
IJHG 27.4 Review

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Fiona Ellen MacVane Phipps
Independent Researcher, Bradford, UK

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Introduction

Submissions reviewed in this issue of *IJHG* are directly related to healthcare governance topics essential to an understanding of current global health issues. The coronavirus disease 2019 (COVID-19) pandemic remains a high priority in the medical literature; this is reflected in the four articles reporting on governance aspects of the pandemic, including movement restriction and vaccination campaigns.

Three articles deal specifically with topics around the COVID-19 pandemic. [Gaduen et al. \(2022\)](#) examine the effect of mobility restriction on the spread of the COVID-19 virus in the Philippines. Surprisingly their conclusion argues that mobility restriction does not prevent viral transmission; this position is challenged by other authors, but read the article carefully before making your own mind up. [Kilci \(2022\)](#) examines the convergence between testing and positive COVID-19 levels in Germany and Italy. These two countries had different testing strategies; this was reflected in the number of COVID-19 deaths in each country. However, as all good researchers know, an association between two variables does not necessarily indicate causation. Read the article before making your mind up. [Shodunke et al. \(2022\)](#) write about the urgent imperative of strengthening health systems particularly in low and middle income countries (LMIC) to prepare for health crises such as the recent COVID-19 pandemic. They also ask the intriguing question of why poorly resourced countries such as Nigeria had much lower COVID-19 death rates than countries in the more affluent Global North. Could it be lifestyle, weather or air pollution? Reading this interesting article will give you some hypotheses to consider. While [De Micco et al. \(2022\)](#) do not write explicitly about the COVID-19 pandemic, their article is highly applicable as they present a review of the literature on the costs of introducing a new vaccine in Sub-Saharan Africa.

[Bunyaminu et al. \(2022\)](#) ask whether per capita health expenditure is the only factor responsible for differences in life expectancy or whether this is mitigated by the effect of good governance. [Lytvyn et al. \(2022\)](#) write about innovations in healthcare regulations in the Ukraine, but oddly, for an article submitted in 2022, say nothing about the impact of war on the provision of healthcare in that nation. As a review editor I have commented on this discrepancy.

The final two articles are both outliers to some extent. [Bousfot et al. \(2022\)](#) examine the role of HSCs in Algerian industry and outline the reasons why they are often ineffective. Do these same problems apply to occupational health and safety in your country or in the industries within which you work? Read the article and let us know with an email to the review editor. Finally, [Heiss et al. \(2022\)](#) write about food labeling standards in the EU and the food to farm (F2F) strategy at the heart of the Green Agenda. As eating nutritious healthy food is where preventative healthcare begins an argument can be made for including this article in a journal on health governance. In any case, it is an interesting article. What are your thoughts on food labeling and its contribution to population health?

Reviews of each article published in this issue of *IJHG* are structured with an introduction stating: "this review is based on" followed by the author(s) and title of the individual article being reviewed. This introductory sentence is the same for each article and is followed by the editor's review. The sequence in which articles are presented does not necessarily follow the order of the articles as published in the journal.

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This review is based on Bunyaminu A, Mohammed I, Yakubu IN, Sani B, Abukari AL (2022) – The effect of health expenditure on average life expectancy: Does government effectiveness play a moderating role?

Population health is a global challenge; unexpected events such as the recent COVID-19 pandemic have demonstrated that no nation or region can be complacent. However, challenges to population health may be experienced more acutely in developing nations with multiple urgent demands on public finance. Bunyaminu *et al.* (2022) conducted a study examining health data from 43 African nations covering a period of 18 years from 2000 to 2018. The literature review supporting this work indicated that greater health expenditure increases life expectancy; however, this finding was challenged when the level of general economic development was factored into the equation. The authors of the current study sought to fill a gap in the literature by examining the relationship between health expenditure and life expectancy in Africa when the mitigating effects of governance are also considered.

Life expectancy at birth (LE) was the dependent variable used in this study, while total health expenditure was the main independent variable. Others included government effectiveness (GE), infant mortality rate (InfM) and economic growth (GDP). Results demonstrated a positive relationship between health spending and life expectancy. Government effectiveness also increases life expectancy as do school enrollment and economic growth, which are perhaps indicators of good governance in their own right. The authors suggest that in countries with high levels of government effectiveness, higher life expectancy may be achieved with lower health expenditure. They explain this in terms of a reduction in bureaucracy, which may absorb high spending without improving outcomes.

