



POLICY BRIEF
**ACCELERATING PROGRESS
TOWARD UNIVERSAL HEALTH
COVERAGE**



Task Force 7
**G20 SUPPORT FOR SDGS AND DEVELOPMENT
COOPERATION**

Authors

**HANAN ALAHMADI, AHMED ALAMRI, HUSEIN REKA,
JONTY ROLAND**

موجز السياسة تسريع التقدم نحو التغطية الصحية الشاملة

فريق العمل السابع
دعم مجموعة العشرين لأهداف التنمية المستدامة
والتعاون الإنمائي



المؤلفون

حنان الأحمدى، أحمد العمري، حسين ريكا، جونتي رولاند



ABSTRACT

Universal health coverage (UHC) remains a major international challenge. However, most countries are not on track to achieve it by 2030, and those that are find these gains difficult to sustain. The situation calls for novel approaches on multiple fronts, including technology to improve efficiency, affordability, and access; innovative financing models; and reorienting systems around primary care, along with a workforce equipped to deliver these new care models. While each country charts its unique path to UHC, this policy brief presents opportunities to accelerate the progress through global collaboration and sharing of solutions among the G20 countries.

ما زالت التغطية الصحية الشاملة (UHC) تمثل تحديًا عالميًا رئيسيًا. ورغم ذلك، لا تسير معظم البلدان على الدرب لتحقيقها بحلول عام ٢٠٣٠، والدول التي استطاعت أن تمضي قدما نحو تحقيقه، تواجه صعوبة في المحافظة على هذه المكتسبات. لذا يتطلب الموقف نهجًا حديثة على أصعدة متعددة، بما في ذلك تسخير أحدث التقنيات اللازمة لتحسين الكفاءة والقدرة، والوصول؛ ونماذج تمويل مبتكرة؛ وأنظمة إعادة توجيه بشأن الرعاية الأساسية، بالإضافة إلى قوى عاملة مجهزة لتقديم نماذج الرعاية الجديدة هذه. وفي حين أن كل بلد يخطط مساره الخاص نحو التغطية الصحية الشاملة، فإن ملخص السياسة هذا يعرض فرصًا لتسريع سير العمل عبر التعاون الدولي ومشاركة الحلول فيما بين دول مجموعة العشرين.



CHALLENGE

Challenge 1: Financial sustainability of effective UHC

Many countries are struggling to raise the financing required to move closer to UHC. Although it can be politically inspiring, UHC is believed to represent a fiscal “bottomless pit” (Horton 2018). While the economic impact of COVID-19 demonstrates the importance of health security and resilient health systems, there is a critical risk that a lack of investment could derail the progress toward UHC. Key challenges include:

- Finding new sources of financing to reach and sustain UHC.
- Prioritizing domestic healthcare spending across different products and services.
- Incentivizing healthcare providers to deliver the maximum population health gain using these resources.

Challenge 2: Fragmented care models and lack of well-developed primary care

Traditional, siloed models of care are failing to deliver effective UHC and better outcomes than integrated and person-centered care (OECD 2016; Kruk et al. 2018). This negatively affects communities’ trust in primary healthcare (PHC) and leads to inadequate funding. According to the World Health Organization (WHO), boosting PHC in low- and middle-income countries would require 0.9%–1.9% of Gross Domestic Product, but could save 60 million lives and increase life expectancy by 3.7 years by 2030 (WHO 2019). Key challenges include:

- Failure to recognize the importance of PHC as a critical element of integrated care. Although health systems face acute needs during epidemics, the ongoing recognition of the need and importance of PHC is not constant (Ghebreyesus 2019).
- Low level of intersectoral action at the community level to affect health promotion.
- Integration of PHC with other areas of healthcare delivery and the adoption of less hospital-centric approaches.

Challenge 3: Sustainable and versatile health workforce

Regardless of a country's income level, maintaining the human resources required for UHC has become increasingly challenging. Despite the world approaching a shortage of 17.4 million healthcare workers by 2030, few countries are training an adequate number of professionals, or thinking deeply enough about how to motivate and retain them (WHO 2016; Britnell 2019). With some medical specialists taking ten years or more to fully qualify, most of the health workforce due to be available in 2030 are already working or in training. Rapid, ambitious solutions are needed or the world risks falling into a global bidding war for health workers.

