Imagining the Alternative Worlds of 2030: Policy Implications for the Future of Global Health Procurement

Janeen Madan Keller and William Savedoff

Abstract

The availability and affordability of health products—medicines, diagnostics, devices, and equipment—are critical to achieving universal health coverage and improving health outcomes. Yet low- and middle-income countries face multiple challenges in procuring health products related to institutional inefficiencies, market failure, and fragmented demand. At the same time, the world is evolving rapidly in ways that will affect health procurement, from changes in countries' eligibility for foreign assistance to advances in information technologies. Looking forward, efforts to improve global health procurement must proactively address the sweeping changes on the horizon.

Drawing on a range of political, economic, and social trends, this paper envisions how the global landscape might change between now and 2030, with a focus on the implications for global health, particularly the procurement of health products. The paper develops three possible but distinct futures—worlds characterized as atomistic, privately led, or multilateral. It concludes by describing the policy options and locus of action to improve global health procurement in light of these scenarios, emphasizing three areas of work: financing and modes of collaboration, procurement procedures and tools, and procurement capacity.

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1. Introduction

For countries to provide good quality healthcare, they must be able to efficiently purchase health products such as medicines, diagnostics, devices, and equipment, both to assure that supplies are available and to get the most healthcare out of every dollar, shilling, or rupee. Yet efficient purchasing of health products is hampered by a wide range of public policy and market challenges. With advances in technology, shifting disease burdens, and national health system reforms, these challenges are evolving rapidly. Indeed, if efforts to improve global health procurement are to be relevant in this changing landscape, actions taken today must proactively address the changes that are visible on the horizon.

Drawing on a range of political, economic, and social trends, this paper envisions how the global landscape might change between now and 2030, with a focus on the implications for global health, particularly the procurement of health products. It seeks to inform a CGD Working Group aimed at ensuring the medium- to long-term relevance, efficiency, quality, affordability, and security of global health procurement.¹ This futuring exercise is also potentially useful to other entities, including global health financiers and country-level policymakers, looking to (re)formulate their procurement strategies in a way that would be robust to future uncertainties.

Looking ahead even just a few years is necessarily uncertain, so the broad patterns highlighted throughout the paper are meant to be indicative, not precise. Certain trends—such as demographics and global warming—have an inertia that allows reasonably precise predictions of such things as labor supply and sea acidity. But even these trends are affected by shorter-term factors—such as the global financial crisis of 2008 or a burst in sunspot activity—which may shift conditions away from trend lines. Among some of the greatest uncertainties affecting global health procurement are the social and political institutions that determine what sources of funding, types of purchasing, and kinds of healthcare providers will be part of the health sector, along with the rate at which new technologies will be diffused and adopted across low- and middle-income countries.

After defining the scope and methodology, we present five premises about key trends shaping global health which provide context for envisioning the future. We then analyze three drivers of change—international governance, domestic governance, and technology adoption—whose trajectories remain uncertain. Following a description of the range of possible outcomes along these "axes of uncertainty," we develop three distinct scenarios for the world of 2030—atomistic, privately led, and multilateral—and describe their implications for the future of global health procurement. Finally, we use these results to discuss policy options for improving procurement in relation to financing and modes of collaboration, procurement procedures and tools, and procurement capacity. By shedding light on future challenges and opportunities, we hope to better inform the global health community's

¹ More here: <u>https://www.cgdev.org/working-group/working-group-future-global-health-procurement</u>

approaches to ensuring the medium- to long-term relevance, efficiency, quality, affordability, and security of global health procurement.

2. Scope and Methodology

This paper highlights the key implications of a rapidly changing global landscape for identifying approaches to improve procurement of health products in low- and middle-income countries. Public and private actors at the national level, notably in middle-income countries, play an important role in purchasing health products, while many low-income countries currently rely on international organizations to finance and procure a large share of these products, especially those related to HIV/AIDS, tuberculosis, malaria, and maternal and child health. This paper uses the term "global health procurement" to encompass the full range of these actors and activities.

Procurement processes encompass a large range of activities, and necessarily interact with other health system functions, including prescribing practices, the design of health benefits plans, and insurance coverage. In this paper, we use the term "procurement" to describe the upstream parts of the supply chain until health products are delivered to a centralized warehouse or other wholesaling facility in a country. We do not focus on the downstream segments that encompass delivery and distribution to health clinics, pharmacies, and hospitals, although we acknowledge these aspects are difficult to disentangle in practice.²

With this in mind, we sought to describe what the world in 2030 might look like, and to identify the key drivers of change that will have important implications for the future of global health procurement. Our methodology builds on and complements previous approaches to envisioning future scenarios for a range of applications in global development and beyond, such as *Alternative Worlds in 2030* by the National Intelligence Council, *Shaping the Future of Global Food Systems by 2030* by the World Economic Forum, and *The Evolving Internet in 2025* conducted by Cisco and the Global Business Network (National Intelligence Council 2012; World Economic Forum 2017; Rueda-Sabatar and Derosby 2011).

Drawing on these approaches, we first identified a range of political, social, and economic trends that will shape the future global health landscape. We then selected a subset of these trends that are likely to have a significant impact on the effectiveness of global health procurement. Our next step was to distinguish five trends that are more certain—which we call premises—from those that are less certain—which we denote axes of uncertainty.³ Building on the three axes of uncertainty—international governance, domestic governance, and technology adoption—we constructed divergent scenarios to depict a subset of

² The scope used in this paper is based on that agreed upon by the members of the CGD Working Group on the Future of Global Health Procurement. The procurement-related segments of the supply chain are defined as encompassing product selection, regulation of health products, tendering, price negotiation, ordering, and quality assurance. See also discussion in the final report of CGD's Working Group on the Future of Global Health Procurement titled "Tackling the Triple Transition in Global Health Procurement" *forthcoming.* ³ The use of the terms "premise," "axes of uncertainty," and "scenarios" are drawn from Rueda-Sabatar and Derosby 2011.

outcomes that might be realized in the future. As a next step, we explored key issues, including challenges and opportunities, for improving global health procurement under each of those scenarios, which we tested with experts and in consultation with the CGD Working Group on the Future of Global Health Procurement. Following this, we further refined the premises and axes of uncertainty as presented here. Finally, we discuss the policy options and local of action for improving global health procurement by showing how efforts related to financing and modes of collaboration, procurement procedures and tools, and procurement capacity need to correspond with the realization of alternative futures.

3. Five Premises for the World of 2030

While our knowledge about the future is limited, we can predict some broad trends with a higher level of certainty than others. This section highlights five premises about what the world will look like in the year 2030 related to economic growth; the level and proportion of extreme poverty; the composition of the disease burden; technology advances; and the prevalence of crises. In each of the five areas, we draw on a range of existing projections to illustrate broad trends about the world of 2030 (see table 1), highlighting factors that are important to global health procurement. These five premises provide the underlying context for the scenarios of the world in 2030 (outlined in section 5).

Key variables	
Economic growth	The International Monetary Fund's (IMF) Economic Outlook Database
and health spending	presents macroeconomic analysis and projections through 2024.
	A 2018 HSBC analysis includes economic projections to 2030.
	The International Health Metrics and Evaluation's (IHME) Financing
	Global Health tool projects total health spending up to 2040.
Poverty	The World Bank projects poverty levels through 2030 from its Poverty and
	Equity Data Portal, and PovcalNet, its global poverty monitoring data analysis tool. ⁴
	Geoffrey Gertz and Homi Kharas at the Brookings Institution have a
	separate classification in their report on "Severely Off-Track Countries."
Burden of disease	The World Health Organization (WHO) projects the future disease burden
	through 2030.

Table 1. Sources for Key Variables in Projections

⁴ Other entities that publish poverty estimates and projections include UNDP, the Gates Foundation, World Poverty Lab, ODI, and Brookings. While these efforts use different methodologies, they all point to declines in extreme poverty over time. See discussion by Soumya Chattopadhyay at: <u>https://www.odi.org/comment/10688-new-projections-show-extreme-poverty-falling-not-fast-enough</u>

	Bollyky et al. 2017 analyze the shifting geographic distribution and demographics of non-communicable and communicable diseases up to 2040.
Health and non-	Details on health and non-health technology are available from WHO and
health technology	the Groupe Spéciale Mobile Association (GSMA), respectively.
	A CGD policy paper by Michael Pisa and Denise McCurdy discusses the application of traceability to global health procurement and supply chains, including the potential use of distributed ledger technology. David Cutler and Mark McClellan provide an overview of advances in medical technology
	incureat techniology.
Crises and	The Global Trends Report published by the United Nations Refugee
displacement	Agency (UNHCR) and a joint report from the Center for Global
	Development (CGD) and the International Rescue Committee (IRC)
	provide data and analyses on displacement.

