# 1AC

#### Resolved: The member nations of the World Trade Organization ought to reduce intellectual property protections for medicines.

## Framework

#### The standard is preventable deaths.

#### Independent of considerations of future happiness or life, death is ontologically the worst possible evil since it destroys the subject itself

Paterson, 03 – Department of Philosophy, Providence College, Rhode Island (Craig, “A Life Not Worth Living?”, Studies in Christian Ethics, http://sce.sagepub.com)

Contrary to those accounts, I would argue that it is death per se that is really the objective evil for us, not because it deprives us of a prospective future of overall good judged better than the alter- native of non-being. It cannot be about harm to a former person who has ceased to exist, for no person actually suffers from the sub-sequent non-participation. Rather, death in itself is an evil to us because it ontologically destroys the current existent subject — it is the ultimate in metaphysical lightening strikes.80 The evil of death is truly an ontological evil borne by the person who already exists, independently of calculations about better or worse possible lives. Such an evil need not be consciously experienced in order to be an evil for the kind of being a human person is. Death is an evil because of the change in kind it brings about, a change that is destructive of the type of entity that we essentially are. Anything, whether caused naturally or caused by human intervention (intentional or unintentional) that drastically interferes in the process of maintaining the person in existence is an objective evil for the person. What is crucially at stake here, and is dialectically supportive of the self-evidency of the basic good of human life, is that death is a radical interference with the current life process of the kind of being that we are. In consequence, death itself can be credibly thought of as a ‘primitive evil’ for all persons, regardless of the extent to which they are currently or prospectively capable of participating in a full array of the goods of life.81 In conclusion, concerning willed human actions, it is justifiable to state that any intentional rejection of human life itself cannot therefore be warranted since it is an expression of an ultimate disvalue for the subject, namely, the destruction of the present person; a radical ontological good that we cannot begin to weigh objectively against the travails of life in a rational manner. To deal with the sources of disvalue (pain, suffering, etc.) we should not seek to irrationally destroy the person, the very source and condition of all human possibility.82

#### No act omission distinction, governments are morally responsible for their omissions because they always face choices between different sets of policy options, all of which advantage some while disadvantaging others.

Cass R. **Sunstein and Vermeule** Adrian [“Is Capital Punishment Morally Required? Acts, Omissions, and Life-Life Tradeoffs. Copyright (c) 2005 The Board of Trustees of Leland Stanford Junior University. Stanford Law Review December,2005 58 Stan. L. Rev. 703]

The critics of capital punishment have been led astray by uncritically applying the act/omission distinction to a regulatory setting. Their position condemns the "active" infliction of death by governments but does not condemn the "inactive" production of death that comes from the refusal to maintain a system [\*720] of capital punishment. The basic problem is that even if this selective condemnation can be justified at the level of individual behavior, it is difficult to defend for governments. [n58](http://www.lexisnexis.com.floyd.lib.umn.edu/us/lnacademic/frame.do?tokenKey=rsh-20.737298.6087973779&target=results_DocumentContent&reloadEntirePage=true&rand=1187847773274&returnToKey=20_T1938900223&parent=docview##) A great deal of work has to be done to explain why "inactive," but causal, government decisions should not be part of the moral calculus. Suppose that we endorse the deontological position that it is wrong to take human lives, even if overall welfare is promoted by taking them. Why does the system of capital punishment violate that position, if the failure to impose capital punishment also takes lives? We suggest that the distinction between government acts and omissions, even if conceptually coherent, is not morally relevant to the question of capital punishment. Some governmental actions are morally obligatory, and some governmental omissions are blameworthy. In this setting, we suggest, government is morally obligated to adopt capital punishment and morally at fault if it declines to do so. The most fundamental point is that, unlike individuals, governments always and necessarily face a choice between or among possible policies for regulating third parties. The distinction between acts and omissions may not be intelligible in this context, and even if it is, the distinction does not make a morally relevant difference. Most generally, government is in the business of creating permissions and prohibitions. When it explicitly or implicitly authorizes private action, it is not omitting to do anything or refusing to act. [n61](http://www.lexisnexis.com.floyd.lib.umn.edu/us/lnacademic/frame.do?tokenKey=rsh-20.737298.6087973779&target=results_DocumentContent&reloadEntirePage=true&rand=1187847773274&returnToKey=20_T1938900223&parent=docview##) Moreover, the distinction between authorized and unauthorized private action - for example, private killing - becomes obscure when the government formally forbids private action but chooses a set of policy instruments that do not adequately or fully discourage it. To be sure, a system of punishments that only weakly deters homicide, relative to other feasible punishments, does not quite authorize homicide, but that system is not properly characterized as an omission, and little turns on whether it can be so characterized. Suppose, for example, that government fails to characterize certain actions - say, sexual harassment - as tortious or violative of civil rights law and that it therefore permits employers to harass employees as they choose or to discharge employees for failing to submit to sexual harassment. It would be unhelpful to characterize the result as a product of governmental "inaction." If employers are permitted to discharge employees for refusing to submit to sexual harassment, it is because the law is allocating certain entitlements to employers rather than employees. Or consider the context of ordinary torts. When Homeowner B sues Factory A over air pollution, a decision not to rule for Homeowner B is not a form of inaction: it is the allocation to Factory A of a property right to pollute. In such cases, an apparent government omission is an action simply because it is an allocation of legal rights. Any decision that allocates such rights, by creating entitlements [\*722] and prohibitions, is not inaction at all.

#### Only through utilitarianism can we

1. Avoid biases and flawed ontological assumptions as we treat all “good” equally
2. Enable the creation of positive alternative futures because we are focusing on the “greatest good”

### Definitions

**Intellectual property protections for medicines-** Hickey et al 19 Two main types of IP may protect pharmaceutical products: patents and regulatory exclusivities. Patents, which are available to a wide range of technologies besides pharmaceuticals, are granted by the U.S. Patent and Trademark Office (PTO) to new and useful inventions. Pharmaceutical patents may claim chemical compounds in the pharmaceutical product, a method of using the product, a method of making the product, or a variety of other patentable inventions relating to a drug or biologic. The holder of a valid patent generally has the exclusive right to make, use, sell, and import the invention for a term lasting approximately 20 years. If a court concludes that a competitor’s generic or biosimilar version infringes a valid patent, the court may issue an injunction precluding the competitor from making, using, selling, and importing that competing product until the patent expires. In some circumstances, FDA grants regulatory exclusivities to a pharmaceutical manufacturer upon the completion of the process required to market pharmaceutical products. Before a new drug or biologic can be sold in the United States, companies must apply for regulatory approval or licensure from FDA, which determines if the pharmaceutical is safe and effective. For certain pharmaceuticals, such as innovative products or those that serve particular needs, FDA provides a term of marketing exclusivity upon the successful completion of the regulatory process. If a product is covered by an unexpired regulatory exclusivity, FDA generally may not accept and/or approve an application seeking FDA approval of a follow-on product (i.e., a generic drug or biosimilar). Regulatory exclusivities vary in length from as little as six months to as much as 12 years depending on the specific type of drug or biologic at issue and other factors. (“Drug Pricing and Intellectual Property Law: A Legal Overview for the 116th Congress” Congressional Research Service, April 4, 2019, Kevin J. Hickey, Coordinator Legislative Attorney Erin H. Ward Legislative Attorney Wen S. Shen Legislative Attorney, <https://fas.org/sgp/crs/misc/R45666.pdf>)

