The Moral Case For The Routine Vaccination Of Children In Developed And Developing Countries

ABSTRACT In developed countries some parents have decided not to provide routine vaccinations for their children, while in many developing countries there are inadequate rates of vaccination for various reasons. The consequences for children, and members of the community in which they live, can be significant and even tragic. Although some parents may worry that vaccines will harm their child, there is a broader moral case for vaccination that parents and policy makers should consider. This case has four components: benefits and harms, best interests, community benefits, and justice. This moral case should be central to deliberations about vaccination by parents and policy makers.

Several moral arguments can be used to make a case in favor of vaccination and may be useful in promoting vaccination programs. Moral arguments are focused on what we ought to do. There are at least four distinct arguments in favor of vaccinating children. The first is concerned with the importance of balancing harm and benefits. The second is focused on the best interests of the child. The third appeals to various societal, community, or public benefits. The fourth argument addresses justice.

Vaccination is a classic example of a public health issue. For that reason, we ought not to focus solely on moral considerations relating to individuals, but we should also consider arguments related to social groups. This article focuses on the moral case for routine vaccination of children in developed and developing countries. Children are vulnerable to vaccine-preventable infections, and there is great potential for harm if they are infected. Children also are unable to make decisions about their own care. Yet discussions about vaccinating children have focused on compelling parents to vaccinate their children, whether they wish to or not. This focus has obscured the more general moral case for parents to vaccinate their children.

Harm And Benefits
The first argument in favor of vaccinating children focuses on bringing about benefit and preventing harm. Perhaps the key aim of vaccination is to protect the individual vaccinated, so that when he or she comes into contact with another person with the disease, the immune system is primed to avert infection.

About 2.5 million deaths could be prevented each year by vaccination.1 What are often judged to be trivial diseases (for example, measles) in the wealthier parts of the world can be devastating for a young child in a society where vaccination rates are low, access to basic health care is limited, and nutrition is poor. The perception of risk thus is influenced by circumstance, and such differences in perceptions of risks are important in arguments about vaccination. Parents in many parts of the world face the uncertainty of real dangers from infectious disease in a way that parents in the developed world do not.

Of course, the benefits of vaccination need to
be weighed against the potential risk of harm from the vaccination itself. Any intervention will carry some risk, but such risk needs to be weighed fairly against the benefits. It is not appropriate to make decisions based only upon a presumption that we ought to avoid risks. Such a position is incoherent, because doing nothing also carries risks.

**Assessment of Harm** An argument against vaccination on the basis of risks seems to assume either that not vaccinating carries fewer risks than vaccinating, which in many cases—particularly in the developing world—is false, or that there must be some other reason to favor not vaccinating. One plausible possibility is that some parents may view vaccination as doing something to their children. Thus, if any harm results they may feel responsible, whereas any harm resulting from disease is somehow “natural.” The obvious problem here is that we tend to hold parents responsible for any foreseeable harm to their child (no matter how it comes about). We should not confuse individual perceptions of risk with the fair determination of the balance between risks and benefits.

All other things being equal, preventing harm is, surely, preferable to letting the harm arise and then seeking to treat it. Take tetanus vaccination as an example. A preventive vaccination is low risk and low cost. However, if someone is unfortunate enough to develop this condition, his or her chances of survival without sophisticated and expensive health care are poor. If the person has access to state-of-the-art medical treatment, he or she might occupy a hospital bed for six months. Prevention becomes all the more important where there is little routine health care, the nearest hospital is many miles away, and public sanitation is inadequate.

Choosing not to vaccinate a child based on perceptions about risks may be a symptom of a society that has largely conquered infectious disease, where parents may have no knowledge of the harm such diseases can cause. Perceptions may be very different when the main ethical issue regarding vaccination is lack of access to something that is seen as protecting one’s child. A good example of this is the polio vaccination program in the United States during the 1950s, when parents would line up for hours to ensure that their children were vaccinated. Polio was seen as a real threat, so there were few qualms about vaccination’s undue risk.

