

A Covid-19 vaccine should be affordable for all

March 2020



As coronavirus rips through the world, the race is on to find a vaccine for Covid-19. There are already reports of promising candidates¹ as well the start of human trials.² And this progress is largely thanks to public investment in biomedical research and development (R&D).

But there is a real danger that, without effective safeguards, big pharmaceutical firms could profiteer from price gouging which would prevent widespread access to coronavirus treatments and threaten the world's ability to stop the spread of this pandemic.

The UK government needs to take firm action to ensure that any vaccine developed with public funding is accessible and affordable. We are calling for:

- Public interest conditions on access, affordability and transparency to be attached to all UK public funding for R&D on Covid-19 vaccines and treatments.
- The use of Crown Use licenses for any patented technologies for tackling Covid-19, where patient access may be restricted by monopolies.
- Commitment to global efforts to agree equitable access to Covid-19 vaccines and treatments for all.

How public funding drives innovation

Nearly every coronavirus vaccine candidate currently in development involves public investment.³ The big public backers are the US National Institutes of Health and Biomedical Advanced Research and Development (BARDA).⁴ This is not surprising as the US is the biggest public funder of health R&D globally.⁵

The UK is the second largest country funder of health R&D⁶ and has committed £120 million⁷ investment into developing vaccines through the UK Vaccine Network and contributed a further £250 million⁸ since the outbreak specifically for coronavirus vaccine research through the global vaccine research platform, the Coalition for Epidemic Preparedness Innovations (CEPI). This is on top of £10 million for CEPI in 2019⁹. The National Institute for Health Research and UK Research Innovation have also jointly launched a Rapid Response Call via the Medical Research Council, committing a further £20 million¹⁰ towards developing novel diagnostics, vaccines and therapeutics to address Covid-19.

Public investment in vaccine development is significant because pharmaceutical companies have been reluctant to invest in vaccines.¹¹ There are only four major players that dominate the vaccine market: GSK, Merck, Sanofi and Pfizer – who between them have about 90% of the vaccine market.¹²

Developing vaccines for infectious diseases like coronavirus can take several years by which time the crisis may have passed and with it the demand for the vaccine. And so it is seen as a costly risk for big pharma to undertake especially as the industry's main priority is profit and not public health. The deadly impact of this profit-driven model was seen in the case of the Ebola epidemic of 2014-2016 which killed over 11,000 people¹³ and exposed the flaws of a pharmaceutical industry that prioritises profit over public health. The absence of lucrative markets for the vaccine meant that a breakthrough was left on the shelf with no further investment to test or produce the vaccine so, when the epidemic broke out in 2014, there was no vaccine available.¹⁴ The eventual development of an Ebola vaccine, approved in 2019, happened largely because of public funding from governments and philanthropic funders.¹⁵ CEPI was then set up, backed with public and philanthropic funding, to plug the hole vacated by big pharma.

In 2016 US public investment led to a potential SARS vaccine. The genome of SARS has an 86% similarity with Covid-19 and therefore could have been a potential coronavirus vaccine.¹⁶ The SARS vaccine showed promise in early tests but then all commercial interest fell away as SARS was no longer a public health threat and there was no more investment for clinical trials or getting the vaccine to market. One of the leading scientists on this discovery gave testimony in congress in

March 2020 where he said: "We could have had this ready to go and been testing the vaccine's efficacy at the start of this new outbreak in China."¹⁷

Instead of investing in public health priorities such as vaccines for infectious diseases, antimicrobial resistance and treatments for conditions that affect communities in the global south, big pharma investment decisions are based on the areas of greatest profitability such as developing drugs for chronic diseases and modifying existing drugs with no additional health benefit. They also invest in extending their exclusive rights to new drugs. Patents create monopolies for new drugs – meaning no other company can make or sell that innovation for a minimum of 20 years. With no competition, drug companies are able to charge exorbitant prices for drugs, treatments and vaccines that have been developed with public money.

It has also been reported that big pharma spend more on financialised practices such as buying back their own shares than they do on R&D¹⁸. This helps to raise their share value but is not actual investment in health innovation.¹⁹ This practice puts even more profit into the pockets of their shareholders.

In response to this global pandemic, public funding is playing a significant role in leveraging private involvement. In spite of millions in taxpayers money going towards vaccines, there are no guarantees that any final vaccine will be available for all. These new discoveries are patented by pharmaceutical companies that conduct later stage drug development on publicly funded inventions and are therefore able to charge eye-watering prices.

Investing in basic science and research is high-risk because of the high levels of failure and uncertainty. With no conditions attached to public funding, the risks of drug development are socialised while the rewards are privatised. This system leaves the taxpayer to pay twice, first for the research and then in high prices for the final product. And in recent years, the NHS is increasingly having to reject or ration new effective drugs because they are too expensive.



