

IUSSP Webinar on  
**Quantifying COVID-19-related Excess Mortality in Latin America:  
Demographic Analyses of Death Registration Data in Latin America**

*July 17, 2020*

## **Q&As**

- 1 Indirect deaths are not only related to how the health system is affected by the pandemic, but also how the economic consequences of COVID affect risks?  
Amanda Glassman ([aglassman@cgdev.org](mailto:aglassman@cgdev.org))
- 2 About the coverage of the death registration and more so about the differential of this coverage throughout the country, the excess mortality is a good proxy for mortality by Covid-19 with the strong assumption that coverage does not change from one year to the next. But my question: is there any hint about an improvement in this register exactly due to the Covid-19 urgency? Like in Brazil the burials papers (coming from the registration) need now to state the cause of deaths due to the protocols put in place for safety. Would this improve suddenly the registration or not?  
Suzana Cavenaghi ([suzana\\_cavenaghi@uol.com.br](mailto:suzana_cavenaghi@uol.com.br))
  - (related comment/question): Everton's analysis enriches our understanding of the spatial distribution of excess mortality at subnational levels. In Ecuador and Colombia, Peralta et al (2019) and Castanheira-Cruz (2020) have documented a notable sex differential in the death registration completeness that varies substantially across geographic subnational areas of those countries. Given such under-registration of female deaths, how might we better understand the sex-specific and gendered mortality consequences of COVID-19 excess deaths? (Romesh Silva)
  - Suzana and Romesh - in the case of Brazil and the Portal da Transparência - Registro Civil - there is a big variation in quality of reporting and timing across the country. Some areas are presenting delays of almost 1 month when they should be reporting this information in a much shorter time. To deal with that, we look at data from a few weeks ago. Fujiwara (at Princeton) has some interesting analysis on that as well. (Bernardo Queiroz)
    - [https://www.princeton.edu/~fujiwara/papers/excess\\_deaths.pdf](https://www.princeton.edu/~fujiwara/papers/excess_deaths.pdf)
  - Bernardo, thanks for the reference. That is always, that is the excess mortality would overcome that if those places always have bad coverage (or late registration), but my worry is that due to Covid, the registration system had improved due to the pressure put on this. And in that case, excess mortality method would not be a good one. Or maybe should be used only for places where mortality rises harder. (Suzana Cavenaghi)
  - This is a good point and can go both ways. Covid has improved quality because of the need, but also delay the process because of the impact of it. Thomas shows some interesting patterns in his analysis for major areas. We also look for all RM in Brazil and some have clear data issues in reporting. (Bernardo Queiroz)
- 3 In a time of lockdown, it is reasonable that the number of other natural causes of death may have declined. Given that such is the case do you agree with a process of adjusting the base from which you will compare excess deaths? Or would you make the comparison based on the

