

Moral Considerations With Certain Viral Vaccines

by
John D. Grabenstein

Darmacists usually assume that medications serve a moral purpose: to improve human lives. I am inclined to give vaccines a moral primacy among medications, because vaccines prevent disease from happening in the first place.¹

Recently though, some vaccines have received harsh moral criticism. Ardent abortion opponents object to the method by which rubella, varicella, and certain other viral vaccines are manufactured.^{2,3} The implications are far-reaching and literally millions of lives hang in the balance.

Two separate problems exist: One is the origin of the virus used to make rubella vaccine; The second involves the origin of the cell-culture media used to manufacture several viral vaccines, including the new vaccine against chickenpox.

ORIGIN OF RUBELLA VIRUS RA27/3

The virus that led to the only rubella vaccine available in the United States (*Meruvax II*, Merck) "was recovered from the explanted tissue of a fetus obtained at therapeutic abortion from a mother who had been infected with rubella virus."⁴ The written record of that era implies that the abortion was not conducted in order to isolate the virus, but because the mother was infected with rubella virus.^{5,6} This distinction will be important in considerations described below.

Since that RA27/3 strain of rubella virus was isolated, it has been propagated in human diploid cell lines. No further abortions are necessary to sustain the supply of attenuated rubella viruses used to manufacture additional batches of rubella vaccine for the future.

ORIGIN OF HUMAN DIPLOID CELL LINES

Human diploid cell cultures are batches of immature cells propagated artificially in a laboratory. Diploid cells have twice the number of chromosomes as sperm or egg cells. Certain diploid cell lines are valuable in vaccine manufacture, because these cells can be propagated indefinitely and are a reliable medium in which viruses infectious to humans grow readily. MRC-5 and WI-38 are the names given to two different lineages of human diploid cell cultures. For example, varicella vaccine (*Varivax*, Merck) is produced by growing varicella-zoster viruses in both MRC-5 and WI-38 cell cultures. The moral problem arises because each of these cell lines started with cells harvested from a deliberately aborted fetus.



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The WI-38 line was developed in Philadelphia at the Wistar Institute (WI), with lung cells from a female fetus of 3-months gestation. The WI-38 line was first described in 1961.^{6,8} Similarly, the MRC-5 line was developed in 1966 by British scientists funded by the Medical Research Council (MRC).^{2,6,9} These cells came from fetal lung fibroblasts "taken from a 14-week-old male fetus removed for psychiatric reasons from a 27-year-old woman...."⁹

These cell lines have been growing under laboratory conditions for more than 30 years. For both, the cells are merely the medium in which are grown the viruses that act as the vaccine's active ingredients. These cell lines do not form a complete organism and do not constitute a human being. Viruses are collected from the diploid cells and then processed further to produce the vaccine itself.

Viruses, you may recall, cannot reproduce on their own. Thus, agar in a petri dish is insufficient to grow viruses for industrial use. Viruses require a living host in which to replicate, such as a specific kind of human diploid cells. Vaccine manufacturers currently have few options for viral culture media, for valid pharmaceutical reasons of science and human safety.⁶ Thus, it is far more difficult to manufacture biological medications (e.g., vaccines, antibodies) than it is to produce chemical medications (e.g., penicillin, aspirin). The bacteria that go into bacterial vaccines can be grown in simple laboratory cultures. But pro-

duction of enough viruses to produce millions of doses of vaccine requires a more sophisticated level of technology.

This controversy reaches far beyond the merit of varicella vaccine, because MRC-5 cells are also used to prepare vaccines against several other

serious or fatal diseases, including two hepatitis A vaccines, the inactivated poliovirus vaccine, and a rabies vaccine (*Imovax Rabies*, Pasteur-Merieux-Connaught).¹⁰ WI-38 cells are used for *Varivax*, plus vaccines against rubella and adenovirus.

The WI-38 and MRC-5 lines also do *not* require additional abortions to sustain the cell lines,

nor to produce additional batches of vaccine. Fetal cells themselves are not ingredients in these vaccines.