Zarulli *et al.* (2021) previously reported on the relationship between life expectancy and healthcare efficiency in a study comparing the health systems of 140 countries. Their findings broadly predicted those of the current study, particularly in the relationship between educational levels and population life expectancy, and the fact that healthcare governance is an independent variable that can mitigate lower health spending to some degree.

This is a relevant paper; the study methodology is clearly articulated and the findings have significant implications for health planning and government spending in African nations. As this research takes an innovative approach, further studies in this area would be beneficial, particularly as health-related factors have altered significantly in the last 22 years. Climate change, conflict and pandemic have altered health predictions in Africa and throughout the world.

This review is based on Lytvyn NA, Berlach AI, Kovalko NM, Melnyk AA, Berlach HV (2022) – Legal regulation of the state financial guarantees of medical services for the domestic and international experience.

This paper explores innovations in healthcare regulation in Ukraine during the past decade as the nation seeks to improve the health of its citizens by a move toward greater public regulation.

Ukrainian law guarantees government funding of necessary medical care; in practice, this has not happened due to financial constraints. The COVID-19 pandemic highlighted inadequacies in healthcare provision and regulation. Recently the government of Ukraine has altered the payment method for publicly funded healthcare from a capacity model to a completed treatment model. In effect this means that public healthcare spending follows the patient rather than the institution. Modernization of the Ukrainian health service has also been aided by the implementation of an e-health system where health information can be stored or shared, and from which data can be extracted for audit and research purposes.

While the authors examine different aspects of health governance and compare these with models from North America and Europe, it is surprising in an article submitted in

2022 that there is no mention of the current Russian invasion or the impact of the war on health governance in Ukraine. Suggestions made for improvements will require updating as the long-term effects of war become clear. However, the impact is already obvious with attacks on hospitals and health centers, which have destroyed infrastructure, forcing healthcare facilities to move to inappropriate locations such as shelters or other intact buildings. Such temporary locations do not have the resources to provide a full spectrum of care (Rogers, 2022). While Levy and Leaning (2022) also cite deliberate targeting of healthcare facilities by the Russian military, they point out other impacts on health caused by the war, such as decreased access to safe food and water, increased incidence of communicable disease due to cramped living spaces and inadequate access to sanitation. Instances of communicable disease such as measles, cholera, and tuberculosis increase during war; it is predictable that this would also pertain to the more recent threat of COVID-19.

It is interesting to gain insight into how a nation's healthcare system is developing; reference to Ukraine's current situation and the significant implications this is having, and will have, on the nation's ability to provide effective healthcare for its citizens would be a welcome addition.

This review is based on De Micco P, Maraghini MP, Spadafina T (2022) – The costs of introducing a vaccine in Sub-Saharan Africa: a systematic review of the literature.

Vaccination is acknowledged as one of the most effective public health initiatives in preventing or reducing the effects of infectious diseases; immunization has a positive impact on life expectancy and quality. It is inexpensive, cost-effective and safe (Galazka, 1994). However, assessing the economic impact of a vaccination program is more difficult, particularly in low and middle-income countries (LMICs). Kaizer (2022) presents recent news from the United Nations Development Program (UNDP) linking vaccine inequity with growing economic instability. While Kaizer's article focuses on the broader costs attributable to lack of vaccination across a population, DeMicco *et al.*'s (2022) work shines a narrow light on the economic implications of developing, distributing and administering a new vaccine.

The authors of this current systematic review have been studying the literature surrounding the economic impact of introducing vaccination programs since 2017 through their work with the S-AFRIVAC project coordinated by the Achille Sclavo Foundation. Using standard search protocols, the authors screened publications concerning human vaccination in LMICs between 2001 and 2021. Data were extracted from a final list of 34 articles, and stored in an Excel file prior to analysis.

Findings indicate that calculating costs is extremely complex and may vary from country to country. However, one finding that is easily applicable and could reduce administration costs in all LMICs is that efficiency increases and costs are reduced when new vaccines are distributed and administered as part of an existing Expanded Program on Immunization (EPI) schedule. Established by the World Health Organization (WHO) in 1974, the aim of the EPI was to expand the coverage of existing vaccination programs around the world (Galazka, 1994).

