup>37</sup>

So, when vaccines succeed, and the incidence of common preventable diseases is kept at a very low level, anecdotal evidence about the risk of those diseases is not commonplace. Further, the prevalence of reported side-effects of vaccination significantly discourages people to accept the risk.<sup>38</sup> The anti-vaccination movement also perpetuates false anecdotal evidence as to the risk of vaccination. You are much more likely to see a friend posting an infographic about the dangers of mercury in vaccines<sup>39</sup> on Facebook, than you are to experience someone you know being killed by a preventable disease. This anecdotal evidence disparity causes people to undertake a concerning (and unsubstantiated) risk-benefit analysis. This, in turn, fuels opposition and hesitancy towards vaccination.

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32 “Silencing debate over autism” (2007) 10 *Nature Neuroscience* 531.

33 “A jab in time” *The Economist* (online ed, London, 26 March 2016) at 67.

34 Jeanette B Ruiz and Robert A Bell “Understanding vaccination resistance: Vaccine search term selection bias and the valence of retrieved information” (2014) 32 *Vaccine* 5776.

35 Linden, Clarke and Maibach, above n 29, at 3.

36 Walter R Schumm “Neurologic adverse events associated with smallpox vaccination in the United States – response and comment on reporting of headaches as adverse events after smallpox vaccination among military and civilian personnel” (2006) 4:27 *BMC Medicine* 1 at 2.

37 Thorsten Pachur, Ralph Hertwig and Florian Steinmann “How Do People Judge Risks: Availability Heuristic, Affect Heuristic, or Both?” (2012) 18 *Journal of Experimental Psychology: Applied* 314.

38 Alberto d’Onofrio, Piero Manfredi and Piero Poletti “The impact of vaccine side effects on the natural history of immunization programmes: An imitation-game approach” (2011) 273 *Journal of Theoretical Biology* 63.

39 For completeness, it should be noted that common anti-vaccination arguments raising concerns about vaccine additives have been repeatedly debunked. See P Offit and R Jew “Addressing Parents’ Concerns: Do Vaccines Contain Harmful Preservatives, Adjuvants, Additives, or Residuals?” (2003) 112 *Pediatrics* 1394.

Some parents of autistic children also contribute to this new wave of anecdotal “warnings” about the dangers of vaccination. Understandably, many parents of autistic children have jumped onto the anti-vaccination bandwagon to attribute blame. Possibly the most notable example of this phenomenon is former Playboy model, Jenny McCarthy. McCarthy claimed that her son’s autism was triggered by vaccinations. McCarthy’s celebrity status meant that her views were given a relatively high degree of exposure, including appearances on *Larry King Live*,<sup>40</sup> a dubious honour, and in a PBS Frontline documentary in 2010.

It is understandable that media outlets continue to broadcast the “controversy” and give non-expert celebrities like McCarthy airtime. Sensationalism attracts viewers and viewership is the goal of every commercial media outlet. Presumably, this is why even coverage seeking to correct the misinformation surrounding vaccination often gives airtime to the views of McCarthy and her ilk.

That approach to media coverage exposes new parents, in particular, to a high volume of dire warnings. This is especially so when paired with the temptation for parents of autistic children to blame vaccines, and the lack of anecdotal material about the dangers of preventable diseases. Without adequate reminders of the grave long-term consequences of preventable diseases, it is (again) understandable that otherwise reasonable parents may — and often do — conclude that the smoke indicates a fire.

Quite apart from the consequences of pervasive misinformation, there are some who choose simply to rely on herd immunity rather than be (or allow their children to be) vaccinated. On an individual level, this decision resolves the “dilemma” of whether or not to vaccinate. However, this tactic jeopardises achievement of HIT thresholds just the same as any other abstention from vaccination.

Against those trends, it is easy to see why regimes of recommended vaccinations are losing ground against the tide of misinformation and the anti-vaccination movement. While anti-vaxxers remain a minority, the high thresholds required for herd immunity mean that those trends legitimately place people at risk. More specifically, vulnerable persons (who cannot be vaccinated) and potentially the wider community (if pockets of susceptibility allow for pathogens to mutate and infect the inoculated) are placed at risk.

#### **IV A MANDATORY PROGRAMME: RIGHTS IMPLICATED**

To understand what rights may be infringed (and to what extent), we must understand what the proposed measures are. As discussed below, there are mandatory schemes with non-medical exemptions. These prevent or minimise infringements upon rights, but do not achieve herd immunity.

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40 Liza Gross “A Broken Trust: Lessons from the Vaccine-Autism Wars” (2009) 7(1) *PLoS Biology* 1 at 1.



I propose that the New Zealand Government should amend the Crimes Act 1961 to define vaccination as a legal duty, for the purposes of s 145 (criminal nuisance), owed by:

- (a) any eligible unvaccinated adult, in respect of themselves; and
- (b) any parent and/or legal guardian of any eligible child, in respect of such child.

“Eligible” is intended to mean “any person for whom vaccination is not contraindicated by age, immune deficiency, or other designated medical condition”.

The characteristics of disease transmission explored above impact differently on people’s lives. The role of herd immunity creates two distinct groups that are affected where it fails:

- (a) those unable to be vaccinated (whether due to age or existing medical conditions); and
- (b) the vaccinated population.

