

COVID-19 situation report for WHO Africa Region  
01/05/2020

Produced by the TIBA COVID-19 Pandemic Response Unit



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## Section 1: Overview of WHO Africa Region 30/04/2020

### Overview



**Total Reported Cases**  
**23833**

**Total Reported Deaths**  
**934**

## Methods

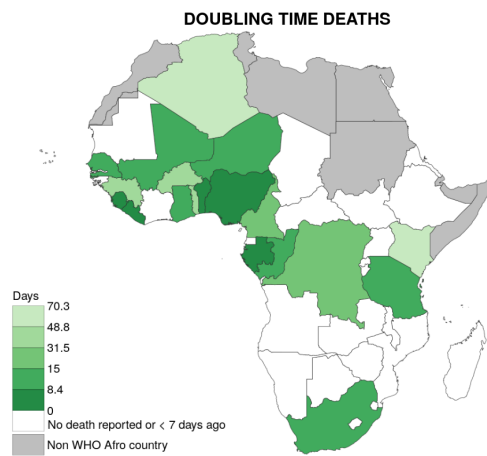
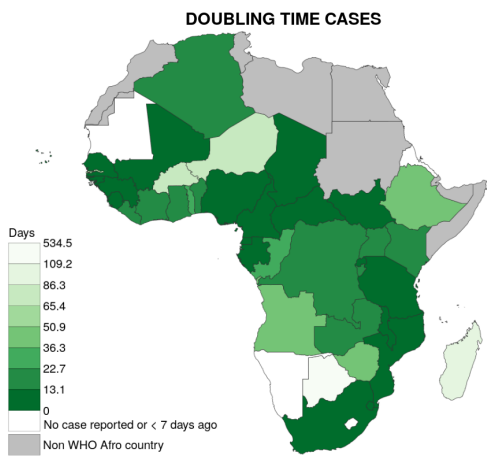
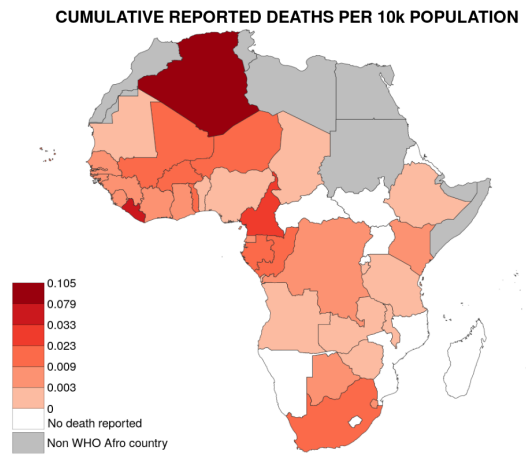
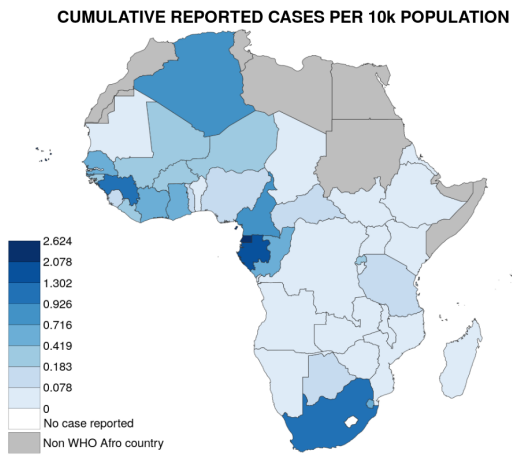
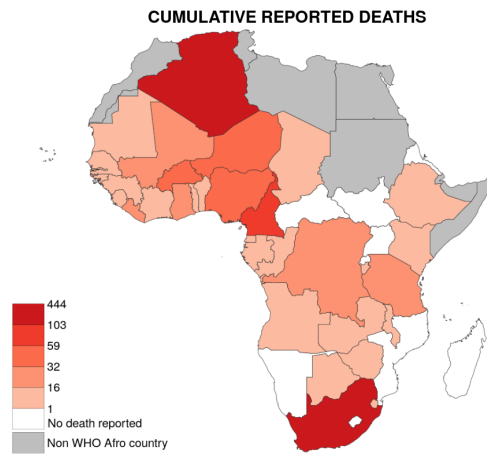
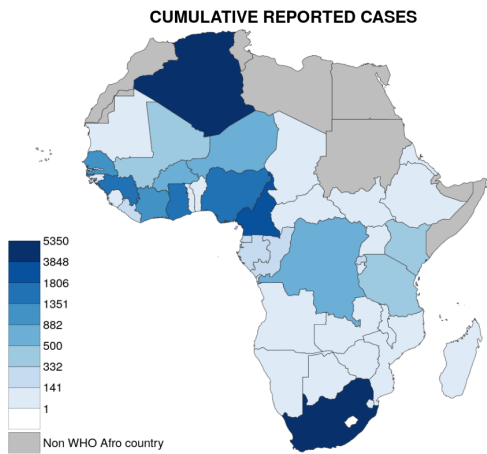
We compare the size and rate of increase of the COVID-19 epidemic across the countries included in WHO Africa Region.

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 30/04/2020. The lower the doubling time the faster the spread of COVID-19.

Caveat: Colour scales are non-linear and are re-calibrated every week.

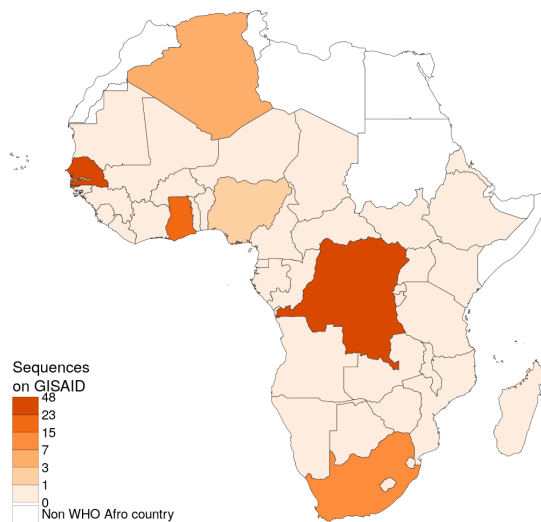
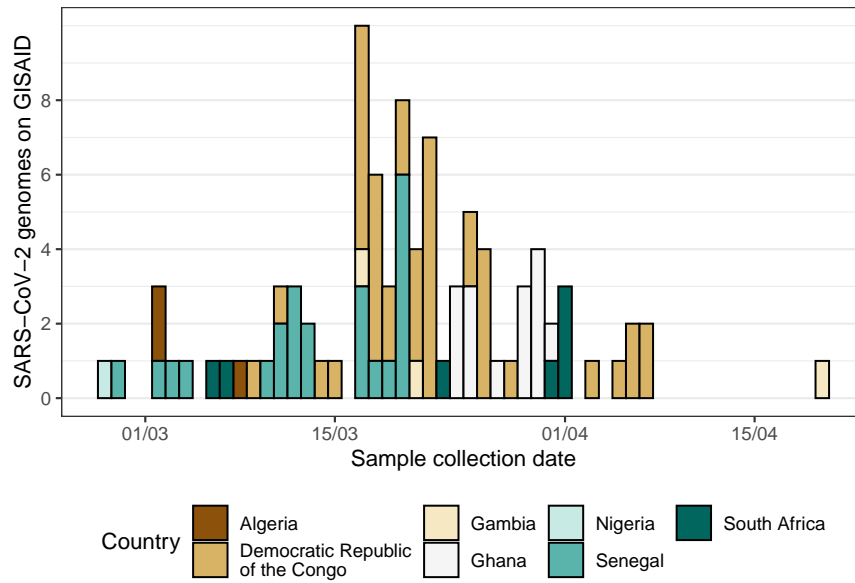
# Summary maps



## Sequencing

As of 30/04/2020, 100 SARS-CoV-2 genomes collected and sequenced in Africa have been 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



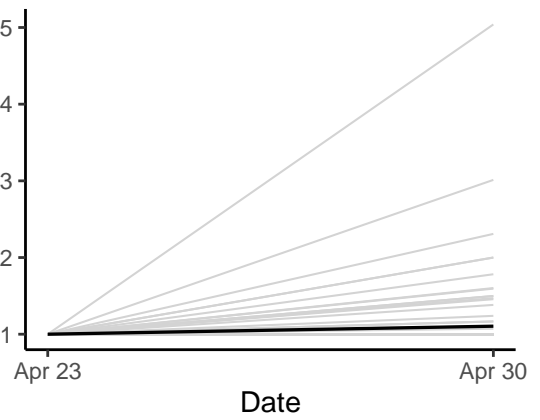
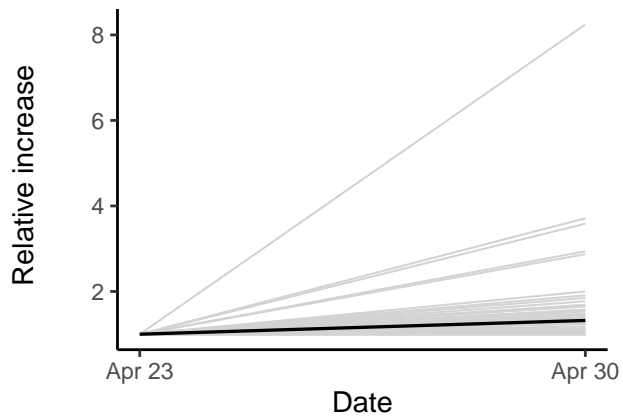
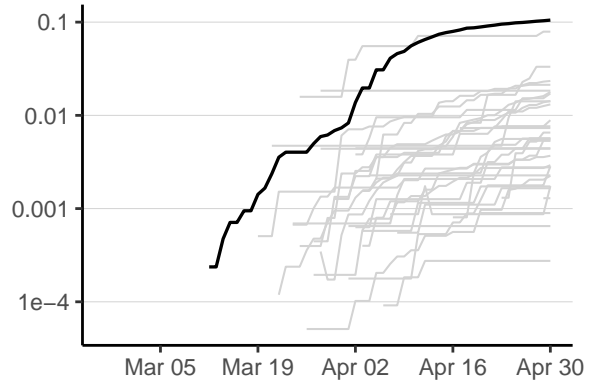
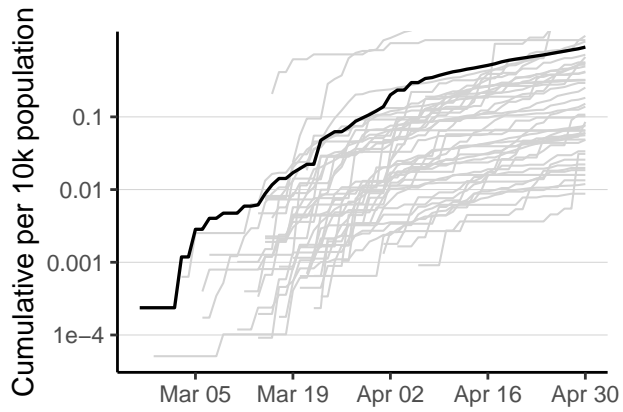
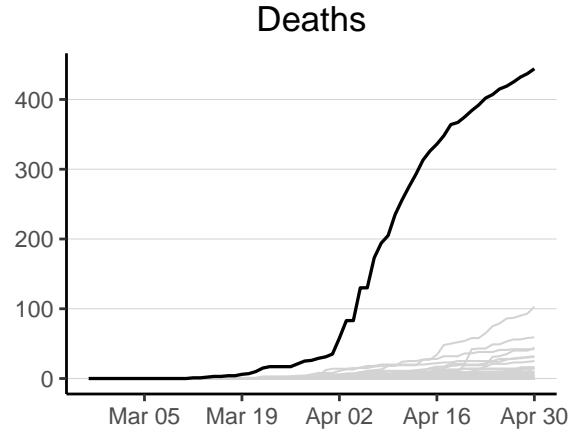
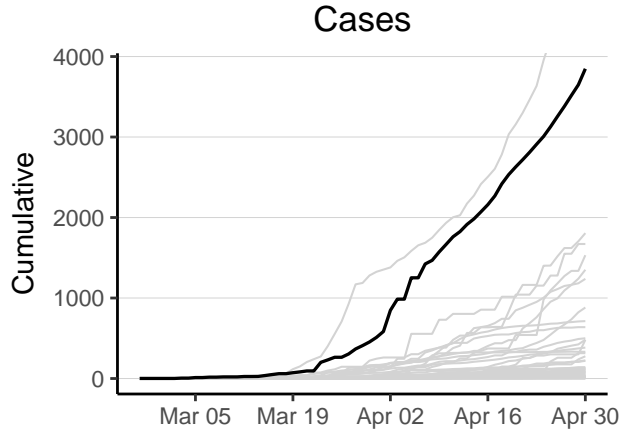
## Section 2: Individual country situations

As of 30/04/2020, each panel below shows for each country:

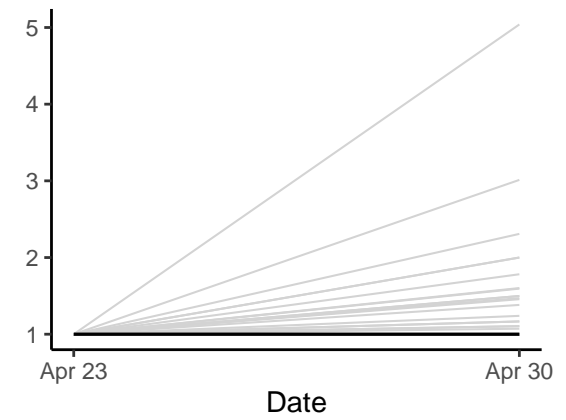
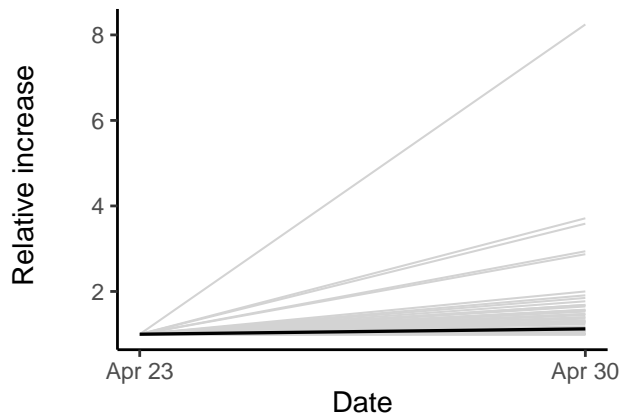
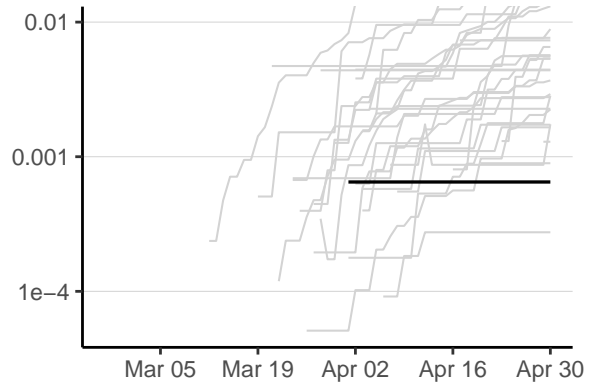
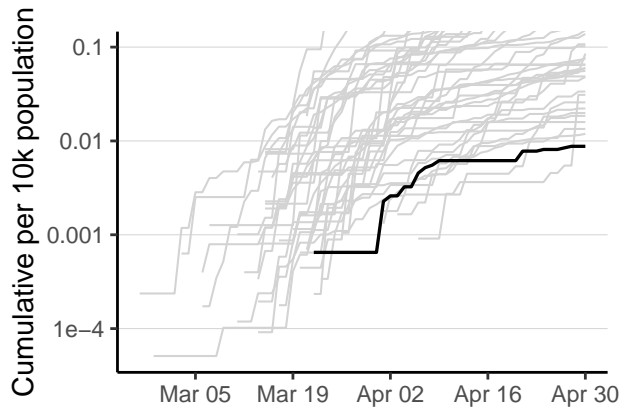
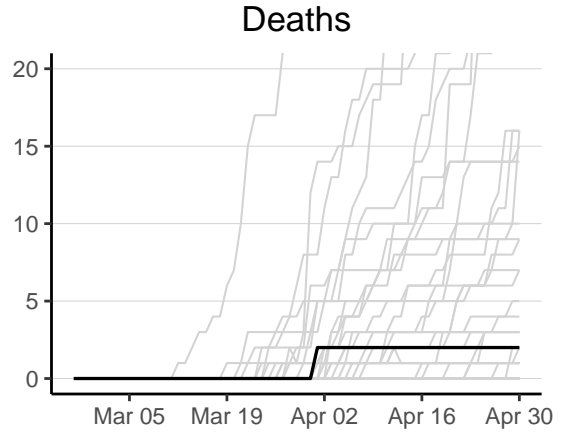
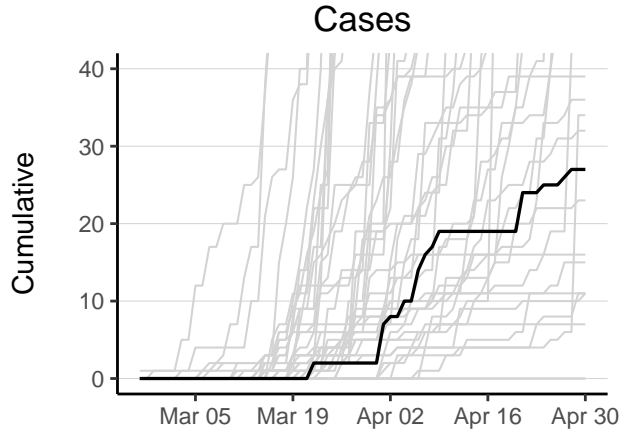
- Top row: cumulative reported cases (left) and deaths (right).
- Middle row: cumulative reported cases (left) and deaths (right) per 10,000 population on a log10 scale.
- Bottom row: relative increase in cumulative number of cases (left) and deaths (right) based on the doubling times (of cases and deaths respectively) estimated over a 7 day period up to 30/04/2020. The lower the doubling time the faster the spread of COVID-19.