Premise 1: Most Countries (and More People) Will Be Wealthier Than They Are Today

While cyclical variation will certainly occur between now and 2030, world income is almost certain to be substantially higher. Emerging economies will continue to grow, with China becoming the world's largest economy (as measured by gross domestic product, or GDP) and India rising to the third largest, surpassing Germany, Japan, the UK, and France (HSBC 2018). Bangladesh, the Philippines, Pakistan, and Vietnam will rise quickly in the GDP rankings, as well (HSBC 2018). As a consequence of economic growth, the number of low-income countries is likely to drop substantially, from 26 in 2015 to only 11 in 2030 using the World Bank's income classification system (see figure 1). Most countries—139 out of 186—will be considered either high-income or upper-middle income in 2030 (per the current classification system). Still, the gap between countries will remain substantial, with per capita incomes expected to climb close to \$60,000 in high-income countries but only reach about \$7,000 in low- and middle-income countries by 2024 (see figure 2).



Figure 1. Changes in Countries' World Bank Income Classification, 2000 to 2030

Data note: GDP per capita, US\$ current, Atlas Method for country data. Income classifications are GNI per capita. 2030 projections calculated by assuming the same level of growth for 2015-2030 as for 2000-2015. 186 countries (missing, due to incomplete data: Afghanistan, Somalia, North Korea, Eritrea, Venezuela, Aruba, Monaco, Bermuda, Nauru, Sao Tome de Principe, and Syria).



Figure 2. Actual and Predicted GDP per Capita, 1980 to 2024

Source: IMF, World Economic Outlook, April 2019. Accessed, April 19, 2019. http://www.imf.org/external/datamapper/NGDP_RPCH@WEO/OEMDC/ADVEC/WEOWORLD

Premise 2: Poverty Will Be Geographically More Concentrated

High rates of economic growth will be accompanied by substantial declines in poverty. By 2030, extreme poverty rates are expected to drop below 3 percent (the target set by the Sustainable Development Goals) in more than half of the world's countries (World Bank 2018a). However, as global poverty shrinks, it will become increasingly concentrated in sub-Saharan Africa, albeit with variation across the continent. In particular, nearly 9 out of 10 people living in extreme poverty will live in sub-Saharan Africa by 2030, though the number of extreme poor on the continent will be roughly the same in absolute terms as today (see figure 3).



Figure 3. People in Extreme Poverty by Region, 1990 to 2030

Source: Reproduced from Divyanshi Wadhwa, "The number of extremely poor people continues to rise in sub-Saharan Africa," The Data Blog, September 19, 2018.

The countries projected to have the highest share of people living in extreme poverty are also where the prospects for rooting out extreme poverty may be the hardest. Countries classified as "fragile states" are projected to be home to 60 percent of the world's extreme poor by 2030 (Chandy, Ledlie, and Penciakova 2013).⁵ A recent report identified 31 countries that will have more than 20 percent of their population living in extreme poverty in 2030, a group characterized in the report as "severely off track countries" (Gertz and Kharas 2018).

⁵ The cited study uses a classification of fragile states based on OECD DAC, "Fragile States 2013: Resource Flows and Trends in a Shifting World" OECD DAC, 2013, which combines the US Fund for Peace's Failed States Index and the harmonized World Bank and Asian Development Bank's fragile and post-conflict countries.

Premise 3: Non-Communicable Diseases Will Predominate Globally While Communicable Diseases Will Be Concentrated in Fragile States or Those Where HIV/AIDS Is Endemic

People are living longer than ever before in large part because of massive declines in communicable diseases since the 1950s. As of today, non-communicable diseases (NCDs) account for approximately 65 percent of all deaths in low- and middle-income countries (WHO 2013). Looking forward, the biggest decline in the share of deaths due to communicable diseases will occur in low-income countries (where it will drop from 50 percent to 37 percent) and lower-middle-income countries (from 30 percent to 21 percent) between 2015 and 2030 (WHO 2013). Today, four of the ten leading causes of early death are communicable diseases; by 2040, only two of them—respiratory infections and diarrheal disease—will remain among the top ten causes (IHME 2016).

In countries like Bangladesh, Indonesia, Myanmar, the Philippines, and Vietnam, the share of NCDs will be over 80 percent of the total disease burden within a generation or two (see figure 4). However, in countries affected by the HIV/AIDS epidemic, such as South Africa, or violent conflict, such as the Democratic Republic of the Congo, NCDs will account for about half of the disease burden, with communicable diseases continuing to be a substantial cause of death and disability (Bollyky et al. 2017).

Figure 4. NCDs as a Share of the Disease Burden in 1990 and 2040 for Select Countries



Source: Reproduced from Thomas J. Bollyky, available here <u>https://www.cfr.org/article/changing-demographics-global-health;</u> accessed November 23, 2018 and based on Bollyky et al. 2017.

Premise 4: Both Health and Non-Health Technologies Will Advance Rapidly

While it is impossible to predict technologies that do not exist, it is possible to look at incipient technologies and speculate how they might transform the world. Four possible candidates are the use of blockchains; the increased availability and diffusion of portable communication devices; big data analytics; and cheaper, more sophisticated medical diagnostic tools.

Blockchain technology encodes a series of transactions in such a way that they can be verified and protected from tampering. While blockchain technology is most visibly used in the emergence of cryptocurrencies, its advantages are being exploited by private firms to expand the kinds and amount of data they have on production, distribution, and final use of products. By uniquely identifying every product, analytics can be applied to monitor demand, manage transport, track payments, identify quality issues, and quickly detect problems along the supply chain. The result of such information is to expand opportunities for increasing efficiency, driving down costs, and improving accountability.

Portable communication devices have already revolutionized the way people communicate, transfer funds, and make purchases around the world. As portable communication devices grow more sophisticated and as broadband becomes more accessible, people, governments, and businesses are going to increasingly rely on them for diverse applications: tracking inventory and distribution or linking facilities in medical networks to share patient data, diagnostic information, financial records, and images.

Another technology that is likely to play a big role in 2030 is "Big Data Analytics." Until recently, most analysis of market data, consumer behavior, and financing relied on data sets with standardized variables that were highly structured. The spread of technology and emergence of massive datasets on transactions, social media communications, and the like, have spawned a fundamentally distinct kind of analysis.

One set of health-specific technologies that could reduce healthcare costs, improve the quality of care, and facilitate regulations is cheaper and more sophisticated diagnostic tools. In particular, devices that use molecular assays to scan blood samples for infections or solutions of a drug for active ingredients can be quite costly. By 2030, it may be possible to conduct such analyses anywhere with a handheld device. On the other hand, the availability of cheap diagnostics might also lead to higher utilization of services—some necessary, others not—and thereby drive up health expenditures.

Premise 5: Crises Will Become More Prevalent

As the world becomes more populated, warmer, and polluted, the frequency and intensity of crises will almost certainly increase. Three kinds of crises, in particular, are already occurring more frequently and at larger scale: population displacement, pandemics, and the emergence of drug-resistant infectious diseases.

Population displacement is occurring on a larger scale than ever before and there is little reason to expect it to diminish. Over 68 million people are currently displaced by conflict, 25 million of whom have sought refuge in other countries (UNHCR 2018). Furthermore, this displacement is becoming more and more protracted (CGD-IRC 2017). People are also displaced by natural disasters—whether distinct events like hurricanes, tsunamis and earthquakes or extended environmental changes such as drought and sea rise.

Major pandemics associated with new pathogens and/or the rapid spread of existing pathogens are also likely to occur before 2030. The number of infectious disease outbreaks has been increasing since 1980 (see figure 5 and Smith et al. 2014) and is likely to continue because of increasing connectivity, unplanned urbanization, conflicts, and warming. Pandemics have a disproportionate impact on the very health systems that are needed to contain them by affecting medical personnel who are at greater risk and by diverting resources from other health needs. The impact on economic activity can also be severe, disrupting transportation, trade, and production.



Figure 5. Infectious Disease Outbreaks by Pathogen, 1980 to 2010

The *development of drug-resistant strains of infectious diseases*—driven in large part by overconsumption and inappropriate use of antibiotics in both human medicine and animal agriculture—could become even more widespread. Indeed, years of progress against infectious diseases like HIV, malaria, tuberculosis, and even hospital infections from common surgery could be reversed by the emergence of drug-resistant strains (Pray 2008; Nugent et al. 2010; Albrich, Mannet, and Harbarth 2004).

Implications of the Five Premises for Global Health Procurement

In sum, the world of 2030 is likely to be wealthier, have fewer people living in poverty, and have more advanced technologies. Nevertheless, extreme poverty will be concentrated in a subset of countries; the share of the disease burden accounted for by NCDs will grow, though infectious disease will remain a substantial contributor in several places; and crises related to population displacement, pandemics, and drug-resistance will become more common. Each of these trends has important implications for the future of global health procurement in low- and middle-income countries.

