

Analyzing the Impact of COVID-19 Deaths and Vaccinations in Africa

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GitHub : <https://github.com/Mohamed-ME21/daily-new-confirmed-covid-19-deaths-per-million-people>

Analyzing the Impact of COVID-19 Deaths and Vaccinations in Africa

Location	date	total_cases	new_cases	total_deaths	population
Afghanistan	01/01/2021	52513	183	2201	39835428
Afghanistan	01/01/2022	158107	23	7356	39835428
Afghanistan	01/02/2021	55059	36	2404	39835428
Afghanistan	01/02/2022	163555	629	7417	39835428
Afghanistan	01/03/2020	5	0		39835428
Afghanistan	01/03/2021	55733	19	2444	39835428
Afghanistan	01/03/2022	173879	220	7609	39835428
Afghanistan	01/04/2020	192	26	4	39835428
Afghanistan	01/04/2021	56517	63	2489	39835428
Afghanistan	01/04/2022	177782	35	7670	39835428
Afghanistan	01/05/2020	2171	344	64	39835428
Afghanistan	01/05/2021	59939	194	2631	39835428
Afghanistan	01/05/2022	178899	20	7683	39835428
Afghanistan	01/06/2020	15836	656	269	39835428

```
-- select data that we are going to be using
SELECT
    Location,
    date,
    total_cases,
    new_cases,
    total_deaths,
    population
FROM
    Coviddeath
ORDER BY Location,date;
```

Analyzing the Impact of COVID-19 Deaths and Vaccinations in Africa

Location	date	total_cases	total_deaths	Death_Percentage
Africa	01/01/2021	2788203	66126	2.3716350638744736
Africa	01/01/2022	9796727	228636	2.3337998496844916
Africa	01/02/2021	3582291	91479	2.553645139381474
Africa	01/02/2022	10914089	239430	2.1937699060361338
Africa	01/03/2020	4		0
Africa	01/03/2021	3906070	104021	2.663060313819261
Africa	01/03/2022	11340541	248899	2.1947718367227806
Africa	01/04/2020	6360	233	3.6635220125786163
Africa	01/04/2021	4239521	113165	2.6692874029872713
Africa	01/04/2022	11559547	251961	2.1796788403559413
Africa	01/05/2020	40468	1690	4.176139171691213
Africa	01/05/2021	4565640	122066	2.673579169623536

```
-- Looking at Total Cases VS Total Deaths  
-- Show likelihood dying if you contract covid in Africa
```

```
SELECT  
    Location,  
    date,  
    total_cases,  
    total_deaths,  
    (total_deaths / total_cases)*100 AS Death_Percentage  
FROM  
    Coviddeath  
WHERE Location = 'Africa'  
ORDER BY  
    date,  
    Location;
```

Analyzing the Impact of COVID-19 Deaths and Vaccinations in Africa

Location	MAX_cases	MAX_deaths	Death_Percentage
Africa	11951914	99812	0.835113104060153

-- Show Max Total Cases and Total Deaths in Africa

SELECT

Location,

MAX(total_cases) AS MAX_cases,

MAX(total_deaths) AS MAX_deaths,

(MAX(total_deaths) / MAX(total_cases)) * 100 AS Death_Percentage

FROM

Coviddeath

WHERE

Location = 'Africa'

GROUP BY

Location

ORDER BY

Location;

Analyzing the Impact of COVID-19 Deaths and Vaccinations in Africa

Location	date	total_cases	population	Percentage_population
Africa	01/01/2021	2788203	1373486472	0.2030
Africa	01/01/2022	9796727	1373486472	0.7133
Africa	01/02/2021	3582291	1373486472	0.2608
Africa	01/02/2022	10914089	1373486472	0.7946
Africa	01/03/2020	4	1373486472	0.0000
Africa	01/03/2021	3906070	1373486472	0.2844
Africa	01/03/2022	11340541	1373486472	0.8257
Africa	01/04/2020	6360	1373486472	0.0005
Africa	01/04/2021	4239521	1373486472	0.3087
Africa	01/04/2022	11559547	1373486472	0.8416
Africa	01/05/2020	40468	1373486472	0.0029
Africa	01/05/2021	4565640	1373486472	0.3324

