

COVID-19 situation report for WHO Africa Region $\frac{05/06/2020}{}$

Produced by the TIBA COVID-19 Pandemic Response Unit



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Section 1: Overview of WHO Africa Region 04/06/2020

Overview



Total Reported Cases 113168

Total Reported Deaths 2833

Methods

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

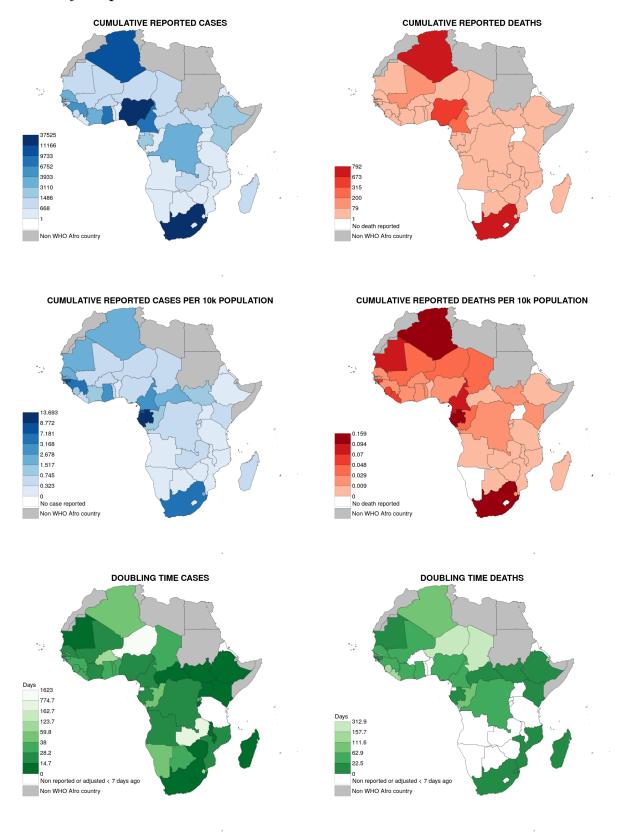
The maps below summarise the in-country situations:

- Top row: cumulative reported cases (left) and deaths (right).
- Middle row: cumulative reported cases (left) and deaths (right) per 10,000 population on a log10 scale.
- Bottom row: overview of doubling time of cumulative reported cases (left) and deaths (right). Doubling times are estimated over a 7 day period up to 04/06/2020. Doubling time is an easily understood measure of how fast the epidemic is growing when the case reproduction number, R, is greater than 1. The lower the doubling time the faster the national COVID-19 epidemic is growing. For individual country plots we use a related metric, the relative increase in the size of the national epidemic over the past 7 days. A relative increase of 2 corresponds to a doubling time of exactly 7 days.

Caveats:

- Colour scales are non-linear and are re-calibrated every week.
- WHO African region countries shaded in white either have no reported deaths/cases or, for doubling time calculations, have reduced their cumulative total cases/deaths in the last 7 days due to retrospective changes in reporting procedures.

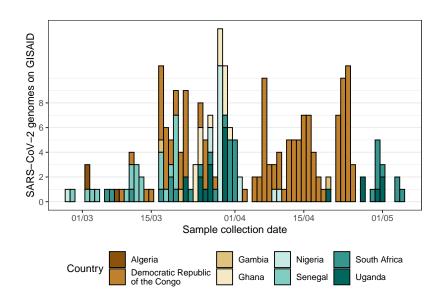
Summary maps

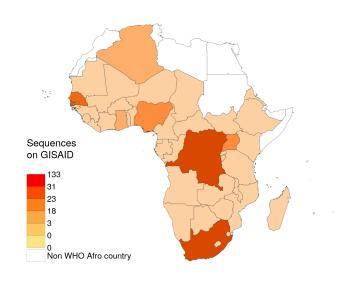


Sequencing

As of 04/06/2020, SARS-CoV-2 genomes have been collected and sequenced from 246 patients across Africa and submitted to GISAID. Each genome's country of origin and collection date is summarised below:

- Top graph: SARS-CoV-2 genomes available on GISAID by collection date. Six genomes from the Democratic Republic of the Congo with unknown collection dates are removed.
- Bottom map: SARS-CoV-2 genomes available on GISAID by country.





Section 2: Individual country situations

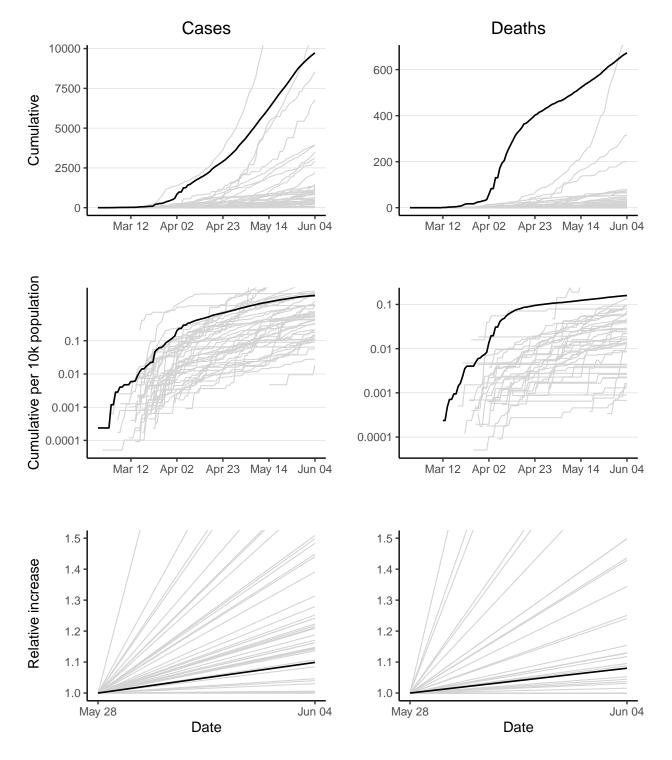
As of 04/06/2020, each panel below shows for each country:

- Top row: cumulative reported cases (left) and deaths (right).
- \bullet Middle row: cumulative reported cases (left) and deaths (right) per 10,000 population on a log10 scale.
- Bottom row: relative increase in cumulative number of cases (left) and deaths (right) over the 7 day period leading up to 04/06/2020. A relative increase of 2 corresponds to a doubling time of exactly 7 days.

Caveats;

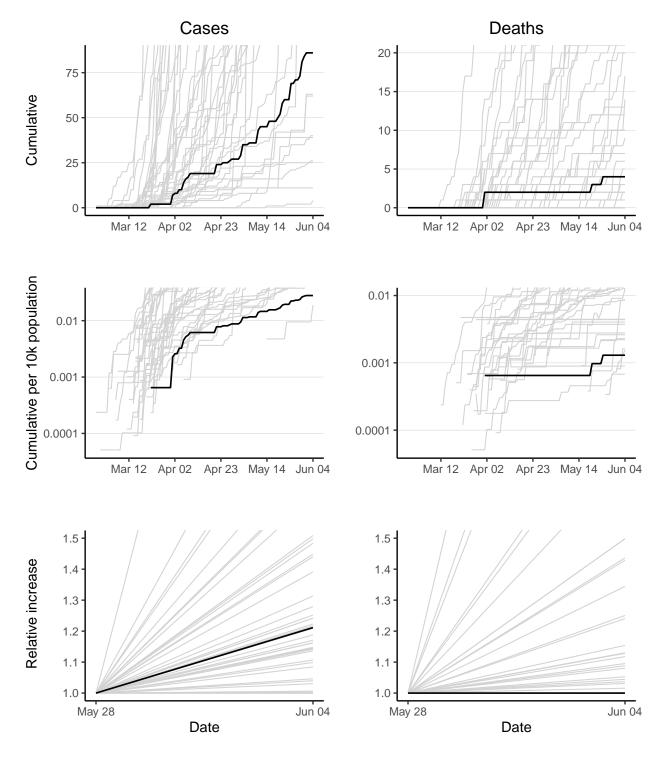
• Retrospective changes in reporting policy may cause cumulative deaths/cases counts to drop as described in WHO Sit Rep Number 105, published on 04/05/2020.

Algeria



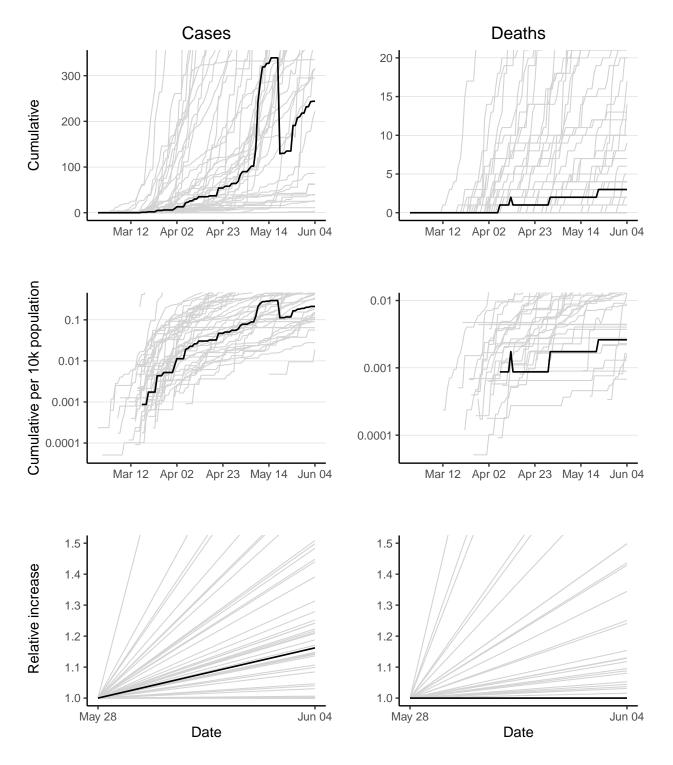
Algeria has 9733 reported case(s) (3rd in the region) and 673 reported death(s) (2nd). Cumulative counts per 10,000 population for reported cases and deaths are 2.3 (13th) and 0.16 (2nd) respectively. Doubling times over the last 7 days for reported cases and deaths are 51.4 days (36th) and 62.9 days (21st).

Angola



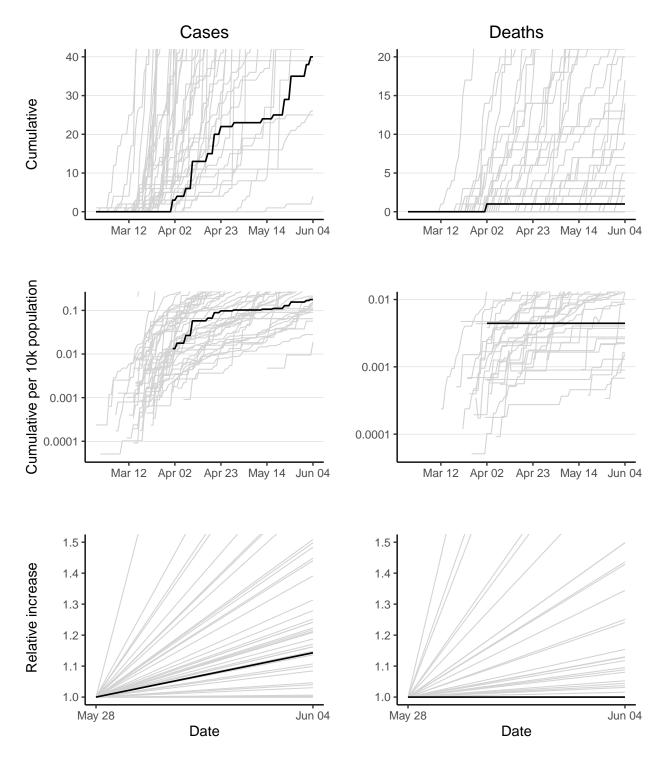
Angola has 86 reported case(s) (39th in the region) and 4 reported death(s) (31st). Cumulative counts per 10,000 population for reported cases and deaths are 0.028 (46th) and 0.0013 (40th) respectively. The doubling time over the last 7 days for reported cases is 25.3 days (22nd). The doubling time of reported deaths cannot be calculated as no new deaths have been reported in last 7 days.

Benin



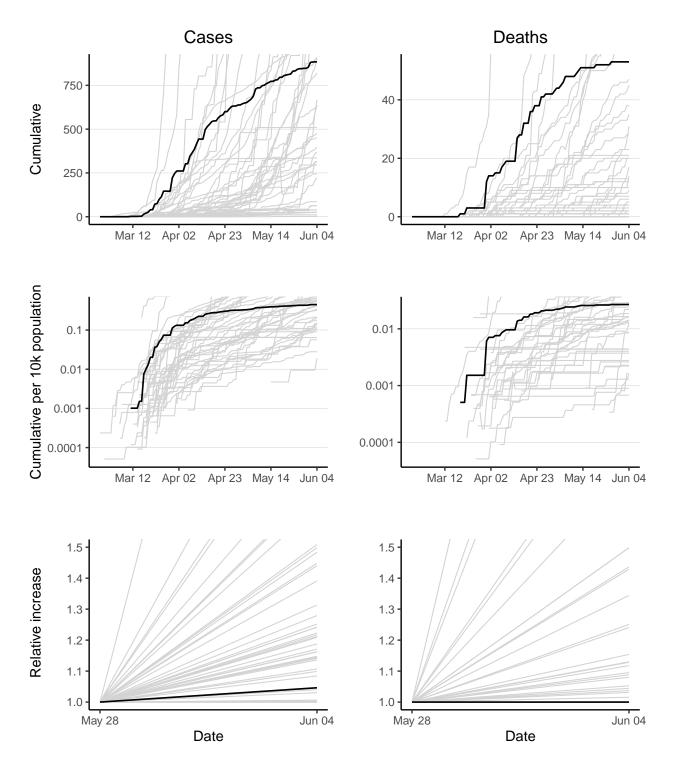
Benin has 244 reported case(s) (37th in the region) and 3 reported death(s) (35th). Cumulative counts per 10,000 population for reported cases and deaths are 0.21 (34th) and 0.0026 (35th) respectively. The doubling time over the last 7 days for reported cases is 32.3 days (27th). The doubling time of reported deaths cannot be calculated as no new deaths have been reported in last 7 days.