Challenge 4: Limited utilization of innovation and technology

Progress toward UHC has recently slowed (WHO 2019). Many countries that are lagging the UHC targets could progress more quickly with the help of innovation and technology. Innovation opportunities are not only in hard technology but also in "social innovation."¹ Therefore, scaling up technologies to make a significant impact requires paying equal attention on innovations in business models, care processes, pathways, and products. Key challenges include:

- Ensuring that technology is affordable to low-income countries through innovative partnerships.
- Developing systematic approaches to UHC research and development—a weak point for most countries.
- Strengthening governance, data confidentiality, and ethical aspects of technology application.
- Increasing infrastructure, workforce preparation, and expertise to address new technology.

1. Social innovation includes—but is not limited to—the development of new products, services, programs, and entrepreneurship.



PROPOSAL

The following proposal outlines the recommendations that address each of the above four global challenges. We believe that integrated efforts across the international community would most meaningfully accelerate the progress toward UHC. The vision that links these solutions is the collective effort to achieve sustainable healthcare financing mechanisms that will foster more integrated care models, with PHC at their heart, supported by a mobile and versatile health workforce. Innovation and technology, as enablers, may further enhance the impact of the recommended actions.

Achieving more sustainable models of healthcare financing

The first step in creating a more sustainable environment for healthcare financing—whether in high-, middle-, or low-income countries—is to engender an appreciation of UHC as an effective protector and creator of economic value, not just a cost (Summers 2015). The COVID-19 pandemic has created a crossroads for many countries in terms of the political economy of UHC: demonstrating the critical importance of health systems to societies, while simultaneously causing extensive damage to the economic conditions needed to foster investment in such systems.

In this environment it is vital that health leaders argue for healthcare spending as a powerful direct—and indirect—multiplier of economic growth, via several causal pathways (Bloom, Khoury, and Subbaraman 2018), including:

- A healthier workforce resulting in increased labor productivity.
- Reduced precautionary saving and increased domestic spending by families as a result of a lower risk of experiencing catastrophic health expenditures.
- Improved child health and educational attainment.
- Health security measures making countries more resilient to shocks, such as pandemics.
- The reduced financial burden of ill health on families and the decrease of economic inequalities, bolstering social solidarity and political stability.

Economic modeling has quantified these effects as representing a nine-to-one return on investment on healthcare spending in countries aspiring toward UHC (Jamison et al. 2013). As a result, several G20 countries that are achieving the most rapid increases in healthcare financing are openly doing so for more than simply humanitarian reasons. For example, the Indian Government has stated that out-of-pocket health expenditure was the leading cause for its citizens falling into poverty (60 million people annually). This forms part of the rationale for its “Ayushman Bharat” reforms to cover 500 million citizens with publicly financed health insurance. Many G20 countries are also actively positioning their health and life science industries as engines of economic investment, growth, and export (NBR 2015).

As the prospect of another global economic recession looms close, the G20 countries should reflect on the past mistakes of countries that heavily constrained or cut public health funding during the Global Financial Crisis, which in some cases, proved to undermine long-term economic strength (Thomson et al. 2014).

Having made the economic case for health investment, it is the primary responsibility of governments to steward the development of regulation, governance, and funding models to finance UHC. Two fundamental principles are critical.

The first principle is to select funding sources that will be societally inclusive (i.e., not unfairly impacting the poor) and ideally include economic incentives that align with the goals of health promotion and disease prevention. Common examples include so-called “sin taxes” on tobacco, alcohol, and sugar—proposed by many countries as a critical source of funds for health, for example, the UHC Act in the Philippines (DOH PH 2013). It may be equally impactful to remove and redeploy fossil fuel subsidies that are present in many countries. Fossil fuels contribute to poorer health through air pollution, sedentary forms of transport, and—in the long run—climate change, a significant threat to human health (Yates 2014; Smith et al. 2014; Coady et al. 2019).

The second principle is to design funding mechanisms that will optimize health gain for any given investment. Outcome and value-based models should be deployed at every level of healthcare financing and spending, including:

- The creation and evolution of healthcare benefit packages using rational processes for prioritization—such as Health Technology Assessment—to direct resources where they will produce the maximum improvement in outcomes.
- The implementation of value-based financial incentives and contracting models for healthcare providers, so that payments are timely and more closely linked to patient (and population) health outcomes.
- The deployment of private investment through public-private partnerships, where payment is linked to the achievement of specific measurable improvements in healthcare efficiency, effectiveness, and experience, rather than merely the delivery of infrastructure or service contracts.
- The application of “payer power” and strategic purchasing to achieve more favorable prices with providers and suppliers from the perspective of patients and taxpayers. Many countries are finding that the consolidation of coverage pools is an essential first step in creating sufficiently powerful payer agencies.