IMPLICATIONS OF VACCINATING

Before vaccines were available, poliomyelitis afflicted 57,000 people and killed 3,100 more in a single year in the U.S. Varicella currently hospitalizes 9,000 and kills 50 to 100 people each year in the United States. Hepatitis B infects 300,000 people and kills 5,000 in the U.S. annually, frequently those persons without a known behavioral risk factor. Hepatitis A afflicts more than 10 million people and kills more than 14,000 people around the world each year. A pandemic of rubella struck the United States in 1964-65, producing 6,250 spontaneous abortions, over 2,100 neonatal deaths, and 2,000 cases of encephalitis. At least 30,000 infants

(1% of all pregnancies) developed devastating birth defects due to congenital rubella syndrome that year.

Some opponents of *Varivax* say that using vaccines manufactured in this way "gives the abortion industry one more 'reason' for proclaiming the benefits of abortion."² Does use of these vaccines necessarily mean being an accomplice to past abortions or to future ones? Might it ever be ethically justifiable to use vaccines made in this way?

MORAL PRINCIPLES FOR GUIDANCE

Two moral principles can help guide our actions: The first is the "principle of double effect," founded in work of Thomas Aquinas, a philosopher and theologian of the 1200s.¹¹

The principle of double effect can help us determine if an action that has both good and bad effects is justified. Actions with both good and bad effects can be morally acceptable under specific circumstances. With these vaccines, the good effect is disease prevention and the bad effect is the potential for encouraging future abortions by using these vaccines. Even if using these vaccines might remotely lead someone to an abortion in the future, the vaccines could still be acceptable if (1) the vaccine can protect the vaccine user, (2) the vaccine user does not intend to encourage additional abortions, (3) more abortions are not needed to make more vaccine, and (4) the good effect is at least as important as the evil effect.

Another approach to this issue involves a moral concept known as "remote mediate material cooperation," dating back to Alphonsus Liguori, a philosopher who lived in the 1700s.¹²⁻¹³ This is the condition where the moral object of the cooperator (*i.e.*, the vaccine user) differs from that of the wrong-doer (*i.e.*, those involved with contemporary abortions). Even if one believes that using these vaccines advances the

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cause of those who favor abortion, a point in serious doubt,¹³ vaccination could still be justified if sufficient reason exists (to avoid serious disease) and if "scandal" can reasonably be avoided.

In moral theology, if one person's actions lead another person into evil, it is called "scandal." This differs from the word's colloquial use in everyday conversation. Scandal comes from Greek roots, meaning "to cause to stumble." If we use these vaccines for their intended good, we must be clear to others that we reject any defense of abortion and do not intend to lead others astray in this regard. Further, we certainly reject any "progress" that leads to additional abortions.

MORAL REASONING

Catholic bishops in Britain addressed this dilemma in 1994, when a protest disrupted a national rubella vaccination campaign.¹⁴ A British health-care ethics center advised the bishops that "it is reasonable for parents to hold that there are no generally binding obligations which should prevent them from seeking to secure the benefits of rubella vaccination for their children." But they also found that other parents might "reasonably judge that... any consent of theirs to vaccination may be a source of scandal, obscuring in the minds of those they love a true appreciation of the evil of abortion."

Richard Doerflinger of the U.S. Catholic bishops' Secretariat for Pro-Life Activities summarized the conflict by saying that refusing vaccination "could be a moral witness, but it's not something you could demand of people."¹⁴

But is there not an obligation to protect the lives of people vulnerable to preventable infections, even if it uses a vaccine with regrettable origins? Without these vaccines, multitudes around the world die, year after year. The answer, I believe, lies with

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the moral imperatives of justice and charity.¹⁵ Justice and charity lead parents and health professionals to provide all reasonable care for their children and patients.