Botswana



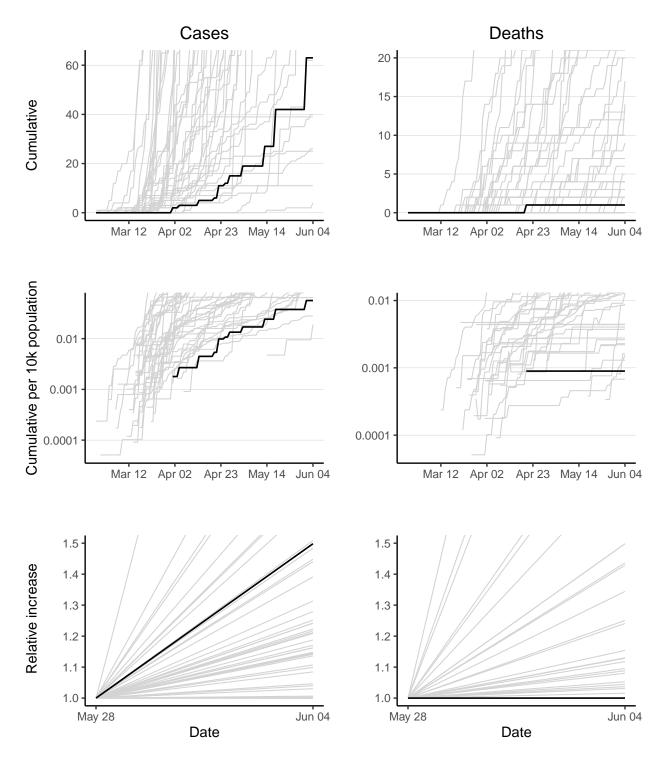
Botswana has 40 reported case(s) (42nd in the region) and 1 reported death(s) (40th). Cumulative counts per 10,000 population for reported cases and deaths are 0.18 (36th) and 0.0044 (30th) respectively. The doubling time over the last 7 days for reported cases is 36.3 days (32nd). The doubling time of reported deaths cannot be calculated as no new deaths have been reported in last 7 days.

Burkina Faso



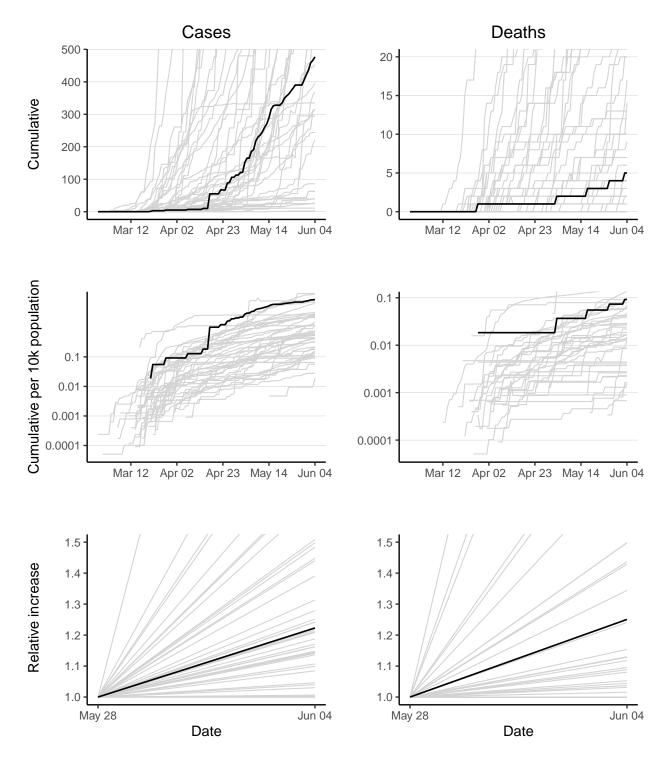
Burkina Faso has 884 reported case(s) (22nd in the region) and 53 reported death(s) (10th). Cumulative counts per 10,000 population for reported cases and deaths are 0.45 (28th) and 0.027 (18th) respectively. The doubling time over the last 7 days for reported cases is 107.5 days (38th). The doubling time of reported deaths cannot be calculated as no new deaths have been reported in last 7 days.

Burundi



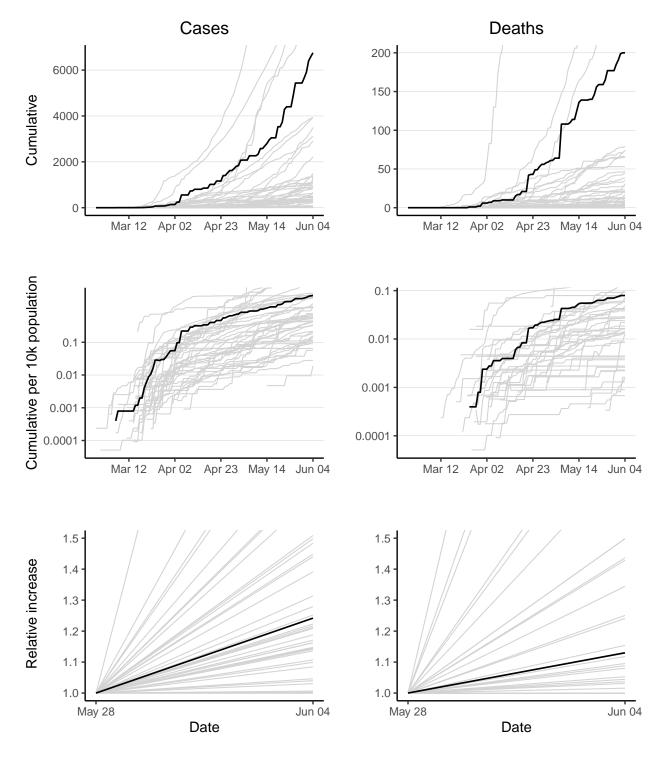
Burundi has 63 reported case(s) (40th in the region) and 1 reported death(s) (41st). Cumulative counts per 10,000 population for reported cases and deaths are 0.056 (45th) and 0.00089 (41st) respectively. The doubling time over the last 7 days for reported cases is 12 days (10th). The doubling time of reported deaths cannot be calculated as no new deaths have been reported in last 7 days.

Cabo Verde



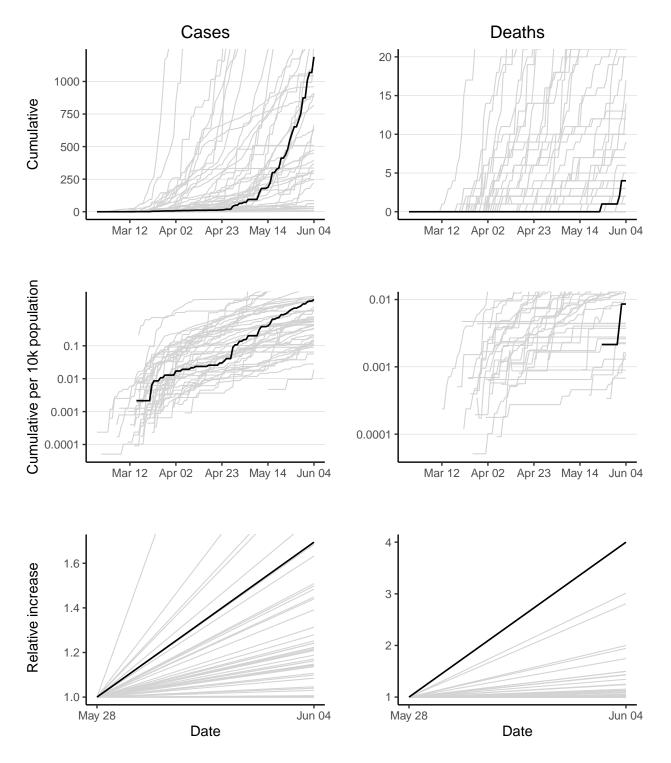
Cabo Verde has 477 reported case(s) (28th in the region) and 5 reported death(s) (30th). Cumulative counts per 10,000 population for reported cases and deaths are 8.8 (3rd) and 0.092 (5th) respectively. Doubling times over the last 7 days for reported cases and deaths are 24.1 days (20th) and 21.7 days (12th).

Cameroon



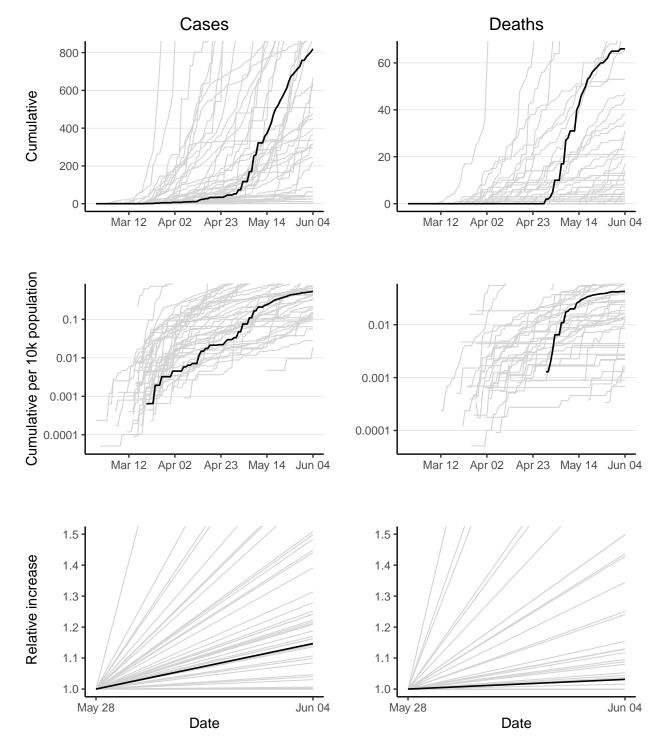
Cameroon has 6752 reported case(s) (5th in the region) and 200 reported death(s) (4th). Cumulative counts per 10,000 population for reported cases and deaths are 2.7 (9th) and 0.079 (7th) respectively. Doubling times over the last 7 days for reported cases and deaths are 22.4 days (18th) and 39.7 days (15th).

Central African Republic



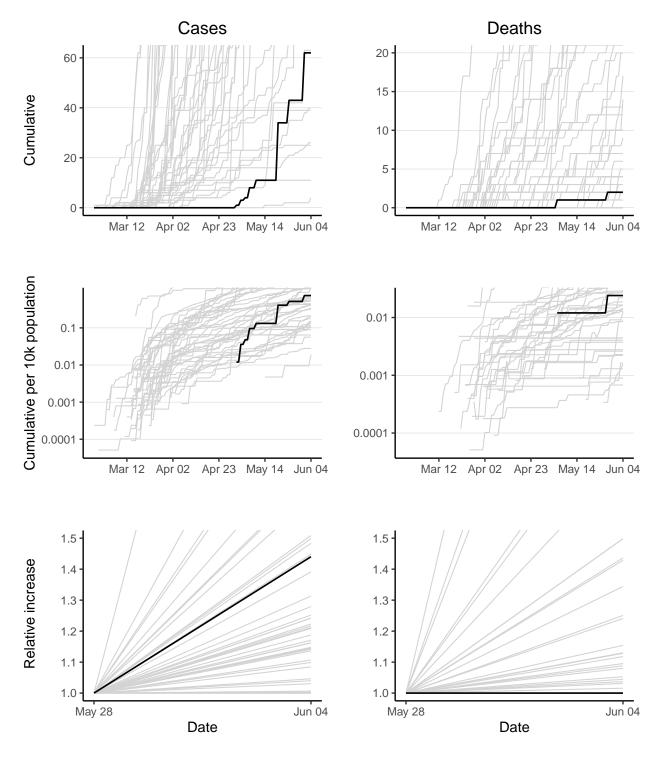
Central African Republic has 1189 reported case(s) (16th in the region) and 4 reported death(s) (32nd). Cumulative counts per 10,000 population for reported cases and deaths are 2.5 (11th) and 0.0086 (29th) respectively. Doubling times over the last 7 days for reported cases and deaths are 9.2 days (6th) and 3.5 days (1st).

Chad



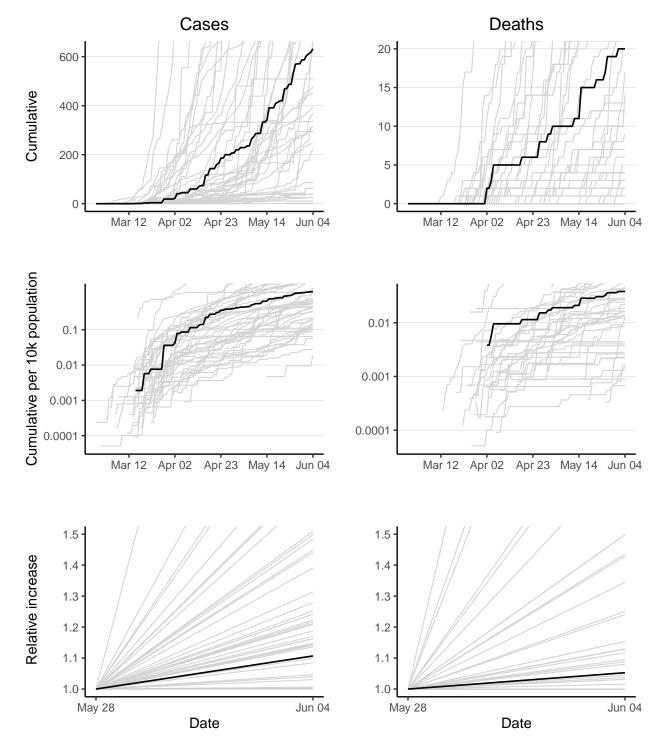
Chad has 820 reported case(s) (23rd in the region) and 66 reported death(s) (8th). Cumulative counts per 10,000 population for reported cases and deaths are 0.53 (27th) and 0.043 (13th) respectively. Doubling times over the last 7 days for reported cases and deaths are 35.4 days (30th) and 157.7 days (25th).

