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Vaccination in Africa and how it can be improved

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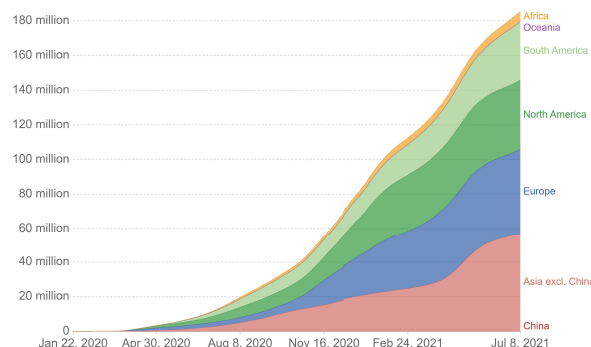
Co-Director African Leadership in Vaccinology Expertise (ALIVE)

COVID-19 Deaths and testing rates in Africa (9 July 21)

COVID-19 cases

Cumulative confirmed COVID-19 cases

The number of confirmed cases is lower than the number of actual cases. The main reason for this is limited testing.

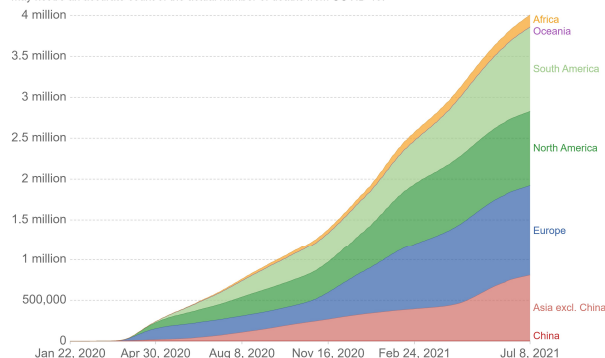


Source: Johns Hopkins University CSSE COVID-19 Data – Last updated 9 July, 06:03 (London time) OurWorldInData.org/coronavirus • CC BY

COVID-19 deaths

Cumulative confirmed COVID-19 deaths

Limited testing and challenges in the attribution of the cause of death means that the number of confirmed deaths may not be an accurate count of the actual number of deaths from COVID-19.

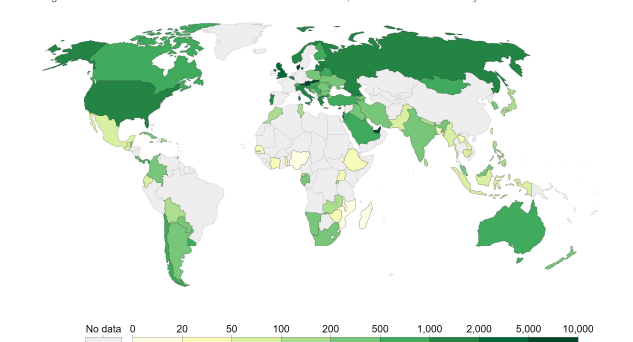


Source: Johns Hopkins University CSSE COVID-19 Data – Last updated 9 July, 06:03 (London time) OurWorldInData.org/coronavirus • CC BY

COVID-19 testing rate per 1,000

Total COVID-19 tests per 1,000 people

The figures shown relate to the closest date for which we have data, with a maximum of 10 days' difference.