As shown by the previous Think 20 Taskforce on UHC in 2019, the global landscape of health financing and international collaborative platforms is poorly aligned to the goals of UHC and the broader Sustainable Development Goals (SDGs; Bloom, Katsuma, Rao, Makimoto, and Leung 2019). Currently, the global response to the COVID-19 pandemic threatens to create yet another set of vertical health financing initiatives—both at the national and intergovernmental levels. Therefore, it is more important than ever to consider the reform of the global governance architecture for health to better reflect the integrated priorities of effective UHC financing.

New models of care with primary healthcare at the center

Four decades ago, the Alma-Ata declaration envisioned PHC as a way to achieve health for all. In 2018, a new global commitment to PHC was endorsed through the Astana Declaration. It encouraged countries to recommit to PHC as a means of achieving health for all, and linked it to SDG 3: “healthy lives and wellbeing for all at all ages” (Walraven 2019). Overwhelming evidence proves that countries that invest in primary care are better positioned to achieve health-related SDGs than those focusing on hospital care (Hone, Macinko, and Millet 2018). Countries such as Chile, Cuba, Ethiopia, Nepal, Rwanda, and Sri Lanka have achieved better population health outcomes and reduced inequalities at lower levels of health spending—good health at low cost (Rao and Pilot 2014). Amid the COVID-19 pandemic, hospital capacity often takes center-stage. Therefore, strong primary care systems have been the determinant of how well the virus is controlled and have been at the heart of the triage “test, treat, track and trace” strategy (Baker et al. 2020).

However, primary care in isolation cannot deliver the goal of UHC. New business models for healthcare delivery should integrate primary, secondary, and tertiary care focusing on the entry point of system delivery for PHC to provide better access, improve outcomes, and reduce cost. Such integrated care models—with inclusive access for the most vulnerable groups of society—are now a reality and represent some of the most powerful examples of innovation that accelerate progress toward UHC. For instance, family health teams in Brazil, multi-disciplinary community healthcare for women and children in Belize, and one-stop diabetic clinics—using bundled payments for complete pathway management for low-income patients—in Mexico (PAHO n.d.; Casanova 2019; Giovanella 2019).

On the other end of the spectrum are broader and more ambitious health transformation efforts, where entire health systems transform into integrated care systems to better cater to population needs. One prominent example of this is the Saudi Arabian Vision 2030 initiative to merge public health providers into clusters, and eventually transform these clusters into Accountable Care Organizations. This initiative has primary care at the core through a comprehensive reform program covering financing, delivery, workforce, and technology (Roodenburg 2019). We await the results of this significant reform effort and the impact on primary care and progress toward sustainable UHC.

Increasing the capacity of primary care is a prerequisite to achieve better access and affordability, as it remains a challenge for many governments that cannot afford basic healthcare coverage. However, governments should not be the sole drivers of these efforts; a host of development partners must collaborate to ensure stronger stewardship and coordination for the UHC agenda. Simultaneously, developed countries should transform primary care into more patient-centric institutions and strengthen existing capacity within health systems.

A mobile and versatile health workforce

G20 countries must each ensure that they design recruitment, training, and retention strategies that are closely aligned to their desired model of healthcare delivery. This should consider the evolving health needs of their population, desired future care models, and likely changes in healthcare technology. This means that health systems must (Britnell 2019):

- Substantially increase the number of health workers trained from current levels of undersupply. Focus especially on professional cadres that have proven to be the most cost-effective for improving access and quality (i.e., in primary and community care).
- Begin treating patients and caregivers as active, vital participants in the healthcare workforce, empowering them with the skills and confidence to self-care, manage, and treat diseases.
- Adopt global best practices in the creation and adoption of new cadres of healthcare workers (physician assistants, community health workers, and nurse practitioners). Recognize that these roles are essential to scale up new models of care and that insufficient attention is given to recognition, progression, and mobility.
- Reward, manage, and motivate the healthcare workforce in smarter ways, both financially and in terms of job quality, as well as appreciate them for their vital front-line work to keep our societies safe, healthy, and functional.