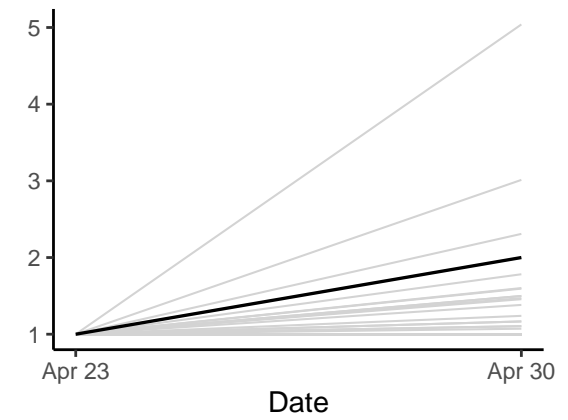
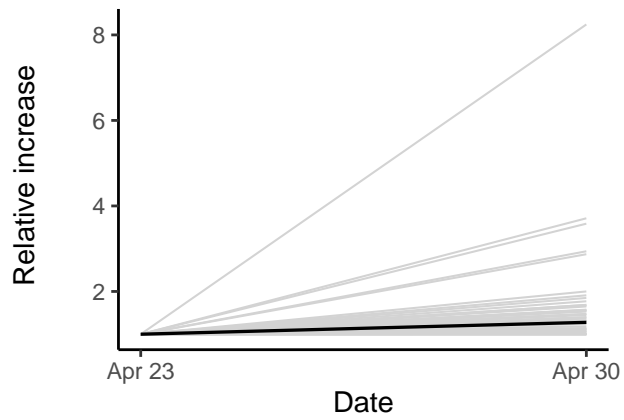
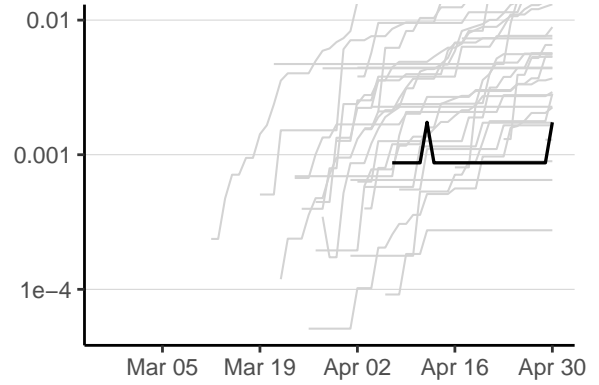
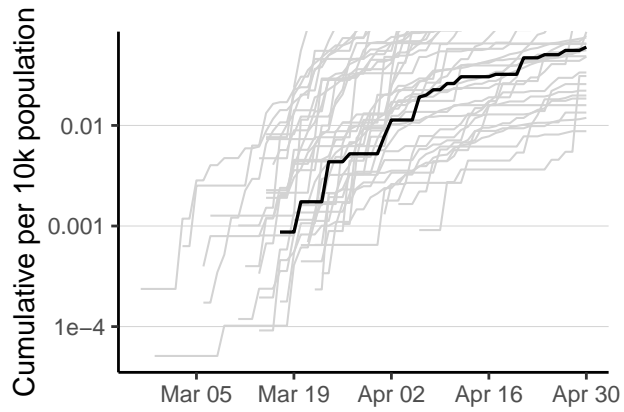
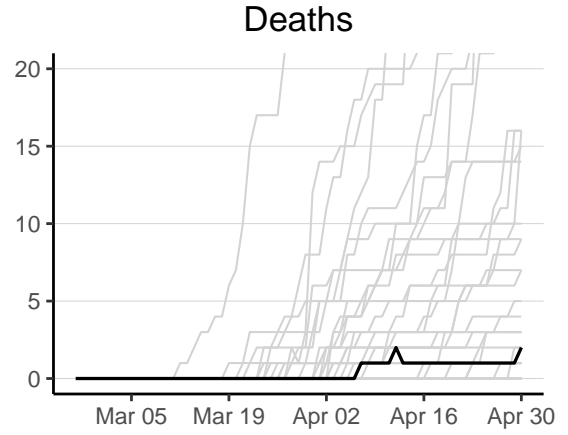
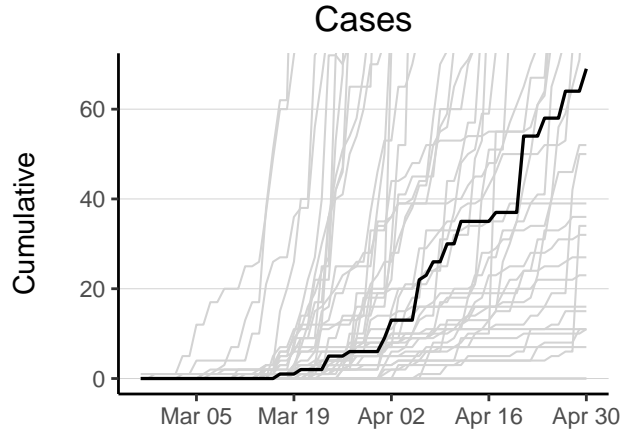
# Algeria



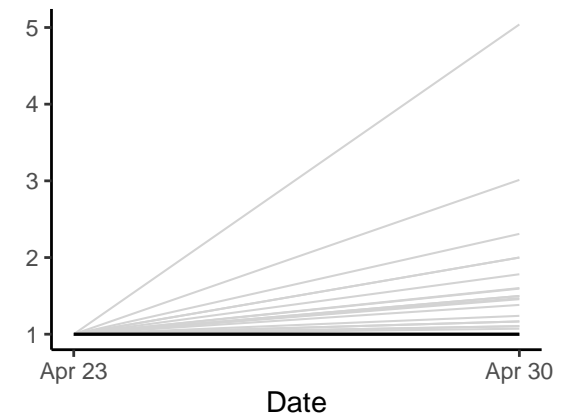
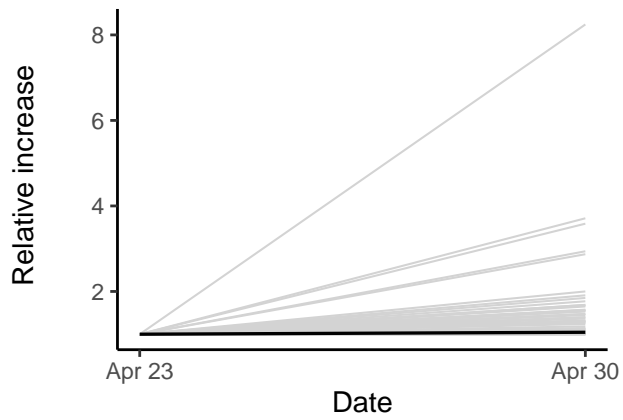
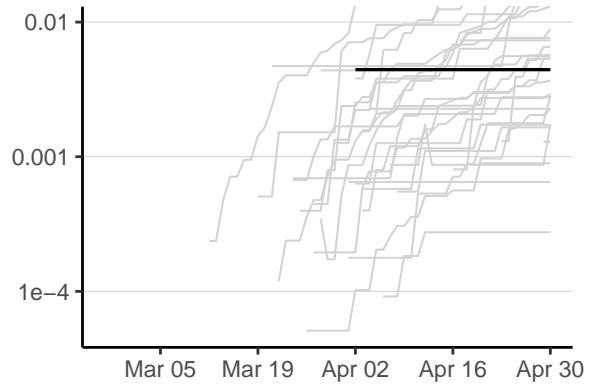
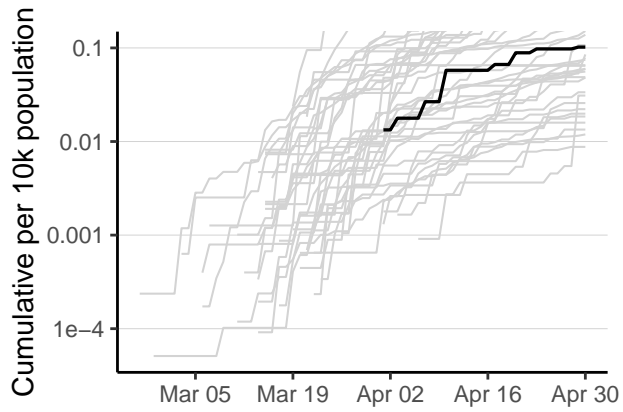
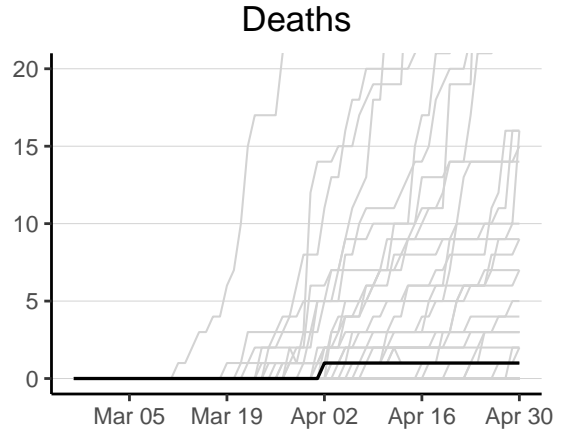
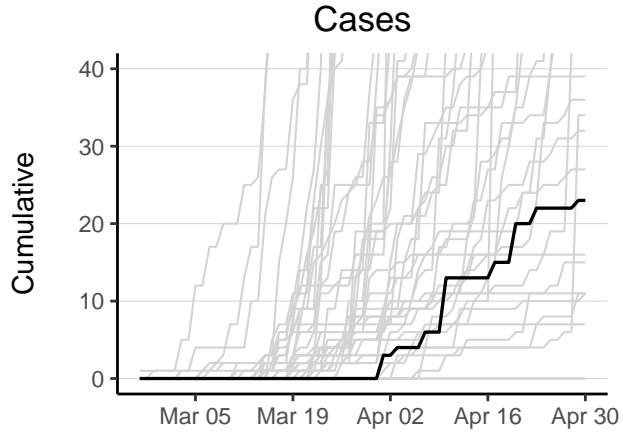
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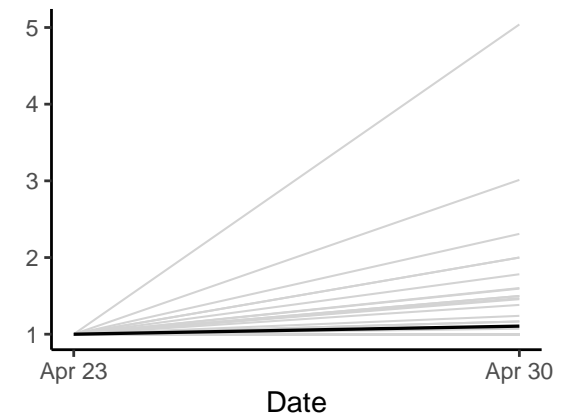
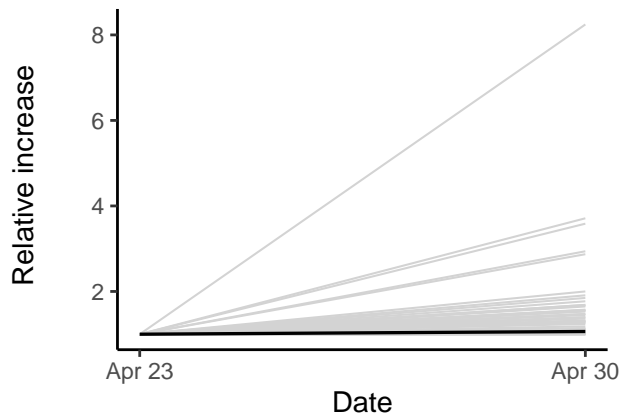
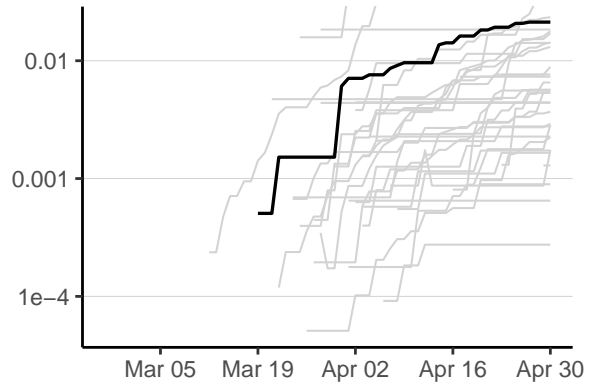
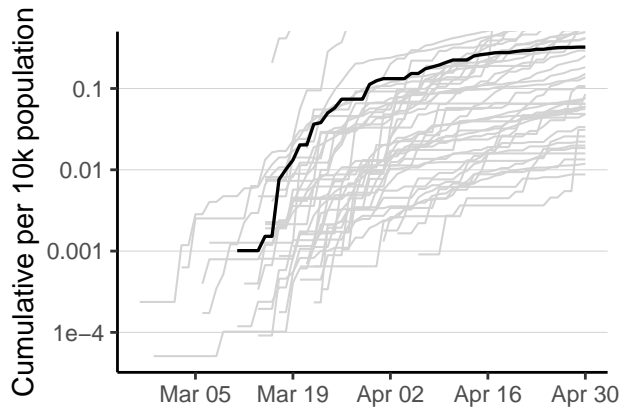
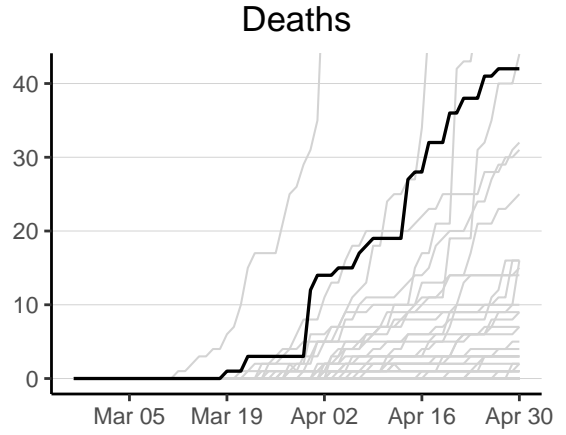
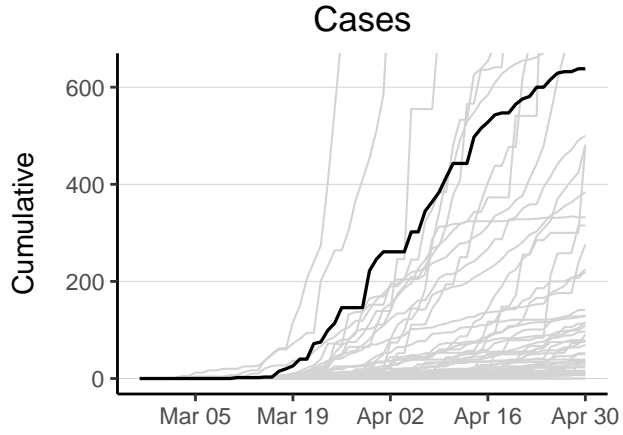
# Benin



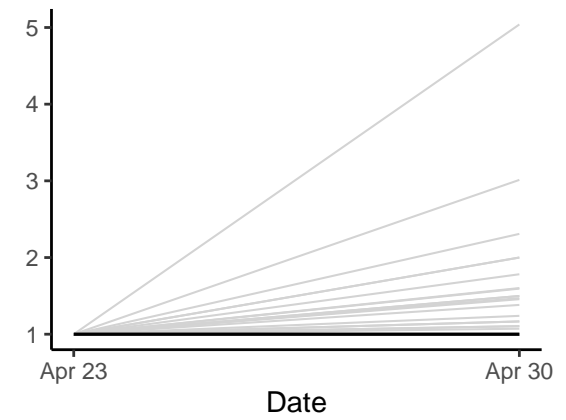
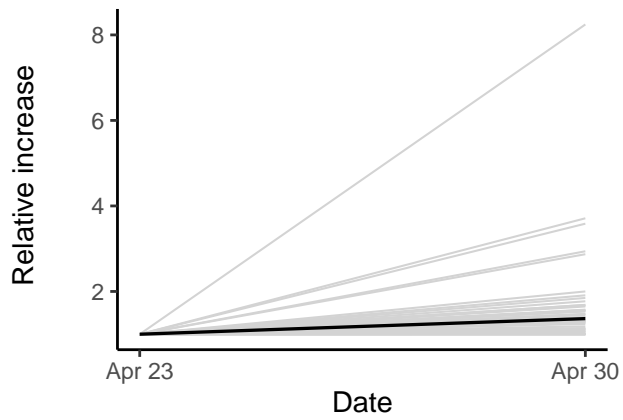
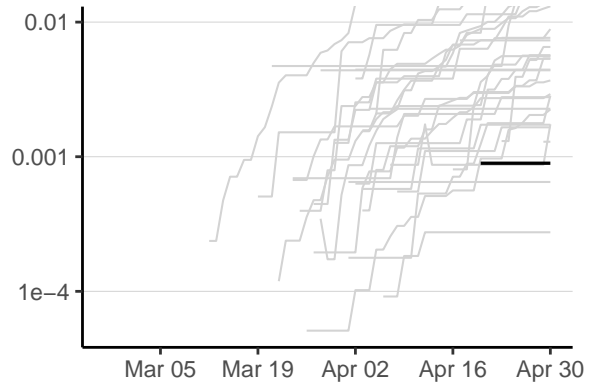
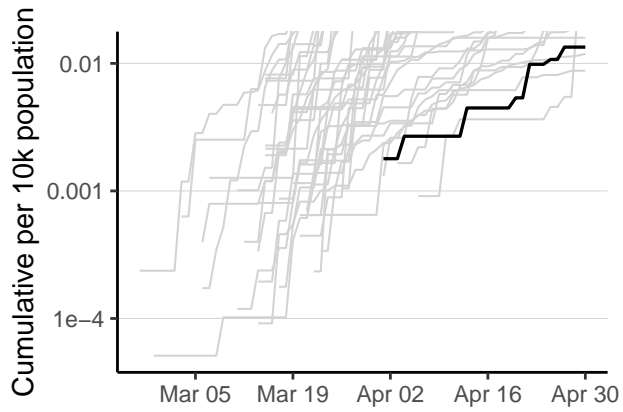
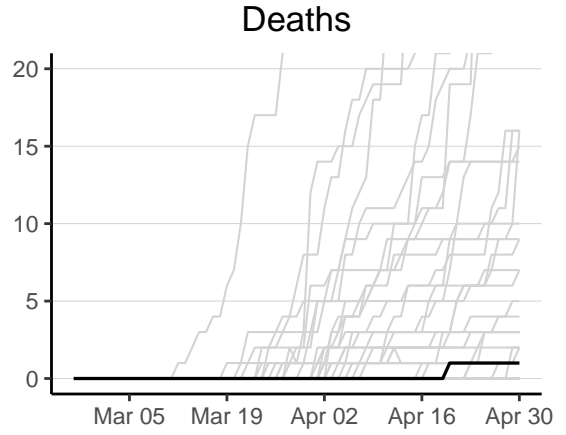
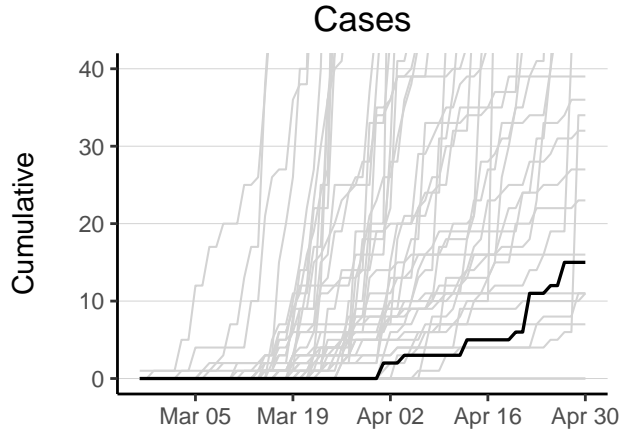
# Botswana