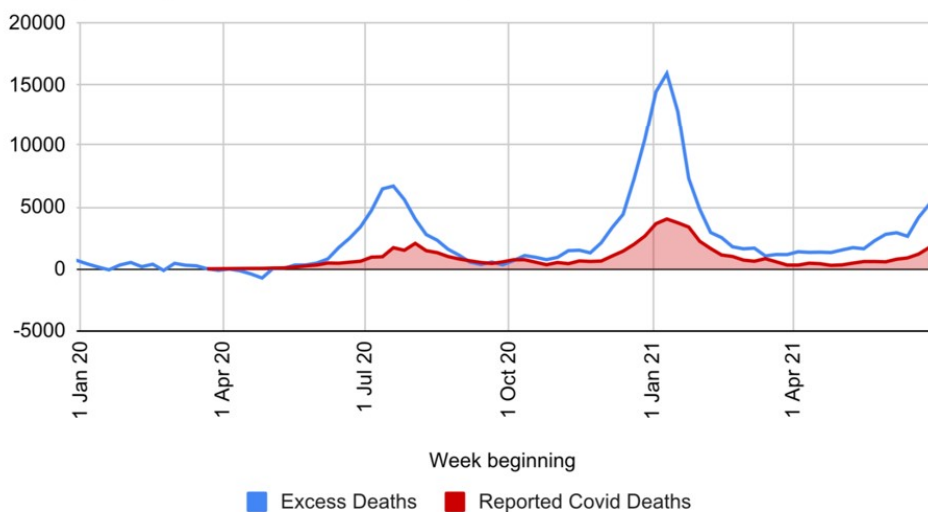


Source: Official sources collated by Our World in Data
Note: Comparisons of testing data across countries are affected by differences in the way the data are reported. Details can be found at our Testing Dataset page.

	Population	COVID-19 reported cases	COVID-19 reported deaths	Testing rate/1000 population
Global	7.8 billion	185,51 million	4 million	-
Africa	1.3 billion (17%)	5.82 mil (3.2%)	148,701 (3.7%)	-
South Africa	59 million [4.5%]	2.135 [36.7%]	63,499 [42.8%]	220

Reported and modelled COVID-19 deaths in South Africa, 30 June 2021

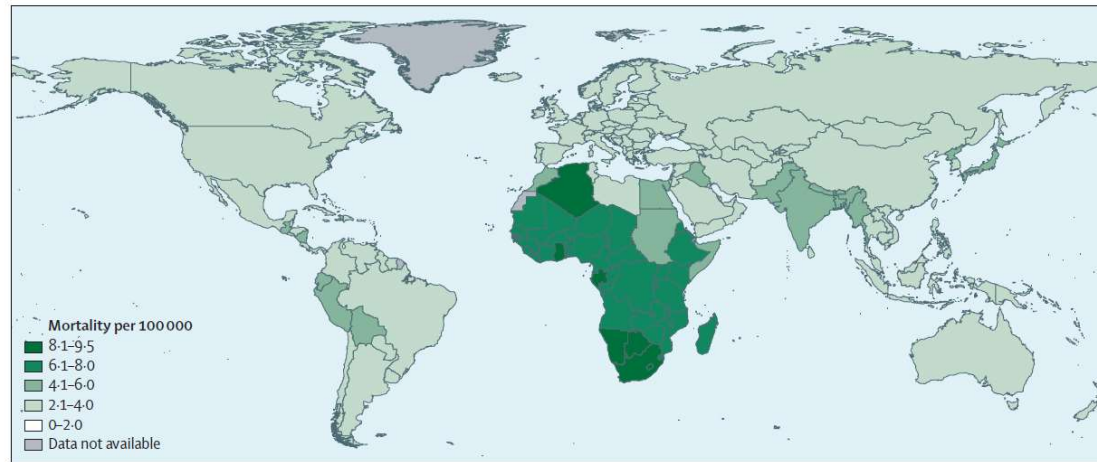
RSA (Natural) Excess Deaths and Reported Covid-19 Deaths



Estimated number of excess natural deaths of persons 1+ years and death rates by province and metro, South Africa 2020/2021

Cumulative Weekly : Excess deaths			
Region	Excess deaths 3 May 2020 - 3 July 2021	Excess deaths per 100,000 population	Age-standardised excess death rate per 100,000 population
South Africa	182,369	306	306
Province			
Eastern Cape	34,400	523	421
Free State	10,644	366	366
Gauteng	36,520	234	257
KwaZulu-Natal	39,852	348	401
Limpopo	16,241	275	241
Mpumalanga	13,077	272	293
Northern Cape	5,739	490	459
North West	8,578	213	219
Western Cape	17,318	245	216