Having examined the crucial (and often underestimated) importance of maintaining a high rate of vaccination, let us assume that to achieve that vaccination rate, New Zealand adopts this hypothetical mandatory vaccination scheme. Assessing the practical needs and implications of such a measure would fill an entire separate article. However, some guidance can be gained from jurisdictions that have already adopted such a programme.<sup>41</sup>

Many countries follow regimes that are described as “mandatory”. In reality, they have relatively expansive non-medical exemptions or conscientious objection allowances.<sup>42</sup> There is a correlation between the ease of accessing these exemptions and the rates of vaccine refusal.<sup>43</sup> Therefore, the hypothetical scheme I posit here has no non-medical exemptions.

Similarly, the means of enforcement in many countries is simply exclusion from state education and other public facilities, or, at worst, notifying health authorities and parental liability for fines.<sup>44</sup> Australia denies access to child care benefits without proof of vaccination or exemption.<sup>45</sup>

More recently, jurisdictions have responded to worsening epidemics of preventable diseases by removing non-medical exemptions.<sup>46</sup> The four American states that have disallowed non-medical exemptions have the

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41 Erin Walkinshaw “Mandatory vaccinations: The international landscape” (2011) 183 CMAJ 1167.

42 At 1167.

43 See for example Jennifer S Rota and others “Processes for Obtaining Nonmedical Exemptions to State Immunization Laws” (2001) 91 Am J Public Health 645; Saad B Omer and others “Legislative Challenges to School Immunization Mandates, 2009–2012” (2014) 311 JAMA 620; and Saad B Omer and others “Vaccination Policies and Rates of Exemption from Immunization, 2005–2011” (2012) 367 N Engl J Med 1170.

44 Walkinshaw, above n 41.

45 Daniel A Salmon, C Raina MacIntyre and Saad B Omer “Making vaccination truly compulsory: well intentioned but ill conceived” (2015) 15 Lancet: Infectious Diseases 872.

46 Tom Hale “Maine Ends Religious And Philosophical Exemptions For Vaccinations” (27 May 2019) IFL Science <[www.iflscience.com](http://www.iflscience.com)>.

highest overall vaccination rates. Removing non-medical exemptions caused a seemingly reciprocal rise in “medical” exemptions, suggesting parents were simply seeking doctors who were willing to exempt them.<sup>47</sup> The overall result of the law change tends to be a reduction in the total number of exemptions from vaccination and a higher overall vaccine coverage.<sup>48</sup>

Although these legislative regimes that have disallowed non-medical exemptions show more success, they still rely on a system of disincentives (like barring access to public education),<sup>49</sup> rather than imposing stricter sanctions. Note that while these four states are sources of hope, the majority of legislative change in the United States is expanding, rather than restricting, access to non-medical exemptions.<sup>50</sup>

For New Zealand’s hypothetical scheme, I anticipate something more coercive than simply a system of benefits and disincentives. Proposed strategies to combat obesity infringe on personal autonomy for the sake of public health. Strategies include a similar system of benefits and disincentives, including taxes, higher insurance premiums and more expensive airfares.<sup>51</sup> Such a programme may be well-suited for public health concerns like the obesity “epidemic”, but the key distinction is that such concerns relate only to the health of the individual, not the health of the population as a whole.

The vital need to hit a certain threshold of adherence for vaccination effectiveness is unique and justifies more forceful measures. Hence, this article proposes criminalising the failure to vaccinate.

That even many existing “mandatory” nations still suffer significant disease outbreaks bolsters this analysis. Valid criticisms have been made that mandatory vaccination schemes (in their current form with relatively accessible non-medical exemptions) can cause greater resentment, vaccine hesitancy and pushback.<sup>52</sup> This means that any other approach (be it more or less coercive) would be more effective. Strong counter-arguments call for the *more* coercive alternatives. This is on the basis of the harm principle (that vaccine refusal is morally analogous to firing a weapon into the air without regard for the lives endangered).<sup>53</sup> It is also on the basis of libertarian conceptions of wrongfully imposing harm on others.<sup>54</sup>

To determine the legality of such a mandatory scheme, it must first be determined which rights are engaged — and how.

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47 Deborah Lehman “Medical Vaccination Exemptions on the Rise in California” (2017) *NEJM Journal Watch*.

48 Lehman, above n 47.

49 Rota and others, above n 43; Walkinshaw, above n 41; and Lehman, above n 47.

50 Neal D Goldstein, Joanna S Suder and Jonathan Purtle “Trends and Characteristics of Proposed and Enacted State Legislation on Childhood Vaccination Exemption, 2011–2017” (2019) 109 *AJPH* 102 at 103.

51 Ian Freckelton and Kerry Petersen (eds) *Tensions and Traumas in Health Law* (The Federation Press, Sydney, 2017) at 7.

52 Cornelia Betsch and Robert Böhm “Detrimental effects of introducing partial compulsory vaccination: experimental evidence” (2016) 26 *European Journal of Public Health* 378.

53 Jessica Flanigan “A Defense of Compulsory Vaccination” (2014) 26 *HEC Forum* 5.

54 Jason Brennan “A libertarian case for mandatory vaccination” (2018) 44 *J Med Ethics* 37.

## The Right to Refuse Medical Treatment

Section 11 of the New Zealand Bill of Rights Act (NZBORA) guarantees the right to refuse to undergo any medical treatment. It is derived from art 7 of the International Covenant on Civil and Political Rights and redrafted by White Paper.<sup>55</sup> The importance of safeguarding autonomy over bodily decision-making rose to prominence from the grim backdrop of medical experimentation in Nazi Germany. However, it has come into play as recently as the 1980s in New Zealand with the Cartwright Report.<sup>56</sup>

Although terminology differs, it is generally accepted that constitutional provisions that protect the right to liberty and security of the person also entail the right to refuse medical treatment. Examples include the United States Fifth and Fourteenth Amendments, the German Basic Law, art 2(2), and s 7 of the Canadian Charter of Rights and Freedoms. Similarly, international conventions protect liberty and security of the person without granting specific rights in relation to medical treatment.<sup>57</sup>

The s 11 right is viscerally important, cutting to the heart of each person's sense of autonomy over their own body. It is no wonder that many of the topics with which it intersects are highly contentious and hotly debated — from abortion to euthanasia. More than the obvious protection against forcing treatments upon people against their will, the right also encompasses the need for *informed* consent. That is, for individuals to be given, accurately and reliably, all the relevant information pertaining to their treatment and to make their own decision based on that information. Mandatory vaccination bypasses informed consent altogether.