Comoros



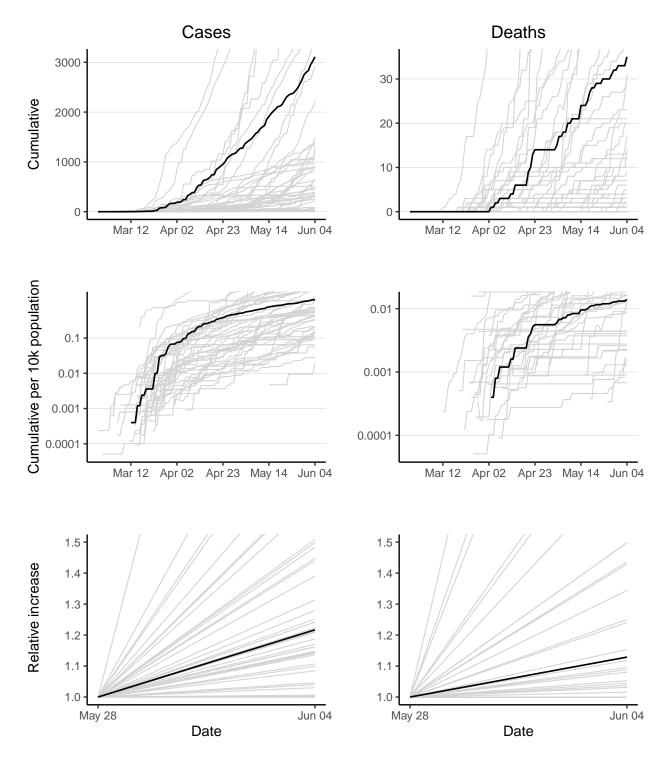
Comoros has 62 reported case(s) (41st in the region) and 2 reported death(s) (37th). Cumulative counts per 10,000 population for reported cases and deaths are 0.74 (21st) and 0.024 (19th) respectively. The doubling time over the last 7 days for reported cases is 13.3 days (13th). The doubling time of reported deaths cannot be calculated as no new deaths have been reported in last 7 days.

Congo



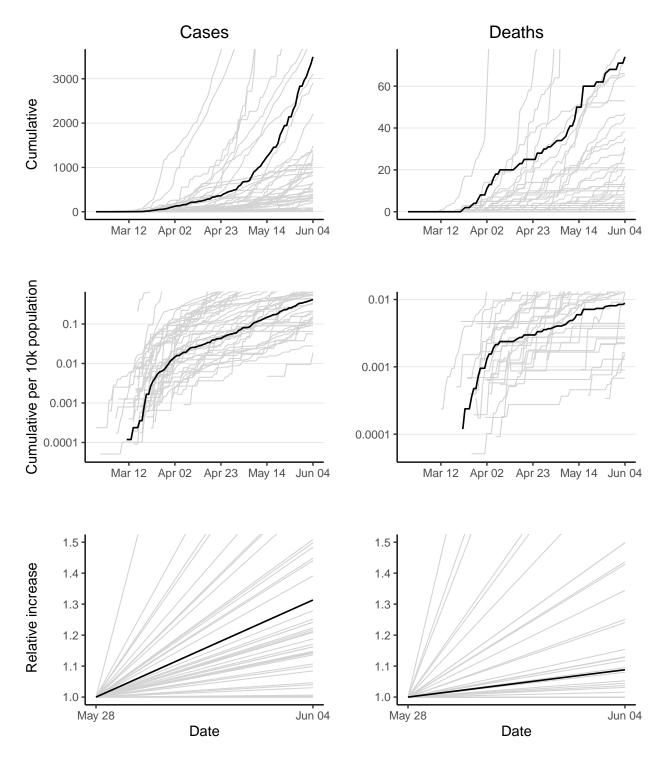
Congo has 632 reported case(s) (26th in the region) and 20 reported death(s) (19th). Cumulative counts per 10,000 population for reported cases and deaths are 1.2 (17th) and 0.038 (15th) respectively. Doubling times over the last 7 days for reported cases and deaths are 47.8 days (35th) and 94.6 days (22nd).

Cote d'Ivoire



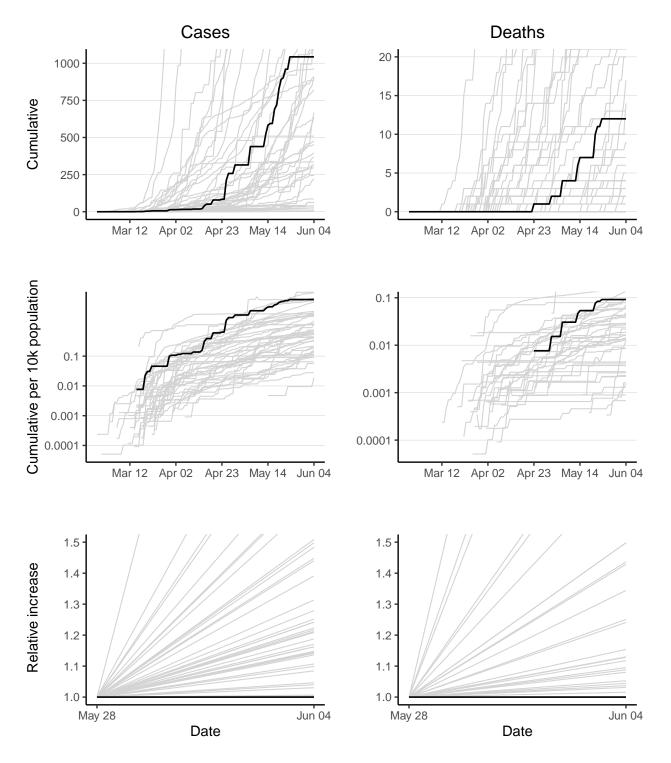
Cote d'Ivoire has 3110 reported case(s) (9th in the region) and 35 reported death(s) (14th). Cumulative counts per 10,000 population for reported cases and deaths are 1.2 (16th) and 0.014 (25th) respectively. Doubling times over the last 7 days for reported cases and deaths are 24.7 days (21st) and 40 days (16th).

Democratic Republic of the Congo



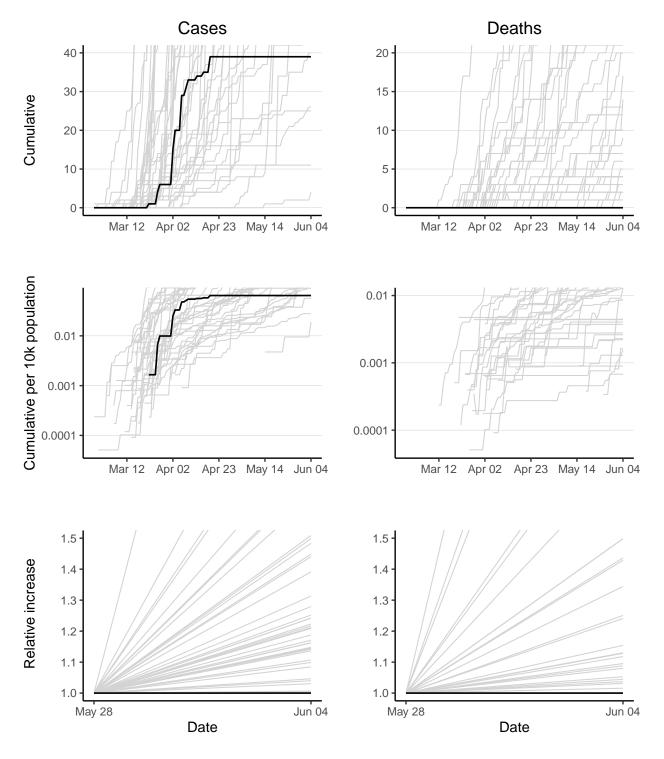
Democratic Republic of the Congo has 3494 reported case(s) (8th in the region) and 74 reported death(s) (6th). Cumulative counts per 10,000 population for reported cases and deaths are 0.42 (31st) and 0.0088 (28th) respectively. Doubling times over the last 7 days for reported cases and deaths are 17.8 days (15th) and 57.4 days (20th).

Equatorial Guinea



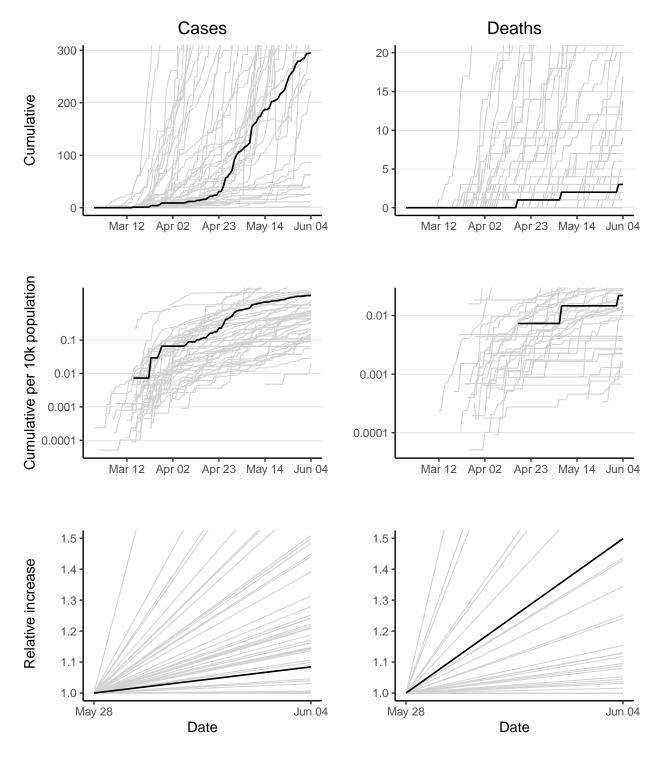
Equatorial Guinea has 1043 reported case(s) (18th in the region) and 12 reported death(s) (24th). Cumulative counts per 10,000 population for reported cases and deaths are 8 (4th) and 0.092 (6th) respectively. The doubling time of reported cases cannot be calculated as no new cases have been reported in last 7 days. The doubling time of reported deaths cannot be calculated as no new deaths have been reported in last 7 days.

Eritrea



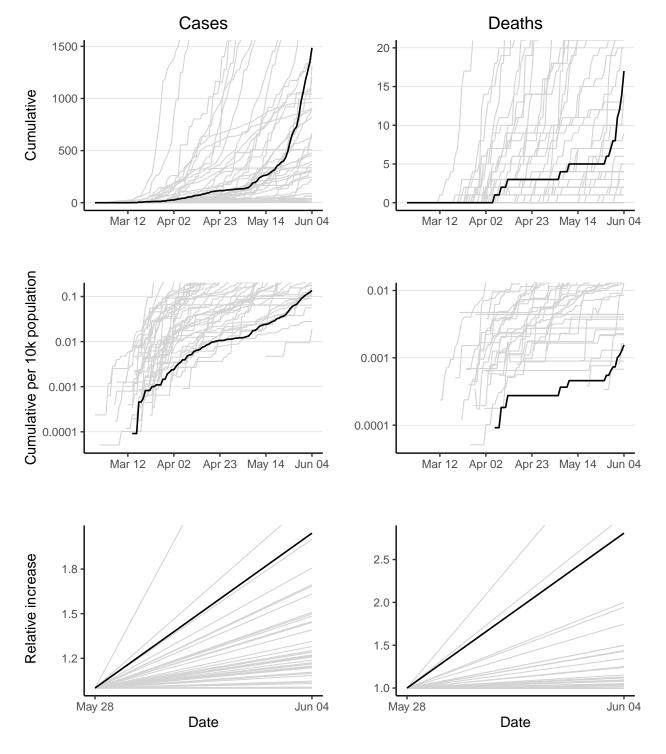
Eritrea has 39 reported case(s) (43rd in the region) and 0 reported death(s) (43rd). Cumulative counts per 10,000 population for reported cases and deaths are 0.064 (44th) and 0 (43rd) respectively. The doubling time of reported cases cannot be calculated as no new cases have been reported in last 7 days. The doubling time of reported deaths cannot be calculated as no new deaths have been reported in last 7 days.

Eswatini



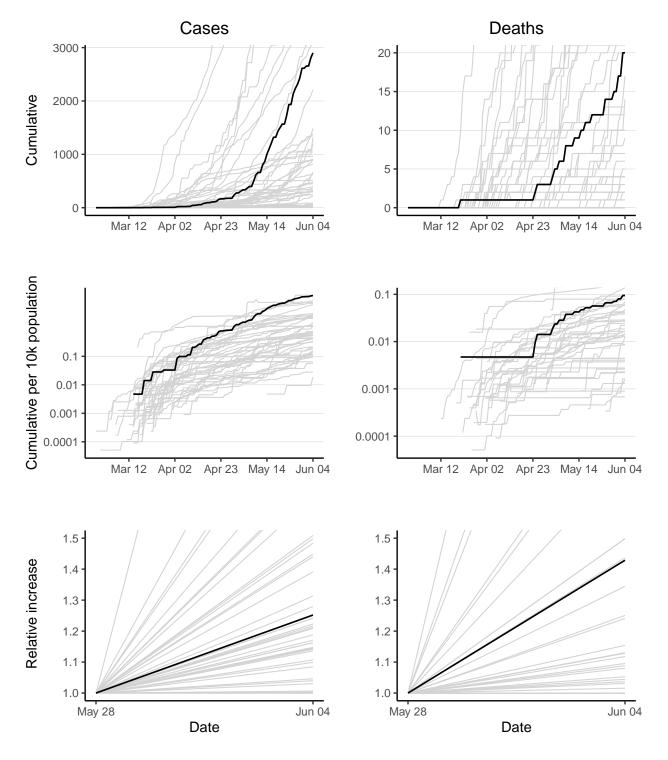
Eswatini has 295 reported case(s) (35th in the region) and 3 reported death(s) (36th). Cumulative counts per 10,000 population for reported cases and deaths are 2.2 (14th) and 0.022 (20th) respectively. Doubling times over the last 7 days for reported cases and deaths are 59.8 days (37th) and 12 days (7th).