#### Other definitions will be provided upon request.

## Plan

#### **My plan is to delink by rewarding companies with financial prizes.**

CHAN 17 (https://apps.who.int/iris/bitstream/handle/10665/255355/9789241512442-eng.pdf?sequence=1 BY DR MARGARET CHAN, DIRECTOR-GENERAL, WORLD HEALTH ORGANIZATION World Health Organization 2017 “TEN YEARS IN PUBLIC HEALTH 2007-2017”)

WHO’s approach to access issues became far more ambitious in 2006, when the WHO Commission on Intellectual Property, Innovation and Public Health issued its report. The Commission concluded that, while governments bear much responsibility, WHO must take the lead in promoting more sustainable funding mechanisms to stimulate innovation in cases where intellectual property acts as a barrier to access to medicines. In line with that conclusion, the report urged WHO to “develop a global plan of action to secure enhanced and sustainable funding for developing and making accessible products to address diseases that disproportionately affect developing countries.” WHO Member States promptly acted on that advice. Two years later, after tense and sometimes heated negotiations, the World Health Assembly approved the Organization’s first Global Strategy and Plan of Action on Public Health, Innovation and Intellectual Property, an achievement immediately hailed as a milestone. WHO had taken a daring step into the potential minefield of the patent regime, with major implications. As one of its strengths, the strategy and action plan tackled the need for innovation and affordable access simultaneously. The resulting text did indeed contain some breakthrough proposals. It raised the prospect of managing intellectual property in a more responsible manner that maximized needs-driven innovation and promoted access to affordable medical products. It called for exploration of new incentive schemes that would delink the costs of R&D from the price of medical products. Financial prizes for R&D milestones or bringing a product to market were put forward as one way of doing so. And it scolded, drawing attention to the practice, often embedded in trade agreements, of stipulating more extensive intellectual property protection than required by the World Trade Organization’s Agreement on Trade-related Aspects of Intellectual Property Rights – the socalled TRIPS-plus measures. Commonly used measures include extending the term of a patent longer than the 20-year minimum, introducing provisions that limit the use of compulsory licenses, and requiring data exclusivity, which blocks market entry by generic manufacturers. WHO was unquestionably taking a stand in contentious territory. With an agreed strategy and action plan in hand, the next step was to finance its implementation. As requested, WHO appointed expert working groups to explore innovative proposals for financing and coordinating R&D. The report of the Consultative expert working group, issued in 2012, critically and systematically assessed 15 proposals for financing R&D and recommended five as best meeting its established criteria: a binding R&D convention or framework, pooled funds, direct grants to companies, milestone prizes and end prizes, and patent pools. While the experts believed the time was right to initiate negotiations for a binding convention, Member States disagreed. By 2012, the impact of the 2008 financial crisis was being felt almost universally. The proposal to negotiate a binding convention did not resonate well in a climate of austerity. Governments were reluctant to accept any new instrument that committed them to substantial and sustained financial support. During discussions of the report in subsequent sessions of the World Health Assembly, WHO was asked to pursue several recommendations: to establish an R&D observatory, to appoint an expert committee to advise on R&D priorities and means of coordination, to elaborate a mechanism for the voluntary pooled funding of R&D, and to conduct demonstration projects for designated diseases of the poor. The latter initiative was crippled by a significant funding gap. The proposal to negotiate a binding R&D convention was revived in 2016, when the UN Secretary-General’s High-level panel on access to medicines issued its report. That report also drew attention to the fact that many countries were not using fully the flexibilities under the TRIPS Agreement, for reasons ranging from capacity constraints to undue political and economic pressure from states and corporations. As the report noted, “Political and economic pressure placed on governments to forgo the use of TRIPS flexibilities violates the integrity and legitimacy of the system of legal rights and duties created by the TRIPS Agreement, as reaffirmed by the Doha Declaration.” WHO works closely with the World Trade Organization, the World Intellectual Property Organization, and other UN agencies to support the unimpeded use of measures that can improve access, such as local production, giving least-developed countries a transition period, implementing patentability criteria that reward only genuinely innovative discoveries, and compulsory licensing. On request, WHO provides direct technical support to countries that intend to make use of these flexibilities.

#### Clearly, what is necessary is to delink costs of R&D from medical products. Patents are a way of linking them together, as companies charge the costs of R&D through sales. Thus, I introduce my plan of financing R&D through financial prizes, which successfully delinks and will replace patents.

## Adv 1- Accessibility

#### The patent system forces the poor to wait 20 years before getting access to breakthrough medicines.

CHAN 17 (https://apps.who.int/iris/bitstream/handle/10665/255355/9789241512442-eng.pdf?sequence=1 BY DR MARGARET CHAN, DIRECTOR-GENERAL, WORLD HEALTH ORGANIZATION World Health Organization 2017 “TEN YEARS IN PUBLIC HEALTH 2007-2017”)

While all of these initiatives are doing great good, they address only pieces of a much bigger – and deep-seated – problem: the way the patent system operates to preferentially stimulate innovation for wealthy markets, establish a 20-year minimum monopoly on high prices, and leave the poor – and their vast health needs – abandoned by the wayside. A 2002 WHO document expressed the situation well: “A significant proportion of the world’s population, especially in developing countries, has yet to derive much benefit from innovations that are commonplace elsewhere.”

#### Developing countries have greater need of patented drugs, despite being unable to afford them.

Ahmadiani and Nikfar 16 (Published online 2016 May 4. Challenges of access to medicine and the responsibility of pharmaceutical companies: a legal perspective [Saeed Ahmadiani](https://www.ncbi.nlm.nih.gov/pubmed/?term=Ahmadiani%20S%5BAuthor%5D&cauthor=true&cauthor_uid=27141958) and [Shekoufeh Nikfar](https://www.ncbi.nlm.nih.gov/pubmed/?term=Nikfar%20S%5BAuthor%5D&cauthor=true&cauthor_uid=27141958) <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4855755/> Saeed Ahmadiani: Department of Pharmacoeconomics and Pharmaceutical Administration, Faculty of Pharmacy, Tehran University of Medical Sciences, 16Azar St, Tehran, Iran; Shekoufeh Nikfar: Department of Pharmacoeconomics and Pharmaceutical Administration, Faculty of Pharmacy, Tehran University of Medical Sciences, 16Azar St, Tehran, Iran )

Huge part of barriers in access to medicine returns to patent law and its consequences. Although patent law generally has been used for centuries [[2](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4855755/#CR2)], the manifestation of TRIPS agreement in 1994 turned it to a new form of challenge. This agreement force the World Trade Organization (WTO) members to take action for protecting intellectual property rights, which entails that any patented product should be produced, imported, sold or used under permission of the patent owner [[3](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4855755/#CR3)]. This includes medicine, thus the production of each medicine is initiated with a period of monopoly in the market with the highest possible price. In this period there will be no low price generic drugs in the market after signing the agreement by one state (for those drugs which are still under patent), and hence, patients should provide the expensive branded medicine either out of pocket or by using their insurance. The problem will rise up when it comes to a developing country where population not only have lower economic status, but also lower health status and higher needs to medicine. According to WHO, life expectancy in developed countries was 1.7 fold higher than developing countries in 2002, showing a 32-years gap in life expectancy between these societies [[4](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4855755/#CR4)]. Also, data shows that infectious diseases such as TB have a negative relationship with GDP per capita of the country [[5](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4855755/#CR5)] (also see Fig [1](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4855755/figure/Fig1/)). These health measures make it obvious that in developing countries there is a higher need to medical technologies which many of them are under patent. At the same time, health insurance coverage is usually poor in these countries and patients often have to pay for the branded medicine out of their own pockets. Evidence shows that the lower the national income is, the higher the out of pocket share of health spending will be [[6](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4855755/#CR6)]. With higher needs and lower economic ability, providing branded medicine will result in a large load of expenditure for states, catastrophic expenditures for patients [[7](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4855755/#CR7)] and increase of mortality and/or morbidity because of low access to medicine (see Fig [2](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4855755/figure/Fig2/)).

