

COVID-19 PANDEMIC: STATISTICAL ISSUES FOR LOW AND MIDDLE INCOME COUNTRIES

Briefing note from the RSS International Development Section

Prepared for the RSS Covid-19 Task Force

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Introduction

This briefing note is predicated on the assumption that the pandemic will have very serious health consequences for the populations of low and middle income countries (LMICs). At present, with a few exceptions, there are relatively few confirmed cases and deaths, but whether this is a true indication of prevalence and mortality or simply lack of testing and inadequate reporting remains to be seen. Certainly many LMICs have already taken far-reaching measures against Covid-19 ranging from curfews to complete lock-downs. In LMICs as in high income countries, there is as much of a need for data on the socio-economic impact of these measures as there is on the epidemiology of the pandemic itself.

There will inevitably also be socio-economic effects on LMICs from the lockdown measures taken elsewhere in the world, resulting in reduced demand for some of the goods and services that they normally supply and on which their economies depend – for example, tourism, textile and clothing production.

In this note, we identify issues we see arising for LMICs under each of the four areas that constitute the remit of the Task Force. But before doing so it is important to note that the statistical issues raised for LMICs by the pandemic serve only to emphasise the overarching need for data more generally to measure progress towards the UN Sustainable Development Goals (SDGs), and the need for statistical capacity building to achieve this in LMICs. The RSS drew attention to these issues in its Statement for World Statistics Day 2015 made at the time of the launch of the SDGs and signed by a wide range of organisations – this is attached for reference as Annex A.

The statistical capacity that countries need to develop for effective measurement, analysis and communication of data relating to the pandemic are generally the same as that needed for the SDG agenda. This presents statisticians in LMICs with an opportunity to show how, with investment in innovative data collection techniques and methods of communication, they can make a difference to policy making, to public understanding of policy issues, and, ultimately, to policy outcomes.

(a) To support the production of evidence-based analyses

Many LMICs will be handicapped through deficiencies in the basic data collection systems required to construct a reliable evidence base. For example:

- (i) **Poor quality vital statistics**, through incomplete coverage of vital events, in this case deaths – for example, registration of only those deaths occurring in hospitals or other clinical contexts, and inaccurate recording of cause of, and age at, death. It seems highly likely that these deficiencies are contributing to the apparent low mortality from Covid-19, and indeed all causes, in many LMICs [Ref Economist 9 May 2020].

- (ii) **Lack of up to date population statistics more generally**, for example population numbers in age/sex specific groups.
- (iii) **Lack of community health surveillance systems**, or, where these do exist, difficulties in adapting them to meet the reporting needs of the pandemic, and for national statistical services to gain timely access to the data for statistical purposes.
- (iv) **Lack of more wide-ranging data** needed to measure not only the direct impact of the disease but also the risk factors in terms of underlying health conditions, which might differ from those in higher income countries. Data on the health, social and economic impact of policies aimed at dealing with the pandemic (for example, lockdown) on a wide range of variables, from vaccination rates, food poverty to crime rates, are also needed in order to assess their costs and benefits to inform policy choices in future pandemics.
- (v) **Lack of statistical capacity to collect data at a time of lockdown**, for example lack of experience and/or infrastructure to conduct telephone surveys or collect citizen generated data, or to carry out web scraping. Much routine survey work, and some population censuses, have been halted or postponed, and where data collection has continued, higher non-response rates are being observed.
- (vi) **Lack of statistical capacity to evaluate evidence generated by non-government organisations**, for example, the international organisations and agencies, the national and international media.

(b) To emphasise the importance of fundamental statistical principles and best statistical practice in relation to the analysis of observational data

A statement from the RSS (and others) to emphasise the importance of fundamental statistical principles in the current Covid-19 situation could be very helpful to statisticians in LMICs – for example, a restatement of the UN Fundamental Statistical Principles for a time of pandemic [<https://unstats.un.org/unsd/dnss/gp/FP-New-E.pdf>]. This would underline the need to address the weaknesses identified above, and the need for support to LMICs if they are to be able to do this.

In the medium term, it will be important to ensure that the efficacy of tests, vaccines and drugs are trialled in LMICs using proper statistical protocols (and that LMIC populations are not treated unethically and safety is assessed appropriately).