Experience from 2009 H1N1 Pandemic

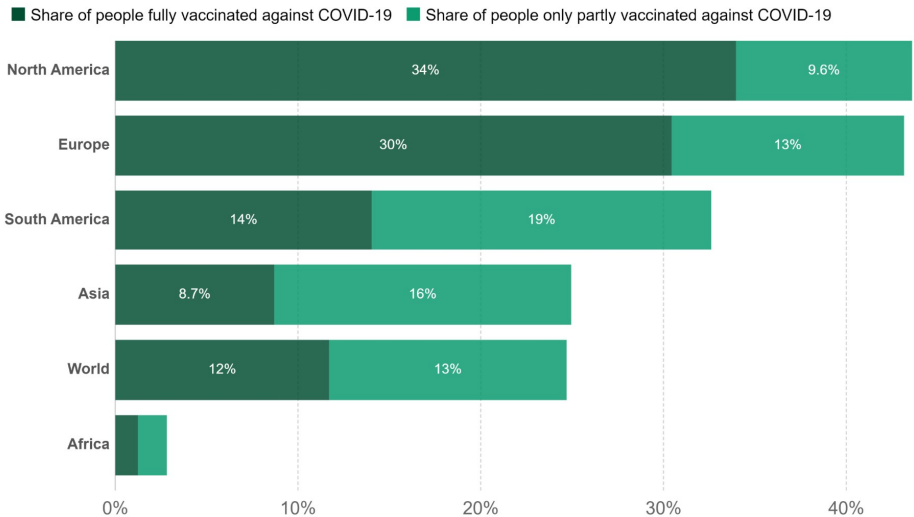


- Pandemic observed cases 491382 lab - confirmed cases; 18449 deaths.
- Estimated 284000 deaths.
- Africa and Southeast Asia (38% of the global population)
 - 5% reported cases during pandemic
 - 51% of deaths based on modelling post-pandemic.

Global status of COVID-19 vaccination, 9 July 2021

Share of people vaccinated against COVID-19, Jul 7, 2021

This data is only available for countries which report the breakdown of doses administered by first and second doses.

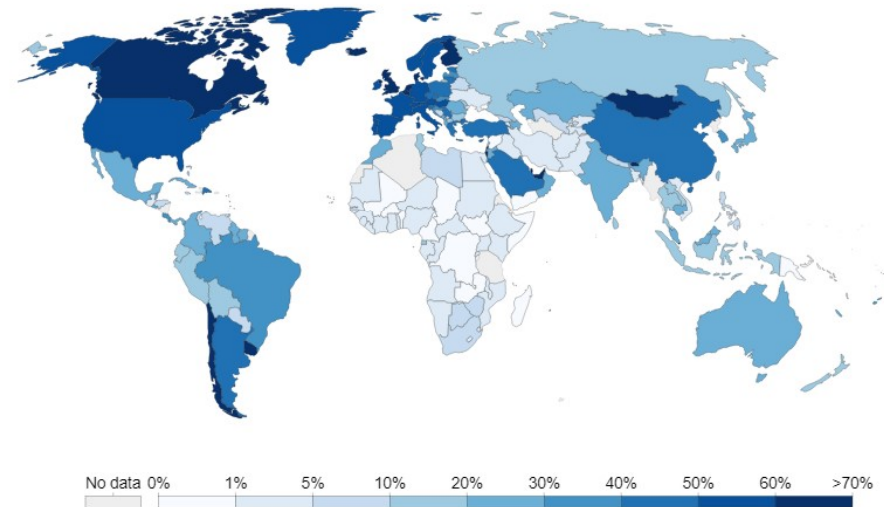


Source: Official data collated by Our World in Data

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Share of people who received at least one dose of COVID-19 vaccine

Share of the total population that received at least one vaccine dose. This may not equal the share that are fully vaccinated if the vaccine requires two doses. This data is only available for countries which report the breakdown of doses administered by first and second doses.



Source: Official data collated by Our World in Data

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- **24.7%** of the world population has received at least one dose of a COVID-19 vaccine.
- **3.32 billion doses** have been administered globally, and **33.25 million** are now administered each day.
- Only **1%** of people in low-income countries have received at least one dose

African manufacturers of human vaccines



- Senegal: producer of prequalified vaccine (yellow fever).
- Egypt: DTP and some fill-finish
- South Africa: Fill finish
- Tunisia: very limited BCG and rabies
- Ethiopia: starting....