- average number of deaths for the same week from previous years?  
Diego Iturralde ([diegoi@statssa.gov.za](mailto:diegoi@statssa.gov.za))
- 4 Do you think it would be interesting to include January and February to check if deaths started to increase even though the epidemic was not officially declared back then?  
Pricila Mullachery ([phm32@drexel.edu](mailto:phm32@drexel.edu))
- 5 In many cases covid is a competitive risk in the final cause, but not as primary cause of mortality, in terms of CRVS registration. In what order cause are we registering it and how will it change over time? Is this another good reason to think in total excess mortality? Thanks  
Iván Williams ([act.ivanwilliams@gmail.com](mailto:act.ivanwilliams@gmail.com))
- Hi Ivan, there is an issue of tests and the confirmed final cause of death. Also, the impact will not only be by Covid but for other reasons as well, like Everton showed. There are the direct deaths, those deaths that were misreported, but also deaths that could be avoid if there was not a pandemic and also is now a competing risk. (Bernardo Queiroz)
  - Hi Bernardo, thanks for the answer. Best (Iván Williams)
- 6 Everton, did you compare the excess mortality in these countries (and provinces) with the official deaths by Covid-19? How do they differ?  
Suzana Cavenaghi ([suzana\\_cavenaghi@uol.com.br](mailto:suzana_cavenaghi@uol.com.br))
- Not in this paper. But we have done some regional analysis across regions using COVID-19 mortality only. (Bernardo Queiroz)
    - <https://osf.io/preprints/socarxiv/ujstp/>
- 7 For Everton: could this heterogeneity seen on the coast of Ecuador or in Brazil be due to mobility? or population density?  
Alessandra Carioli ([a.carioli@soton.ac.uk](mailto:a.carioli@soton.ac.uk))
- 8 This analysis enriches our understanding of the spatial distribution of excess mortality at subnational levels. In Ecuador and Colombia, Peralta et al (2019) and Casteinheira Cruz (2020) have documented a notable sex differential in the death registration completeness that varies substantially across geographic subnational areas of those countries. Given such under-registration of female deaths, how might we better understand the sex-specific and gendered mortality consequences of COVID-19 excess deaths?  
Romesh Silva ([rosilva@unfpa.org](mailto:rosilva@unfpa.org))
- 9 In Europe and North America, the big headline daily mortality numbers cited by mainstream media are drawn from hospital and health facility deaths as is the case for prominent COVID-19 dashboards by Johns Hopkins etc. Comparing death registration data with hospital reporting may be help us to better understand the relative strengths and weaknesses of the death register vs hospital reporting. How feasible is such a comparative analytical exercise for COVID-19 deaths in Brazil, Chile, Ecuador, Peru?  
Romesh Silva ([rosilva@unfpa.org](mailto:rosilva@unfpa.org))
- The problem is that the hospital reports are consolidated by the national statistic offices with 1 or 2 years of delay. (Adriana Robles)
  - For Brazil is very feasible. The hospitalization individual data is available online (last update july 7) (Suzana Cavenaghi)
  - Portal da Transparência has information on COVID death as well. But one has to be careful because of the large number of deaths “under investigation”. There are evidences in some states that a “final death certificates” is taking some time to be released. (Bernardo Queiroz)

- 10 Suppose that there are new causes of deaths, such as deaths attributed to violence or instability during a certain period. What would you do in such circumstances?  
Garmma Feyissa ([garummatolu@yahoo.com](mailto:garummatolu@yahoo.com))
- 11 Justify the validity of data collected on the total number of deaths in the sampled study sites associated to COVID-19 based on the fact that, there is low testing, under-reporting and deaths that are not directly associated with COVID-19.  
Dr. Jackson Musau ([jmusau26@gmail.com](mailto:jmusau26@gmail.com))
- 12 To what extent are covid-19 deaths likely to be under-estimated due to: 1) comorbidities; and 2) home-based care? (Ben Obonyo)
- 13 for Everton: was there analysis by age/ sex/ rural- urban./ socio economic ..and other variables?  
Sana Naffa ([snaffa@idrc.ca](mailto:snaffa@idrc.ca))
- 15 In the subnational analyzes for Brazil, was there a comparison of information by data source? Information from the civil registry can be substantially different from information from the Ministry of Health, since there are different protocols for information retrieval and information correction, mainly because of death.  
Raphael Guimarães ([raphael24601@gmail.com](mailto:raphael24601@gmail.com))
- Raphael, the analysis for both years (2020 and 2019) are from the same source (Registro Civil). We did not use Datasus here. There is a issue of under-reporting and delaying in reporting in 2020. To deal with that we compared information from 2 or 3 weeks ago. But there are still some regional variation in the quality of information across regions. (Bernardo Queiroz)
  - That's true, Bernardo. At Fiocruz there are some groups developing research in this field, exclusively for COVID, to try to equalize this data (not only for deaths, but also for incidence). We are testing reclassification criteria for cases and deaths, and analyzing temporal and spatial trends, including for small areas. We could try to talk about it, what do you think? (Raphael Guimarães)
  - Raphael, did you see Thomas Fujiwara work? He tried to compare recent data with Datasus and found some interesting patterns. (Bernardo Queiroz)
  - Yep. It's very interesting indeed. The main limitation for a more accurate analysis in Brazil has been the low number of tests. On the other hand, there is a huge discussion about the use of information on SARS, and there are studies trying to analyze particularly the excess of deaths by SARS, and trying to evaluate how these deaths could be recoded to COVID. There is a huge field of study to be explored in this regard. (Raphael Guimarães)
- 16 Hi All, David Ojaka Demographer from Nairobi Kenya Africa. What is the indicative percentage of death registration in either Brazil or any other of the countries studied? These can usually be generated from pilot birth and death registration data.  
David Ojaka ([davidojaka@gmail.com](mailto:davidojaka@gmail.com))
- 17 Jenny, in Brazil there are both, deaths in the civil registration and also from ministry of health (from hospitals mainly), both incomplete, unfortunately.  
Suzana Cavenaghi ([suzana\\_cavenaghi@uol.com.br](mailto:suzana_cavenaghi@uol.com.br))
- 18 The Ecuadorian case is a particular one. The situation in Guayas in April caused a partial shutdown in most of public service provision in the city that also affected death registration. As such, for about two weeks, registration was nearly paralyzed. Overall, the country also suffers from issues of lateness of reporting and a high number of deaths occur in homes, which makes it particularly difficult to address issues of data collection and data quality.  
Vinícius De Souza Maia ([Viniciusmaia108@gmail.com](mailto:Viniciusmaia108@gmail.com))

