



## POLICY BRIEF

# The Great Vaccine Robbery

**Pharmaceutical corporations charge excessive prices for COVID-19 vaccines while rich countries block faster and cheaper route to global vaccination**

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### Summary

- The lifesaving vaccines for COVID-19 - funded largely by the public - has been privatized and monopolised leaving pharmaceutical corporations the power to charge excessive vaccine prices to maximise profit. The cost of vaccinating the world against COVID-19 could be at least five times cheaper if pharmaceutical companies weren't profiteering from their monopolies on COVID vaccines.
- New estimates of the cost of production for the successful mRNA COVID vaccines suggest they can be produced for as little as \$1.18 a dose. COVAX, the scheme set up to help countries get access to COVID vaccines, has been paying, on average, nearly five times more for its doses. Available reported prices suggest that governments worldwide are paying between 4 and 24 times more than they could be for COVID-19 vaccines.
- Pharmaceutical corporations are free to prioritise the most lucrative high-priced contracts with rich countries at the direct expense of protecting more lives in more countries. Despite rising infections and deaths across many developing countries, Pfizer/ BioNTech and Moderna have allocated more than 90 per cent of their supplies to rich countries. The COVAX scheme and developing country governments cannot possibly compete with the high prices willingly paid by rich countries and so are pushed to the back of the vaccine queue. Less than 1 per cent of people in low income countries have had a vaccine.
- High prices block access, reduce vaccination coverage, drain precious public budgets and super-charge profits. Pfizer/BioNTech and Moderna are charging governments as

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much as \$41 billion above the estimated cost of production. Colombia may have overpaid Moderna and Pfizer/BioNTech as much as \$375 million for just 20 million doses. South Africa may have overpaid Pfizer/BioNTech \$177 million. Over-priced vaccines matter for strained public budgets in rich countries too. The UK and US could have paid Pfizer/BioNTech and Moderna \$1.8 billion and \$17.4 billion respectively more than the estimated production cost of these mRNA vaccines, while for Germany the figure could be €5.8 billion. The EU could have paid €31 billion more than the estimated cost for the mRNA vaccines, equivalent to 19 per cent of the total EU 2021 budget.

- Government budgets that could be paying for more health workers or used to tackle hunger are instead creating extreme wealth. Since the start of the pandemic, Moderna, BioNTech and CanSino have created at least nine new vaccine billionaires with a combined net wealth of \$19.3 billion.
- Breaking monopolies and enabling generic competition is a proven route to increased production and reduced prices of vaccines and medicines. Rich country governments must stop blocking and start supporting the fastest and cheapest route to global vaccination by insisting the vaccine technology and know-how is shared with the WHO's COVID Technology Access Pool, and immediately agree a temporary waiver of intellectual property rules at the World Trade Organisation for all COVID-19 vaccines, treatments and tests.

### **Monopoly prices**

At the heart of today's stark, unacceptable and unnecessary COVID-19 vaccine inequality is the world's collective dependence on a handful of pharmaceutical corporations who hold the power to decide how many vaccines get made, who gets them and at what price. While companies make billions in revenue and profits as COVID-19 vaccines fast become some of the best-selling pharmaceutical products in human history, less than 1 per cent of people in low-income countries have had a vaccine.<sup>2</sup> COVID-19 infection and death rates are surging in developing countries with too few health workers and without the oxygen to save lives. Yet a handful of rich country governments continue to refuse to insist that pharmaceutical corporations share vaccine technology and know-how, free of intellectual property rights, with other capable manufacturers - a move that would rapidly expand the supply of lower cost vaccines and prevent unnecessary mass loss of life.

The role vaccine monopolies play in blocking the urgently needed increased production of COVID-19 vaccines across the globe has been increasingly debated and is well understood. Receiving less discussion and debate is how much the vaccines cost, whether the prices charged are fair and what role price plays in exacerbating today's vaccine apartheid.

The lack of attention to vaccine pricing is in some ways not surprising. Amid a global pandemic, protecting lives should always take priority, at whatever cost. Further, as the IMF

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have argued, the costs of vaccinating the world in comparison to the economic consequences of not doing so almost pale into insignificance.<sup>3</sup> At any price, vaccination seems to provide 'value for money'.

On the other hand, rich and poor countries alike have suffered decades of wildly excessive and exploitative pricing at the hands of pharmaceutical corporations that have pushed lifesaving and life improving medicines out of reach for millions of people.<sup>4</sup> This was case with HIV medicines two decades ago, before generic competition brought prices down by up to 99 per cent.<sup>5</sup> To assume that these same corporations have changed their ways just because of a global pandemic is at best naïve, especially when the opportunity for short-term profit has been gifted to these corporations by wealthy countries.

Evidence gathered and analysed by the People's Vaccine Alliance strongly suggests many of the COVID-19 vaccines are priced unjustifiably high. Governments are paying more than they should, meaning that the CEOs and shareholders of these corporations are unnecessarily draining precious domestic budgets and international aid spending that is urgently needed for hospitals and health workers, as well as to address other impacts of the pandemic. High prices are also directly contributing to extreme vaccine scarcity in the global south – without the budgets needed to compete with rich country buyers, low- and middle-income countries and the COVAX facility have been pushed to the back of the vaccine queue. The failure of rich country governments to force prices down by breaking up vaccine monopolies and insisting on cost transparency has left pharmaceutical corporations entirely free to prioritise profit maximising contracts with them despite the fact that this will lead to many more deaths. Evidence is growing that the pharmaceutical corporations are planning even more aggressive pricing for COVID 19 vaccines in the future.