Ethiopia



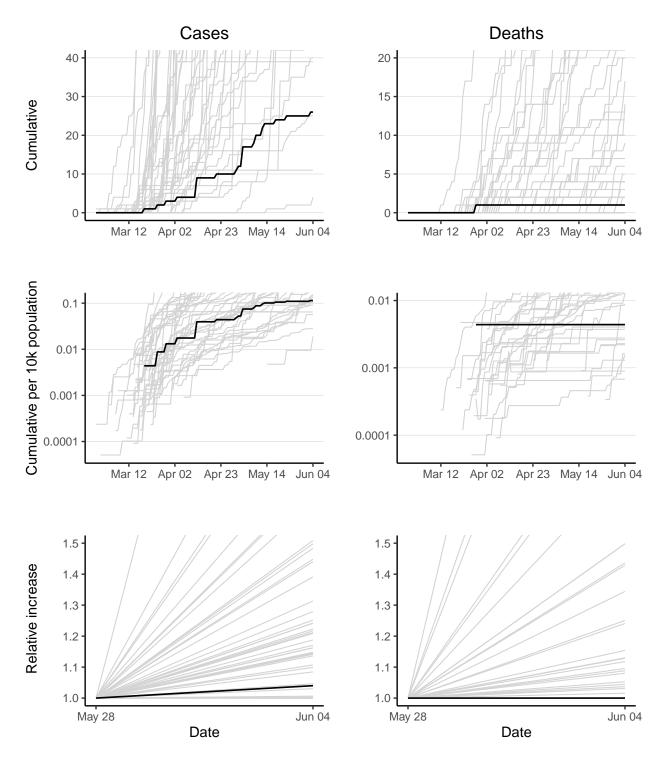
Ethiopia has 1486 reported case(s) (12th in the region) and 17 reported death(s) (21st). Cumulative counts per 10,000 population for reported cases and deaths are 0.14 (39th) and 0.0016 (39th) respectively. Doubling times over the last 7 days for reported cases and deaths are 6.8 days (3rd) and 4.7 days (3rd).

Gabon



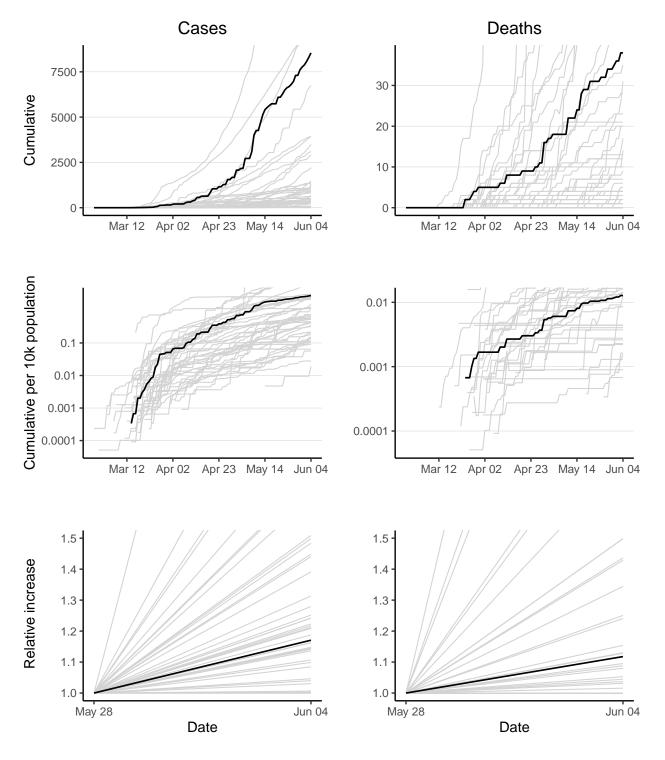
Gabon has 2902 reported case(s) (10th in the region) and 20 reported death(s) (20th). Cumulative counts per 10,000 population for reported cases and deaths are 14 (2nd) and 0.094 (4th) respectively. Doubling times over the last 7 days for reported cases and deaths are 21.6 days (17th) and 13.6 days (10th).

Gambia



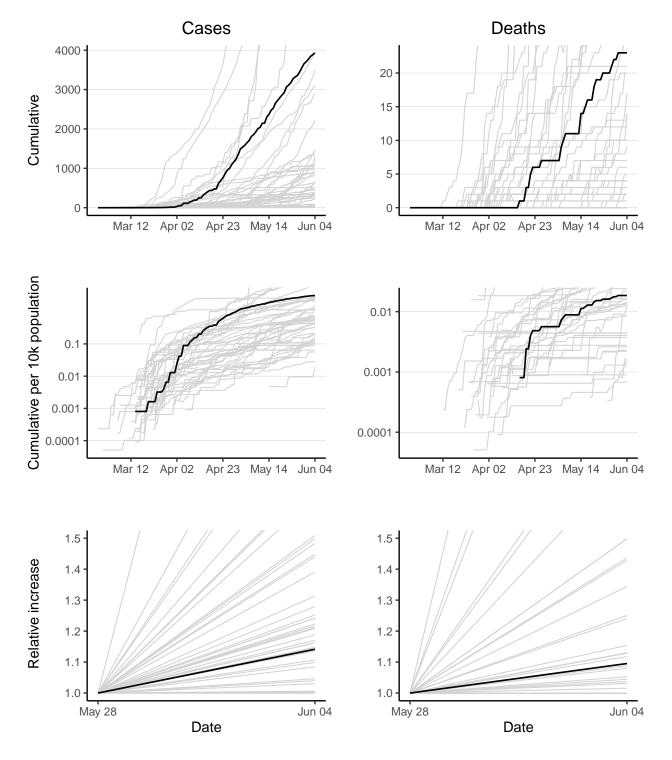
Gambia has 26 reported case(s) (44th in the region) and 1 reported death(s) (42nd). Cumulative counts per 10,000 population for reported cases and deaths are 0.11 (40th) and 0.0044 (31st) respectively. The doubling time over the last 7 days for reported cases is 123.7 days (39th). The doubling time of reported deaths cannot be calculated as no new deaths have been reported in last 7 days.

Ghana



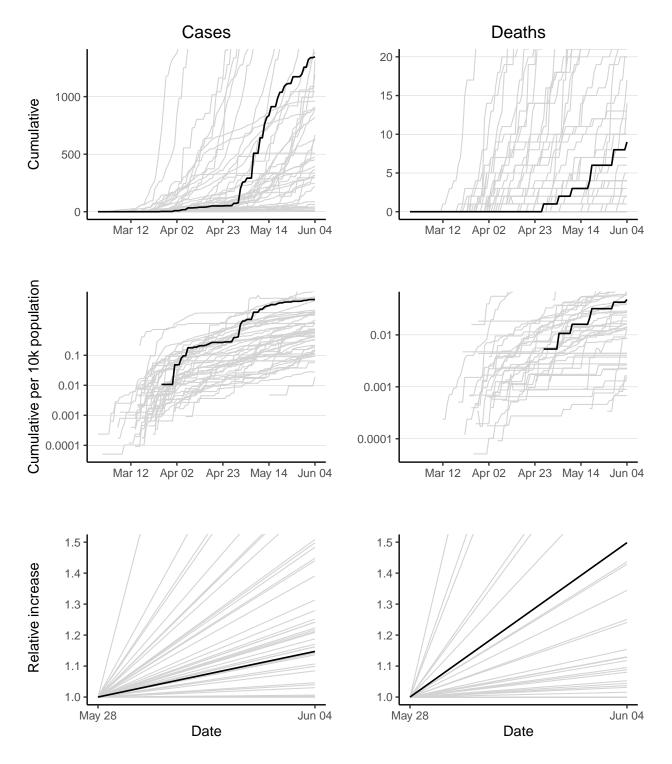
Ghana has 8548 reported case(s) (4th in the region) and 38 reported death(s) (13th). Cumulative counts per 10,000 population for reported cases and deaths are 2.9 (8th) and 0.013 (26th) respectively. Doubling times over the last 7 days for reported cases and deaths are 30.8 days (25th) and 43.6 days (18th).

Guinea



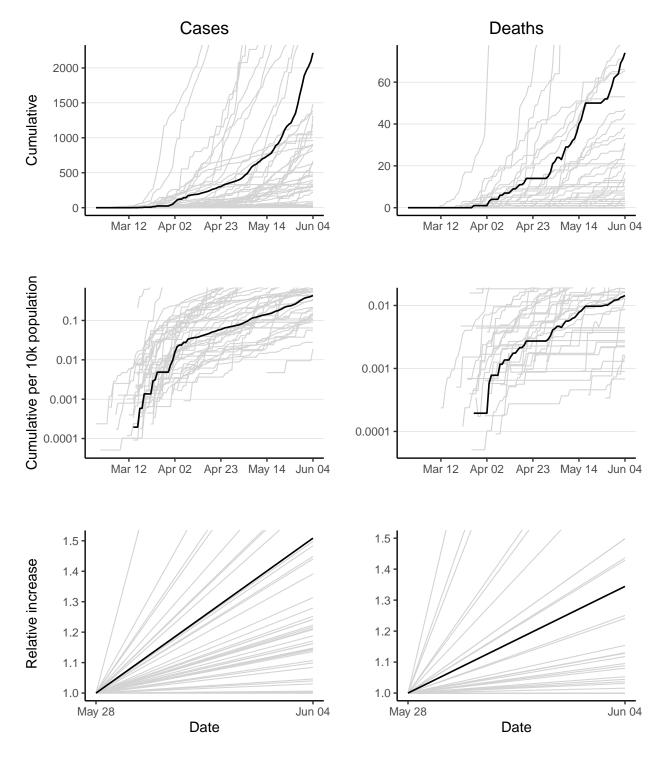
Guinea has 3933 reported case(s) (6th in the region) and 23 reported death(s) (17th). Cumulative counts per 10,000 population for reported cases and deaths are 3.2 (7th) and 0.019 (21st) respectively. Doubling times over the last 7 days for reported cases and deaths are 36.7 days (33rd) and 53.3 days (19th).

Guinea-Bissau



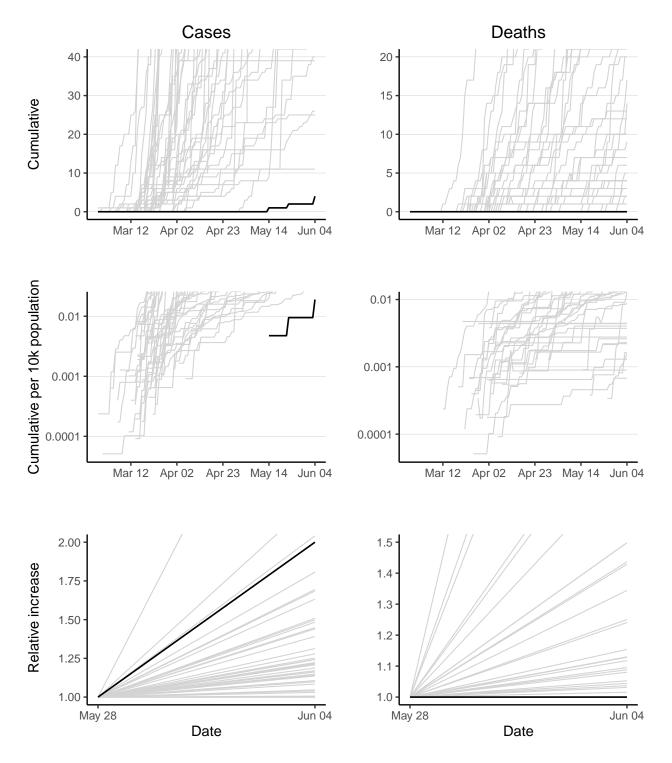
Guinea-Bissau has 1346 reported case(s) (14th in the region) and 9 reported death(s) (27th). Cumulative counts per 10,000 population for reported cases and deaths are 7.2 (5th) and 0.048 (12th) respectively. Doubling times over the last 7 days for reported cases and deaths are 35.3 days (28th) and 12 days (8th).

Kenya



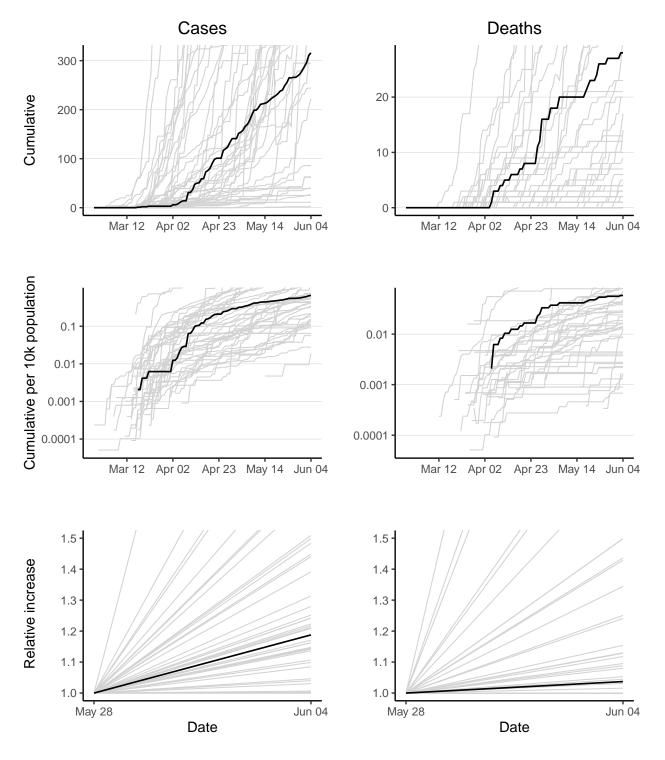
Kenya has 2216 reported case(s) (11th in the region) and 74 reported death(s) (7th). Cumulative counts per 10,000 population for reported cases and deaths are 0.43 (29th) and 0.014 (24th) respectively. Doubling times over the last 7 days for reported cases and deaths are 11.8 days (9th) and 16.4 days (11th).