- 19 Yep. It's very interesting indeed. The main limitation for a more accurate analysis in Brazil has been the low number of tests. On the other hand, there is a huge discussion about the use of information on SARS, and there are studies trying to analyze particularly the excess of deaths by SARS, and trying to evaluate how these deaths could be recoded to COVID. There is a huge field of study to be explored in this regard.  
Raphael Guimarães ([raphael24601@gmail.com](mailto:raphael24601@gmail.com))
- 21 Congratulations to the authors, especially to dr. Lima for his presentation.  
José Marcos Pinto da Cunha ([zemarcos@unicamp.br](mailto:zemarcos@unicamp.br))
- 22 Indeed, mortality registration in Ecuador has important limitations on completeness and quality; and there are great geographical inequalities. During the Covid-19 pandemic, not only healthcare services but also mortuary services collapsed, specially in coastal regions as Guayas and Santa Elena. It is highly probable that this excess mortality is under-registered and that in most provinces it could be much higher.  
(Andrés Peralta)
- 23 I like Stephane's comment about population at risk. Population at risk can change due to natural growth besides migration. In that case would it not be better to compare some form of death rate rather than the absolute number of deaths?  
Gour Dasvarma ([gour.dasvarma@flinders.edu.au](mailto:gour.dasvarma@flinders.edu.au))
- 24 Moreover, the data used has not been yet validated by the National Institute of Statistics and Censuses (INEC). Numbers of deaths between both sources can differ substantially in some areas but INEC statistics are not available yet for all the study period.  
Andrés Peralta ([tirico85@gmail.com](mailto:tirico85@gmail.com))
- Well put. Congratulations on your paper about coverage and quality of death registration in Ecuador from last year.
  - Thank you Vinicius. Great to see it's useful.
  - Andres, I work with your colleagues at INEC on data quality issues related to mortality surveillance. It would be great to connect. ([lortiz@vitalstrategies.org](mailto:lortiz@vitalstrategies.org))
- 25 I think that effect of the population-at-risk should be mainly considered because analysing pure death counts at the sub-population level could be misleading since one deals with large as well as small areas. Well, for the same reasons we, demographers, compute death rates. However, I think Everton has considered that, at least, indirectly by using death counts in 2 years in row, with a (strong?) assumption that population-at-risk did not change.  
Giancarlo Camarda ([carlo-giovanni.camarda@ined.fr](mailto:carlo-giovanni.camarda@ined.fr))
- 26 How mortality due to RTA is treated in comparing mortality?  
Harshal Salve ([harshalsalve@ymail.com](mailto:harshalsalve@ymail.com))
- 27 Thanks, Everton, for the interesting presentation. I understand that you did the analysis in Brazil for some metropolitan areas (core municipality vs other municipalities). I think should be interesting to do that comparing the metropolitan area vs other municipalities of the state in order to understand the spreading of Covid to interior.  
Alberto Jakob ([alberto@nepo.unicamp.br](mailto:alberto@nepo.unicamp.br))
- Good morning... I know this may have been raised but when analyzing the data do analyst adjust for place of residence vs place of occurrence? place of residence is more useful for intervention, I think. Also is definition of causes of death the same among countries? Thanks (Sylvan Roberts)
  - Hello Sylvan, it has indeed been addressed. In the Brazilian case, they only had place of occurrence available, if I'm not mistaken. The definitions for causes of death was not

