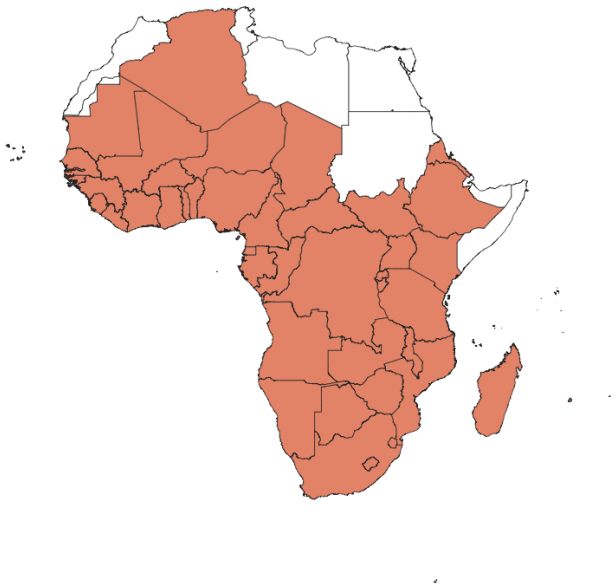
Covid19 situation report for WHO Africa

07/04/2020

COVID-19 Epidemic Response Unit, University of Edinburgh

We compare the size and rate of increase of the COVID-19 epidemic across the countries included in WHO Africa Region.



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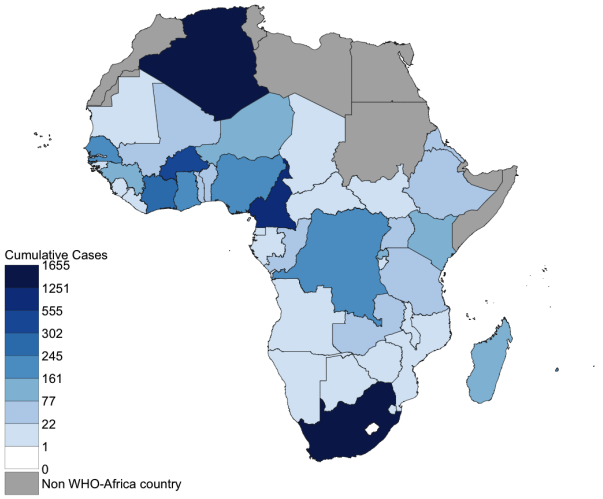
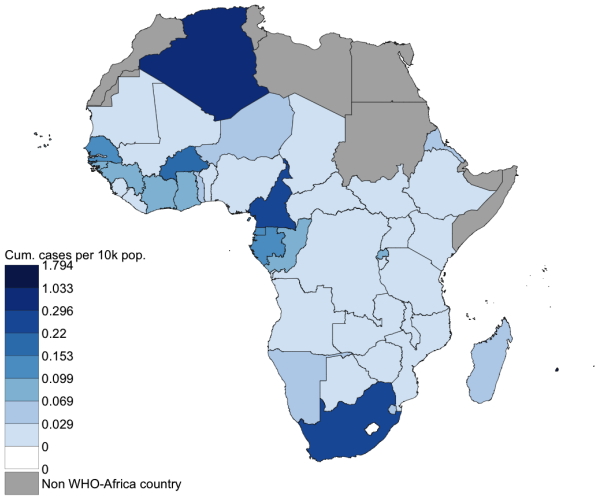
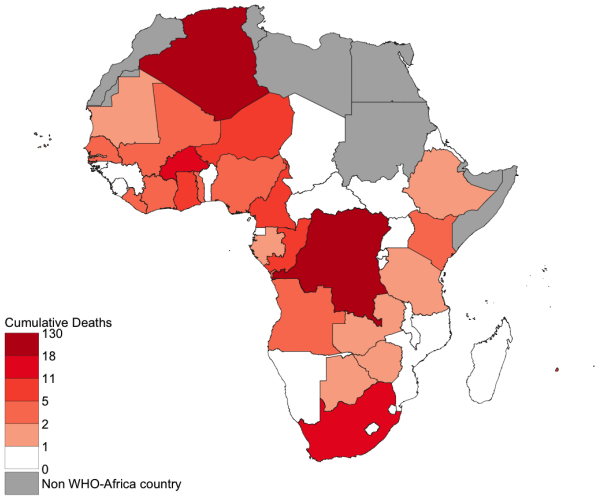
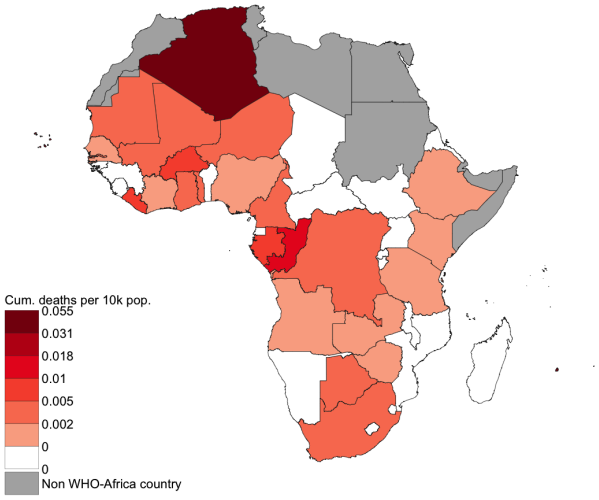
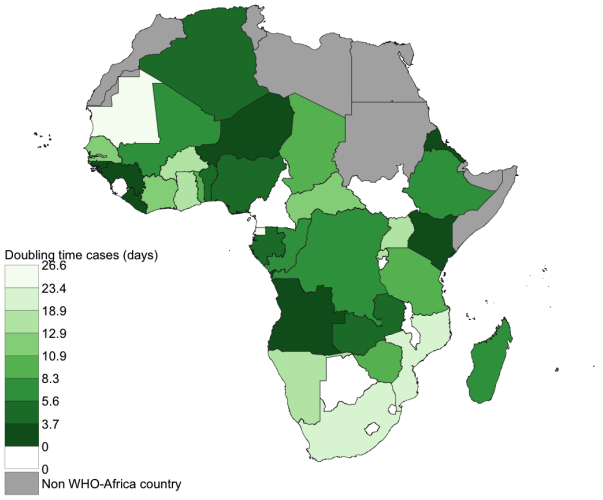
WHO Africa situation overview

