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Amaya Perez-Brumer & Alfonso Silva-Santisteban

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ARTICLE COMMENTARY

The Peruvian COVID-19 vaccine scandal and re-thinking the path to public trust

Amaya Perez-Brumer [a] and Alfonso Silva-Santisteban[b]

[a]Division of Social and Behavioural Health, Dalla Lana School of Public Health, University of Toronto, Toronto Canada; [b]Center for Interdisciplinary Research in Sexuality, AIDS and Society, Universidad Peruana Cayetano Heredia, Lima, Peru

ABSTRACT

In February 2021, the Peruvian 'vaccinegate' scandal broke when the media reported that nearly 500 experimental doses of an ongoing COVID-19 trial were given to key individuals not enrolled in the trial. Indeed, vaccine doses were administered to leading politicians, such as the former President and his wife, and other high-level health officials and academic leaders at the universities overseeing ethical compliance and administration of the trial. The 'vaccinegate' scandal in Peru is but one example of how the lack of a coordinated global response to COVID-19 has allowed countries to act in the best interest of some, ultimately, failing to secure a democratic approach to the right to health for all during a global pandemic. While Peruvian vaccinegate is an example of the egregious use of power to further cronyism amid fear and mounting COVID-19 related death, unfortunately, it is not an anomaly. We argue that the sensationalisation of the event has distracted from the existing precarious health system in Peru and the ways in which long-existing abuses of power evident prior to the pandemic limit a just response to it.

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Peru; politics of COVID-19; vaccine equity; corruption; global health justice

Introduction

The mounting scale of COVID-19 related mortality globally set in motion a race to develop vaccines to mitigate the impacts of the pandemic. Western pharmaceutical companies such as Pfizer-BioNTech, AstraZeneca, Johnson & Johnson and Moderna have largely led the scientific efforts and wealthy countries have claimed and purchased most of the early vaccine supply, exacerbating inequitable vaccine access for low-income countries (Wouters et al., 2021). As such, many developing countries, such as Peru, have turned to non-Western pharmaceutical companies, seeking opportunities to participate in vaccine clinical trials and early contracts that would secure doses of vaccines for their populations.

The 'vaccinegate' scandal in Peru is but one example of how the lack of a coordinated global response to COVID-19 has allowed some countries to act in their best interest, thereby failing to enact equitable and rights-based scientific practices amid a global pandemic. Indeed, the COVID-19 pandemic has been a shock that has underscored that a meaningful integration of equity into global health absolutely necessitates a human rights-based approach (Forman, 2020; Khosla & Gruskin, 2021). Here, we draw attention to the way corruption and other abuses of power are often deemed beyond regulation and accountability and, thus, can reinforce a system based on academic and political exceptionalism in global health science.

CONTACT Amaya Perez-Brumer a.perezbrumer@utoronto.ca

Starting on September 9th, 2020, Lima, Peru, became a central site of a phase III clinical trial testing a two-dose COVID-19 vaccine developed by Sinovac Biotech, part of the Sinopharm/China National Pharmaceutical Group (Hoy se iniciaron los ensayos clínicos de vacuna anticovid de China, 2020). Prior to the start of the trial, in August 2020, the Peruvian government granted an emergency license to import an additional 3,200 doses of the experimental Sinopharm vaccine, above and beyond those already allotted for the trial. These were to be administered to clinical staff affiliated with the ongoing trial and to personnel of the Chinese embassy (Aquino, 2021). However by mid-February 2021, it was widely reported and confirmed that nearly 500 doses had been administered to select elites who received experimental doses of the COVID-19 vaccine despite having no clinical affiliation to the ongoing trial (Kenyon, 2021; Tapia, 2021).