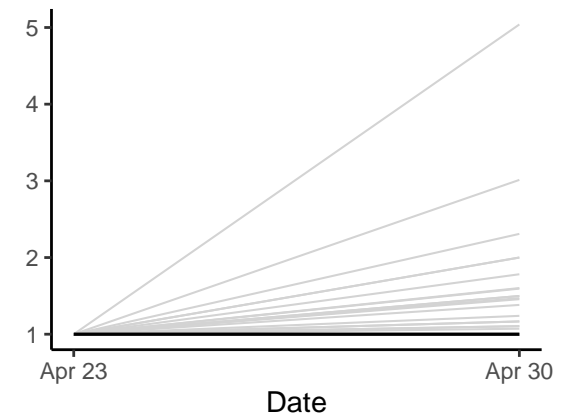
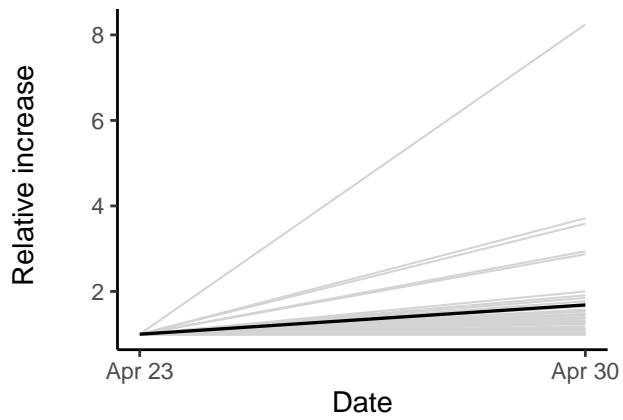
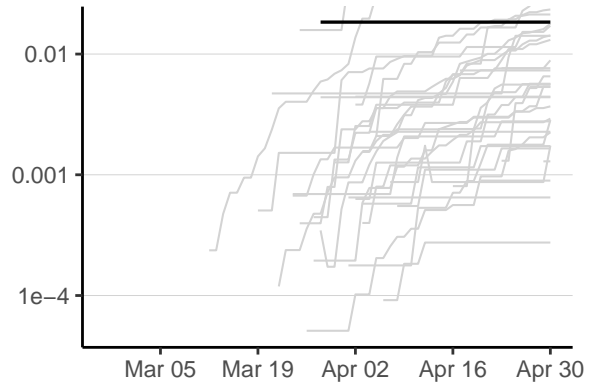
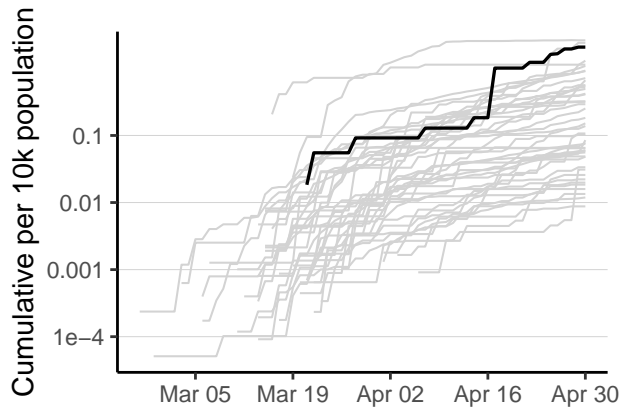
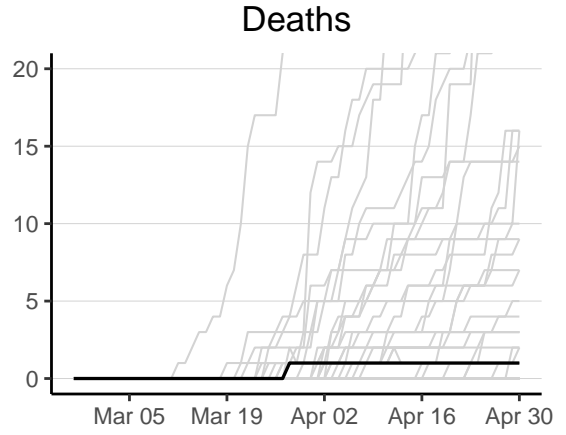
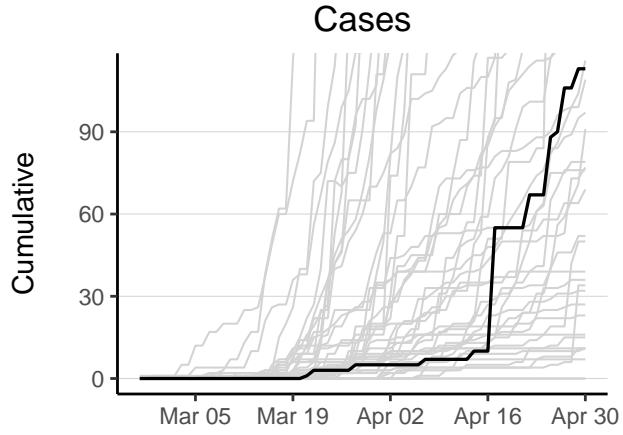
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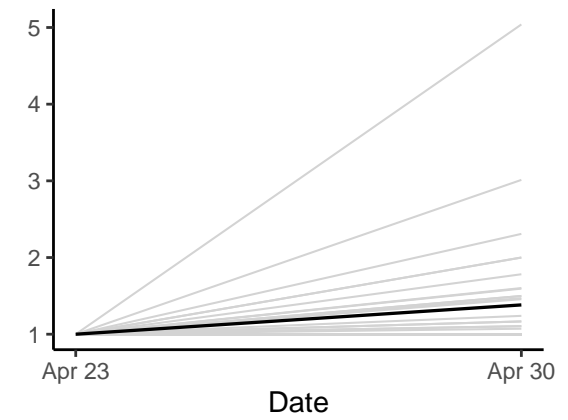
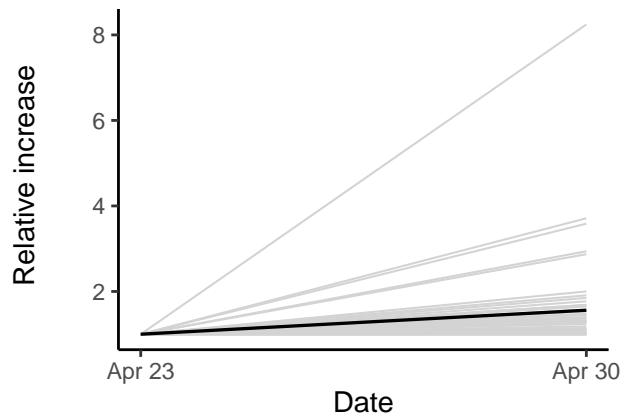
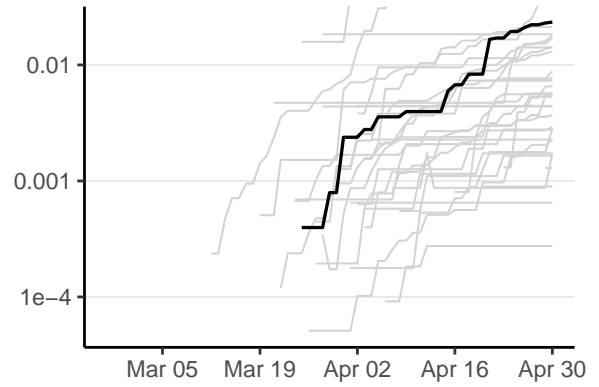
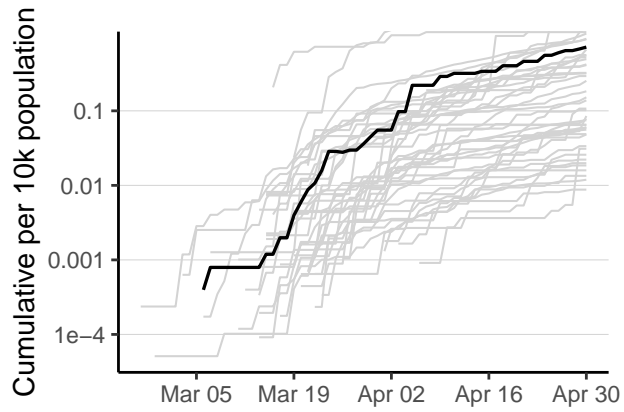
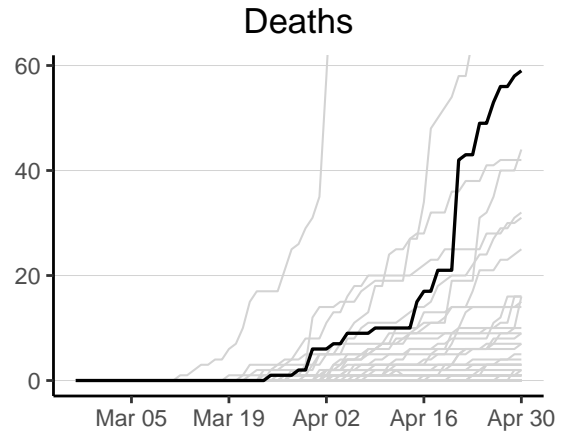
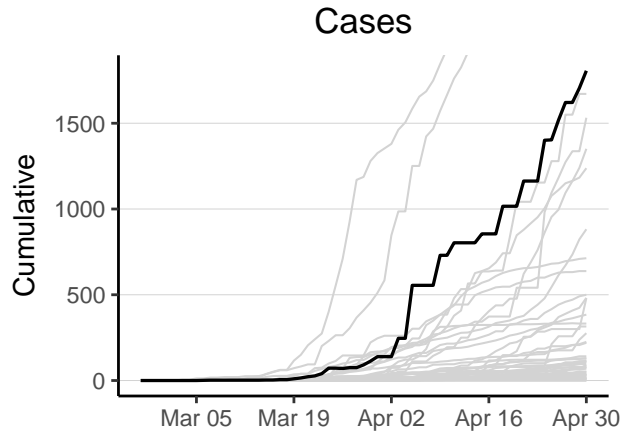
# Burundi



# Cabo Verde

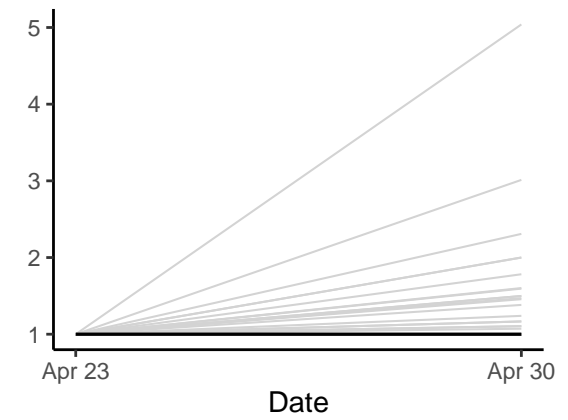
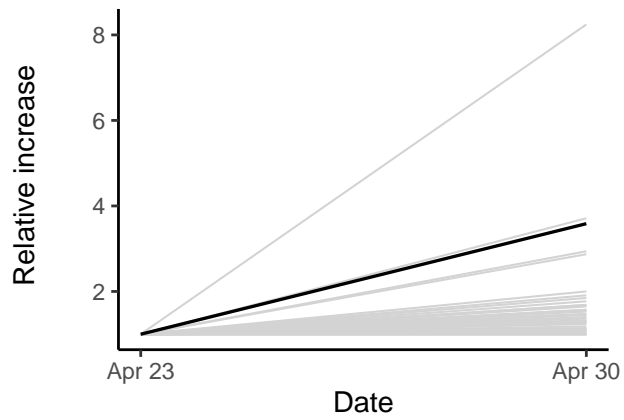
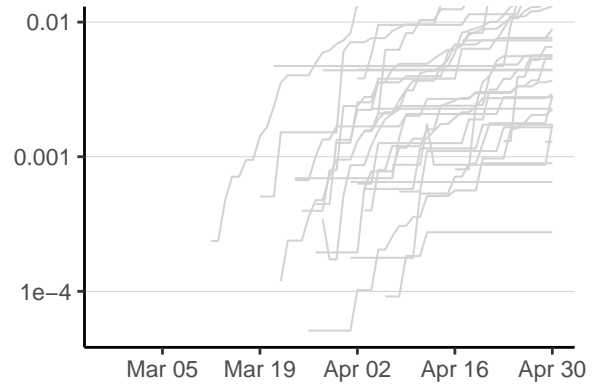
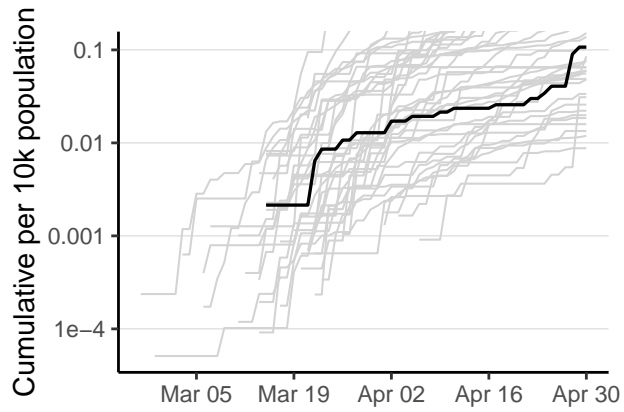
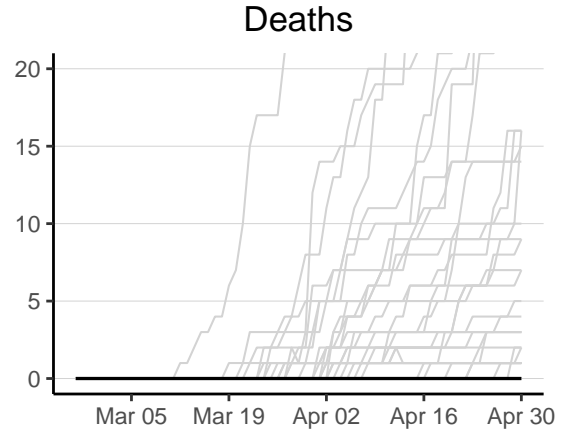
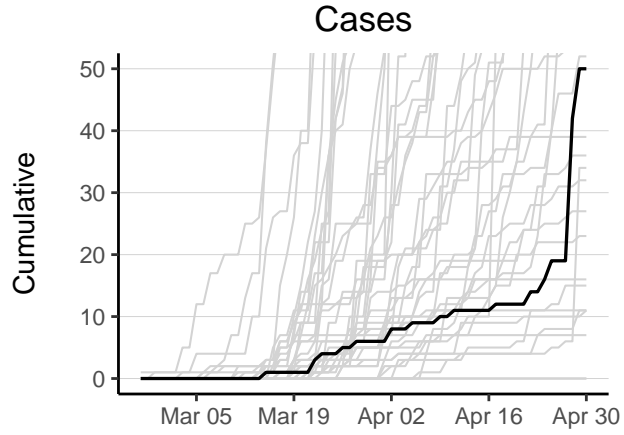


# Cameroon

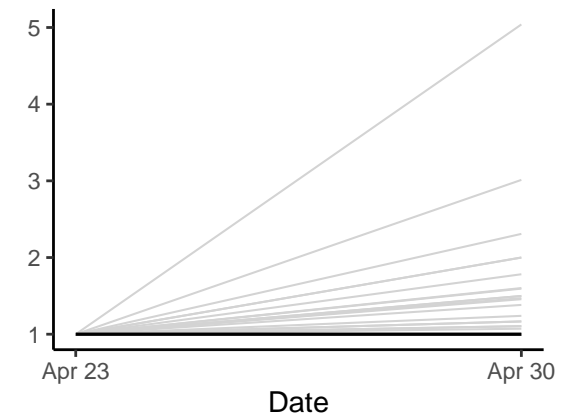
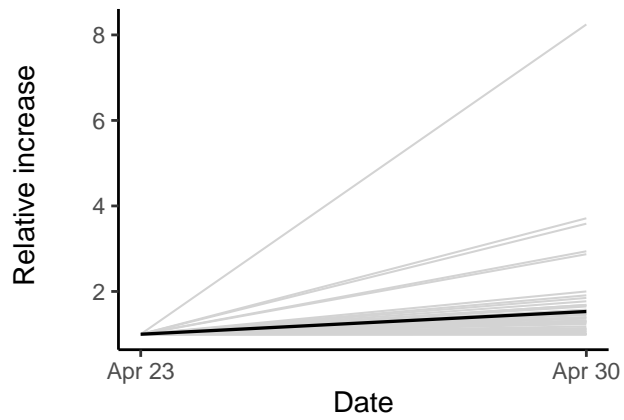
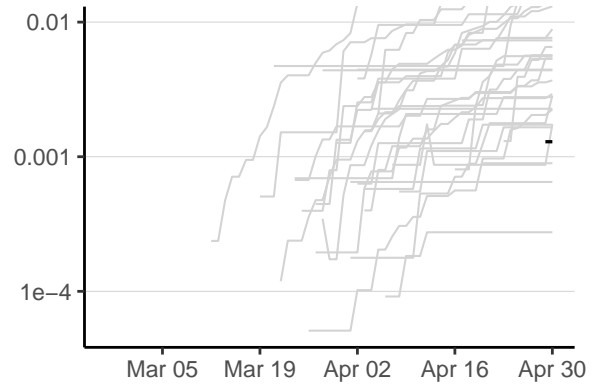
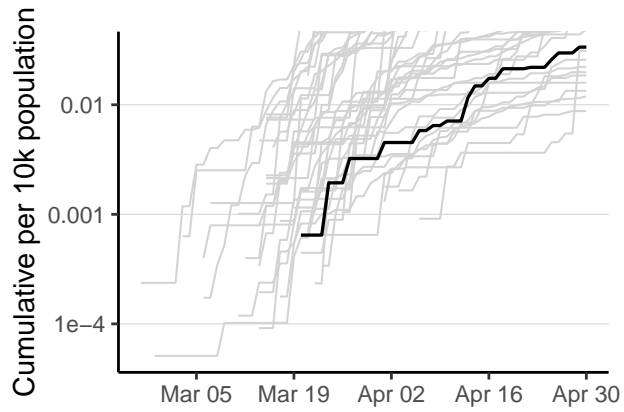
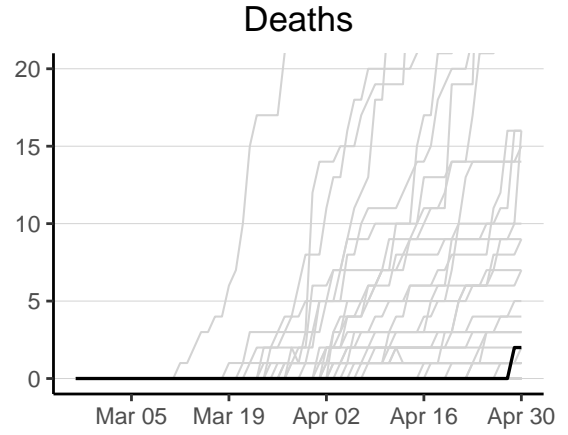
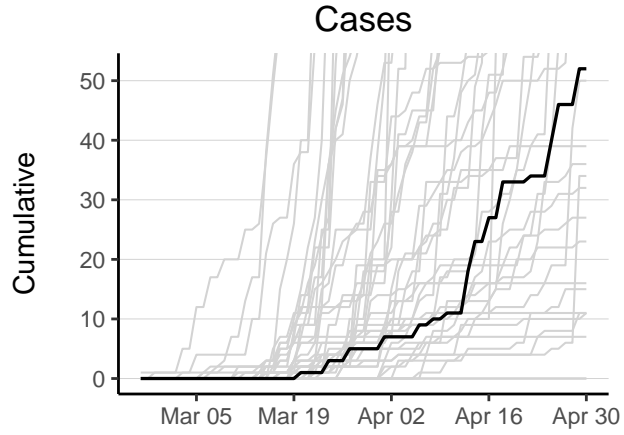




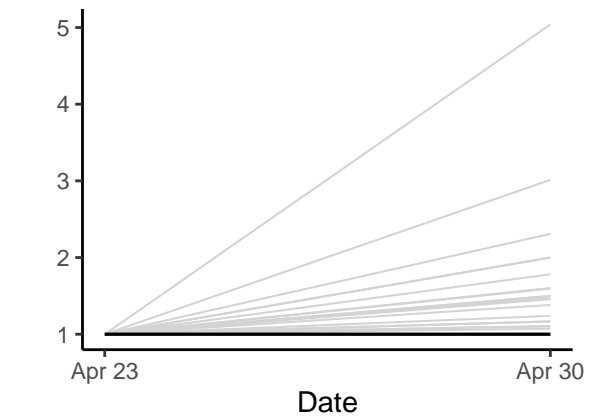
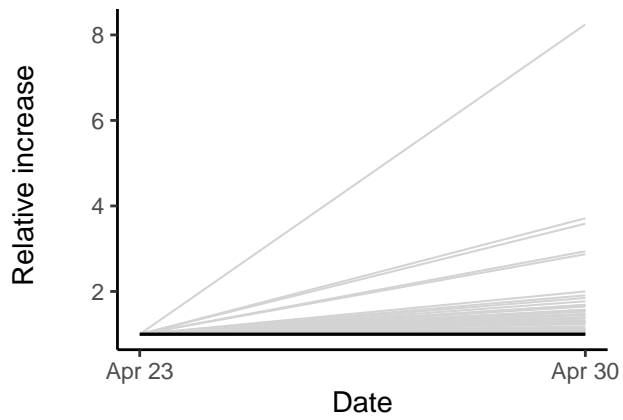
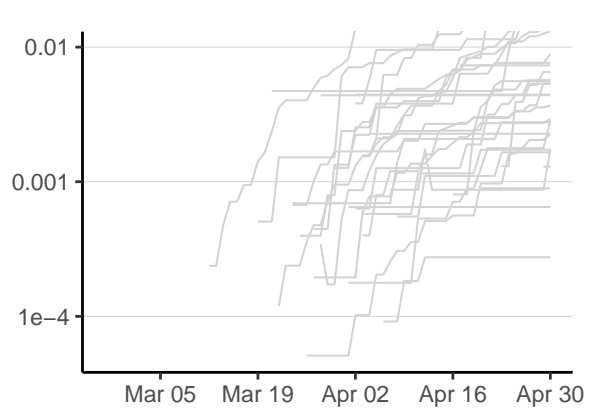
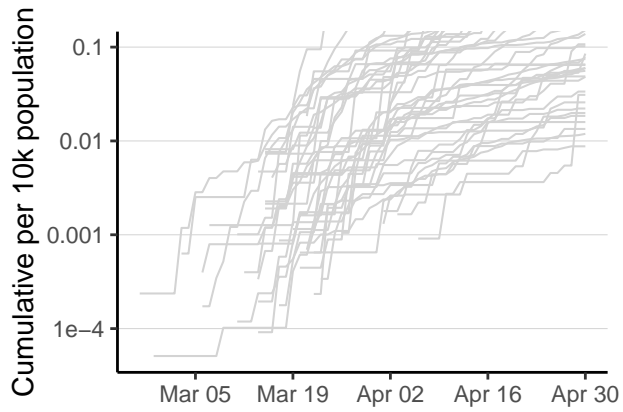
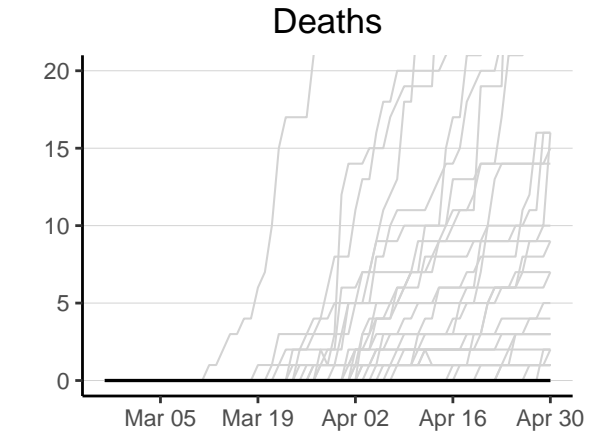
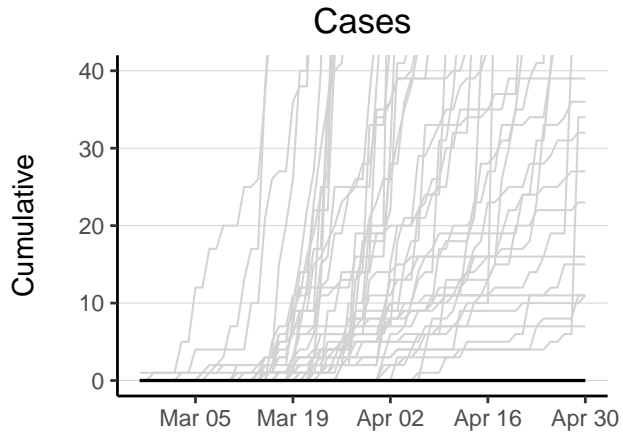
# Central African Republic