#### Lack of access causes massive suffering and preventable deaths.

CHAN 17 (https://apps.who.int/iris/bitstream/handle/10665/255355/9789241512442-eng.pdf?sequence=1 BY DR MARGARET CHAN, DIRECTOR-GENERAL, WORLD HEALTH ORGANIZATION World Health Organization 2017 “TEN YEARS IN PUBLIC HEALTH 2007-2017”)

Nearly 2 billion people have no access to basic medicines, causing a cascade of preventable misery and suffering. Since the landmark agreement on the Global Strategy and Plan of Action on Public Health, Innovation and Intellectual Property, WHO and its partners have launched a number of initiatives that are making market forces serve the poor. The WHO prequalification programme is now firmly established as a mechanism for improving access to safe, effective and quality-assured products. WHO has struggled to improve access to medicines throughout its nearly 70-year history, and rightly so. Good health is impossible without access to pharmaceutical products. Universal health coverage depends on the availability of quality-assured affordable health technologies in sufficient quantities. Lack of access to medicines causes a cascade of misery and suffering, from no relief for the excruciating pain of a child’s earache, to women who bleed to death during childbirth, to deaths from diseases that are easily and inexpensively prevented or cured. Lack of access to medicines is one inequality that can be measured by a starkly visible yardstick: numbers of preventable deaths. Efforts to improve access to medicines are driven by a compelling ethical imperative. People should not be denied access to life-saving or health-promoting interventions for unfair reasons, including those with economic or social causes. Millions of yearly childhood deaths from diseases that could have been prevented or cured by existing medical products would be unthinkable in a fair and just world. The world is neither. An estimated two billion people have no access to essential medicines, effectively shutting them off from the benefits of advances in modern science and medicine.

## Adv 2- Pandemic

#### Lack of health services causes poverty and limits future generations.

Mamiko Yoshizu et al. 17, (Communications Officer at the WHO, Simeon Bennett, Communications Officer at the WHO, Tomoko Hirai, Communications Officer at the World Bank, Gregory Härtl, Spokesperson at the WHO, World Bank and WHO: Half the world lacks access to essential health services, 100 million still pushed into extreme poverty because of health expenses,” December 13th, 2017, https://www.who.int/news/item/13-12-2017-world-bank-and-who-half-the-world-lacks-access-to-essential-health-services-100-million-still-pushed-into-extreme-poverty-because-of-health-expenses)

At least half of the world’s population cannot obtain essential health services, according to a new report from the World Bank and WHO. And each year, large numbers of households are being pushed into poverty because they must pay for health care out of their own pockets. Currently, 800 million people spend at least 10 percent of their household budgets on health expenses for themselves, a sick child or other family member. For almost 100 million people these expenses are high enough to push them into extreme poverty, forcing them to survive on just $1.90 or less a day. The findings, released today in Tracking Universal Health Coverage: 2017 Global Monitoring Report, have been simultaneously published in Lancet Global Health. "It is completely unacceptable that half the world still lacks coverage for the most essential health services," said Dr Tedros Adhanom Ghebreyesus, Director-General of WHO. "And it is unnecessary. A solution exists: universal health coverage (UHC) allows everyone to obtain the health services they need, when and where they need them, without facing financial hardship." "The report makes clear that if we are serious – not just about better health outcomes, but also about ending poverty – we must urgently scale up our efforts on universal health coverage," said World Bank Group President Dr. Jim Yong Kim. "Investments in health, and more generally investments in people, are critical to build human capital and enable sustainable and inclusive economic growth. But the system is broken: we need a fundamental shift in the way we mobilize resources for health and human capital, especially at the country level. We are working on many fronts to help countries spend more and more effectively on people, and increase their progress towards universal health coverage." There is some good news: The report shows that the 21st century has seen an increase in the number of people able to obtain some key health services, such as immunization and family planning, as well as antiretroviral treatment for HIV and insecticide-treated bed nets to prevent malaria. In addition, fewer people are now being tipped into extreme poverty than at the turn of the century. Progress, however, is very uneven. There are wide gaps in the availability of services in Sub-Saharan Africa and Southern Asia. In other regions, basic health care services such as family planning and infant immunization are becoming more available, but lack of financial protection means increasing financial distress for families as they pay for these services out of their own pockets. This is even a challenge in more affluent regions such as Eastern Asia, Latin America and Europe, where a growing number of people are spending at least 10 percent of their household budgets on out-of-pocket health expenses. Inequalities in health services are seen not just between, but also within countries: national averages can mask low levels of health service coverage in disadvantaged population groups. For example, only 17 percent of mothers and children in the poorest fifth of households in low- and lower-middle income countries received at least six of seven basic maternal and child health interventions, compared to 74 percent for the wealthiest fifth of households. The report is a key point of discussion at the global Universal Health Coverage Forum 2017, currently taking place in Tokyo, Japan. Convened by the Government of Japan, a leading supporter of UHC domestically and globally, the Forum is cosponsored by the Japan International Cooperation Agency (JICA), UHC2030, the leading global movement advocating for UHC, UNICEF, the World Bank, and WHO. Japanese Prime Minister Shinzo Abe, UN Secretary-General Antonio Guterres, World Bank President Kim, WHO Director-General Tedros and UNICEF Executive Director Anthony Lake will all be in attendance, in addition to heads of state and ministers from over 30 countries. "Past experiences taught us that designing a robust health financing mechanism that protects each individual vulnerable person from financial hardship, as well as developing health care facilities and a workforce including doctors to provide necessary health services wherever people live, are critically important in achieving 'Health for All,'" said Mr. Katsunobu Kato, Minister of Health, Labour and Welfare, Japan. "I firmly believe that these early-stage investments for UHC by the whole government were an important enabling factor in Japan’s rapid economic development later on." The Forum is the culmination of events in over 100 countries, which began on Dec. 12—Universal Health Coverage Day—to highlight the growing global momentum on UHC. It seeks to showcase the strong high-level political commitment to UHC at global and country levels, highlight the experiences of countries that have been pathfinders on UHC progress, and add to the knowledge base on how to strengthen health systems and effectively promote UHC. The main high-level sessions of the Forum take place tomorrow, Dec. 14, and will also feature an all-day “innovation showcase,” highlighting innovations driving progress in health systems around the world, and a celebratory public event in the evening. A commitment to action, called the Tokyo Declaration on Universal Health Coverage, will be released during the Forum’s closing ceremony. "Without health care, how can children reach their full potential? And without a healthy, productive population, how can societies realize their aspirations?" said UNICEF Executive Director Anthony Lake. "Universal health coverage can help level the playing field for children today, in turn helping them break intergenerational cycles of poverty and poor health tomorrow." Building on the G7 Ise-Shima Summit and the TICAD VI in 2016, both of which stress the need for UHC, the Forum in Tokyo is seen as a milestone for accelerating progress towards the target of UHC by 2030, a key part of the Sustainable Development Goals. Countries will then gear up for the next global moment: a high-level meeting of the UN General Assembly on UHC in 2019.

