



# COVID-19

## Demography Evidence Summary

### No.3

Evert-jan Quak

Institute of Development Studies

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*This is the third of a weekly COVID-19 Demography Evidence Summary (DES) to signpost DFID and other UK government departments to the latest relevant evidence and discourse on COVID-19 to inform and support their response. It is a result of 4 hours of work per week and is not intended to be a comprehensive summary of available evidence on COVID-19 but aims to make original documents easily accessible to decisionmakers which, if relevant to them, they could refer to before making decisions.*

*This DES looks specifically to the demographic indicators that impact on transmission/spreading and mortality rate, and the emerging evidence and policy advice on tailoring such responses to account for demographic indicators.*

*\* Means a specific focus on Africa.*

## Academic journal articles and research papers

### How should policy responses to the Covid-19 pandemic differ in the developing world?

Alon, T., Kim, M., Lagakos, D., & VanVuren, M. | *Centre for Economic Policy Research*, COVID Economics Vetted and Real-time Papers. | May 26, 2020 | tags: policy, spreading, age-structure

<https://cepr.org/sites/default/files/news/CovidEconomics22.pdf>

**Abstract:** This paper provides a preliminary quantitative analysis of how aggregate policy responses should differ in developing countries. The model used features several of the main economic and demographic distinctions between advanced and developing economies relevant for the pandemic. The study focuses in particular on differences in population structure, fiscal capacity, healthcare capacity, the prevalence of "hand-to-mouth" households, and the size of the informal sector. The

model predicts that blanket lockdowns are generally less effective in developing, while age-specific lockdown policies may be more potent.

### **\*The potential effect of the African population age structure on COVID-19 mortality**

Mougeni, F., Mangaboula, A., & Lell, B. | *MedRxiv (not peer reviewed)* | May 21, 2020 | tags: age-structure, mortality

<https://doi.org/10.1101/2020.05.19.20106914>

**Abstract:** The researchers calculated standardised mortality ratios (SMR) using age-specific case fatality rates for COVID-19 and the age structure of the population of Africa and of other continents. Compared to a European or Northern American population, the standardised mortality ratio was only 0.22 and 0.25, respectively, corresponding to reduction of deaths rates to a quarter. Compared to the Asian and Latin American & Caribbean population, the SMR was 0.43 and 0.44, respectively, corresponding to half the death rate for Africa.

### **\*Nairobi informal settlements: COVID-19 perceptions, prevention practices & impact**

Population Council Kenya | Ongoing research (round 3 data collection overview) | May 20, 2020 | tags: population density, perceptions

[https://www.popcouncil.org/uploads/pdfs/2020PGY\\_CovidKenyaKAPStudyPresentationRound3.pdf](https://www.popcouncil.org/uploads/pdfs/2020PGY_CovidKenyaKAPStudyPresentationRound3.pdf)

**Abstract:** The study results are based on a phone survey conducted on May 10-11 in Kibera, Huruma, Kariobangi, Dandora, Mathare. 1750 interviews were completed (37% male; 63% female – Mean age: 37 years). This document shows how over time the people in the informal settlements responded to COVID-19 and how their perceptions have changed.

### **Measuring excess mortality during the COVID-19 pandemic in low- and lower-middle income countries: the need for mobile phone surveys.**

Adjiwanou, V., Alam, N., Alkema, L., Asiki, G., Bawah, A., Béguy, D. et al. | *SocArXiv (not peer reviewed)* | May 19, 2020 | tags: mortality

<https://doi.org/10.31235/osf.io/4bu3q>

**Abstract:** In low income and lower-middle income countries, data from civil registration systems do not allow monitoring excess mortality during the COVID-19 pandemic. Rapid mobile phone surveys aimed at measuring mortality trends on a monthly basis are a realistic and safe option for filling that data gap. The data generated by mobile phone surveys can play a key role in better targeting areas or population groups most affected by the pandemic. They can also help monitor the

impact of interventions and programs, and rapidly identify what works in mitigating the impact of COVID-19.