While development and administrative costs of supplying new vaccines is fairly well understood, the cost to individuals, families and communities of accessing immunization has been less well researched. This requires further investigation but ultimately, the entire cost of a new vaccine can only be understood in the context of the cost to society if populations remain unvaccinated. This is especially relevant when considering the recent COVID-19 pandemic and the challenges of swift vaccine development and distribution.

This review is based on Gaduena A, Caboverde CE, Flaminiano JP Romero YR (2022) – Decomposing the role of mobility restrictions in controlling COVID-19 outcomes: a regional level study of the Philippines.

This literature review indicated a clear economic impact resulting from social distancing, mobility restrictions and quarantine rules. The authors sought to determine whether these were effective methods of containing the pandemic in the Philippines, especially when compared to the economic costs.

The government of the Philippines instituted rigid containment measures in order to stop the spread of COVID-19; restrictions varied in different areas of the country according to assessed risk. Frequent changes in guidelines, relayed to the public in bi-weekly (fortnightly) public announcements caused confusion for both employers and for the public. In addition to containment measures, the government conducted a national vaccination campaign. While this was effective in the National Capital Region (NCR), vaccine hesitancy in other regions due to uncertainty about safety and erroneous beliefs sourced from social media platforms meant that overall immunization was lower in the Philippines than in other countries in the region (Amit *et al.*, 2022).

Gaduena *et al.* (2022) found that mobility restrictions have no or limited effect on virus transmission. Replicating their methodology in other settings would assist in answering the question as to whether this finding could be applied outside the research area. Zhou *et al.* (2020) conducted a modeling exercise using mobile phone data in Shenzhen, China; findings indicated that a mobility reduction of 20–60% was notably effective in reducing the spread of COVID-19. As the findings of these two studies contradict each other, re-visiting this question using mixed research methodologies in a sample of countries with varying demographics could serve to clarify whether mobility restrictions should, or should not, be used as a front-line method of reducing transmission during pandemics.

As Gaduena *et al.* (2022) also reported that people were more concerned about the economic impact of the pandemic than they were about the virus itself, some of this discrepancy could be attributable to people ignoring or circumventing mobility restrictions. Food and economic security are more immediate concerns than exposure to an illness that one may or may not catch. Recommendations included building trust with the public and implementing pandemic control measures with a strong social support component.

This review is based on Kilci EN (2022) – Convergence of testing and positivity rates for the COVID-19 pandemic: evidence from Germany and Italy.

COVID-19 continues to occupy a key position in the international medical literature as health professionals review the strategies that were implemented and reflect on what could be improved when the next pandemic hits the world.

One strategy used to combat the virus was testing; this was employed very differently in different countries. Some countries, such as Germany, made free testing available to everyone and advocated frequent tests whether or not a person was symptomatic. Other countries provided free, widely available testing at the height of the pandemic, but withdrew this facility as the pandemic wound down. This was the position in the UK where the withdrawal of free testing could be attributed to the government's return to a herd-immunity policy (Handley, 2022).

Germany's low COVID-19 death rates have been partially attributed to the high testing rates, which enabled people who had the virus but were asymptomatic to be identified and to self-isolate, thereby preventing further spread of the virus. Other factors such as Germany's excellent medical care including a high number of intensive care facilities and public trust in government directives were also contributors to death rates lower than those in other European countries during the first phase of the pandemic (Narlikar, 2020).

In many countries, however, it was and remains difficult to determine the true rates of COVID-19 infection because of a lack of testing. This may be because tests were unavailable, were not free or widely distributed, or because people, particularly those without symptoms did not see the necessity of testing. People with no or mild symptoms may also have avoided testing because of the economic implications of a positive test (Gaduanya *et al.*, 2022).

Kilci (2022) contrasts Germany's experience with that of Italy, which had one of the highest COVID-19 mortality rates in Europe; this may be partially due to the fact that Italy did not have sufficient COVID-19 test kits to implement large-scale population testing. However, the author acknowledges other factors such as air pollution, which may have contributed to the rapid spread of the virus in Italy.

In conclusion, Kilci focuses on the detrimental effects of the COVID-19 pandemic on children's education and makes recommendations for a low-cost acceptable screening method that was implemented by schools in Southeast Germany.

This review is based on Shodunke AO, Oladipupo SA, Tayo-Ladega OT, Alowolodu AJ, Adebayo YO (2022) – COVID-19 pandemic, global advisories and the imperatives of strengthening the public healthcare system: Nigeria in context.

