Thinking about whether or not you should receive a Covid-19 vaccine?

(Debbie Duncan, Malcolm Duncan and Chris Shaw)

Introduction

(Malcolm Duncan)

The race is on for a vaccine that will protect us from Covid-19 – and rightly so. This virus has had a profound impact on the world and finding a medical and scientific way to fight it has been the priority for tens of thousands of researchers, virologists, medics and pharmaceutical companies. According to John Wyatt, as of September 2020, there were 40 different coronavirus vaccines in clinical trials on humans and at least 92 preclinical vaccine under active investigation in laboratory experiments.[i] The challenge that many of us face, is making a decision about how we respond to the offer of a vaccine. The Moderna Vaccine claims to present 94% efficacy,[ii] the Pfizer/Biontech vaccine claims similar results,[iii] with the Oxford/ AstraZeneca vaccine trials showing efficacy of 90% when administered as a half-dose followed by a full dose in a second treatment.[iv] The medical and research world broadly welcome the speed and apparent efficacy of the development of these vaccines.[v] There is still a need to analyse data and dig into the research behind these results though, and whilst the World Health Organisation has welcomed the results of clinical trials, it also wants to make sure that it can examine the data more fully.[vi] Public Health England, [vii] The Scottish Health Secretary[viii], Public Health Wales,[ix] and Public Health Northern Ireland[x] have all issued statements concerning the rolling out of vaccination programmes and the challenges of mass vaccination. Whenever the vaccine becomes available, however, each of us must make a decision about whether we will receive it or not.

In an effort to avoid many of the conspiracy theories that are circulating at the moment,[xi] we want to think through the question of vaccination against Covid-19 in as clear, as open and as helpful a way as possible. We aren't intending to tell you what you should or should not do. Instead, we want to help you think through your own questions, responses and decisions. To help you, we will address three key areas:

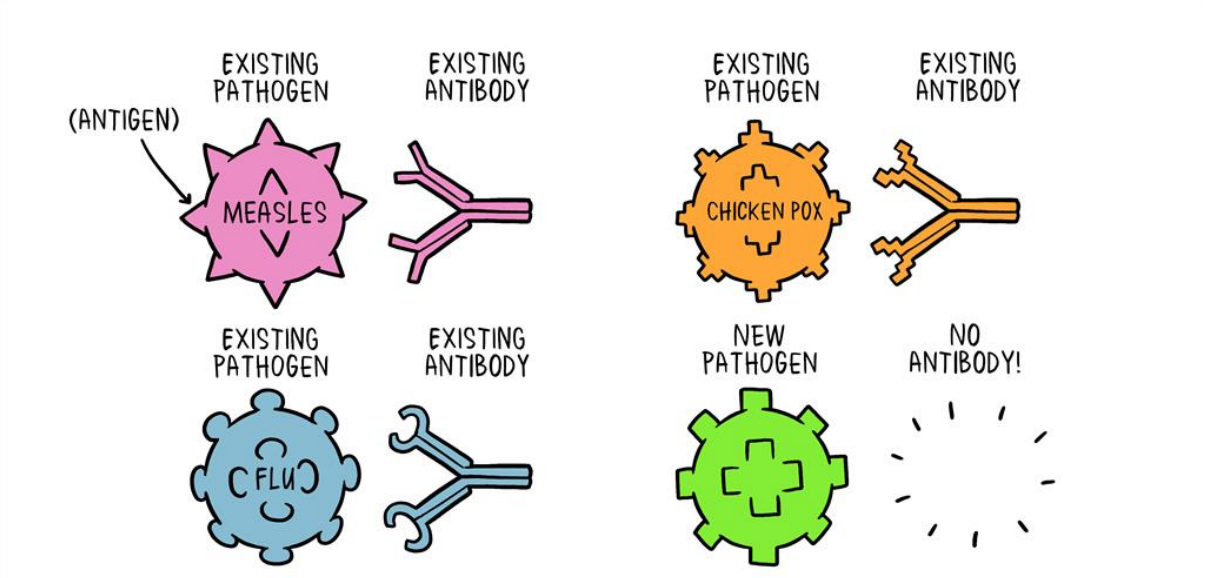
(1) How do vaccines work.