### **Cost of vaccinating the world set to cost at least five times more than it should**

Vaccine monopolies restrict global production and, because of lack of competition, risk keeping prices artificially high. Competition from multiple suppliers is a proven route to sustainably reduce the price of vaccines.<sup>6</sup> Analysis of the prices reportedly paid by COVAX, the international facility set up to potentially help all and especially developing countries procure COVID-19 vaccines, suggest it has been paying on average close to five times more than the estimated cost of producing the Pfizer/BioNTech vaccine, one of the most expensive vaccines on the market.<sup>7</sup> In other deals, governments worldwide appear to be paying between 4 and 24 times more than they could be for COVID-19 vaccines, where reported prices are available.

Recent analysis of production techniques by Public Citizen with engineers from Imperial College London,<sup>8</sup> estimate that the mRNA vaccines produced by Pfizer/BioNTech and Moderna could be mass produced for as little as \$1.18 to \$2.85 a dose. Yet these vaccines are some of the most expensive on the market at an average price of \$16.25 and between \$19.20<sup>9</sup> and \$24 per dose respectively.<sup>10</sup> Based on computational process modelling, the expert analysts estimate that setting up regional hubs to transfer the successful technology and manufacture 8 billion doses of the mRNA vaccines in one year would cost \$22.8 billion for the

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Moderna vaccine (\$2.85 per dose), and \$9.4 billion for the Pfizer/BioNTech vaccine (\$1.18 per dose).<sup>11</sup>

Without vaccine monopolies restricting supply, and at the estimated cost price for the Pfizer vaccine, the \$9.3bn spent already by COVAX would have been enough to fully vaccinate every person in low- and middle-income countries.<sup>12</sup> Instead COVAX has only been able to buy enough doses to cover 23 per cent of people for eligible developing countries.<sup>13</sup>

COVAX, and its co-ordinators Gavi, the Vaccines Alliance, and CEPI (The Coalition for Epidemic Preparedness Innovations) must take significant responsibility for their failure to call out pharmaceutical corporations to drive vaccine prices down, and for their failure to challenge vaccine monopolies. Mediciens Sans Frontiers (MSF) point out that when first proposing its role in securing high volumes of COVID-19 vaccines for developing countries, Gavi assured that manufacturers would be asked to commit to transparency regarding their costs and that Gavi would aim to set a price based upon cost of production with a marginal increase. However, in later technical guidance notes very few such requirements were included.<sup>14</sup> MSF together with more than 40 civil society organisations urged Gavi not to repeat the mistakes of previous Advanced Market Commitment schemes for lifesaving childhood pneumonia vaccines which for over ten years were kept at unaffordable prices for governments and treatment providers like MSF.<sup>15</sup>

In addition to paying unnecessarily high prices, COVAX has been characterised by poor transparency both on pricing and costs of production and has excluded civil society and low- and middle-income countries from its strategy development, decision making and negotiations. Moreover, COVAX did not support other mechanisms to maximise supply, especially the WHO COVID-19 Technology Access Pool – the mechanism for sharing technology and know-how and for licensing intellectual property rights. Throughout, as public private partnerships, Gavi, COVAX and its key partner CEPI have been too close to industry, appearing to prefer cosy, closed door deals rather than demanding that firms do the right thing and provide for COVAX first and at cost or near-cost prices. In its latest Investment Case report, COVAX demonstrates even less intention to challenge excessive pricing, indicating that it would be willing to pay more going forward to secure greater early volumes.<sup>16</sup> To our knowledge, no COVAX funder has publicly questioned or criticised the potential waste of limited aid financing due to excessively high priced vaccines.

### **Pharmaceutical corporations and rich country governments price out poorer nations and push them to the back of the queue**

The ultimate responsibility for today's scarce and over-priced vaccines must lie with rich country governments and the global institutions they fund like COVAX and its constituent institutions, such as CEPI. Collectively and unforgivably these actors failed to place necessary conditions on the more than \$100 billion of tax-payers money allocated to fund the research and development and early purchases of these vaccines.<sup>17</sup> Such access conditions could have guaranteed that any successful products would be global public goods – free of intellectual

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property rights and with a commitment to share the vaccine technology and know-how so that other qualified and capable manufacturers around the world could make them as soon as possible. Open competition itself would have increased supplies and forced prices down. Many millions more doses could have been produced in 2021. Given the scale of both the public funding and the global crisis, further funding could and should have been mobilised with conditions attached to ensure a planned large-scale and non-exclusive transfer of technology with increased investment in manufacturing capacity to ensure vaccines from the outset were sold at cost or near-cost prices. Even allowing for the uncertainty in the early days of the pandemic, clinical trial data by the fall of 2020 made clear that new vaccines would be safe and effective. At that point, instead of hoarding doses for themselves, rich country governments should have and could have dedicated their resources – financial and political – to dramatically scale up production worldwide to ensure sufficient doses for everyone.

Without these conditions the COVID-19 vaccines funded largely by the public have been privatized and monopolized leaving pharmaceutical corporations the power to set prices as they like. Some are charging wildly varying prices to different buyers that suggests there is no discernible relationship to the actual cost of production. And some rich country governments appear to have willingly paid higher prices than necessary to push their way to the front of the vaccine queue, thus contributing directly to vaccine scarcity in low- and middle-income countries.

