

INTRODUCTION

The global nature of the COVID-19 pandemic offers an unprecedented opportunity for those of us involved in global health to look at current philosophy and practice.

We've had a universal experience of isolation, of shortages, fear and new rules. How might those shared realities help us consider new ways to renew our solidarity with our partners in lowand middle-income countries and to assist us as we build something different through our global health strategies?

"The pandemic is a crisis and we do not emerge from a crisis the same as before: either we come out of it better or we come out of it worse. We must come out of it better, to counter social injustice and environmental damage. Today we have an opportunity to build something different," said Pope Francis.*

In order to come out better, we will need to identify where breakdowns occurred when travel was banned and consider if new paths need to be created. Many public health and access challenges have become more evident, requiring lengthy research and analysis, but, overall, how do we emerge from quarantine with greater meaning and purpose? What are we learning from all that is happening amid this global pandemic?

The following essays are an offering to set the stage for collective consideration of how the complexities and challenges of the pandemic create an opportunity for us to rethink, reset and renew our global health relationships. While COVID-19 and the isolation we have experienced inspires more questions, they provide us with renewed hope and inspiration to do it better in the future. We hope you will take this time "apart" to reflect on our future opportunity to be brother and sister to our global neighbors.

BRUCE COMPTON

Senior Director, Global Health Catholic Health Association of the United States

^{*}From Pope Francis' General Audience on Aug. 19, 2020.

COVID-19 AND THE VACCINE HESITANCY MOVEMENT

COVID-19 and the Vaccine Hesitancy Movement

BY ANDREW S. NATSIOS

wo major health crises are headed for a collision course over the next year with serious implication for every country in the world. The COVID-19 pandemic, both because of its health consequences and because of the damage it has done to the world economy, has driven policymakers to provide massive funding for the development of vaccines to combat the virus. These same policymakers will shortly face the Vaccine Hesitancy Movement (VHM) when health care providers, schools and government agencies try to immunize the population with these newly developed vaccines.

The vaccines should be available in the first half or middle of 2021. An intense and politically-charged competition is underway between advanced industrial democracies and China to see which health scientists can produce an effective vaccine first, a competition which is not necessarily bad if the vaccines are developed according to established scientific standards and the public agrees to get vaccinated.

Vaccines are one of the greatest scientific discoveries of the 20th century. We have had vaccines since the 18th century for smallpox, but no one knew how or why the vaccine worked. But they knew it did. In the 19th century German (Robert Koch) and French (Louis Pasteur) scientists developed the modern germ theory of disease which in turn led to the development of vaccines for most major diseases and the immunization of much

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of the world's population. More than any other single factor, mass immunization campaigns against most communicable diseases have resulted in increased life expectancy around the world.

The second trend, one that predates COVID-19, is the VHM. Hostility to vaccines has been around since the 19th century, but was accelerated by a British

medical doctor named Andrew Wakefield who claimed to have discovered a link between autism and vaccines. His research was published in *Lancet*, the respected British journal, but it was later discovered that Wakefield had an egregious conflict of interest and had manipulated the test results. *Lancet* later denounced his research and withdrew it from their website. Dr. Wakefield was later debarred from practicing medicine in the UK; he moved to Austin, Texas where he continued to spread his anti-vaccine messages.

Domestic politics is now complicating efforts to combat this disinformation campaign of the VHM as elements of the populist left and populist right have united to attack vaccines. The VHM has been concentrated in Berkeley, California, Austin, Texas and Detroit, Michigan, but it has been spread online through the worldwide web and now has a growing following around the world. This has alarmed medical professionals and research scientists because an increasing number of parents are not allowing their children to be immunized. The drop in immunization rates, in turn, threatens herd immunity which has been a central doctrine in public health science for much of the last century and protects the world's population from most major diseases. Herd immunity develops when a sufficient percentage of the population is vaccinated against a disease, which effectively prevents its spread.

Dr. Peter Hotez is one of the leaders of the pro-vaccine movement, which is trying to counter the anti-vaccine disinformation campaign. Dr. Hotez, a Senior Scowcroft Fellow, is one of the greatest health scientists in the world, creator of the Neglected Tropical Disease Movement and Dean of the Baylor School of Tropical Medicine. He has written a powerful book called *Vaccines Did Not Cause Rachel's Autism: My Journey as a Vaccine Scientist, Pediatrician, and Autism Dad,* explaining in lay person's terms the incontrovertible evidence that there is no relationship between vaccines and autism. He has come under vicious attacks by the leaders of the VHM.

The VHM has now intersected with the COVID-19 pandemic to make the situation even more complicated. Many supporters of the VHM generally are organizing to stop the broad mandate to vaccinate everyone against COVID-19 when and if the vaccine becomes available for three reasons: they are suspicious of big pharmaceutical companies that are doing the research and development of some of the vaccines; they are concerned that the vaccines are being developed too quickly and proper protocols are not being followed in the vaccine trials; and finally, they do not trust federal institutions, particularly the Food and Drug Administration's regulatory process.