The continued trend of income growth, for example, will be accompanied by rising citizen expectations for more health services and associated health products. An expanding middle class—especially in urban centers of large, rapidly growing middle-income countries—will also demand more complex forms of care. To the extent that income growth is broadly distributed within countries, healthcare demand will be more widespread, including among populations that previously lacked access. This will create pressures on procurement systems—both international and national—to manage larger, more heterogeneous, and more complex purchases.

Source: Reproduced from Exhibit 2.2, panel c in IWG 2017. Available here: http://documents.worldbank.org/curated/en/979591495652724770/pdf/115271-REVISED-FINAL-IWG-Report-3-5-18.pdf

Furthermore, as incomes rise, countries have consistently increased health spending (Fan and Savedoff 2014). Indeed, in many countries, especially those reaching middle-income status, the resources to meet growing demand for more—and more complex—forms of healthcare will increasingly come from domestic sources rather than external assistance. Yet large differences in per capita spending on health prevail across countries (see figure 6). There are also often large gaps between what countries can afford and the health products (and services) their populations need. Thus, many countries are likely to find themselves squeezed between rising expectations and constrained public budgets, which, though increasing, are still limited. The accompanying pressures on procurement systems—to purchase a wider range of health products within highly constrained public budgets—will be correspondingly large. Nevertheless, in a small subset of countries that are likely to fall farther behind, it is possible that the systems and processes required to ensure efficient and effective procurement of health products will not improve without sustained international support.

The changing disease burden across low- and middle-income countries will, in turn, shift the composition of health products (and services) that patients will need. In many countries, NCDs will account for by far the greatest share of the disease burden, leading populations to require more complex preventive and chronic care—ranging from control of diabetes and high blood pressure to cancer treatment and kidney dialysis. While some of the systems used to procure health products for infectious diseases can also be used for NCD-related products, the latter have special characteristics that will require different procurement approaches and capabilities. The future is further complicated by the fact that procurement of health products outside areas currently supported by donors (namely, HIV, malaria, tuberculosis, and maternal and child health) is poorly organized and already faces considerable challenges.

Figure 6. Total Health Spending per Capita by Income Group, 1995 to 2030



Source: IHME Data Visualization (https://vizhub.healthdata.org/fgh/, accessed October 17, 2018).

Advances in non-health technologies hold promise for making global health procurement more efficient and reducing costs. Serialization, which would enable track-and-trace capabilities, holds promise for improving procurement by assuring the improved flow of information about products through the whole supply chain (Pisa and McCurdy 2019). It can even integrate supply chain information with other health system information such as disease surveillance and patient safety, allowing purchasers to better project demand and assess quality. Building on the foundation of serialization, blockchain technologies could enable more secure transactions and payments for procurement. Moreover, the spread of sophisticated communication devices will mean purchasing new kinds of devices and support infrastructure but can also improve the flow of information between facilities, and from facilities to purchasers. Big Data Analytics may revolutionize procurement by increasing the sophistication of market analyses and price searches. Some technologies may even reduce the cost of care and replace the need for higher cost medical products and treatments.

Technologies specific to the health sector also present opportunities and challenges for procurement. Notably, technological change will provide expanded opportunities to extend life and improve health, but with a bias toward addressing diseases experienced by those with means. The direction of technological advances in health tends to be driven by effective demand rather than need, leading to a mismatch between the burden of disease and R&D investments (Von Philipsborn et al. 2015). One persistent hope for advances in medical technology is to reduce the cost of care. Nevertheless, medical advances can also be cost-increasing when they lead to expanded use (Cutler and McLellan 2001). Though the health benefits of such technological advances may make these changes eminently worthwhile, they still require more funding.

Crises will simultaneously increase healthcare demands and undermine response capacity. Displacement caused by violence, conflict, and disasters will require those purchasing health products to fill unforeseen demands and accommodate discontinuities in the size and composition of the populations they serve. Pandemics and the spread of drug-resistant infectious diseases will also exacerbate health system weaknesses by disproportionately affecting medical personnel and requiring the purchase of equipment to contain diseases. Further, the proliferation of antimicrobial resistance will increase the need for second-line or even third-line treatments, which may be more expensive and have distinct procurement challenges due to fewer suppliers or more difficult quality control requirements. The increasing likelihood of such crises will make resilience a key criterion for choosing among different health procurement strategies. Such resilience may be more likely for systems that have more decentralized information collection, processing, and implementation; the ability to interact with different kinds of actors in both the public and private sectors; and larger, more flexible workforces. Furthermore, such crises also underscore the need for international cooperation to help support important global public goods related to procurement, including, but not limited to, international pricing agreements or pooled purchasing.

The opportunities to improve global health procurement in the face of these shifts will differ considerably depending on the nature and extent of international cooperation, how well countries are organized and governed, and how quickly and widely technologies are adopted. The next section, therefore, looks at these three sources of uncertainty in detail, namely international governance, domestic governance, and technology adoption.

4. Axes of Uncertainty: International Governance, Domestic Governance, and Technology Adoption

Taking the preceding five premises as given, this section identifies axes of uncertainty that will, in turn, shape the future. We began by considering a wide range of potential sources of uncertainty (e.g., public health financing, domestic governance), then distilled them into three axes we judged significant to the future design and overall functioning of health procurement systems, but which are nevertheless highly uncertain. These three axes of uncertainty are international governance and foreign aid, domestic governance and progress towards universal health coverage (UHC), and technology adoption (see figure 7).



Figure 7. Three Axes of Uncertainty

Source: Authors.

Axis 1: International Governance and Foreign Aid

After World War II, nations engaged in unprecedented levels of multilateral collaboration by creating institutions to pursue joint action on many issues, including security, trade, international finance, and health. Multilateral organizations like the World Bank, WHO, bilateral agencies, and large philanthropies provided funding and technical assistance to low-and middle-income countries through loans and grants. This post-World War II era of global coordination is indeed still in place, but its future is uncertain.

Looking forward, today's political movements that reject globalization and multilateralism could signal a new era of limited international engagement and collaboration. Commitments by the world's high-income countries to development assistance for health are highly uncertain over the next 15 years. This uncertainty has important consequences for the availability and affordability of lifesaving health products in low- and middle-income countries. Many low-income countries, in particular, continue to rely on external financing

and donor-managed mechanisms to procure a large share of their health products (Rosen, Chalkidou, and Madan Keller 2018; AfRx Consulting 2018).⁶

At one extreme, international governance and foreign aid could become *fragmented*, *weak*, and *ungenerous* by 2030. This is likely if the United States, United Kingdom, and European Union turn inward, redirecting funds away from development assistance, scaling back their engagement through international organizations, and reducing their commitments to global public goods. Alternatives to their leading roles over the last 70 years could arise but would require international innovation to construct institutions with sufficient legitimacy and to identify substantial funding from other sources. If large emerging economies also turn inward and become less collaborative, global fragmentation will be even more severe.

At the other extreme, the world of 2030 could become *integrated, strong, and generous*. For this to happen, the recent inward-turning response of many high-income country governments would have to reverse. This might take the shape of reforms to international governance, changes to the global development and global health architecture, or a renewal of multilateral approaches, as represented particularly by such organizations as the WHO, United Nations (UN), Global Fund to Fight AIDS, Tuberculosis and Malaria (the Global Fund), Gavi, World Trade Organization (WTO), World Bank, and International Monetary Fund (IMF). It could also take the form of mixed coalitions (Savedoff 2012), creating a less formal but perhaps equally effective web of international action to provide financial and technical support for health to low- and middle-income countries and to produce the public goods required for effective prevention and treatment of disease (e.g., disease surveillance and quality regulation). The roles of countries like Brazil, China, and India, for example, could introduce energy for some kind of new global order—if their domestic governance grows stronger and more stable.

Axis 2: Domestic Governance and Progress Toward UHC

Over the past 50 or so years, most low- and middle-income countries have substantially improved domestic governance and expanded healthcare coverage. However, many of these countries are turning to political leaders who are increasingly autocratic or corrupt in ways that have slowed, or reversed, progress toward greater accountability and UHC.

Looking forward, domestic governance and progress toward UHC could become increasingly *unaccountable and constrained*. The more that countries turn toward governments which are autocratic, lack transparency, and condone corruption, the more they are likely to fall short on promoting public administrative efficiency, equitable access to affordable, high-quality healthcare, and domestic wellbeing. Many factors could drive countries in this direction. Internal conflicts between groups defined by ethnicity, religion, or ideology are continuing in many parts of the world and could spread further. The movement of refugees

⁶ In low-income countries, for example, donors account for more than half of the estimated \$4.4 billion of expenditures on health products. See more here: <u>https://www.cgdev.org/publication/initial-estimation-size-health-commodity-markets-low-and-middle-income-countries.</u>

due to wars, natural disasters, and climate change could destabilize host countries if they are not willing and resourced to manage the resulting domestic pressures. A breakdown in commitments to the rule of law—both domestically and internationally—could encourage the rise of leaders who flout political institutions of good governance and affect domestic policies on the basis of personal whims and closed circles of advisors.