## National age and co-residence patterns shape COVID-19 vulnerability

Esteve, A., Permanyer, I., Boertien, D., & Vaupel, J.W. | *MedRxiv (not peer reviewed)* | May 16, 2020 | tags: mortality, age-structure, intergenerational living

<https://doi.org/10.1101/2020.05.13.20100289>

**Abstract:** Based on harmonised census data from 81 countries, this research estimates how age and co-residence patterns shape the vulnerability of countries' populations to outbreaks of COVID-19. The age-structures of European and North American countries increase their vulnerability to COVID-related deaths in general. The co-residence patterns of elderly persons in Africa and parts of Asia increase these countries' vulnerability to deaths induced by within-household transmission. In a second step, the research estimates to what extent avoiding primary infections for specific age-groups would prevent subsequent deaths due to within-household transmission of the virus. Preventing primary infections among the elderly is the most effective in countries with small households and little intergenerational co-residence such as France, whereas confining younger age groups can have a greater impact in countries with large and inter-generational households such as Bangladesh.

## Early estimates of the indirect effects of the COVID-19 pandemic on maternal and child mortality in low-income and middle-income countries: a modelling study

Roberton, T., Carter, E.D., Chou, V.D., Stegmuller, A.R., Jackson, B.D., Tam, Y., et al. | *Lancet, Global Health* | May 12, 2020 | tags: maternal death, child mortality

[https://doi.org/10.1016/S2214-109X\(20\)30229-1](https://doi.org/10.1016/S2214-109X(20)30229-1)

**Abstract:** The least severe scenario (coverage reductions of 9.8–18.5% and wasting increase of 10%) over 6 months would result in 253,500 additional child deaths and 12,200 additional maternal deaths. Our most severe scenario (coverage reductions of 39.3–51.9% and wasting increase of 50%) over 6 months would result in 1,157,000 additional child deaths and 56,700 additional maternal deaths. These additional deaths would represent an increase of 9.8–44.7% in under-5 child deaths per month, and an 8.3–38.6% increase in maternal deaths per month, across the 118 countries. The results show that as routine health care is disrupted and access to food is decreased (as a result of unavoidable shocks, health system collapse, or intentional choices made in responding to the pandemic), the increase in child and maternal deaths will be devastating.

## Strong effect of socioeconomic levels on the spread and treatment of the 2019 novel coronavirus (COVID-19) in China

Zheng, Z., Michelle, C., & Li, X. | *MedRxiv (not peer reviewed)* | May 07, 2020 | tags: spreading, migration, socioeconomic indicators

<https://doi.org/10.1101/2020.04.25.20079400>

**Abstract:** The study aimed to estimate the effects of socioeconomic levels on the spread and treatment of COVID-19 in China. The researchers used migration data from the major cities in Hubei Province, and macroeconomic data at city and province levels. They obtained social management measures in response to COVID-19 outbreak and assessed the association between measures, migration and COVID-19 spread, and the association between socioeconomic levels and COVID-19 treatment capacity. The study concludes that socioeconomic levels had strong effect on the spread and treatment of COVID-19 in China.

## Lived population density and the spread of COVID-19

Babbitt, D., Garland, P., & Johnson, O. | *Arxiv (not peer-reviewed)* | May 05, 2020 | tags: population density

<https://arxiv.org/pdf/2005.01167.pdf>

**Abstract:** The study shows that the population density has a small but significant effect on the rate of spread of the virus. However, it also shows that measures of 'lived population density', which capture density as perceived by a randomly chosen person, do a better job of explaining variations in the rate of spread, in Europe and US.

## COVID-19: mortality, future years lost, and demographic structure Italy and Kenya compared

Bell, C. | *UNU-WIDER Working Paper 2020/60* | May 2020 | tags: mortality, age-structure

<https://www.wider.unu.edu/sites/default/files/Publications/Working-paper/PDF/wp2020-60.pdf>

**Abstract:** COVID-19 causes extremely high mortality among the old. This motivates a comparison of the losses of future lifetime years and future lifetime years of work ensuing from a hypothetical 25,000 excess deaths in Italy, whose affluent population is one of the world's oldest, with those in Kenya, whose population is one of the most youthful and poor. The findings suggest that donors might do better to continue to concentrate on malaria, HIV/AIDS, and diseases of childhood.