According to reported pricing for countries where data is available, Pfizer/BioNTech have been charging governments between 6 and 24 times the estimated cost of producing its vaccines. Its lowest reported price was charged to the African Union at \$6.75 per dose, still nearly 6 times more than the estimated cost of production. Its highest reported price was charged to Israel at \$28 per dose.<sup>18</sup>

Moderna, whose vaccine science and development were almost entirely funded by the public purse and co-developed with government scientists,<sup>19</sup> has reportedly charged countries between 4 and 13 times the estimated cost price of its vaccine. Its lowest reported price was charged to the US government at \$12 to \$16.50 a dose,<sup>20</sup> while the company has said it is charging up to \$37 a dose for some customers.<sup>21</sup> It appears to be reserving some of its highest prices for poorer countries least able to pay but which also have suffered very high infection and death rates with minimal access to vaccines. Colombia is reported to have paid double what the US government was charged at \$30 a dose.<sup>22</sup> South Africa is reported to have turned down Moderna's unaffordable offer of up to \$42 per dose.<sup>23</sup>

The analysis by Public Citizen with Imperial College engineers provides a useful cost vs price comparison for the new mRNA vaccines and suggests unjustifiably high prices are being charged. To the best of our knowledge no equivalent analysis of potential cost prices exists for other non-mRNA COVID-19 vaccines. However, the price paid for the full range of existing non-COVID-19 vaccines can provide a useful if not perfectly comparable benchmark. According to analysis published in the Lancet using data from WHO in 2018, developing countries paid a median price of \$0.80 a dose for vaccines when buying them via UNICEF.<sup>24</sup> For COVID-19, even one of the lowest priced vaccines on the market,

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Oxford/AstraZeneca, is nearly four times this price at the most widely reported price of \$3 a dose.<sup>25</sup> At a claimed non-profit price of \$10 a dose,<sup>26</sup> the Johnson & Johnson vaccine is nearly 13 times this cost. Senegal, a lower-income country, was reportedly charged \$20 a dose for the Sinopharm vaccine<sup>27</sup> – 25 times the median price paid for vaccines by developing countries before the pandemic. The Pfizer/BioNTech and Moderna vaccines are up to 46 times more expensive.

The abysmal level of transparency required of pharmaceutical corporations by governments; the demands of pharmaceutical corporations for absolute secrecy in exchange for early access to vaccines; and the woeful lack of transparency of governments themselves, all mean it is impossible to accurately scrutinise the industry's vaccine pricing practices. But the evidence outlined here, together with the sheer scale of the catastrophe countries are collectively facing, means the burden of proof must most definitely rest with the corporations to justify why any COVID-19 vaccine is priced more than \$1 or \$2 a dose. It is the responsibility of governments to insist that companies provide such evidence, preferably via independent, third party audits. From the outset this should have been a requirement of public funding for the development, manufacture, and distribution of COVID-19 vaccines.

Market analysis also makes clear that the prices of vaccines and medicines only drop sustainably when there are multiple competitors in the market (see below). Fixing the access problem for COVID-19 means breaking the pharmaceutical monopolies on COVID-19 vaccines, tests and treatments and insisting the technology and know-how is transferred to more manufacturers in developing countries through a coordinated, transparent and non-exclusive mechanism like the Covid-19 Technology Access Pool. Only then will supply increase and prices come down sustainably to the lowest possible levels.

The continued failure to do this means that pharmaceutical corporations are free to prioritise the most lucrative high volume, high priced contracts with rich countries at the direct expense of protecting more lives in more countries. The COVAX scheme and developing country governments cannot possibly compete with the high prices paid by rich countries and so are pushed to the back of the vaccine queue. Moderna and Pfizer/BioNTech stand out as the worst offenders. Pfizer/BioNTech have allocated just 8 per cent of their global supplies to low- and middle-income countries to date, including COVAX and the African Union. For Moderna the figure is just 7 per cent.<sup>28</sup> Overall, less than 1 per cent of people in low-income countries have received at least one dose to date.<sup>29</sup> While everyone living in the rich G7 countries are set to be fully vaccinated by January 2022, based on current rates it will take low income countries 57 years to achieve the same coverage.<sup>30</sup>

### **Raiding precious public budgets to create vaccine billionaires**

High prices are particularly serious as countries will all need to vaccinate the vast majority of their populations, potentially on a regular basis. At current prices the vaccines are prohibitively expensive for many nations, which could translate into lower vaccination rates allowing the virus to continue to spread.

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With COVAX only aiming to help reach up to 27 per cent vaccine coverage in eligible countries, developing countries, with already limited resources and now facing economic catastrophe because of the pandemic, have no route to securing the volumes of vaccines they need. It's not hard to see why. Uganda, a least developed country, spends just \$6.83 per person on health each year. That's just 8 cents more than the price paid by the African Union for each dose of the Pfizer/BioNTech vaccine. If Colombia were to vaccinate everyone at Moderna's prices it would swallow 16 per cent of the entire national budget. Yet combining what Colombia has already paid for both the Moderna and Pfizer/BioNTech vaccines, we calculate it may have overpaid by as much as \$375 million in comparison to the estimated cost price for these vaccines.<sup>31</sup>

Compared to the estimated cost price of the Pfizer/BioNTech vaccine, South Africa may have overpaid for its 20 million doses by as much as \$177 million. The over payment alone would be enough to pay to fully vaccinate all remaining South Africans with the estimated 'at cost' price Pfizer/BioNTech vaccine, leaving more than enough left to fully vaccinate everyone in neighbouring Zambia and Namibia as well.<sup>32</sup>

The African Union demonstrated its effective negotiation skills by securing the lowest reported price to date for 50 million doses of the Pfizer/BioNTech vaccine,<sup>33</sup> but this is still 6 times the estimated cost of production and could mean an overpayment of \$279 million.

