

9 Toward Trustworthiness in Immunization Policy

9.1 The Challenge of Vaccine Hesitancy

The main argument in the previous chapters consists of two steps. First, liberal-democratic governments have a responsibility to ensure adequately high immunization rates, where possible, to prevent outbreaks of vaccine-preventable infectious diseases. This collective protection is a means to achieving two higher-order goals: the protection of the basic interests of young children and the protection of a well-functioning society—including its economic, health care, and educational institutions—against disruptive outbreaks of vaccine-preventable infectious diseases. In the second step, we argue that acting on this responsibility can imply the use of legal action, particularly the employment of liberty-limiting measures (i.e., mandatory vaccination policies). Such policies can take different forms in different contexts and can involve a variety of measures, constraints, and criteria that ensure the policies are necessary, precautionary, proportionate, and justified.

Ethical problems in public health are often framed in terms of a dilemma concerning the state's responsibility to protect citizens' fundamental health interests versus its obligation to respect the freedoms and rights of all individual citizens. If we conceive the controversy about vaccination only in terms of this two-dimensional dilemma, one could say that our proposed two-staged regulation of vaccination—voluntary when possible and mandatory when necessary—adequately “solves” the ethical problem that many states currently face. This, however, oversimplifies the problem. For one thing, it is mistaken to assume that the protection of public health and the maintenance of herd immunity are solely a task for the state. Rather, it is a collective endeavor of citizens and the state (Verweij & Dawson, 2004, 2007).

Governments can initiate, organize, and promote immunization programs. Ultimately, governments can even initiate policies to make it more difficult for citizens to refuse vaccination. But before more liberty-limiting policies are pursued, governments should seek to convince citizens of the importance of vaccination programs and the benefits and protections these programs offer to individuals and the population at large.

For many people, it is not self-evident to choose for vaccination, and governments and health professionals must create adequate conditions for communication and information to encourage citizens to vaccinate (Conis, 2015). Ultimately, the success of programs is determined by the trust, acceptance, and participation of citizens and their conviction that vaccination is something that is good for their child, for themselves, and for societal life at large. If vaccine acceptance is very low, it is highly questionable whether mandatory or compulsory vaccination would offer a real or sustainable solution. People would look for alternative means for childcare if they were not allowed to access childcare centers, and if too many parents opted out, then using more force would probably be unfeasible. It is also questionable whether coercive measures could receive sufficient democratic support if public acceptance is very low. And if a mandatory policy was in place already, sooner or later a political majority would vote to abandon it. Given that the democratic state depends on its citizen consent to effectively execute policies, it is inappropriate to juxtapose public health and individual freedom as conflicting values.

Moreover, if programs have so far been voluntary but participation rates drop below a certain threshold, political discussion about a mandatory scheme that is to be imposed might only strengthen the opposition to it. Critics could protest that this amounts to the suppression of a minority. Although in various countries, recent policy changes toward more coercive programs did not lead to a drop in the overall level of vaccine acceptance, the possibility of such a backlash cannot be excluded beforehand.

But most important, current vaccine hesitancy and the dilemmas it creates for vaccine policies are not just a matter of judging which value is most important, public health or individual freedom. Even if a proportionate mandatory program *is* widely accepted in society and has broad democratic support, this will not take away or silence the objections of people who object to vaccination or have concerns about the potential side effects. Even though a political majority is convinced that mandatory vaccination policies are, all

things considered, fair and justified, the government continues to have an obligation to explain and justify these policies to critics and, indeed, to take their views seriously—even if these are not in line with generally accepted science or expert advice. This is, first and foremost, a matter of respect and good governance, taking seriously the plurality of moral views in a liberal-democratic society. A second, more consequentialist argument for this obligation is that, inevitably, such oppositional voices will keep vaccine hesitancy alive and might spread it further. A democratic government therefore cannot simply push aside epistemic and moral disputes by appealing to the scientific and professional consensus about vaccine safety and effectiveness.

How should governments deal with such opposition toward vaccination, which, on the one hand, can be seen as one of the many voices in an energizing free market of ideas but, on the other hand, can ultimately contribute to an erosion of vaccine acceptance and of state legitimacy in general? We argue that in a democratic context, the state still has obligations toward minorities' points of view that strongly disagree with policies—even if those policies are democratically justified. Although public trust in vaccination is of the utmost importance for democratic governments, the focus should be on making immunization policies and the institutions and professionals that shape these programs *trustworthy*, rather than primarily creating policies that are expected to protect and promote trust. This has implications for government communication about immunization and, more specifically, for how to respond to vaccine misinformation in the public arena.