At the other extreme, domestic governance and progress toward UHC could become more *accountable and expansive*. The progress of the last 50 years in improving domestic governance and expanding health coverage has occurred in large part in response to increased organization by domestic movements that demand greater participation in political decisions and greater accountability from governments. To the extent that these movements continue to organize effectively, they could improve domestic governance and the quality of public policy. If this trend were to predominate over the next 15 years, countries would experience greater adherence to the rule of law, rising standards of public integrity, growing transparency, more efficient public management, and increased prioritization of social sectors including health.

Axis 3: Technology Adoption

The development of new technologies around the world is proceeding exponentially and is apparent in the computing power packed into small personal devices, the expansive scope of the internet, and advances in artificial intelligence. However, the rate of adoption has varied significantly across countries and across technologies. Adoption rates have also varied significantly between urban and rural areas, the private and public sectors, and richer and poorer households.

Looking forward, at one extreme, technology adoption could be *slow and divergent*. In countries where investment in basic infrastructure lags—including cell towers but also electric grids, transportation, and education—the spread of new technologies could be severely restricted. While innovations—such as longer-lasting batteries—may reduce reliance on such infrastructure, adoption will lag wherever the networks and support systems are slow to expand. In countries where the public sector is slow to exploit new technology or does so inefficiently, progress on UHC and administrative efficiency will lag.

Geographic differences in take-up, particularly between rural and urban areas, could exacerbate existing gaps in healthcare coverage. Similarly, differences across income or socioeconomic groups could also result in adoption patterns that exacerbate inequities. In many low- and middle-income countries, the private sector has been quicker at exploiting new technologies, leading to a growing divergence between public and private sector capabilities.

At the other extreme, technology adaption could be *rapid and widespread*. Countries that expand infrastructure and are equipped to seize the opportunities presented by technology could reap substantial improvements in public policy and healthcare. While technology adoption tends to initially increase gaps between geographic areas and income classes, rapid and widespread adoption could reduce inequities in access and financial protection.

Governments might drive rapid adoption if they see it as a way to improve their legitimacy and improve public services. The nonprofit sector might offer alternative ways to reach poorer or marginalized groups in low- and middle-income countries with new technologies. Another way this outcome could be realized is if some form of mixed coalitions were to find effective approaches of introducing technologies through private sector engagement in ways that complement or fulfill the mandates of the public sector.

5. The Worlds of 2030: Atomistic, Privately Led, and Multilateral

In 2030, we will be able to look back and see where the world has moved along the three axes of uncertainty. Looking forward, though, we can only combine the different possible outcomes to imagine the scenarios that might materialize. Of these possible outcomes, we identified five scenarios for the world in 2030. Two of these represent extremes that we consider unlikely. We focus instead on describing three more likely intermediate scenarios, highlighting the opportunities and challenges that those futures pose for improving global health procurement.

Identifying Alternative Scenarios

At one extreme, we could imagine a world in which international governance and foreign aid became fragmented and ungenerous, domestic governance grows more unaccountable with little or no progress toward UHC, and technology adoption is slow and divergent. Such a scenario might be described as a "Regressing World" (see table 2 and figure 8). The opportunities for improving global health procurement in a Regressing World would be extremely limited because both multilateral and domestic public institutions would be in disarray. Private action would also be hindered by the slow and uneven spread of technology.

At the other extreme, international governance and foreign aid could become more integrated and generous, domestic governance could grow more accountable with notable progress toward UHC goals, and technology adoption could be rapid and widespread. Such a scenario would provide many opportunities for collective action and could be described as a "Cooperative World." In a Cooperative World, more generous resources, stronger public sector capacities, better policy implementation, improved market regulation, and wider adoption of technologies would present strong prospects for improving global health procurement at the global, regional, and national levels.

We judged these two extremes to be unlikely and instead chose to focus on three intermediate scenarios that are more probable and represent distinct sets of challenges for improving global health procurement.

	Axes of Uncertainty			
Extreme scenario	International governance and foreign aid	Domestic governance and UHC progress	Technology adoption	
Regressing World	Sharp worsening of international governance and reduction in foreign aid	Worsening of domestic governance with little or no UHC progress	Slow and divergent	
Cooperative World	Improved international governance and greater global coordination, and increased foreign aid	Strong improvements in domestic governance and UHC progress	Rapid and widespread	

Table 2. Extreme Scenarios for the Year 2030 by Axes of Uncertainty

The three worlds of 2030 that we describe in detail are Atomistic, Privately Led, and Multilateral (see table 3 and figure 8). In the Atomistic World, international governance falters, countries experience positive advancements in domestic governance and progress toward UHC, and technology adoption proceeds moderately albeit unevenly. This means the locus of action is mainly within low- and middle-income countries. In the Privately Led World, both international and domestic governance grow weaker, but technology advances rapidly and unevenly. As a result, prospects for improving global health procurement lie primarily with private sector initiatives and actions (both for-profit and nonprofit). In the Multilateral World, the international community's commitment remains relatively strong in comparison with domestic institutions, while technology adoption proceeds moderately but with large geographic gaps. Therefore, the global architecture, comprising global health institutions and other development organizations, largely drives change in global health procurement.

	Axes of uncertainty		
Scenario	International governance and foreign aid	Domestic governance and UHC progress	Technology adoption
Atomistic World 🐯	Somewhat weaker levels of international governance and lower funding	Strong improvements in domestic governance and UHC progress	Moderate pace of adoption but divergent and uneven
Privately Led World 🖴	Somewhat weaker levels of international governance and lower funding	Worse governance with little or no UHC progress	Rapid adoption but divergent and uneven
Multilateral World 😚	Improved governance, greater coordination, and higher funding	Maintains current levels of governance and UHC progress	Moderate pace of adoption but divergent and uneven

Table 3. Summary of Three Selected Scenarios for the Year 2030 by Axes of Uncertainty



Figure 8. Selected Scenarios for the World in 2030

Source: Authors. Note: View this model in 3D on the CGD website.

Welcome to the World of 2030

The World of 2030 will be wealthier, but poverty will be geographically concentrated in a subset of countries. Except for periodic outbreaks, the burden of infectious diseases will decline, and non-communicable diseases will predominate. Technologies will advance substantially in terms of tools like big data analytics, blockchain, communications, and miniaturization. However, population displacement, pandemics, and antimicrobial resistance will also be more common. These are the five premises described in section 3—the more predictable factors—which provide the overarching context for the three scenarios described in this section.

To picture the world of 2030 under these premises, a World Bank report looking back 15 years might read like this:

EXTRACT FROM WORLD BANK 2030 The Sustainable Development Goals Progress and Setbacks

Looking back on the last 15 years, we can see that the world is wealthier but more unequal and facing increasing numbers of crises. Most notably:

- The world economy has grown from about €108 trillion* to €177 trillion driven by an average growth of about 2.5 percent—a significant recovery since the 2020 Financial Meltdown in which the Chinese financial crisis triggered a global economic decline and led to the collapse of the US Dollar as the preferred international reserve currency. Brazil, India, and China grew most rapidly among the major emerging countries. Nevertheless, of the world's 215 countries, 42 remain extremely poor, with per capita incomes of less than €3,000. In those regions of the world where droughts are recurrent and sea levels are rising, per capita income has fallen even as major out migrations occur.
- World population grew from 7.4 billion to 8.9 billion, at a rate of ~0.8 percent, with major middle-income countries like, India, Nigeria, and Indonesia experiencing serious challenges in managing urban growth.
- Life expectancy has mirrored the trends in economic growth—global life expectancy has risen from 71.5 years to 74.2 years, but in the 42 poorest countries life expectancy has not grown as rapidly and in 14 of them life expectancy has actually fallen.
- Health systems have become more complex and unequal with rising technology for higher income groups within countries. Total Health Expenditure per capita averaged €5,368 but rose to €8,189 in high-income countries; €281 to €960 in middle-income countries; €276 to €662 in low- and middle-income countries; & €114 to only €172 in low-income countries.
- Non-communicable diseases continued to rise, accounting for close to 75 percent of all deaths in low- and middle-income countries.
- Technology has developed devices, software, and techniques beyond imagining in 2015. Some predictions of that time have materialized, such as the almost universal coverage of smartphones and the use of block chains throughout commerce. Others, like BIGENYX, laser-based transportation, and enzymatic construction, weren't even considered feasible.
- Climate change and conflict have been particularly destructive. The droughts in sub-Saharan Africa, the Middle East, parts of South Asia, and China have led to massive population displacements; while agricultural production has shifted away from the equator wherever possible. Coastal flooding, particularly in Bangladesh, has caused population movements involving almost 3 percent of the world's population. Civil wars raging in every region of the world have also made security, governance, and humanitarian responses difficult in at least 26 countries. The 2025 flu epidemic was so deadly, killing an estimated 12 million people, only partly because of its virulence. Conflict and weather-related events made responses difficult.