Lesotho



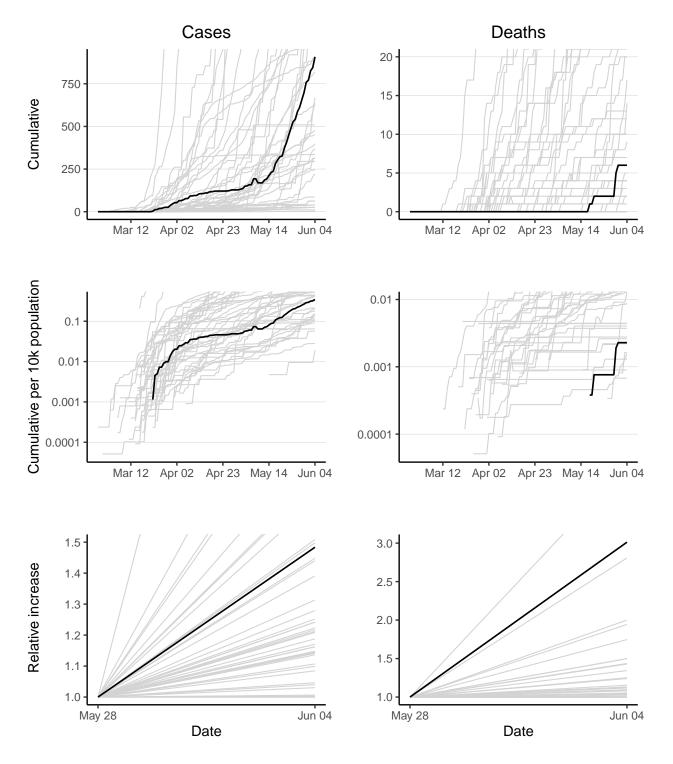
Lesotho has 4 reported case(s) (47th in the region) and 0 reported death(s) (44th). Cumulative counts per 10,000 population for reported cases and deaths are 0.019 (47th) and 0 (44th) respectively. The doubling time over the last 7 days for reported cases is 7 days (4th). The doubling time of reported deaths cannot be calculated as no new deaths have been reported in last 7 days.

Liberia



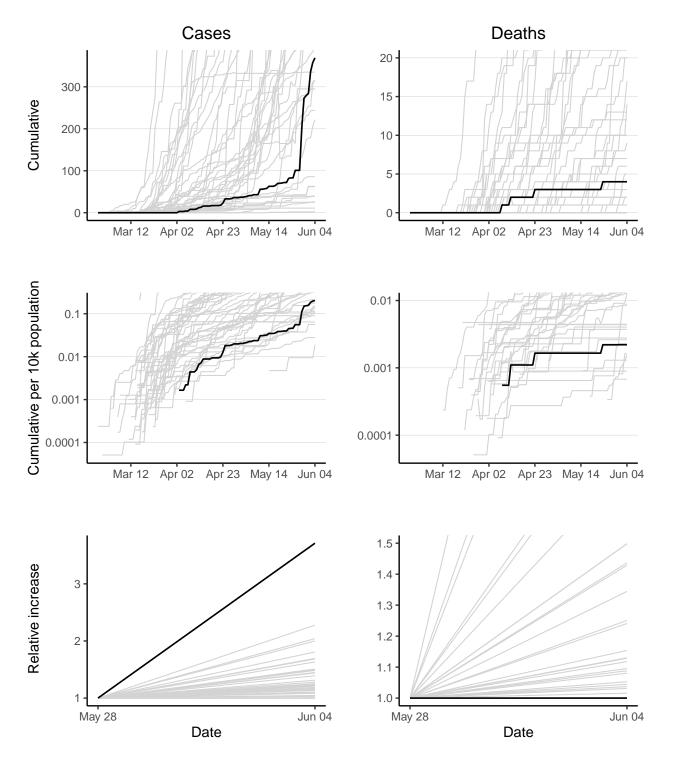
Liberia has 316 reported case(s) (33rd in the region) and 28 reported death(s) (16th). Cumulative counts per 10,000 population for reported cases and deaths are 0.66 (23rd) and 0.058 (11th) respectively. Doubling times over the last 7 days for reported cases and deaths are 28.2 days (24th) and 133.4 days (24th).

Madagascar



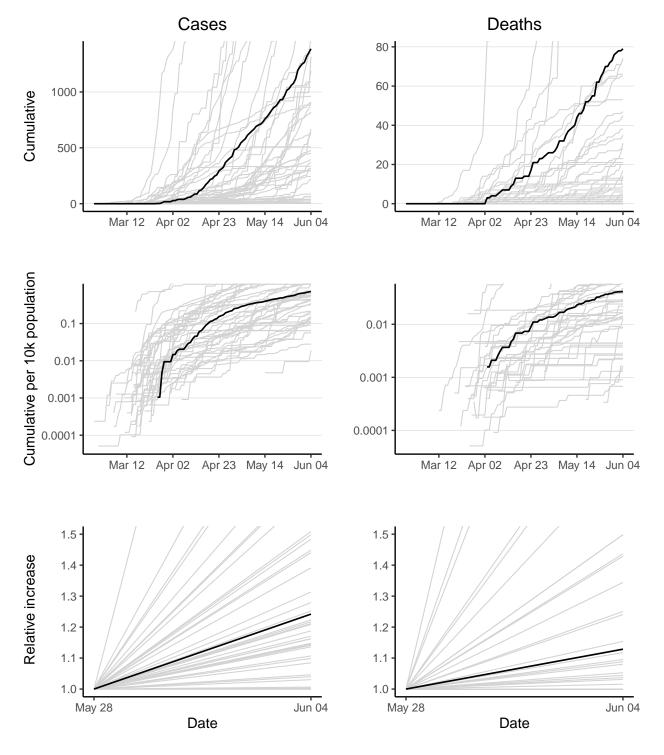
Madagascar has 908 reported case(s) (21st in the region) and 6 reported death(s) (29th). Cumulative counts per 10,000 population for reported cases and deaths are 0.35 (32nd) and 0.0023 (36th) respectively. Doubling times over the last 7 days for reported cases and deaths are 12.3 days (11th) and 4.4 days (2nd).

Malawi



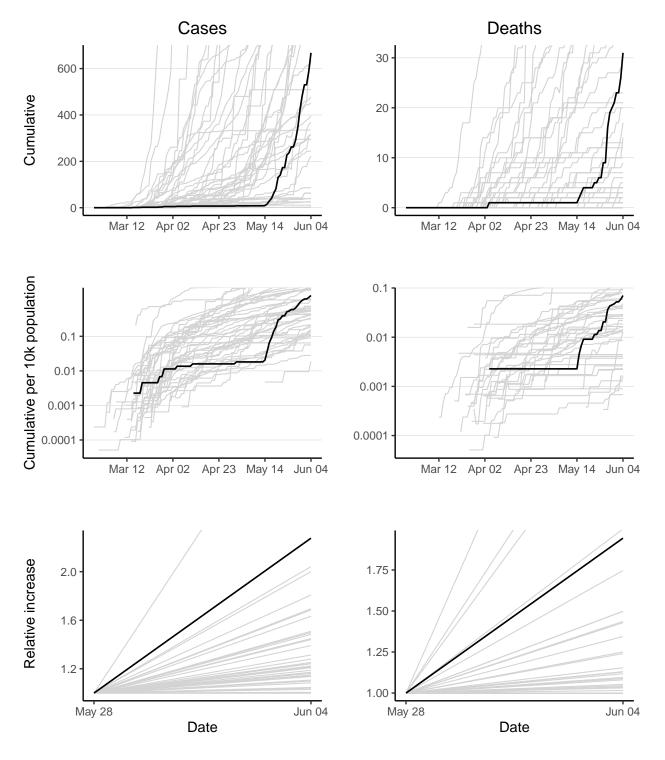
Malawi has 369 reported case(s) (31st in the region) and 4 reported death(s) (33rd). Cumulative counts per 10,000 population for reported cases and deaths are 0.2 (35th) and 0.0022 (37th) respectively. The doubling time over the last 7 days for reported cases is 3.7 days (1st). The doubling time of reported deaths cannot be calculated as no new deaths have been reported in last 7 days.

Mali



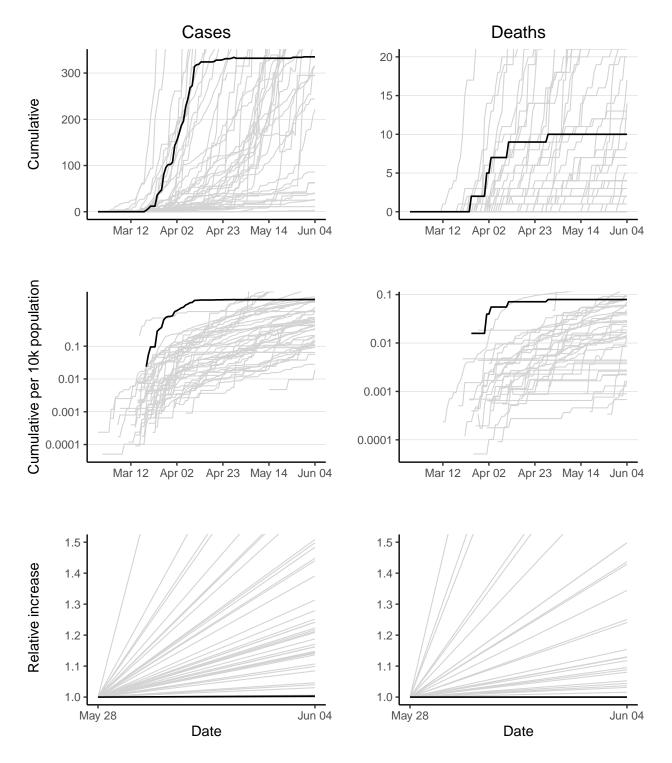
Mali has 1386 reported case(s) (13th in the region) and 79 reported death(s) (5th). Cumulative counts per 10,000 population for reported cases and deaths are 0.73 (22nd) and 0.041 (14th) respectively. Doubling times over the last 7 days for reported cases and deaths are 22.4 days (19th) and 40.1 days (17th).

Mauritania



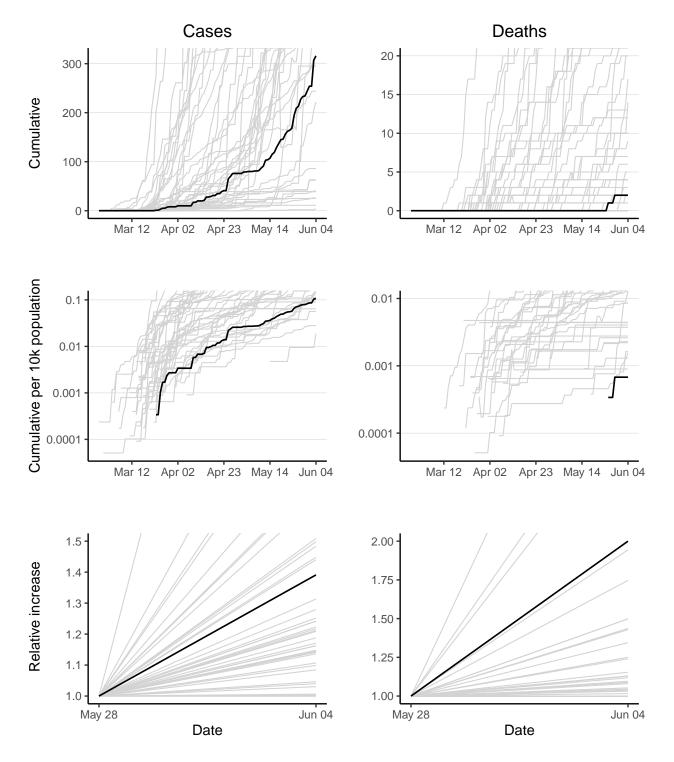
Mauritania has 668 reported case(s) (24th in the region) and 31 reported death(s) (15th). Cumulative counts per 10,000 population for reported cases and deaths are 1.5 (15th) and 0.07 (9th) respectively. Doubling times over the last 7 days for reported cases and deaths are 5.9 days (2nd) and 7.3 days (5th).

Mauritius



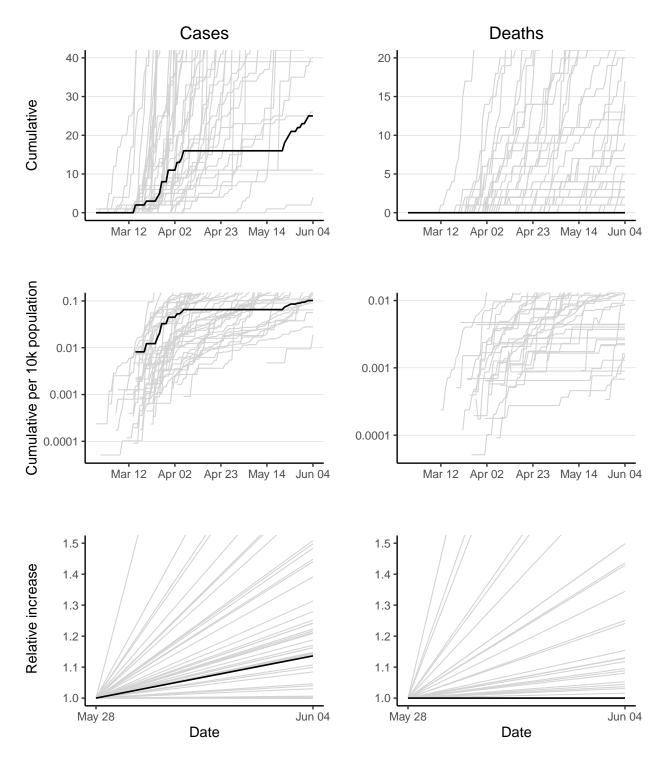
Mauritius has 335 reported case(s) (32nd in the region) and 10 reported death(s) (25th). Cumulative counts per 10,000 population for reported cases and deaths are 2.6 (10th) and 0.079 (8th) respectively. The doubling time over the last 7 days for reported cases is 1623 days (42nd). The doubling time of reported deaths cannot be calculated as no new deaths have been reported in last 7 days.