Prima facie, mandatory vaccination intersects unmistakably with the right to refuse medical treatment; it forces people to receive a medical treatment. It seems to be the most relevant NZBORA right impacted. However, as *New Health* shows, some analysis is needed to determine whether the right is actually engaged.

First, *New Health New Zealand Inc v South Taranaki District Council (New Health (HC))* casts doubt on whether medical treatment could entail acts without “therapeutic purpose” or where there are “competing interests”.<sup>58</sup> While the undefined term “treatment” might lead some to rely on a dictionary definition,<sup>59</sup> the correct definition applied in practice is wider.<sup>60</sup>

Vaccination, the introduction of foreign agents directly into the bloodstream by piercing the skin, is a very serious contravention of bodily

55 Butler and Butler, above n 5, at [11.3.10] and [11.4.2].

56 Committee of Inquiry into Allegations Concerning the Treatment of Cervical Cancer at National Women's Hospital and into Other Related Matters *The Report of the Cervical Cancer Inquiry* (July 1988).

57 *Universal Declaration of Human Rights* GA Res 217A (1948), art 3.

58 *New Health New Zealand Inc v South Taranaki District Council* [2014] NZHC 395, [2014] 2 NZLR 834 [*New Health (HC)*] at [55] and [86].

59 For example, “medical care for an illness or injury”: Angus Stevenson and Maurice Waite (eds) *Concise Oxford English Dictionary* (12th ed, Oxford University Press, Oxford, 2011) at [treatment, n]. Alternatively, “the management and care of a patient for the purpose of combating disease or disorder”: Dorland, above n 8, at [treatment, n].

60 *M v Attorney-General* [2006] NZFLR 181 (HC) at [107].

integrity and personal autonomy. It follows that it will only be justified if supported by an equally great need.

There is international precedent for allowing compulsory vaccination in times of great need. *Jacobson v Commonwealth of Massachusetts* found in 1905 that personal liberty (under the United States Constitution) is subordinate to the common good.<sup>61</sup> The Vaccination Act of 1853 in England was considered to be a justified incursion on personal autonomy due to the weight of the public health concerns supporting it.<sup>62</sup>

It is settled that there is an apparent limitation on the right to refuse medical treatment inherent in mandatory vaccination. It remains to be determined, then, whether that limit is justified.

### **The Right to Freedom of Thought, Conscience, Religion and Belief**

In New Zealand, s 13 of the NZBORA protects the right to freedom of thought, conscience, religion and belief. However, questions may well be asked: is opposition to vaccination not an intellectual opinion, rather than a tenet of faith? Is an anti-vaccination stance really a legitimate issue of religion or belief?

First, the list of slightly unorthodox religions and beliefs that have been accepted as worthy of protection under s 13 include pacifism, veganism, communism, belief in anthropogenic climate change, abstinence from alcohol, and opposition to abortion.<sup>63</sup> Opposition to vaccination would not look out of place in that list.

Further, an attempt to strictly or specifically define the religions and beliefs that fall under s 13 would itself be a limitation upon the freedom.<sup>64</sup> Courts attempting to read the section narrowly risk conducting an unacceptable inquiry into which beliefs are valid, and which are not. Accordingly, the courts typically allow a wide ambit to the scope of beliefs and religious convictions protected under s 13.<sup>65</sup> Therefore, it becomes a matter of whether the individual has subjective good faith belief.<sup>66</sup>

There is international support for this interpretation. *Sherr v Northport-East Northport Union Free School District* held that a religious exemption to a mandatory vaccination scheme (from the right derived from the United States Constitution) must necessarily be broadened from the stricter requirement of being an accepted member of a recognised religious organisation, to a less stringent requirement of having sincerely held beliefs.<sup>67</sup> This demonstrates two points. First, that a religious exemption is a legitimate barrier to mandatory vaccination; and secondly, that the scope of this exemption is increasing.

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61 *Jacobson v Commonwealth of Massachusetts* 197 US 11 (1905) at 26.

62 Butler and Butler, above n 5, at [11.9.22].

63 At [14.6.13].

64 At [14.6.7].

65 Paul Rishworth *The New Zealand Bill of Rights* (Oxford University Press, Melbourne, 2003) at 289.

66 Butler and Butler, above n 5, at [14.6.6].

67 *Sherr v Northport-East Northport Union Free School District* 672 F Supp 81 (ED NY 1987).

In the United Kingdom, whether a religious belief is eligible for protection similarly includes factors such as whether those beliefs are genuinely held and are not merely an opinion or viewpoint. Crucially, the religion or belief *must not conflict with the fundamental rights of others*. This limb was framed in *Nicholson* as “worthy of respect in a democratic society”.<sup>68</sup> Anti-vaxxers may stumble on this point, given the ways in which opposition to vaccination affects the rights of others, as discussed below.

Accepting, then, that there is a relatively strong argument for opposition to vaccination to fall under the beliefs encompassed by s 13, what protection against a mandatory regime might s 13 offer?