**Avoiding Harm to Others** An important moral consideration is the responsibility for avoiding causing harm to others. One of the most popular approaches to medical ethics during the past thirty or more years is a general application of John Stuart Mill’s liberalism, one interpretation of which is that individuals should be free to do as they wish unless their actions might cause harm to others.

It is interesting to explore what such an argument might mean in the context of vaccination. Am I, for example, under an obligation to vaccinate my children because if they become infected they might pass on the infection to others, who may then be harmed? There are a number of complications if we seek to apply a harm-to-others argument to the case of vaccination.

First, we are talking about responsibility for harm caused by an omission—that is, the failure to vaccinate the child—rather than an act. But the most important issue here is surely the ability to foresee the harm.

Second, it will be difficult to attribute responsibility in such a context, because a number of unvaccinated individuals could be the source of the infection (and hence harm). Although there may be difficulties tracing the causation in actual cases of harm, the mere fact that there is a foreseeable increase in the probability of causing harm is enough to impose an obligation to act. Such an argument may be useful to the policy maker interested in changing behavior, but it is harder to see it convincing a skeptical parent to vaccinate a child.

**Best Interests**

In a discussion of routine childhood vaccination, an important moral argument is to appeal to what is in a child’s best interest.

We tend to leave decision making about children’s health care to their parents, presumably because we believe that parents will act in children’s best interest. But parents do not always decide what is in a child’s interest; indeed, we have no reason to think that parental decisions are by definition in a child’s best interest. Clearly, such decisions must be related to the individual child and context and so ought to allocate a great deal of weight to the determination of the balance between risks and benefits.

In general, arguments based on best interests are likely to support routine childhood vaccination. However, they will become even more powerful if the background risks from the disease are serious. Where infectious disease is widespread, often deadly, and there are few if any treatment options, childhood vaccination can save lives, and it will be hard to argue that it is not in the best interest of a child.

Medical facts are not the only ones to be considered in relation to best interests. What if the parents object to vaccination for religious or philosophical reasons? How do such considerations get weighed in the deliberations about
what is best? Clearly, such factors are relevant because they are likely to affect the child.

For example, if a religious community to which the parents belong rejects a child because he or she has been vaccinated, this will have an impact upon the welfare of the child and is therefore a relevant consideration. However, here it is the parents’ religious views that end up determining the outcome. Although such views may be relevant, a test of best interests must be focused on what is best for the child, all things considered, not just what the parents want.

In many cases, the state might not consider it worthwhile to enforce what is best in such circumstances, given the costs of going to court (both financial as well as to the child’s welfare). Where the risk from infectious disease is significant in a particular environment, then the burden ought to be placed upon the parents to demonstrate why vaccination should be rejected.

Community Benefits
The focus of discussions regarding vaccination, at least among parents, is the balance of benefits and risks to the individual child. In addition, other important benefits of many vaccination programs occur at the community or population levels. For example, when sufficient numbers of people in a specified group have been vaccinated and an infected individual enters the group, it is unlikely that the infection can be passed to a nonvaccinated, uninfected contact. In brief, upon entry into the relevant community, the infection has nowhere to go and therefore dies out. This is called “herd immunity” in the medical literature, but perhaps it is better to call it “community immunity,” because it emphasizes the social and positive nature of vaccination.

Community immunity offers additional protection to the whole of the relevant group beyond any individual benefit from direct vaccination. This is particularly important because there will always be some members of the relevant group who will not have the required immunity. They may be too young to be vaccinated, or they may have a severe allergy to a vaccine component. Or they may not have sufficient immunity despite vaccination, because for some reason the vaccination failed.

Without follow-up blood tests for everyone who is vaccinated, it is impossible to tell who has sufficient immunity. This makes it clear that individual vaccination is no guarantee of individual benefit, and it is the reason why community immunity provides benefit to all.