Shodunke *et al.* (2022) ask a question that has intrigued medical personnel and epidemiologists around the world: Why have death rates from COVID-19 been higher in the global North where countries are richer and have well-resourced and managed healthcare systems? They examine this question in relation to the structure and function of the Nigerian healthcare system and ask what improvements will be required to prepare Nigeria's health service for the next global pandemic.

At the start of the pandemic the World Health Organization (WHO), as well as local health services, had serious concerns about the trajectory of the virus in areas of the world where cramped multi-generational living was the norm, where public sanitation and clean water supplies were unavailable or erratic, and where healthcare facilities were over-stretched and under-resourced.

Mukherjee, writing in the New Yorker (2021) points out that the normal pattern of viral illness is that the most devastating effects are found in low income countries while high income countries experience lower levels of mortality and morbidity. Mukherjee reports that in the case of COVID-19 deaths in poor countries are low, giving the example of Nigeria where the COVID-19 death rate was 1/100th that of the USA.

Shodunke *et al.* (2022) suggest that climate, weather conditions and air pollution levels may have an impact on COVID-19 transmission rates. However, the fact that out of all Sub-Saharan African countries, South Africa had COVID-19 death rates approaching that of countries in the global North somewhat negates this hypothesis (Mukherjee, 2021).

While acknowledging Nigeria's good fortune in experiencing lower fatality rates from this pandemic, the authors suggest that the pandemic has served to highlight the inadequacies in the Nigerian health service. Under resourced, overpriced and difficult to access healthcare does not possess the medical and human resources to cope with common health conditions such as hypertension, diabetes and tuberculosis; the addition of the extra resources such as ICU beds and ventilators, required to care for patients with acute respiratory symptoms, could cause the health service to collapse. The Nigerian government's recent policy of cutting healthcare budgets can only weaken the country's health infrastructure.

Overall findings from this documentary style study indicate that, despite the low fatality rate during this pandemic, which was approximately half of regional averages, the government of Nigeria must make a clear commitment to public health, allocating appropriate percentages of resources and working with overseas partners and

international agencies to build capacity into the Nigerian health service. Only by allocating time, effort and resources, can Nigeria prepare for the next pandemic in which the country's citizens might not be so fortunate to experience lower than international and regional death rates.

This review is based on Bousfot W, Saadi S, Djebabra M (2022) – Emergence of joint health and safety committees in Algerian companies: an exploratory study.

This paper reports on the introduction of occupational health and safety (OHS) in Algerian companies. While acknowledging the importance of OHS in aspects such as strike reduction and improved workplace quality, [Bousfot et al. \(2022\)](#) note the dearth of studies examining the effect of introducing HSCs in developing countries such as Algeria. Therefore, this paper aims to explore the emergence of HSCs in Algeria, particularly in terms of OHS improvements.

Using three main hypotheses: (1) That regulatory compliance of certain HSCs is problematic, (2) That HSCs functioning in certain companies is problematic and (3) That management commitment in certain companies is problematic, the authors conducted a survey of members or former members of the HSCs of 150 Algerian companies. The firms invited to participate were from different industrial sectors and included those in both private and public ownership. The survey given to respondents was adapted from one previously validated by Nichol *et al.*, in 2017, who are referenced in the article by [Bousfot et al. \(2022\)](#). Responses were anonymous.

Findings indicated that public industries in Algeria were more compliant with OHS regulations and had better functioning HSCs. Other problems included a lack of clear focus for HSCs and the fact that meetings of such committees were not well attended and did not include members with sufficient seniority to influence change. In addition, most members of HSCs received their appointments through company management; this raised questions about their ability to remain neutral or to raise difficult issues. However, while the authors note the importance of management commitment to the effective functioning of industrial HSCs, there was little discussion of the other components previously identified as crucial by [Milgate et al. \(2002\)](#). These included involvement of professional experts, good communication, union involvement, training and the process of the meetings.

The authors acknowledge the need for further longitudinal studies, particularly in light of the fact that this study occurred during the COVID-19 pandemic period and therefore some of the potential respondents, whom the authors would have liked to include in their survey, were unavailable.

This review is based on Heiss R, Peonides M, Knoll V, Gerstner N, Frischut M, Gokani N (2022) – Food labeling in the European union: a review of existing approaches.