explicitly mention, but Jenny remarked that when it comes to COVID, there is a lot of variation on what is considered a COVID related death, considering testing status, place of occurrence, etc." (Vinícius De Souza Maia)

- 28 Only a comment to the importance of civil registration and data transparency. In Brazil, in the beginning of the pandemic the number of deaths by covid-19 was higher than the official death from Health Ministry (with all the delays from civil registration). That made the health ministry to put in place better instruments and improve their official data. So, let's go always for stronger CRVS systems!! Congratulations to the panel on the work!  
Suzana Cavenaghi ([suzana\\_cavenaghi@uol.com.br](mailto:suzana_cavenaghi@uol.com.br))
- 29 The trend seems to be on the high in the West African sub-region, especially the incidence of new cases  
Taofik Olatunji Bankole ([oluwabamikoleolatunji@yahoo.com](mailto:oluwabamikoleolatunji@yahoo.com))
- 30 As regards population at risk, could you also compare January 2019 v. January 2020? This would not address the covid-related mobility, but the annual growth, which I imagine is not negligible in some urban agglomerations. In any case, I think it would be useful to have a benchmark comparison that is presumably before covid hits  
Patrick Heuveline ([heuveline@soc.ucla.edu](mailto:heuveline@soc.ucla.edu))
- 31 I think one of the causes of undercounting is due to this fact that policy makers try to hide real statistics and show lower rate of death caused by COVID-19, true?  
Khadijeh Asadi ([asadi.kh1982@gmail.com](mailto:asadi.kh1982@gmail.com))
- 35 Hello colleagues. The issue of the implications of migration and mobility for analysis of COVID morbidity and mortality has emerged prominently. Our Panel on International Migration is developing themes for a related webinar. Please, may I ask for your inputs and ideas about priorities in the demographic analysis of the relationships between international migration and mobilities and the pandemic? We would greatly appreciate learning your perspectives. Thank so very much. Ellen Percy Kraly ([ekraly@colgate.edu](mailto:ekraly@colgate.edu))
- 36 Congratulations. I've been following Ecuador daily, and can tell that ""general deaths"" is the only lantern that's left to track our darkness, and the strongest variable to reflect that something strange is happening to us (source of data: Registro Civil): it's a census. Conversely, the official Covid data of (Ministry of Health) needs to be understood as a sample, a good sample of a very few symptomatic cases at hospitals, but not as census of Covid phenomena. The strongest variable at Health's report is ""total cases by symptoms"", which is most correlated to ""total deaths"" (Registro Civil, 0.95 during march-April in Guayas, in lapses of -12 days) than to ""official Covid deaths"" of the same Ministry of Health.
- Thanks, I share this DB where describes daily changes of mortality in local counties in Ecuador through 2020, % excess deaths and equivalences in accumulative a& annual equivalent mortality (I refresh it daily).
    - [https://datastudio.google.com/s/vT4uJcq4\\_rk](https://datastudio.google.com/s/vT4uJcq4_rk)

Sebastian Naranjo ([sebasnaranjo@gmail.com](mailto:sebasnaranjo@gmail.com))

- Muchas gracias Sebastian !!!

37 Could you share the link of the paper, please.  
Lina Maria Sanchez Cespedes ([lina.maria.sc@live.co.uk](mailto:lina.maria.sc@live.co.uk))

- <https://osf.io/xhkp4/>

38 How about using interrupted time series analysis for this purpose?  
Louise Maranda ([louise.maranda@gmail.com](mailto:louise.maranda@gmail.com))