#### Many elements key to defeating pathogens are currently unachievable by those in the developing world, but can be increased by increased accessibility and reducing poverty.

Roser 20 (“Our history is a battle against the microbes: we lost terribly before science, public health, and vaccines allowed us to protect ourselves” [by Max Roser](https://ourworldindata.org/team) July 20, 2020 updated version: 21 July 2020 Our World in Data https://ourworldindata.org/microbes-battle-science-vaccines Max is the founder and director of Our World in Data. He [began](https://ourworldindata.org/history-of-our-world-in-data) the project in 2011 and for several years was the sole author, until receiving funding for the formation of a team. Max’s research focuses on poverty, global health, and the distribution of incomes. He is also Programme Director of [the Oxford Martin Programme on Global Development](https://www.oxfordmartin.ox.ac.uk/global-development/) at the University of Oxford, and Co-executive Director of [Global Change Data Lab,](https://global-change-data-lab.org/) the non-profit organization that publishes and maintains the website and the data tools that make our work possible.)

Vaccines not only protect the health of the immunized person but also the health of the community. If vaccination rates are high enough the transmission of infectious diseases is interrupted in the community which means that even those who are unvaccinated gain protection. As is so often the case in development [you cannot achieve progress by yourself](https://ourworldindata.org/global-inequality-of-opportunity). Your progress towards a healthier life depends on everyone else’s progress towards a healthier life; you safer if others are vaccinated too. The health improvements that you cannot achieve by yourself is the sphere of public health and many of the most important interventions in the fight against infectious diseases were therefore financed socially. Public spending financed the crucial improvements in sanitation as well as many large vaccination programs. Vaccination programs are one of many strategies by which we made progress against infectious diseases. The first pathogen successively defeated by humans in Europe – as early as the 17th century – was the plague. According to Shaw-Taylor (2020) this was achieved by a combination of quarantine measures, cordons sanitaire and contact tracing (which was first developed in the Renaissance).[5](https://ourworldindata.org/microbes-battle-science-vaccines#note-5) Since then we found many additional strategies against the various microbes. Antibiotics, safe drinking water, better housing, better education, falling poverty, declining undernourishment, pasteurization, hygiene, better sanitation and other public health advancements were and are crucial. Jason Crawford provides an [excellent overview](https://rootsofprogress.org/draining-the-swamp) of the crucial role of better sanitation, hygiene, and other public health measures for the progress since the 19th century. Today too, vaccines are only one of many strategies that we have found in the battle against the microbes. We see now – in the COVID-19 pandemic – that there are several countries responding successfully to the virus without the help of a vaccine (we studied how they do this [here](https://ourworldindata.org/identify-covid-exemplars)).

#### No matter how strong innovation may be in the developed world, weak healthcare in the developing world encourages epidemics and mutations.

World Bank 18 (The World Bank December 7, 2018 "Lack of Health Care is a Waste of Human Capital: 5 Ways to Achieve Universal Health Coverage By 2030" <https://www.worldbank.org/en/news/immersive-story/2018/12/07/lack-of-health-care-is-a-waste-of-human-capital-5-ways-to-achieve-universal-health-coverage-by-2030>)

There’s been a steady increase in the frequency and diversity of disease outbreaks over the past 30 years. Epidemics can strike anywhere. But it’s often the weakest part of the health system, where people are not being reached by health services, is often where outbreaks grow unchecked. We can all be protected from outbreaks and pandemics only if every single person is covered by health services—which is the foundation of UHC. This is why the World Bank Group focuses on [supporting countries strengthen veterinary and human health systems](https://blogs.worldbank.org/health/node/888) through its [Regional Disease Surveillance Systems Enhancement](https://projects.worldbank.org/P154807?lang=en) (REDISSE) program, and has pioneered innovative financing of speedy response to pandemics through the [Pandemic Emergency Financing Facility](https://www.worldbank.org/en/topic/pandemics/brief/pandemic-emergency-facility-frequently-asked-questions) (PEF).

#### Pandemics start in poor regions because they must first focus on current high disease burdens. Only by being relieved of those will they be able to turn their FULL attention to future pandemics.

Oppenheim and Yamey 17 (“Pandemics and the poor” [Ben Oppenheim](https://www.brookings.edu/author/ben-oppenheim/) and [Gavin Yamey](https://sanford.duke.edu/people/faculty/yamey-gavin-mark), Monday, June 19, 2017 Brookings https://www.brookings.edu/blog/future-development/2017/06/19/pandemics-and-the-poor/ [Ben Oppenheim](https://www.brookings.edu/author/ben-oppenheim/): Senior Scientific Consultant - Metabiota Senior Fellow and Visiting Scholar - New York University Center on International Cooperation [Gavin Yamey](https://sanford.duke.edu/people/faculty/yamey-gavin-mark): Director, Center for Policy Impact in Global Health and Professor of Global Health - Duke Global Health Institute, Duke University)

Most pandemics begin with a pathogen leaping from wild or domesticated animals to humans, what is called a “zoonotic spark.” [Kate Jones and colleagues have found](https://www.nature.com/nature/journal/v451/n7181/full/nature06536.html) high levels of spark risk in West and Central Africa, and South and Southeast Asia. These regions are experiencing rapid expansions in human settlements, intensifying agricultural and livestock production, and increasing exploitation of natural resources. Such factors drive contact between humans and animals, amplifying pandemic risks. These regions are also home to most of the global poor. The first line of defense against pandemics is surveillance: monitoring human and animal populations to spot outbreaks and contain them quickly. Despite growing international attention, disease surveillance remains weakest in impoverished countries at greatest risk. Such countries are short on labs, infrastructure, and trained epidemiologists. Underinvestment in preparedness reflects the painful choice facing [poor countries with high disease burdens](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4126350/): attend to today’s health burdens or to the potentially far-off (yet inevitable) risk of a pandemic. These weaknesses mean that in poor countries, isolated outbreaks are likely to go undetected longer and, thus, to smolder and spread.

**Disease spread is inevitable causes quick extinction and outweighs war and acting preemptively is key**

**Srivatsa 17** – MD

(Kadiyali, “Superbug Pandemics and How to Prevent,” January 12, 2017, https://www.the-american-interest.com/2017/01/12/superbug-pandemics-and-how-to-prevent-them/)