## What are the underlying transmission patterns of COVID-19 outbreak? An age-specific social contact characterization

Liu, Y., Gu, Z., Xia, S., Shi, B., Zhou, X.N., Shi, Y., et al. | *The Lancet, EClinicalMedicine* | April 28, 2020 | tags: age-structure, spreading

<https://doi.org/10.1016/j.eclinm.2020.100354>

**Abstract:** The study focuses on 6 representative cities in China: Wuhan, the epicenter of COVID-19 in China, together with Beijing, Tianjin, Hangzhou, Suzhou, and Shenzhen, which are five major cities from three key economic zones. The results show that the social contact-based analysis can readily explain the underlying disease transmission patterns as well as the associated risks (including both confirmed and unconfirmed cases). In Wuhan, the age-groups involving relatively intensive contacts in households and public/communities are dispersedly distributed. This can explain why the transmission of COVID-19 in the early stage mainly took place in public places and families in Wuhan. With such an in-depth characterisation of age-specific social contact-based transmission, the retrospective and prospective situations of the disease outbreak, including the past and future transmission risks, the effectiveness of different interventions, and the disease transmission risks of restoring normal social activities, are computationally analysed and reasonably explained.

## Policy briefs, statements, tools, guidelines

### Gendered Impacts of COVID-19 School Closures: Insights from Frontline Organizations

Megan O'Donnell, Maryam Akmal & Susannah Hares | Policy Paper by *Center for Global Development* | May 27, 2020 tags: policy, education, impact of COVID-19

<https://www.cgdev.org/publication/gendered-impacts-covid-19-school-closures-insights-frontline-organizations>

### Population-based age-stratified seroepidemiological investigation protocol for COVID-19 virus infection

Epidemiological protocol by *WHO* | May 26, 2020 | tags: policy, age-structure

<https://www.who.int/publications-detail/population-based-age-stratified-seroepidemiological-investigation-protocol-for-covid-19-virus-infection>

### \*When a global virus meets local realities: Coronavirus (COVID-19) in West Africa

Brief on policy responses to Coronavirus (COVID-19) by *OECD* | May 11, 2020 | tags: policy

<http://www.oecd.org/coronavirus/policy-responses/when-a-global-virus-confronts-local-realities-coronavirus-covid-19-in-west-africa-8af7f692/>

### Protecting and mobilizing youth in COVID-19 responses

Policy Brief on youth and COVID-19 responses by *UN DESA* | May, 2020 | tags: policy, youth

[https://www.un.org/development/desa/youth/wp-content/uploads/sites/21/2020/05/PB\\_67.pdf](https://www.un.org/development/desa/youth/wp-content/uploads/sites/21/2020/05/PB_67.pdf)

## Webinars (recordings)

### Demographic Insights into COVID-19: The Importance of Age, Sex, Family and...Denominators

Organiser: Population Association of America | 27 May, 2020 | tags: age-structure, family size