This article uses a policy analysis approach to review front of pack nutrition labeling (FoPNL) used in the EU. The three most commonly used food labeling strategies are (1) Nutri-Score, popular with Western European food retailers, grades products according to how healthy they are; (2) Keyhole, developed and used mainly in Scandinavian countries promotes products which are low in fat, sugar and salt but high in fibre; (3) NutriInform developed for the Italian food industry, but also popular in other Southern European countries, provides information about the weight of various components of the food product and how much of this should be consumed in an adult daily diet. While there are 7 different food-labeling schemes endorsed by the EU, these are all voluntary. This can present problems when manufacturers either do not label their foods or only label ones considered “healthy”. However, there are plans in the EU to introduce a single mandatory of FoPNL by the end of

2022, as part of the “Farm to Fork” (F2F) initiative. This is a very ambitious strategy at the heart of the European Green Deal (EGD) which aims to make Europe climate-neutral by 2050 designed to move to greater sustainability in food production and retailing (Wesseler, 2022).

The authors caution that a more integrated labeling system should not shift responsibility for making healthy food choices from the manufacturer to the customer. Indeed, this has been one criticism of FoPNL in that consumers find it difficult to understand labels. Heiss *et al.* (2022) suggest that any new FoPNL initiative must be accompanied by a public health campaign to raise awareness of healthy food choices.

Concluding remarks

So what can we (healthcare practitioners, educators, managers, writers) learn from this issue of *IJHG*? What can we take away from our reading and what will we apply to our own areas of practice?

My key points are

- (1) The COVID-19 pandemic remains a major area of concern. There are still questions that need to be asked about the best methods of reducing transmission and how national health services can prepare for future pandemics.
- (2) The structure, organization and finance of healthcare will always be important health governance topics. Conflict, climate change and economic instability need to be addressed in terms of their impact on health governance.
- (3) Outlier topics add interest to our considerations of health and health governance and should not be overlooked.

It would be interesting to hear how readers use information from *IJHG*. Too often busy health sector professionals just skim read professional journals. As the review editor, I read all content carefully and then explore related topics in the literature in order to present a capsule view with commentary. As always, the diverse nature of the articles and the global focus of this journal provide a valuable source of reflection and possible altered patterns of action for our readers. Please share your comments to the review editor by email.

References

- Amit, A.L.M., Pepito, V.C.F., Sumpaico-Tanchanco, L. and Dayrit, M.M. (2022), “COVID-19 vaccine brand hesitancy and other challenges to vaccination in the Philippines”, *PLOS Global Public Health*, Vol. 2 No. 1, e0000165, doi: [10.1371/journal.pgph.0000165](https://doi.org/10.1371/journal.pgph.0000165).
- Bousfot, W., Saadi, S. and Djebabra, M. (2022), “Emergence of joint health and safety committees in Algerian companies: an exploratory study”, *International Journal of Health Governance*, Vol. 27 No. 4, pp. 449-459.
- Bunyaminu, A., Mohammed, I., Yakubu, I.N., Sani, B. and Abukari, A.L. (2022), “The effect of health expenditure on average life expectancy: does government effectiveness play a moderating role?”, *International Journal of Health Governance*, Vol. 27 No. 4, pp. 365-377.
- De Micco, P., Maraghini, M.P. and Spadafina, T. (2022), “The costs of introducing a vaccine in sub-Saharan Africa: a systematic review of the literature”, *International Journal of Health Governance*, Vol. 27 No. 4, pp. 391-409.
- Gaduen, A., Caboverde, C.E., Flaminiano, J.P. and Romero, Y.R. (2022), “Decomposing the role of mobility restrictions in controlling COVID-19 outcomes: a regional level study of the Philippines”, *International Journal of Health Governance*, Vol. 27 No. 4, pp. 410-424.
- Galazka, A.M. (1994), “Achievements, problems and perspectives of the expanded programme on immunization”, *Zentralblatt für Bakteriologie*, Vol. 281 No. 3, pp. 353-364, doi: [10.1016/S0934-8840\(11\)80533-5](https://doi.org/10.1016/S0934-8840(11)80533-5).