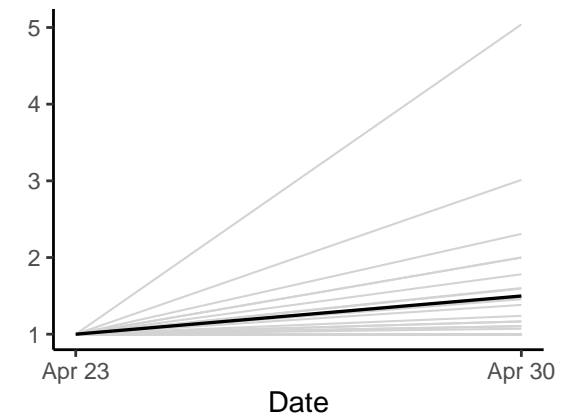
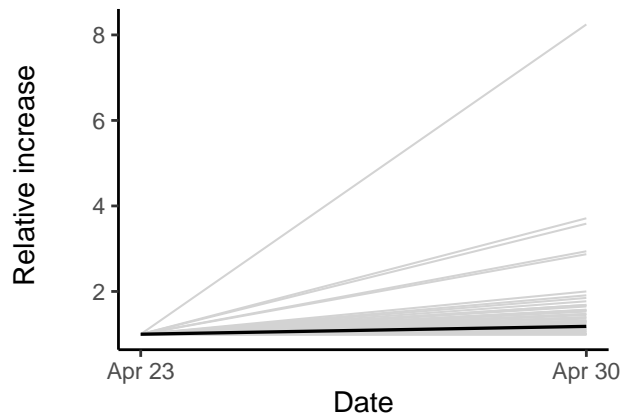
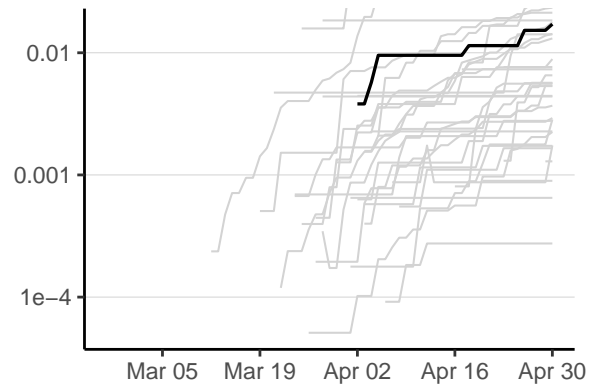
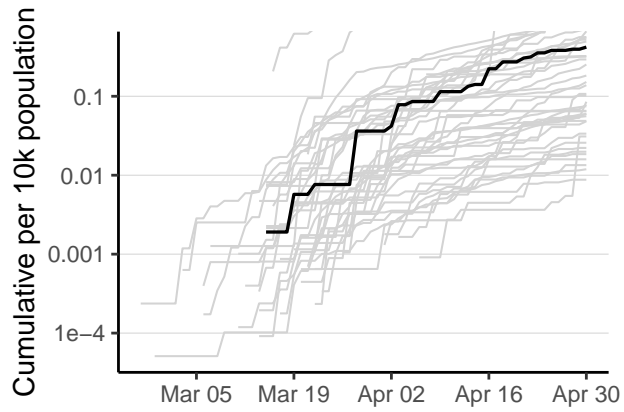
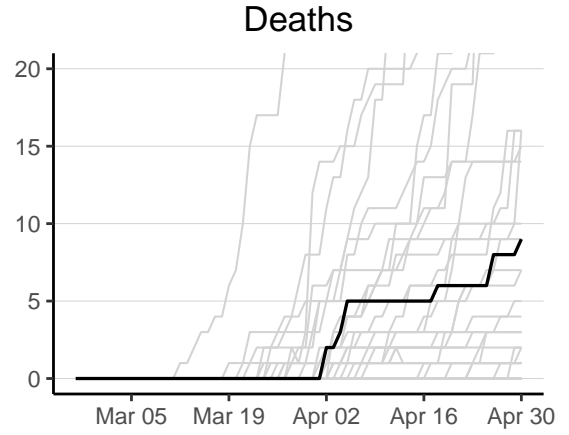
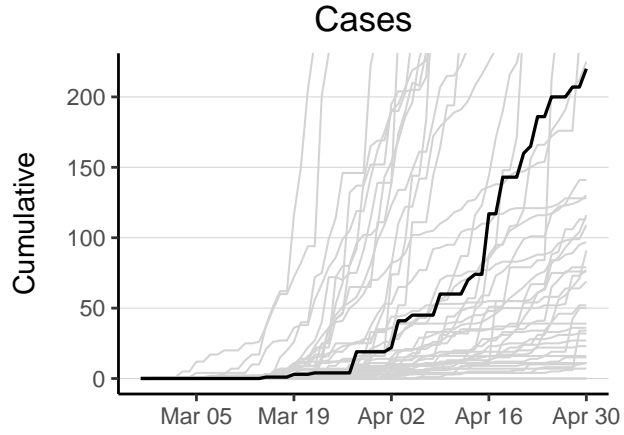
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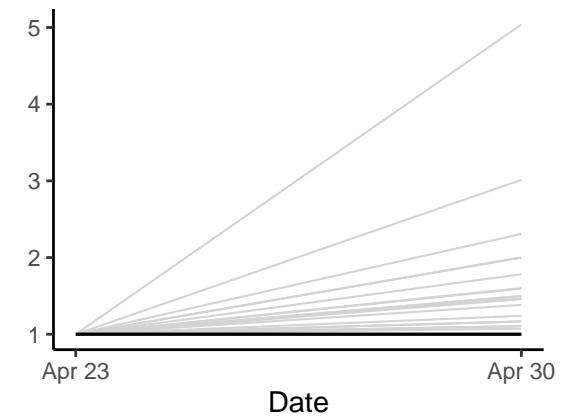
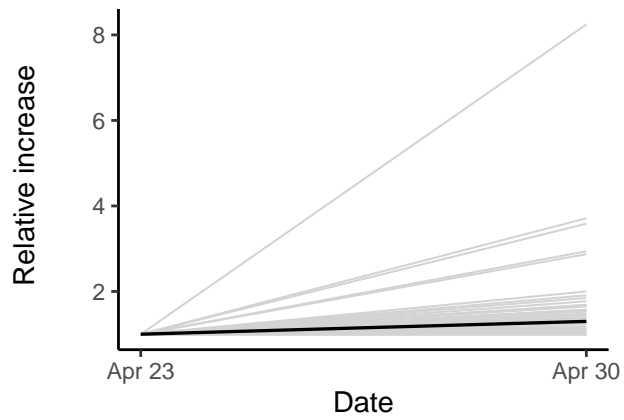
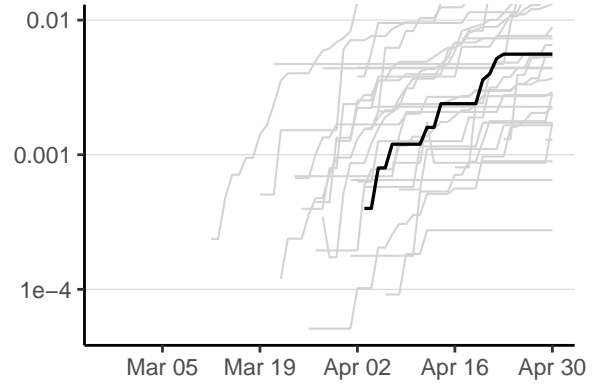
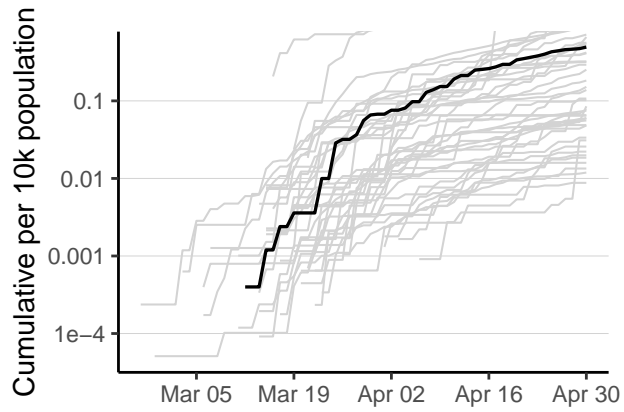
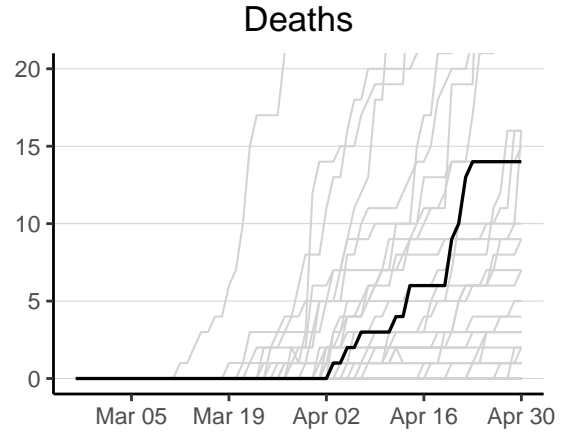
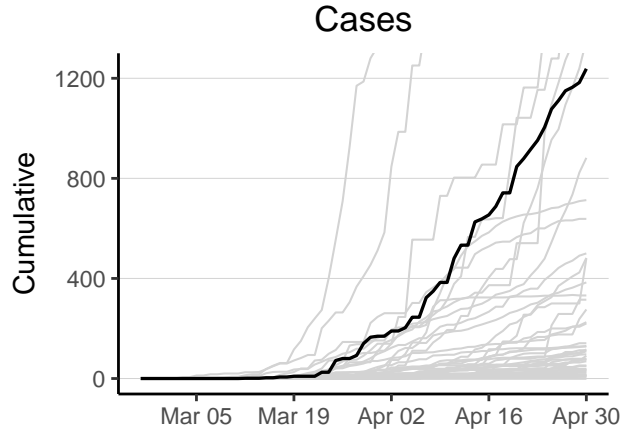
# Comoros



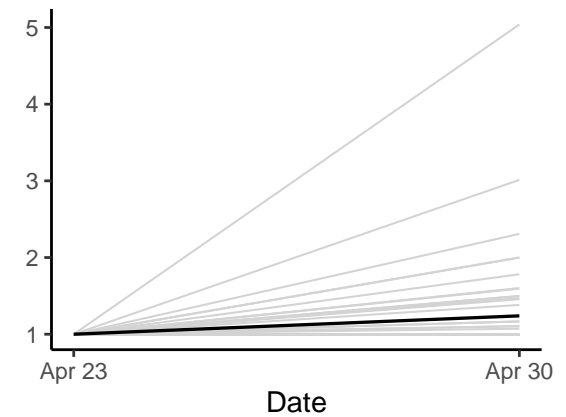
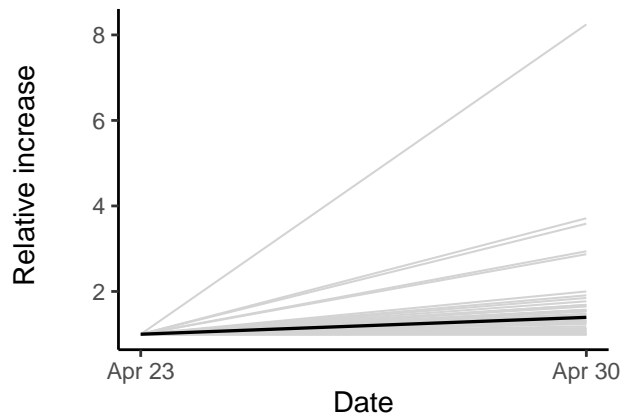
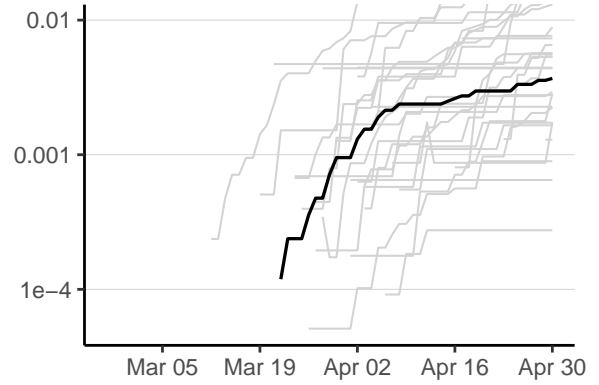
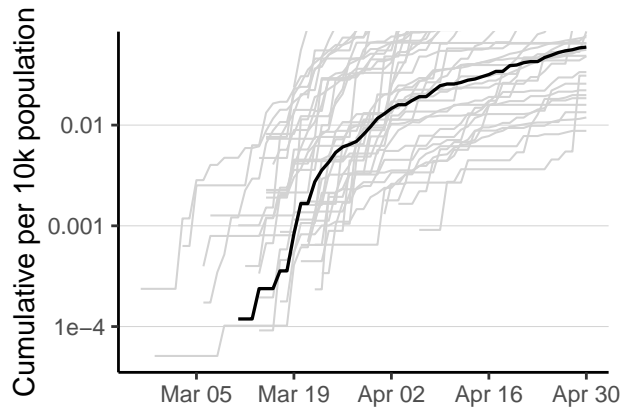
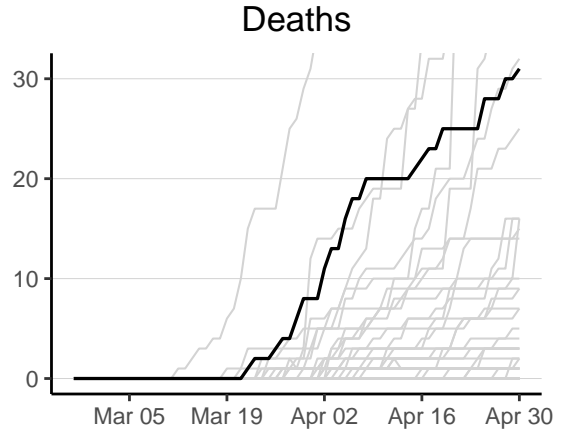
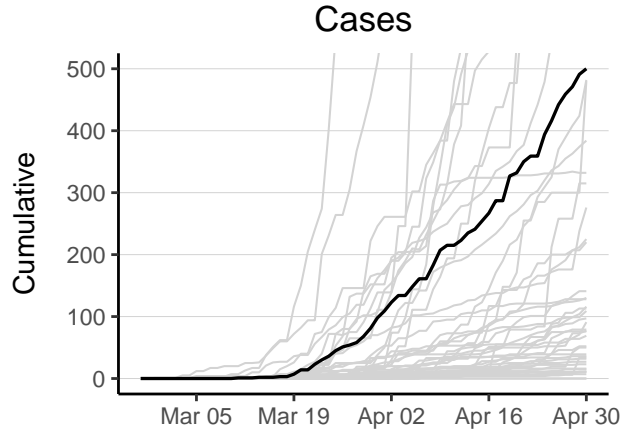
# Congo



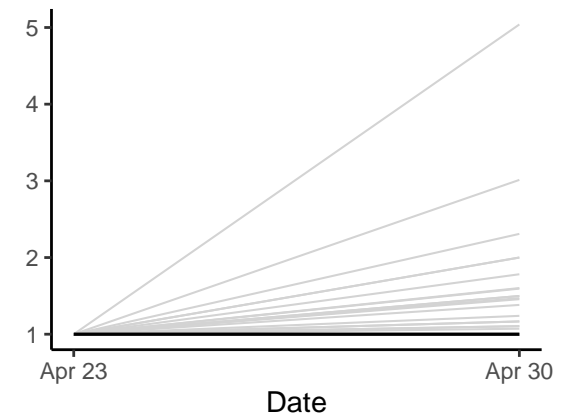
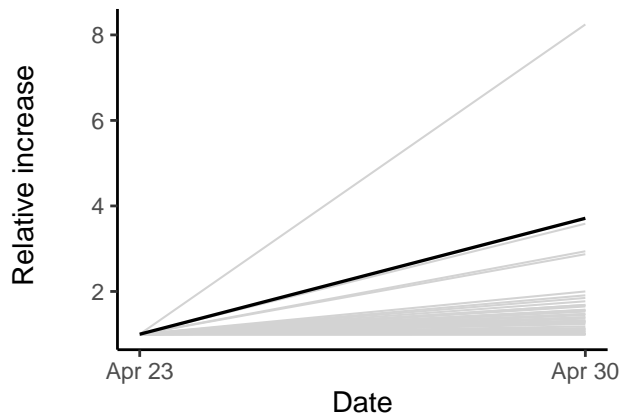
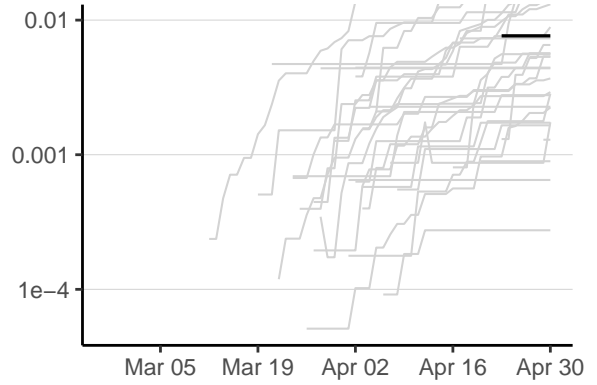
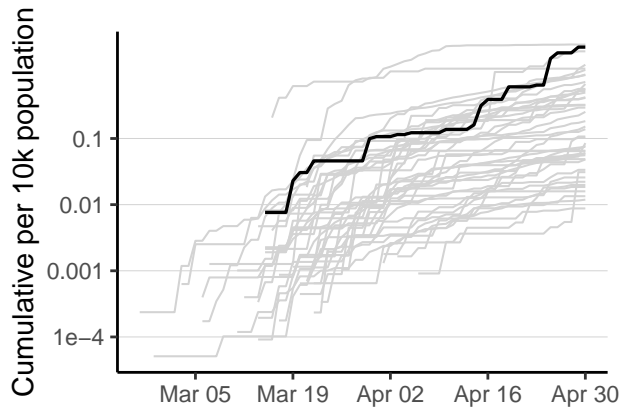
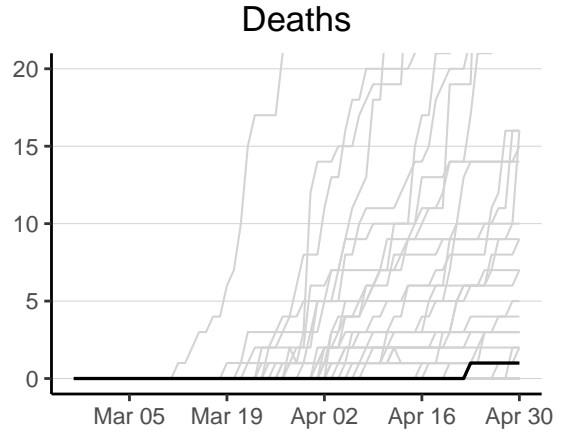
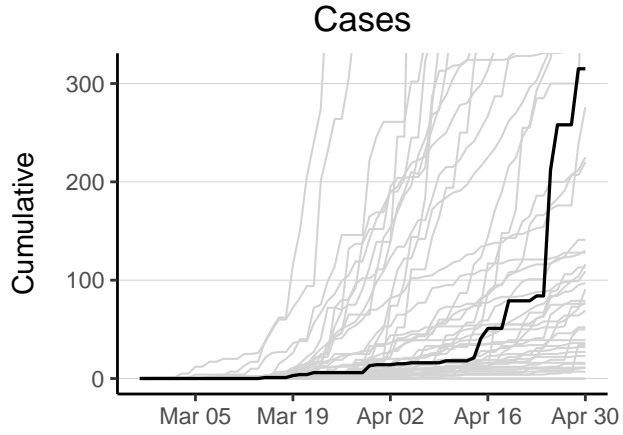
# Cote d'Ivoire