<https://www.youtube.com/watch?v=rwaEmbsMRIk>

### Evidence in the time of COVID-19

Organiser: 3ie (Virtual Evidence Weeks) | May 08, 2020 | tags: data, evidence

[https://www.youtube.com/watch?v=1APykcf80Jg&feature=youtu.be&utm\\_source=Session+1-++Evidence+in+the+time+of+COVID-19&utm\\_campaign=8bdef2914e-EMAIL\\_CAMPAIGN\\_2020\\_05\\_08-vew-covid19&utm\\_medium=email&utm\\_term=0\\_2862db23ca-8bdef2914e-305183730&ct=t%28EMAIL\\_CAMPAIGN\\_5\\_8\\_2020-vew-covid19%29&goal=0\\_2862db23ca-8bdef2914e-305183730&mc\\_cid=8bdef2914e&mc\\_eid=3dd270f03c](https://www.youtube.com/watch?v=1APykcf80Jg&feature=youtu.be&utm_source=Session+1-++Evidence+in+the+time+of+COVID-19&utm_campaign=8bdef2914e-EMAIL_CAMPAIGN_2020_05_08-vew-covid19&utm_medium=email&utm_term=0_2862db23ca-8bdef2914e-305183730&ct=t%28EMAIL_CAMPAIGN_5_8_2020-vew-covid19%29&goal=0_2862db23ca-8bdef2914e-305183730&mc_cid=8bdef2914e&mc_eid=3dd270f03c)

### Maternal, newborn and child health and nutrition in the time of COVID-19: implications for action and research

Organiser: Agriculture, Nutrition & Health Academy | May 05, 2020 | tags: maternal health, impact of COVID-19

<https://anh-academy.org/academy-news-events/event/webinar-mnch-nutrition-covid-19>

### Securing supplies in insecure times: Ensuring contraceptive security under COVID-19

Organiser: *Marie Stopes International* and *Family Planning 2020* | May 01, 2020  
tags: family planning, impact of COVID-19

<https://www.mariestopes.org/the-spotlight-blog/2020/5/the-spotlight-webinar-securing-supplies-in-insecure-times-ensuring-contraceptive-security-under-covid-19/?page=0#>

## Comments, Editorials, Opinions, Blogs, News

### Covid-19 and quarantine in Peru – what does this mean for people with disabilities?

Amy Riley-Powell (IDS Doctoral Researcher) and Renato Antonio Constantino Caycho | Published on *Institute of Development Studies* (IDS) | May 27, 2020

<https://www.ids.ac.uk/opinions/covid-19-and-quarantine-in-peru-what-does-this-mean-for-people-with-disabilities/>

## **The Disproportionate Effect of COVID-19 on Migrant Workers in ASEAN: Thailand, Singapore, and Vietnam approached the intertwined issues of COVID-19 and migrant workers quite differently**

Camille Bismonte (associate researcher at the Foreign Policy Community of Indonesia) | Published on *The Diplomat* | May 22, 2020

<https://thediplomat.com/2020/05/the-disproportionate-effect-of-covid-19-on-migrant-workers-in-asean/>

## **Low- and middle-income countries face up to COVID-19**

Miriam Shuchman (journalist) | Published on *Nature Medicine* May 21, 2020

<https://www.nature.com/articles/d41591-020-00020-2>

## **Men and COVID-19: Adding a gender lens**

Betron, M., Gottert, A., Pulerwitz, J., Shattuck, D., & Stevanovic-Fenn, N. | Commentary published in *Global Public Health*, Volume 1, Issue 3. | May 21, 2020

<https://doi.org/10.1080/17441692.2020.1769702>

## **\* How youth and technology can drive Africa's COVID-19 response**

Neema Kaseje (Founder, Surgical Systems Research Group) and Dan Kaseje (Professor of Public Health, Tropical Institute of Community Health, Kisumu, Kenya) | Published on *World Economic Forum* | May 19, 2020

<https://www.weforum.org/agenda/2020/05/covid-19-and-young-people-in-sub-saharan-africa/>

## **COVID-19 and the impact of social determinants of health**

Elissa M Abrams (Department of Paediatrics at the University of Manitoba and University of British Columbia) & Stanley J Szeffler (The Breathing Institute and Pulmonary Medicine Section, Children's Hospital Colorado and University of Colorado School of Medicine) | Commentary published on *The Lancet* | May 18, 2020

[https://doi.org/10.1016/S2213-2600\(20\)30234-4](https://doi.org/10.1016/S2213-2600(20)30234-4)

## **Minorities, Migrants, and Social Exclusion During COVID-19**

Nendirmwa Noel (Program Associate and the Special Assistant to the Director at New York University Center on International Cooperation) | Published on *New York University CIC* | May 12, 2020