It is very common in discussions about vaccination to focus only on individual benefits and harms. However, we must also acknowledge these community- or society-level benefits.

Public and Common Goods
Let’s look at two ethically relevant considerations: public goods and the common good. Public goods are created by the actions of many individuals. Such public goods cannot, once created, be broken up and shared by the constituent contributors (public goods are indivisible), and no individual in the relevant group can be prevented from enjoying the benefit (public goods are nonexcludable) even if they have not, themselves, contributed to it. Both of these features can be seen in relation to community immunity.

What obligations, if any, one has in relation to the creation and maintenance of such public goods is disputed. It is reasonable to recognize a duty to contribute to such a benefit, given that not doing so will count as a case of free-riding, or unjustly benefiting from the creation of that public good where one has not made any contribution oneself. We can think of community immunity, brought about through vaccination, as fulfilling the criteria for being a public good.

We can also consider arguments that appeal to common goods. The language of “common goods” is an attempt to capture something different from public goods. Common goods are those goods that we share or hold jointly. Examples of such goods are the kinds of things that allow us to live a good or meaningful life together. Such factors might include shared values.

The concept of the common good can be applied to the idea of community immunity because we can think of it as a shared protective project, where the community acts together to prevent harm to itself as a common entity. All individual participants benefit from this joint good. However, the reasons to participate in the development of such common goods may not be best captured by talking of an obligation to contribute. Rather, the very meaning of a common good implies that we participate in its development.

In addition to these appeals to public and common goods, it is also possible that community benefits arise from financial or economic savings as a result of vaccination. This concept supports the idea that prevention may be cheaper to society than the cost of treatment, should the potential harm eventuate. Such cost-effectiveness arguments are common in reaction to vaccination. They are particularly powerful where the costs of vaccination programs are borne collectively by a society.

Even societies without European-style solidarity-based health care systems, such as the United States, fund routine childhood vaccinations in a collective way (through federal laws and general taxation). As a result, we all save resources if it is
true that prevention is cheaper than cure. If a disease can be eradicated, then we can certainly reap even larger rewards due to the (hoped-for) perpetual benefit of saved future vaccination costs, as occurred with smallpox.11

These societal and community moral arguments align with a key aspect of public health: that public health is focused on the health of populations or groups, not just that of individuals.12 To acknowledge this does not commit one to believe that the interests of the many must always take priority over the wishes of an individual. It does mean that the interests of a population are a relevant consideration in deliberations about what action to take.

Justice

There are many compelling arguments for greater justice in global health. Vaccination, especially in developing countries, is a relatively inexpensive intervention with important benefits for individuals and communities. If all countries followed the World Health Organization–recommended schedule for vaccinations, they would contribute toward fulfilling a number of the United Nations’ Millennium Development Goals, such as reducing child mortality.

Justice is a highly disputed concept, but, in general, it requires us to do what is right and fair. Justice arguments, within the context of vaccination, are powerful precisely because not all children in the world have the opportunity to be vaccinated. Often the degree of opportunity is indirectly proportional to the real risk from the relevant diseases.

Justice may require that all children in the world have the same opportunity to enjoy the benefits of vaccination. However, if some children are at increased risk, as many are in the developing world, then justice requires urgent action to secure what is a relatively inexpensive intervention to prevent unnecessary harm to this vulnerable population that cannot protect itself.

Vaccination can play a vital role in greatly reducing illness and death, and securing vaccination for all is an important factor in addressing equity in global health. It is hard to argue with the idea that every child is equally valuable. Indeed, it seems highly offensive to suggest that we ought not reduce the chances that serious harm will affect a child because we decided to save a relatively trivial amount of money.

Justice provides reasons for shifting resources toward addressing the unequal global health burdens. Vaccination is a particularly effective means of contributing to the survival of very small children, and it must be a priority in discussions of global health. 