Mail Guardian

Vaccine technology transfer hub a win for South Africa

The first batch of locally manufactured jabs could be expected in the next nine to 12 months

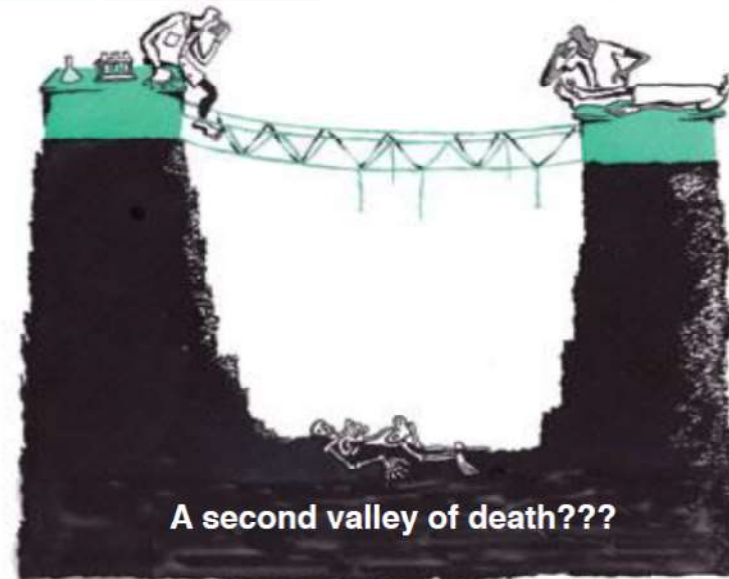
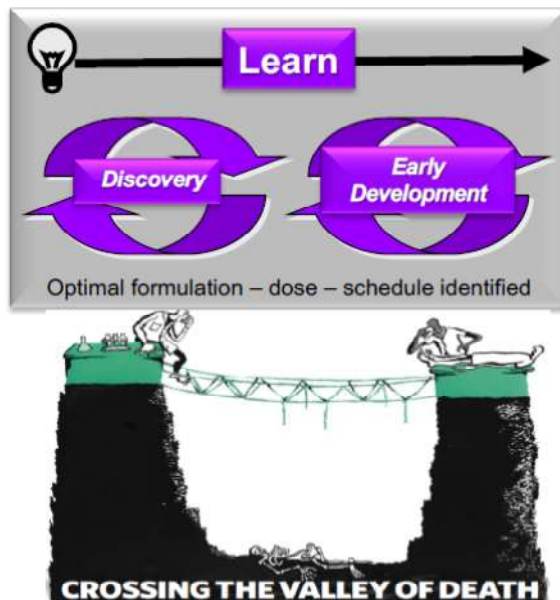
Eunice Stoltz 22 Jun 2021

A close-up photograph of numerous small glass vials, likely containing vaccines, arranged in a pile. The vials have white labels with some text and blue markings.

(Photo by Michael Caglo/Getty Images)

Progression of vaccine development and introduction for LMICs

Conventional pathway to impact (circa 2019)???



Drawn to scale



www.lancet.com Vol 387 May 7, 2016
<https://www.nature.com/articles/d41586-018-07758-3>
<https://stm.sciencemag.org/content/11/497/eaaw2888.full>