There is also significant scope for international cooperation to address the global health workforce crisis, as argued by previous Think 20 task forces (Bloom, Katsuma, Rao, Makimoto, Yin, et al. 2019). However, the proposal to improve measurement and understanding is not enough. To achieve UHC by 2030, the G20 countries must substantially increase their ambitions for cooperation in international stewardship of the health workforce. We propose two specific proposals that would, if adopted, create a step-change in the likelihood of achieving a UHC-ready workforce by 2030:

- An agreement on more robust regulations for the international recruitment of healthcare workers, to prevent the brain drain of doctors and nurses from countries with the highest need to those with the lowest, and to reduce the likelihood of a global bidding war for talent, which will increase healthcare costs. While some international agreements exist, such as the WHO Code of Practice on the International Recruitment of Health Personnel, the intended adherence has not been realized due, in part, to multiple loopholes (Tam, Edge, and Hoffman 2016). Currently, low- and middle-income countries lose an equivalent of \$15.4 billion in excess mortality from the migration of their doctors (Saluja et al. 2020). The G20—including some of the world’s largest importers and exporters of healthcare professionals—is ideally placed to lead such efforts.
- Coordinated investment in several countries with the intention to create health workforce export hubs. This will convert the current ad hoc system, whereby many countries face unplanned migrations of doctors and nurses, into deliberate partnerships. High-income countries would co-invest in new training facilities and high-quality professional education in countries with young, well-educated populations, such as the Philippines, Kenya, and India. This would accompany the agreement to allow a certain proportion of workers to be retained in the region in better quality, better-paid jobs, and a certain proportion to be transferred to other countries. Such agreements would increase the supply and skill base of the in-country workforce, as well as generate additional remittances from those who leave.

Innovation and technology as an enabler to foster UHC

Innovation and the application of new technologies can enable countries to rapidly progress toward UHC, as demonstrated by many initiatives that show promising results with low cost and rapid reach (de Jong 2019). The application of technology, primarily digital technology, is transforming the health sector in fast and unpredictable ways. However, innovation is not limited to technology only; it can also be found in healthcare education, supervision, population health, and healthcare business models. Indeed, without these wider innovations, even the most transformative technologies often fail to scale up.

The WHO, in its Global Strategy on Digital Health, views digital technology application and innovation as a means of achieving affordable and universal access to health (WHO 2020). The deep penetration of mobile devices provides a unique opportunity, especially in remote areas where users are now able to make communications and transactions in a split second, at a low cost. For example, the “Be he@lthy, Be mobile” collaboration between the WHO and the International Telecommunications Union has been implemented in a dozen countries. They help millions of users manage diabetes, screen for cancer, and stop smoking, using their mobile devices (WHO 2018).

Often, the barrier to large-scale impact from new innovations in healthcare has not been invention, but implementation. However, as COVID-19 has demonstrated, with the right impetus and incentives, it is possible to rapidly scale new technologies and ways of working. A case in point is the impact of data analytics utilized in the fight against SARS-CoV-2, for mitigating the pandemic through “contact-tracing,” or forecasting the spread of the virus by national public health entities (Wang, Chun, and Brook 2020; Hao 2020).

Health systems worldwide are innovating in real time to implement digital tools that have long been neglected, such as remote consultations, predictive analytics, algorithm-based patient assessment, and drone delivery of essential supplies (Yang and Reuter 2020; Ginsberg 2020). The private sector is crucial for the diffusion of these technologies, for financing, provision, as well as for building new models to increase their reach. Governments should build partnerships, including those with high-tech firms, to maximize the potential to enhance population coverage.

Innovations in business models are good examples of successful partnerships that create accessible and affordable coverage. Cases of successful, low-cost improvements in care delivery with private-sector partnerships have been reported in Mali and Nepal (McClellan et al. 2020). A similar partnership model is required with high-tech companies, which utilizes the latest technologies and solutions in pursuit of UHC.

The most recent deployment of digital technology in China was successful in stemming the spread of SARS-CoV-2. It provides a good foundation for testing and exhibiting the potential application of these technologies in the pursuit of UHC. From apps and telemedicine that connect patients from their homes to healthcare personnel, to big data and artificial intelligence deployed for faster and more efficient diagnostics and tracking of infected patients, these technological advances have made a significant contribution to the fight against the virus (Krishnan 2020).

