

Access to medicines—an old problem needing new solutions

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The Oxford/AstraZeneca and Pfizer-BioNTech covid-19 vaccines were approved in December 2020, followed by the Moderna vaccine in January 2021. The relief I felt after my first dose of the covid-19 vaccine on 23 December 2020 is hard to describe. In late January 2022, the world crossed a remarkable milestone—delivery of 10 billion covid-19 vaccine doses.¹ About half of the global population is fully vaccinated with over 20 vaccines being distributed worldwide, including generic versions of AZ and Pfizer, and those from China, Russia, Iran, Turkey.²

To enable equitable access to covid-19 vaccines, COVAX (COVID-19 Vaccines Global Access) was established, led by the GAVI vaccine alliance, the Coalition for Epidemic Preparedness Innovations (CEPI), the World Health Organisation (WHO), and UNICEF.³ However, gross inequities persist by country, level of development, and availability of second and booster doses, with over 90% of vaccine use in high- and middle-income countries and barely any in the lowest income countries. Lack of affordable research pipelines, affordable production, distribution, intellectual property rights and incentives all play a role.

The median cost of bringing a new drug to market is, on average, \$1.3 billion.⁴ When a drug or vaccine goes to market, companies try to recoup research and development costs. Martin Landray, principal investigator of the RECOVERY trial, established Protas last month to design smarter, more efficient, cheaper trials with better collaborations across public and private partners.⁵

Inadequate production and distribution are more pressing concerns. The Serum Institute of India was licensed to produce the Oxford/AZ vaccine as Covishield since 1 January 2021. Biological E, an Indian company, is producing India's first locally developed covid-19 vaccine, partnering with Baylor College of Medicine.⁶ When covid-19 cases soared in India, local Indian need for vaccines threatened global vaccine supplies.⁷ India and low- and middle-income country producers are supplying most of the covid-19 vaccine to poorer countries, which reflect the greatest need. We saw a similar situation with treatment for HIV/AIDS, where Indian pharma companies supplied the majority of anti-retroviral therapy to sub-Saharan Africa.⁸

Just as covid-19 has led to exceptional considerations in terms of access to and use of data for research, there was encouraging news recently, when the EU, South Africa, India and the U.S agreed to an exceptional waiver in intellectual property rights for covid-19 vaccines.⁹ However, this waiver currently only lasts for 3-5 years and excludes covid-19-related therapeutics or diagnostics. Moreover, should covid-19 be singled out as more important than other diseases and vaccines as more important than other drugs?

For non-communicable diseases, like cardiovascular disease and cancers—which account for most of the world’s burden of disease—the situation is worse. In recent years, there have been major treatment advances, including novel anticoagulants for preventing stroke in atrial fibrillation, or SGLT2-inhibitors, whose long term benefits are proven beyond diabetes in those with cardiovascular disease and those with chronic kidney disease.¹⁰¹¹ Yet, these drugs are neither affordable nor accessible in many settings. The only hope for such countries is the WHO Essential Medicines List, which tends to exclude new drugs for several years until they are towards the end of their patent life.

The cost of not providing new drugs worldwide is not routinely or systematically measured, but is likely to be substantial, avoidable, and extend far beyond vaccines. Potential solutions must work across vaccines, drugs and diseases, overcoming these different barriers, such as the Health Impact Fund where companies producing drugs would be rewarded for the population health impact of their products rather than market forces. The implications for improved survival and quality of life are enormous, but require coordinated political will during and beyond the pandemic. The time is now.