Mozambique



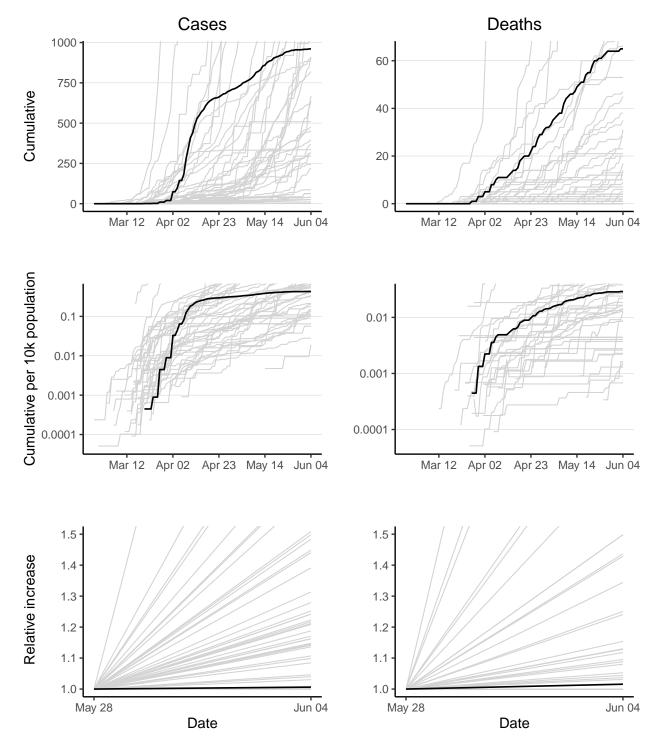
Mozambique has 316 reported case(s) (34th in the region) and 2 reported death(s) (38th). Cumulative counts per 10,000 population for reported cases and deaths are 0.11 (41st) and 0.00068 (42nd) respectively. Doubling times over the last 7 days for reported cases and deaths are 14.7 days (14th) and 7 days (4th).

Namibia



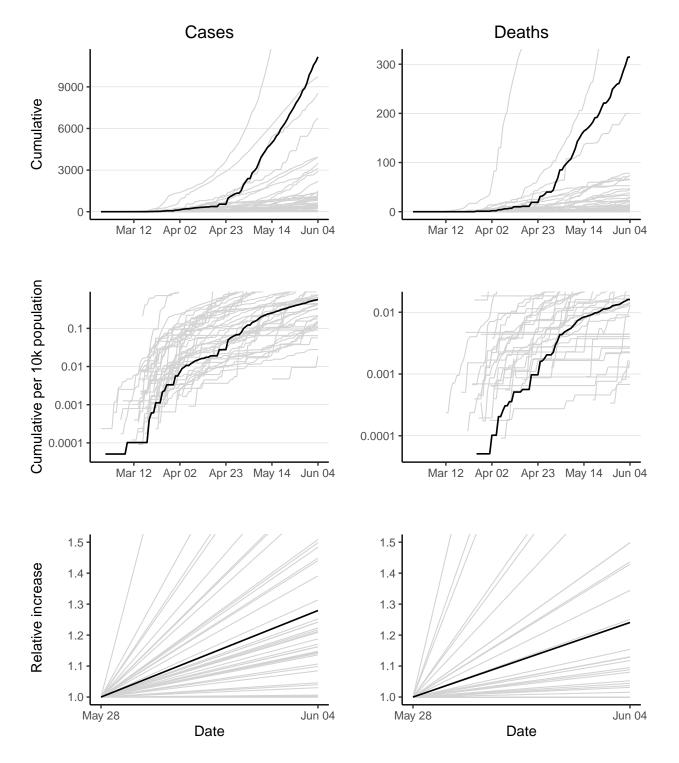
Namibia has 25 reported case(s) (45th in the region) and 0 reported death(s) (45th). Cumulative counts per 10,000 population for reported cases and deaths are 0.1 (42nd) and 0 (45th) respectively. The doubling time over the last 7 days for reported cases is 38 days (34th). The doubling time of reported deaths cannot be calculated as no new deaths have been reported in last 7 days.

Niger



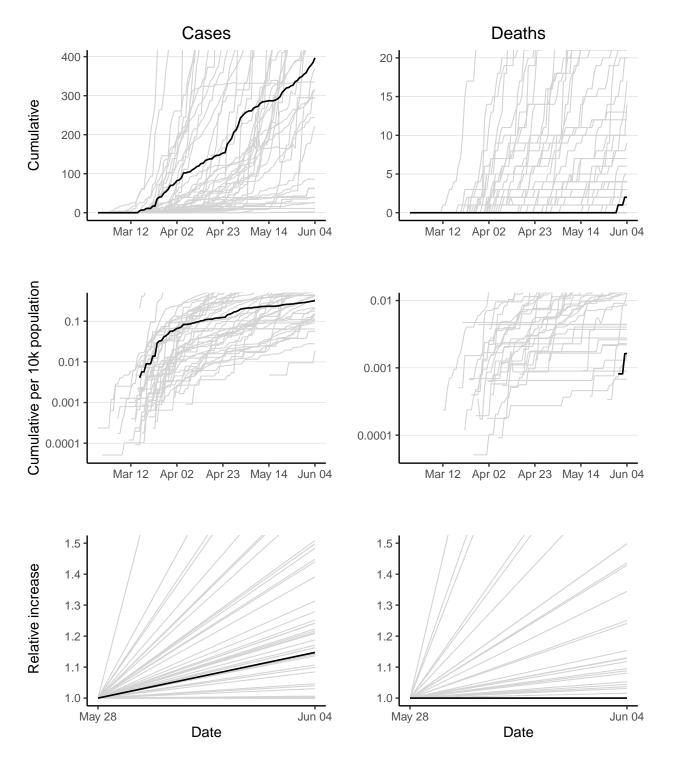
Niger has 961 reported case(s) (19th in the region) and 65 reported death(s) (9th). Cumulative counts per 10,000 population for reported cases and deaths are 0.43 (30th) and 0.029 (16th) respectively. Doubling times over the last 7 days for reported cases and deaths are 774.7 days (41st) and 312.9 days (26th).

Nigeria



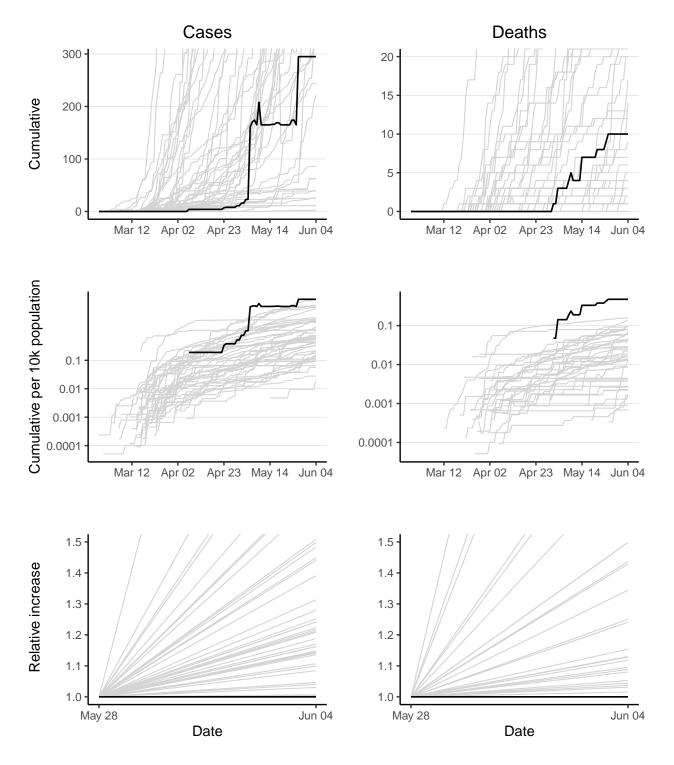
Nigeria has 11166 reported case(s) (2nd in the region) and 315 reported death(s) (3rd). Cumulative counts per 10,000 population for reported cases and deaths are 0.57 (26th) and 0.016 (23rd) respectively. Doubling times over the last 7 days for reported cases and deaths are 19.7 days (16th) and 22.5 days (13th).

Rwanda



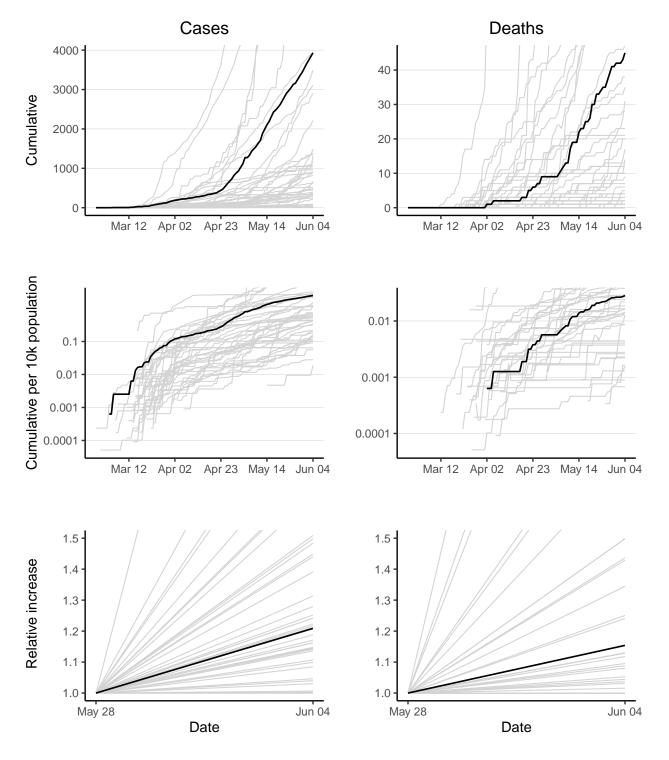
Rwanda has 397 reported case(s) (30th in the region) and 2 reported death(s) (39th). Cumulative counts per 10,000 population for reported cases and deaths are 0.32 (33rd) and 0.0016 (38th) respectively. The doubling time over the last 7 days for reported cases is 35.3 days (29th). The doubling time of reported deaths cannot be calculated as no new deaths have been reported in last 7 days.

Sao Tome and Principe



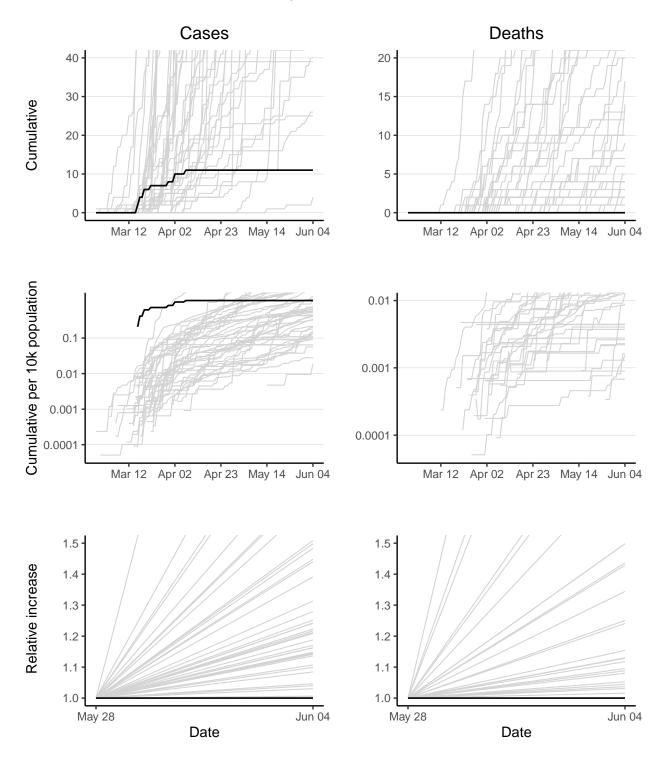
Sao Tome and Principe has 295 reported case(s) (36th in the region) and 10 reported death(s) (26th). Cumulative counts per 10,000 population for reported cases and deaths are 14 (1st) and 0.47 (1st) respectively. The doubling time of reported cases cannot be calculated as no new cases have been reported in last 7 days. The doubling time of reported deaths cannot be calculated as no new deaths have been reported in last 7 days.

Senegal



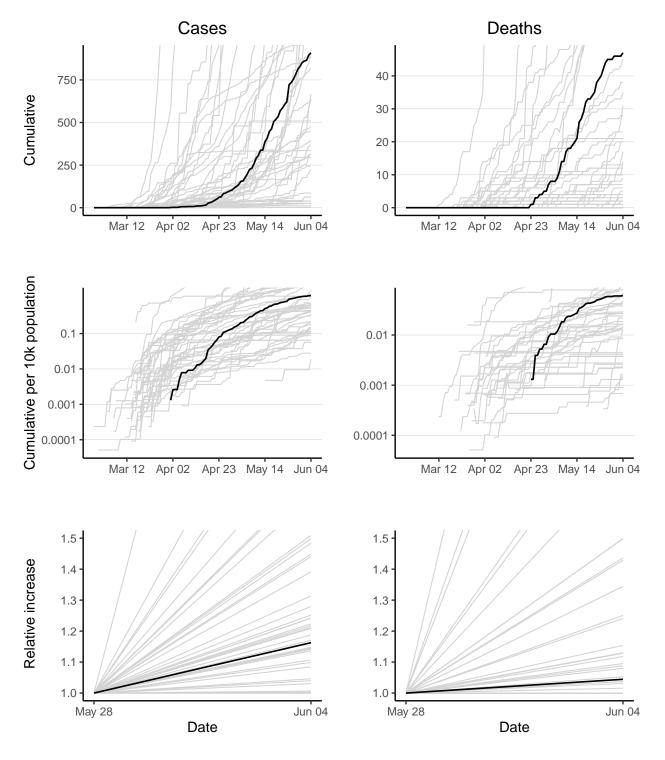
Senegal has 3932 reported case(s) (7th in the region) and 45 reported death(s) (12th). Cumulative counts per 10,000 population for reported cases and deaths are 2.5 (12th) and 0.028 (17th) respectively. Doubling times over the last 7 days for reported cases and deaths are 25.6 days (23rd) and 33.9 days (14th).