Edward Furton, editor of the newsletter of the National Catholic Bioethics Center (NCBC), noted that "parents have a moral obligation to provide vaccinations to their children..."¹³ He and colleague Daniel Maher reason that because the abortions that enabled the production of these things are in the past, being vaccinated does not involve any sharing in immoral intention or action of others.

The health consequences of these vaccine-preventable diseases are clear.^{10,15} Rabies is invariably fatal without immunization. Rubella causes horrible birth defects. The other diseases afflict or kill thousands to hundreds of thousands each year in the US, and many more around the world. Over a decade, these numbers easily exceed a million lives. The number vulnerable is far greater, a number virtually equal to the people on our planet.

MRC-5 and WI-38 cultures and the rubella RA27/3 strain came from three isolated abortions many decades ago. Those three wrongs, involving three precious lives, *can never be righted*. But discarding all the work (separate from the abortion) done since then jeopardizes the lives of millions. Protecting today's patients from real threats of illness and death offers benefits with no justification of past evil.

These vaccines can morally be used. There is no question of the end justifying the means, because the origi-

nal abortions were not undertaken with the intent of producing vaccines. Using the vaccines does not justify the original abortions, which were then, and remain now, morally unacceptable. Rather, the vaccinations are morally acceptable, despite the abortions, because they are morally separate actions.³

The fetal cells that eventually were transformed into the WI-38 and the MRC-5 cell lines were removed from infants who were already dead. The cellular biologists did not induce the abortions. Indeed, benefiting from vaccines manufactured using these cells is not unlike benefiting from an organ transplant, where the organ came from the victim of a murder.

ACTION WARRANTED

There are several actions we can take today to give witness to the need for moral consciousness among pharmaceutical manufacturers. We can write to researchers and manufacturers, asking that future vaccines be developed in alternate cell systems, such as other mammalian cells like Chinese hamster ovary cells or Vero cells. Other viral vaccines already rely on mammalian cells or fertilized chicken eggs as viral growth media. Another option, as exemplified by hepatitis B vaccine, is to produce vaccine antigens with recombinant DNA technology. Or, whenever two or more vaccines comparable in safety and efficacy are produced by different methods, we can consider favoring the use of the product with no ties to abortion.

Vaccine boycotts are morally unnecessary, as reasoned above, and can have devastating consequences. A

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recent analysis demonstrates how clusters of people with religious or philosophical objections to vaccination can undergo outbreaks of serious diseases. For example, the risk of measles was 35 times higher among people claiming exemptions to vaccination, than among the general population.¹⁶ Reports from many states have documented outbreaks of vaccine-preventable diseases that started primarily among vaccine decliners.

Of the vaccines discussed above, only rabies vaccine currently offers a choice of several vaccine formulations produced with various cell-culture media. The other two rabies vaccines are produced by BioPort Corporation (*Imovax*, produced in fetal Rhesus monkey lung cells) and by Chiron Corporation (*RabAvert*, produced in synthetic cell culture media).¹⁰


Most important, perhaps, is to assert the belief that therapies involving fetal tissue itself, such as those proposed for neurologic conditions, are immoral and unacceptable. Such therapy could be a grievous source of scandal, in that ongoing supplies of fetal tissue would be needed, attempting to justify future abortions. Further, it is important to avoid new research on deliberately aborted fetuses, such as certain forms of stem-cell research.

MORAL VACCINATIONS

Remember that considerable disease and death result from failing to vaccinate. The principle of integrity directs humanity to maintain the

health of heart, soul, mind, and body. Pope Pius XII once praised health-care workers for emphasizing preventive medicine: efforts "to preserve men from sickness and contagion and epidemics."¹⁷

Like other health-care workers, pharmacists are "ministers of life," each called on as "a witness of thorough respect for every human life."¹⁸ Many vulnerable people need vaccines and trust their pharmacist to care for them. They await your recommendation to be vaccinated.

Do pharmacists have an obligation to protect their patients through immunization? I believe so.¹ After considerable thought, I remain a stalwart vaccine advocate. 

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