(2) Covid-19 Vaccines – the basic details

(3) Thinking about the ethics of receiving the Covid-19 vaccine.

How do vaccines work[xii]

(Debbie Duncan)



When a new pathogen or disease enters our body, it introduces a new antigen. For every new antigen our body needs to build a specific antibody that can grab onto the antigen and defeat the pathogen.[xiii]

When pathogens or disease-causing organisms infect the body, the immune system is triggered and the pathogen is attacked by a range of different immune cells.[xiv] Bacterium, virus, parasite or fungus are all pathogens that can cause disease. Each pathogen (or antigen) consists of unique subparts which, when presented to our immune system, stimulate our antibody production. Each antibody in our immune system is trained to recognize one specific antigen. Antigen-specific antibodies work in cooperation with the rest of the immune system, triggering an immune cascade of defence cells to destroy the pathogen.

Vaccines contain an inactivated form of the antigen or a small part of the pathogen. When the body detects the contents of the vaccine the immune system will be primed to make the antibodies needed to fight the infection.[xv] They do not cause the disease. Vaccine efficacy is dependent on the duration of protection.[xvi] Some vaccines however need to be given multiple times and can be administered weeks or months apart because protection is dependent on the antibody persistence and the quality of memory induced by priming doses.

Not everyone can be vaccinated, especially if they have underlying health conditions that weaken their immune systems. These people can still be protected from the disease by their community because the more people that are vaccinated, the less likely people will be in contact with the pathogen. This is known as herd immunity. Having a vaccination will help those vulnerable people in society.

The Covid-19 vaccines – the basic details.

(Chris Shaw)

There are three main contenders sprinting for the finishing line at present made by Pfizer, Moderna and Oxford University/Astra-Zeneca, respectively. All are awaiting approval for application to the general public following submissions of clinical trial data to regulatory authorities. This is undoubtedly a fast-track process which usually takes much longer for human medicines but as these vaccines meet an immediate global clinical need – a novel viral pandemic – such fast tracking is considered necessary to deliver these therapeutics to the general public in record time. Early indications are that each vaccine is well-tolerated and are highly-efficient in preventing a clinical illness of note. However, the numbers in the experimental groups are relatively small and side-effects may not make an appearance until many more people receive them. This undoubtedly will be watched closely.

Vaccines usually employ weakened or killed cells of the disease-causing organism and sometimes a purified form of a toxic component. The Pfizer and Moderna vaccines use a novel approach in which the COVID target for the human immune system is a piece of messenger RNA codes for the specific virus protein to be targeted. When injected, this target virus protein is made by the recipient's cells and invokes an immune response. Preliminary results show that this approach evokes a powerful and apparently protective antibody response. The Oxford/Astra-Zeneca vaccine candidate is likewise a COVID virus target protein but this is coded by a gene placed within the genes of a well –tried and tested innocuous carrier virus which when injected as a vaccine, makes the COVID protein which then evokes a protective antibody response. This approach has been used several times in the efficient production of vaccines and is thus better understood. Although all three produce an immediate protective antibody response, it is too early to say if they also produce protective long-term memory in the immune system – an important consideration.

All three vaccines have employed human foetal cell lines in their biological assessment and development. Most vaccine production requires efficacy and toxicity testing on living cells ideally of human origin as the widespread use of animal testing was downregulated for the more efficacious use such cells in drug testing generally. The industry thus has had to walk that fine line between acquisition of robust and scientifically-sound safety data and the ethical issues raised by modern drug development approaches.

Thinking about the ethics of receiving the Covid-19 vaccine.

(Malcolm Duncan)

There are myriad issues around the ethics of a Covid-19 vaccination[xvii] Our thoughts around receiving the vaccine are rooted in Christian Theology and ethics. We do not claim to represent every faith or community,[xviii] nor do we claim to represent a definitive and exclusive Christian view. In August of this year, for example, there was a varied and heated difference of opinion expressed in the Melbourne publication, *The Age,* to the suggesting from one of Australia's Roman Catholic archbishops that the Oxford vaccine should be boycotted.[xix]Rather, we offer these ethical and theological reflections to you in the hope that they will help those who are Christians and others to make a considered, thoughtful and prayerful response, in keeping with their faith and worldview, to accepting or declining a Covid-19 vaccination. We are not the first generation to face such dilemmas, nor will we be the last. [xx] A number of issues and challenges need to be considered.