It is by now no secret that the human species is locked in a race of its own making with “superbugs.” Indeed, if popular science fiction is a measure of awareness, the theme has pervaded English-language literature from Michael Crichton’s 1969 Andromeda Strain all the way to Emily St. John Mandel’s 2014 Station Eleven and beyond. By a combination of massive inadvertence and what can only be called stupidity, we must now invent new and effective antibiotics faster than deadly bacteria evolve—and regrettably, they are rapidly doing so with our help. I do not exclude the possibility that bad actors might deliberately engineer deadly superbugs.1 But even if that does not happen, **humanity faces an existential threat largely of its own making** in the absence of malign intentions. As threats go, this one is entirely predictable. The concept of a “black swan,” Nassim Nicholas Taleb’s term for low-probability but high-impact events, has become widely known in recent years. Taleb did not invent the concept; he only gave it a catchy name to help mainly business executives who know little of statistics or probability. Many have embraced the “black swan” label the way children embrace holiday gifts, which are often bobbles of little value, except to them. But the threat of inadvertent pandemics is not a “black swan” because its probability is not low. If one likes catchy labels, it better fits the term “**gray rhino**,” which, explains Michele Wucker, **is a high-probability, high-impact event** that people manage to ignore anyway for a raft of social-psychological reasons.2 A pandemic is a quintessential gray rhino, for it is no longer a matter of if but of when it will challenge us—**and of how prepared we are to deal with it when it happens**. We have certainly been warned. The curse we have created was understood as a possibility from the very outset, when seventy years ago Sir Alexander Fleming, the discoverer of penicillin, predicted antibiotic resistance. When interviewed for a 2015 article, “The Most Predictable Disaster in the History of the Human Race, ” Bill Gates pointed out that one of the costliest disasters of the 20th century, worse even than World War I, was the Spanish Flu pandemic of 1918-19. As the author of the article, Ezra Klein, put it: “No one can say we weren’t warned. And warned. And warned. A pandemic disease **is the most predictable catastrophe** in the history of the human race, if only because it has happened to the human race so many, many times before.”3 Even with effective new medicines, if we can devise them, **we must contain outbreaks of bacterial disease fast**, lest they get out of control. In other words, we have a social-organizational challenge before us as well as a strictly medical one. That means **getting sufficient amounts of medicine into the right hands and in the right places**, but it also means educating people and enabling them to communicate with each other to prevent any outbreak from spreading widely. Responsible governments and cooperative organizations have options in that regard, but even individuals can contribute something. To that end, as a medical doctor I have created a computer app that promises to be useful in that regard—of which more in a moment. But first let us review the situation, for while it has become well known to many people, there is a general resistance to acknowledging the severity and imminence of the danger. What Are the Problems? Bacteria are among the oldest living things on the planet. They are masters of survival and can be found everywhere. Billions of them live on and in every one of us, many of them helping our bodies to run smoothly and stay healthy. Most bacteria that are not helpful to us are at least harmless, but some are not. They invade our cells, spread quickly, and cause havoc that we refer to generically as disease. Millions of people used to die every year as a result of bacterial infections, until we developed antibiotics. These wonder drugs revolutionized medicine, but one can have too much of a good thing. **Doctors have used antibiotics recklessly**, prescribing them for just about everything, and in the process helped to create strains of bacteria that are resistant to the medicines we have. We even give antibiotics to cattle that are not sick and use them to fatten chickens. Companies large and small still mindlessly market antimicrobial products for hands and home, claiming that they kill bacteria and viruses. They do more harm than good because the low concentrations of antimicrobials that these products contain tend to kill friendly bacteria (not viruses at all), **and so clear the way for the mass multiplication of surviving unfriendly bacteria**. Perhaps even worse, hospitals have deployed antimicrobial products on an industrial scale for a long time now, **the result being a sharp rise in iatrogenic bacterial illnesses**. Overuse of antibiotics and commercial products containing them has helped superbugs to evolve. We now increasingly face **microorganisms that cannot be killed by antibiotics, antifungals, antivirals, or any other chemical weapon** we throw at them. Pandemics are the major risk we run as a result, but it is not the only one. Overuse of antibiotics by doctors, homemakers, and hospital managers could mean that, in the not-too-distant future, something as simple as a minor cut **could again become life-threatening if it becomes infected**. Few non-medical professionals are aware that antibiotics are the foundation on which nearly all of modern medicine rests. Cancer therapy, organ transplants, surgeries minor and major, and even childbirth all rely on antibiotics to prevent infections. If infections become untreatable we stand to lose most of the medical advances we have made over the past fifty years. And the problem is already here. In the summer of 2011, a 43-year-old woman with complications from a lung transplant was transferred from a New York City hospital to the Clinical Center at the National Institutes of Health (NIH), in Bethesda, Maryland. She had a highly resistant superbug known as Klebsiella pneumoniae carbapenemase (KPC). The patient was treated and eventually discharged after doctors concluded that they had contained the infection. A few weeks later, a 34-year-old man with a tumor and no known link to the woman contracted KPC while at the hospital. During the course of the next few months, several more NIH patients presented with KPC. Doctors attacked the outbreak with combinations of antibiotics, including a supposedly powerful experimental drug. A separate intensive care unit for KPC patients was set up and robots disinfected empty rooms, but the infection still spread beyond the intensive care area. Several patients died and then suddenly all was silent on the KPC front, with doctors convinced they had seen the last of the dangerous bacterium. They couldn’t have been more mistaken. A year later, a young man with complications from a bone marrow transplant arrived at NIH. He became infected with KPC and died. This superbug is now present in hospitals in most, if not all U.S. states. This is not good. This past year an outbreak of CRE (carbapenem-resistant enterobacteriaceae) linked to contaminated medical equipment infected 11 patients and killed two in Los Angeles area hospitals. This family of bacteria has evolved resistance to all antibiotics, including the powerful carbapenem antibiotics that are often used as a last resort against serious infections. They are now so resilient that **it is virtually impossible to remove them** from medical tools such as catheters and breathing tubes placed into the body, **even after cleaning.** Then we have gonorrhea, chlamydia, and other sexually transmitted diseases that we cannot treat and that are spreading all over the world. Anyone who has sex can catch these infections, and because most people may not exhibit any symptoms they spread infections without anyone knowing about it. Sexually transmitted diseases used to be treatable with antibiotics, but in recent years we have witnessed the rise of multi-drug resistant STDs. Untreated gonorrhea can lead to infertility in men and women and blindness and other congenital defect in babies. As is well known, too, we have witnessed many cases of drug-resistant pneumonia. These problems have arisen in part because of simple mistakes healthcare professionals repeatedly make. Let me explain. Neither superbugs nor common bacterial infections produce any special symptoms indicative of their cause. Rashes, fevers, sneezing, runny noses, ear pain, diarrhea, vomiting, coughing, fatigue, and weakness are signs of common and minor illnesses as well as uncommonly deadly ones. Therefore, the major problem for clinicians is to identify a common symptom that may potentially be an early sign of a major infection that could result in an epidemic. We know that dangerous infections in any given geographical area do not start at the same time. They start with one victim and gradually spread. But that victim is only one among hundreds of patients a doctor will typically see, so many doctors will miss patients presenting with infections that are serious. They will probably identify diseases that kill fast, but slow-spreading infections such as skin infections that can lead to septicemia are rarely diagnosed early. In addition, I have seen doctors treating eczema with antibiotic cream, even though they know that bacteria are resistant to the majority of these drugs. This sort of action encourages simple infections to spread locally, because patients are therefore not instructed to take other, more useful precautions. On top of that, some people are frivolous about infections and assume doctors are exaggerating the threat. And some people are selfish. Once I was called to see a passenger during a flight who had symptoms consistent with infection. He boarded the plane with these symptoms, but began to feel much worse during the flight. I was scared, knowing how infections such as Ebola can spread. This made me think about a way to screen passengers before they board a flight. Airlines could refund a traveler’s ticket, or issue a replacement, in case of sickness—which is not the policy now. We currently have no method to block infectious travelers from boarding flights, and there are no changes in the incentive system to enable conscientious passengers to avoid losing their money if they responsibly miss a flight because of illness. Speaking of selfishness, I once saw a mother drop her daughter off at school with a serious bout of impetigo on her face. When I asked her why she had brought her daughter to school with a contagious infection, she said she could not spare the time to keep her at home or take her to the doctor. By allowing this child to contact other children, a simple infection can become a major threat. Fortunately, I could see the rash on the girl’s face, but other kids in schools may have rashes we cannot see. Incorrect diagnosis of skin problems and mistaken use of antibiotics to treat them is common all over the world, and so we are continually creating superbugs in our communities. Similarly, chest infections, sore throats, and illnesses diagnosed as colds that unnecessarily treated with antibiotics are also a major threat. By prescribing antibiotics for viral infections, we are not only helping bacteria develop resistance, but we are also polluting the environment when these drugs are passed in urine and feces. All of this helps resistant bacteria to spread in the community **and become an epidemic**. Ebola is very difficult to transmit because people who are contagious have visible and unusual symptoms. However, the emerging infections and pandemics of the future may not have visible symptoms, and they could break out in highly populous countries such as India and China **that send thousands of travelers all over the world every day.