First, s 13 protects people by prohibiting the government from interfering with the adoption of a religion or belief, including by endorsing one regime to the exclusion of the other.<sup>69</sup> At face value, this might mean it prohibits government endorsement of vaccination over anti-vaccination sentiments. Secondly, s 13 protection includes ensuring tolerance of those who follow the religion or belief. A public policy denying those followers the ability to manifest their belief would be unacceptable. The hypothetical mandatory vaccination scheme proposed above would plainly limit both applications of the right.

Compulsory vaccination schemes in other countries have combatted the double-infringement of rights (both medical and religious) by creating religious or conscientious objection exemptions to vaccination, for which people can apply. In those states, proof of exemption is as good as proof of vaccination to prevent the system of benefits and disincentives coming to bear.

I argue that there should be no such “non-medical” exemption for two reasons. First, as already canvassed above, such exemptions are associated with unsatisfactory levels of vaccination, even in states where vaccination is “compulsory”. New Zealand is in the Western Pacific region, one of the regions that reports the most religious incompatibility with vaccines worldwide.<sup>70</sup> Secondly, religious and conscientious exemptions tend to create “pockets” of susceptibility, in a way that medical exemptions do not.<sup>71</sup> An example of this is the Somali community in Minnesota, which has a relatively well-documented ideological objection to vaccination.<sup>72</sup> Further, religious communities often share anti-vaccination ideologies and philosophies, which they exercise via their religious exemption. Orthodox Jewish communities in London reported a combination of shared conscientious objections and strongly religious objections. The close proximity of people in these communities who share ideologies and collectively refuse to vaccinate creates the susceptibility “pockets”.<sup>73</sup>

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68 *Grainger plc v Nicholson* [2010] ICR 360 (UK Employment Appeal Tribunal).

69 Butler and Butler, above n 5, at [14.6.18].

70 Heidi J Larson and others “The State of Vaccine Confidence 2016: Global Insights Through a 67-Country Survey” (2016) 12 *EBioMedicine* 295 at 298.

71 Bahta and Ashkir, above n 20.

72 Libson, above n 4.

73 N Fournet and others “Under-vaccinated groups in Europe and their beliefs, attitudes and reasons for non-vaccination; two systematic reviews” (2018) 18:196 *BMC Public Health* 1 at 9.

Therefore, under the suggested hypothetical vaccination scheme, there is an apparent infringement of the s 13 right.

### **The Right to Life, Liberty and Security of the Person**

Although not explicitly outlined in the NZBORA, the rights to “liberty” and “security of the person” are wrapped into ideas of bodily autonomy, dignity and freedom from interference with one’s bodily integrity. Therefore, this section focuses on the right to life pursuant to s 8 of the NZBORA.

Accidental deaths from vaccination are incredibly rare. WHO states that “so few deaths can plausibly be attributed to vaccines that it is hard to assess the risk statistically.”<sup>74</sup> The most common cause of vaccine-related death is through allergic reaction,<sup>75</sup> followed by other causes such as improper storage and administration of vaccines.<sup>76</sup> However, that latter cause is so infrequent that it does not register as a causative factor of vaccine-related deaths in most studies. The vast majority of deaths in close proximity to the administration of a vaccine are coincidental.<sup>77</sup> That it is almost impossible to attribute deaths to vaccines means it is very difficult to conceive of it as an infringement of the right to life.

Notably, it is established practice in most countries that those potentially exposed to dangerous pathogens are physically confined for such time as is necessary to determine whether they pose a risk to the broader community (quarantine). It is not controversial to suggest that liberty and security of the person are generally subordinated to legitimate community health concerns.

In any event, critics of a proposed regime of mandatory vaccination would not have a monopoly on s 8 rights. Vulnerable members of the community who are inevitably put at risk by the choice not to vaccinate also have a right to life. The anti-vaccination movement infringes upon this right.

### **The Right to Health**

The “right to health” is contained in the International Covenant on Civil and Political Rights.<sup>78</sup> It was first articulated in 1946 in the preamble to the Constitution of the World Health Organization, where it is said to entail the “highest attainable standard” of health and quality of life.<sup>79</sup>

74 World Health Organization “Six common misconceptions about immunization” <www.who.int>.

75 Wendi Wu and others “Deaths reported to national surveillance for adverse events following immunization in China, 2010–2015” (2019) 37 *Vaccine* 1182 at 1184.

76 Working Group on Immunization Safety: Division of Vaccines and Immunization *Immunization Safety: How to address events allegedly attributable to vaccination or immunization?* (Pan American Health Organization, 2002) at 7.

77 Wu and others, above n 75, at 1184.

78 International Covenant on Civil and Political Rights 999 UNTS 171 (opened for signature 16 December 1966, entered into force 23 March 1976).

79 Constitution of the World Health Organization 14 UNTS 185 (signed 22 July 1946, entered into force 7 April 1948). See also Office of the United Nations High Commissioner for Human Rights “The Right to Health: Fact Sheet No 31” <www.ohchr.org>.

However, questions remain around whether such a broad right can truly be enforceable, or whether such an idealistic assertion is instead necessarily aspirational. Arguably, such a concept is so broadly defined as to be a practical impossibility — what the highest attainable standard is for some may be unacceptably low for others. Further, criticisms suggest that such a right is indistinguishable from other civil and political rights — or, more fatally, that such a right is irreconcilable with a human rights framework that otherwise guarantees the right to “life, liberty ‘and the pursuit of obesity.’”<sup>80</sup>

Setting these criticisms aside, is there an apparent infringement of the right to health? Similarly, regarding the right to life, while the rare adverse effects of vaccination may constitute a low-level infringement of the right to health, the balance of infringement falls heavily in the other direction. That is, there is far more of an infringement of susceptible persons’ right to health by non-vaccinators, through the effect of preventable diseases on their wellbeing and standard of living.