1. We must each decide how we respond to the reality that the vaccines developed by Moderna, Pfizer/Biontech and Oxford/AstraZeneca all use cell lines. Whether it be the HEK-293 cell line, which was obtained from foetal cells in the Netherlands in 1973, (it is not clear whether these are cells that were from a therapeutic abortion or a spontaneous miscarriage), or the Per.C6 cell line, which comes from an abortion in the 1980's. John Wyatt asks us to consider whether receiving a vaccine that has used cell lines amounts to 'cooperating with evil' whilst also acknowledging that to be involved in our world, and to be a citizen in any society means some level of participation in a broken and fallen system[xxi]. Human remains are not contained in the vaccines. Cell lines have, however, been used.

   Perhaps the challenge lies in working out what we understand to be the differences between intentional and non-intentional cooperation, between what Wyatt describes as 'active and passive co-operation and between proximate (or physically close) cooperation and remote cooperation'[xxii].

   It is certainly true that as Christians, we have a responsibility to accept our moral agency – we are accountable and responsible for our decisions and our choices when we make them. [xxiii] The choices we each face are also determined by our own vocations and contexts. A person directly involved in testing a vaccine and using a cell line has dilemmas that a parent, deciding about whether or not to vaccinate themselves or their child, does not have. The greater good, of society, and the elimination of a deadly virus, are very important considerations. We must be true to our consciences here. Without a doubt, there is room to raise our voices as Christians at the ways in which vaccines are tested. Vaccines for Hepatitis B, and Influenza, for example, do not use cell lines. Some of the Covid-19 vaccines in trial also do not use human cell lines.[xxiv]

   What do we do, however, when the vaccine presented to us has been tested on cell lines? The Roman Catholic Church's position might be helpful here. They urge that the voices of Catholics must be used to challenge the use of human tissue and remain opposed to abortion. They also recognise the dilemma of conscience that faithful Roman Catholics will face and call on them to ask their governments to find vaccines and treatments that are not used on humans. At the same time, they draw a distinction between testing on human remains themselves and testing on tissue that has been generated *from* human remains. They also recognise that the greater good may be served by receiving a vaccine, particularly for the more vulnerable and at risk in our societies.[xxv] In the end, we must each make a choice that does not violate our sense of Christian teaching or our sense of Christian conscience. It is, however, possible, to accept that two people, with equally passionate views of the dignity of life might reach different conclusions on the receipt of a Covid-19 vaccine without having to suggest that either have violated a commitment to the dignity of life. For example, Debbie Duncan has decided that she will receive a vaccine when it is available, probably the Oxford/ AstraZeneca vaccination whilst Malcolm Duncan will receive this vaccine if it is clear that one not based on human cell lines will not be available in sufficient time to ensure the safety of his family, his congregation and wider society. Chris Shaw will receive any of the three leading vaccines that look like they will be available first. All three authors share a conservative theological view of the dignity of life and are actively engaged in advocating for the protection of both women and the unborn. All three share a desire to see the Covid-19 pandemic defeated. Each of us has made a decision in response to our own prayerful consideration of the

Scriptures, the teaching of the Church and the obligation to love our neighbours and do all we can to protect them.

It pains the authors greatly that so much of the Church has fallen silent on abortion. Our plea would be that we see the rights and personhood of women and of the unborn as a vital part of Christian witness in the world. Supporting agencies and groups that compassionately and clearly continue to advocate for the voiceless is a vital part of Christian public witness, and all three authors are committed to such activity. At the same time, the authors do not see a moral contradiction in accepting a vaccine for Covid-19 that has involved the use of cell lines. We accept that others may not feel the same way, but we believe that there should be grace, room and mutual respect in this ongoing discussion.