Developing countries do not have the means to pay for monopoly priced vaccines and it is a scandal that they are forced to raid massively depleted government budgets that should be spent bolstering buckling health services and preventing the escalation of poverty and hunger, to pay for the outsized profits of already extremely wealthy and powerful pharmaceutical corporations. It is also essential that aid financing, including the \$12 billion World Bank COVID-19 vaccine fund of loans and grants for low- and middle-income countries,<sup>34</sup> is not similarly diverted to line the pockets of more vaccine billionaires, but, as much as possible, can instead provide financing for health services and community health workers to ensure doses reach the people who need them. In the US it has been reported that USAID has been required to partially fund the 500 million doses of Pfizer/BioNTech vaccines for low- and middle-income countries announced by President Biden at the G7 Summit in June 2021,<sup>35</sup> using a \$1.5 billion budget that was intended to help countries distribute the vaccines and obtain COVID medicines and personal protective gear.<sup>36</sup>

But with government budgets and essential services stretched to breaking point the world over, over-priced vaccines matter for rich countries too. The potential overpayments here too are staggering.

In Canada, the government is reported to have paid \$8.18 per dose for 20 million doses of the Oxford/AstraZeneca vaccine.<sup>37</sup> Given Oxford/AstraZeneca's not for profit commitment and widely reported vaccine price of around \$3 a dose,<sup>38</sup> it is estimated that the government overpaid AstraZeneca by \$100 million at least.

In the UK, at £15 per dose for 100 million Pfizer/BioNTech vaccines<sup>39</sup> and £25 per dose for 17 million Moderna vaccines<sup>40</sup> we estimate the government may have paid £1.8 billion more

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than the estimated cost prices for both vaccines. This would be enough to pay every NHS worker in the UK a bonus of over £1000.<sup>41</sup> The US paid \$19.50 for 300 million doses of Pfizer/BioNTech and \$25 for 500 million doses of Moderna,<sup>42</sup> making an estimated overpayment by the government of \$17.4 billion against potential cost prices.

The EU seems to have fared particularly badly in its negotiations. Economies of scale mean that given the huge unprecedented volumes of vaccines being made, costs of production should be going down over time. And as governments make second or third large volume orders, they should be able to negotiate lower prices. But in the case of the EU the opposite happened. The EU is reported to have paid Pfizer/BioNTech €15.50 per dose for its first order of 600 million vaccines. The price then increased to €19.50 per dose for the subsequent order of 900 million vaccines.<sup>43</sup> Together with its order of 460 million Moderna doses at a reported price of €14.80, we estimate that in comparison to estimated cost of production prices, the EU has overpaid for its mRNA COVID-19 vaccines by €31 billion. That's as much as 19 per cent of the EU's total 2021 budget.

Assuming that vaccine costs are spread proportional to member state population (including EEA members who are part of the scheme) we calculate the following overspend for selected EU countries:

<b>Country</b>	<b>Potential overspend for Pfizer/BioNTech and Moderna vaccines € millions</b>
Belgium	796
Denmark	399
France	4,642
Germany	5,757
Ireland	339
Italy	4,154
Netherlands	1,177
Norway	372
Spain	3,213
Sweden	694

Despite the high prices, it seems EU negotiators did not even contemplate challenging the pharmaceutical monopolies on vaccines. The lead EU negotiator, Clement Auer, stated: *'We had a mandate to buy vaccines, not to talk about intellectual property. The global community should have had this back in 2020 but that didn't happen. Maybe we should have done it last year, but now it's too late. It is spilled milk.'*<sup>44</sup> In fact the EC negotiating directive did say that *'the Commission will seek to promote related questions with the pharmaceutical industry regarding intellectual property sharing, especially when such IP has been developed with public support'*.<sup>45</sup> The directive appears to have been ignored.

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Turning now to the recipients of this enormous public expenditure.

Pharmaceutical corporations frequently claim that their revenue and profits are ploughed back into research and development for new life saving or life improving products, but Pfizer, Johnson & Johnson and AstraZeneca have paid out \$26 billion in dividends and stock buybacks to their shareholders in the past 12 months.<sup>46</sup> Since the beginning of the COVID-19 pandemic, Moderna, BioNTech and CanSino, all makers of successful COVID-19 vaccines, have created at least nine new vaccine billionaires with a combined net wealth of \$19.3 billion, our analysis of Forbes 2021 billionaires list shows.<sup>47</sup>

Apart from the new vaccine billionaires, a further eight existing billionaires with extensive portfolios in the companies making COVID-19 vaccine saw their wealth rise by a massive \$32.2 billion.<sup>48</sup>

The stock prices of many of the pharmaceutical corporations manufacturing the COVID-19 vaccine has been on a rising trajectory since last year, and particularly for BioNTech and Moderna.<sup>49</sup> Moderna and Pfizer/BioNTech's mRNA vaccines are set to become two of the three bestselling pharmaceutical products in the world, and even possibly of all time, and the companies are projecting revenues of \$19.2 billion<sup>50</sup> and \$26 billion<sup>51</sup> respectively in 2021 from these vaccines alone.