While mandatory vaccination reasonably engages these latter rights (right to life and right to health), ultimately, it does not infringe upon them. In fact, an objective view of their purposes supports mandatory vaccination. However, that the government seeks to protect these rights (on behalf of the susceptible members of society) through mandatory vaccination is not included in the analysis of whether an infringement of other rights is justified.

Despite conflict of right issues being dealt with differentially in some courts,<sup>81</sup> the reasoning in *Living Word* is largely accepted as the correct approach.<sup>82</sup> The issue is correctly characterised as an inquiry into the manner in which the state limits the rights of one individual to uphold the rights of another; the weight and importance of the rights being upheld is not what is at issue.

So, although the rights of susceptible people to health and to life are engaged (and supported) by the hypothetical vaccination law, they do not require further analysis.

## V IS THE INCURSION JUSTIFIED?

### The New Zealand Approach to Limitations on Rights

The NZBORA protects against unjustified limitations on rights. *R v Hansen* sets out the test for determining whether a potential encroachment on rights is legitimate.<sup>83</sup> In short, the *Hansen* approach involves:

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80 Ashlee Beazley “Contagion, containment, consent: Infectious disease pandemics and the ethics, rights, and legality of state-enforced vaccination” (LLB (Hons) Dissertation, University of Auckland, 2015) at 24.

81 See for example *Re J (An Infant): B and B v Director-General of Social Welfare* [1996] 2 NZLR 134 (CA) at 146, where two “conflicting rights” were balanced.

82 Butler and Butler, above n 5, at [6.6.34].

83 *Hansen*, above n 7, at [92].

- (a) interpreting an impugned Act to ascertain its meaning;
- (b) determining whether that meaning is inconsistent with a right or freedom; and
- (c) evaluating whether an identified inconsistency is justified per s 5 (and, if so, is not a violation on the protections enshrined in the NZBORA); or
- (d) if not, determining whether that unjustified limitation is capable of being read down (to see if a consistent, or less inconsistent meaning can be found).

If a demonstrable and unjustified limitation on a right is not capable of being read down, the subordinate nature of the NZBORA, and the concept of parliamentary supremacy, both require the relevant legislation to be given full effect by the courts. This means that in New Zealand, Parliament can expressly mandate legislation that violates rights.

However, this article argues that legislation making vaccination mandatory passes the third step of the above analysis. If it did not, this article would not recommend such a step to Parliament.

### *1 The First Two Steps*

Rodney Hansen J in the High Court ruling of *New Health* found a narrower scope to the s 11 right, such that an individual only had the right to refuse treatment that was not part of a public health regime. He also found that an individual's right to refuse treatment could not be allowed to dictate other individuals' health.<sup>84</sup> This approach attempted to support fluoridation by skirting the NZBORA infringement altogether. It has been roundly criticised as far too narrow a construction of s 11 and what it seeks to protect against: unwanted interference with bodily integrity.<sup>85</sup>

That is not the approach I take here. This article advocates for a legislative amendment that makes vaccination mandatory. Above, it identifies an infringement of the right to refuse medical treatment and the right to freedom of thought, conscience, religion, and belief, caused by a governmentally mandated vaccination regime.

It follows that the proposed mandatory vaccination regime does constitute an apparent limitation on rights protected by the NZBORA. Accordingly, the key question is whether that apparent limitation is justified.

### *2 Whether the Limitation is Justified*

Under *R v Hansen*, an apparent limitation on a right otherwise protected under the NZBORA will be justified when:<sup>86</sup>

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84 *New Health* (HC), above n 58, at [86]–[88].

85 Butler and Butler, above n 5, at [11.9.8].

86 *Hansen*, above n 7, at [104].



- (1) the purpose of the legislation imposing the apparent limitation is sufficiently important to justify curtailment of an infringed right or freedom; and
- (2) the apparent limitation:
  - (a) is rationally connected to that purpose; and
  - (b) impairs the infringed right or freedom no more than is reasonably necessary for sufficient achievement of the purpose; and
  - (c) is in due proportion to the importance of the purpose.

The following sections apply those tests, with particular reference to the Supreme Court's approach in *New Health*. This is on the basis that both *New Health* and this proposal relate to a universal public health measure that appears to limit the right to refuse medical treatment.

It is worth noting that in undertaking that analysis:<sup>87</sup>

... the courts must make a utilitarian calculation as to where the balance of public welfare lies — between unrestricted enjoyment of a right or freedom, and any limitations placed upon it.

The major objective in the following sections is, therefore, to determine whether mandatory vaccination is justified on a utilitarian analysis. That is the benchmark against which the following discussion ultimately will be measured.

#### (a) A Sufficiently Important Purpose?

The purpose of vaccination is to halt the transmission of, and therefore eliminate, preventable diseases within a population.<sup>88</sup> Above, I have set out the vital importance of vaccination and particularly of maintaining immunisation rates above the HIT.

As discussed, some members of the population cannot be vaccinated for legitimate reasons. They remain susceptible to diseases and are thus reliant on herd immunity. The purpose of the proposed legislative change is to raise vaccination rates above the HIT and protect such members from sickness and death. Secondary goals include preventing incubation pockets that put the vaccinated population at risk and, ultimately, eliminating preventable diseases altogether.