<https://cic.nyu.edu/publications/covid-19-minorities-and-social-exclusion>

## **Immunization in the time of COVID-19 and beyond**

John Snow Inc. | Published on *Medium.com* | May 08, 2020

<https://medium.com/@JSIhealth/immunization-in-the-time-of-covid-19-and-beyond-374bb55aae7d>

## **COVID-19 Data hubs relevant for Demography**

### **Coronavirus (COVID-19) Data Resource Hub**

Data resource hub by *Data World*  
<https://data.world/resources/coronavirus/>

### **Demographic and Social Statistics: countries with a census in 2020 and the impact of COVID-19**

Updates on census 2020 and COVID-19 by the *UN Statistics Division*  
<https://unstats.un.org/unsd/demographic-social/census/COVID-19/>

### **Migration Data Portal**

Migration data relevant for COVID-19 pandemic  
<https://migrationdataportal.org/themes/migration-data-relevant-COVID-19-pandemic>

### **Understanding the Coronavirus (COVID-19) pandemic through data**

Data centre on COVID-19 by the *World Bank Group*  
<http://datatopics.worldbank.org/universal-health-coverage/coronavirus/>

### **Using mobile operator data**

Data portal by *Flowminder*  
<https://COVID19.flowminder.org/>

## **COVID-19 Resource hubs relevant for Demography**

### **\*African Population and Health Research Centre**

APHRC COVID-19 Situation updates in Sub-Saharan Africa  
<https://aphrc.org/COVID-19-situation-updates/>

### **\*Africa Centres for Disease Control and Prevention**

COVID-19 Resource hub



<https://africacdc.org/COVID-19/COVID-19-resources/>

### **\*Africa UN Knowledge Hub for COVID-19**

One-stop knowledge information centre of all UN agencies on COVID-19 by *UN Development System in Africa*

<https://knowledge.uneca.org/COVID19/>

### **Family Planning & COVID-19**

Family Planning 2020 COVID-19 resource hub

<http://familyplanning2020.org/covid-19>

### **Global Partnership for Sustainable Development Data**

COVID-19 resources hub on data and mapping

<http://www.data4sdgs.org/resources/COVID-19-resources>

### **International Conference on Family Planning**

COVID-19 and reproductive health

<https://icfp2021.org/COVID19>

### **International Union for the Scientific Study of Population**

Demographers' contributions to the understanding of the COVID-19 pandemic

<https://iussp.org/fr/node/11297>

### **Population Council**

Responding to the COVID-19 pandemic

<https://www.popcouncil.org/research/responding-to-the-COVID-19-pandemic>

### **Population Europe: The Network of Europe's leading Demographic Research Centres**

Demography and COVID-19

<https://population-europe.eu/news/demography-coronavirus>

### **UNFPA**

United Nations Population Funds COVID-19 knowledge hub

<https://www.unfpa.org/COVID19>

### **Suggested citation**

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## Methodology

The rapid weekly search looks for peer-reviewed academic articles, however, due to rapid developments most academic literature is not peer-reviewed (yet). Therefore, the literature is complemented by a search of the homepage of high-impact global health, demography and population journals and a Twitter search of their Twitter pages. A search also of preprints, for example from medRxiv. Additional commentaries, opinions, and commissioned pieces are selected based on relevance. The search for dashboards, guidelines, tools, editorials, comments, blogs, opinions and news is mostly through academic institutions, journals, C19 resource hubs and following lead academics and professionals on Twitter.

## About this report

The weekly Demography Evidence Summaries are not intended to replace professional advice and the researcher or the K4D consortium cannot be held responsible for any decisions made about COVID-19 on the basis of the summaries alone.

K4D services are provided by a consortium of leading organisations working in international development, led by the Institute of Development Studies (IDS), with Education Development Trust, Itad, University of Leeds Nuffield Centre for International Health and Development, Liverpool School of Tropical Medicine (LSTM), University of Birmingham International Development Department (IDD) and the University of Manchester Humanitarian and Conflict Response Institute (HCRI).

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