Analysis of these same global sales forecasts from Pfizer/BioNTech and Moderna suggest the firms could be exploiting their monopolies on successful vaccines by together charging governments as much as \$41 billion above the potential cost of production this year.<sup>52</sup> This figure doesn't include any additional income BioNTech is expected to earn from its direct sales to countries such as Germany and Turkey.<sup>53</sup>

The potential over-payment to Pfizer/BioNTech alone of an estimated \$24 billion would be enough to fully vaccinate everyone on the planet if vaccines were provided at the estimated cost price of \$1.18 per dose; even leaving \$4.6 billion leftover to help countries with roll out.<sup>54</sup>

The plans to raid public budgets don't end there with evidence that pharmaceutical corporations are planning even more aggressive pricing in the future. Pfizer's CEO has said that the vaccine is a huge commercial opportunity, and that a booster shot could be a source of sustained revenues for the company into the future.<sup>55</sup> On a February 2, 2021 investor call, company executives for Pfizer indicated that it would seek a higher price for a booster shot, especially if such booster shots were required after the pandemic was over.<sup>56</sup> Post-pandemic, according to the company, "Obviously, we're going to get more on price. And clearly... there's a significant opportunity for those margins to improve once we get beyond the pandemic environment." The company cited the typical price it receives for vaccines at \$150, \$175 per dose.<sup>57</sup> If Pfizer moved to these prices for booster shots, as suggested, they would cost 148 times the potential cost price estimated by Public Citizen and Imperial College experts.

Because pharmaceutical corporations anticipate they can charge such high prices for boosters, they will continue to prioritise selling their doses to rich countries at the expense of

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addressing vaccine scarcity in the rest of the world. The profits from selling boosters are simply too tempting for them to do otherwise.

### **Evidence from history – breaking monopolies saves lives**

Pharmaceutical corporations using their monopolies to charge excessive prices for their products is unexceptional, no matter the effect their actions have on peoples' health. By refusing to challenge these monopolies for COVID-19 to maximise the supply of vaccines and drive down their prices, rich country governments have repeated the same fatal mistakes of history.

In the midst of the HIV crisis two decades ago, life-saving treatment was available in rich countries but at a price tag of between \$10,000 to \$15,000 per patient per year, was out of reach for millions of people who died unnecessarily in low- and middle-income countries.<sup>58</sup> Since 2000, access to anti-retroviral drugs to treat HIV has dramatically increased to more than 27.5 million people in 2020.<sup>59</sup> Essential to this achievement was the dramatic reduction in antiretroviral prices, a result of global political mobilization that cleared the way for competitive production of generic versions of widely patented medicines.<sup>60</sup> Competition drove down the price of first-line regimen for HIV by 99 per cent from \$10,000 to as low as \$67 per patient per year.<sup>61</sup> The continued protection of patents in rich countries like the US meant that by 2018, WHO's recommended first line treatment option in HIV-1 positive people in 2018 was available for as little as \$27 in Georgia but as much as \$20,130 in the US per person per year.<sup>62</sup>

By 2008, 95 per cent of the global donor-funded HIV treatment was comprised of generics, primarily from India.<sup>63</sup> By this time donors understood their aid budgets could go much further and help save millions more lives by procuring low-cost generics versus high-cost patented medicines.

Pneumonia is the biggest killer of children under five years of age and the pneumococcal vaccine (PCV) is a critical tool to protect children from the illness and save lives. It is estimated that global use of the PCV vaccine could save an additional 400 thousand children each year in low- and middle-income countries.<sup>64</sup> However, despite the launch of an Advance Market Commitment in 2007 by Gavi to encourage competition among manufacturers to reduce the price of PCV, a number of failings meant that just two producers maintained a duopoly on the vaccine for a further ten years allowing them to keep prices high.<sup>65</sup> While Gavi negotiated a discounted, but still expensive price of around \$9 a dose, prices remained unaffordable for many middle income countries ineligible for Gavi support.<sup>66 67</sup> The high price of the vaccine meant that in 2019 around one third of countries had still not been able to include PCV into their national immunisation programmes.<sup>68 69</sup> It wasn't until December 2020 when a third manufacturer, the Serum Institute of India, started producing the vaccine, that the price fell to just \$3 a dose for governments.<sup>70 71</sup>

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In its annual Global Market Vaccine Report the WHO confirms increased supplier competition, especially from developing country vaccine manufacturers, as a key reason for decreasing prices.<sup>72</sup> It says that across all vaccines, developing country manufacturers offer a lower average price than multinational pharmaceutical corporations making up the membership of the IFPMA. In 2018 the prices for the vaccines produced by developing country manufacturers were up to 26 times cheaper than the same vaccines produced by IFPMA manufacturers.<sup>73</sup> A recent study from the US Food and Drug Administration found that average generic medicine manufacturer prices between 2015 and 2017 were more than 95% lower with six or more competitors.<sup>74</sup>

Unfortunately, the international community, which has experienced both the harm caused by pharmaceutical monopolies as well as the successes of generic competition to increase supply and reduce prices, has largely ignored these lessons during the COVID-19 pandemic, at the cost of lives and livelihoods. This is both difficult to understand and totally unacceptable.