The purpose of fluoridation as preventing tooth decay was accepted by courts at every level.<sup>89</sup> In conclusive terms, the Supreme Court reiterated that “the dental health of children [is] unarguably sufficiently important to justify curtailment of the right to refuse medical treatment”.<sup>90</sup>

87 Philip A Joseph *Constitutional and Administrative Law in New Zealand* (4th ed, Thomson Reuters, New Zealand, 2014) at 1265.

88 The Immunisation Advisory Centre, above n 26.

89 *New Health* (HC), above n 58, at [102]; *New Health New Zealand Inc v South Taranaki District Council* [2016] NZCA 462, [2017] 2 NZLR 13 at [152]; and *New Health* (SC), above n 6, at [123].

90 *New Health* (SC), above n 6, at [123].

The Court discussed the extent to which the merits of the available evidence should be taken into account. The Court decided that it could not rule on the actual merits of the science or politics behind a proposed treatment.<sup>91</sup> Rather, it was to determine whether there was sufficient evidential basis for deciding whether a limit was justified.<sup>92</sup> Further, the Court endorsed McLachlin J's decision in *RJR-MacDonald Inc v Canada* that "the balance of probabilities may be established by the application of common sense to what is known, even though what is known may be deficient from a scientific point of view".<sup>93</sup> Rather than sink down into the muddled waters of the fluoride debate,<sup>94</sup> the Supreme Court drew guidance from reputable sources like the WHO and the Ministry of Health. It also gained insight from the fluoridation schemes of other countries to which New Zealand is often compared (like Australia, Canada, the United States and the United Kingdom).<sup>95</sup>

This was useful in *New Health*, as there is not complete scientific consensus as to the merits (or potential disadvantages) of fluoridation.<sup>96</sup> The Court found that there was sufficient evidence to establish that fluoridation was a sufficiently important purpose. Supporting evidence included that dental decay is a problem in New Zealand, and is a particular problem the regions concerned.<sup>97</sup>

The case for vaccination is even stronger given that there is reliable scientific consensus as to the merits of vaccination. Evidence shows that resurgence of preventable disease due to vaccination rates dropping below HIT is a growing concern and one that is impacting susceptible members of the population. Also, reputable sources maintain that vaccination is the only (or most reliable) way to prevent this harm.

Interestingly, the party appealing against the introduction of fluoridation in *New Health* argued that the only type of health issue that would justify a limitation on s 11 was one where a failure to treat would put other citizens at risk. Here, we have exactly that situation. A failure to treat, as discussed above, puts not only the medically susceptible citizens at risk, but also the whole vaccinated population as well (in the case of a disease that is not eliminated and mutates). Clearly this is purpose is sufficiently important.

## (b) Rational Connection?

This limb of analysis relates to the connection between the proposed measure and the desired purpose. The two must be objectively "rationally connected" such that the imposition of the measure is likely to bring about the desired outcome.

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91 *Ministry of Health v Atkinson* [2012] NZCA 184, [2012] 3 NZLR 456 at [166].

92 *New Health* (SC), above n 6, at [122].

93 *RJR-MacDonald Inc v Attorney-General of Canada* [1995] 3 SCR 199 at [137].

94 See C Albert Yeung "A systematic review of the efficacy and safety of fluoridation" (2008) 9 Evidence-Based Dentistry 39.

95 *New Health* (SC), above n 6, at [121].

96 At [121]; and Yeung, above n 94.

97 *New Health* (SC), above n 6, at [126].

In *New Health*, the Courts (without much trouble) accepted that there was a rational connection between fluoridation and the significant reduction in the incidence of dental decay.<sup>98</sup> This was despite the appellant's arguments that there was insufficient proof that systemic application of fluoride at the specific concentrations proposed by the Council had any beneficial effect.<sup>99</sup>

Here, there is no argument that vaccination does not prevent transmissible diseases. Even the most fervent opposition to vaccination is founded not on the premise that vaccines do not work, but that they cause other allegedly unwanted effects. With reference to the standard of evidence to be analysed, as discussed above, other nations' existing mandatory vaccination schemes are persuasive. So too are the positions of the WHO and the Ministry of Health. Both recommend vaccination as the best measure to reduce, prevent, and eventually eradicate preventable disease.

There may be scope for further discussion of the practicality of ensuring that the mandatory mechanism used does raise vaccination rates to reach the HIT. This is a concern falling within this limb of the inquiry. Is there rational connection not just between vaccinations and the prevention of disease, but also between a mandatory scheme that threatens prosecution and achieving herd immunity? The link between "mandatory" schemes and raised vaccination rates is weakened only by overly permissive exemption allowances.<sup>100</sup> Thus, the rational connection between a more coercive approach and achieving herd immunity is sound.

Clearly this measure is rationally connected to the goal of preventing transmission and prevalence of transmissible diseases.

### (c) A "No More Than Reasonably Necessary" Limitation?

In *Hansen*, this limb assessed whether the purpose of the provision at issue might have been achieved by any other means involving less of an incursion upon the right.<sup>101</sup> The Court of Appeal in *Atkinson* framed it as meaning: "is the chosen policy within a range of reasonable alternatives?". This approach, which offers the legislator more leeway, was later confirmed in *Attorney-General v IDEA Services*.<sup>102</sup> The "range of alternatives" framing, when applied, means that the existence of a less intrusive alternative may not defeat the more intrusive approach adopted, so long as its adoption can be reasonably explained.<sup>103</sup>

Again, the court's reasoning in relation to fluoridation is very useful. Alternatives such as the use of fluoridated toothpaste, dental hygiene practices and reduced sugar intake were all posited as less intrusive means of reducing tooth decay. However, the Council argued that these means were of limited

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98 *New Health* (SC), above n 6, at [127].