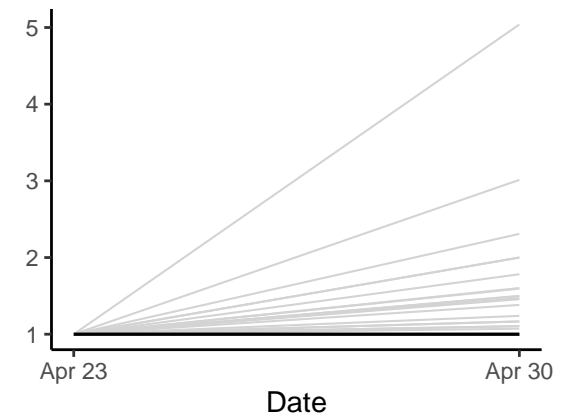
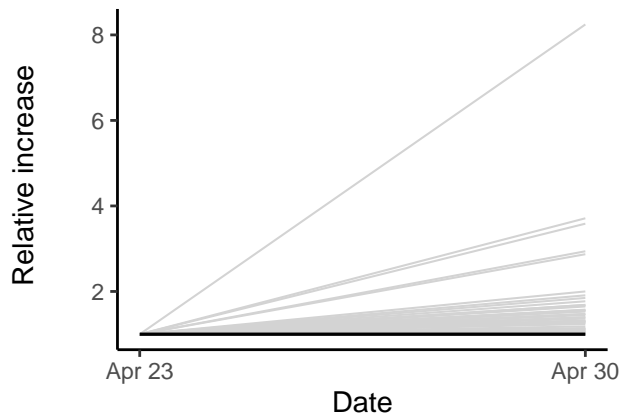
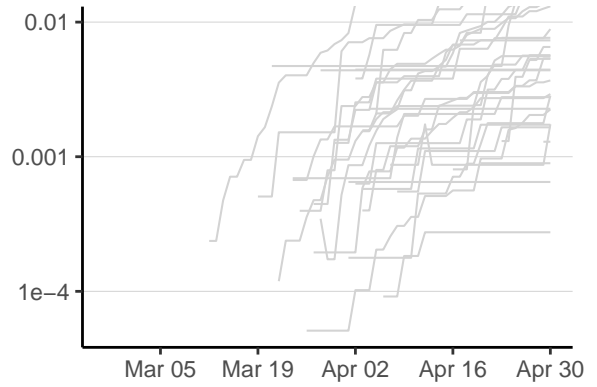
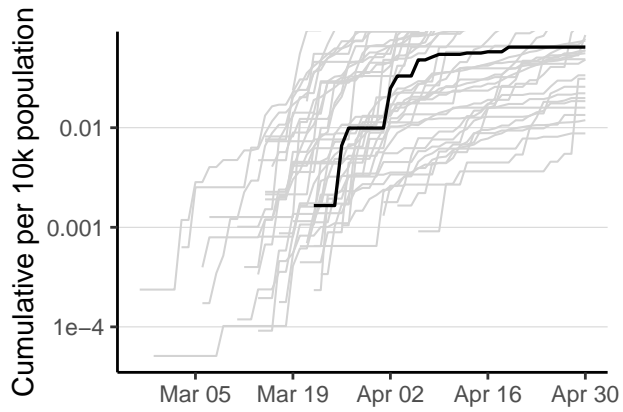
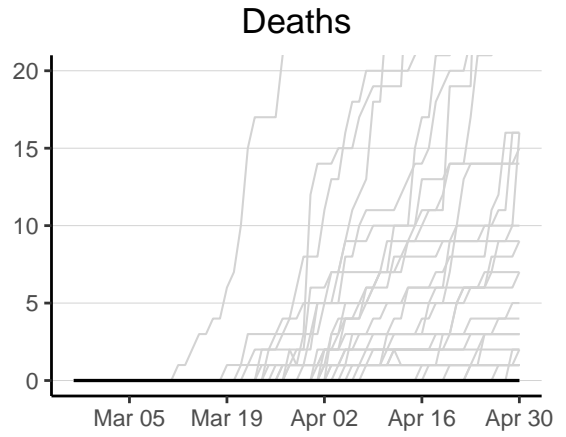
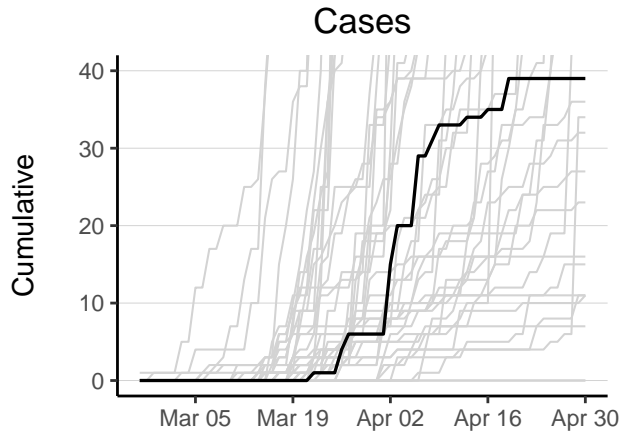
# Democratic Republic of the Congo



# Equatorial Guinea

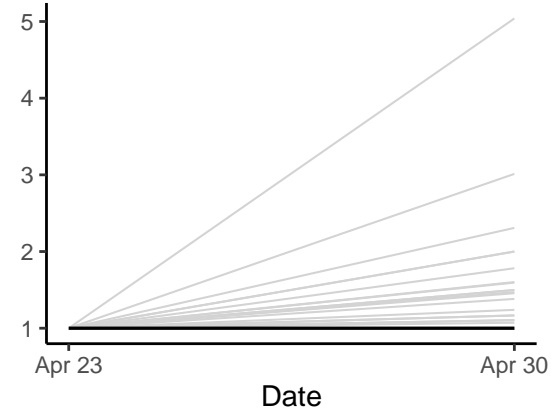
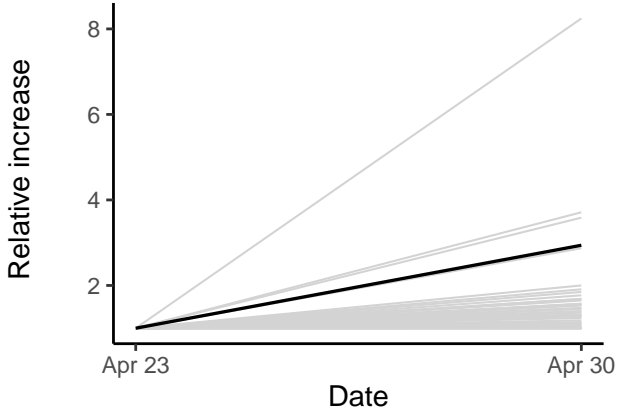
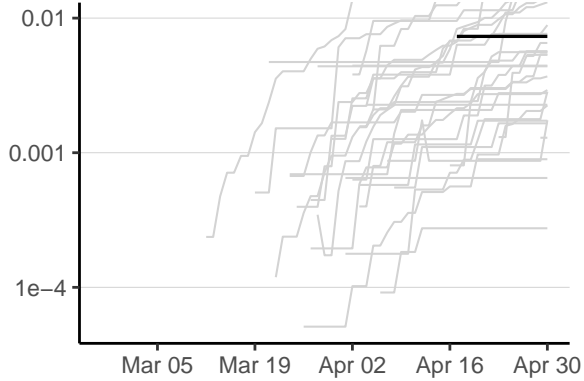
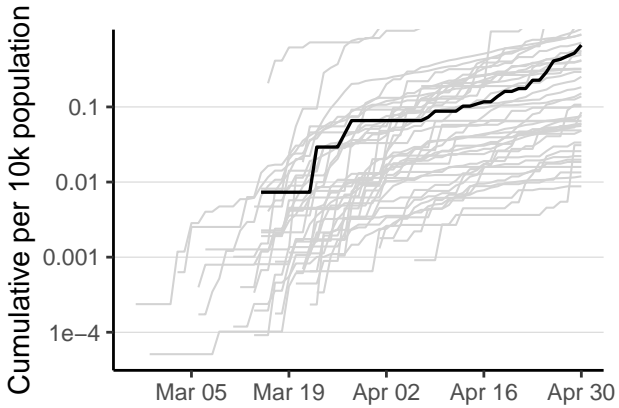
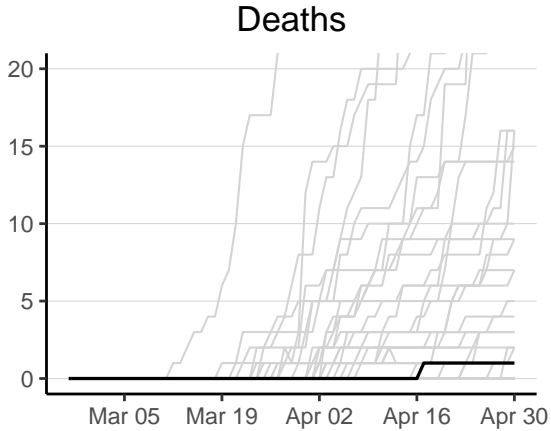
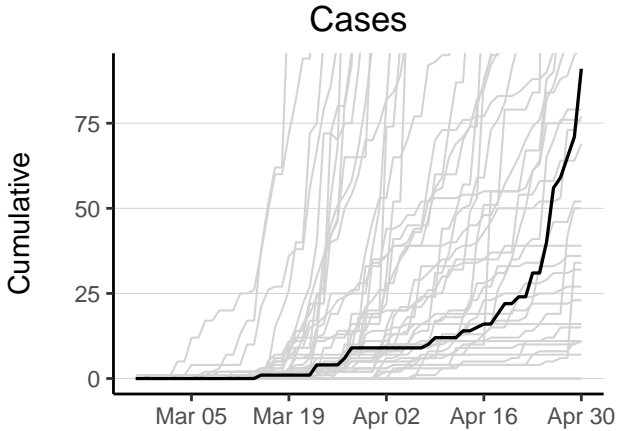


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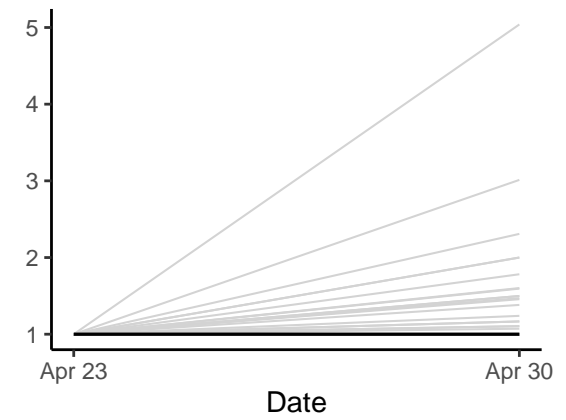
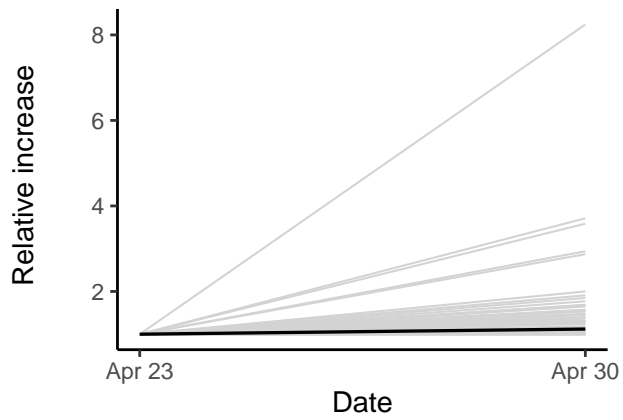
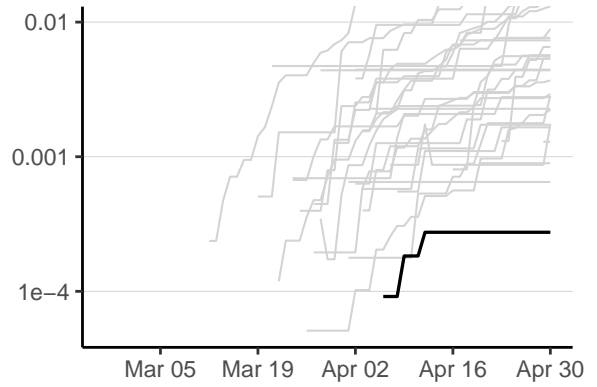
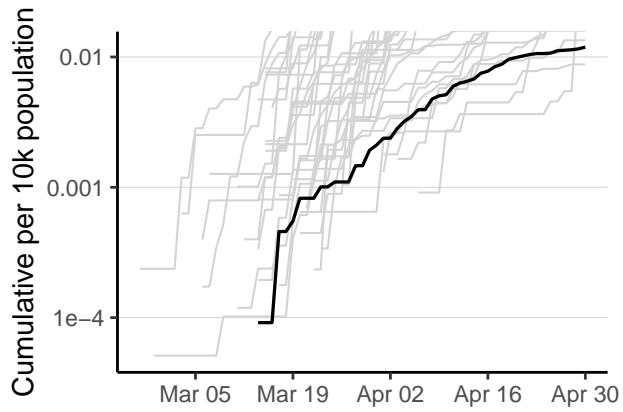
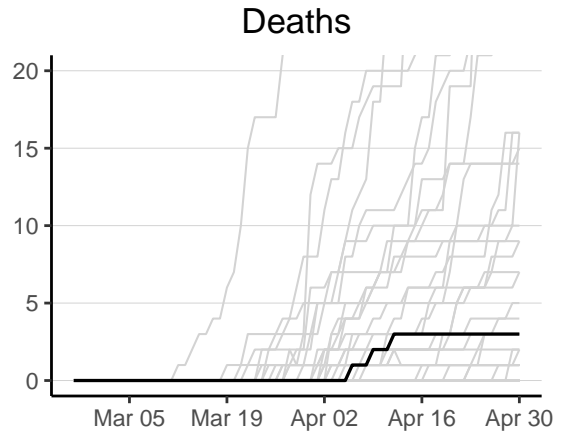
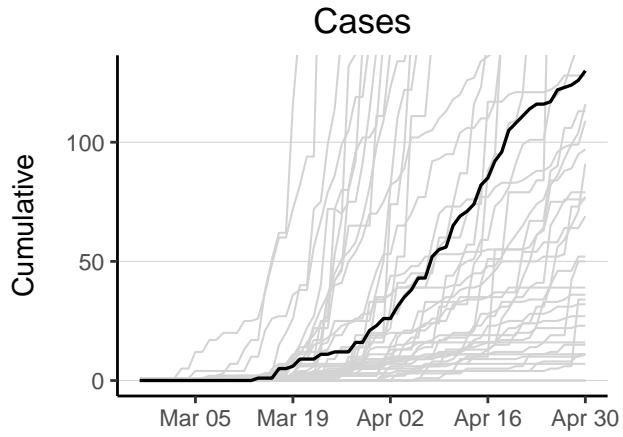




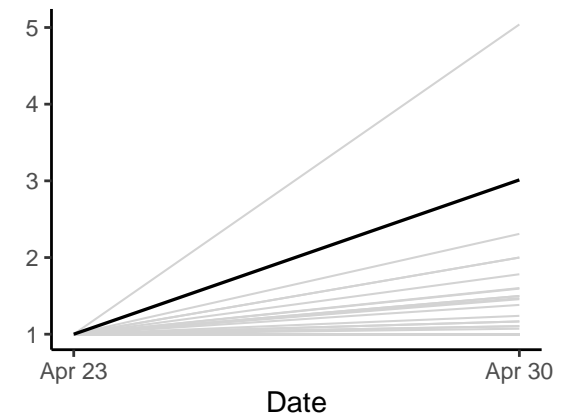
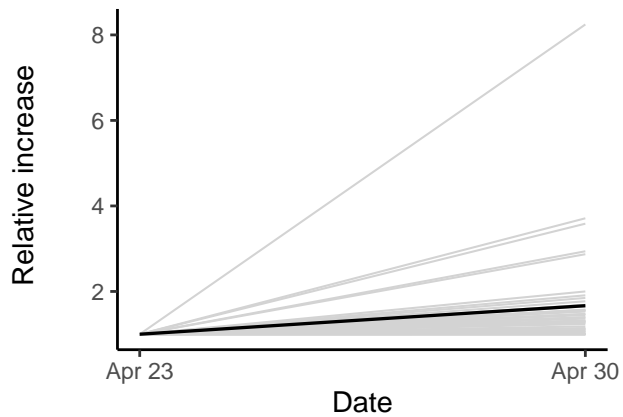
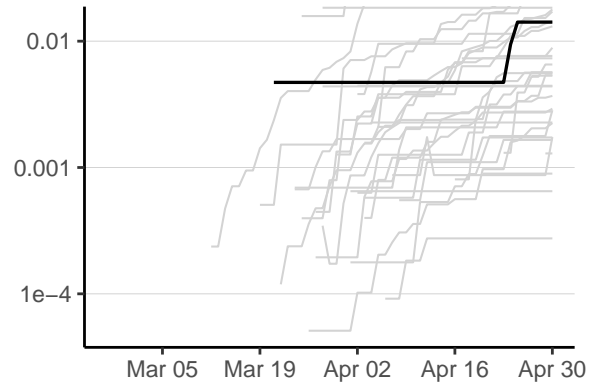
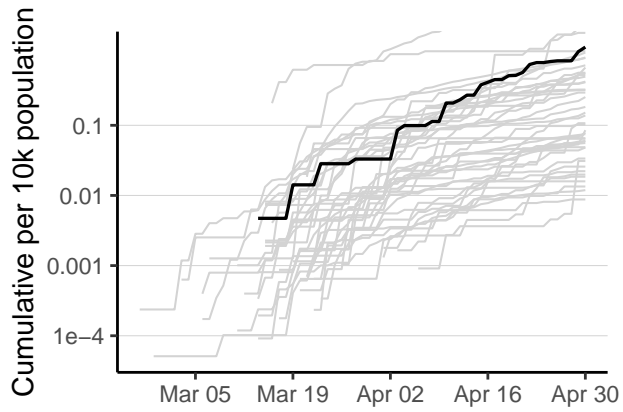
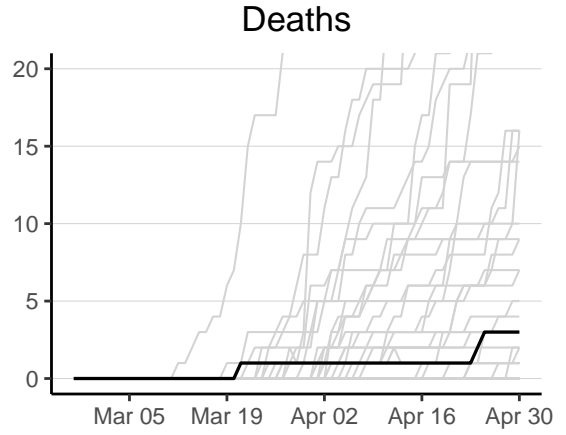
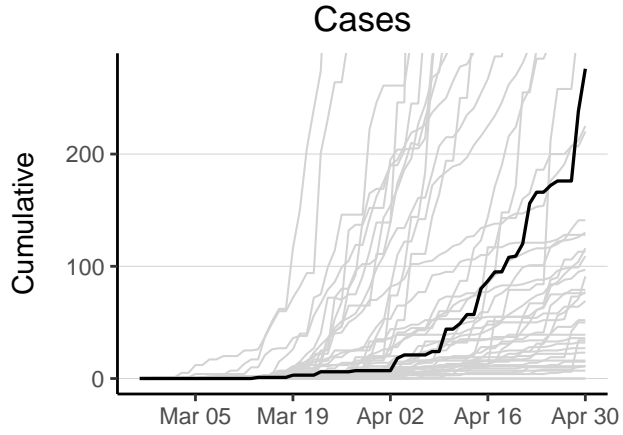
# Eswatini