-- Looking at Total Case VS Population in Africa
-- Show what percentage got Covid

```
SELECT
    Location,
    date,
    total_cases,
    population,
    (total_cases / population) * 100 AS Percentage_population
FROM
    Coviddeath
WHERE
    Location = 'Africa'
ORDER BY Location , date;
```


Analyzing the Impact of COVID-19 Deaths and Vaccinations in Africa

Location	population	HeighstInfection	percentage_population_infected
Africa	1373486472	11951914	0.8700

```
-- Looking at countries with hieghst infection rate compared to population
SELECT
    Location,
    population,
    MAX(total_cases) AS HeighstInfection,
    MAX((total_cases / population)) * 100 AS percentage_population_infected
FROM
    Coviddeath
WHERE
    Location = 'Africa'
GROUP BY
    Location, population
ORDER BY
    percentage_population_infected;
```

Analyzing the Impact of COVID-19 Deaths and Vaccinations in Africa

```
-- Looking at countries with hieghst Death count per population
```

```
SELECT
    Location,
    MAX(total_deaths ) AS Total_Death_Count
FROM
    Coviddeath
GROUP BY |
    Location
ORDER BY
    Total_Death_Count ASC ;
```

Location	Total_Death_Count
Anguilla	9
Bahamas	96
Afghanistan	979
Andorra	98
Bahrain	98
Azerbaijan	985
Albania	989
Antigua and Barbuda	99
Aruba	99
Angola	994
Armenia	995
Algeria	996
Argentina	99640
Africa	99812

Analyzing the Impact of COVID-19 Deaths and Vaccinations in Africa

date	total_cases	total_death	Death_Percentage
12/07/2020	16	16	100
13/07/2020	16	16	100
14/07/2020	16	16	100
15/07/2020	16	16	100
16/07/2020	16	16	100
17/07/2020	16	16	100
18/07/2020	16	16	100
19/07/2020	16	16	100
20/07/2020	16	16	100
21/07/2020	16	16	100
22/07/2020	16	16	100
23/07/2020	16	16	100
24/07/2020	16	16	100
25/07/2020	16	16	100

date	total_cases	total_death	Death_Percentage
27/02/2020	6	6	0
15/02/2020	2	2	0
16/02/2020	2	2	0
17/02/2020	2	2	0
18/02/2020	2	2	0
19/02/2020	2	2	0
20/02/2020	2	2	0
21/02/2020	2	2	0
22/02/2020	2	2	0
23/02/2020	2	2	0
28/01/2020	1	1	0
31/01/2020	1	1	0
02/02/2020	1	1	0
03/02/2020	1	1	0

-- Let's Break Things Down BY Continent

SELECT

continent, MAX(total_deaths) AS Total_Death_Count

FROM

Coviddeath

GROUP BY continent

ORDER BY Total_Death_Count;

SELECT

date,

SUM(new_cases IS NOT NULL) AS total_cases ,

SUM(new_deaths IS NOT NULL) AS total_death,

(SUM(new_deaths) / SUM(new_cases) IS NOT NULL) * 100 AS Death_Percentage

FROM

Coviddeath

GROUP BY date

ORDER BY Death_Percentage;

Analyzing the Impact of COVID-19 Deaths and Vaccinations in Africa

continent	population	date	Location	new_vaccinations	Rollingpeoplevaccination	Percentage_of_Population_Vacci
Asia	39835428	03/06/2021	Afghanistan	4015	4015	0.010078967897621183
Asia	39835428	27/01/2022	Afghanistan	6868	10883	0.02731990227392561
Asia	39835428	27/04/2022	Afghanistan	383	11266	0.028281357991183125
Asia	39835428	27/05/2021	Afghanistan	2859	14125	0.035458386439327326
Africa	44616626	22/11/2021	Algeria	23526	23526	0.052729222510012295
Africa	44616626	30/01/2021	Algeria	30	23556	0.052796462018441286
Africa	44616626	30/11/2021	Algeria	147230	170786	0.38278555621843746