### **The fastest and cheapest route to global vaccination**

The world is facing a vaccine apartheid. Proven successful and publicly funded vaccines that save lives exist, but billions of people are unprotected, facing the threat of illness or death because they can't access them.

The privatization and monopolisation of the vaccine science and technology, the profiteering by pharmaceutical corporations and the unforgiveable behaviour of rich country governments are all responsible for today's vaccine scarcity and vaccine inequality. People in low- and middle-income countries are left without the vaccines they need; high income countries are overpaying for the same vaccines; and all people in all countries remain at risk of new vaccine resistant variants.

The international community cannot revisit the bad decisions, the compromises, the hoarding, and the enabling of greed, of the last eighteen months. But as infection and death rates rise in parts of the world least able to access vaccines it is incumbent on governments to not only learn from the mistakes of the last eighteen months, but to learn from the successes of the last two decades. Immediate action must be taken now to deliver a People's Vaccine – vaccines that are universally available as soon as possible free of charge, with access prioritised according to need and not ability to pay.

### **The People's Vaccine Alliance calls for:**

- Rich country governments to immediately redistribute COVID-19 doses before administering booster vaccines to ensure that at a minimum every health worker and all people considered at greatest risk from the disease are protected, everywhere. This is a temporary but crucial action.

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- A rapid scale up in the sharing of vaccine know-how and transferring of technology. This must be through non-exclusive transparent licenses, open to public scrutiny. This will increase production and bring prices down. To achieve this, governments, especially those hosting pharmaceutical companies with proven vaccine technology must:
  1. Urgently use all available policy and legal tools to insist companies join the WHO's COVID Technology Access Pool (C-TAP). This should include providing incentives such as financing for technology transfer.
  2. Provide political, technical, human and financial resources to C-TAP to maximise its effectiveness and speed of operation.
  3. Share mRNA technology and know-how with the new South African mRNA technology transfer hub on a non-exclusive basis.
- The immediate agreement at the World Trade Organisation of a temporary suspension of intellectual property rules for all COVID-19 technologies as proposed by the governments of India and South Africa. Governments including the UK and Germany, and the European Union must stop stalling and blocking the waiver proposal.
- A large scale up in public financing for manufacturing capacity in low- and middle-income countries so these countries are never again left dependent on the goodwill of rich countries to access life-saving vaccines and other technologies in a pandemic.

Ends.

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<sup>1</sup> Anna Marriott is Health Policy Manager, Oxfam; Alex Maitland is Private Sector Senior Advisor, Oxfam

<sup>2</sup> Vaccination data from Our World in Data as of 27<sup>th</sup> July 2021; Population data from the UN

<sup>3</sup> <https://www.imf.org/-/media/Files/Publications/SDN/2021/English/SDNEA2021004.ashx>

<sup>4</sup> [https://www.ucl.ac.uk/bartlett/public-purpose/sites/public-purpose/files/peoples\\_prescription\\_report\\_final\\_online.pdf](https://www.ucl.ac.uk/bartlett/public-purpose/sites/public-purpose/files/peoples_prescription_report_final_online.pdf); <https://www.bmj.com/content/368/bmj.l4627>; <https://www.nature.com/articles/s41408-020-0338-x>; [https://msfaccess.org/sites/default/files/2020-02/IP\\_TechnicalBrief\\_Lethal%20Monopolies\\_ENG\\_Feb2020\\_EPO-V6-digital.pdf](https://msfaccess.org/sites/default/files/2020-02/IP_TechnicalBrief_Lethal%20Monopolies_ENG_Feb2020_EPO-V6-digital.pdf)

<sup>5</sup> Competition drove down first-line regimen HIV medication prices by 99 per cent over a 10 year period, from \$10,000 to as low as \$67 per patient per year: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3078828/#B67>

<sup>6</sup> [https://www.who.int/immunization/programmes\\_systems/procurement/mi4a/platform/module2/2019\\_Global\\_Vaccine\\_Market\\_Report.pdf?ua=1](https://www.who.int/immunization/programmes_systems/procurement/mi4a/platform/module2/2019_Global_Vaccine_Market_Report.pdf?ua=1)

<sup>7</sup> The price paid by COVAX for the Pfizer vaccine is not known but likely higher than the reported average \$5.20 per dose paid by the scheme for the first 1.3bn doses

<https://www.gavi.org/sites/default/files/covid/covax/Gavi-COVAX-AMC-Investment-Opportunity.pdf>) . It has been widely reported that COVAX purchased the Oxford/AstraZeneca vaccine at \$3 a dose and this vaccine makes up roughly a quarter of the 1.8bn vaccines secured by the scheme to date. As one of the largest single purchases the Oxfam/AstraZeneca vaccine price is likely to have significantly reduced the overall average price paid by COVAX per dose. In contrast, Pfizer, typically a much more expensive vaccine, agreed to supply only 40 million vaccines to the scheme constituting only 2.5% of secured doses. It is reported that the African Union paid \$6.75 for the Pfizer vaccine and it is assumed, but not known, that COVAX secured a similar price.