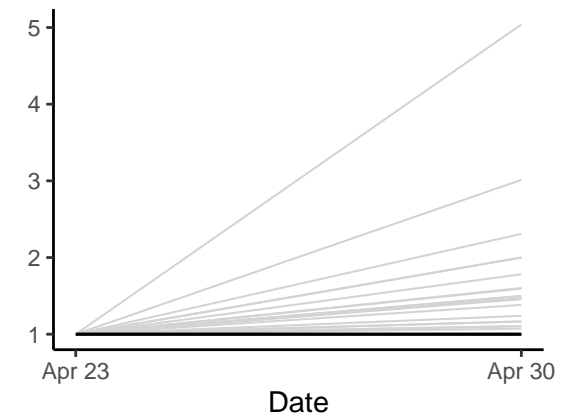
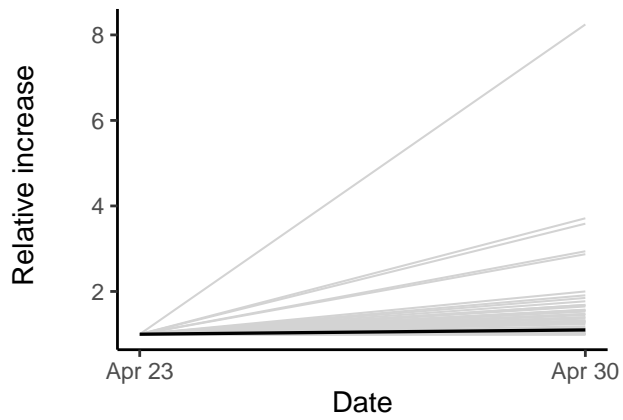
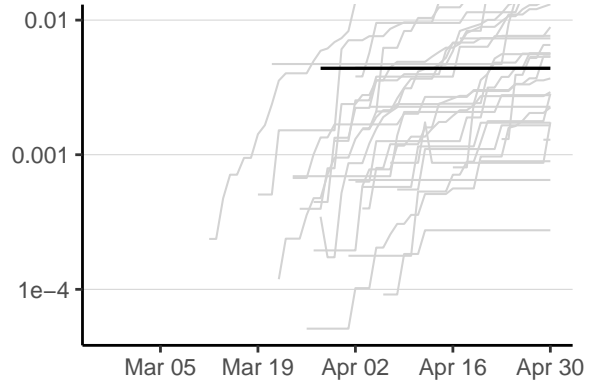
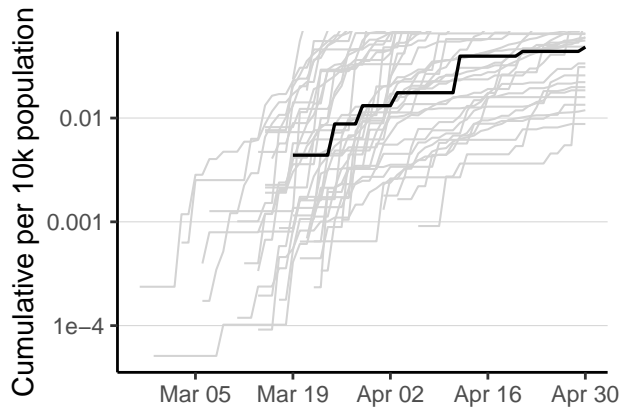
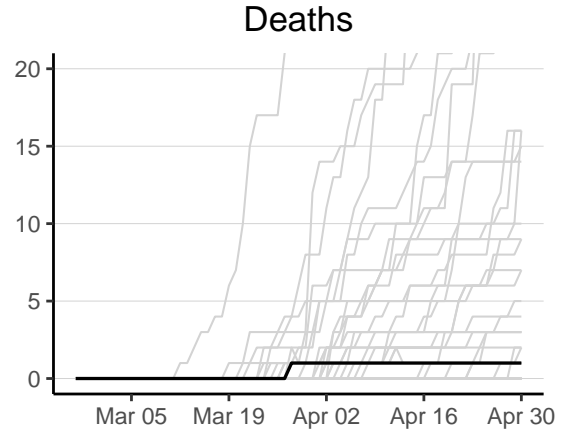
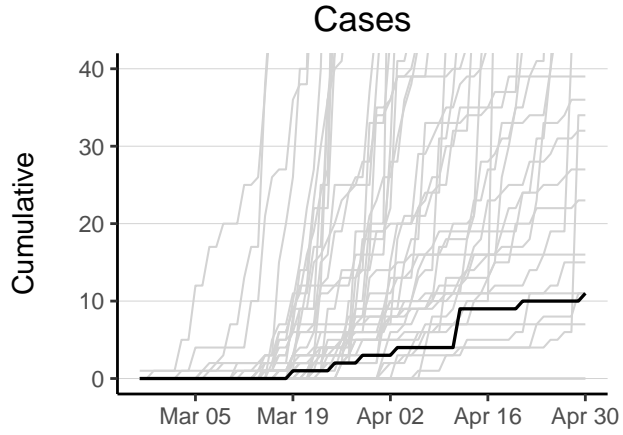
# Ethiopia



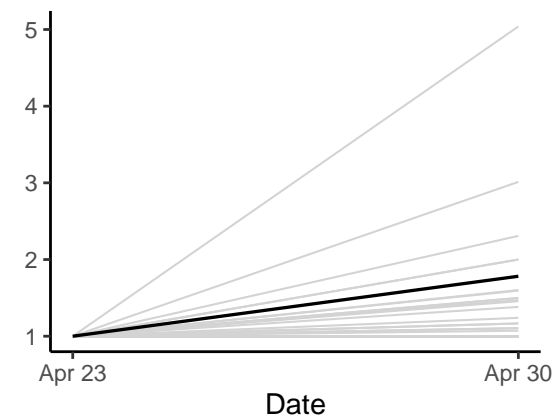
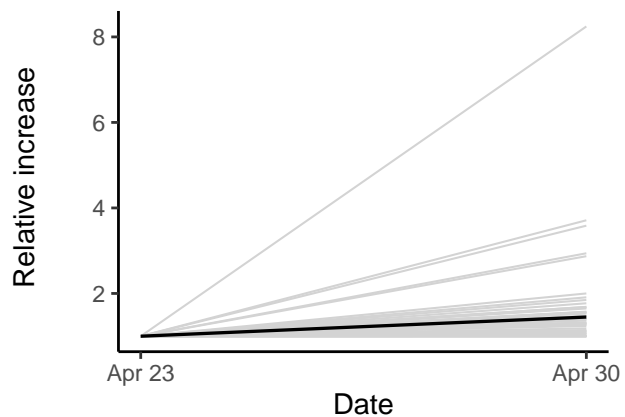
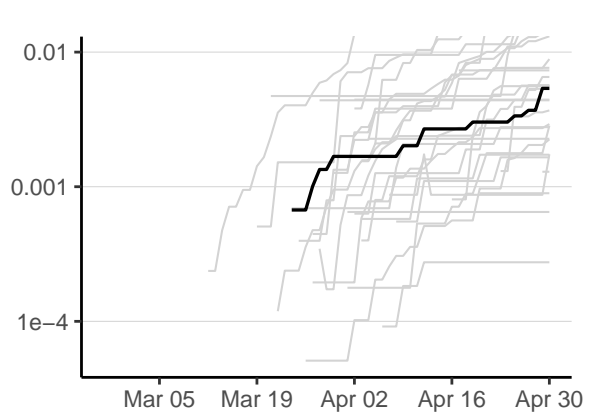
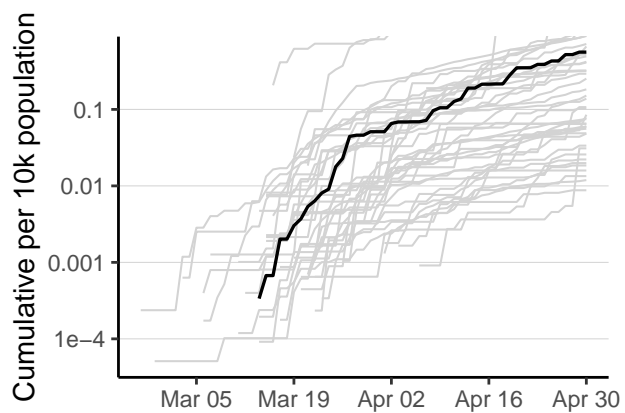
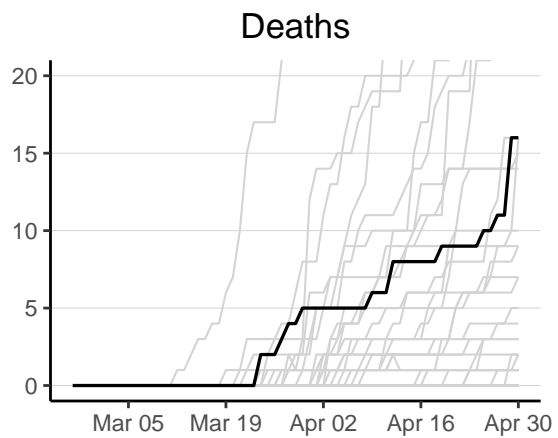
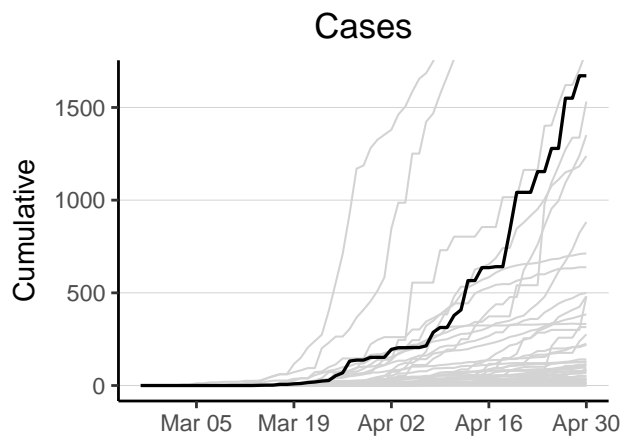
# Gabon



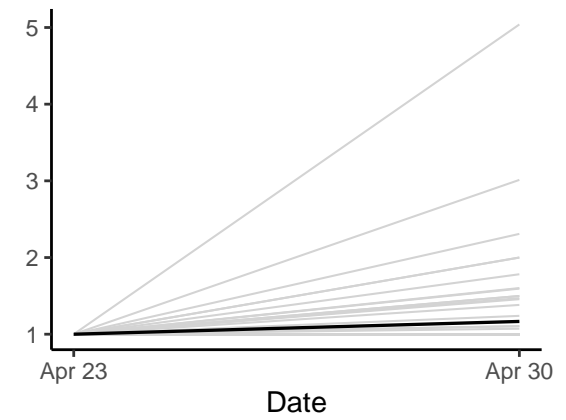
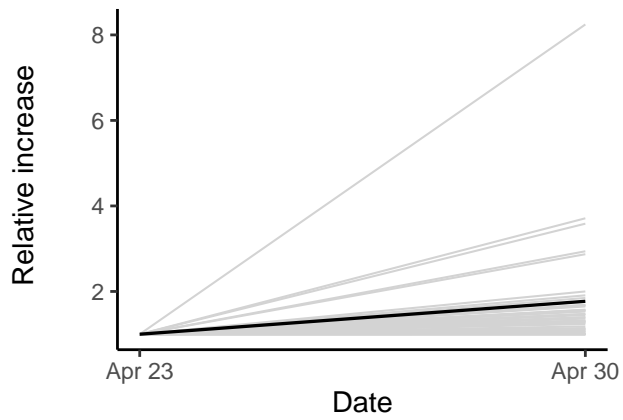
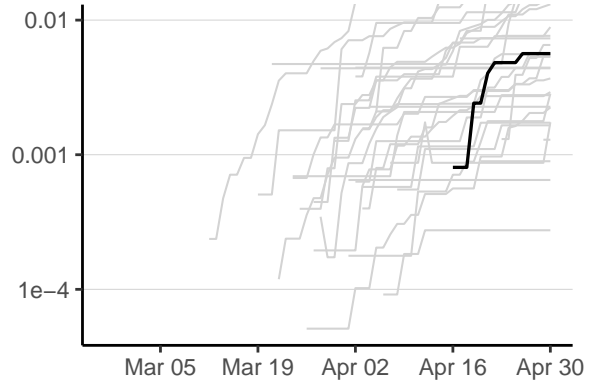
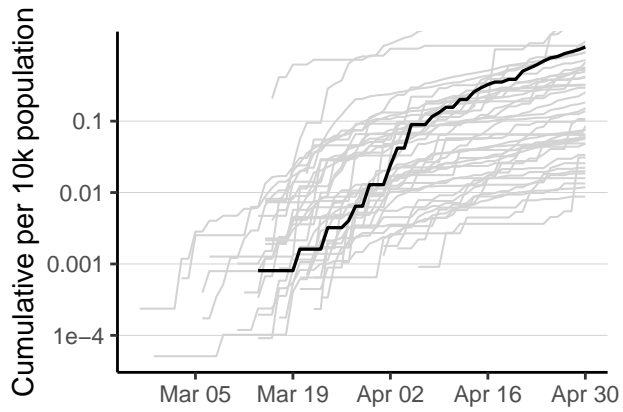
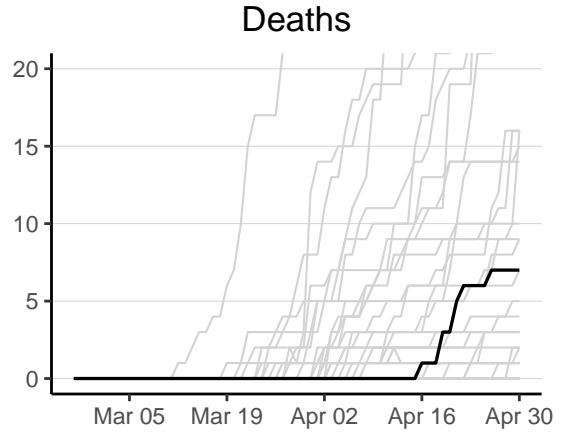
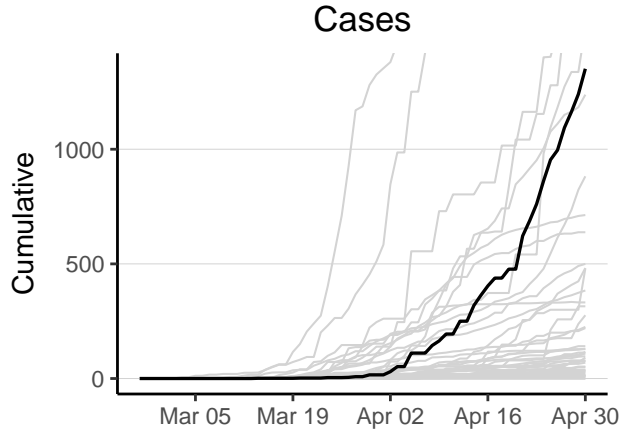
# Gambia



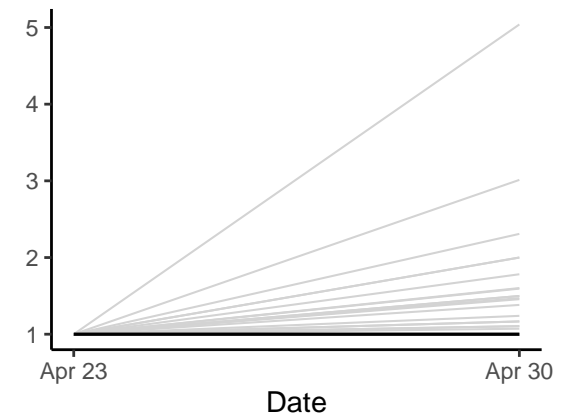
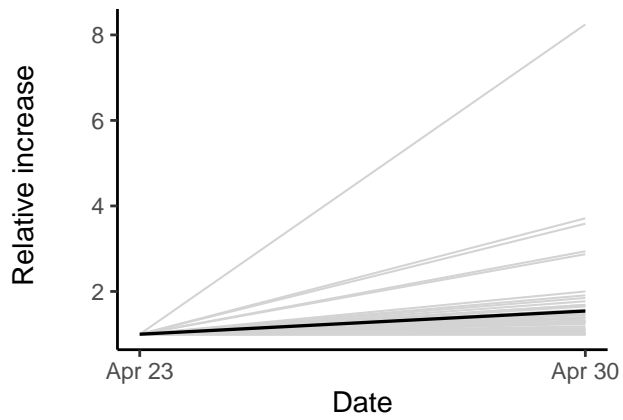
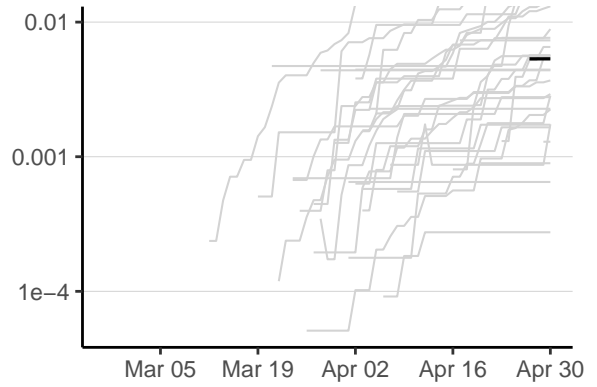
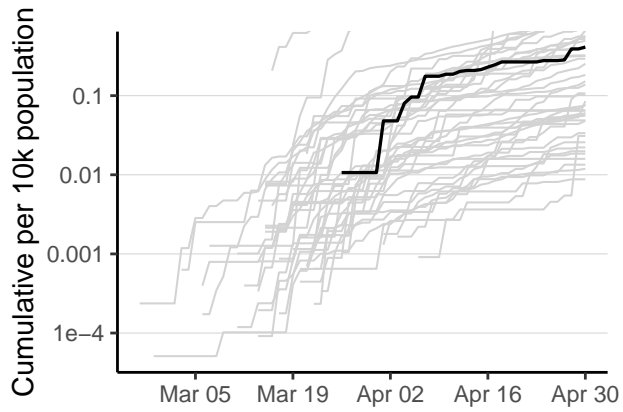
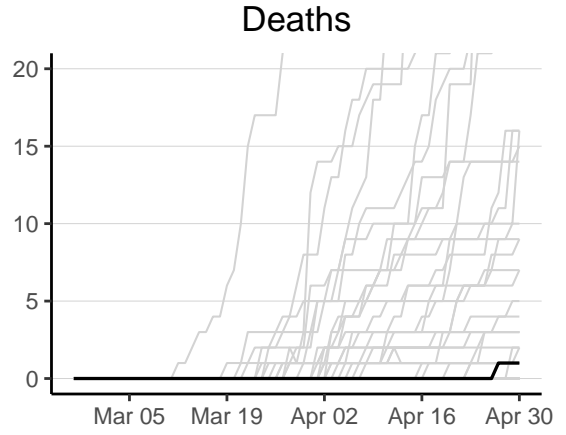
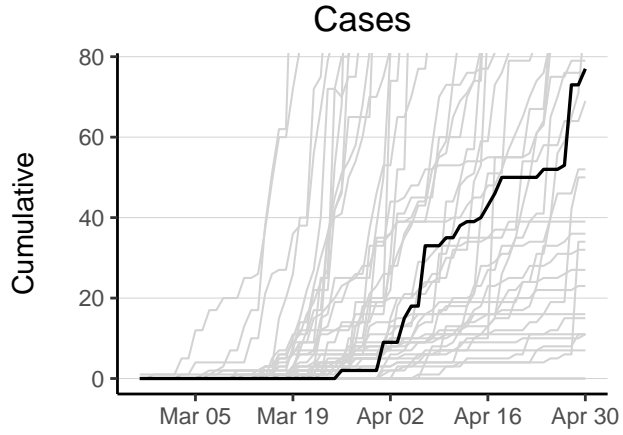
# Ghana