International politics has complicated the situation even more. Just at the time the international health community had nearly eliminated polio as a disease in the early 2000's — as it had done in the 1960's and 1970's for smallpox — al-Qaeda spread rumors in Nigeria that children who were immunized from polio would be sterile. This stopped the polio vaccination campaign in Nigeria as health care workers were being attacked and killed for immunizing children. The U.S. Agency for International Development (where I served as Administrator from 2001-2006), which was one of the leaders of the polio immunization campaign, counter-attacked by asking the Muslim Doctors Associations around the world to issue Fatwahs — religious edicts with legal authority in Islam — that parents refusing to immunize their children would be in violation of the Quran. Muslim doctors then successfully led campaigns to counteract al-Qaeda's propaganda in their communities to ensure children were immunized against polio (and other diseases). In addition, health care professionals in developing countries enlisted the active support of traditional leaders — village and tribal chiefs — to get the public vaccinated. These traditional leaders retain substantial legitimacy and authority in their communities even when the public distrust of their formal government structures remains very high.

Meanwhile, the Russian government has become involved in the VHM, according to research done by Professor David Broniatowski at the George Washington University School of Engineering and Applied Science. He found that a substantial portion of the internet messaging against vaccines was coming from Russian trolls. The research showed that almost half of these Russian trolls messaging on social media supported vaccines and immunizations, while the other half spread anti-vaccine propaganda. Scholars of Russian electronic warfare argue that this seemingly bizarre contradictory messaging by these

Russian trolls is a deliberate attempt to create what is called "epistemological chaos" in the industrial democracies designed to encourage public skepticism of our institutions, scientists and public authority. The public no longer knows whom to trust, whom to believe or what to do. This strategy feeds into the notion that there is no objective reality, just intellectual chaos. The problem for developing countries is that it is not just the public in advanced industrial democracies reading this material, but people in low- and middle- income communities as well.

The Vaccine Hesitancy Movement in sub-Saharan Africa has complex roots. Charles Shey Wiysonge, a South African health care professional, published a detailed analysis of the movement in his study *Vaccine Hesitancy, an Escalating Danger in Africa*. He argues that vaccines have been highly successful in reducing child mortality rates in Africa. Since the World Health Organization launched its Expanded Program on Immunization in 1974, and today, the percentage of African children who have been vaccinated (it's a three-shot series) against diphtheria-tetanus-pertussis (DTP3) has risen from 5% to 75%. He reports "over the past five years there has been stagnation in coverage across the continent with decreases recorded in some countries." While some of the barriers

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to immunizing all African children are the logistics of getting the vaccines to and administering them in conflict zones, accessing children in remote areas with no roads and supply challenges are additional barriers in the growing VHM. The movement has manifested itself in South Africa, Cameroon, Mozambique, Zimbabwe and many other countries.

This brings us to the current COVID-19 crisis. Many of the leaders of our health care systems, governments, academia and the private sector are counting on new vaccines to stop this accursed pandemic. They will shortly be in for a shock when 30 - 50% of the people refuse to be immunized

in the United States. Add to that, we anticipate increased hesitancy in low- and idleincome countries. This, in turn, will prevent the development of herd immunity. The failure to develop herd immunity will only extend the life of the pandemic. Traditional leaders in low- and middle-income countries at the local level should be recruited to lead public education efforts. Pro-vaccine messaging can be done using local radio, which penetrates even some of the most inaccessible communities in poor countries, but also social media such as Facebook and Twitter, given the spread of smartphone usage, can be used to get the message out.

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For many people in the United States and around the world, the institution they most trust is the

Church. Educating parishioners about the need for vaccinations, not just for COVID-19 but for all infectious diseases, may be the greatest service the Church can perform in a period of chaos and crisis in our societies.



ANDREW S. NATSIOS is Executive Professor at the George H.W.
Bush School of Government and Public Service at Texas A&M
University, where he also serves as Director of the Scowcroft Institute of
International Affairs, which began a pandemic preparedness program
in 2014. He is the former Administrator of the U.S. Agency for
International Development (2001-2006) and Vice President of World
Vision U.S. (1993-1998).



The current pandemic has highlighted our interdependence: we are all connected to each other, for better or for worse.

Therefore, to emerge from this crisis better than before, we have to do so together; together, not alone. Together. Not alone, because it cannot be done. Either it is done together, or it is not done. We must do it together, all of us, in solidarity.

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Washington Office

1875 Eye Street NW, Ste. 1000 Washington, DC 20006-5440 (202) 296-3993

St. Louis Office

4455 Woodson Road St. Louis, MO 63134-3797 (314) 427-2500