9.2 “Building and Maintaining” Trust in Vaccination?

It is vital that immunization programs are generally endorsed by the public and that a large majority of citizens are intrinsically motivated to participate. Successful collective protection against infectious diseases is not only determined by the effectiveness of vaccines provided but also by the level and depth of trust citizens have in vaccinations, medical staff, and public health institutions. This suggests that governments should invest a great deal of energy in public trust in voluntary vaccination, which also requires that government actively encourages those who are still hesitant to get on board. Governments indeed have the ability to make vaccines accessible through collective programs and promote acceptance through communication and information programs. As Attwell et al. (2022) state, “Nobody is

born wanting to get vaccinated. Every generation and social group across the world must be socialized into the practice” (p. 576). Governmental agencies should do their utmost best to make the choice to vaccinate the normal choice.

Still, there remains a precarious balance between active vaccination promotion and socialization by the government and citizens’ trust in vaccination. How should we understand trust in vaccination, or vaccine confidence, and how can this be promoted? The Vaccine Confidence Project, led by Heidi Larson of the London School of Hygiene and Tropical Medicine, defines vaccine confidence as “the belief that vaccination—and by extension the providers and range of private sector and political entities behind it—serves the best health interests of the public and its constituents” (Vaccine Confidence Project, 2020). But trust is more than a belief. In section 2.4, we explained that trust involves deferring with comfort and confidence to others, about something beyond one’s knowledge or power, in ways that can potentially hurt oneself. This mental state has different elements: a *willingness* to defer to the judgments of other persons, a *feeling* that this willingness will not be abused, and a complex set of *beliefs* that offers (limited, not complete) support for deferring to the judgment of these others. Many different factors influence people’s acceptance of vaccination programs. Being well informed is certainly not the only one. According to Larson,

Vaccine acceptance is about a relationship, about putting trust in scientists who design and develop vaccines, industries that produce them, health professionals who deliver them, and the institutions that govern them. That trust chain is a far more important lever of acceptance than any piece of information. Without these layers of confidence, even the more scientifically proven and well-communicated information may not be trusted. (Larson, 2020, p. xxxv)

Moreover, providing good and reliable information is *sine qua non* for vaccination policies, but even that is not as straightforward as it may sound. It can be very difficult to judge what information on effectiveness and safety and which scientific uncertainties must be shared in public information campaigns—and this is particularly important for vaccine confidence. Especially in the context of new diseases and recently developed vaccines, evolving insights and epidemiological developments imply that medical experts learn on the fly. New vaccines are not allowed on the market until they have been tested on tens of thousands of persons and have been found to be safe and effective in those tests. A very rare side effect, however, will only come to

Box 9.1

COVID-19 Vaccines: Adverse Effects and Public Trust

In the course of the COVID-19 vaccination program, it became clear that the non-mRNA vaccines created by AstraZeneca and Johnson & Johnson had a very rare but serious thrombosis-like side effect. It seemed to occur more frequently in young people, although it turned out to be notoriously difficult to indicate the youngest age at which the side effect was potentially likely to occur. Data showed that the adverse effect occurred more frequently among young women, but this might have been caused by a confounder, because in the early stage of pandemic vaccination, nursing staff were among the first to get their shots, and this group consists mainly of women. This caused a difficult dilemma for public health authorities: how should they respond to the very small and still uncertain risk? Should governments decide to prioritize precaution and safety—almost at all costs—and stop using these vaccines, even though this decision might will cost more lives than it saved? Or should they take a more consequentialist approach during the pandemic and continue to vaccinate en masse, which would save most lives but also cause the death of some individuals due to this rare adverse effect (Pierik, 2021b)? This dilemma obviously also had an impact on how citizens—already often reluctant due to the speed of COVID-19 vaccine development—perceived safety. When it was decided in some countries that the AstraZeneca and the Johnson & Johnson vaccines would no longer be offered to younger persons, many older people wanted to receive the alternative options as well.

light when millions have received the vaccine. And because such a side effect is so rare, it will also take some time to find out whether it has indeed been caused by the vaccine. The evidence that this condition could indeed be a side effect of the vaccine may only slowly come to the surface through initially contradicting study reports that may not even have been peer reviewed yet. This creates a dilemma for expert advisory bodies and governments: how should they deal with uncertainty, knowing that such information will affect how the public perceive the vaccine?

So, even though providing reliable information is essential for people to be able to trust vaccination policies, it is often impossible to present a clear and univocal message, especially in response to concerns about safety. This was one of the factors that at least for some time hampered the COVID-19 mass vaccination campaign (box 9.1).

