

Project Title: Africa's Management of the Covid-19 Pandemic.

Data: This project uses data from two main sources

- 1- The website of the World Health Organization (<https://www.who.int/>)
- 2- World meters (<https://www.worldometers.info/>)

Input files:

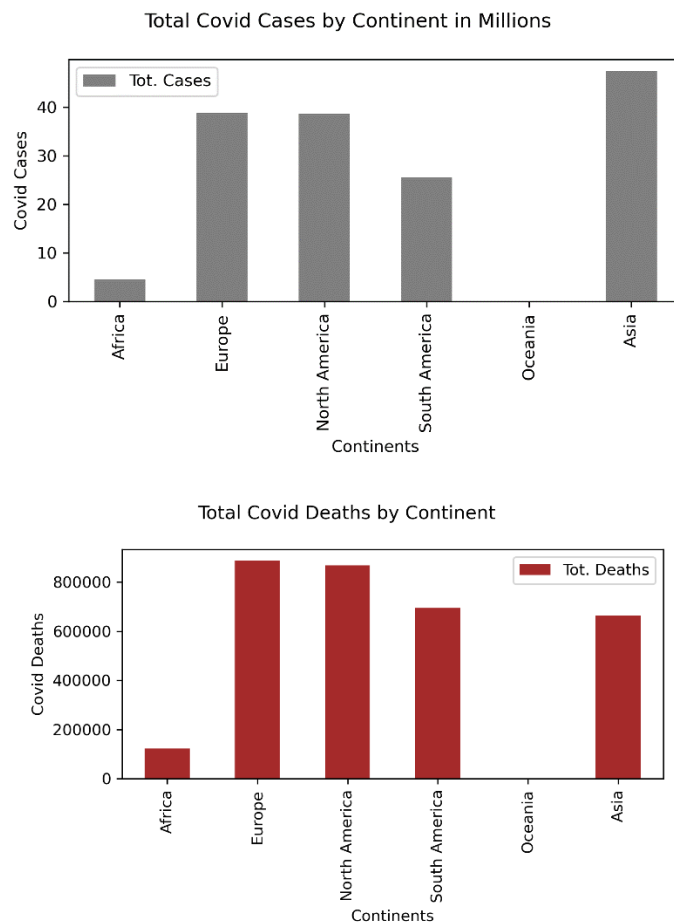
- Covid_wrld.csv: Covid-19 data by Country up to May 6, 2021.
- C and C.csv: List of countries and continents
- World_POP.csv: World population data
- Health expenditure.csv: Health Expenditure by country
- Vaccines.csv: Covid-19 vaccination data by country
- World_GDP2021: Continents GDP 2021.

Output files:

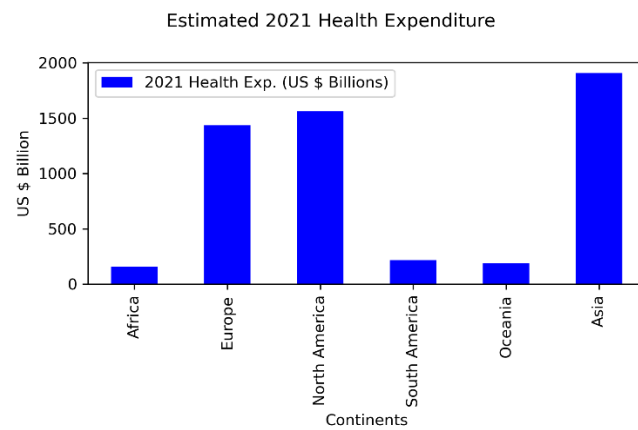
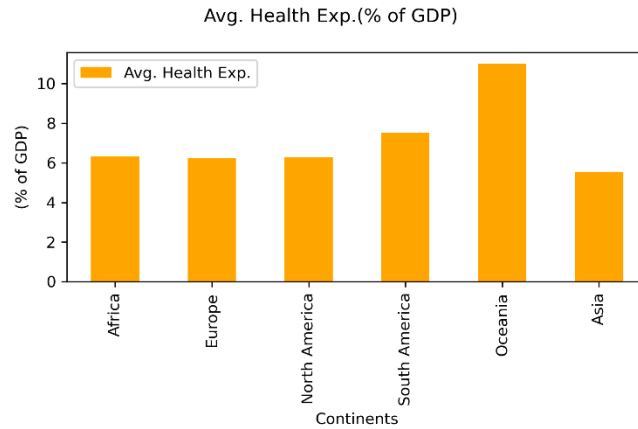
- Scripts:
 - 1- Covid_Data.py: Analysis of Covid-19 data
 - 2- Health_Exp.py: Analysis of Health Expenditure
 - 3- pop.py: Analysis of population data
 - 4- Covid_Tests.py: Analysis of Covid-19 vaccination data
- PNG files:
 1. World-Cases: Total Covid Cases by Continent in Millions
 2. World-Deaths: Total Covid Deaths by Continent
 3. Continent_Share_of_Cases: Continent % of Cases
 4. Average: Average cases per 1M people by continent
 5. Continent_Share_Tests: Continent % of World Covid Tests
 6. World-Tests: Total Covid Tests by Continent
 7. Avg. Health Exp: Average health expenditure by continent (% of GDP)
 8. Estimated 2021 Health Expenditure: Estimated 2021 Health Expenditure by continent
 9. Median-Age: Median Age by continent
 10. Total Doses per 100 Residents: Total Doses per 100 residents in each continent
- CSV files:
 1. CovidbyContinent.csv: Covid-19 data summary by Continent
 2. Covid_population.csv: Combined Covid and population data by country
 3. TestsbyContinent.csv: Covid tests summary by continent
 4. Continents Average Health Expenditure 2010-2018.csv: Continents' health expenditure summary
 5. population_summary.csv: Population summary by continent