** When a person is infected with a contagious disease, he or she can expect to pass the illness on to an average of two people. This is called the “reproduction number.” Two is not that high a number as these things go; some diseases **have far greater rates of infection**. The SARS virus had a reproduction number of four. Measles has a reproduction number of 18. One person traveling as an airplane passenger and carrying an infection similar to Ebola can infect three to five people sitting nearby, ten if he or she walks to the toilet. The study that highlighted this was published in a medical journal a few years ago, but the airline industry has not implemented any changes or introduced screening to prevent the spread of infections by air travel passengers, a major vehicle for the rapid spread of disease. It is scary to think that nobody knows what will happen when the world faces a lethal disease we’re not used to, perhaps with a reproduction number of five or eight or even ten. What if it starts in a megacity? What if, unlike Ebola, it’s contagious before patients show obvious symptoms? Past experience isn’t comforting. In 2009, H1N1 flu spread around the world before we even knew it existed. The Questions Remains Why do seemingly intelligent people repeatedly do such collectively stupid things? How did we allow this to happen? The answer is disarmingly simple. It is because people are incentivized to prioritize short-term benefits over long-term considerations. It is what social scientists have called a “logic of collective action” problem. Everyone has his or her specialized niche interest: doctors their patients’ approval, business and airline executives their shareholders’ earnings, hospitals their reputations for best-practice hygienics, homemakers their obligation to keep their own families from illness. But no one owns the longer-term consequences for hundreds of millions of people who are irrelevant to satisfying these short-term concerns. Here is an example. At a recent Superbug Super Drug conference in London that I attended, scientists, health agencies, and pharmaceutical companies were vastly more concerned with investing millions of dollars in efforts to invent another antibiotic, claiming that this has to be the way forward. Money was the most pressing issue because, as everyone at the conference knew, for many years pharmaceutical companies have been pulling back from antibiotics research because they can’t see a profit in it. Development costs run into billions of dollars, yet there is no guarantee that any new drug will successfully fight infections. At the same conference Dr. Lloyd Czaplewski spoke about alternatives to antibiotics, in case we cannot come up with new ones fast enough to outrun superbug evolution. But he omitted mention of preventive strategies that use the internet or communication software to help reduce the spread of infections among families, communities, and countries. It is madness that we don’t have a concrete second-best alternative to new antibiotics, because we need them and we need them quickly. Of course, this is why we have governments, which have been known occasionally in the past as commonwealths. Governments are supposed to look out for the wider, common interests of society that niche-interested professionals take no responsibility for, and that includes public health. It is why nearly every nation’s government has an official who is analogous to the U.S. Surgeon General, and nearly every one has a public health service of some kind. Alas, national governments do not always function as they should. Several years ago physician and former Republican Senator Bill Frist submitted a proposal to the Senate for a U.S. Medical Expeditionary Corps. This would have been a specialized organization that could coordinate and execute rapid responses to global health emergencies such as Ebola. Nothing came of it, because Dr. Frist’s fellow politicians were either too shortsighted or too dimwitted to understand why it was a good idea. Or perhaps they simply realized that they could not benefit politically from supporting it. Plenty of mistakes continue to be made. In 2015, a particularly infectious form of bird flu ripped through 14 U.S. states, leading farmers to preventively slaughter nearly 40 million birds. The result of such callous and unnecessary acts is that, instead of exhausting themselves in the host population of birds, the viruses quickly find alternative hosts in which to survive, and could therefore easily mutate into a form that can infect humans. Earlier, during the 1980s, AIDS garnered more public attention because a handful of rich and famous people were infected, and because the campaign to eradicate it dovetailed with and boosted the political campaign on behalf of homosexual rights. Methicillin resistant Staphylococcus aureus (MRSA) in hospitals, by far the bigger threat at the time, was virtually ignored. Some doctors knew that MRSA would bring us to our knees and kill millions of people worldwide, but pharmaceutical companies and device and equipment manufacturers ignored these doctors and the thousands of patients dying in hospitals as a result of MRSA. They prioritized the wrong thing, and government did not correct the error. And that is partly how antibiotic-resistant infection went from an obscure hospital problem to an incipient global pandemic. Politics well outside the United States plays several other roles in the budding problem that we are confronting. Countries often will not admit they have a problem and request help because of the possible financial implications in terms of investment and travel. Guinea did not declare the Ebola epidemic early on and Chinese leaders, worried about trade and tourism, lied for months in 2002 about the presence of the SARS virus. In 2004, when avian influenza first surfaced in Thailand, officials there displayed a similar reluctance to release information. Hospitals in some countries, including India, are managed and often owned by doctors. They refuse to share information about existing infections and often categorically deny they have a problem. Reporting infections to public health authorities is not mandatory, and so hospitals that fail to say anything are not penalized. Even now, the WHO and the CDC do not have accurate and up-to-date information about the spread of E. coli or other infections, and part of the reason is that for-profit hospitals are reluctant to do anything to diminish their bottom line. Syria and Yemen are among those countries that are so weak and fragmented that they cannot effectively coordinate public healthcare. But their governments are also hostile to external organizations that offer relief. Part of the reason is xenophobia, but part is that this makes the government look bad. Relatedly, most poor-nation governments do not trust the efficacy of international institutions, and think that cooperating with them amounts to a re-importation of imperialism. They would rather their own people suffer and die than ask for needed help. That brings us to the level of international public health governance. Alas, sometimes poor-country governments estimate the efficacy of international institutions accurately. The WHO’s Ebola response in 2014-15 was a disaster. The organization was slow to declare a public health emergency even after public warnings from Médecins Sans Frontières, some of whose doctors had already died on the front line. The outbreak killed more than 28,000 people, far more than would have been the case had it been quickly identified. This isn’t just an issue of bureaucratic incompetence. The WHO is under-resourced for the problems it is meant to solve. Funding comes from voluntary donations, and there is no mechanism by which it can quickly scale up its efforts during an emergency. The result is that its response to the next major disease outbreak is likely to be as inadequate as were its responses to Ebola, H1N1, and SARS. Stakeholders admit that we need another mechanism, and most experts agree that the world needs some kind of emergency response team for dangerous diseases. But no one knows how to set one up amid the dysfunctional global governance structures that presently exist. Maybe they should turn to Bill Frist, whose basic concept was sound; if the U.S. government will not act, perhaps some other governments will, and use the UN system to do so. But as things stand, we lack a health equivalent of the military reserve. Neither government leaders nor doctors can mobilize a team of experts to contain infections. People who want to volunteer, whether for government or NGO efforts, are not paid and the rules, if any, are sketchy about what we do with them when they return from a mission. Are employers going to take them back? What are the quarantine rules? It is all completely ad hoc, meaning that humanity lacks the tools it needs to protect itself. And note, by the way, the contrast between how governments prepare for facing pandemics and how they prepare for making war. War is not more deadly to the human race than pandemics, but national defense against armed aggression is much better planned for than defense against threats to public health. There is a wealth of rules regarding it, too. Human beings study and plan for war, which kills people both deliberately and accidentally, but they do not invest comparable effort planning for pandemics, **which are liable to kill orders of magnitude more people**. To the mind of a medical doctor, this is strange. Creating Conditions for Infections to Spread Superbug infections spread for several interlocking reasons. Some are medical-epidemiological. Most of the infections of the past thirty years have started in one place and in one family. As already noted, they spread because many infectious diseases **are highly contagious** before the onset of symptoms, and because it is difficult to prevent patients who know they are sick from going to hospitals, work, and school, or from traveling further afield. But again, one reason for the problem is political, not medical. Many governments have no strategies in place to prevent pandemics because they are unwilling to tell their people how infections spread. They don’t want to worry people with such talk; it will make them, they fear, unpopular. So governments may have mountains of bureaucracy with great heaps of rules and regulations concerning public health, but they are generally unwilling to trust their own citizens to use common sense on their own behalf. **This, too, seems very strange**. Until now, no one has come forward to help us develop strategies to educate people how to identify and prevent the spread of infection to their families and communities. The majority of stakeholders have also been oblivious to the use of new technologies to help reduce the spread of these infections. There are some exceptions. In a fun blog post called Preparedness 101: Zombie Apocalypse, the CDC uses the threat of a zombie outbreak as a metaphor to encourage people to prepare for emergencies, including pandemics. It is well meaning and insightful, yet when my colleagues and I try to discuss ways of scaling up the CDC’s example with doctors and nurses, they shut down. Nobody plans for an actual crisis partly because it is too scary and hence paralyzing to think about. But it is also because it is not most health professionals’ job; it is not what they are trained and paid to do. It is always someone else’s job, except that it has turned out to be nobody’s job. Worse, the situation is not static. While we sit paralyzed, superbugs are evolving. Epidemiological models now predict how an algorithmic process of disease spread will move through the modern world. All urban centers around the entire globe can **become infected within sixty days** because we move around and cross borders much more than our ancestors did, thanks to air travel. A new pandemic could start crossing borders before we even know it exists. A flu-like disease could **kill more than 33 million people in 250 days**.3