The vaccinegate scandal broke as a journalist denounced former President Vizcarra for having been vaccinated in Peru in October, when vaccines where only accessible through participation the Sinopharm trial. Vizcarra subsequently lied, claiming that he was a participant, until Peruvian Principal Investigator of the Sinopharm trial Dr. Germán Málaga confirmed that ex-President Vizcarra was not part of the trial, and that Dr. Málaga had nonetheless personally vaccinated the former President with the experimental vaccine. This marked only the beginning of a larger scandal, in which it was revealed that many leading politicians were implicated, such as the former President and his wife, and high-level health officials, including former Ministers of Health, as well as numerous scientists, including academic leaders at the universities overseeing ethical compliance and administration of the trial (Osborne, 2021).

Vaccinegate garnered much domestic and international media attention with headlines such as 'VIP immunisation for the powerful' (Taj et al., 2021) and 'queue-jumping and clandestine jabs' (Taylor, 2021a). The scandal significantly damaged public trust in COVID-19 vaccines and in the public institutions charged with overseeing the research and subsequent vaccine roll-out in Peru. While the coverage and public outrage rightfully focused on elite corruption, this commentary argues that analysis to date fails to contextualise the scandal within deep-rooted inequalities underpinning the Peruvian and broader global response to COVID-19.

#487traidores and beyond

Public outrage was evident in the widely circulating hashtag #487traidores (#487 traitors) that followed the disclosure of the list of people who received early access to the vaccine. While emerging analyses of the scandal in media and global health scholarship focused on the issue of individual malice, we argue that this focus on the misconduct of some individuals (while necessary) has distracted from the abuses of power embedded within existing systems and critical attention to systemic injustices within science is equally as vital at this juncture. For example, further attention is warranted regarding the Peruvian regulatory agencies' failures to limit scientists' discretionary power and block policies that are not in the best interest of the public. The Peruvian vaccine scandal is one of several COVID-19 scandals that shed light on the unchecked discretionary powers of physician-scientists who act as gatekeepers (Argentina's President Decries 'Unforgivable' Vaccine Scandal, 2021; Taj et al., 2021). In this case, powerful gatekeepers not only determined how vital science would be conducted but simultaneously decided who would receive doses of an experimental vaccine outside the bounds of an ongoing scientific trial.

What is particularly troublesome are the failures by numerous Peruvian regulatory agencies such as Ethics Review Boards whose members have been trained to identify and avoid precisely this type of ethical research malpractice. Citing emergency status given the mounting toll and associated fear of COVID-19, the group of researchers leading the Sinopharm trial, and thus those who had control over the distribution of imported experimental doses, had the approval of both state regulatory institutions and ethics review boards to import additional experimental doses. Notably, structural regulatory mandates limited imported doses to be administered to people affiliated with the ongoing clinical trial testing COVID-19 vaccine effectiveness. In practice, the vagueness of these

directives gave wide space for the ad hoc judgment and unchecked decision-making as to who was affiliated, even tangentially, with the trial (Taylor, 2021b).

As has come to be a global pattern, prioritised access to COVID-19 vaccines and top treatments has been secured by a small group of influential people that control a disproportionate amount of wealth, privilege, and power. Unsurprisingly, implicated investigators are part of Peru's socioeconomic and scientific elite (Osborne, 2021). In about a week's time, a speed that is unheard of in clinical trial requests both in the global North and global South, the emergency license to import additional doses of the experimental vaccine was approved (Caso VacunaGate, 2021). The granting of this special license to a product under development that was not authorised for use outside of a clinical trial involved not only the modification of the existing trial protocol but coordination between the leading affiliated academic research institution, the Universidad Peruana Cayetano Heredia, and the Peruvian Ministry of Health. Great enthusiasm for the Sinopharm vaccine in combination with the well-established social network among Peru's health elites allowed for the rapid approval of this unprecedented measure.

'This isn't about privilege. This is how these things work'

Further, the hidden use of experimental vaccine doses outside of the experimental context exemplifies the entanglement between discretionary power and policies that support abuses of power. As became clear while the scandal unfolded, Sinopharm vaccines were offered to influential contacts from key government authorities, core individuals affiliated with numerous academic research institutions and, in some cases, those seated on ethical review boards, well-known media personalities, and, of course, key stakeholder affiliated family and friends (Sanchez-Perez et al., 2021; Taylor, 2021a, 2021b). For many, there was also a much deeper conflict of interest. For example, key people implicated included the President and Minister of Health and eight out of the eighteen members of the government committee that approved vaccine acquisitions. Amid the rising death toll, the egregious use of power to further cronyism and corruption shown in the Peruvian vaccinegate scandal generated public outrage.