2. The validity of the data for vaccines must be examined carefully. The accelerated process of testing the vaccines and collecting data must not be at the expense of the safety and the well-being of participants in trials or the general public. It seems obvious to state, but the vaccines must have been proven to be safe. At this point, we must each make a decision about the trustworthiness and good intentions of our public health bodies and researchers. It is not helpful or effective to call into question the ethics and intentionality of bodies such as the W.H.O., or public health bodies in our nations, unless there is clear and incontrovertible evidence of malpractice. The authors have found no evidence of such practices.

3. Ensuring that the availability of vaccines 'for the world' is maintained seems also to be a very important ethical issue. The heartbeat of Christian faith is to love God and to love our neighbours as we love ourselves (Matthew 22). We are called to look after the poor and the vulnerable, from orphans and widows (James 1) to the hungry and desolate (Matthew 5 and Luke 6). Indeed, the Council of Jerusalem urged Paul to always 'remember the poor, a fundamental of Christian faith (Galatians 2:10). It would seem obvious, but there is a vital need for the richer nations of the world to ensure that the vaccination of the world is a priority and a commitment shared across the wealth of the planet. At a time when global cooperation is needed more than ever, it is important that we do not retreat into modern notions of nationhood that can so often forget the shared humanity of all people. There should not be a 'race to the top' for vaccines. Again, the authors' own perspectives might be helpful here. We each agree that any planned vaccination schemes should identify the most vulnerable in the world and in our own societies and seek to offer vaccines to those in greatest danger and those in greatest need first. We take note that the Oxford /AstraZeneca vaccine is being described as 'a vaccine for the world'[xxvi] and whilst we recognise that pharmaceutical companies and agencies are also seeking to return dividends and make profit, the reality of the global cooperation of the research community and the common sense of purpose that has been shown is bot inspiring and re-assuring. Profit should not be the primary objective of a global vaccination initiative; the safety and protection of the human race should be.

Conclusion

(Chris, Debbie and Malcolm)

We live in a complex and challenging world, where the moral dilemmas we face are far from simple and more often than not are nuanced and require careful thought, prayer and intentional reflection. Now is not the time to spread conspiracy theories or indulge in conjecture, nor is it the time to force our opinions on others. Instead we listen to one another, we read Scripture, we pray, we talk, and we think about what will help most people in the most ethical and faithful way, whilst at all times seeking to remain faithful to Christ. The last words of this piece are offered from each of us individually.

Malcolm: I will receive the Covid-19 vaccine. My preference would be to receive one that has not involved the use of human cell lines, but if waiting for this will put people in danger or mean that the hardships and restrictions that people have faced will continue to cause negative impacts on well-being, mental health and endanger the most vulnerable, then I will receive a vaccine that has involved human cell lines.

Debbie: I have decided that I will receive a vaccine when it is available, probably the Oxford/ AstraZeneca vaccination. I believe receiving the vaccine will help protect the most vulnerable in our communities and wider society and will be an act of obedience to God, Who commands me to love my neighbour.

Chris: I would receive any one of the three vaccines when they become available. Probably the Oxford/Astra-Zeneca one will be available in Northern Ireland first. I am happy with that. The other two mRNA vaccines are the first widely available and could represent a technology that would fast track vaccine production for future pandemics and save many lives. I have faith in the vaccine discovery and application process and the vast majority if not all biomedical scientists have no hidden agendas but rather wish to work to save lives and misery.

Biographical Notes

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Debbie, Malcolm and Chris are all part of Dundonald Elim Church.

Endnotes

[i] 'Coronovirus and Christian Ethics' by John Wyatt, accessed at https://johnwyatt.com/2020/10/08/article-coronavirus-vaccines-and-christian-ethics/ on November 1st December 2020.

[ii] See https://www.theguardian.com/world/2020/nov/30/moderna-covid-vaccine-has-94-efficacy-final-results-confirm accessed 1st December 2020.

[iii] See https://www.pfizer.co.uk/pfizer-and-biontech-conclude-phase-3-study-covid-19-vaccine-candidate-meeting-all-primary-efficacy-endpoints accessed 1st December 2020.