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<sup>8</sup> <https://www.citizen.org/article/how-to-make-enough-vaccine-for-the-world-in-one-year/>

<sup>9</sup> Pfizer forecast sales of \$26bn in revenue for 1.6bn vaccines in 2021 which works out at an average cost of \$16.25 per dose

<sup>10</sup> Moderna forecast sales of \$19.2 billion for between 800m and 1bn doses in 2021. This works out at an average sale cost of between \$19.2 and \$24 per dose. <https://www.pharmaceutical-technology.com/news/moderna-q1-sales-vaccine/>

<sup>11</sup> <https://www.citizen.org/article/how-to-make-enough-vaccine-for-the-world-in-one-year/>

<sup>12</sup> Using World Bank data the population of low and middle-income countries eligible to benefit from the Advance Market Commitment of the COVAX facility is 3.6 billion people. Fully vaccinating everyone in these countries would require 7.2 billion doses. The COVAX facility said it needed \$9.3 billion to lock in 1.8 billion doses. <https://www.gavi.org/sites/default/files/covid/covax/Gavi-COVAX-AMC-Investment-Opportunity.pdf> \$9.3 billion would buy over 7.9 billion vaccines if at the estimated 'at cost' price of the Pfizer/BioNTech vaccine @ \$1.18 per dose.

<sup>13</sup> <https://www.gavi.org/sites/default/files/covid/covax/COVAX%20Supply%20Forecast.pdf>

<sup>14</sup> <https://www.doctorswithoutborders.org/what-we-do/news-stories/news/msf-gavi-must-ensure-covid-19-vaccines-produced-through-its-new-global>

<sup>15</sup> Ibid.

<sup>16</sup> <https://www.gavi.org/sites/default/files/covid/covax/Gavi-COVAX-AMC-Investment-Opportunity.pdf>

<sup>17</sup> <https://www.businesswire.com/news/home/20210110005098/en/Governments-Spent-at-Least-%E2%82%AC93bn-on-COVID-19-Vaccines-and-Therapeutics-During-the-Last-11-Months>

<sup>18</sup> <https://www.timesofisrael.com/israel-will-reportedly-pay-more-than-us-eu-for-pfizer-coronavirus-vaccine/>

<sup>19</sup> <https://www.oxfam.org/en/research/shot-recovery>

<sup>20</sup> Ibid.

<sup>21</sup> <https://www.cnbc.com/2020/08/05/moderna-is-pricing-coronavirus-vaccine-at-32-to-37-per-dose-for-some-customers.html>

<sup>22</sup> <https://www.bloomberg.com/news/articles/2021-07-06/when-lifesaving-vaccines-become-profit-machines-for-drugmakers?s=08>

<sup>23</sup> <https://news.bloomberglaw.com/health-law-and-business/moderna-offers-south-africa-vaccines-at-30-to-42-a-dose>

<sup>24</sup> UNICEF procures existing vaccines on behalf on many low- and middle-income countries. According to analysis in the Lancet they pay a median of 0.80 cents a dose for all vaccines

[https://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(21\)00306-8/fulltext](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(21)00306-8/fulltext)

<sup>25</sup> <https://www.oxfam.org/en/research/shot-recovery>

<sup>26</sup> Ibid.

<sup>27</sup> <https://www.bloomberg.com/news/articles/2021-07-06/when-lifesaving-vaccines-become-profit-machines-for-drugmakers?s=08>

<sup>28</sup> Analysis by People's Vaccine Alliance using data from Airfinity <https://www.airfinity.com/>

<sup>29</sup> Vaccination data from Our World in Data as of 27<sup>th</sup> July 2021; Population data from the UN

<sup>30</sup> <https://www.oxfam.org/en/press-releases/more-million-covid-deaths-4-months-g7-leaders-failed-break-vaccine-monopolies>

<sup>31</sup> Colombia reportedly paid Pfizer/BioNTech \$12 a dose for 10 million doses and Moderna \$29.50 a dose for 10 million doses. <https://www.bloomberg.com/news/articles/2021-03-16/covid-hit-these-countries-hard-now-they-face-big-vaccine-bills?sref=vetpZg4P> and data from <https://www.airfinity.com/>

<sup>32</sup> South Africa reportedly paid \$10 a dose for 20 million Pfizer/BioNTech vaccine doses, enough to fully vaccinate 10 million South Africans. According to the World Bank the population of South Africa is 58.6 million, Namibia is 2.5 million and Zambia is 17.9 million. For the purposes of the calculation and for the benefit of doubt by 'fully vaccinate everyone' we use the total population. This does not mean that everyone must or should be vaccinated.

<sup>33</sup> <https://www.reuters.com/article/us-health-coronavirus-africa-vaccine-exc/exclusive-covid-19-shots-to-cost-3-to-10-under-african-union-vaccine-plan-idUSKBN29POLL>

<sup>34</sup> <https://www.worldbank.org/en/news/press-release/2020/10/13/world-bank-approves-12-billion-for-covid-19-vaccines>