While it is critical to recognise privilege and the associated nimbleness to leverage discretion as power, this is not only an issue of individual malice but also a way of thinking about the world, in this case, about the differential value of lives. Indeed, individual corruption and elitism are only part of the story and detract attention from the dire social realities of a weakened Peruvian healthcare system during a raging epidemic. As noted by the Peruvian Principal Investigator of the Sinopharm trial Dr. Málaga on February 16th in front of the Peruvian Congress, 'this isn't about privilege. This is how these things work' ('Vacunagate': Las Frases Desafortunadas de Funcionarios y Profesionales Que Recibieron Las Dosis Activas de Sinopharm, 2021).

But unlike Dr. Málaga's statement, the COVID-19 pandemic has powerfully demonstrated that privilege is a fundamental determinant of an effective response nationally and internationally. In the same way that the mantra 'we are all in this together' flattens the violence of structural inequities (Kumar & Gaztambide-Fernández, 2020) so do calls to ensure equitable COVID-19 vaccine access without reckoning with normalised corruption and abuses of power, especially in contexts where public health systems are under-resourced. Further it is not surprising that countries such as Taiwan, Japan, New Zealand, Germany, and others that have led more equitable COVID-19 responses (Sekalala et al., 2020) also have robust public health systems. How can countries meaningfully respond to a brutal pandemic when at all levels of government, health departments and public health agencies lack the necessary funding and infrastructure to address the nation's most pressing health concerns?

An equitable response in the context of precarious health systems?

In Peru, the hope that vaccines would be the silver bullet solution rapidly grew and fizzled out due to vaccinegate and, consequently, distracted from the startling realities of inadequacies in health

systems not only in Peru but also across global regions. However, it did something even more menacing – presented as an anomaly, vaccinegate distracted from the startling reality of how corruption is leveraged and normalised to access scarce resources including and beyond COVID-19 (Cruzado, 2021; Pereyra Colchado, 2021). Further, while corruption undermines precarious health systems, unstable and under-resourced health systems provide ample opportunity for commodification of health care (Vian, 2008). Peru, even prior to the start of COVID-19, lacked necessary healthcare infrastructure. For example, Peru has the lowest rate of intensive care unit (ICU) beds per thousand citizens in the region and documented scarcity of human resources within the health sciences (Ríos, 2021).

Further, Peru's oxygen policy is an illustrative example of how existing precarious and corrupt health systems can give way to profit-driven policies that can limit a justice-driven response to the pandemic. As COVID-19 took hold of Peru, the world watched the horror of reported oxygen shortages. Yet, the shortage of supply was a structural manifestation of policies enacted in 2008, signed by the then minister of health and minister of health between February and July 2021. While the World Health Organization (WHO) recommends that supplemental oxygen for clinical use contain at least 93% pure oxygen (WHO, 2020; WHO & UNICEF, 2019), Peru required medicinal oxygen to have at least a 98% concentration (Zapata, 2020). This new threshold resulted in only two companies being able to meet these targets and thus monopolise the Peruvian market which contributed vastly to the shortage of oxygen faced by the health system during the first wave of the pandemic.

At the height of the epidemic, oxygen shortages were one of the most dramatic markers of navigating life amid heightening COVID-19 infections. Given the shortage due to increased demand, some public hospitals required that patients arrive with their own supply of medical oxygen (Defensoría del Pueblo, 2020). This resulted in lines of hundreds of Peruvian citizens waiting with empty oxygen cylinders to refill with medicinal oxygen to take back to the hospital for their loved ones. Illegal markets quickly emerged with the cost of medical oxygen soring to more than ten times that of registered locations (Yacila, 2021). While the law was reversed in January of 2021, oxygen shortages have remained one of the main bottlenecks for the care of people with COVID-19 (Yacila, 2021).