It is unfortunate that the pandemic seems to have reduced international collaboration rather than increased it, at least at the political level. There could be opportunities for the RSS to foster and encourage links between epidemiological centres of excellence and clinical trial facilities in the UK and centres in LMICs. Also, the RSS could usefully champion the need for comparative cross-country observational studies to explore issues such as whether countries with good health surveillance systems were able to use them to reduce infection and/or death rates, and issues of ‘unintended consequences’ such as whether lockdowns in higher income countries led to higher (non-Covid related) mortality in LMICs due to economic recession.

(c) To contribute to the design of future data collection

Online surveys and mobile phone apps such as the symptom tracker developed by Kings College, London - <https://covid.joinzoe.com/> - could be valuable research tools for understanding transmission etc in LMICs. Some but not all LMICs will have access to this level of technology or the expertise to exploit it – at least not within their official statistical services. Thus it could be very valuable if the RSS could act as broker between statistical organisations in LMICs (governmental, academic, NGOs) and their counterparts in the UK to facilitate transfer of this type of technology and know-how.

(d) To engage in increasing public understanding of the statistical issues linked to Covid-19

As already mentioned, the pandemic presents opportunities to raise public awareness in LMICs of the importance of a sound statistical evidence base, exemplified by the SDG framework, and to support statistical capacity building that can ensure that evidence base is available. It might be possible to generate a programme to improve statistical literacy - and counter misinformation - by building on the public interest in the statistical measurement of the progress of the pandemic.

As in the UK, the public in LMICs will obtain most of their information about statistics related to Covid-19 through the media. LMIC journalists need to know how to write about Covid related issues, and how to evaluate the evidence that they are being bombarded with from a variety of sources, national and international. Thus a 'quick win' might be to develop a version of the RSS training for journalists which concentrated on Covid-19 based examples.

ANNEX A

Data for Sustainable Development – A Statement for World Statistics Day 20/10/2015

In September, at the United Nations General Assembly, heads of states and governments came together to launch a new and ambitious agenda for world development from 2016 to 2030. The Sustainable Development Goals set out 17 goals with 169 targets and more than 300 indicators to monitor progress. In the lead up to the launch of the goals, a report by a High-Level Panel of Eminent Persons set up by the UN Secretary General to advise on the Post-2015 Development Agenda¹, recognised that for too long development efforts have been hampered by a lack of the most basic data about the social and economic circumstances in which people live.

If the world is to live up to the promises made by our leaders then more and better data will be essential. To abolish poverty everywhere, in all its forms, the world will need to ensure that everyone is counted, that progress is being monitored and that this information is made available in an accessible and useable form as widely as possible. This will require a true data revolution, one that makes use of the possibilities provided by new technology, but also one that keeps the information about individuals confidential and which provides information that is trusted and credible.

The signatories to this statement support the call for a data revolution and recognise the importance of data for policy making and for accountability in all countries of the world. The challenges of the new development agenda require new approaches including a much greater emphasis on open data and the use of new data sources. We have to take advantage of the opportunities provided by new technology and big data and national statistical systems are central to this effort. These systems – set up and financed by governments to collect, process and disseminate the information needed to manage government activities – are crucial. They operate within a framework of legislation and ethical principles that promote objectivity, independence, confidentiality and accountability. These principles are likely to be even more important in the next 15 years than they have been in the past.

Considerable progress has been made throughout the world in building and strengthening the capacity of national statistical systems since the launch of the Millennium Development Goals in 2000, but much still remains to be done. Too many countries operate under severe financial and human resource constraints. To meet the data challenges of the sustainable development goals, national statistical systems must be properly financed, the development of statistical skills and expertise must be supported, and access to new tools and technology must be provided. Also, support must be provided not just to the collection of data, but to its transformation into useful and actionable information. Above all a true data revolution that puts useful and useable information into the hands of everyone who needs it, especially the poor and the marginalised, must be pursued.

¹ A New Global Partnership: Eradicate Poverty and Transform Economies Through Sustainable Development; The Report of the High-Level Panel of Eminent Persons on the Post-2015 Development Agenda, UN, New York, 30 May 2013 http://www.un.org/sg/management/pdf/HLP_P2015_Report.pdf

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