Given how essential widespread vaccine confidence is for successful protection against infectious diseases, it is understandable that public health authorities want to build and maintain public trust. However, it is not obvious that they can do so. Confidence is not something that an organization that wants to be trusted can “make” or cause to exist. The relational attitude of the “trustor” cannot be enforced or created by a “trustee.” It involves an overall judgment of the trustor about the quality of the actions, policies, and actors involved in the “trustee” (i.e., the vaccination program). This judgment can be explicit and well considered or something that is just taken for granted and hardly reflected on. As Larson (2020) emphasizes, various factors influence how trust arises—or breaks down. The myriad interactions between these cognitive, emotional, socioeconomic, and cultural aspects at stake are complex, hard to understand, and difficult for governments to influence in a particular direction.

But *if* these factors were moldable to some extent, it would be questionable for institutions to actively and systematically seek to influence them with the aim of building, promoting, and sustaining public trust. Suppose that the Vaccine Confidence Project is successful in identifying and untangling the many factors that influence people’s trust in vaccination. And imagine now that behavioral economists, psychologists, communication specialists, and other social scientists employed by the Department of Health developed a program that is effective in tweaking all factors in such a way that people’s trust in vaccination would increase. In this hypothetical program, the government would see all information it shares about vaccination as a means to promote acceptance. All aspects of vaccine communication would be judged and shaped in a strategic way to promote a positive perception of immunization and thus strengthen confidence and take away doubts. Would it be a good idea to implement this program? The government has an important responsibility, of course, to promote vaccination and to maintain herd immunity. Yet implementing such an all-encompassing policy to influence people’s trust is not unproblematic.

First, there is something disrespectful for a government to shape all information processes, communication policies, and other social factors in a manner that maximizes the public’s confidence in government policy and governmental actors. Information and communication then become not elements that enable people to make their *own* judgments and decisions, on the basis of their own values, but elements that influence their perception and

judgment in such a way that they will choose what the government prefers them to choose. Of course, some degree of influencing perception and judgment is part and parcel of any effective communication. As mentioned earlier in this section, governmental agencies should do their utmost best to socialize citizens into accepting vaccination and to make the choice to vaccinate the normal, or even “banal,” choice (Attwell et al., 2021; Attwell et al., 2022, p. 575; Conis, 2015). But communication should not turn into manipulation.¹ If communication is fully tailored to maximize the effect, this does not fit with a respectful relationship and might backfire in the long run. The most important thing is that information is honest and well grounded, so that the trust that might be given is also justified (O’Neill, 2018). If government, public health authorities, or health professionals are concerned about public trust in vaccination—and they should be—the appropriate thing to focus on is to ensure that they are themselves trustworthy (cf. Meijboom et al., 2006; O’Neill, 2018). That is what they can and should influence. Interestingly, this is only possible if the trustee (i.e., the government) is prepared to “give trust” to citizens as well: to have confidence that, if they have the appropriate information, citizens are capable of making a good judgment about what to do. In this way, we can see trust as a *mutual relationship* between (in this case) public health authorities (or government) and citizens. Governments should aim to build, strengthen, and maintain relationships of trust, and this sets limits to how far they can go in tailoring communication processes in such a way that as many people as possible will believe that vaccines are effective and safe.

Second, without such a relationship of trust, it is also questionable whether government communication can successfully maintain vaccine confidence that is sufficiently robust to withstand the cases of adverse effects and vaccine failure that will inevitably occur. If health authorities succeed in inducing a univocally positive perception of immunization, parents may feel betrayed if a vaccine appears to be less effective or if it comes with adverse effects. As the saying goes, trust arrives on foot and leaves on horseback, and this certainly applies when such trust is based on an all-too-positive presentation of science. For that matter, it is difficult to see how public health authorities could determine the availability of information and the spread of diverging ideas about vaccinations—especially in a society in which certain groups actively spread doubts about vaccine safety. Discussions on social media play an important role in what people are willing to believe and accept. It is often not national news, information disseminated by a government authority,

or a scientific consensus that is the most important source that leads people to believe something about topics on which they have no specific expertise themselves. Instead, it is stories, anecdotes, or arguments that are shared on social media. Alternative information sources can only be controlled in a minimal way. Moreover, as we argue in the next section, suppressing information that does not fit the “official view” on vaccination will not do in a democratic context.

We conclude that governments should be cautious to employ an explicit public relations approach to “build” vaccine confidence or trust, in the sense of organizing and shaping social conditions and the exchange of information in a way that induces citizens to trust and accept vaccination. Trust as a mental state or attitude of the public toward health authorities or vaccination cannot genuinely be created by those health authorities themselves. Governments, public health institutions, and health professionals should instead focus on being *trustworthy* and on building and maintaining relationships of trust with citizens.