The disproportionate focus on the vaccinegate scandal distracted from examples of health system precarity such as those described above, which evidence the impossibility of the Peruvian health system and governments (like many other countries in the region) to effectively respond to the need for a just response to COVID-19. The ability to fully enact systems that secure the right to health of its citizens is at odds with the interests of powerful stakeholders who hold financial and/or political interests in health-related industries but who, concurrently, are supposedly working in the best interests of the wider public. Indeed, health is a fundamental human right in Peru and access to vaccines is an integral part of this right in Peru and globally. Yet, as this case has shown, there is considerable cause to be concerned about how science is conducted amid a pandemic. Calling for equity is simply not enough. The task before us is to develop clearer guidelines for granting emergency and/or conditional use of candidate vaccines, and for safeguarding rights-based access in the aftermath of the clinical trial.

Where do we go from here?

The seductive appeal of the vaccinegate scandal is that it offered a targeted event for outrage, solidarity, and demands for action to remediate the injustice perpetrated. In the case of Peru, this became an essential point of reference for both needed action and evaluation of existing corruption embedded within the COVID-19 response. Following public outrage and scrutiny from the international community, key stakeholders were fired, implicated universities revisited their policies, and the Sinopharm trial and associated use of vaccines was stopped. Accordingly, further harm was enacted in efforts to remediate the fall out of the scandal. For example, even if study participants

who had received placebo desired, they could not receive the Sinopharm vaccine, though they had been promised such a measure as part of the original protocol (Berríos, 2021).

Further, as a dramatic spin out of the scandal, public health actors, namely those implicated, and the media questioned the efficacy of the Sinopharm vaccine. The Data and Safety Monitoring Board (DSMB), composed of independent experts tasked with monitoring patient safety and treatment efficacy data, conducted an evaluation that was subsequently partially leaked. When discussed on national television, to minimise the scandal the Sinopharm vaccine was at times presented as 'useless' and 'ineffective' (Willax Television, 2021). Circulating fears about vaccine's efficacy temporarily halted the purchase of vital doses that could have potentially protected many citizens. While Peru had committed to the purchase of 40 million doses of the Sinopharm vaccine, following vaccinegate the negotiations were delayed (COVID-19, 2021). As of May 2021, the Sinopharm vaccine was the only non-Western vaccine to receive WHO emergency use and global clearance (WHO, 2021).

Given the disproportionate negative impact of the COVID-19 pandemic on global South communities, it is critical to recognise that the Peruvian vaccinegate scandal is not an isolated incident. While actors need to be held accountable, abuses of power are bigger than this incident both within and beyond Peru. Due to years of shifting political crises on top of already unstable health systems, COVID-19 has illustrated that far too many countries have health systems that are unable to withstand a prolonged health crisis. Further, the hope and rallying cries surrounding vaccine science have been dashed by more recent revelations of the lack of a rights-based approach inherent in global roll-out of vaccines. The phenomenon of vaccine nationalism, which indicates the privilege of wealthy countries to pre-buy and hoard limited vaccines supply to the detriment of poorer countries, have been rampant (Callaway, 2020; Khan, 2021).

While Dr. Tedros Adhanom Ghebreyesus, the WHO director-general has described this as a 'catastrophic moral failure', when do we start to ask the tough questions about accountability that transcend national borders? How do we make our response to a global pandemic less cruel? It is time to reimagine a more realistic perspective that considers and confronts the scale of global corruption rooted in privilege and existing health system precariousness when assessing preparedness and response.