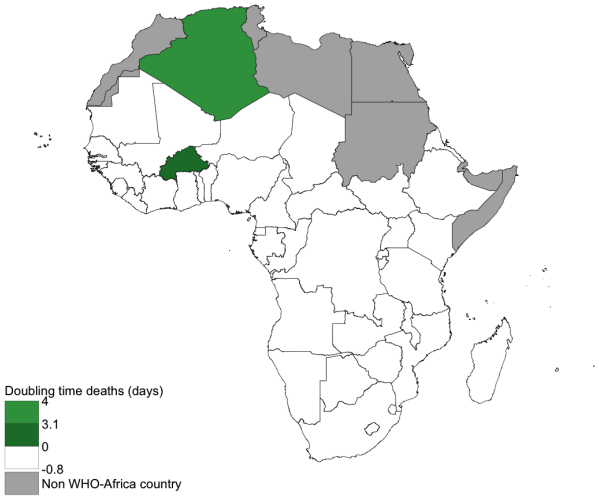












The maps above summarise the in-country situations:

- Top-left: cumulated reported cases.
- Top-right: cumulated reported cases per 10,000 population on a log10 scale.
- Middle-left: cumulated reported deaths.
- Middle-right: cumulated reported deaths per 10,000 population on a log10 scale.
- Bottom-left: Overview of doubling time of cumulative incidence. Doubling times are calculated over a 7 day period up to 06/04/2020.
- Bottom-right: Overview of doubling time of cumulative deaths per 10,000 population. Doubling times are calculated over a 7 day period up to 06/04/2020.

APPENDIX

Data

Sources and access

- Case counts for countries in WHO African region from WHO Coronavirus disease (COVID-2019) situation reports https://www.who.int/emergencies/diseases/novel-coronavirus-2019/situation-reports (accessed 2400 06/04/2020).
- Death counts for countries in WHO African region from WHO Coronavirus disease (COVID-2019) situation reports https://www.who.int/emergencies/diseases/novel-coronavirus-2019/situation-reports (accessed 2400 06/04/2020).
- Population counts from the World Bank (2018) https://data.worldbank.org/indicator/SP.POP.TOTL?locations=ZG (accessed 0900 30/03/2020).

Doubling time calculations

Calculated over prior 7 days using method described by *E. Vynnycky & R. White (2010) An Introduction to Infectious Disease Modelling*, page 74.

Confidence intervals calculated using bootstrapping of a simulated dataset with Poisson error structure, using method published here: https://doi.org/10.1101/2020.02.05.20020750.

Caveats

- Case count data are affected by any changes in testing strategy or testing effort over time and/or any variation in testing strategy or testing effort between regions.
- Case count data are likely a substantial under-representation of the true number of COVID-19 infections.
- Death data are considered more reliable but may lag behind case data by as much as 3 weeks.