What does this imply? Trustworthiness involves, among other things, that government agencies base their decisions concerning vaccination policies on the most reliable information available. Obviously, they should be honest and transparent in their communication, explaining how decisions came about, the grounds on which they were made, and the inherent uncertainties that are involved in such decision-making. And they should use and maintain their expertise to monitor and ensure the safety and effectiveness of immunization. Moreover, it also involves caring for relationships of trust. Trustworthy public health professionals or institutions engage with parents or other citizens; they allow and enable them to voice their hopes and concerns, and they take those concerns seriously. Governments can invest in making policies and programs less anonymous and more “human,” certainly in areas where vaccination uptake is relatively low. In some European cities, participation by parents with a migrant background is far from optimal, and here a more personal approach, possibly with help from professionals and community leaders with a similar migrant background, could establish or build on existing relationships of trust. Again, however, the focus for public health professionals and authorities should be on being trustworthy, not on inducing people to trust a vaccine. Trust can be given by people; it is not something that the to-be-trusted institution should try to bring about. We have argued previously that vaccination can be seen as a collective endeavor

of government, public health professionals, and citizens. This is another reason why relationships of trust are important, and arguably they are only possible if the ultimate aims, to protect the health of children and to prevent major outbreaks, are widely shared. Relationships of mutual trust are a constitutive element of successful collective vaccination programs.

Note that this argument for trustworthiness and promoting relationships of trust still leaves room for persuasive communication, with a role for nudges, incentives, positive framing of information, and employment of other means to help people overcome their vaccine hesitance. Yet liberal-democratic governments must at the same time respect democratic constraints on attempts to shape public preferences and perceptions.

9.3 Freedom of Speech in a Democratic Society

In the previous section, we argued that in a relationship of trust, public health authorities and governments should also be prepared to trust citizens' capacity to use information about vaccination in such a way that they will come to a reasonable judgment. Regarding evidence-based information about the safety and effectiveness of immunizations, public health practices that seek to establish relationships of trust, and clear policies aiming at maintaining herd immunity, one hopes that citizens, for themselves or for their children, want to participate in immunization programs. The problem, however, is that there is also other information "out there" and more forces that will influence people's view on immunization—and hence their willingness to trust public health programs.

Of course, most citizens in democratic states have confidence in regular vaccinations, and even the rapidly developed novel COVID-19 vaccines have mostly been well accepted. At the same time, a significant minority remain hesitant about collective vaccination programs, and their doubts are triggered and sustained by a small but vocal skeptical community, who actively spreads information about alleged severe side effects of vaccines or about the alleged superfluousness of public health interventions in general. There has always been public discussion about vaccine effectiveness and safety, but the past two decades have seen a reemergence of vocal antivaccination movements, which see themselves as an *alternative community of knowers* that reject the evidence that is generally accepted in vaccination science. Rather than endorsing the existing scientific consensus, these critics emphatically

endorse democratized norms for allocating epistemic authority. The emergence of these movements and the advent of the internet have changed the environment around the vaccines from top-down expert-to-consumer (vertical) communication toward nonhierarchical, dialogue-based (horizontal) communication, in which some skeptics publicly voice doubts about medical consensus on the basis of their own, often web-based, research. They appeal to anecdotes and often cherry-pick scientific studies to support their views, thus creating “alternative medical truths” that have an increasing impact on public discourse (DiRusso & Stansberry, 2022).

Opposition to immunization is largely led by this small but vocal group, which usually not only rejects vaccination but also deeply distrusts both the science on which policies are founded and the democratic integrity of government in general. They are prominent on social media, publish their own books and “documentaries,” and are invited to speak on television programs that often prefer to give a voice to different perspectives in polarized societal controversies.² Their stories easily trigger, fuel, and deepen the initial doubts, concerns, and hesitancy that many young parents experience when they have to make a decision about vaccination. This disbalance makes hesitant parents systematically overestimate the magnitude of the risks involved, causing them to doubt whether the benefits of vaccinations do outweigh their dangers (Larson et al., 2011, p. 526). It is somewhat unsettling that in democratic societies, unscientific claims, half-truths, and outright lies can have such weight in public debate, diluting the voice of evidence-based science (Kata, 2010; Venkatramana et al., 2015, p. 1422). Ultimately, these voices challenge and potentially threaten public trust in collective immunization—and thus undermine collective protection against infectious diseases. How should liberal-democratic governments respond?