As a first step to enact a rights-based approach and combat the cruelty of vaccine nationalism, we must temporarily waive certain intellectual property rules under the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS Agreement). As others have argued, a TRIPS waiver is a first step in more equitable vaccine production and distribution (Gupta & Namboodiri, 2021). Regulatory mechanisms must also extend and reconsider a rights-based approach to vaccine trials amidst a pandemic. While offering COVID-19 experimental vaccines to all participants who received placebo has been widely recognised to be an 'ethical obligation' (Rid et al., 2021), in the context of vaccine scarcity and vaccine-related corruption it remains unclear how oversight of this obligation will be managed.

As of June 2021, Peru was leading the world in COVID-19 related mortality (Dyer, 2021). The response has been 'How did Peru get here?' (Covid, 2021). This rhetorical question needs to be reframed. Instead, in the context of mounting COVID-19 related suffering, it is critical to instead ask how public health can be democratised to serve the public. How can the guarantee of the right to health become praxis to construct collective wellbeing? It is critical to recognise vaccine nationalism as a violation to the right to health of millions of people and a form of corruption that privileges some lives over others.

The Peruvian government stated publicly in June 2021 that it has secured vaccines for all Peruvian citizens.(Llega al Perú un nuevo lote de 496,080 dosis de la vacuna Pfizer, 2021). Yet, rebuilding trustworthiness in vaccines and in the Peruvian public health system more broadly has been slow and demands reflexivity on what equity in public health really implies in a time of crisis. We, the global community, and Peruvians alike, need to reexamine the distribution of power in our current systems that follow top-to-bottom dynamics that are locally reproduced across most of the world. A broader look at the failings of health systems with explicit recognition of the exploitation of power as fundamental to the praxis of a rights-based approach to health that demands the continuous democratisation of our scientific practices and associated implementation of life-saving technologies.

As this Peruvian COVID-19 vaccine-related scandal and others have demonstrated, a human rights-based approach to science is urgently needed. Vaccine development and implementation has been historically a multilateral scientific endeavour and primary health intervention to guarantee the right to health of millions of people. Indeed, vaccine development during COVID-19 has been a tremendous scientific feat. However, while acknowledging these scientific advances, we cannot minimise the vast human and economic resources that were mobilised and critically leveraged by local communities should not be ignored. A human rights-based re-thinking is urgently needed to provide an important critique of how care is organised beyond the scandalous dolling out of extra vaccines.

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ORCID

Amaya Perez-Brumer http://orcid.org/0000-0003-2441-4358

References

Aquino, M. (2021, February 15). Courtesy Doses: Peru probes early use of Sinopharm vaccine by top government officials. Reuters. https://www.reuters.com/article/us-health-coronavirus-peru-idUSKBN2AF1G0.

Argentina's president decries 'unforgivable' vaccine scandal. (2021, February 21). *Al Jazeera*. https://www.aljazeera.com/news/2021/2/21/argentina-president-decries-unforgivable-vaccine-scandal.

Berríos, M. (2021, May 5). Tras larga espera, a fin de mes llegarían 16.500 dosis para voluntarios. *La República*. https://larepublica.pe/sociedad/2021/05/05/coronavirus-en-peru-tras-larga-espera-a-fin-de-mes-llegarian-16500-dosis-sinopharm-para-voluntarios/.

Callaway, E. (2020). The unequal scramble for coronavirus vaccines – By the numbers. *Nature*, *584*(7822), 506–507. https://doi.org/10.1038/d41586-020-02450-x

Caso VacunaGate: La historia de la importación de las dosis de Sinopharm. (2021, 04). *Canal N*. https://canaln.pe/actualidad/caso-vacunagate-historia-importacion-n433378.

Cruzado, J. C. (2021, March 15). Un año de pandemia: Las vacunas en el Perú, renace la esperanza. *Andina*. https://andina.pe/agencia/noticia-un-ano-pandemia-las-vacunas-el-peru-renace-esperanza-837443.aspx.

Defensoría del Pueblo. (2020). *Crisis de oxígeno para pacientes de COVID-19; Alternativas de solución* (Oficina de Comunicaciones e Imagen Institucional 311-0300 anexo 1400–1401 – 1402–1403 – 1404–1406 www.defensoria.gob.pe / prensa@defensoria.gob.pe Nota de Prensa N° 416/OCII/DP/2020; p. 2). https://www.defensoria.gob.pe/wp-content/uploads/2020/06/NP-416-2020.pdf.