-- Looking at Total population VS Total Vaccination

```
SELECT
    d.continent,
    d.population,
    d.date,
    d.Location,
    v.new_vaccinations,
    SUM(v.new_vaccinations) OVER (PARTITION BY d.Location ORDER BY d.Location,d.date) AS Rol,
    (SUM(v.new_vaccinations) OVER (PARTITION BY d.Location ORDER BY d.Location, d.date) / d.p
FROM
    Coviddeath d
    JOIN
    covidvaccination v ON d.Location = v.Location AND d.date = v.date
WHERE new_vaccinations != '';
```

Analyzing the Impact of COVID-19 Deaths and Vaccinations in Africa

```
-- Create tmper
DROP TABLE IF EXISTS percenpopulationvaccination;
CREATE TABLE Percent_PopulationVaccination (
    continent VARCHAR(255),
    Location VARCHAR(255),
    Date DATETIME,
    population NUMERIC,
    new_vaccinations NUMERIC,
    Rollingpeoplevaccination NUMERIC
);
UPDATE coviddeath
SET Date = STR_TO_DATE(Date, '%m/%d/%Y')
WHERE Date LIKE '%/%/%' AND LENGTH(Date) = 10;
```

```
INSERT INTO Percent_PopulationVaccination
(continent, Location, Date, population, new_vaccinations, Rollingpeoplevaccination)
SELECT
    d.continent,
    d.Location,
    d.date,
    d.population,
    v.new_vaccinations,
    SUM(v.new_vaccinations) OVER
    (PARTITION BY d.Location ORDER BY d.Location, d.date) AS Rollingpeoplevaccination
FROM
    Coviddeath d
JOIN
    covidvaccination v
ON
    d.Location = v.Location AND d.date = v.date
WHERE
    v.new_vaccinations != '';
```

continent	population	date	Location	new_vaccinations	Rollingpeoplevaccination	Percentage_of_Population_Vacci
Asia	39035428	03/06/2021	Afghanistan	4015	4015	0.010078967897621183
Asia	39035428	27/01/2022	Afghanistan	6868	10883	0.02731990227392561
Asia	39035428	27/04/2022	Afghanistan	383	11266	0.028281357991183125
Asia	39035428	27/05/2021	Afghanistan	2859	14125	0.035458386439327326
Africa	44616626	22/11/2021	Algeria	23526	23526	0.052729222510012295
Africa	44616626	30/01/2021	Algeria	30	23536	0.052796462018441286
Africa	44616626	30/11/2021	Algeria	147230	170786	0.38278555621843746

```
CREATE VIEW Percent_PopulationVaccinationView AS
SELECT
    d.continent,
    d.population,
    d.date,
    d.Location,
    v.new_vaccinations,
    SUM(v.new_vaccinations) OVER
    (PARTITION BY d.Location ORDER BY d.Location, d.date) AS Rolling_new_Vaccinations
FROM
    Coviddeath d
JOIN
    covidvaccination v
ON
    d.Location = v.Location AND d.date = v.date
WHERE
    v.new_vaccinations != '';
```

Recommendations Based on COVID-19 Data Analysis in Africa

•Focus Efforts on the Most Affected Areas:

- Analyze countries with the highest death rates relative to population to identify influencing factors, such as weak healthcare systems or delayed vaccination campaigns.

•Enhance Vaccination Campaigns:

- Allocate resources and support to countries with low vaccination rates to ensure the protection of the most vulnerable communities.
- Use vaccination rate data to improve vaccine distribution strategies.

•Analyze Gaps in Pandemic Response:

- Study periods with sharp increases in cases or deaths to identify mistakes or delays in response efforts.

Promote Regional and International Cooperation:

Support initiatives for collaboration among African countries and international organizations to share expertise and strengthen healthcare capacities.

•Conduct Awareness Campaigns:

- Launch comprehensive awareness campaigns focusing on the importance of vaccination and adherence to preventive measures, considering local cultures.