To counteract these voices would be to suppress the sharing of “fake news” and “alternative truths” about the effectiveness and safety of vaccines, either by the state itself, for example, by prohibiting such expressions, or by requiring social media, internet providers, and other publishers to suppress or downplay messages, blogs, or videos that undermine vaccine confidence. In line with the argument of the previous section, we see this as a wrong-headed approach to trying to maintain trust: a government that suppresses opinions, even those that are blatantly objectionable, is not trustworthy at all. There is also a further, more fundamental ground for refraining from such an approach: to respect freedom of speech.

Freedom of speech is a quintessential right in the liberal catalogue of fundamental rights. John Stuart Mill is famous not only for his defense of the harm principle, which is pivotal to the argument in this book, but especially also for the way he links this principle to a defense of a near-absolute freedom of expression. His basic argument is that for various reasons, limiting freedom of speech usually generates more harm than any speech act itself could ever generate. For the liberal political philosopher Mill, *liberty of thought* is sacrosanct (Mill, 1991, pp. 16–17). And since the *liberty of expressing and publishing opinions* is an inherent consequence of freedom of thought, it is almost as important as liberty of thought itself. In addition to the justification of freedom of speech as an essential individual right, Mill also presents several arguments why freedom of speech is an important collective endeavor that is a necessary precondition for the collective process of finding and celebrating truth.

The peculiar evil of silencing the expression of an opinion is, that it is robbing the human race; posterity as well as the existing generation; those who dissent from the opinion, still more than those who hold it. If the opinion is right, they are deprived of the opportunity of exchanging error for truth: if wrong, they lose, what is almost as great a benefit, the clearer perception and livelier impression of truth, produced by its collision with error. (Mill, 1991, p. 21)

Mill assumes that establishing the truth on important matters is one of the “permanent interests of man as a progressive being” and that it requires “the steady habit of correcting and completing [one’s] own opinion by collating it with those of others, so far from causing doubt and hesitation in carrying it into practice, is the only stable foundation for a just reliance on it.” One can only be certain that one’s judgment is tenable and reasonable after one has actively “sought for objections and difficulties, instead of avoiding them, and has shut out no light which can be thrown upon the subject from any quarter” (Mill, 1991, p. 25). Moreover, even if one is fully certain about the truth of one’s own opinion, it will still be necessary to allow opposing voices to enable the best possible understanding of that truth. If other voices are suppressed, then even the truth will become merely dead dogma. Mill therefore embraces an almost absolute freedom of speech and rejects an active role of government in limiting utterances, irrespective of whether they are scientifically grounded, blatant untruths, or straightforward “alternative facts.”

Of course, one could argue that even if certain antivaccination voices were silenced, there is little reason to fear that scientifically grounded knowledge

about vaccine safety and effectiveness would become dead dogmas. After all, in the scientific arena, these claims are systematically tested, reviewed, and adjusted if new facts come about. However, we don't think that it makes sense to separate the scientific arena, where any view can be put on the table and be tested, from an arena of societal debate (e.g., on social media), where certain perspectives would be suppressed. If laypersons or self-proclaimed experts are not allowed to voice their opinions (or are actively thwarted in their attempts to voice them) while such questions and opinions can be openly debated among scientific experts, this conflicts with the values of science as well. Scientists should also be able to discuss the results of their work for a broader public, and it would be unbalanced if others, including vaccine critics, were not allowed to raise questions or objections. It is doubtful whether such a strong separation of scientific studies and societal debate can be upheld at all. And if it could, it would be undesirable: one of the values of science is that it can contribute to public reflection and understanding, and this requires not only that the results of scientific studies are disseminated in society but also that the academic habit of asking critical questions is adopted and accepted in broader societal debates. Ironically, the emergence and spread of antivaccination perspectives that raise doubts about scientific knowledge concerning how to prevent infectious diseases is also a consequence of the influence of science within society.

The case for respecting freedom of speech is therefore very strong, also when it concerns the expression and spread of vaccine hesitancy and misinformation. The emphasis on freedom of speech on matters of public concern is at the heart of the First Amendment to the US Constitution: "Congress shall make no law . . . abridging the freedom of speech." It reflects a profound commitment to the principle that debates ought to be unconstrained, robust, and wide open. Speech concerning public affairs is more than merely the self-expression of the individual person: within the US constitutional tradition, it is seen as the essence of self-government in a democracy. This implies that freedom of speech on issues of public concern is virtually unrestricted and that government or courts should not inhibit public debates. This foundational character provides freedom of speech with a trump-card character in US constitutional discussions, disabling courts to balance it with other fundamental rights.