Dyer, O. (2021). Covid-19: Peru's official death toll triples to become world's highest. *BMJ*, *373*, n1442. https://doi.org/10.1136/bmj.n1442

Forman, L. (2020). The evolution of the right to health In the shadow of COVID-19. *Health and Human Rights Journal*, *22*(1), 375. https://www.hhrjournal.org/2020/04/the-evolution-of-the-right-to-health-in-the-shadow-of-covid-19/.

Gupta, V., & Namboodiri, S. (2021). America and the TRIPS waiver: You can talk the talk, but will you walk the walk? *Health Affairs*, https://www.healthaffairs.org/do/10.1377/hblog20210712.248782/full/.

Hoy se iniciaron los ensayos clínicos de vacuna anticovid de China. (2020, September 9). *Andina:Agencia de la noticias*. https://andina.pe/agencia/noticia-coronavirus-hoy-se-iniciaron-los-ensayos-clinicos-vacuna-anticovid-china-813110.aspx.

Kenyon, G. (2021). Vacuna-gate escalates In Peru. *The Lancet Infectious Diseases*, *21*(4), 463. https://doi.org/10.1016/S1473-3099(21)00157-2

Khan, A. (2021). What is 'vaccine nationalism' and why is it so harmful? *Al Jazeera*. https://www.aljazeera.com/features/2021/2/7/what-is-vaccine-nationalism-and-why-is-it-so-harmful.
Khosla, R., & Gruskin, S. (2021). Equity without human rights: A false COVID-19 narrative? *BMJ Global Health*, *6*(7), e006720. https://doi.org/10.1136/bmjgh-2021-006720
Kumar, S., & Gaztambide-Fernández, R. (2020). Are we all In this together? COVID-19, imperialism, and the politics of belonging. *Curriculum Inquiry*, *50*(3), 195–204. https://doi.org/10.1080/03626784.2020.1819525
Llega al Perú un nuevo lote de 496,080 dosis de la vacuna Pfizer. (2021, October 6). *Andina:Agencia de la noticias*. https://andina.pe/agencia/noticia-llega-al-peru-un-nuevo-lote-496080-dosis-de-vacuna-pfizer-848795.aspx.
Osborne, S. (2021, February 17). Outrage in Peru after 500 top officials secure early Covid vaccines. *The Independent*. https://www.independent.co.uk/news/world/americas/peru-vaccinegate-scandal-coronavirus-vaccine-b1803385.html.
Pereyra Colchado, G. (2021, March 2). *Esperanza en la segunda ola: Testimonios del personal que hoy recibió la segunda dosis de Sinopharm*. El Comercio Perú; Noticias El Comercio Peru. https://elcomercio.pe/lima/sucesos/vacunas-contra-el-covid-19-esperanza-en-la-segunda-ola-testimonios-del-personal-que-hoy-recibio-la-segunda-dosis-de-sinopharm-noticia/.
Rid, A., Lipsitch, M., & Miller, F. G. (2021). The ethics of continuing placebo in SARS-CoV-2 vaccine trials. *JAMA*, *325*(3), 219–220. https://doi.org/10.1001/jama.2020.25053
Ríos, A. M. (2021). Latin America: Penetration rate of ICU beds in 2019. *Statista*. https://www.statista.com/statistics/1119085/latin-america-penetration-rate-icu-beds-hospitals/.
Sanchez-Perez, J., Rodriguez-Olivari, D., & Woodward, L. (2021, March 18). Peru's COVID-19 vaccine scandal shows the shady deals made with pharma companies. *Brighter World*. https://brighterworld.mcmaster.ca/articles/perus-covid-19-vaccine-scandal-shows-the-shady-deals-made-with-pharma-companies/.
Sekalala, S., Forman, L., Habibi, R., & Meier, B. M. (2020). Health and human rights are inextricably linked in the COVID-19 response. *BMJ Global Health*, *5*(9), e003359. https://doi.org/10.1136/bmjgh-2020-003359
