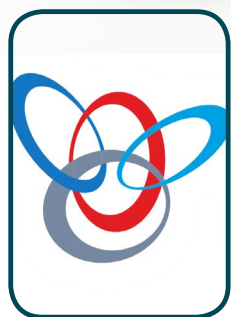




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EVALUATION OF THE IMPACT OF COVID-19 PANDEMIC ON PRIORITY DISEASE RESEARCH PRODUCTION AND FUNDING IN AFRICA

Background: Covid-19 is one of the greatest health crises of 21st century, affecting many aspects of life. It emerged at the time Africa is battling with a plethora of other public health issues. To guide disease response, research is indispensable, but it needs funding. We evaluated the impact of Covid-19 pandemic on Africa's priority disease (PD) research.

Methods: Published articles between 2018-2020 with an African affiliation was retrieved from Web of Sciences, MEDLINE and African Journals OnLine. Search terms for PD were identified by MeSH terms and queried from articles' title, keywords and keywords plus section using Biblioshiny package in R. PDs were defined as: (i) top 10 killer diseases (ICD-2019) in low/middle-income countries; (ii) neglected tropical diseases (NTDs); (iii) re-/emerging diseases and (iv) potential top 10 causes of future pandemics (GAVI and WHO). The big three are HIV/AIDS, TB and malaria. Research funding was compared between the period before (2018-2019, P1) and during Covid-19 (2020-2021, P2).

Results: Globally, 427405 articles with African affiliations were published during the period 2018-2021, 23.8% on PID research. Among PID research papers (n=101684), 49.4% were funded. Overall, PID research production significantly decreased from P1 to P2 for the big-three (HIV/AIDS, TB, malaria), NTDs and infections classified as potential next pandemics, $P < 0.05$.

Concerning research funding, HIV/AIDS was the top killer infectious diseases with the highest funded papers. Significant decrease on research funding from P1 to P2 was observed for the big three, NTDs, re-/emerging diseases and potential next pandemics.

According to countries, Egypt, South Africa (SA) and Nigeria were the top three countries conducting PID research on top killer and re-/emerging infections; South Africa, Egypt and Ethiopia in NTDs; South Africa, Uganda and Kenya on big three; Nigeria, South Africa and Sierra Leone on potential next pandemics. Most of these countries showed a decrease in their research funding from P1 to P2.

Conclusions: In sum, Covid-19 pandemic played a role in the significant decrease of PD research funding in Africa, especially in countries with the highest research capacity.