[iv] See https://www.ovg.ox.ac.uk/news/oxford-university-breakthrough-on-global-covid-19-vaccine. Accessed 1st December 2020.

[v] For example, see the British Medical Journal article in response to the Pfizer/Biontech vaccine - https://www.bmj.com/content/371/bmj.m4347 accessed on 1st December 2020.

[vi] DR. Katherine O'Brien, of the W.H.O. stressed the need to see 'more than a press release' in relation to the data from vaccines. As reported on Sky News on Friday 27th November 2020. See https://news.sky.com/story/covid-19-world-health-organisation-needs-more-than-a-press-release-on-oxford-astrazeneca-vaccine-trial-12144352 accessed on 28th November 2020.

[vii] See https://www.gov.uk/government/news/phe-publishes-covid-19-vaccine-guidance-for-health-and-social-care-workers accessed on 30th November 2020.

[viii]See https://www.gov.scot/publications/covid-vaccine-delivery-statement-health-secretary/ accessed on 21st November 2020.

[ix] See https://phw.nhs.wales/topics/immunisation-and-vaccines/covid-19-vaccination-information/ accessed on 1st December 2020. See also Examining Christian End Times Rhetoric in the Time of COVID. (2020, August 17). *History News Network*, NA. https://link.gale.com/apps/doc/A632780550/ITOF?u=chesterc&sid=ITOF&xid=3c2f8aef accessed 29th November 2020. See also Trump Creates Confusion, Contradicts Scientists on Masks, Vaccines; U.S. Adds 36,000+ New Infections on Wednesday; Trump: Blue States Drag Down U.S. COVID Response; GOP More Dismissive of Trump Controversies as Election Nears; Cohen: A.G. Barr is President Trump's New Fixer. Aired 11-11:30a ET. (2020, September 17). *CNN Newsroom*, NA. https://link.gale.com/apps/doc/A635771092/ITOF?u=chesterc&sid=ITOF&xid=9ec29c07 accessed 27th November 2020.

[x] See https://www.health-ni.gov.uk/news/minister-comments-vaccine-progress accessed 30th November 2020.

[xi] See Tristan Sturm & Tom Albrecht (2020) 'Constituent Covid-19 apocalypses: contagious conspiracism, 5G, and viral vaccinations', Anthropology & Medicine, DOI: 10.1080/13648470.2020.1833684.

[xii] World Health Organisation have produced a helpful explanation of how vaccines work. WHO (2020). How do vaccines work? Last accessed 29/11/2020 https://www.who.int/emergencies/diseases/novel-coronavirus-2019/covid-19-vaccines/how-do-vaccines-work.

[xiii] ibid.

[xiv] ibid.

[xv] Iwasaki, A., & Omer, S. B. (2020). Why and how vaccines work. Cell, 183(2), 290-295

[xvi] Siegrist, C. A., & Lambert, P. H. (2016). How vaccines work. In The vaccine book (pp. 33-42). Academic Press

[xvii] For example, see 'COVID-19 vaccine research and development: ethical issues' by Tri Wibawa. 34 different vaccine trials are set out, and the ethical issues around each are tabulated. https://doi.org/10.1111/tmi.13503. Accessed at https://onlinelibrary.wiley.com/doi/epdf/10.1111/tmi.13503 on 30th November 2020.

[xviii] For a helpful overview of some of the different and shared ethical issues from different perspectives around a vaccine, see 'COVID-19 AND RELIGIOUS ETHICS' by Toni Alimi, Elizabeth L. Antus, Alda Balthrop-Lewis, James F. Childress, Shannon Dunn, Ronald M. Green, Eric Gregory, Jennifer A. Herdt, Willis Jenkins, M. Cathleen Kaveny, Vincent W. Lloyd, Ping-cheung Lo, Jonathan Malesic, David Newheiser, Irene Oh, and Aaron Stalnaker. https://onlinelibrary.wiley.com/doi/full/10.1111/jore.12328. Accessed on 28th November. Journal of Religious Ethics Volume 48, Issue 3 September 2020 Pages 349-387.