*Note: All monetary figures are in 2030 Euros.

The Atomistic World

In the Atomistic World, international governance and commitment to multilateral action falls apart, but many low- and middle-income countries experience positive advancements in their domestic governance and make progress towards UHC. Furthermore, technology adoption proceeds at a moderate pace albeit unevenly, so that the better-governed countries can take advantage of opportunities provided by new computational and communication strategies.

A political scientist writing in 2030 might look back on the last 15 years and describe the emergence of an Atomistic World in the following way:

EXTRACT FROM MAGDA CEREBRI 2030 The New International Disorder

The international order established after World War II envisioned a system of supranational institutions that would provide centers of coordination among countries for their common interests, such as the UN, WTO, IMF, and WHO. However, this system suffered successive waves of erosion from the 1970s onward, culminating in the 2020 Financial Meltdown, the subsequent withdrawal of the United States from the UN, and the failure of the 2024 Global Order Conference in Beijing.

In the resulting vacuum, mixed coalitions comprised of extremely wealthy individuals and a handful of countries have pursued international cooperation on particular issues but with increasing difficulty, Rapid advances in technology have facilitated some of these initiatives, particularly in relation to reducing carbon emissions, improving disease surveillance, and enforcing tax laws. Nevertheless, the reach of these technologies remains limited in about one-third of the world's countries, whether due to environmental crises, domestic conflict, or low infrastructure investment.

The gloom regarding international cooperation and the uneven spread of technology is offset to some extent by progress in most Middle States* which have experienced rising income, slowing population growth, and improving governance. Progress toward UHC is one of the more remarkable achievements for this group of countries, which has been accomplished through a bewildering array of reforms.

*Editor's note: Since 2025, this publishing house has adopted the international standard for classifying countries by the Price-McKinsey Domestic Prosperity Index. Comparisons of the new classification relative to previous ones based on GDP or the HDI can be found online at: <u>www.RetroPublishing.com</u>.

Moreover, low- and middle-income countries can no longer rely on international agencies to provide health sector support owing to the rapid decline in foreign assistance and international cooperation. The governments that succeed in progressing toward UHC will have spent more and improved the efficiency of health spending in their countries.

If a researcher were to analyze the health sector of a fictional middle-income country in sub-Saharan Africa in 2030, which we have called Mekabala, this might be the resulting report:

EXTRACT FROM ZAIN UBONGO 2030 Health Sector Diagnostic: Mekabala Country Study

Mekabala has been able to participate in global trends of rising income, slowing population growth, and improving governance. It also made significant progress toward UHC beginning with the National Health Insurance Reform of 2019.

Mekabala's new National Health Insurance system incorporated all the country's prior health insurance funds, except for the military and teachers' funds. The growing tax base has helped the government increase its share of total health spending, which has doubled in per capita terms since 2019. International funding for the health sector, which fell sharply after the 2020 Financial Meltdown, has resumed in an effort to help Mekabala handle the needs of the 6.2 million refugees who have entered the country due to intensification of the drought in neighboring Koma.

Mekabala's government was reelected in 2028, but it now lacks a parliamentary majority and efforts to reform its National Health Insurance Institute (NHII) are faltering. The government is looking for new solutions that rely on its small but dynamic technology sector to leverage and complement more traditional public programs for addressing its population's changing needs and rising expectations for healthcare.

The government is facing three major health system challenges: improving the efficiency of NHII procurement; increasing real coverage for rural and vulnerable populations; and reallocating resources to serve the large displaced population.

If the Atomistic World becomes a reality, improvements in global health procurement cannot rely on multilateral coordination and foreign aid. Instead, low- and middle-income countries will have to take primary responsibility for upgrading their policies and administrative capacities; for seeking out and contracting the expertise they need; and initiating regional or sub-regional collaborations to increase their market power and benefit from economies of scale. Success will be more likely where new private-public collaborations and private initiatives are fostered to provide information and services related to procurement.

These trends would certainly be identified by a health procurement specialist studying the panorama of global health procurement over the 2020s, who might write it up like this:

EXTRACT FROM NAO XIUYING 2030

Health Sector Procurement in the 2020s: Successes and Failures

During the 2020s, efforts to pool health procurement at the international and regional levels and to manage health product markets failed as a direct result of the breakdown in global institutions after the 2020 Financial Meltdown. Nevertheless, health sector procurement around the world evolved through diverse public and private mechanisms which increasingly relied on domestic capacity and cross-country collaboration. In most Middle Countries,* technology services revolutionized procurement when governments began to contract from several competing data collection and market analysis firms, of which the nonprofit BuyWell continues to be the most prominent.

In hindsight, we can now see that the most successful initiatives for facilitating improved procurement of health products in Middle Countries were:

- The creation of 12 sub-regional "buying clubs"—four in sub-Saharan Africa, two in Latin America, and six in South and East Asia.
- The creation of BuyWell and the emergence of its competitors in providing Big Data analysis of market data, which became possible after the standardization of product categories and the widespread use of serialization.
- The expansion of the highly competitive market of for-profit consulting firms that offer technical expertise and training in return for a share in the resulting savings on health procurement.

Diversification of domestic purchasing mechanisms when public sector reforms reapportioned procurement roles. The most common of these reforms involved decentralizing the purchasing role while strengthening central functions such as negotiating framework agreements (either at the national level or among sub-regional groups). Some countries with expanding public insurance programs drove improvements in health products procurement through increasingly exigent reimbursement criteria.

Unfortunately, these successes are concentrated in those Middle Countries that improved domestic governance and the smaller countries that joined sub-regional collaborations. Only a handful of Low-Functioning countries have succeeded at improving health procurement. Consequently, many continue to confront challenges including supply shortages, stockouts, and poor quality of essential health products. To exacerbate matters, the prices these Low-Functioning countries pay for products are relatively high due to their limited market power, poor credit records, and expensive logistics.

*Editor's note: The Chongking University Press uses the Price-McKinsey Domestic Prosperity Index categories for country classification.

The Privately Led World

Another possible scenario for 2030 is that a failure of both domestic and international governance could lead us into a Privately Led World. In such a world, low- and middle-income countries receive less external support, but also fail to improve their own domestic institutions or make progress toward UHC. Nevertheless, rapidly advancing technologies are adopted quite widely, even in the poorest countries. Nongovernmental initiatives might emerge to provide a variety of services across borders despite the collapse of both international and domestic governance. Most of these initiatives will be for-profit but some may be nonprofit, and several others may get support from a subset of countries that are islands of good practice, performance, and accountability.

The emergence of nongovernmental institutions that provide a variety of services across borders despite the collapse of both international and domestic governance would certainly be an object of interest to sociologists.

If the Privately Led World becomes our future, a book published in 2030 might describe the evolution of international institutions as follows:

EXTRACT FROM LJUBA MOZANGI 2030 Where Did Government Go?

Since the 2020 Financial Meltdown, international cooperation has collapsed, and most governments have become less accountable and less effective in providing public services. This book describes how societies have evolved a number of alternative mechanisms to fill this vacuum in governance. It shows how a Mishra-Zaman complexity model is best suited to understanding the ways in which new organizational forms develop and interact to compensate for the decline in social order previously provided by the public sector.

In particular, this model contrasts the one-dimensional institutional structures of the 20th century—corporations, nonprofit organizations, and governments—with the multidimensional institutional structures that have emerged in this century. These n-dimension institutions are accountable to cross-sectoral stakeholders and self-organize to adapt to multiple regulatory environments. Three of these new n-dimension institutional forms are analyzed in detail, including nonprofit organizations that self-finance through commercial transactions; corporations that draw on social capital to assure survival while transferring profits through cross-subsidies to reach poorer clients; and mixed coalitions that provide public goods through mobilizing willing partners while explicitly discounting free rider problems.

If this world were to materialize, privately led initiatives would manifest differently across countries, determined largely by each government's ability to coordinate and regulate the health sector.

A political essayist in a fictionalized Latin American middle-income country called Galdivia might recount developments in her country as follows:

EXTRACT FROM RITA PENSADOR 2030 *Healing Hands: From the Old to the New*

Our country is small but proud. The people have lost confidence in a succession of incompetent or corrupt governments from every ideological leaning. Galdivia's national income has risen, but who has benefited? Only the rich and those fortunate enough to live in the capital. An important consequence of this unending search for social coherence has been a remarkable shift in healthcare.

