Why Data Disaggregation is key during a pandemic

IMPORTANT NOTE: Stay informed with timely information on the Coronavirus Disease (COVID-19), available on the PAHO and WHO websites and through your national and local public health authorities

What does data disaggregation mean?

Disaggregated data refers to the separation of compiled information into smaller units to elucidate underlying trends and patterns. Compiled data may come from multiple sources (the public/private sectors and national/international organizations) and have multiple variables or "dimensions." To enhance understanding of a situation, the data is grouped by dimension, such as age, sex, geographic area, education, ethnicity, or other socioeconomic variables.

Why do we need disaggregated data during a pandemic?

When a pandemic occurs, an appropriate and efficient response requires that we identify and characterize the factors that slow or accelerate transmission and the populations that are most vulnerable. **High quality**, **accessible**, **trusted**, **timely**, **open,** and **reliable** disaggregated data is critical to

> The **better data** we have, the **smarter** the **response** will be

generating valuable information for decision-making in real time. For instance, to determine if an intervention (e.g., mass self-screening) is effective, we need to know what proportion of the population has been tested. This may require an analysis by age, geographic area, and/or other socioeconomic variables.

Pandemics do not spread among or affect different population subgroups in the same manner. With COVID-19, for example, research shows that older adults have a higher risk of developing health complications. Age appears to be a crucial determinant, so the current response and control measures have been implemented with this focus. That said, the relationship between socio-demographic determinants and the spread of respiratory disease is a complex one.

The current COVID-19 pandemic highlights the importance of data disaggregation for allocating limited health resources and policy planning during and after the crisis. Hospitalization and mortality rates for COVID19 vary greatly by age group; so, accurate population-level data is imperative for determining the relative size of

> Data disaggregation is key to discovering confounders in clinical trials, such as those pursuing a vaccine for COVID-19/SARS-CoV-2

each age group. These proportions are used in models to estimate the resource requirements of any given hospital. Likewise, as countries begin to loosen physical-distancing measures, disaggregated

data analysis will permit governments to adjust guidelines according to relative risks, thereby shielding vulnerable age groups.

Ensuring that data collected are sufficiently disaggregated by the appropriate dimensions enables more effective interventions and supports policies and strategies to address the underlying health inequities that fuel disease. A significant level of data disaggregation is required to insure **no one is left behind**.

What is the minimum set of suggested disaggregation?

Once collected, data can be divided by various dimensions, depending on the information available and the objectives sought. In accordance with the *Fundamental Principles of Official Statistics*, indicators should be disaggregated by sex, age, education, income/economic status, ethnic origin, geographic location, and disability.

Interoperability is key to analyzing disaggregated data across national databases, registries, and information systems (see related factsheet)

What are the principles of data disaggregation?

The *Global Partnership for Sustainable Development Data* sets for the following criteria:

- All populations must be included in the data
- All data should, wherever possible, be disaggregated in order to accurately describe all populations
- Data should be drawn from all available sources
- Those responsible for the collection of data and production of statistics must be accountable
- Human and technical capacity to collect, analyze, and use disaggregated data must be improved, including through adequate and sustainable financing

What are some of the benefits of data disaggregation?

Disaggregated data offers many benefits, such as: accurate health situation analysis; enhanced understanding of a population's particular characteristics; problem detection; patterns and needs identification; equity monitoring; financing structures and plans for resource targeting; project monitoring and evaluation; progress measurement; routine comparison and trends analyses to inform and improve programs; improved health information systems; and more.

Solid and accurate disaggregated data is essential for targeting interventions during a pandemic

Where can I find technical information about data disaggregation?

- Pan American Health Organization. Public Health in the Americas. Washington DC: PAHO; 2002. Pp.67 https://iris.paho.org/handle/10665.2/2748
- Organization for Economic Cooperation and Development. Development Co-operation Report, 2018: Joining Forces to Leave No One Behind. https://doi.org/10.1787/dcr-2018-en
- ONU México. Datos: Cómo surgieron los ODS. Una cronología de lo más destacado del proceso de conformación de la Agenda 2030 para el Desarrollo Sostenible; 2016. http://www.onu.org.mx/linea_del_tiempo_ods/
- UNSD. Background document. Data disaggregation and SDG Indicators. IAEG-SDGs, 2019.
- GPSDD (2018), Inclusive Data Charter, GPSDD. http://www.data4sdgs.org/sites/default/files/2018-08/IDC_onepager_ Final.pdf
- United Nations. Fundamental Principles of Statistics. 2013/21. Resolution 68/261
- United Nations, Economic and Social Council. Report of the Inter-Agency and Expert Group on Sustainable Development Goal Indicators; March 2016. https://unstats.un.org/unsd/statcom/47th-session/documents/2016-2-IAEG-SDGs-Rev1-E.pdf
- United Nations. Overview of standards for data disaggregation; June 2018. Doi: https://unstats.un.org/sdgs/files/Overview%20of%20Standards%20for%20Data%20Disaggregation.pdf
- National Forum on Education Statistics. Forum Guide to Collecting and Using Disaggregated Data on Racial/Ethnic Subgroups. https://nces.ed.gov/forum/pdf/Disaggregated_Data_PPT.pdf

Contact information
Tel: +1 (202) 974 3531 ● FAX: +1 (202) 775 4578 ● Email: emergencies@paho.org

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