However, sustaining this beyond the urgency of a global pandemic requires more robust UHC governance and more initiatives to build and invest in science, technology, engineering, and mathematic capabilities within healthcare systems. Incubators situated in low- and middle-income countries could provide one such platform for innovation with faster routes-to-scale and impact.

Governments and regulators must make significant effort to ensure data confidentiality and privacy in digital technology applications, when pursuing UHC, especially when partnering with the private sector. Ethics, empathy, and patient safety should be paramount in these endeavors. Additionally, while numerous efforts have been made to provide guidance on these issues for both policymakers and technocrats, there is no one-stop platform or resource that consolidates practical tools and guidance.

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Disclaimer

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REFERENCES

Baker, Tim, Carl Otto Schell, Dan Brun Petersen, Hendry Sawe, Karima Khalid, Samson Mndolo, Jamie Rylance et al. 2020. "Essential Care of Critical Illness Must Not Be Forgotten in the COVID-19 Pandemic." *The Lancet* 395 (10232): 1253–54. [https://doi.org/10.1016/S0140-6736\(20\)30793-5](https://doi.org/10.1016/S0140-6736(20)30793-5).

Bloom, David E., Alexander Khoury, and Ramnath Subbaraman. 2018. "The Promise and Peril of Universal Health Care." *Science* 361 (6404): eaat9644. <https://doi.org/10.1126/science.aat9644>.

Bloom, Gerald, Yasushi Katsuma, Krishna D. Rao, Saeda Makimoto, and Gabriel M. Leung. 2019. "Deliberate Next Steps toward a New Globalism for Universal Health Coverage (UHC)." Accessed June 8, 2020. <https://t20japan.org/policy-brief-deliberate-next-steps-toward-new-globalism-for-uhc>.

Bloom, Gerald, Yasushi Katsuma, Krishna D. Rao, Saeda Makimoto, Jason D. C. Yin, and Gabriel M. Leung. 2019. "Next Steps towards Universal Health Coverage Call for Global Leadership." *BMJ* 365: l2107. <https://doi.org/10.1136/bmj.l2107>.

Britnell, Mark. 2019. *Human: Solving the Global Workforce Crisis in Healthcare*. Oxford: Oxford University Press.

Casanova, Ann M. 2019. "A Retail Approach to Diabetes Care: Clinicas del Azucar – Bringing Disruptive Innovation to Chronic Disease Management in Mexico: Case Study (English)." The World Bank. Last modified June 01, 2019. <https://documents.worldbank.org/en/publication/documents-reports/documentdetail/863211567679824647/a-retail-approach-to-diabetes-care-clinicas-del-azucar-bringing-disruptive-innovation-to-chronic-disease-management-in-mexico-case-study>.

Coady, David, Ian Parry, Nghia-Piotr Le, and Baoping Shang. 2019. "Global Fossil Fuel Subsidies Remain Large: An Update Based on Country-Level Estimates." IMF (International Monetary Fund). Last modified May 2, 2019. <https://www.imf.org/en/Publications/WP/Issues/2019/05/02/Global-Fossil-Fuel-Subsidies-Remain-Large-An-Update-Based-on-Country-Level-Estimates-46509>.

de Jong, Henk S. 2019. "How Technology Can Help Us Achieve Universal Healthcare." WEF (World Economic Forum). Last modified May 21, 2019. <https://www.weforum.org/agenda/2019/05/universal-health-coverage-technology>.

REFERENCES

DOH PH (Department of Health, The Republic of the Philippines). 2018. "Increasing Tobacco Taxes a Win-Win for UHC and the Filipino People." Last modified September 05, 2018. <https://www.doh.gov.ph/node/15123>.

Ghebreyesus, Tedros A. 2019. "Healthcare for All: Every Country Can Do It—An Essay by Tedros Adhanom Ghebreyesus" *BMJ* 367: l6790. <https://doi.org/10.1136/bmj.l6790>.

Ginsberg, Anthony. 2020. "Five Healthcare Innovations Helping to Fight the Transmission of Coronavirus." *ETF Strategy*. Last modified March 16, 2020. <https://www.etfstrategy.com/five-healthcare-innovations-helping-to-fight-the-transmission-of-coronavirus-han-gins-indxx-healthcare-innovation-ucits-well-etf-89766>.