Taj, M., Kurmanaev, A., Andreoni, M., & Politi, D. (2021, February 25). 'V.I.P. immunization' for the powerful and their cronies rattles South America. *The New York Times*. https://www.nytimes.com/2021/02/25/world/americas/covid-south-america-vaccine-corruption.html.
Tapia, M. B. (2021). Publi policies, pandemic and corruption: The "Vacunagate" case in Peru. *Revista Direitos Sociais e Políticas Públicas (UNIFAFIBE)*, *9*(1), 984. https://doi.org/10.25245/rdspp.v9i1.1019
Taylor, L. (2021a, March 4). Queue-jumping and clandestine jabs: Peru's 'vaccinegate' sparks outrage – and a national inquiry. *The Telegraph*. https://www.telegraph.co.uk/global-health/science-and-disease/queue-jumping-clandestine-jabs-perus-vaccinegate-sparks-outrage/.
Taylor, L. (2021b). Scandal over COVID vaccine trial at Peruvian universities prompts outrage. *Nature*, *592*(7853), 174–175. https://doi.org/10.1038/d41586-021-00576-0
"Vacunagate": Las frases desafortunadas de funcionarios y profesionales que recibieron las dosis activas de Sinopharm. (2021, 17). *RPP Noticias*. https://rpp.pe/peru/actualidad/vacunagate-las-frases-desafortunadas-de-funcionarios-y-medicos-que-recibieron-la-vacuna-fuera-de-los-ensayos-clinicos-noticia-1321488.
Vian, T. (2008). Review of corruption in the health sector: Theory, methods and interventions. *Health Policy and Planning*, *23*(2), 83–94. https://doi.org/10.1093/heapol/czm048
Willax Television. (2021, March 5). *Beto a Saber—¿Qué va a pasar con las vacunas que compramos?* https://www.youtube.com/watch?v=deM-ujxbuj0.
World Health Organization. (2020). *Oxygen sources and distribution for COVID-19 treatment centres*. https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&cad=rja&uact=8&ved=2ahUKEwjd-K2P6YjxAhVMTd8KHc9tBNsQFjAJegQIAxAD&url=https%3A%2F%2Fapps.who.int%2Firis%2Frest%2Fbitstreams%2F1274720%2Fretrieve&usg=AOvVaw1MJeaFjpzALYNqmfXhoa5l.
World Health Organization. (2021). *WHO lists additional COVID-19 vaccine for emergency use and issues interim policy recommendations*. https://www.who.int/news/item/07-05-2021-who-lists-additional-covid-19-vaccine-for-emergency-use-and-issues-interim-policy-recommendations.
World Health Organization, & UNICEF. (2019). *Technical specifications and guidnace for oxygen therapy devices*. World Health Organisation and United Nations Children's Fund. https://apps.who.int/iris/bitstream/handle/10665/329874/9789241516914-eng.pdf?ua=1.
Wouters, O. J., Shadlen, K. C., Salcher-Konrad, M., Pollard, A. J., Larson, H. J., Teerawattananon, Y., & Jit, M. (2021). Challenges in ensuring global access to COVID-19 vaccines: Production, affordability, allocation, and deployment. *The Lancet*, *397*(10278), 1023–1034. https://doi.org/10.1016/S0140-6736(21)00306-8
Yacila, R. C. (2021, March 1). *Angustia, deudas y estafas: La asfixiante búsqueda de oxígeno*. Ojo Público. https://ojo-publico.com/2522/deudas-y-estafas-la-angustiante-busqueda-de-oxigeno-en-peru.
Zapata, R. (2020, June 2). Dos compañías globales dominan negocio del oxígeno con el sector salud de Perú. *Ojo Público*. https://ojo-publico.com/1842/dos-companias-globales-dominan-negocio-del-oxigeno-en-peru.