While government efforts to provide UHC have stagnated, innovation in the private sector has moved beyond its traditional market for upper-income households and found ways to extend its reach toward the middle class and the poor, albeit at great cost. The government is spending more on health, but it has not kept pace with economic growth or the rapid expansion of private health insurance and out-of-pocket spending.

Private sector spending might have been confined to an elite class but for the widespread adoption of new technologies and innovative private-sector initiatives which have brought dramatic changes in the healthcare system. Multinational companies are peddling their services to our private for-profit networks, while several nonprofit associations, including Kaiser and Parem Tervis, have pioneered outreach to poorer households through their local affiliates. This article describes the massive shift in who provides healthcare in Galdivia and considers the implications for the latest public sector legislation enacted last year by the Reformed Albañista government.

If this Privately Led World becomes a reality, private initiatives—both for-profit and nonprofit—will drive change. The for-profit sector will undertake significant improvements in health procurement, but at high cost owing to the increasing concentration of markets for pharmaceuticals, diagnostic equipment, and other health products. The for-profit private sector, lacking incentives to serve those with less purchasing power, will also focus primarily on privately insured upper-income households. Nonetheless, nonprofit organizations might finance themselves by selling services, and hybrid corporations might cross-subsidize poorer clients with revenues from richer ones. Philanthropists and a subset of countries might also pool resources to support nonprofit organizations and collaborations that attempt to widen access to healthcare services. Though these providers sustain themselves by charging fees, the impact on households is mitigated through cross-subsidies, some limited insurance mechanisms, and lower-cost drugs and supplies.

It is possible to imagine an international consulting firm in 2030 looking back on 15 years of change and documenting these privately led initiatives as follows:

EXTRACT FROM PRICE-MCKINSEY REPORT 2030

Health Procurement Innovations in Middle and Low-Functioning Countries: The Synchronized-Chaos Systems Apporach

In 2015, no one could have predicted the dramatic changes that have taken place in shifting the locus and nature of health procurement over the last 15 years in Middle and Low-Functioning Countries. Private spending on drugs, medical equipment, and other health products has soared while government spending has stagnated. Growing shares of these purchases are taking place through platforms provided by the three leading e-tailers, Alibaba, Amazon, and Altamar, who are also expanding into supply chain management.

Hopes that public sector initiatives like CYBERNET and URHealth would improve government procurement efficiency never materialized. Instead, public interest organizations like BuyWell, HuiCAN and the MCAA have used the new technologies to support their innovative human-centered networking, which allowed them to reduce procurement transaction costs, improve quality, and expand access to previously unserved populations.

This report introduces the Synchronized-Chaos Systems Approach to demonstrate the isomorphic features of the successes and failures in for-profit and nonprofit efforts to address procurement challenges. In particular, it illustrates the key roles played by:

- Information transfer across multi-nodal networks made possible by the expanding use of blockchain and AI extraction of private market data from Big Data sources
- Semi-cooperative arrangements between distinct hierarchical actors to demand standardization, serialization, and efficalization
- Peer-led support for procurement capacity building, primarily in the private sector but with comparable progress in a subset of high-performing countries

The Multilateral World

In the Multilateral World, the international community continues to provide external financing, technical expertise, and broad support for public goods. While the US and Europe were key to the post-WWII era of multilateralism, a future Multilateral World is likely to rely on a wider coalition of countries involving the large middle-income economies. Technology adoption advances at a moderate pace and creates opportunities to improve public policy and administration. Nevertheless, while most middle-income countries do well on domestic governance and progress toward UHC, the public health sector in fragile countries remains weak and reliant on international support.

One can imagine that a New Development Bank report released in 2030–looking back at the changes that led to such a global shift from the post-WWII era arrangements–would read as follows:

EXTRACT FROM NEW DEVELOPMENT BANK 2030

New Blossoms, New Fruit: How Middle Countries Reinvigorated World Institutions

The inaugural agreement for the New Development Bank (NDB) in 2014 is now widely recognized as the moment the old world order began to give way to the new. The changes were not without struggle, reaction, and setbacks. But today, we can clearly see how the international architecture which previously concentrated power in the so-called "Western Countries" transitioned to a system with broader participation and alternative conceptions of cooperation and coordination.

Part of this transition was accelerated by the 2020 Financial Meltdown. Approval of the IMF's ability to issue SDRs (special drawing rights) provided the liquidity needed for the subsequent economic recovery. But at the same time, the NDB's pioneering financial innovations helped channel that increased liquidity to Middle- and Low-Functioning Countries, ensuring a more robust and equitable economic rebound.

Unfortunately, many countries squandered these resources on unproductive investments, leading to the current round of debt-reduction negotiations amidst an increase in crises related to climate change, conflict, and new epidemics.

Despite these setbacks, retraction by the US and Europe made room for the BRICS-Plus Council to offer reforms. Most international organizations have now followed the reform model adopted for the UN, which was replaced by a new institution—the World Federation. The success of this model was based on an appeal to shared interests—such as expanding the provision of public goods, exploiting new technologies to share information, and stabilizing Low-Functioning Countries. By contrast, it eliminated many of the political and normative functions of earlier international institutions that had increasingly devolved into discord. The success of this realignment can be seen in the substantial increase in funding for these international functions and to support Middle and Low-Functioning countries.

In the Multilateral World, international agencies remain strong enough and sufficiently funded to provide and sustain health service functions that domestic governments cannot provide. Successors to the Global Fund, Gavi, and PEPFAR are reconstituted in a new global health architecture. Funding is used to leverage reforms but is largely unsuccessful due to domestic political resistance and turmoil.

In this context, low-income and lower-middle income countries with poor governance will face health sector challenges most acutely. Opportunities will be available through

international cooperation and technological advances, but domestic governance will limit the effectiveness of external support and slow the adoption of technologies.

A journalist in 2030 might describe these health sector dilemmas for a fictionalized lowermiddle income country in sub-Saharan Africa called Benzaland as follows:

EXTRACT FROM RAMRO SVASTHYA 2030

No Exit? Benzaland's Anthropogeni Health Crisis. Essay from BenzaLife: Summer Issue

Benzaland's current government blames the country's troubles on the drought, internal displacement, urban overcrowding, and conflict spilling over the border from two neighboring countries. Nevertheless, the country's health crisis is not driven by nature's vicissitudes or foreign wars. It is driven by human beings who have betrayed our people through corruption and ineptitude.

Since 2015, the economy has grown 1.9 percent per year, based largely on raw material exports, yet per capita income remains roughly unchanged. Income inequality has grown worse as the old elite connected to the President's family and military has been joined by a new group of families connected to international transaction technologies. The growth of CYBERNET and mobile device usage has insulated the economy from government taxation and regulation. More than 60 percent of all transactions are denominated in UCoins and other digital currencies. Yet, these transactions are concentrated in a small share of the population due to high subscription costs and international security controls, which make it prohibitive for the middle and lower classes to participate.

Meanwhile, healthcare remains highly dependent on international aid. In 2030, our government spent €286 per person on healthcare, only €16 more per person than in 2015. Only the commitment of international groups to local nonprofit providers has kept basic services like vaccinations and maternal care in the reach of poorer households. A full third of the population still lacks regular access to healthcare services or to any form of financial protection. Why do we remain beholden to other countries for these basic human needs?

Unless our politicians act, the people will continue to suffer. Unless we act, our politicians won't.

In the Multilateral World, efforts to improve health sector procurement are likely to succeed if international coalitions provide coordination mechanisms (such as pooled procurement) and public goods (such as market intelligence). For the poorest or most fragile countries, however, continued direct support and contracting with nonprofits will be needed if large segments of the population are to have access to essential health products. New technologies can play a role to the extent they are adopted more widely, but limited domestic investment in infrastructure, education, and administrative functions will constrain their uses. Weak accountability and resistance to reforms in many governments will preclude improvements in public procurement or appropriate regulation of the private sector. The tension between international actors (who want to transition out of providing direct support) and governments (who rely upon that support and want it to continue) remains unresolved.

In the Multilateral World of 2030, some international institution is likely to be charged with establishing a strategy to address these unresolved tensions. Its procurement transition strategy might read as follows:

EXTRACT FROM WORLD FEDERATION HEALTH DEPARTMENT (WFHD) 2030 *Procurement Transition Strategy for Middle- and Low-Functioning Countries*

This is the 10th strategy approved by WFHD's Board of Executive Directors since our founding in 2022. While other strategies have addressed the direct delivery of medical care and prevention, this is the first strategy to address a key supporting function: procurement.

This strategy builds on a detailed diagnosis of the global health procurement system and is the result of extensive consultation with the leading international health agencies, regional institutions, member countries, and private partners. It recognizes the prominent role that WFHD and the system of World Technical Funds and Agencies (WTFA) play for Middleand Low-Functioning countries in terms of pooling purchasing, negotiating framework agreements, and strengthening domestic and regional procurement systems. It also assesses the function of nonprofit associations in the direct delivery of care in most Low-Functioning Countries.