[xix] See VACCINE Archbishops' stance out of tune with community. (2020, August 27). *Age* [Melbourne, Australia], 20. https://link.gale.com/apps/doc/A633544692/STND?u=chesterc&sid=STND&xid=e1b3217d accessed on 29th November 2020.

[xx] See Masic, I., & Gerc, V. (2020). On Occasion of the COVID-19 Pandemic - One of the Most Important Dilemma: Vaccinate or Not? *Medical archives (Sarajevo, Bosnia and Herzegovina)*, *74*(3), 164–167. https://doi.org/10.5455/medarh.2020.74.164-167 for reflections on the challenges of vaccination. See also 'ethical Challenges posed by Covid-19' by Paul A. Komesaroff. Respirology (2020) 25, 1035–1036 doi: 10.1111/resp.13930. Available at https://onlinelibrary.wiley.com/doi/pdf/10.1111/resp.13930 accessed on 1st December 2020.

[xxi] Wyatt, Coronoviraus and Christian Ethics.

[xxii] ibid.

[xxiii] To explore this, for example, see Kenny, A.P.J., Freewill, 2012 and Responsibility London: Routledge. See also Muelder, W., 1966. Moral Law In Christian Social Ethics. Richmond: John Knox Press. See also Porter, J. (2001). The search for a global ethic. Theological Studies, 62(1), 105-121. Retrieved from https://search.proquest.com/docview/212697003?accountid=14620. See also Lysaught, M. T. (2012). On moral medicine: Theological perspectives in medical ethics (Third ed.). Grand Rapids, Michigan; Cambridge, England: William B. Eerdmans Publishing Company. See also Prieur, M. R., Atkinson, J., Hardingham, L., Hill, D., Kernaghan, G., Miller, D., . . . Wilson, S. (2006). Stem cell research in a catholic institution: Yes or no? Kennedy Institute of Ethics Journal, 16(1), 73-98. doi:10.1353/ken.2006.0005. See also Hussain, A., Ali, S., Ahmed, M., & Hussain, S. (2018). The anti-vaccination movement: A regression in modern medicine. Curēus (Palo Alto, CA), 10(7), e2919-e2919. doi:10.7759/cureus.2919. See also Lysaught, M. T. (2012). On moral medicine: Theological perspectives in medical ethics (Third ed.). Grand Rapids, Michigan; Cambridge, England: William B. Eerdmans Publishing Company.

[xxiv] There are complex reasons for the use of cell lines. This article might be helpful in navigating some of the reasons, and the issues involved. https://www.sciencemag.org/news/2020/06/abortion-opponents-protest-covid-19-vaccines-use-fetal-cells. Accessed on 27th November 2020. See also https://www.aljazeera.com/features/2020/11/24/covid-19-vaccines-explained-in-maps-and-charts for a summary of vaccines for Covid-19 and their methodology. The Charlotte Lozier Institute have produced a detailed summary of what is in development and its relationship to foetal cell lines. However, it should be noted that this is an anti-abortion think tank so brings that perspective to the studies. See https://lozierinstitute.org/news/ and https://lozierinstitute.org/update-covid-19-vaccine-candidates-and-abortion-derived-cell-lines/, both accessed on 26th November 2020. Other articles which cover the ethics of foetal cells lines used in COVID-19 vaccine development include:https://www.catholicnewsagency.com/news/the-ethics-of-modernas-coronavirus-vaccine-80858 and https://www.nationalreview.com/corner/pfizer-covid-vaccine-not-created-with-fetal-cells/, both accessed on 26th November 2020.

[xxv] See https://www.cbcew.org.uk/home/our-work/health-social-care/coronavirus-guidelines/covid-19-and-vaccination/. Accessed on 1st December 2020. See also https://www.vatican.va/roman_curia/congregations/cfaith/documents/rc_con_cfaith_doc_20081208_dignitas-personae_en.html, accessed on 19th November 2020. See also http://www.academyforlife.va/content/pav/en/the-academy/activity-academy/note-vaccini.html, accessed on 29th November 2020.

[xxvi] See https://edition.cnn.com/2020/11/28/health/oxford-astrazeneca-vaccines-developing-countries-intl/index.html accessed on 1st December 2020.