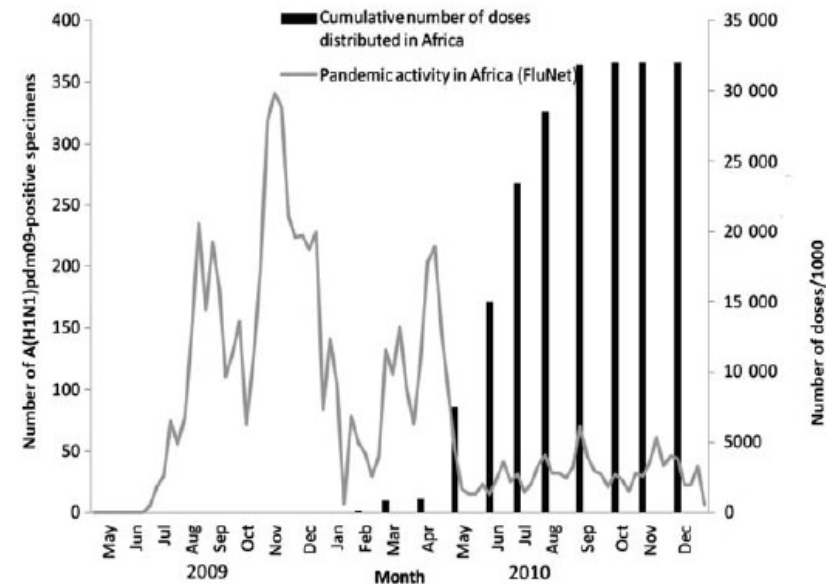
H1N1 Vaccine distribution in Africa.

Vaccines - available Sept 2009

Feb - Nov 2010: With WHO support 32.2 million doses were delivered to 34 countries in Africa.

Of the 19.2 million doses delivered to 24 countries that reported their vaccination activities to WHO, only 12.2 million doses (64%) were administered.

Population coverage in these countries varied from 0.4% to 11%, with a median coverage of 4%.



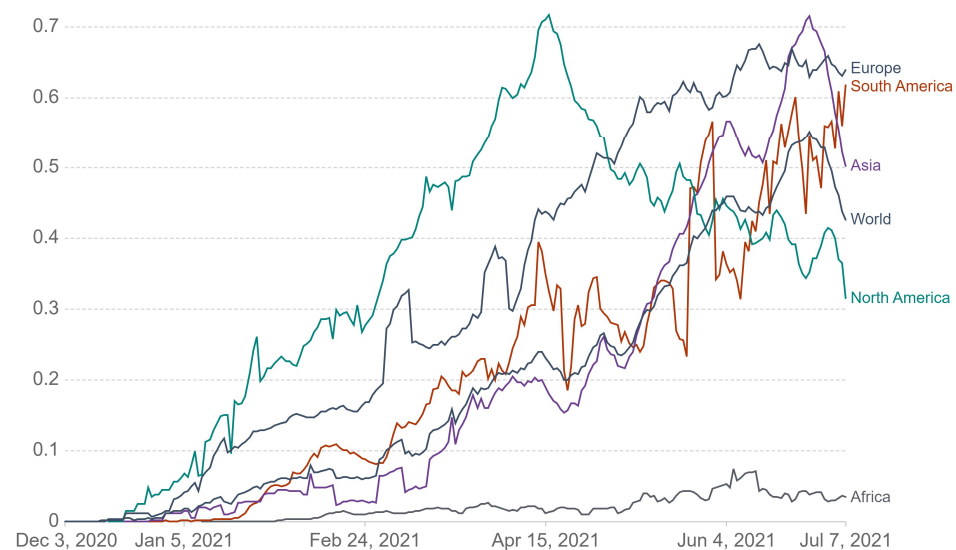
Key considerations:

- **Under-ascertainment of burden of COVID19 cases and death in Africa.**
- **Limited access with dependency on COVAX for most countries.**
- **No manufacturing capacity, and access not necessarily immediately remediable through wavering of TRIPS.**
- **Ongoing evolution of variants of concerns with heightened transmissibility and immune evasion potential.**
- **Goal of vaccination to be focussed on high-risk groups in immediate future, not dissimilar to observations in HIC (age, diabetes, underlying cardiac and lung disease)**
- **Navigating of “Valleys of death” at multiple levels, including the final mile of implementation.**

Daily COVID-19 vaccine doses administered per 100 people

Shown is the rolling 7-day average per 100 people in the total population. For vaccines that require multiple doses, each individual dose is counted.

Our World
in Data



Source: Official data collated by Our World in Data – Last updated 8 July 2021, 11:00 (London time)

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