Based on this diagnosis, the strategy looks to the future by showing how the international community can transition from a funder and service provider in procurement to a source of facilitation and technical advice. To this end, the engagement of nonprofit initiatives that provide information and direct technical services, such as BuyWell, will have to expand as the Low-Functioning countries gradually transition from the involvement of the international system.

Key elements of the strategy include:

- Strengthening information-sharing services based on a flexible and agile series of nonprofit and for-profit entities using Big Data and blockchains to provide market intelligence and procurement services for private and public health providers
- Building linkages among sub-regional groupings of countries and their associated private healthcare and insurance providers
- Producing the scientific evidence, analytical techniques, and management innovations that can be transmitted to all partners to encourage standardization, quality control, and supply chain management capacities
- Reducing fragmentation of health procurement which is typically managed separately by different donor agencies, multilateral entities, numerous private

nonprofit and for-profit provider groups, and dozens of international pharmacy companies

• Using new networking methods to provide community health workers and village facilities with the referral systems, drug management, and medical supply logistics

Implications of Alternative Scenarios for Global Health Procurement

This look at the Atomistic, Privately Led, and Multilateral Worlds shows how the plans we make today can be undone by the events of tomorrow. Casting our lot with private sector actors might be the best bet if we knew the world of tomorrow would be the Privately Led one; however, we would lose the economies of scale and legitimacy provided by public institutions—a lost opportunity if the world experiences a revitalization of multilateral institutions. Putting all our emphasis on in-country support and regional accords would be the right direction if the world were moving toward the Atomistic scenario but is risky when progress on domestic governance is so uncertain.

A key difference across these scenarios is the locus for action to improve global health procurement (see table 4). In the Atomistic World, good governance will develop in a large number of countries and local policy will drive improvements in the health sector. In some countries with poor governance, procurement is likely to depend on bilateral support from a handful of high-income countries or on the ability to collaborate regionally with wellgoverned neighbors. In the Privately Led World, the health sector is likely to experience greater divergence, with for-profit institutions serving the relatively wealthy, while a mix of government agencies and nongovernmental organizations serve the rest. The opportunity for innovation and movement toward better health procurement is therefore likely to reside in the nongovernmental organizations that find models for financial sustainability despite operating in poorly governed contexts. In the Multilateral World, the international community's financial and technical support could help ease a range of constraints, regardless of the level of domestic governance. The degree of success would depend on strategically applying resources and supporting collective institutions in ways that best respond to the world's evolving needs.

In the face of this uncertainty, many promising strategies could fail. For example, promoting the advantages of centralized procurement makes sense in a context of good governance but may be counterproductive with unaccountable and corrupt governance. Similarly, when domestic governance is poor, the public may be better served by relying on international or private procurement agents than government entities. In some cases, establishing procurement offices with greater autonomy could protect them from political interference and improve their functioning, creating "islands" of integrity. In other cases, such autonomy could harbor corrupt and inefficient practices. The next section describes a set of approaches with which to navigate these future uncertainties.

6. Steering through an Uncertain Future: Implications for Global Health Procurement

Which world will we face in 2030: Atomistic, Privately Led, or Multilateral? And what will it mean for global health procurement? Depending on how the world evolves, global health procurement will have to be organized differently and conducted by distinct institutions (see table 4). But in any case, future efforts will have to address three aspects of procurement that affect the ability to expand access to affordable, high-quality health products: financing and modes of collaboration; procurement procedures and tools; and procurement capacity. This section describes the policy options and locus of action for improving these aspects of global health procurement depending on which future materializes.

	Atomistic 🏶	Privately Led 🖴	Multilateral 🕅	
Premises				
Most countries grow w	ealthier; demand for more	e—and more complex—healt	hcare increases	
Poverty becomes more	geographically concentrat	ted, especially in sub-Saharan	Africa	
NCDs dominate; comm HIV/AIDS is endemic	NCDs dominate; communicable diseases become concentrated in fragile states and/or where HIV/AIDS is endemic			
Health and non-health artificial intelligence, et	technologies advance rapi c.	idly, particularly in communic	ations, diagnostics,	
Crises become more prevalent; population displacement, pandemics, and the spread of drug resistance are more widespread				
Axes of Uncertainty				
International governance and foreign aid	Somewhat weaker levels of international governance and lower funding	Somewhat weaker levels of international governance and lower funding	Improved governance, greater coordination, and higher funding	
Domestic governance and UHC progress	Strong improvements in domestic governance and UHC progress	Worse governance with little or no UHC progress	Maintains current levels of governance and UHC progress	
Technology adoption	Moderate pace of adoption but divergent and uneven	Rapid adoption but divergent and uneven	Moderate pace of adoption but divergent and uneven	

Table 4. Summary of Three Worlds and Implications for Global Health Procurement

Implications for Global Health Procurement			
Locus of action	Low- and middle- income countries or regional bodies	Private entities (including both for-profit and nonprofit)	International community, including bilateral and multilateral actors
Financing and modes of collaboration	Largely country driven and organized through UHC schemes; some regional collaborations form (persist) to facilitate joint purchasing, price negotiation, or product regulation	Private funding predominates through insurance and out-of- pocket spending; procurement is mostly outsourced to private actors	International financing supports procurement priorities; regional and international collaborative procurement arrangements prevail
Procurement procedures and tools	Well-governed countries invest in innovative procurement procedures and technology applications that drive efficiencies	Improved procedures and widespread technology adoption led by the for- profit sector drives procurement efficiency	Global entities expand their role in the provision of procurement-related global public goods
Procurement capacity	Procurement evolves through diverse public and private arrangements, relying on domestic capacity and cross-country collaboration	The private sector leads on providing procurement capacity building, skills accreditation, and technical expertise	The international community becomes the key source of technical assistance to national governments, in addition to its role as a procurement service provider

Financing and Modes of Collaboration

The need for adequate and reliable financing for health products procurement will be critical across all scenarios. How resources are raised, allocated, and spent will, in turn, determine procurement outcomes. Many low- and lower-middle income countries continue to depend on development assistance as a key source of financing for health products procurement. Nevertheless, bilateral and multilateral actors have already begun to call for "transitioning" aid recipients toward a future with higher co-financing requirements or without external assistance at all. For example, the "journey to self-reliance" has emerged as a key strategic

priority across USAID.7 Further, PEPFAR, the Global Fund, Gavi, and the World Bank have adopted a variety of approaches to determine which countries will be eligible for external assistance for health (Silverman 2018). In the Global Fund's case, only about 10 percent of current spending will be affected by aid transitions among its recipients through 2040—assuming that its funding levels continue to be replenished. By contrast, many countries are likely to lose eligibility for Gavi in the next 10 years (Silverman 2018). While the level of US global health funding has remained relatively flat since 20108, even small changes in US funding allocations could seriously affect several sub-Saharan African countries where PEPFAR provides a particularly large share of government health expenditure (Silverman 2018). Nevertheless, the way donors and multilateral institutions manage these transitions toward reduced health assistance, and the degree to which low- and middle-income countries assume greater responsibility for financing, administering, and regulating procurement will significantly affect the outcomes.

In addition, different modes of collaboration across purchasers—whether through information sharing, pooled purchasing, or regulatory harmonization—will also be relevant to ensure efficient procurement, particularly by helping to reduce high transaction costs and barriers to entry. For example, buyers could negotiate as a group to establish an agreement on prices and product specifications. At the global level, international organizations such as the Global Fund, UNICEF, and Gavi already negotiate advantageous prices for eligible countries. Regional collaborations to jointly negotiate prices also exist among high-income countries (e.g., the "BeNeLuxA," a cooperation between Belgium, Netherlands, Luxemburg, and Austria) and low- and middle-income countries alike (e.g., South East Asian countries).⁹ Once such agreements are in place, eligible international institutions, countries, NGOs, or healthcare organizations can purchase under the agreement and benefit from the implicit market power afforded by such an arrangement. Notably, as countries transition away from donor-managed procurement mechanisms, they may need to increasingly consider ways to aggregate demand for health products through pooled or other collaborative purchasing arrangements.¹⁰

Further, global institutions play a vital role in quality assurance for health products. WHO's prequalification program, for example, ensures that medicines, vaccines, and other health products are of acceptable quality, safety, and efficacy through a standardized process, and is a prerequisite for procurement by the Global Fund, UN organizations, US government agencies, and other global entities.¹¹ However, transition away from global procurement mechanisms may entail a loss of centralized quality assurance systems, raising the risk of

⁷ USAID's journey to self-reliance portal can be found at <u>https://www.usaid.gov/selfreliance/</u>. Accessed on November 23, 2018 based on version last updated on October 23, 2018.

⁸ See: <u>https://www.kff.org/global-health-policy/fact-sheet/breaking-down-the-u-s-global-health-budget-by-program-area/</u>.