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- 35 <https://www.nature.com/articles/d41586-021-01762-w>
- 36 <https://www.politico.com/news/2021/07/21/global-vaccine-effort-usaid-cash-500342>
- 37 <https://www.ctvnews.ca/health/coronavirus/canada-paid-a-premium-to-get-doses-from-pfizer-earlier-than-planned-1.5467958>
- 38 <https://www.oxfam.org/en/research/shot-recovery>
- 39 <https://www.bbc.co.uk/news/health-55040635>
- 40 <https://www.gov.uk/government/news/uk-secures-extra-60-million-pfizerbiontech-covid-19-vaccines>
- 41 Based on the NHS having 1.5 million members of staff in England; 140,000 in Scotland; 78,000 in Wales and 64,000 in Northern Ireland. Sources <https://www.nuffieldtrust.org.uk/resource/the-nhs-workforce-in-numbers>; <https://www.scot.nhs.uk/about-nhs-scotland/#:~:text=NHSScotland%20currently%20employs%20approximately%20140%2C000,Health%20and%20Social%20Care%20Directorates>; <https://www.wales.nhs.uk/nhs-wales/about-us#:~:text=Staff,makes%20it%20Wales'%20biggest%20employer>; <https://www.health-ni.gov.uk/publications/northern-ireland-health-and-social-care-hsc-key-facts-workforce-bulletin-march-2021>
- 42 <https://www.nytimes.com/2020/12/18/upshot/coronavirus-vaccines-prices-europe-united-states.html> <https://www.nytimes.com/2020/07/22/us/politics/pfizer-coronavirus-vaccine.html>
- 43 <https://www.reuters.com/world/europe/bulgarian-pm-reveals-price-eus-new-vaccine-contract-with-pfizer-2021-04-12/>
- 44 <https://apnews.com/article/coronavirus-vaccine-inequality-dac9c07b324e29d3597037b8dc1d908a>
- 45 <https://twitter.com/ellenthoen/status/1417409092746895406?s=20>
- 46 <https://www.oxfam.org/en/press-releases/pharmaceutical-giants-shell-out-billions-shareholders-world-confronts-vaccine>
- 47 <https://www.forbes.com/consent/?toURL=https://www.forbes.com/billionaires/>
- 48 <https://www.oxfam.org/en/press-releases/covid-vaccines-create-9-new-billionaires-combined-wealth-greater-cost-vaccinating>
- 49 <https://www.oxfam.org/en/research/shot-recovery>
- 50 <https://www.pharmaceutical-technology.com/news/moderna-q1-sales-vaccine/>
- 51 <https://www.pharmaceutical-technology.com/features/pfizer-covid-19-vaccine-revenue/>
- 52 Pfizer forecasts sales of \$26 billion in revenue for 1.6 billion vaccine doses, therefore at an average cost per dose of \$16.25 (against a potential cost price of \$1.18 per dose). Moderna forecasts sales of between 800 million and 1 billion doses, therefore at an average cost of between \$19.20 and \$24 per dose (against a potential cost price of \$2.85 per dose).
- 53 <https://www.ft.com/content/506f5656-5481-44cd-82c8-1c7306b481c5>
- 54 According to the World Bank the population of the world is 7.8 billion people. It would take 15.6 billion doses (2 doses per person) to fully vaccinate everyone. At the Public Citizen estimated cost price of the Pfizer/BioNTech vaccine of \$1.18 per dose, buying enough doses for everyone would cost \$18.4 billion.
- 55 <https://www.oxfam.org/en/research/shot-recovery>
- 56 Ibid.
- 57 Ibid.
- 58 <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3078828/#B67>
- 59 <https://www.unaids.org/en/resources/fact-sheet#:~:text=GLOBAL%20HIV%20STATISTICS&text=27.5%20million%20%5B26.5%20million%E2%80%9327.7,t he%20start%20of%20the%20epidemic>
- 60 <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3078828/#B67>
- 61 Ibid.
- 62 <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6248837/>
- 63 <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3078828/#B67>
- 64 [https://www.thelancet.com/journals/langlo/article/PIIS2214-109X\(18\)30422-4/fulltext](https://www.thelancet.com/journals/langlo/article/PIIS2214-109X(18)30422-4/fulltext)
- 65 <https://msfaccess.org/gavi-should-stop-awarding-special-funds-pfizer-and-gsk-pneumonia-vaccine>
- 66 Ibid.

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<sup>67</sup> Following 7 years of campaigning led by MSF, GSK did reduce the price per dose to \$3.05 in 2016. This price was only offered to Gavi and other humanitarian organisations but not to countries ineligible for Gavi support that were still unable to afford the vaccine. <https://www.msf.org/msf-welcomes-gsk%E2%80%99s-decision-lower-price-pneumonia-vaccine-some-world%E2%80%99s-most-vulnerable-children>

<sup>68</sup> [https://www.thelancet.com/journals/langlo/article/PIIS2214-109X\(18\)30422-4/fulltext](https://www.thelancet.com/journals/langlo/article/PIIS2214-109X(18)30422-4/fulltext)

<sup>69</sup> <https://msfaccess.org/open-letter-gavi-vaccine-manufacturers-and-donor-governments-ahead-global-vaccination-summit>

<sup>70</sup> <https://www.moneycontrol.com/news/business/companies/serum-institute-of-india-launches-worlds-most-affordable-pneumococcal-conjugate-vaccine-6278681.html>

<sup>71</sup> Ibid.

<sup>72</sup> Analysis of WHO 2018 data

[https://www.who.int/immunization/programmes\\_systems/procurement/mi4a/platform/module2/2019\\_Global\\_Vaccine\\_Market\\_Report.pdf?ua=1](https://www.who.int/immunization/programmes_systems/procurement/mi4a/platform/module2/2019_Global_Vaccine_Market_Report.pdf?ua=1)

<sup>73</sup> In 2018 purchase data, Yellow Fever and rabies vaccines had the greatest notable difference in prices. Yellow Fever was sold at around \$30 per dose by IFMPA manufacturers, and just \$1.15 per dose by developing country manufacturers.

<sup>74</sup> <https://www.fda.gov/about-fda/center-drug-evaluation-and-research-cder/generic-competition-and-drug-prices>