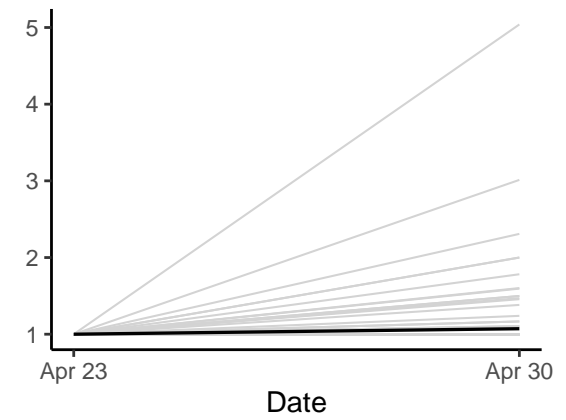
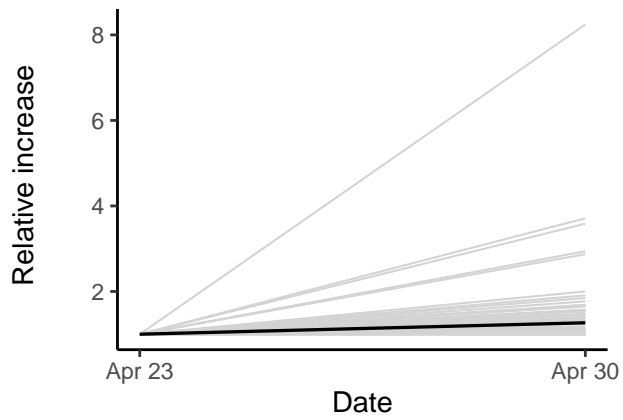
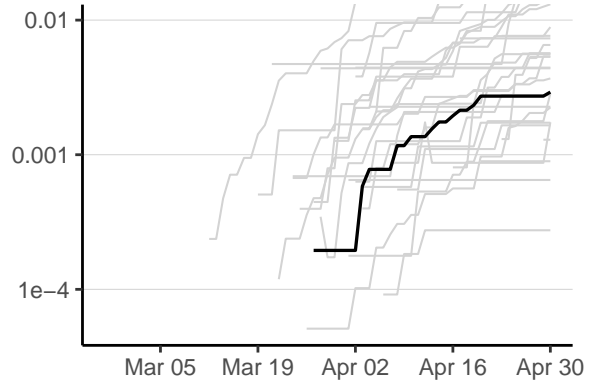
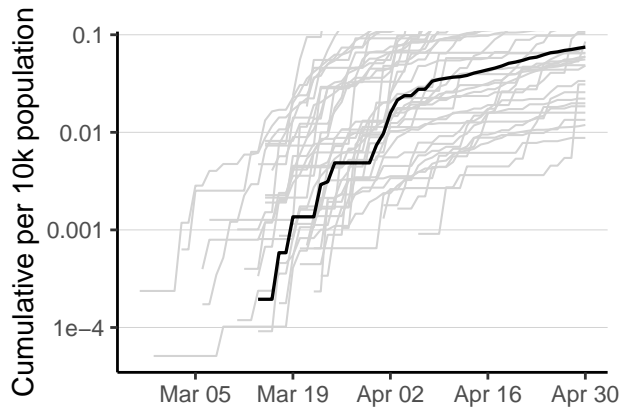
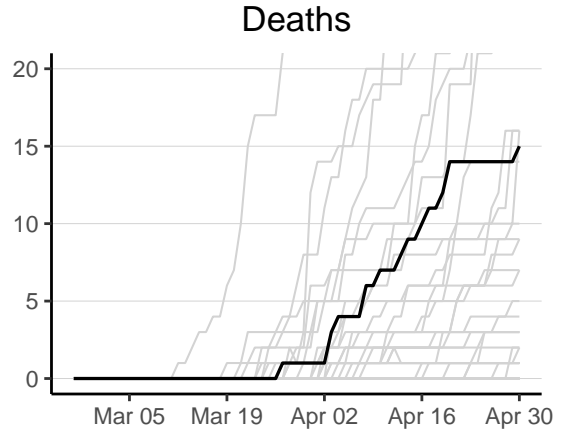
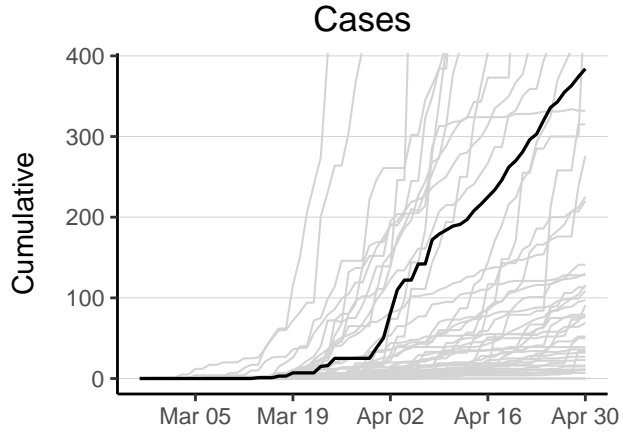
# Guinea



# Guinea-Bissau

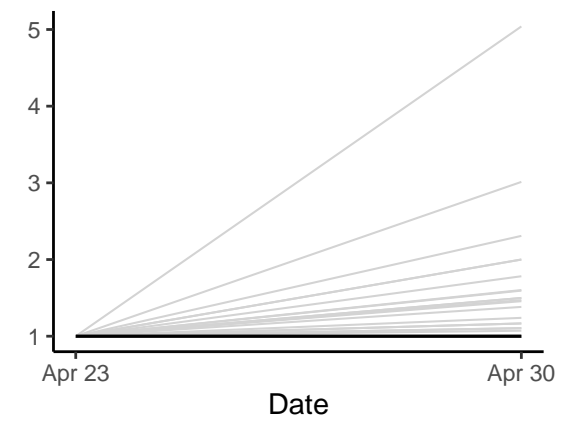
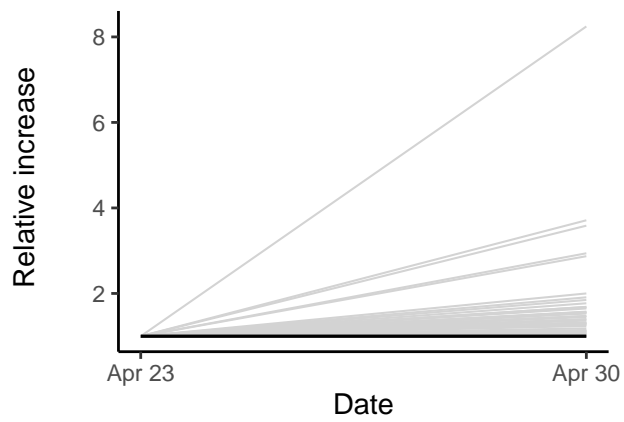
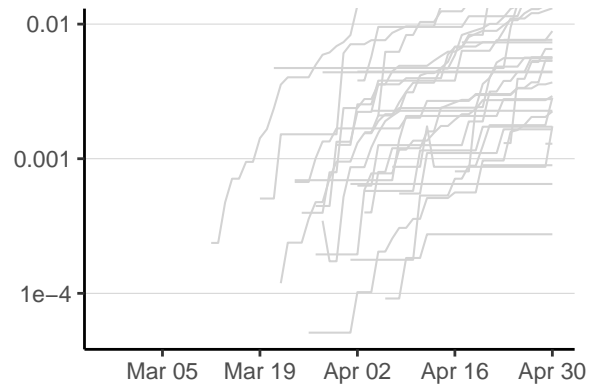
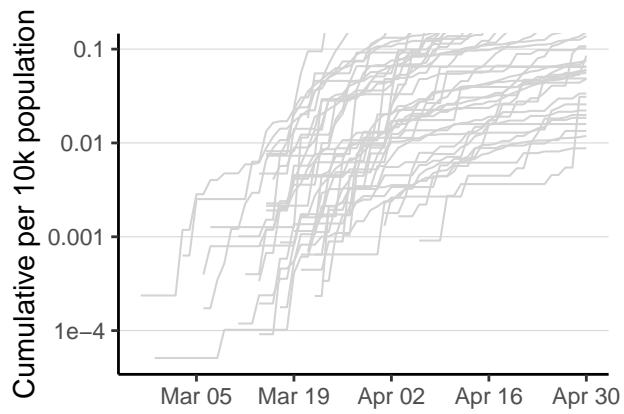
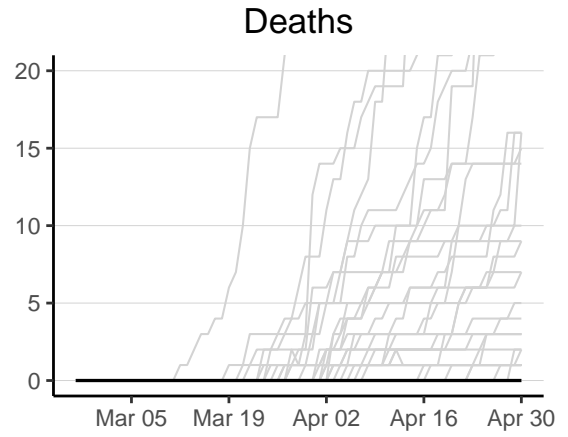
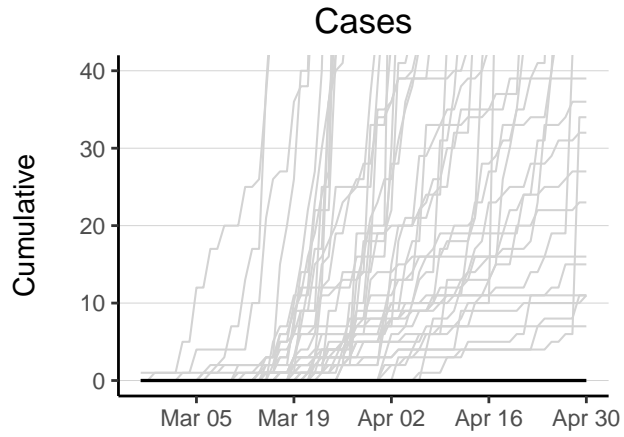


# Kenya

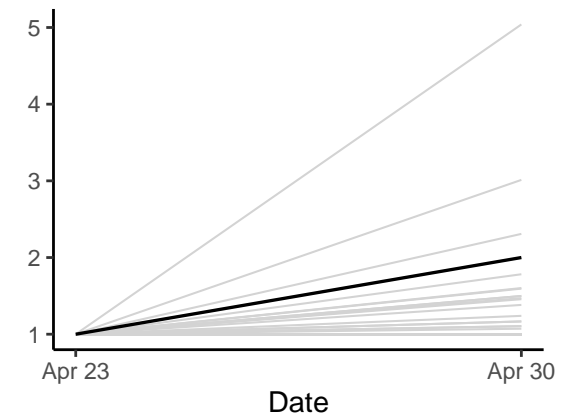
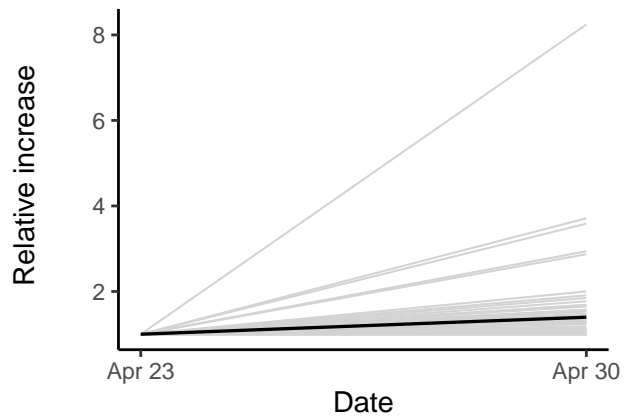
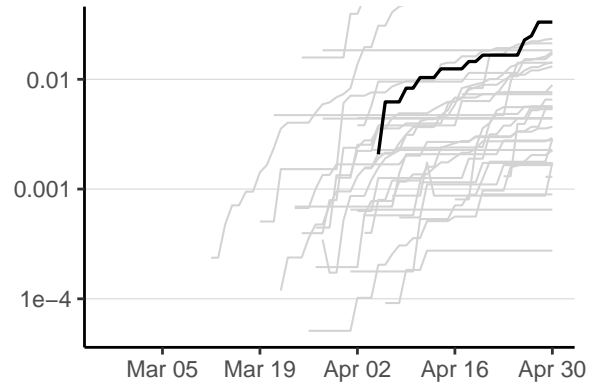
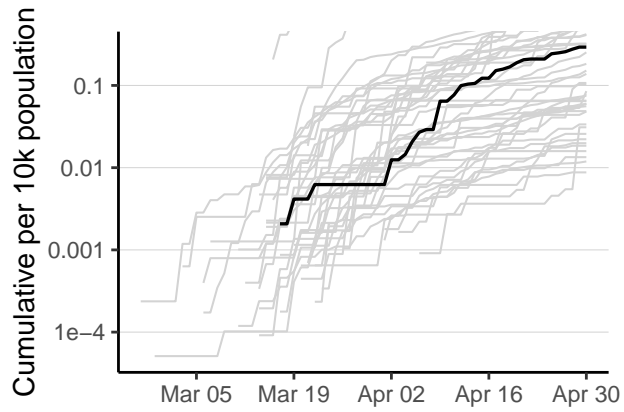
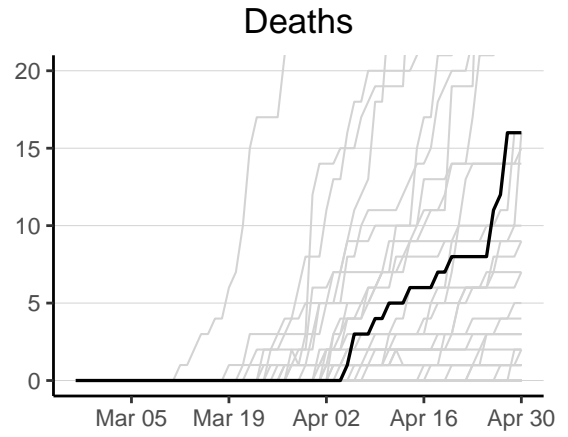
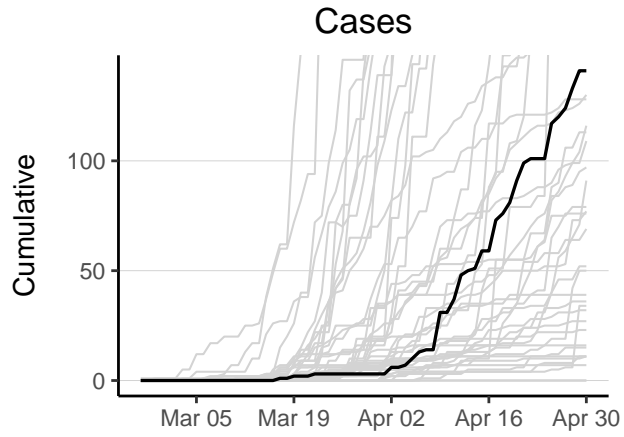