Extended data tables

Cumulative incidence

Country	Cum. Incidence	ci.low	ci.upp
South Africa	1655	1573	1717
Algeria	1251	1215	1295
Cameroon	555	NA	NA
Burkina Faso	302	269	319
Cote d'Ivoire	245	236	255
Mauritius	227	215	244
Senegal	222	205	244
Nigeria	208	NA	NA
Ghana	205	178	215
Democratic Republic of the Congo	161	144	181
Niger	144	130	157
Kenya	142	128	149
Guinea	111	99	138
Rwanda	102	89	118
Madagascar	77	60	90
Uganda	48	42	59
Congo	45	34	46
Togo	44	32	49
Ethiopia	43	33	46
Mali	39	33	49
Zambia	39	31	47
Eritrea	29	23	35
Benin	22	16	31
United Republic of Tanzania	22	17	27
Gabon	21	16	28
Guinea Bissau	18	13	25
Equatorial Guinea	16	12	19
Namibia	16	9	27
Angola	14	10	22
Liberia	13	11	18
Mozambique	10	3	17
Seychelles	10	5	14
Central African Republic	9	5	12
Chad	9	5	15
Eswatini	9	7	14
Zimbabwe	9	5	13
Mauritania	6	2	9
Sierra Leone	6	3	8
Cape Verde	5	2	8
Botswana	4	0	8
Gambia	4	2	5
Malawi	4	2	8
Burundi	3	1	6
South Sudan	1	1	4
Comoros	0	NA	NA
Lesotho	0	NA	NA
Sao Tome and Principe	0	NA	NA

Cumulative incidence per 10,000 population

Country	Cum. Incidence per 10k pop.	ci.low	ci.upp
Cameroon	10.2066	NA	NA
Mauritius	1.7940	1.6992	1.9312
Seychelles	1.0335	0.5167	1.4003
Algeria	0.2962	0.2877	0.3067
South Africa	0.2864	0.2723	0.2971
Burkina Faso	0.1529	0.1362	0.1614
Senegal	0.1400	0.1294	0.1537
Equatorial Guinea	0.1222	0.0909	0.1417
Gabon	0.0991	0.0776	0.1305
Cote d'Ivoire	0.0977	0.0942	0.1016
Guinea Bissau	0.0960	0.0694	0.1339
Guinea	0.0894	0.0796	0.1111
Congo	0.0858	0.0646	0.0869
Rwanda	0.0829	0.0725	0.0962
Ghana	0.0689	0.0598	0.0722
Eswatini	0.0658	0.0545	0.1024
Namibia	0.0654	0.0386	0.1123
Niger	0.0642	0.0579	0.0700
Togo	0.0558	0.0408	0.0627
Eritrea	0.0479	0.0388	0.0582
Madagascar	0.0293	0.0230	0.0341
Kenya	0.0276	0.0249	0.0291
Liberia	0.0270	0.0228	0.0380
Zambia	0.0225	0.0179	0.0274
Mali	0.0204	0.0173	0.0257
Central African Republic	0.0193	0.0117	0.0259
Benin	0.0192	0.0143	0.0273
Democratic Republic of the Congo	0.0192	0.0172	0.0216
Botswana	0.0177	0.0020	0.0335
Gambia	0.0175	0.0088	0.0219
Mauritania	0.0136	0.0056	0.0207
Uganda	0.0112	0.0098	0.0138
Nigeria	0.0106	NA	NA
Sierra Leone	0.0078	0.0045	0.0105
Zimbabwe	0.0062	0.0033	0.0091
Chad	0.0058	0.0032	0.0095
Angola	0.0045	0.0034	0.0071
Ethiopia	0.0039	0.0031	0.0042
United Republic of Tanzania	0.0039	0.0031	0.0048
Mozambique	0.0034	0.0011	0.0056
Burundi	0.0027	0.0013	0.0055
Malawi	0.0022	0.0011	0.0042
Cape Verde	0.0020	0.0010	0.0032
South Sudan	0.0009	0.0009	0.0032
Comoros	0	NA	NA
Lesotho	0	NA	NA
Sao Tome and Principe	0	NA	NA