⁹ See for example: <u>http://www.beneluxa.org; https://apps.who.int/iris/handle/10665/274184;</u> and <u>http://www.searo.who.int/entity/medicines/summary_report_price_info_sharing.pdf</u>.

¹⁰ See discussion here: <u>https://www.cgdev.org/publication/aggregating-demand-pharmaceuticals-appealing-pooling-not-panacea</u>.

¹¹ See: <u>https://www.who.int/topics/prequalification/en/</u>

countries procuring health products of poor quality. Regional collaboration among low- and middle-income countries could create new mechanisms or institutions to ensure quality.

In the *Atomistic World*, financing for procurement of health products will be largely country driven and organized through UHC schemes, especially in many of the large, stable middleincome countries. However, in certain pockets where domestic governance remains poor and public procurement is susceptible to corruption, the public may be better served by international procurement agents or national-level private sector procurement entities than the government. **Further**, **c**ollaborative efforts including pooled procurement would no longer be as relevant as aid retracts and procurement support wanes. However, it is possible that some countries will want to retain sovereignty over procurement, product selection, product regulation, quality control, and industrial policy. If more countries purchase individually, fragmentation may become more acute, especially in low-volume product markets. Small groups of well-governed, stable countries could expand existing buying clubs or establish new sub-regional mechanisms to share information, jointly negotiate prices, or directly purchase health products together. They could also negotiate and adhere to a common or fast-track registration application process along with supporting a commonly accepted institution to inspect, monitor, and sanction suppliers.

Amidst weak multilateral cooperation and domestic governance in a *Privately Led World*, private spending could easily come to predominate, through a combination of insurance and out-of-pocket spending. As such, a large share of procurement and procurement-related functions could be undertaken in the private sector, and public institutions might do better by outsourcing procurement to private actors. For example, private (nonprofit or for-profit) entities could establish purchasing platforms at the global, regional, or country levels to jointly negotiate and/or pool procurement. In such a world, however, equity concerns around access to affordable, high-quality essential health products would likely become especially acute.

Within the global architecture of the *Multilateral World*, international support for procurement would remain strong. While a majority of countries will transition away from direct funding for health products procurement, international financing might still support a narrower set of procurement priorities in low-income and fragile countries, including through subsidies for high-priority products that have global benefits but may be locally cost-ineffective. Global entities like the Global Fund, Gavi, UN entities, and PEPFAR, or their successors, could negotiate framework agreements, longer-term contracts, and/or manage pooled procurement in specific high-priority product markets. With low- and middle-income countries buying into such international arrangements, their future role may well shift from being relatively passive recipients of development assistance to active clients who purchase these services. WHO would also play an important role in supporting more efficient procurement by, for example, expanding its Collaborative Registration Procedure

(CRP) aimed at facilitating common and accelerated product registration at the country level.¹²

Procurement Procedures and Tools

Adopting effective procurement procedures and tools—including contract mechanisms, tender procedures, data, and market intelligence—will be critical to improving the future of global health procurement. By applying evidence-based approaches and overcoming information barriers, purchasers could become more efficient. For example, if a public agency or private entity were charged with collecting, analyzing, and providing access to data relevant to health procurement, the effects of information gaps on health purchasing could be substantially reduced. These efforts (and health procurement more generally) could be easier and more effective to the extent that products are standardized and tools like serialization become widely used—a collective endeavor that could be coordinated and promoted by the same entity or entities (Pisa and McCurdy 2019). Such an effort could also provide important data and information that would reduce supplier risk and uncertainty about the scope and character of market opportunities in low- and middle-income country markets.

Improvements could be accelerated by piloting, testing, and researching new institutional arrangements and procedural approaches. Research could uncover or invent new techniques utilizing different pricing rules, new forms of auctions, and advance purchase commitments, and exploiting concentration of purchasing power (Aperjis and Ausubel 2019; Dubois, Lefouili, and Straub 2019). In light of future uncertainties, investments in innovations to expand the toolbox of purchasing mechanisms could be particularly helpful for increasing the efficiency and effectiveness of health procurement across the divergent scenarios of 2030. Yet, the institutional basis for these innovations will necessarily differ across the three worlds.

In the *Atomistic World*, the adoption of new tools and improved procedures will be an opportunity for well-governed countries to better manage their procurement processes. A handful of well-governed middle-income countries may invest in testing and applying improved procurement procedures and approaches. Further, public sector data collection and market analysis initiatives could crop up, both at the national and regional levels— especially in support of regional buying clubs. Building the capacity of procurement officials to effectively use the data and information to inform purchasing decisions would be critical. However, it is realistic to expect little progress in a subset of low-income countries where continued support from international partners and/or participation in regional efforts will be needed.

In the *Privately Led World*, private actors—both for-profit and nonprofit—will be responsible for funding experiments to identify where efficiencies could be gained through more flexible contract mechanisms and improved auction designs, among other approaches. The ability of

¹² See: <u>https://extranet.who.int/prequal/content/collaborative-registration-faster-registration</u>

public sector institutions to regulate the private sector will continue to be particularly relevant. Private entities could use new technologies to reduce procurement transaction costs, improve quality, and expand access to previously unserved populations. These efforts could also facilitate information transfers across multi-nodal networks made possible by the expansion of blockchain and AI extraction of private market data.

In addition to managing pooled procurement for many specialized products, global efforts in the *Multilateral World* could also promote new technology platforms for epurchasing and distributed information gathering from mobile devices. Global entities could also expand their role in the provision of global public goods related to health products procurement, including research and evaluation around new and improved institutional arrangements like bid preparation, tendering procedures, and contract management.

Procurement Capacity and Skills

Specialized skills are an essential part of procurement efficiency, whether it is carried out by international organizations, national governments, or private actors. Appropriate training along with a credible accreditation process could expand the pool of individuals qualified and skilled in public health procurement. Building a community of practice around global health procurement through peer-to-peer learning and mentorship programs could help professionalize the field and create a cadre of procurement professionals in the public and private sectors across low- and middle-income countries.

The results of training individuals and reforming domestic health procurement institutions will be most useful in the Atomistic or Multilateral Worlds; and even in the Privately Led World, having a cadre of people who are knowledgeable about procurement techniques would assist those private entities to efficiently procure health products. Actions to achieve this expansion of skilled procurement personnel and organizations might include capacity building and skills training and accreditation.

In the *Atomistic World*, procurement of health products could evolve through diverse public and private mechanisms that increasingly rely on domestic capacity and cross-country collaboration. Nonetheless, global institutions could still provide some forms of targeted support to those countries that continue to confront challenges including supply shortages, stockouts, and poor quality of essential health products.

In the *Privately Led World*, peer-led support for procurement capacity building could take place primarily in the private sector. We also might expect there to be comparable progress in a subset of high-performing countries. For-profit and nonprofit private entities offering accreditation of procurement skills could also crop up. There could also be an expansion of a highly competitive market of for-profit consulting firms that offer technical expertise and training in return for a share in the resulting savings on health procurement.

The international community in the *Multilateral World* could become a source of facilitation and technical advice on procurement in addition to being a service provider—eventually replacing its role in direct financing for health products. One or more international initiatives could provide technical assistance to national governments to support legal and regulatory reforms; training and mentoring to staff on the full range of procurement functions, from product selection through monitoring and evaluation; and production and dissemination of guidelines, decision trees, and toolkits that facilitate good practice in global health procurement. International funds could also support existing universities and colleges—or create new ones—to provide formal education and in-service training programs in the practice of global health procurement.

Conclusion

We can't know the future, but we can imagine a range of scenarios to help guide our efforts to prepare for it. Envisioning three distinct future worlds—Atomistic, Privately Led, and Multilateral—reveals important implications for global health procurement amidst a shifting landscape. These implications suggest important policies for global procurement entities, funders, and low- and middle-income countries to protect the gains made over the past decades and ensure the relevance, efficiency, quality, affordability, and security of global health procurement going forward. Three aspects of any future scenario—financing and modes of collaboration, procurement procedures and tools, and procurement capacity—will be key. But the policy options and locus of action will vary across the different scenarios.

The three Worlds described in this paper suggest that very different sets of actors will be needed to promote better global health procurement, depending on how events unfold between now and 2030. Those initiating strategies that rely on one particular locus of action—multilateral institutions, well-governed middle-income countries, or nonprofit institutions, for example—will find that change could support or stymic their progress. Imagining a range of possible futures allows us to pursue particular policies while monitoring how the world progresses and then to pivot to alternative strategies if necessary.

Whatever approach is taken, those charged with implementing any strategy will need to monitor broader global changes—international governance, domestic governance, and the rate of technology adoption—to make sure their efforts remain relevant and useful. While we cannot perfectly predict the future, we can steer toward it and anticipate how to respond to any sharp curves ahead.

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