Freedom of speech is also well established in article 10 of the European Convention of Human Rights. Note, however, that this article comes with

certain provisions that are similar to those we referred to earlier (section 3.7) in relation to article 9: all rights in the European Convention may be subject to restrictions that are necessary in a democratic society for the various fundamental interests, including the protection of health and the rights of others.³

This proviso raises an important question: if the spread of doubts and alternative facts about vaccination undermines herd immunity and thus public health, should that not be a ground for restricting freedom of expression after all? It may be difficult if not impossible to show that specific expressions of opinion are undermining vaccine confidence, but it is plausible to hold that jointly, the messages, blogs, documentaries, and videos of antivaccination groups do have a harmful impact on public health. They certainly undermine the collective endeavor to maintain group-level protection. This constitutes a form of collective harm that is similar to and arguably more powerful than the collective harm of vaccine refusal we explored in section 4.3.3. If that is the case, should not the state impose limits on freedom of speech? Of course, one way to deal with misinformation is to publicly debunk it. Public health authorities and professionals, and maybe also social media platforms, have a responsibility to see to it that well-grounded information about immunization remains available and is not diluted by the unscientific and ungrounded claims of antivaccination groups (Venkatramana et al., 2015). It is difficult, however, to effectively persuade hesitant persons by means of (often rather abstract) scientific evidence if other perspectives are supported with anecdotes, stories, and rumors and by cherry-picking or sometimes simply misrepresenting scientific findings. If the harms of certain expressions cannot be prevented by showing how those ideas are flawed and dangerous, shouldn't those messages, for example on social media, somehow be restricted?

One possible step that social media companies themselves can take, and have also done, is to downplay messages that can be seen as harmful misinformation. This does not make messages invisible, and no one is restricted in their freedom of expression, but it does affect how prominent these messages appear in people's timelines. And *if* social media can do this according to their own misinformation policies and the terms their clients have agreed to, there is no reason why professionals or government officials should refrain from pointing these social media to certain potentially harmful messages, and asking them to consider downplaying these in the timelines of users (Verweij & Pierik, 2023). In our view, a trustworthy government should be reluctant to

intervene in social media discussions in such a way, but can do so as a last resort, if the strategy is made public and if social media organizations can and do make their own choices about whether they act in line with such requests.

A step further, however, would be that a government *required* social media to downplay harmful misinformation about vaccination. That would amount to a suppression of freedom of speech, or, in other words, to censorship. Can this be justified at all? Taking all the elements of the preceding discussion into account, there is insufficient basis for censoring or suppressing the spread of antivaccination beliefs, *even if they are expected to cause harm*. It would be both unfeasible and undesirable to really suppress the exchange of certain opinions about immunization in societal debates while simultaneously promoting and protecting open discussion in the scientific arena. Moreover, in line with our argument in the previous section, this is not how a trustworthy government can respond to critical perspectives. If the state actively censors some people's questioning of the evidence for a specific policy, it destroys everyone's ground for trusting the policy. This argument does not solve the problem of vaccine misinformation; it only closes the option to suppress misguided beliefs about vaccination. Vaccine refusal and hesitancy are here to stay, and in an open society, they will inevitably spread and "infect" young parents. It goes without saying that public health authorities, scientific experts, health professionals, and journalists have a responsibility to expose and refute misinformation, but this may, unfortunately, not be enough to persuade all people who are in doubt due to messages about alleged harms of vaccination. If, partly due to misinformation, vaccine coverage is in decline and falls below a certain threshold minimum (cf. section 7.4.4), a liberal-democratic government better implements mandatory immunization. This also constitutes a severe constraint of the freedom of citizens, but as we show in the next section, it fits much better in a trustworthy government policy.

9.4 A Trustworthy Immunization Policy

Trust in vaccination is a result of many different factors, and as we have argued, democratic states should be reluctant to try to influence it in a direct way. What governments must focus on is being trustworthy, to give citizens reasons to trust the state and the health policies it enacts. In this section, we suggest seven characteristics of a trustworthy immunization policy, thereby combining insights from the analyses in this and previous chapters.

In general, being trustworthy involves being transparent about one's position and about the grounds for choices that one makes, embracing values and goals that others have reason to endorse as well, taking the needs and perspectives of people seriously, and being competent in the skills needed to carry out what must be done to accomplish the goals at stake. Jointly, these elements facilitate relationships of trust. By applying them to the role of the state and the nature of immunization programs, we propose the following requirements for trustworthy vaccination policies.