99 At [129].

100 Salmon, MacIntyre and Omer, above n 45.

101 *Hansen*, above n 7, at [126].

102 *Attorney-General v IDEA Services Ltd (in stat man)* [2012] NZHC 3229, [2013] 2 NZLR 512 at [222].

103 *RJR-MacDonald*, above n 93, at [160] as cited in *New Health* (SC), above n 6, at [132].

efficacy, particularly in the areas that most needed intervention, because they required the willing participation of the public. This argument was accepted.<sup>104</sup> Fluoridation of municipal water supplies was one of a range of reasonable options. The alternatives were measures that would simply add to the benefits of fluoridation.<sup>105</sup>

As canvassed above, there are a range of existing vaccination schemes. The current scheme, voluntary vaccination, does not infringe on rights. “Mandatory” schemes with wide exemptions for religious or conscientious objections infringe to a much lesser extent.<sup>106</sup> Criticisms of mandatory schemes further suggest other measures like public outreach<sup>107</sup> and financial incentives (such as payments), lower insurance premiums and tax exemptions.<sup>108</sup> Continuing education of GPs and nurses could also be an option. Using “incentives and nudges ... to achieve herd immunity”,<sup>109</sup> it is argued, reduces pushback (especially against vaccinations that remain “recommended” rather than “mandatory”), and resentment towards immunisation.

I argue that the evidence presented above is sufficiently clear: less coercive, incentive- and disincentive-based approaches are not working. States with voluntary or mandatory vaccination schemes are still not achieving herd immunity.<sup>110</sup> To reach herd immunity and, ideally, eliminate preventable diseases, the hypothetical mandatory programme outlined above is one of a range of reasonable alternatives. Outreach and more investment in vaccine education would complement and enhance the beneficial effects of this measure.

#### (d) A Proportionate Limitation?

Here, the analogy with *New Health* is weaker. The Court found that certain factors meant that fluoridation of municipal water was only a minimal intrusion upon the s 11 right. Factors included the natural occurrence of fluoride at differing concentrations in drinking water,<sup>111</sup> and that one of the only evidentially-supported side effects was fluorosis (a cosmetic concern).<sup>112</sup> Thus, given that the significant advantages outweighed the risks, the limitation was proportionate.

Similarly, international jurisprudence on fluoridation, although under a different framework than that prescribed under *Hansen*, found fluoridation to be only a minimal incursion on liberty. In *Millership*, fluoridation did not

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104 *New Health* (SC), above n 6, at [134].

105 At [134].

106 *Sherr*, above n 67.

107 Peter Schröder-Bäck and Kyriakos Martakis “Should Childhood Vaccination Against Measles Be a Mandatory Requirement for Attending School? No” (2015) 148 *Chest* 854 at 855.

108 Catherine Constable, Nina R Blank and Arthur L Caplan “Rising rates of vaccine exemptions: Problems with current policy and more promising remedies” (2014) 32 *Vaccine* 1793.

109 Schröder-Bäck and Martakis, above n 107, at 855.

110 World Health Organization “State of the World’s Vaccines and Immunization: Challenges to Sustaining Progress” <[www.who.int](http://www.who.int)>.

111 *New Health* (SC), above n 6, at [135].

112 At [136].

even amount to a prima facie breach.<sup>113</sup> In Florida, that individuals who oppose fluoridation can still avoid ingesting the public water supply contributed to a finding that fluoridation was only a trivial infringement of liberty.<sup>114</sup>

These factors are not at play here, where the hypothetical scheme is prefaced on preventing anyone other than those with a legitimate medical exemption from avoiding vaccination. Mandatory vaccination, it must be accepted, would be a much more than minimal intrusion. Even though vaccines are rigorously tested for safety and known side-effects must be sufficiently rare, adverse reactions to vaccines can still range from very mild to severe.

While the analogy of the medical treatment itself still fits (an agent introduced into the body and being absorbed), an intravenous introduction is more invasive than oral ingestion. Accordingly, the affront to bodily integrity and autonomy is more severe.

However, the proportionately higher importance of the purpose of the measure must equally be considered. This is true on two counts — preventing sickness or deaths of the legitimately susceptible, and safeguarding the entire population against the threat of mutation. The particular importance of preventing “pockets” of susceptibility, as discussed in light of the Minnesotan Somali community, warrants the decision to disallow non-medical (especially religious) exemptions.<sup>115</sup>

To conclude, there is scope for legitimate argument about the proportionality of what is a rather coercive measure. It seems likely that, in line with the reasoning of *New Health*, vaccination could constitute a medical treatment that can be imposed upon people without their consent, in the name of public health.

## VI THE (BEST) INTERESTS OF CHILDREN — WHAT CHANGES?

The sections above approach the issue on the basis that it is the right of competent adults to refuse medical treatment that is being infringed. However, remembering that the majority of vaccinations are administered to infants and young children, does the analysis change?

Typically, parental consent given on behalf of children has been recognised as valid to the extent that it is in the best interests of the child. Repeatedly, the courts have shown that parents’ bases for making decisions are subordinate to the best interests of the child. The courts have routinely stepped in to ensure that the child’s best interests are paramount in making decisions relating to that child.<sup>116</sup> That principle has since been codified in

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113 *Millership v British Columbia & Canada (Attorney General)* 2003 BCSC 82 at [112].

114 *Quiles v City of Boynton Beach* (2001) 802 So 2d 397 (Fla App 4 Dist 2001) at 399.