Giovanella, Lígia, Maria Helena Magalhães de Mendonça, Paulo M. Buss, Sonia Fleury, Carlos Augusto G. Gadelha, Luiz Augusto C. Galvão, and Ronald Ferreira dos Santos. 2019. "From Alma-Ata to Astana. Primary Health Care and Universal Health Systems: An Inseparable Commitment and a Fundamental Human Right." *Cadernos de Saúde Pública* 35 (3). <https://doi.org/10.1590/0102-311x00012219>.

Hao, Karen. 2020. "This Is How the CDC Is Trying to Forecast Coronavirus's Spread." *MIT Technology Review*. Last modified March 13, 2020. <https://www.technologyreview.com/2020/03/13/905313/cdc-cmu-forecasts-coronavirus-spread>.

Hone, Thomas, James Macinko, and Christopher Millett. 2018. "Revisiting Alma-Ata: What Is the Role of Primary Health Care in Achieving the Sustainable Development Goals?" *The Lancet* 392 (10156): 1461–72. [https://doi.org/10.1016/s0140-6736\(18\)31829-4](https://doi.org/10.1016/s0140-6736(18)31829-4).

Horton, Richard. 2018. "Offline: Can the Global Fund Survive" *The Lancet* 392 (10141): 14. [https://doi.org/10.1016/S0140-6736\(18\)31552-6](https://doi.org/10.1016/S0140-6736(18)31552-6).

Jamison, Dean T., Lawrence H. Summers, George Alleyne, Kenneth J. Arrow, Seth Berkley, Agnes Binagwaho, Flavia Bustreo et al. 2013. "Global Health 2035: A World Converging within a Generation." *The Lancet* 382 (9908): 1898–955. [https://doi.org/10.1016/s0140-6736\(13\)62105-4](https://doi.org/10.1016/s0140-6736(13)62105-4).

Krishnan, Ananth. 2020. "China's High-Tech Battle against COVID-19." *The Hindu*. Last modified March 6, 2020. <https://www.thehindu.com/opinion/lead/chinas-high-tech-battle-against-covid-19/article30993814.ece?homepage=true>.

REFERENCES

Kruk, Margaret E., Anna D. Gage, Catherine Arsenault, Keely Jordan, Hannah H. Leslie, Sanam Roder-DeWan, Olusoji Adeyi et al. 2018. "High-Quality Health Systems in the Sustainable Development Goals Era: Time for a Revolution." *The Lancet Glob Health* 6 (11): E1196–252. [https://doi.org/10.1016/S2214-109X\(18\)30386-3](https://doi.org/10.1016/S2214-109X(18)30386-3).

McClellan, Mark, Lucas Scherdel, Andrea Thoumi, and Krishna Udayakumar. 2020. "Achieving Universal Health Coverage through Value-Based Care and Public-Private Collaboration." Brookings. Last modified September 20, 2019. <https://www.brookings.edu/blog/future-development/2019/09/20/achieving-universal-health-coverage-through-value-based-care-and-public-private-collaboration>.

NBR (The National Bureau of Asian Research). 2015. "Healthcare and Life Sciences Industry as a Strategic Focus for South Korea: A Look at the Promises and Challenges." Interview with Joo Hun You. April 7, 2015. Text. <https://www.nbr.org/publication/healthcare-and-life-sciences-industry-as-a-strategic-focus-for-south-korea>.

OECD. 2016. "Universal Health Coverage and Health Outcomes: Final Report." Last modified July 22, 2016. <https://www.oecd.org/health/health-systems/Universal-Health-Coverage-and-Health-Outcomes-OECD-G7-Health-Ministerial-2016.pdf>.

PAHO (Pan American Health Organization). n.d. "Moving towards Universal Health with Integrated Care Services in Belize." Accessed August 6, 2020. https://www.paho.org/hq/index.php?option=com_content&view=article&id=15064:moving-towards-universal-health-with-integrated-care-services-in-belize&Itemid=135&lang=en.

Rao, Mala, and Eva Pilot. 2014. "The Missing Link – The Role of Primary Care in Global Health." *Global Health Action* 7 (1): 23693. <https://dx.doi.org/10.3402%2Fgha.v7.23693>.

Roodenburg, Emmeline. 2019. "The Paradox of Primary Care: How Saudi Arabia Can Leapfrog World-Class Primary Care Systems." KPMG in Saudi Arabia. Last modified December 12, 2019. <https://home.kpmg/sa/en/home/insights/2019/12/the-paradox-of-primary-care.html>.