- Handley, E. (2022), "UK herd immunity: is the lack of COVID regulation working?", *Open Access Government*, 14 April 2022, available at: <https://www.openaccessgovernment.org/uk-herd-immunity-covid-regulation-government-coronavirus-omicron-delta-variant/133893/> (accessed 30 August 22).
- Heiss, R., Peonides, M., Knoll, V., Gerstner, N., Frischut, M. and Gokani, N. (2022), "Food labeling in the European Union: a review of existing approaches", *International Journal of Health Governance*, Vol. 27 No. 4, pp. 460-468.
- Kaizer, F. (2022), "UN analysis shows link between lack of vaccine equity and widening poverty gap", *UN News Global Perspective Human Stories*, 28 March 2022, available at: <https://news.un.org/en/story/2022/03/1114762> (accessed 29 August 2022).
- Kilci, E.N. (2022), "Convergence of testing and positivity rates for the COVID-19 pandemic: evidence from Germany and Italy", *International Journal of Health Governance*, Vol. 27 No. 4, pp. 425-440.
- Levy, B.S. and Leaning, J. (2022), "Russia's war in Ukraine – the devastation of health and human rights", *The New England Journal of Medicine*, Vol. 387, pp. 102-105, available at: <https://www.nejm.org/doi/full/10.1056/NEJMp2207415>
- Lytvyn, N.A., Berlach, A.I., Kovalko, N.M., Melnyk, A.A. and Berlach, H.V. (2022), "Legal regulation of the state financial guarantees of medical services for the domestic and international experience", *International Journal of Health Governance*, Vol. 27 No. 4, pp. 378-390.
- Milgate, N., O'Loughlin, K. and Innes, E. (2002), "Examining the effectiveness of health and safety committees and representatives: a review", *Work*, Vol. 19, pp. 281-290, available at: https://www.researchgate.net/publication/10933325_Examining_the_effectiveness_of_health_and_safety_committees_and_representatives_A_review (accessed 31 August 2022).
- Mukherjee, S. (2021), "Why does the pandemic seem to be hitting some countries harder than others?", *The New Yorker Coronavirus Chronicles*, 1 March 2021, available at: <https://www.newyorker.com/magazine/2021/03/01/why-does-the-pandemic-seem-to-be-hitting-some-countries-harder-than-others> (accessed 31 August 2022).
- Narlikar, A. (2020), "The good, the bad and the ugly: Germany's response to the COVID-19 pandemic", ORF Special Report No. 108. May 2020, Observer Research Foundation, available at: https://www.orfonline.org/wp-content/uploads/2020/05/ORF_SpecialReport_108_Germany-COVID19_NEW-21May.pdf (accessed 30 August 2022).
- Rogers, L.S. (2022), "The vulnerability of health care in conflict: Ukraine and beyond", *John Hopkins Bloomberg School of Public Health*, available at: <https://publichealth.jhu.edu/2022/the-vulnerability-of-health-care-in-conflict-ukraine-and-beyond> (accessed 25 August 2022).
- Shodunke, A.O., Oladipupo, S.A., Tayo-Ladega, O.T., Alowolodu, A.J. and Adebayo, Y.O. (2022), "COVID-19 pandemic, global advisories and the imperatives of strengthening the public healthcare system: Nigeria in context", *International Journal of Health Governance*, Vol. 27 No. 4, pp. 441-448.
- Wesseler, J. (2022), "The EU's farm-to-fork strategy: an assessment from the perspective of agricultural economics", *Applied Economics Perspectives and Policy*, 18 March 2022, doi: [10.1002/aep.13239](https://doi.org/10.1002/aep.13239).
- Zarulli, V., Sopina, E., Toffulutti, V. and Lenart, A. (2021), "Health care system efficiency and life expectancy: a 140-country study", *PLoS One*, Vol. 16 No. 7, e0253450, doi: [10.1371/journal.pone.0253450](https://doi.org/10.1371/journal.pone.0253450).
- Zhou, Y., Xu, R., Hu, D., Yue, Y., Li, Q. and Xia, J. (2020), "Effects of human mobility restrictions on the spread of COVID-19 in Shenzhen, China: a modelling study using mobile phone data", *The Lancet Digital Health*, Vol. 2 No. 8, pp. E417-E424, doi: [10.1016/S2589-7500\(20\)30165-5](https://doi.org/10.1016/S2589-7500(20)30165-5).

Corresponding author

Fiona Ellen MacVane Phipps can be contacted at: fiona@macvane.com

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