Seychelles



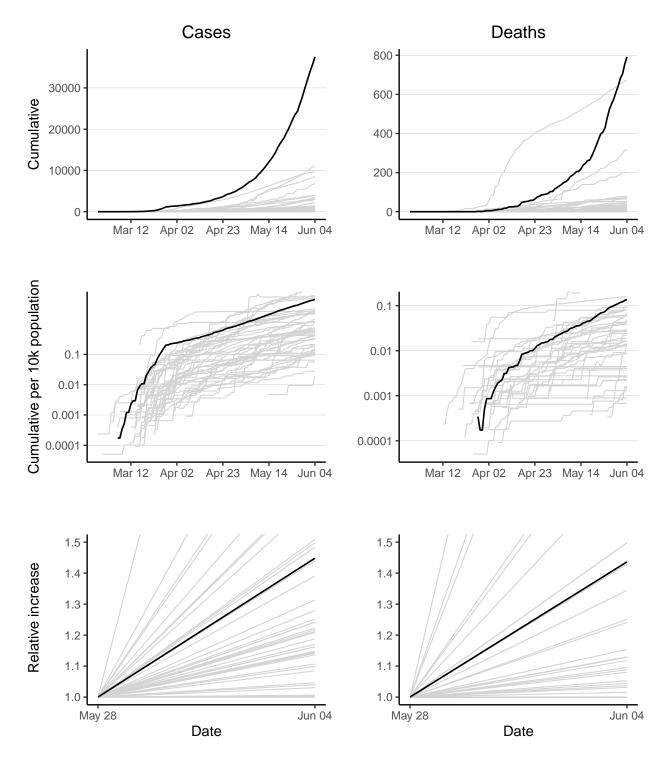
Seychelles has 11 reported case(s) (46th in the region) and 0 reported death(s) (46th). Cumulative counts per 10,000 population for reported cases and deaths are 1.1 (20th) and 0 (46th) respectively. The doubling time of reported cases cannot be calculated as no new cases have been reported in last 7 days. The doubling time of reported deaths cannot be calculated as no new deaths have been reported in last 7 days.

Sierra Leone



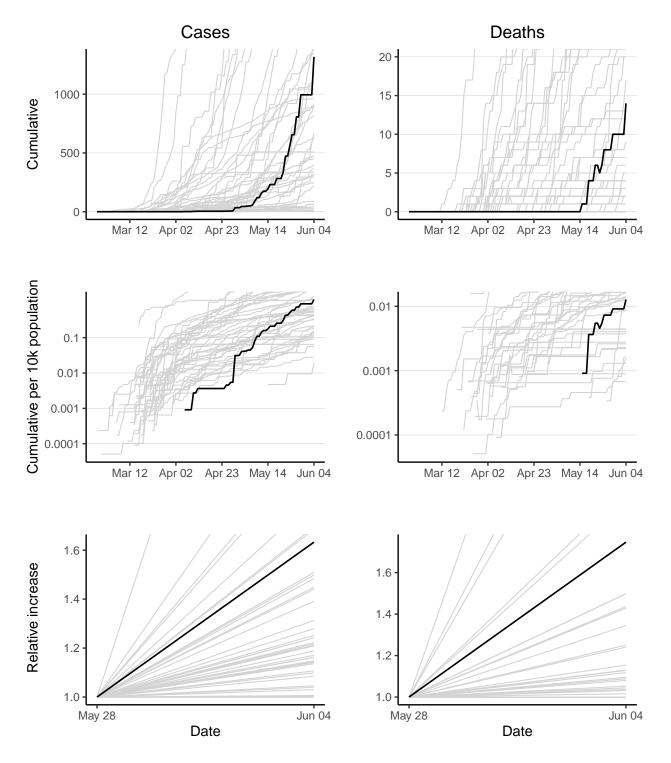
Sierra Leone has 909 reported case(s) (20th in the region) and 47 reported death(s) (11th). Cumulative counts per 10,000 population for reported cases and deaths are 1.2 (19th) and 0.061 (10th) respectively. Doubling times over the last 7 days for reported cases and deaths are 32.2 days (26th) and 111.6 days (23rd).

South Africa



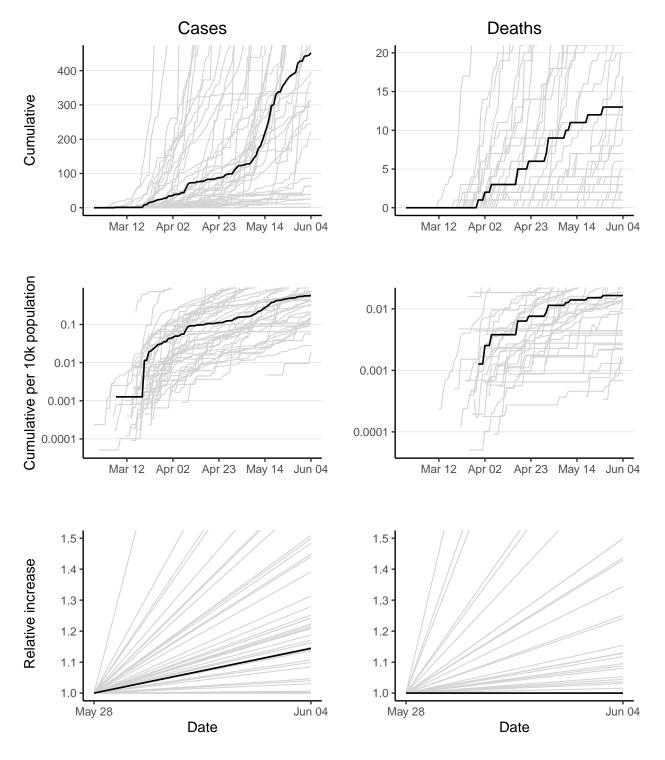
South Africa has 37525 reported case(s) (1st in the region) and 792 reported death(s) (1st). Cumulative counts per 10,000 population for reported cases and deaths are 6.5 (6th) and 0.14 (3rd) respectively. Doubling times over the last 7 days for reported cases and deaths are 13.1 days (12th) and 13.4 days (9th).

South Sudan



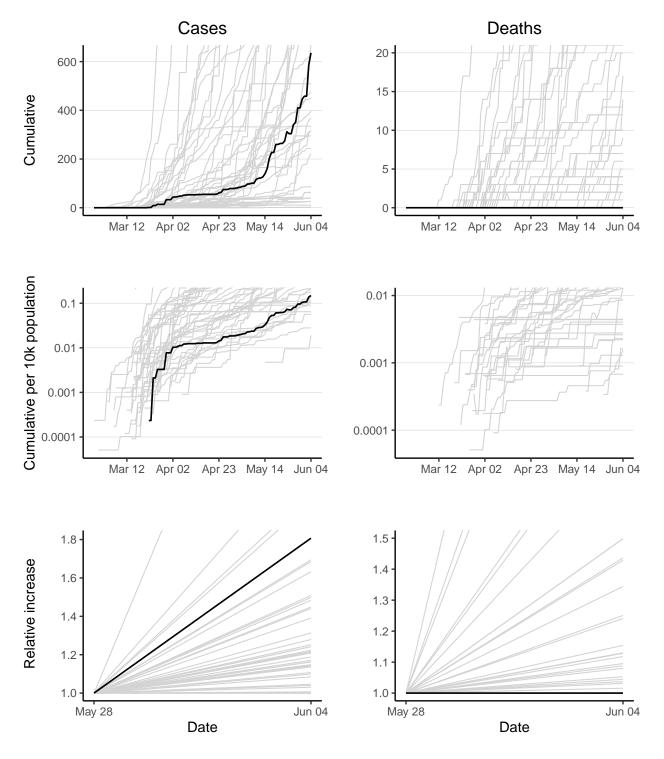
South Sudan has 1317 reported case(s) (15th in the region) and 14 reported death(s) (22nd). Cumulative counts per 10,000 population for reported cases and deaths are 1.2 (18th) and 0.013 (27th) respectively. Doubling times over the last 7 days for reported cases and deaths are 9.9 days (8th) and 8.7 days (6th).

Togo



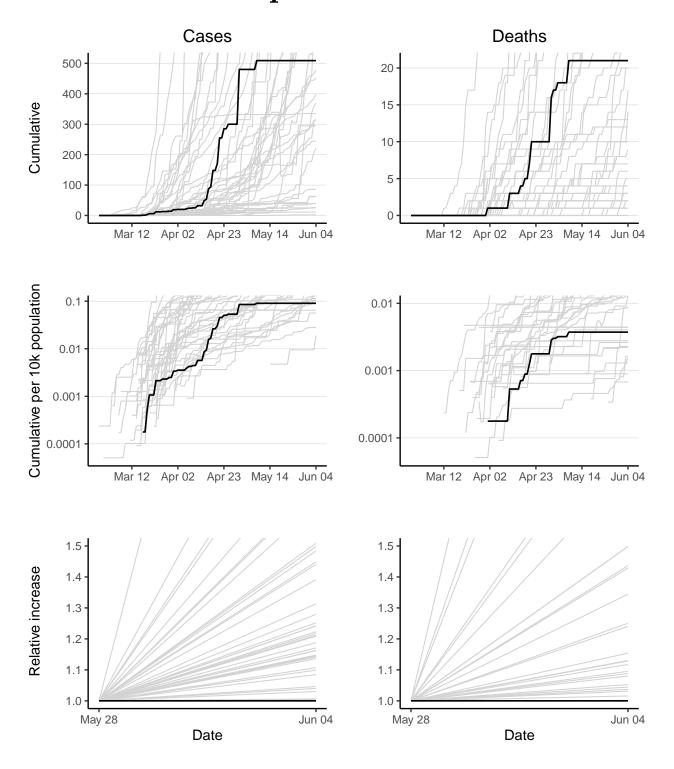
Togo has 452 reported case(s) (29th in the region) and 13 reported death(s) (23rd). Cumulative counts per 10,000 population for reported cases and deaths are 0.57 (25th) and 0.016 (22nd) respectively. The doubling time over the last 7 days for reported cases is 36 days (31st). The doubling time of reported deaths cannot be calculated as no new deaths have been reported in last 7 days.

Uganda



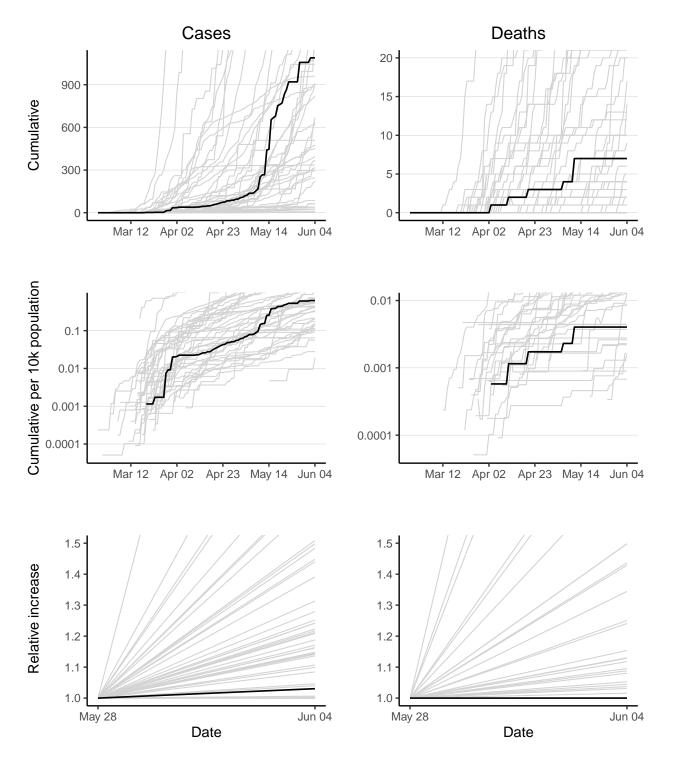
Uganda has 636 reported case(s) (25th in the region) and 0 reported death(s) (47th). Cumulative counts per 10,000 population for reported cases and deaths are 0.15 (38th) and 0 (47th) respectively. The doubling time over the last 7 days for reported cases is 8.2 days (5th). The doubling time of reported deaths cannot be calculated as no new deaths have been reported in last 7 days.