Saluja, Saurabh, Niclas Rudolfson, Benjamin B. Massenburg, John G. Meara, and Mark G. Shrimpe. 2020. "The Impact of Physician Migration on Mortality in Low and Middle-Income Countries: An Economic Modelling Study." *BMJ Global Health* 5 (1): e001535. <https://dx.doi.org/10.1136%2Fbmjgh-2019-001535>.

REFERENCES

Smith, Kirk R., Alistair Woodward, Diarmid Campbell-Lendrum, Dave D. Chadee, Yasushi Honda, Qiyong Liu, Jane M. Olwoch et al. 2014. "Human Health: Impacts, Adaptation, and Co-benefits." In *Climate Change 2014: Impacts, Adaptation, and Vulnerability. Part A: Global and Sectoral Aspects. Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change*, edited by Field, C. B., V. R. Barros, D. J. Dokken, K. J. Mach, M. D. Mastrandrea, T. E. Bilir, M. Chatterjee, et al., 709–54. Cambridge, UK: Cambridge University Press.

Summers, Lawrence H. 2015. "Economists' Declaration on Universal Health Coverage." *The Lancet* 386 (10008): 2112–13. [https://doi.org/10.1016/s0140-6736\(15\)00242-1](https://doi.org/10.1016/s0140-6736(15)00242-1).

Tam, Vivian, Jennifer Edge, and Steven J. Hoffman. 2016. "Empirically Evaluating the WHO Global Code of Practice on the International Recruitment of Health Personnel's Impact on Four High-Income Countries Four Years after Adoption." *Globalization and Health* 12 (1): 62. <https://doi.org/10.1186/s12992-016-0198-0>.

Thomson, Sarah, Josep Figueras, Tamás Evetovits, Matthew Jowett, Philipa Mladovsky, Anna Maresso, Jonathan Cylus et al. 2014. "Economic Crisis, Health Systems and Health in Europe: Impact and Implications for Policy." WHO Regional Office for Europe. Accessed June 8, 2020. https://www.euro.who.int/__data/assets/pdf_file/0008/257579/Economic-crisis-health-systems-Europe-impact-implications-policy.pdf.

Walraven, Gijs. 2019. "The 2018 Astana Declaration on Primary Health Care, Is It Useful?" *Journal of Global Health* 9 (1): 010313. <https://dx.doi.org/10.7189%2Fjogh.09.010313>.

Wang, Jason C., Ng Y. Chun, and Robert H. Brook. 2020. "Response to COVID-19 in Taiwan: Big Data Analytics, New Technology, and Proactive Testing." *JAMA* 323 (14): 1341–42. <https://doi.org/10.1001/jama.2020.3151>.

WHO (World Health Organization). 2016. "Health Workforce Requirements for Universal Health Coverage and the Sustainable Development Goals." Last modified October 2016. <https://www.who.int/hrh/resources/health-observer17/en>.

WHO. 2018. "Be He@lthy, Be Mobile: Annual Report 2018." Accessed August 6, 2020. <https://apps.who.int/iris/bitstream/handle/10665/326497/9789241516259-eng.pdf?ua=1>.

REFERENCES

WHO. 2019. "Primary Health Care on the Road to Universal Health Coverage: 2019 Monitoring Report." Last modified September 22, 2019. https://www.who.int/health-info/universal_health_coverage/report/uhc_report_2019.pdf?ua=1.

WHO. 2020. "Draft Global Strategy on Digital Health 2020–2024." Last modified March 22, 2020. https://www.who.int/docs/default-source/documents/gd4dhdaa2a9f352b-0445bafbc79ca799dce4d.pdf?sfvrsn=f112ede5_38.

Yang, Junwei, and Timothy Reuter. 2020. "3 Ways China Is Using Drones to Fight Coronavirus." WEF (World Economic Forum). Last modified March 16, 2020. <https://www.weforum.org/agenda/2020/03/three-ways-china-is-using-drones-to-fight-coronavirus>.

Yates, Robert. 2014. "Recycling Fossil Fuel Subsidies as Health Subsidies." WHO. Accessed June 8, 2020. <https://www.who.int/bulletin/volumes/92/8/14-143495/en>.



AUTHORS

Hanan Alahmadi

Riyadh Economic Forum

Ahmed Alamri

Riyadh Economic Forum

Husein Reka

Asia Global Institute, Hong Kong University

Jonty Roland

Health For All Advisory