115 Bahta and Ashkir, above n 20.

116 See *Auckland District Health Board v AZ and BZ* HC Auckland CIV 2007-404-2260, 27 April 2007 at [20], where the Court ruled that a blood transfusion was in the best interests of the child, against the parents’ religious wishes. See also *Re J*, above n 81.

statute.<sup>117</sup> This position is consistent with New Zealand's international obligations to safeguard the child's best interests.<sup>118</sup> While there are still medical treatment decisions made by parents on the basis of their religious beliefs, increasingly, the legitimacy of this is being questioned.<sup>119</sup>

Issues involving people's children are emotive, but the legal "justified incursion" analysis does not change. If anything, it is strengthened in the case of children. The state shows a proclivity to step in to safeguard the child's "best interests" when parents (or the child themselves) are making objectively poor choices.<sup>120</sup> While the "best interests" of the child are the subject of much debate (and litigation), and can arguably include religious and parental considerations,<sup>121</sup> those considerations are secondary to health and welfare.<sup>122</sup> In light of the established scientific consensus, the choice not to vaccinate is not a choice that represents the best interests of the child.<sup>123</sup>

The argument for enforcing mandatory vaccination in the best interests of the child should succeed generally. Even if liberty of parental choice prevails in those circumstances, however, it must be defeated once the rights of others are engaged. Whether there is political appetite to tackle this issue is another question. However, from a rights-based approach, there is certainly ample support.

## VII CONCLUSION

There is a concerning trend against vaccination based on misinformation campaigns. Misguided attempts to place blame for autism, media pandering, and the fading public memory of a time before vaccines, when the consequences of not vaccinating were a stark reality, have exacerbated such a trend.

That trend is particularly dangerous. The HIT required for vaccines to effectively protect vulnerable members of the population against preventable diseases (and the whole population against dangerous mutations) will not be achieved if: very small, but closely geographically

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117 Care of Children Act 2004, s 4.

118 Convention on the Rights of the Child 1577 UNTS 3 (opened for signature 20 November 1989, entered into force 2 September 1990), art 3.

119 See discussion around male infant circumcision in Zachary William Fargher "Male Infant Circumcision and Human Rights Law in New Zealand" (LLB (Hons) Dissertation, University of Auckland, 2014).

120 "Where doctor and parent disagree, the court can decide [what the best interests of the infant are] and is not slow to act. I accept that if there is no time to obtain a decision from the court, a doctor may safely carry out treatment in an emergency if the doctor believes the treatment to be vital to the survival or health of an infant and notwithstanding the opposition of a parent...": *Gillick v West Norfolk and Wisbech AHA* [1986] AC 112 (HL) at 432.

121 *Re P (A Minor) (Residence Order: Child's Welfare)* [2000] Fam 15 (CA) at 41.

122 At 43.

123 This position is supported by the reasoning of Druce J in *AC v IW FC Kaikohe* FAM-2002-027-332, 17 October 2005, where the Judge considered the mother's preference for alternative medicine and opposition to vaccination to be factors which were contrary to the child's best interests.

grouped, communities; or relatively small pockets of the population (approximately five percent would usually suffice) choose not to vaccinate.

It is also relatively clear that programmes of “mandatory” vaccination and recommended voluntary vaccinations are not effectively addressing that trend. As a result, preventable diseases are resurging in pockets of susceptible individuals in various countries worldwide (including the Somali community in Minnesota).

The question at the heart of this article is whether or not the New Zealand Government could justifiably amend the Crimes Act 1961 to address the trend against vaccination and ameliorate the threat to achieving HITs in New Zealand. The amendment would make it unlawful (as a variety of criminal nuisance) not to vaccinate eligible persons.

While it is clear that such a step would infringe upon rights protected under the NZBORA, NZBORA rights are not absolute. They are subject to such reasonable limitations as can be demonstrably justified in a free and democratic society. Ultimately, whether or not a limitation is justified depends on a utilitarian analysis. This analysis should weigh the benefit to the community at large against the harm to the individual whose rights will be infringed.

This article does not seek to downplay the seriousness of the intrusion upon bodily integrity imposed by mandatory vaccination. Nor does it seek to minimise the risk that objectively exists: that some of those who are vaccinated will experience negative reactions (and that sometimes those reactions will have a lasting effect on the person who experiences them). Both of those features distinguish this proposal from *New Health*, as fluoride was never going to be injected by hypodermic needle and the only substantiated side-effect was cosmetic. However, without downplaying those concerns, they must be contextualised.

The incidence of lasting, serious negative reactions from responsibly administered vaccinations is very low. The occurrence of death from responsibly administered vaccinations is so low that – so far as WHO can determine – it may not actually occur at all. The benefit to public health, in contrast, is very high.

With those specific distinguishing features addressed, the proposed scheme of mandatory vaccination analogises neatly with *New Health*.

Applying the approach taken in that case to the following circumstances makes it clear that a scheme of mandatory vaccination represents a demonstrably justifiable limitation on the NZBORA rights it necessarily infringes. Such a scheme is justified by:

- (a) the very real risk that those who cannot be vaccinated will die or suffer long-term disabilities if herd immunity is compromised in New Zealand; and
- (b) the more remote (but legitimate) risk of a preventable disease mutating in a susceptible pocket of the community and placing all persons in New Zealand at risk of death or long-term disability.

The practical issues of implementation and the inherent political distaste may, in themselves, form insurmountable barriers to instituting such a measure. This article does not go so far as to find that the criminalisation of a failure to vaccinate would be democratic or would necessarily be the best way forward. Nevertheless, it submits that mandatory vaccination in New Zealand would be a justified limitation on the human rights it infringes.