United Republic of Tanzania



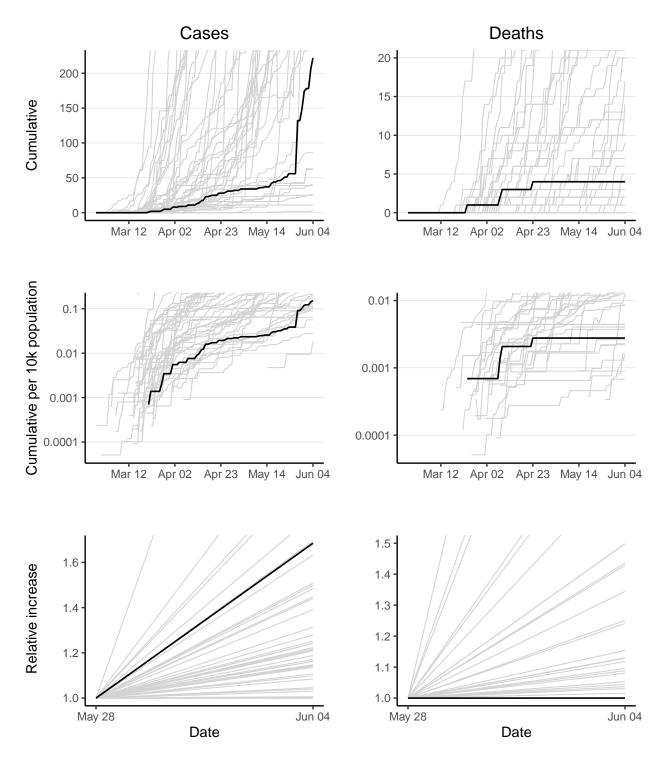
United Republic of Tanzania has 509 reported case(s) (27th in the region) and 21 reported death(s) (18th). Cumulative counts per 10,000 population for reported cases and deaths are 0.09 (43rd) and 0.0037 (33rd) respectively. The doubling time of reported cases cannot be calculated as no new cases have been reported in last 7 days. The doubling time of reported deaths cannot be calculated as no new deaths have been reported in last 7 days.

Zambia



Zambia has 1089 reported case(s) (17th in the region) and 7 reported death(s) (28th). Cumulative counts per 10,000 population for reported cases and deaths are 0.63 (24th) and 0.004 (32nd) respectively. The doubling time over the last 7 days for reported cases is 162.7 days (40th). The doubling time of reported deaths cannot be calculated as no new deaths have been reported in last 7 days.

Zimbabwe



Zimbabwe has 222 reported case(s) (38th in the region) and 4 reported death(s) (34th). Cumulative counts per 10,000 population for reported cases and deaths are 0.15 (37th) and 0.0028 (34th) respectively. The doubling time over the last 7 days for reported cases is 9.3 days (7th). The doubling time of reported deaths cannot be calculated as no new deaths have been reported in last 7 days.

Appendix

Data

Sources and access

- Case counts for countries in WHO Africa Region from WHO Coronavirus disease (COVID-2019) situation reports https://www.who.int/emergencies/diseases/novel-coronavirus-2019/situation-reports (accessed 2400 04/06/2020).
- 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 04/06/2020).
- 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.
- Countries that have reduced their cumulative total cases/deaths in the last 7 days are assigned a doubling time of -1.

Extended Data tables

Cumulative reported cases

Country	Cum. reported cases	95%CI lower	95%CI upper
South Africa	37525	37227	37832
Nigeria	11166	NA	NA
Algeria	9733	9569	9893
Ghana	8548	8403	8707
Cameroon	6752	NA	NA
Guinea	3933	3834	4027
Senegal	3932	NA	NA
Democratic Republic of the Congo	3494	3403	3593
Cote d'Ivoire	3110	3016	3201
Gabon	2902	2820	2987
Kenya	2216	2140	2298
Ethiopia	1486	1426	1557
Mali	1386	1323	1447
Guinea-Bissau	1346	1290	1405
South Sudan	1317	1257	1382
Central African Republic	1189	1135	1247
Zambia	1089	1035	1141
Equatorial Guinea	1043	994	1097
Niger	961	911	1013
Sierra Leone	909	860	961
Madagascar	908	NA	NA
Burkina Faso	884	834	934
Chad	820	772	869
Mauritania	668	627	710
Uganda	636	NA	NA
Congo	632	591	675
United Republic of Tanzania	509	475	545
Cabo Verde	477	442	513
Togo	452	416	488
Rwanda	397	364	431
Malawi	369	337	401
Mauritius	335	NA	NA
Liberia	316	288	345
Mozambique	316	288	346
Eswatini	295	266	324
Sao Tome and Principe	295	NA	NA
Benin	244	NA	NA
Zimbabwe	222	197	246
Angola	86	71	102
Burundi	63	51	76
Comoros	62	49	75
Botswana	40	30	50
Eritrea	39	29	49
Gambia	26	18	34
Namibia	25	17	33
Seychelles	11	6	17
Lesotho	4	1	8

Cumulative reported cases per 10,000 population

Country	Cum. reported cases per 10k pop	95%CI lower	95%CI upper
Sao Tome and Principe	13.9791876	NA	NA
Gabon	13.6933621	13	14
Cabo Verde	8.7721395	8	9
Equatorial Guinea	7.9680727	8	8
Guinea-Bissau	7.1813132	7	7
South Africa	6.4945042	6	7
Guinea	3.1681160	3	3
Ghana	2.8716260	3	3
Cameroon	2.6776398	NA	NA
Mauritius	2.6475872	NA	NA
Central African Republic	2.5480153	2	3
Senegal	2.4800749	NA	NA
Algeria	2.3048454	2	2
Eswatini	2.1580102	2	2
Mauritania	1.5170375	1	2
Cote d'Ivoire	1.2405647	1	1
Congo	1.2051035	1	1
South Sudan	1.1998994	1	1
Sierra Leone	1.1882114	1	1
Seychelles	1.1368099	1	2
Comoros	0.7449040	1	1
Mali	0.7265031	1	1
Liberia	0.6557408	1	1
Zambia	0.6275998	1	1
Togo	0.5729428	1	1
Nigeria	0.5700582	NA	NA
Chad	0.5297927	0	1
Burkina Faso	0.4475602	0	0
Kenya	0.4311870	0	0
Niger	0.4281969	0	0
Democratic Republic of the Congo	0.4156155	0	0
Madagascar	0.3457419	NA	NA
Rwanda	0.3227134	0	0
Benin	0.2124501	NA	NA
Malawi	0.2033807	0	0
Botswana	0.1774524	0	0
Zimbabwe	0.1537501	0	0
Uganda	0.1488655	NA	NA
Ethiopia	0.1360500	0	0
Gambia	0.1140300	0	0
Mozambique	0.1071333	0	0
Namibia	0.1021135	0	0
United Republic of Tanzania	0.0903791	0	0
Eritrea	0.0644628	0	0
Burundi	0.0563739	0	0
Angola	0.0279132	0	0
Lesotho	0.0189741	0	0

Cumulative deaths

Country	Cum. reported deaths	95%CI lower	95%CI upper
South Africa	792	NA	NA
Algeria	673	632	717
Nigeria	315	286	344
Cameroon	200	176	224
Mali	79	65	93
Democratic Republic of the Congo	74	60	87
Kenya	74	NA	NA
Chad	66	54	80
Niger	65	52	77
Burkina Faso	53	42	66
Sierra Leone	47	36	58
Senegal	45	35	57
Ghana	38	28	48
Cote d'Ivoire	35	25	44
Mauritania	31	23	41
Liberia	28	20	37
Guinea	23	16	31
United Republic of Tanzania	21	14	29
Congo	20	13	28
Gabon	20	13	28
Ethiopia	17	10	24
South Sudan	14	NA	NA
Togo	13	8	19
Equatorial Guinea	12	6	18
Mauritius	10	5	15
Sao Tome and Principe	10	NA	NA
Guinea-Bissau	9	4	14
Zambia	7	3	11
Madagascar	6	3	10
Cabo Verde	5	2	9
Angola	4	1	7
Central African Republic	4	1	8
Malawi	4	1	7
Zimbabwe	4	1	7
Benin	3	NA	NA
Eswatini	3	0	6
Comoros	2	0	5
Mozambique	2	0	5
Rwanda	2	0	4
Botswana	1	0	3
Burundi	1	0	3
Gambia	1	0	3
Eritrea	0	0	0
Lesotho	0	0	0
Namibia	0	0	0
Seychelles	0	0	0
Uganda	0	0	0

Cumulative deaths per 10,000 populations

Country	Cum. reported deaths per 10k pop	$95\%\mathrm{CI}$ lower	95%CI upper
Sao Tome and Principe	0.4738708	NA	NA
Algeria	0.1593713	0	0
South Africa	0.1370725	NA	NA
Gabon	0.0943719	0	0
Cabo Verde	0.0919511	0	0
Equatorial Guinea	0.0916749	0	0
Cameroon	0.0793140	0	0
Mauritius	0.0790325	0	0
Mauritania	0.0704014	0	0
Sierra Leone	0.0614367	0	0
Liberia	0.0581036	0	0
Guinea-Bissau	0.0480177	0	0
Chad	0.0426419	0	0
Mali	0.0414096	0	0
Congo	0.0381362	0	0
Niger	0.0289623	0	0
Senegal	0.0283834	0	0
Burkina Faso	0.0268334	0	0
Comoros	0.0240292	0	0
Eswatini	0.0219459	0	0
Guinea	0.0185270	0	0
Togo	0.0164784	0	0
Nigeria	0.0160817	0	0
Kenya	0.0100817 0.0143988	NA	NA
Cote d'Ivoire	0.0145960	0	0
Ghana	0.0139013 0.0127658	0	0
South Sudan	0.0127638 0.0127552	NA	NA
	0.0127332		NA 0
Democratic Republic of the Congo		0	
Central African Republic Botswana	0.0085720	0	0
	0.0044363	0	0
Gambia	0.0043858	0	0
Zambia	0.0040342	0	0
United Republic of Tanzania	0.0037288	0	0
Zimbabwe	0.0027703	0	0 N A
Benin	0.0026121	NA	NA
Madagascar	0.0022846	0	0
Malawi	0.0022047	0	0
Rwanda	0.0016258	0	0
Ethiopia	0.0015564	0	0
Angola	0.0012983	0	0
Burundi	0.0008948	0	0
Mozambique	0.0006781	0	0
Eritrea	0.0000000	0	0
Lesotho	0.0000000	0	0
Namibia	0.0000000	0	0
Seychelles	0.0000000	0	0
Uganda	0.0000000	0	0

Doubling time (cases)

Country	Doubling time (days)	95%CI lower	95%CI upper
Malawi	3.7	3.4	4.2
Mauritania	5.9	5.4	6.4
Ethiopia	6.8	6.5	7.3
Lesotho	7.0	3.5	Inf
Uganda	8.2	NA	NA
Central African Republic	9.2	8.5	9.8
Zimbabwe	9.3	7.8	11.2
South Sudan	9.9	9.2	10.6
Kenya	11.8	11.1	12.6
Burundi	12.0	8.5	17.5
Madagascar	12.3	NA	NA
South Africa	13.1	12.9	13.4
Comoros	13.3	9.4	20.3
Mozambique	14.7	12.4	17.5
Democratic Republic of the Congo	17.8	16.8	18.9
Nigeria	19.7	NA	NA
Gabon	21.6	20.3	23.1
Cameroon	22.4	NA	NA
Mali	22.4	20.3	24.9
Cabo Verde	24.1	20.2	29.0
Cote d'Ivoire	24.7	23.0	26.7
Angola	25.3	17.2	41.2
Senegal	25.6	NA	NA
Liberia	28.2	22.9	35.7
Ghana	30.8	29.5	32.3
Sierra Leone	32.2	28.1	37.4
Benin	32.3	NA	NA
Guinea-Bissau	35.3	31.2	40.1
Rwanda	35.3	28.8	45.9
Chad	35.4	30.5	41.6
Togo	36.0	29.1	45.6
Botswana	36.3	19.8	99.4
Guinea	36.7	34.0	39.7
Namibia	38.0	17.8	Inf
Congo	47.8	39.1	61.1
Algeria	51.4	48.6	54.4
Eswatini	59.8	44.8	90.0
Burkina Faso	107.5	84.0	142.8
Gambia	123.7	41.2	Inf
Zambia	162.7	125.3	230.0
Niger	774.7	467.2	2234.8
Mauritius	1623.0	NA	NA
Equatorial Guinea	NA	Inf	Inf
Eritrea	NA	Inf	Inf
Sao Tome and Principe	NA	NA	NA
Seychelles	NA	Inf	Inf
United Republic of Tanzania	NA	Inf	Inf

Doubling time (deaths)

Country	Doubling time (days)	95%CI lower	95%CI upper
Central African Republic	3.5	2.7	21.7
Madagascar	4.4	2.5	13.4
Ethiopia	4.7	2.8	8.1
Mozambique	7.0	4.4	Inf
Mauritania	7.3	4.9	12.0
South Sudan	8.7	NA	NA
Eswatini	12.0	4.4	Inf
Guinea-Bissau	12.0	4.9	Inf
South Africa	13.4	NA	NA
Gabon	13.6	7.0	38.8
Kenya	16.4	NA	NA
Cabo Verde	21.7	7.0	Inf
Nigeria	22.5	18.4	28.4
Senegal	33.9	19.5	82.5
Cameroon	39.7	29.2	61.3
Cote d'Ivoire	40.0	20.1	148.0
Mali	40.1	25.0	80.0
Ghana	43.6	21.7	157.7
Guinea	53.3	22.7	Inf
Democratic Republic of the Congo	57.4	33.9	150.4
Algeria	62.9	50.8	79.8
Congo	94.6	31.5	Inf
Sierra Leone	111.6	47.0	Inf
Liberia	133.4	44.4	Inf
Chad	157.7	67.9	Inf
Niger	312.9	102.7	Inf
Angola	NA	Inf	Inf
Benin	NA	NA	NA
Botswana	NA	Inf	Inf
Burkina Faso	NA	Inf	Inf
Burundi	NA	Inf	Inf
Comoros	NA	Inf	Inf
Equatorial Guinea	NA	Inf	Inf
Gambia	NA	Inf	Inf
Malawi	NA	Inf	Inf
Mauritius	NA	Inf	Inf
Sao Tome and Principe	NA	NA	NA
Togo	NA	Inf	Inf
United Republic of Tanzania	NA	Inf	Inf
Zambia	NA	Inf	Inf
Zimbabwe	NA	Inf	Inf
Eritrea	NA	NA	NA
Lesotho	NA	NA	NA
Namibia	NA	NA	NA
Rwanda	NA	NA	NA
Seychelles	NA	NA	NA
Uganda	NA	NA	NA