Covid-19 and public funding

The role of publicly funded research is significant for promising vaccine and treatment candidates:

- Moderna, a US biotech firm based in Massachusetts, is the first off the starting block with clinical trials that started in March 2020. Their research builds on earlier research on the MERS virus conducted at the US public research institute - the National Institute of Allergy and Infectious Diseases.²⁰ They are also a recipient of CEPI funding.²¹
- Johnson and Johnson is working with the US federal Biomedical Advanced Research and Development Authority (BARDA) who have agreed to pay 80% of the costs of developing and manufacturing coronavirus treatments.²² Sanofi Pasteur is also working with BARDA who are sharing the costs of R&D.²³
- Regeneron, a US biotech firm has said that it has said it has developed many potential Covid-19 treatments and that it may enter clinical trials by early summer.²⁴ Regeneron's drugs are monoclonal antibodies – this is a breakthrough technology that was developed in the UK, funded by UK taxpayers²⁵ and is also receiving funding from BARDA with a reported agreement that BARDA will pay for 80% of R&D and manufacturing costs after selecting the antibodies it plans to advance.²⁶
- Gilead is currently testing an existing drug, remdesivir, as a potential treatment for Covid-19. It was developed with the help of US taxpayer-funded research.²⁷

Gilead caused outrage by applying for orphan drug status for remdesivir. This is a classification reserved for rare diseases but carries with it a seven year market exclusivity which also prevents any government attempts to bypass its patent.

Other pharmaceutical companies who are receiving funding from CEPI include Inovio Pharmaceuticals (\$65 million)²⁸ and CureVac (\$42.3 million)²⁹. CEPI funding from the Governments of Norway, UK, Germany, Japan, Canada, Ethiopia, Australia, Belgium, Denmark, Finland, the Bill & Melinda Gates Foundation, and Wellcome.

Who will get the vaccine?

Once an effective vaccine has been successfully discovered, the big question will be who will get it first? The two determinants of this will be price and power. With regards to price, the government sets no explicit conditions on UK funding on access or affordability. This means that drug companies could charge the highest price that the market can bear while profiting from public investment. To ensure a public return on public investment and secure affordable access for all, the government urgently needs to attach conditions to ensure that public investment into a Covid-19 vaccine reaches those who are most at risk first.

The second danger in terms of equitable access to any new Covid-19 vaccine is the danger of hoarding. President Donald Trump was reported to have offered German biotech company, CureVac "large sums of money" to obtain exclusive rights over a potential Covid-19 vaccine "but for the US only".³⁰ The US president's shameless America-First approach to vaccines highlights how an industry that prioritises profits urgently needs government intervention to ensure fair access on any new Covid-19 vaccine.

Without this intervention, during a pandemic crisis, the first vaccines produced within a country could be prioritised for that country but the reality is that production facilities are concentrated in rich countries. Governments are already feeling the pressure to secure access to a potential Covid-19 vaccine. Immediately after Trump's approach to CureVac was reported, the European Commission announced an €800 million financial support package to CureVac,³¹ on top of existing support the company had already received in the form of an EU Inducement Prize. The same day, German company BioNTech announced a \$135 million partnership with Fosun Pharma of China to develop a Covid-19 vaccine.³² The pressure is mounting on countries to take a nationalistic approach instead, and without any global leadership and co-ordination to drive international solidarity around vaccine access, there could be a starkly unequal distribution of vaccines.

This would not be the first time where nationalism and wealth have determined who gets sought-after vaccines first during a pandemic. In 2009, the initial supplies of the new H1N1 flu were bought up by richer countries meaning countries in the global south went without. Margaret Chan, the then-head of World Health Organisation criticised the dominance of the ability of rich countries to secure vaccines at the expense of lower income

countries: "The lion's share of these limited supplies will go to wealthy countries. Again we see the advantage of affluence. Again we see access denied by an inability to pay."³³

What can be done?

We are calling for the UK government to commit to the following actions to ensure equitable access to any vaccine that has been developed with UK public funding:

- 1) Impose public interest conditions on all UK funding that is being committed to develop a vaccine for Covid-19 to:
 - Ensure the final product is affordable, accessible and available for everyone who needs it, within the UK as well as in other countries, including but not limited to low- and middle-income countries.
 - Stipulate, as a condition of public funding, that any vaccine or medical product developed is licensed according to the principles of socially responsible licensing, which includes but is not limited to preventing exclusive licensing. Socially responsible licensing could include licensing to the Medicines Patent Pool.
 - Introduce 'step-in' rights for the UK government to issue non-exclusive licenses if a licensing partner fails to comply with the requirements of providing the health technology at an affordable and fair price.
- 2) Issue crown use licenses for any patented technologies that are potentially useful for tackling Covid-19, in response to this public health emergency, where patient access or research may be restricted by patent monopolies
- 3) As a donor country and board member of CEPI, the UK government should support CEPI's continued efforts to ensure equitable access to vaccines globally, and work to ensure that any products developed with support from CEPI are available and affordable to all those who need them.
- 4) Support global co-ordination based on international solidarity to improve global and public capacity for vaccines production and ensure that public health priorities drive the production and distribution of any new Covid-19 vaccine.
- 5) Support the proposal from the President and Minister of Health of Costa Rica for the WHO to create a global pool for rights in Covid-19 related technologies for the detection, prevention, control and treatment of the Covid-19 pandemic.

Please support our petition online at globaljustice.org.uk/Covid-19

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