Cumulative deaths

Country	Cumulative deaths
Algeria	130
Democratic Republic of the Congo	18
Burkina Faso	15
South Africa	11
Cameroon	9
Niger	8
Mauritius	7
Congo	5
Ghana	5
Kenya	4
Mali	4
Nigeria	4
Liberia	3
Togo	3
Angola	2
Côte d'Ivoire	2
Senegal	2
Botswana	1
Cabo Verde	1
Ethiopia	1
Gabon	1
Gambia	1
Mauritania	1
United Republic of Tanzania	1
Zambia	1
Zimbabwe	1
Benin	0
Burundi	0
Central African Republic	0
Chad	0
Comoros	0
Equatorial Guinea	0
Eritrea	0
Eswatini	0
Guinea	0
Guinea-Bissau	0
Lesotho	0
Madagascar	0
Malawi	0
Mozambique	0
Namibia	0
Rwanda	0
Sao Tome and Principe	0
Seychelles	0
Sierra Leone	0
South Sudan	0
Uganda	0

Cumulative deaths per 10,000 populations

Country	Cumulative deaths per 10k pop.
Mauritius	0.0553227
Algeria	0.0307849
Cabo Verde	0.0183902
Congo	0.0095340
Burkina Faso	0.0075943
Liberia	0.0062254
Gabon	0.0047186
Botswana	0.0044363
Gambia	0.0043858
Togo	0.0038027
Cameroon	0.0035691
Niger	0.0035646
Mauritania	0.0022710
Democratic Republic of the Congo	0.0021411
Mali	0.0020967
South Africa	0.0019038
Ghana	0.0016797
Senegal	0.0012615
Cote d'Ivoire	0.0007978
Kenya	0.0007783
Zimbabwe	0.0006926
Angola	0.0006491
Zambia	0.0005763
Nigeria	0.0002042
United Republic of Tanzania	0.0001776
Ethiopia	0.0000916
Benin	NA
Burundi	NA
Central African Republic	NA
Chad	NA
Comoros	NA
Equatorial Guinea	NA
Eritrea	NA
Eswatini	NA
Guinea	NA
Guinea-Bissau	NA
Lesotho	NA
Madagascar	NA
Malawi	NA
Mozambique	NA
Namibia	NA
Rwanda	NA
Sao Tome and Principe	NA
Seychelles	NA
Sierra Leone	NA
South Sudan	NA
Uganda	NA

Doubling time (incidence)

Country	Incidence doubling time (days)	ci.low	ci.upp
Guinea Bissau	2.2	2.1	3.3
Angola	2.5	1.6	2.9
Guinea	2.5	2	2.7
Niger	2.5	2.3	3
Kenya	2.8	2.6	3.4
Eritrea	3.1	2.1	5.1
Liberia	3.3	2.4	7
Benin	3.7	2.4	4.6
Gabon	4.4	3.4	6.8
Algeria	4.8	4.6	5.1
Zambia	5.4	3.9	6.9
Congo	5.6	3.8	8.1
Mauritius	6.1	5.7	6.6
Mali	6.3	4.4	9
Madagascar	6.6	5.7	7.7
Ethiopia	6.8	5.3	8.9
Democratic Republic of the Congo	7.1	6.6	8
Chad	8.3	5	12
Zimbabwe	8.3	4.4	28.2
Togo	10.7	8.4	18.5
United Republic of Tanzania	10.7	6.3	13.9
Senegal	10.9	9.7	12
Cote d'Ivoire	12.3	10	12.6
Namibia	12.9	6.7	19.5
Rwanda	12.9	10.6	18.3
Uganda	12.9	10.2	19.9
Burkina Faso	15.8	14.3	19.6
Ghana	16.2	13.5	17
South Africa	18.9	17.8	19.7
Equatorial Guinea	23.4	11.5	44.3
Botswana	NA	NA	NA
Burundi	NA	NA	NA
Cape Verde	NA	NA	NA
Cameroon	NA	NA	NA
Central African Republic	NA	NA	NA
Comoros	NA	NA	NA
Eswatini	NA	NA	NA
Gambia	NA	NA	NA
Lesotho	NA	NA	NA
Malawi	NA	NA	NA
Mauritania	NA	NA	NA
Mozambique	NA	NA	NA
Nigeria	NA	NA	NA
Sao Tome and Principe	NA	NA	NA
Seychelles	NA	NA	NA
Sierra Leone	NA	NA	NA
South Sudan	NA	NA	NA

Doubling time (deaths)

Country	Deaths doubling time (days)	ci.low	ci.upp
Burkina Faso	3	1.7	5.9
Algeria	3.2	2.7	3.4
Cameroon	3.2	2.2	6.3
Angola	NA	NA	NA
Benin	NA	NA	NA
Botswana	NA	NA	NA
Burundi	NA	NA	NA
Cape Verde	NA	NA	NA
Central African Republic	NA	NA	NA
Chad	NA	NA	NA
Comoros	NA	NA	NA
Congo	NA	NA	NA