Since the beginning of the Covid-19 pandemic, there have been many scientific and media articles theorizing about Africa's low Covid infections and deaths. Africa's reported Covid statistics looked much better than scientists and health experts expected given the weak state of the health system in the continent.

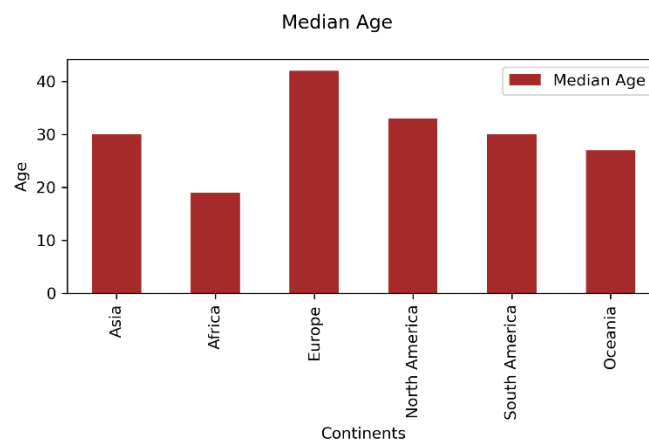
By the end of the first week of May, Africa recorded only 2.93% of global Covid-19 cases. Africa had the second lowest number of cases per 1 million population (6794.27 per 1 million people). Oceania had the lowest number of cases per 1 million (403.75 per 1 million people). Africa has also the second lowest number of Covid-19 related deaths.



The health system in Africa faces many challenges, especially financial ones. Africa spends 6.34% of its GDP on health (approximately 158 billion US dollars in 2021). That is to say, Africa spends 9 times less than Europe on health and 10 times less than North America, while it has twice the population of each of these two continents.

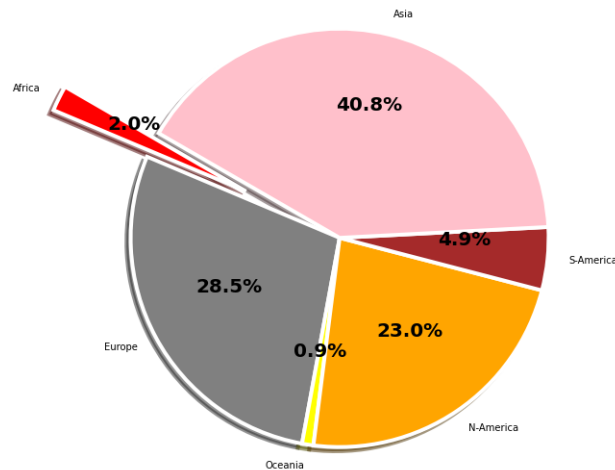


One of the theories behind Africa's low rate of Covid-19 deaths is that it is a young continent. The median age among African countries is 19 (27 in Oceania, 42 in Europe, 30 in Asia and South America, and 33 in North America). The analysis of the top ten countries in terms of Covid-19 shows that the average age among these ten countries is 30.15.



In terms of Covid testing, Africa has the lowest number of administered tests. Only 2% of tests administered globally were recorded in Africa. This is so far the most apparent reason behind Africa's low recorded Covid cases and deaths.

Continent % of World Covid Tests



Africa has also a very slow Covid-19 vaccine rollout. By the time of this analysis, only 8 African countries have started their vaccination campaigns. Morocco, the leading country in the number of vaccines, has only vaccinated 11% of its population. Tunisia is second with only 1% vaccinated people of the country's population.

Total Doses per 100 Residents