Discussion

I present numerous reasons why securing long-term access to routine vaccination for serious childhood diseases should be a global priority. This is partly an issue of funding, but it also is an issue of logistics and commitment.

Nothing in any of these arguments requires compulsory vaccination as a matter of routine, rather than, say, securing the opportunity for parents to access vaccination for their children. We can, unfortunately, rely on the pressing disease burden in many countries to motivate participation in vaccination programs. Where this is not the case, it may be better not to enforce vaccination, given the impact on wider trust in health services. However, it is worth noting that the best-interests argument may, in some cases, provide a justification for compulsion if the risk of harm from an infection is great enough.

Justice requires wealthier countries to fund vaccination programs in countries that have fewer financial resources. However, there are people who will not be convinced of this. They may deny any nonvoluntary commitment to others of any kind.

Such skeptics must surely realize that funding global vaccination programs is in one’s own self-interest as well as in the interest of saving the lives of others. Given the nature of infectious disease, there is always the possibility of an epidemic’s being introduced into one’s own country from elsewhere. This is a particular concern if there are falling vaccination rates in one’s own country due to a perception of more risk from a vaccination than from some unknown disease. Given this, there may well be a happy convergence between what is required of the governments of richer countries (an obligation to fund vaccination programs) with more pragmatic or prudential considerations related to self-protection from threats of disease.

Conclusion

In making the case for vaccination, we need to focus on the individual requirements of each context, such as the nature of the relevant disease, the options for a choice of vaccines, the context of the disease burden in a particular country, and the possibility (or not) of accessing a reasonable standard of health care treatment in the face of developing a particular disease.

A number of different arguments can be used to support the general claim that a moral case can be made in favor of vaccination. Different arguments may be given different weight in discussions depending upon the target audience. However, this fact does not, on its own, count against the force of any of the arguments them-
selves. Indeed, although one or more such arguments may (or may not) convince on its own, together they provide a compelling moral case for the routine vaccination of children, especially those in developing countries.

The author thanks the Bill & Melinda Gates Foundation and the McLaughlin-Rotman Centre for Global Health at the University of Toronto for funding that supported the writing of this article. The author also thanks the participants at the meeting of the Public and Political Support Working Group for the Decade of Vaccines Collaboration in Washington, DC, on January 31–February 1, 2011, for their comments on an earlier version of this article.

NOTES


ABOUT THE AUTHOR: ANGUS DAWSON

Angus Dawson is the senior lecturer in ethics and philosophy at Keele University.

Angus Dawson argues the moral case for vaccination, in terms of both supporting immunization in developing countries and minimizing the rejection of vaccination in developed ones. He hopes that his paper “will contribute to a more informed public conversation” about this vital issue.

Dawson is the senior lecturer in ethics and philosophy at the Centre for Professional Ethics at Keele University, in the United Kingdom. He is also joint editor-in-chief of the journal Public Health Ethics and joint coordinator of the International Association of Bioethics’ Public Health Ethics Network. He has specialized in teaching ethics to health care professionals for most of the past fifteen years.

Dawson’s main research interests are in public health ethics, particularly vaccinations and issues related to lifestyle choices, and the use of empirical evidence in moral arguments. He has been involved in consultation and committee work in the area of tuberculosis care for the World Health Organization and in issues such as quarantine in public health emergencies for the Centers for Disease Control and Prevention, the Public Health Agency of Canada, and the Health Protection Agency in the United Kingdom.

Dawson has published more than seventy papers and is editor or coeditor of five collections of original papers, mainly on topics in public health ethics, including (with Marcel Verweij) Ethics, Prevention, and Public Health (Oxford University Press, 2007). He is also the editor of Public Health Ethics: Key Concepts and Issues in Policy and Practice (Cambridge University Press, 2011).

He holds a master’s degree in health care ethics from Liverpool University and a doctorate in philosophy from Manchester University.