#### Multiple disease at once could very well cause extinction

Piers Millett 17, Consultant for the World Health Organization, PhD in International Relations and Affairs, University of Bradford, Andrew Snyder-Beattie, “Existential Risk and Cost-Effective Biosecurity”, Health Security, Vol 15(4), http://online.liebertpub.com/doi/pdfplus/10.1089/hs.2017.0028

Historically, disease events have been responsible for the greatest death tolls on humanity. The 1918 flu was responsible for more than 50 million deaths,1 while smallpox killed perhaps 10 times that many in the 20th century alone.2 The Black Death was responsible for killing over 25% of the European population,3 while other pandemics, such as the plague of Justinian, are thought to have killed 25 million in the 6th century—constituting over 10% of the world’s population at the time.4 It is an open question whether a future pandemic could result in outright human extinction or the irreversible collapse of civilization.

A skeptic would have many good reasons to think that existential risk from disease is unlikely. Such a disease would need to spread worldwide to remote populations, overcome rare genetic resistances, and evade detection, cures, and countermeasures. Even evolution itself may work in humanity’s favor: Virulence and transmission is often a trade-off, and so evolutionary pressures could push against maximally lethal wild-type pathogens.5,6

While these arguments point to a very small risk of human extinction, they do not rule the possibility out entirely. Although rare, there are recorded instances of species going extinct due to disease—primarily in amphibians, but also in 1 mammalian species of rat on Christmas Island.7,8 There are also historical examples of large human populations being almost entirely wiped out by disease, especially when multiple diseases were simultaneously introduced into a population without immunity. The most striking examples of total population collapse include native American tribes exposed to European diseases, such as the Massachusett (86% loss of population), Quiripi-Unquachog (95% loss of population), and theWestern Abenaki (which suffered a staggering 98% loss of population).

In the modern context, no single disease currently exists that combines the worst-case levels of transmissibility, lethality, resistance to countermeasures, and global reach. But many diseases are proof of principle that each worst-case attribute can be realized independently. For example, some diseases exhibit nearly a 100% case fatality ratio in the absence of treatment, such as rabies or septicemic plague. Other diseases have a track record of spreading to virtually every human community worldwide, such as the 1918 flu,10 and seroprevalence studies indicate that other pathogens, such as chickenpox and HSV-1, can successfully reach over 95% of a population.11,12 Under optimal virulence theory, natural evolution would be an unlikely source for pathogens with the highest possible levels of transmissibility, virulence, and global reach. But advances in biotechnology might allow the creation of diseases that combine such traits. Recent controversy has already emerged over a number of scientific experiments that resulted in viruses with enhanced transmissibility, lethality, and/or the ability to overcome therapeutics.13-17 Other experiments demonstrated that mousepox could be modified to have a 100% case fatality rate and render a vaccine ineffective.18 In addition to transmissibility and lethality, studies have shown that other disease traits, such as incubation time, environmental survival, and available vectors, could be modified as well.19-2

## Solvency

#### Higher government spending in health leads to lower income inequality.

WHO 19 (Global spending on health: a world in transition. Geneva: World Health Organization; 2019 (WHO/HIS/HGF/HFWorkingPaper/19.4). Licence: CC BY-NC-SA 3.0 IGO.)

INCREASING RELIANCE ON PUBLIC HEALTH SPENDING TENDS TO HAVE BETTER FINANCIAL PROTECTION OUTCOMES IN FAST-GROWING COUNTRIES UHC is a social stabilizer, and government spending on social sectors can smooth income through the redistribution effect of direct and indirect taxes. The Gini coefficient of income inequality generally fell in most fast-growing economy countries, similar to the global trend. And higher government spending on health as a share of GDP tends to be associated with lowering the Gini coefficient, or slowing its pace of increase (Figure 2.7). Among the fast-growing countries, those embarking on the health financing transition – to higher levels of government spending in total current health spending – also tend to provide better financial protection to their population as tracked by SDG indicator 3.8.2 (see Box 1.1). Figure 2.8 shows its negative association with catastrophic expenditure, using 25% as the threshold, pointing to better outcomes, similar to finding with the 10% threshold. The large variation reflects differences in the services the government funds and the populations benefitting from them. It confirms that increasing government spending alone will not be enough to achieve universal health coverage even in countries making the health financing transition [1, 6].