1. Vaccination policies are transparent and based on reasonable values and scientific evidence. The core values that guide vaccination policy should be uncontroversial. This includes the protection of the health of all (and notably of children); the protection of societal life against disruptive outbreaks that undermine, among other things, a stable economy and a well-functioning health and education system; and equitable access to vaccination for all. Empirical claims about the prevalence and impact of disease and the effectiveness and safety of vaccines that are used for policy making should be evidence based. There is no better ground for general empirical claims than science. Political decisions about the content of a program therefore require expert scientific advice in which clear and transparent criteria are applied that are based on the core values mentioned above (Gezondheidsraad, 2013; Pierik, 2021b; Verweij & Houweling, 2014).

2. The state sees to it that citizens have easy access to independent, evidence-based information about protective effects as well as adverse side effects of all vaccinations that are part of the collective program. Ideally, every individual is able to form a well-considered judgment about immunization. Even in mandatory programs, it is important that participants are well informed about vaccination and the effects they can expect. Evidence-based information is also important as a counterweight to all less reliable information that is often easily accessible. At the same time, it is important to distinguish independent information provision from the more persuasive messages that governments will communicate to promote compliance. The state cannot and should not be neutral about people's choice for or against participation, and this creates a possible tension within trustworthy information policies. Dealing with this tension in a trustworthy way first and foremost means being explicit about it: to make it clear that the state has a responsibility to protect public health and therefore aims at participation rates that are as high as possible. On the other hand, citizens should be able to trust that

this policy goal does not determine the content of information about, for example, the prevalence and severity of side effects. Arguably the best way to do that is to let an independent body (e.g., the relevant scientific advisory committee) determine or review the factual information that the state makes available to citizens.

3. Concerns of hesitant parents are taken seriously, but health authorities and professionals are also active in pointing out the flaws of misinformation or false beliefs. People who are very worried or uncertain about immunization, for example, because they have experienced adverse events or have heard stories about side effects, are not always in search of objective scientific evidence but are much more likely to be seeking an understanding, comforting response. One of the factors that may explain the “success” of antivaccination groups is that they *do* seem to offer such a response, and they do tell a story that centers on the doubts people experience. By emphasizing that everyone should do their own research on vaccination, antivaccination groups take laypersons’ perspectives seriously—or so it seems. Official responses to vaccine hesitancy, on the other hand, often focus on “getting the facts right,” and this unintentionally communicates that overconcerned people are ignorant or insufficiently knowledgeable about vaccination science. This may easily make them feel disrespected by the state or by “experts,” which can lead to distrust (Larson, 2020, p. xxxv). Although immunization often involves massive programs that cannot be tailor-made to everyone’s preferences or needs, public health institutions should have sufficient funding so that professionals can dedicate time and energy to engaging with the worries and questions that parents have. It is much easier to trust an individual physician or nurse than “the government” or an anonymous public health institution. The physician or nurse can take the time to listen, can respond to questions in a comforting way, and can tell a person honestly what they do and do not know about what can be expected of a vaccine. Such a context is probably the most fruitful basis for restoring a relationship of trust that might have been damaged by the many factors that impede vaccine confidence.

A caring and responsive attitude does not imply that public health institutions and professionals should disregard misinformation. A trustworthy institution also requires competent professionals who are honest in presenting what they *do* know and who expose misguided beliefs to the relevant scientific evidence. At the same time, it is important for professionals to acknowledge that beliefs about vaccine safety are often embedded in a broader worldview

or (quasi-)religious outlook, for example, ideas about what is “natural” and “unnatural.” If someone believes that vaccines are not healthy because they are unnatural, it will not help to repeat that science shows they are safe; it may be more sensible to discuss how embracing vaccination might also be consistent with living one’s life in harmony with nature.

4. The government is transparent about what it expects of citizens in relation to protection against infectious diseases but also about what citizens can expect from the government.

A minister of health can and should call on parents to protect their children against infectious diseases and contribute to herd immunity. Even if immunization is voluntary, it is not wrong to make it clear that responsible parents who care about the health of their child—and of course all do—will opt for immunization. Moreover, everyone has a responsibility to contribute to, and not undermine, the collective protection against diseases that is beneficial to everyone. Vaccination is almost never a purely self-regarding choice: it is also a way of contributing to a public good and an act of solidarity or altruism toward other people who are more vulnerable to infection than oneself, notably children, the elderly, and those who are chronically ill. Protection against infectious diseases is a matter of joint activity, and a society can only be successful in this if it is a truly collective endeavor. The fact that it is not just the government that decides what is in the best interest of society but that the shared value of health requires a collective endeavor in which all participate—in other words, the state also *depends* on citizens who participate in immunization programs—offers a further condition for relationships of trust.

On the other hand, a trustworthy government does not just make it clear what is to be expected of citizens; it should also be transparent about what citizens can expect of the government when it comes to the protection against infectious diseases. Such protection is a core responsibility of the state, and citizens should have reason to trust that the state is taking it seriously. This task cannot just be delegated to parents, doctors, child day care centers, or schools. A trustworthy government makes it clear what steps will be taken if herd protection is threatened due to declining vaccination rates.

Trust in government is not only at stake in relation to vaccine-hesitant parents. Parents who do endorse immunization should also be confident that the health of their child, who might be too young yet to be immunized against measles, will not be threatened by the choices of others who are vaccine hesitant. Indeed, when vaccine coverage is low, this creates

infection risks for young children (<1 year old) attending child day care centers. Therefore, the policy we proposed in chapter 7—a policy that specifies under what conditions a program that has been voluntary to date will implement mandatory measures—fits well with a trustworthy approach. It shows when and how the state will put more pressure on vaccine-hesitant citizens if a voluntary approach appears insufficient to maintain herd protection.

5. Vaccinations are not simply forced or imposed on citizens and their children. By emphasizing that immunization is the right choice yet enabling citizens to make their own choice and, if they really want to, to opt out, a government is inviting them to trust the program. This affirms the importance of a program that does not take away individual freedom and autonomy. And allowing people to opt out if they have very strong objections does not imply that it does not matter what they choose to do. The choice situation is not neutral: governments and public health professionals should see and present participation as the responsible choice (cf. requirement 4). Opting out can therefore have certain consequences, especially when there are risks of outbreaks if the vaccine coverage is too low. If the threat of a possible outbreak is real, governments have reason to be less tolerant of citizens who refuse to participate (cf. requirement 6).

6. Government and public health authorities are prepared for a possible situation in which vaccine coverage has become too low. This involves a law that specifies both a minimum level and a set of measures that will be implemented if coverage drops below that level (Pierik & Verweij, 2019b). Such a preparedness plan contributes to the trustworthiness of a program—both toward parents who endorse immunization but also to those who are hesitant. Parents who are concerned about possible outbreaks that might be dangerous for their child will need confirmation that the state will take precautions if the risk becomes real. By having a preparedness plan, the government is conveying that it is vigilant and will enact measures if herd protection is endangered, but it also shows that room is left for hesitant parents to opt out. At the same time, such a preparedness policy makes it clear that, if societal polarization increases, hesitant parents do not have to fear ad hoc measures that will be imposed on them. More coercive measures will only be installed when the vaccination rate falls below a predefined minimum threshold level.

7. Immunization policies are not technocratic but democratic decisions, which require public accountability. Policies need to be based on state-of-the-art science, but government and other politicians cannot hide behind science if policies are questioned. Questions about what infection risks are still acceptable, how far to go to avoid even the rarest side effects, and what level of vaccine coverage is to be considered a minimum are all normative political issues. Public accountability might involve, for example, an annual reflection on the effectiveness of the program, on the prevalence and nature of side effects, and on the sufficiency of current immunization rates. Public health institutions in many countries do publish such figures, but what is required as a matter of political accountability is that these figures are also presented and discussed by the minister of health, enabling parliament to raise questions about past and future measures.

9.5 When Public Distrust Prevails

In this chapter, we have discussed how a democratic state can respond to misinformation and alternative views about the effectiveness and safety of immunization—and how it should not. A key responsibility for the government is to be trustworthy toward citizens, including to those who have second thoughts about immunization or explicitly reject it. In a democracy, a trustworthy state hardly can suppress spread of misinformation about vaccines, even if such misinformation would undermine the efforts to maintain a sufficient level of vaccine coverage. If group-level protection against diseases like measles is threatened, vaccine mandates are better justifiable than censorship. This may raise worries about ongoing spread of misinformation. State coercion may motivate antivaccination groups to increase their efforts in spreading “news” about the dangers of vaccines and raise their voice about the illegitimacy of government policies—thereby fueling public distrust.

Now suppose that such distrust would prevail in a country that has implemented mandatory vaccination for children against measles and other diseases. Can mandatory immunization still be politically legitimate when a very large part of the population is persuaded by misinformation and convinced that vaccines are unsafe? Ultimately, this is a matter of political debate and decision-making. If vaccine distrust would have become so widespread that a parliamentary majority rejects coercive measures, mandatory vaccination

loses its legitimacy—even if it is based upon robust biomedical evidence and ethical and legal justifications. This is what democracy is about.

Fortunately, it is unlikely that such a scenario would occur. As discussed before, recent cases of states and countries that adopted more coercive measures, like California, Australia, Italy, and France, did not result in a significant backlash in public support for vaccination. Moreover, such backlash is arguably less likely when governments ascertain their immunization policies are trustworthy in the sense we have discussed in this chapter.

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