#### **Governments are unable to bring high medicine prices down.**

‘t Hoen 02 ('t Hoen, Ellen (2002) "TRIPS, Pharmaceutical Patents, and Access to Essential Medicines: A Long Way From Seattle to Doha," Chicago Journal of International Law: Vol. 3: No. 1, Article 6. Available at: https://chicagounbound.uchicago.edu/cjil/vol3/iss1/6)

Infectious diseases kill over 10 million people each year, more than 90% of whom are in the developing world [1]. The leading causes of illness and death in Africa, Asia, and South America-regions that account for four-fifths of the world’s population – are HIV/AIDS, respiratory infections, malaria, and tuberculosis. In particular, the magnitude of the AIDS crisis has drawn attention to the fact that millions of people in the developing world do not have access to the medicines that are needed to treat disease or alleviate suffering. Each day, close to eight thousand people die of AIDS in the developing world [2]. The reasons for the lack of access to essential medicines are manifold, but in many cases the high prices of drugs are a barrier to needed treatments. Prohibitive drug prices are often the result of strong intellectual property protection. Governments in developing countries that attempt to bring the price of medicines down have come under pressure from industrialized countries and the multinational pharmaceutical industry.

#### In the past, small manufacturers were able to replicate drugs, saving millions.

CHAN 17 (https://apps.who.int/iris/bitstream/handle/10665/255355/9789241512442-eng.pdf?sequence=1 BY DR MARGARET CHAN, DIRECTOR-GENERAL, WORLD HEALTH ORGANIZATION World Health Organization 2017 “TEN YEARS IN PUBLIC HEALTH 2007-2017”)

In 1977, on the eve of the Alma-Ata conference on primary health care, WHO issued its first Model List of Essential Medicines as the Organization’s signature contribution to rational drug procurement. The concept that a limited number of inexpensive medicines could meet the priority health needs of a country’s population was considered revolutionary at the time. Historically, the model lists gave priority to effective medicines that offer clear clinical benefits, while also paying attention to their costs and impact on health budgets. That position changed in the 1990s with the advent of expensive yet highly effective antiretroviral therapies for HIV. It changed again in 2015, after new medicines came on the market that transformed hepatitis C from a barely manageable condition to one that could be safely and easily cured by all-oral treatment options. Those new direct-acting antivirals created an unprecedented dilemma for public health: the arrival of breakthrough drugs with tremendous potential to treat millions of patients with a potentially deadly liver infection, but at a price considered unaffordable, even in high-income countries. The 2015 list also included 16 drugs, including some with high prices, which can increase survival times for common cancers, such as breast cancer, or can successfully cure up to 90% of patients with rare cancers, such as leukaemia and lymphoma. The list further included second-line drugs for the treatment of multidrug-resistant tuberculosis. WHO anticipated that including these sometimes extremely expensive medicines in the list would stimulate efforts to get prices down through policies such as tiered pricing, voluntary and compulsory licensing, pooled procurement, and bulk purchasing. WHO was specifically asked to help countries negotiate lower prices and to rapidly introduce prequalified generic formulations, especially for the hepatitis C antivirals. In several countries, prices dropped significantly for hepatitis C antivirals, but less so for the newly listed cancer drugs. Of the options available, WHO prequalification of generic products held considerable promise as a proven way to increase affordable access. The concept of essential health technologies evolved further in 2017, when the Expert Committee on the Selection and Use of Essential Medicines approved the establishment of a complementary Model List of Essential Diagnostics. For essential medicines, inclusion in the model list was often necessary before large funders, like ministries of health, funding agencies, and insurers, would invest in large-scale procurement of a given medicine. The establishment of a list of essential diagnostics is expected to perform a similar role in guiding rational procurement decisions and improving population access to tests that will have the biggest impact on their health. Introduced in 2001, the WHO Prequalification Programme was equally revolutionary. The programme responded to an urgent need. Generic manufacturers, largely concentrated in India, were producing large quantities of low-cost treatments for HIV, tuberculosis, and malaria, but those products were coming on the market without authorization from a stringent regulatory authority. The WHO programme stepped in to meet the need for stringent assessment by sending expert teams to inspect manufacturing facilities and ensure compliance with WHO Good Manufacturing Practices and testing to see if the quality and efficacy of generic products matched those of patented originator products. The programme clearly satisfied an urgent and unmet need at a time when the three epidemics were still rapidly expanding. It eventually extended its remit to include the prequalification of active pharmaceutical ingredients and drug-testing laboratories. Today, the WHO “prequalified” stamp of approval means that medicines and vaccines are considered safe, effective and of high quality, and thus recommended for bulk purchase. After years of stepwise improvements urged by WHO, China’s National Regulatory Authority was assessed as fully functional for the regulation of vaccines in 2011, when WHO certified that the authority’s oversight of vaccine quality met rigorous international standards. That assessment paved the way for the prequalification of individual vaccines, and opened the door to exports from the country that had the largest vaccine manufacturing capacity in the world. The first vaccine made in China, for Japanese encephalitis, was prequalified by WHO in 2013. The vaccine was not only less expensive than vaccines already on the market, it was also a better product. The vaccine is easier to administer, being effective after a single dose, and can be safely given to infants, greatly simplifying the logistics of vaccine delivery and cutting costs even further. The prequalification of this vaccine by WHO was welcomed as a true game-changer for a disease that is the leading viral cause of disability in Asia. Japanese encephalitis kills or causes neurological disabilities in 70% of those infected. In February 2017, WHO assessed India’s National Regulatory Authority as fully functional, reporting 100% compliance with a roadmap, set out by WHO in 2012, for strengthening the national authority. That seal of approval is expected to go a long way towards securing international confidence in medical products manufactured in India, often referred to as the “pharmacy of the world”. The programme’s major contribution to the availability of life-saving medical products is now widely recognized. The initiative deserves much credit for the fact that more than 18 million people living with HIV in low- and middle-income countries have seen their lives turned around by access to antiretroviral therapy. It has had other successes as well. By allowing smaller manufacturers producing quality products to compete on an equal footing with multinational companies, it has increased supplies, improved their predictability, and used competition to get prices down, sometimes dramatically. Less well-known is the programme’s contribution to capacity building. It conducts in-country training programmes, lets regulators in developing countries learn from mature regulatory authorities, and uses expert inspections as an additional training and corrective tool. The programme also operates a system of rotational fellowships at WHO for hands-on learning. In these ways, WHO helps countries move towards self-sufficiency in their regulatory capacity, also when serving the domestic market.

#### Delinkage proposals would not end the industry, yet it would make medicines accessible to the poor.

Quigley 15 ([NOVEMBER 23, 2015](https://www.hhrjournal.org/2015/11/making-medicines-accessible-alternatives-to-the-flawed-patent-system-2/) “Making Medicines Accessible: Alternatives to the Flawed Patent System” Fran Quigley, Health and Human Rights Journal <https://www.hhrjournal.org/2015/11/making-medicines-accessible-alternatives-to-the-flawed-patent-system-2/>, Fran Quigley, JD MA, is a clinical professor at Indiana University McKinney School of Law, where he directs the Health and Human Rights Clinic)

In contrast, some proposals call for the complete “delinkage” of medicine price from the cost of research and development. Instead, medicine price would correspond most closely with manufacturing cost. An example of full delinkage is the proposed Medical Innovation Prize Fund, which would reward innovations that impact public health while requiring the surrender of all monopoly patent rights.52 Delinkage proponents emphasize that the end of the medicine patent system would not mean the end of the private pharmaceutical industry, since effective drug innovators and efficient manufacturers would find ample reward via prizes and other incentives in a delinked system.lii Delinkage proposals are grounded in both the pre-TRIPS history of treating medicines as a public good, and the modern acknowledgement of a human right to health that is not dependent on a patient being fortunate enough to afford a medicine’s market price.

So, to increase accessibility of necessary drugs and prevent future pandemics, I affirm and open myself to cross ex.