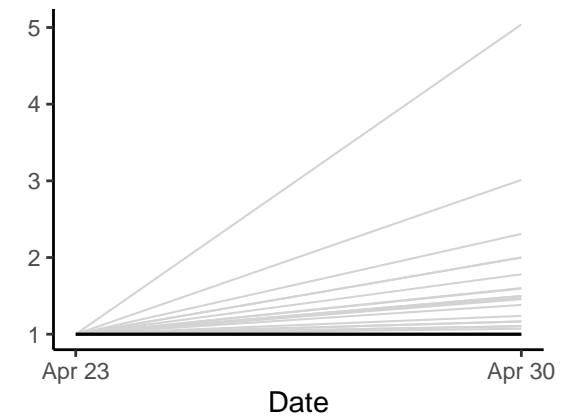
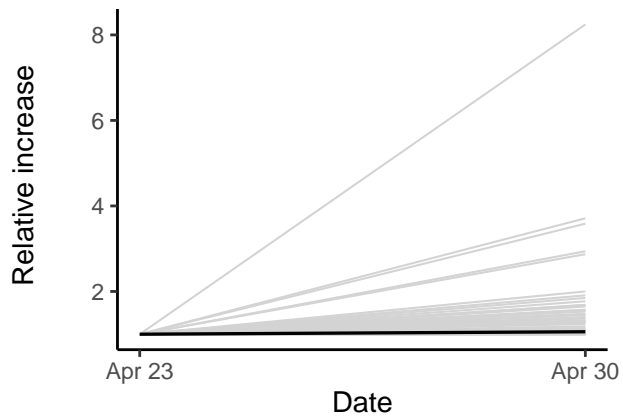
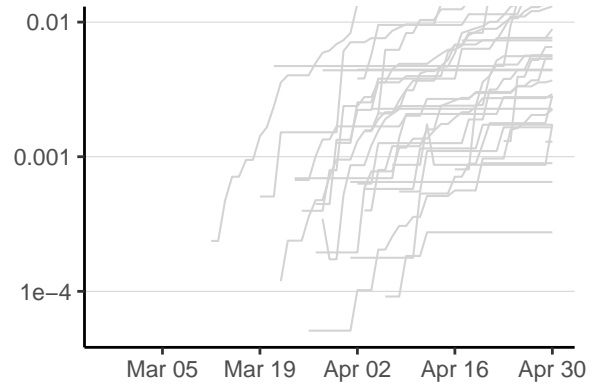
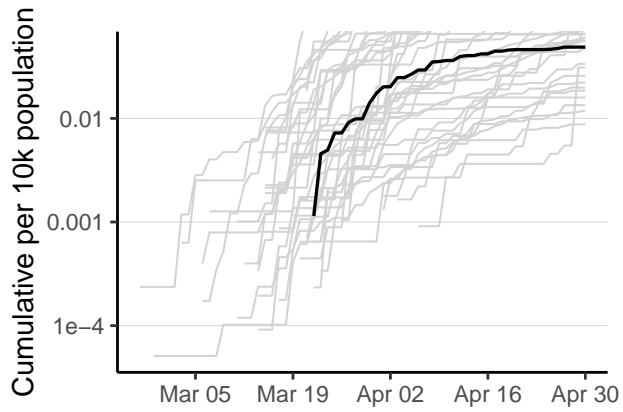
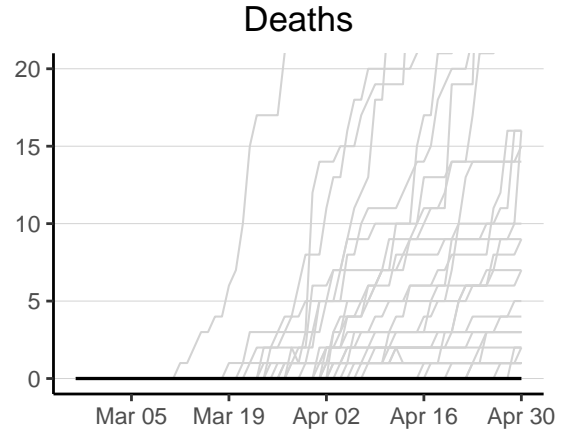
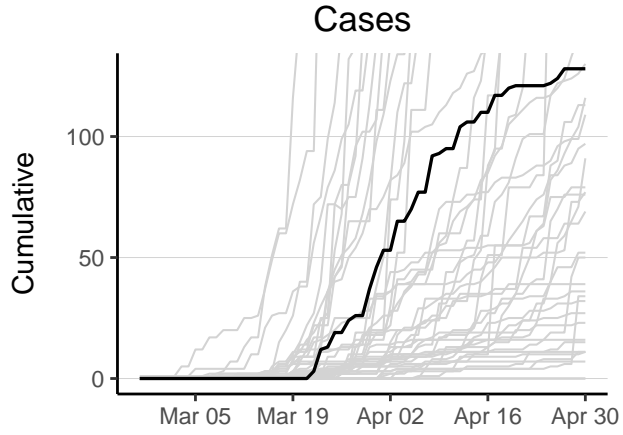
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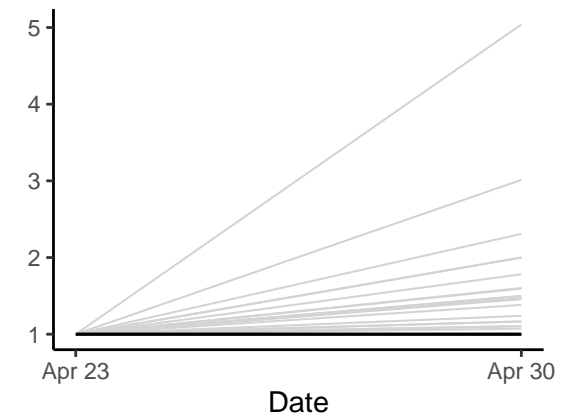
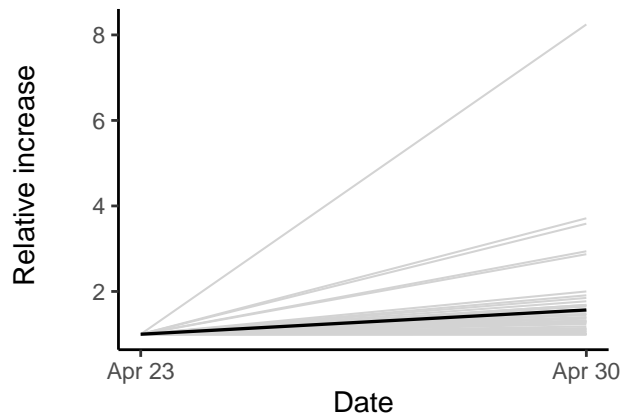
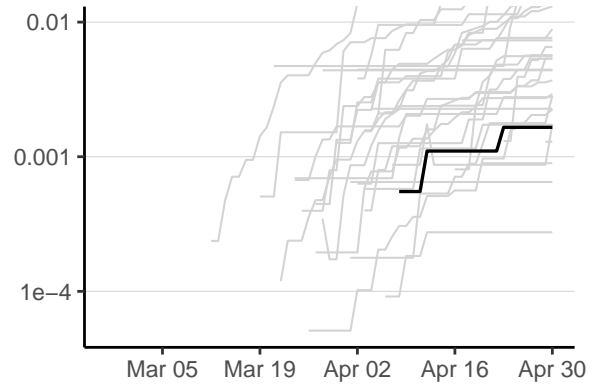
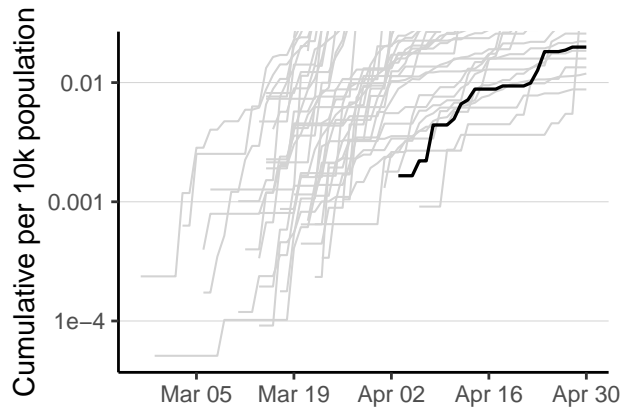
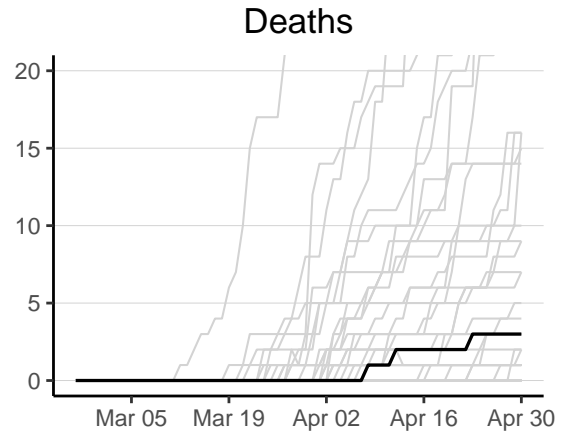
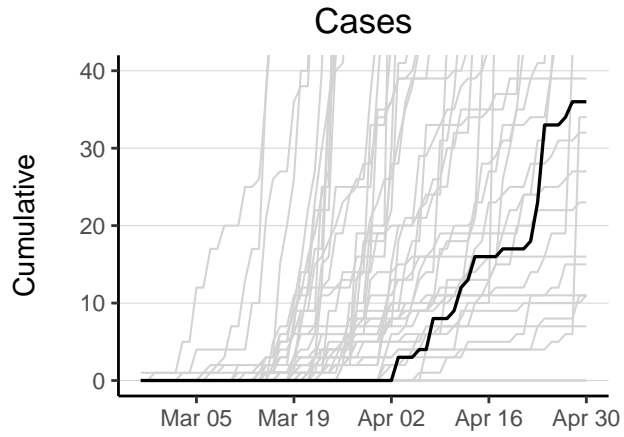
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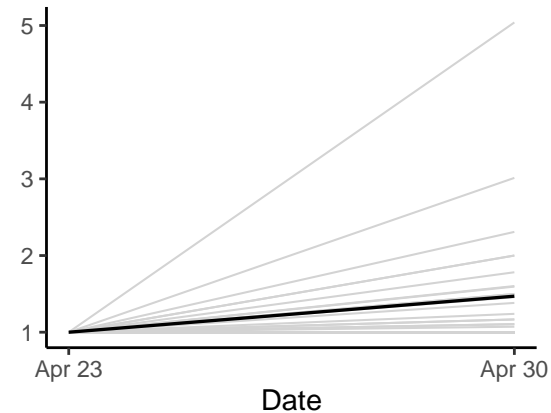
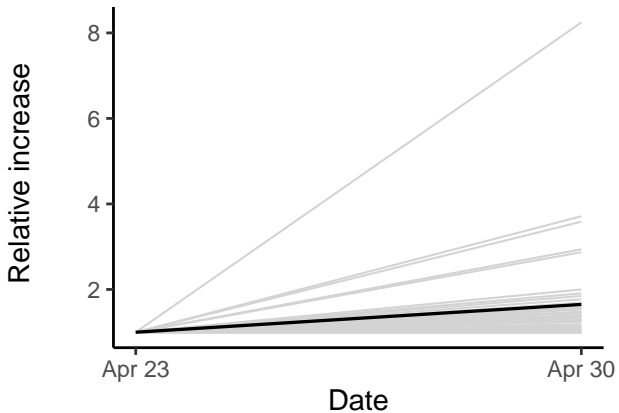
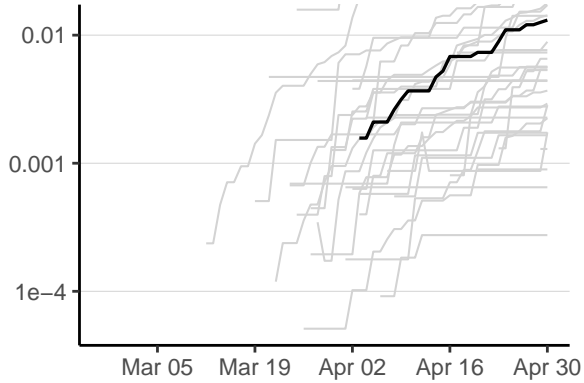
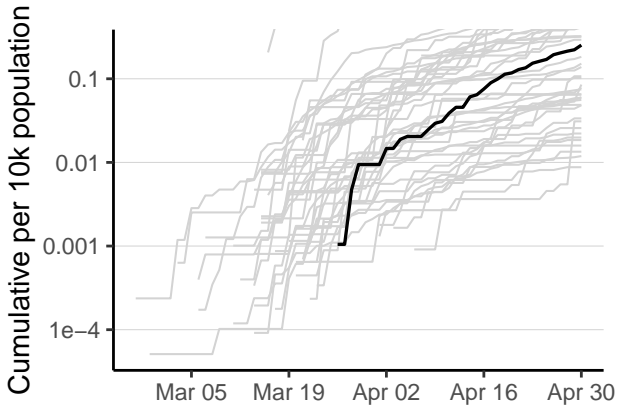
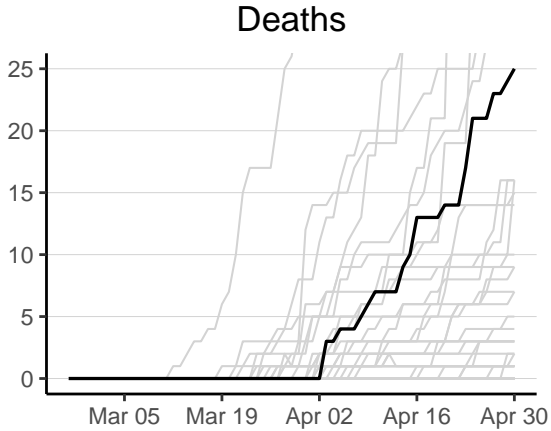
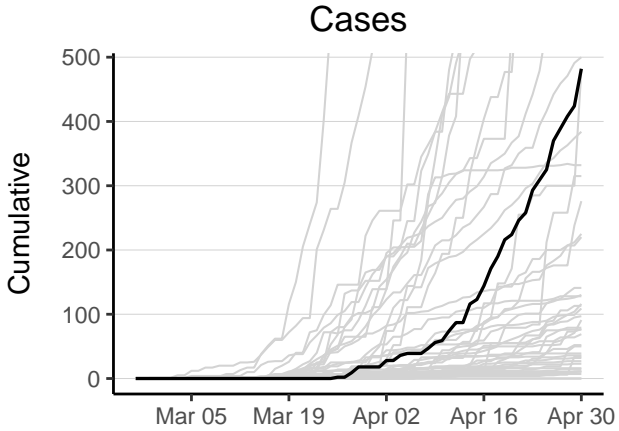
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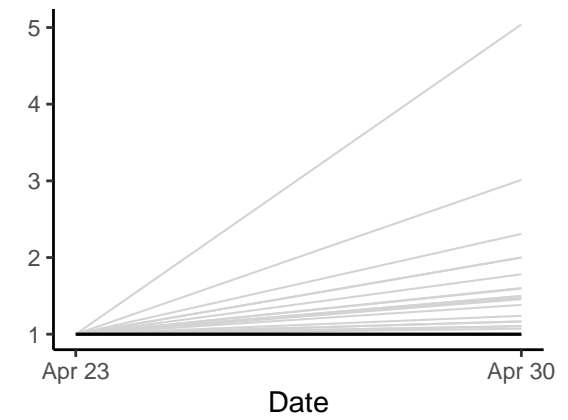
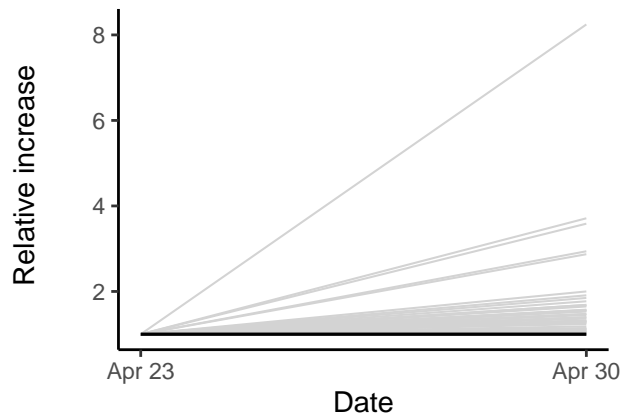
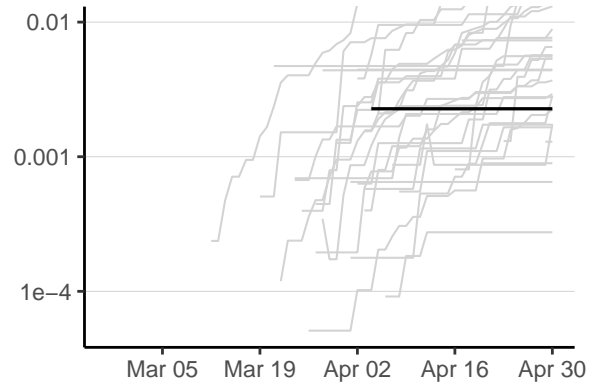
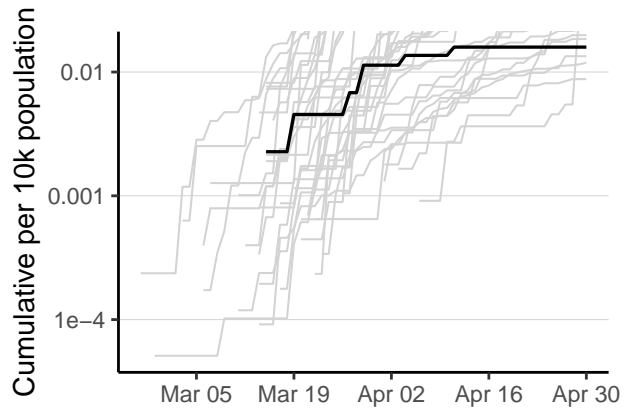
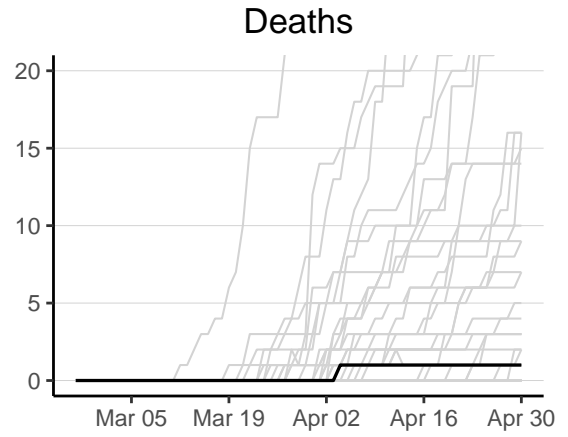
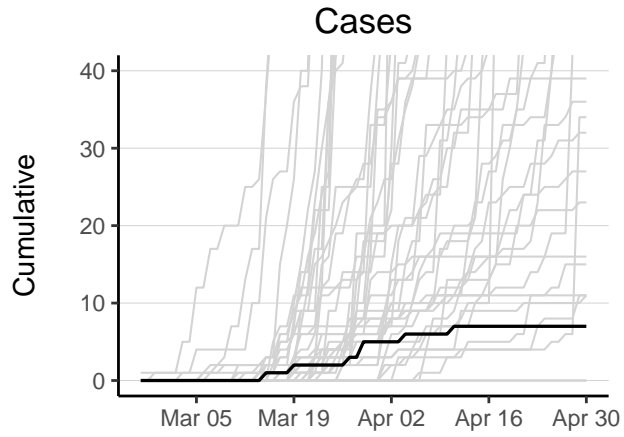
# Malawi



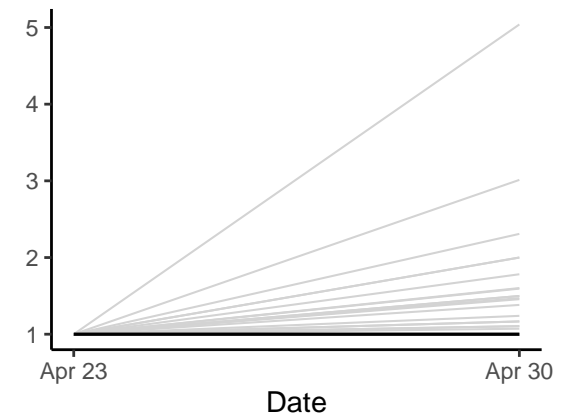
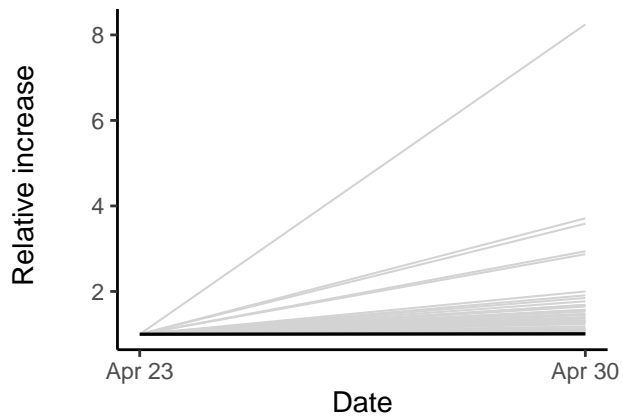
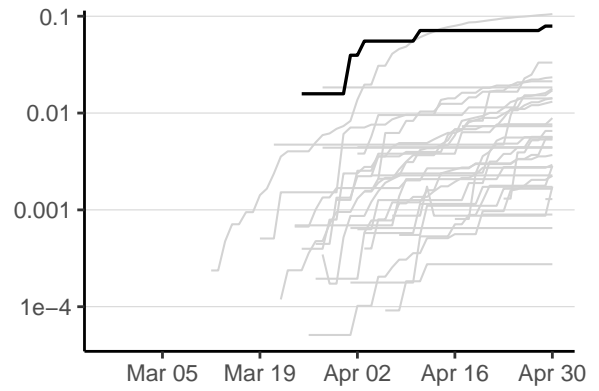
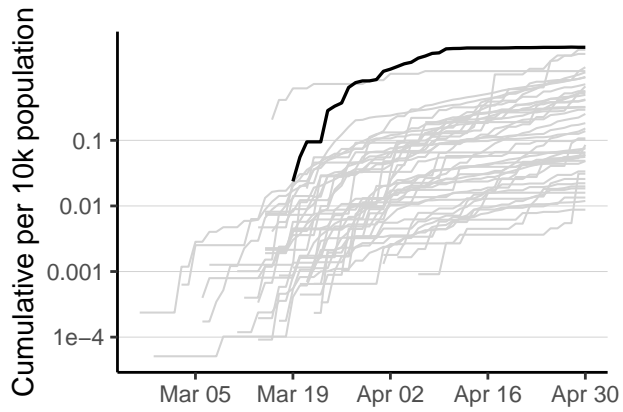
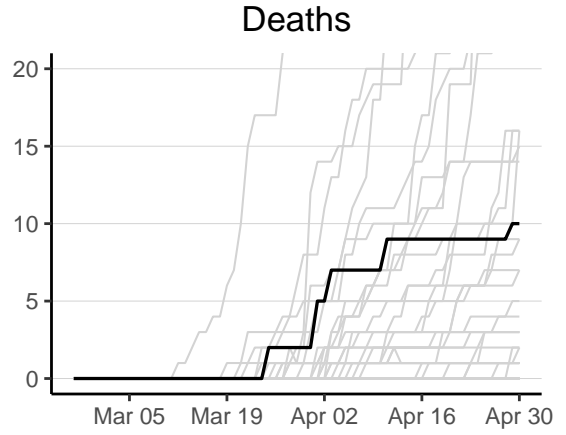
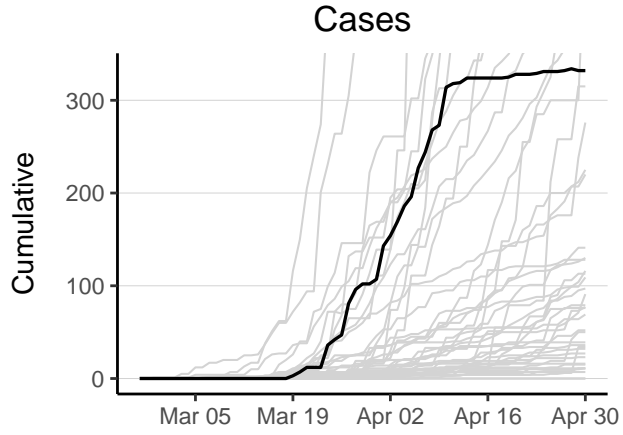
# Mali



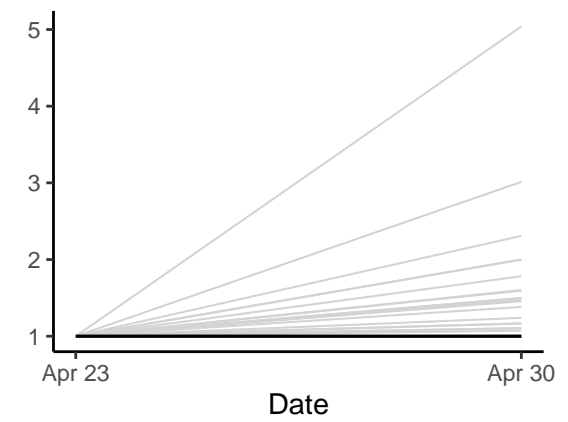
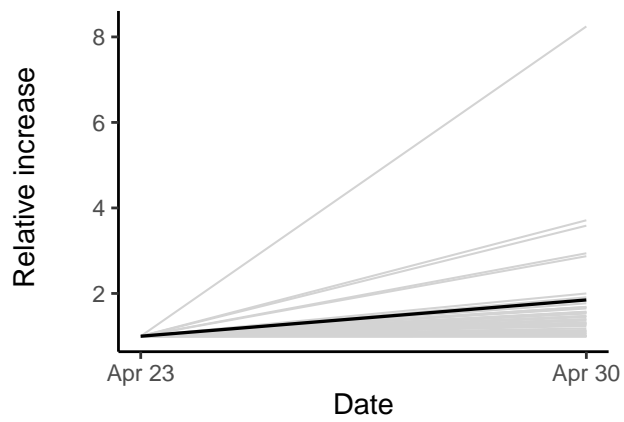
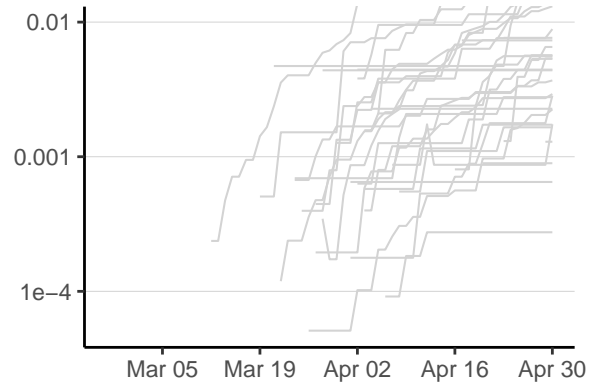
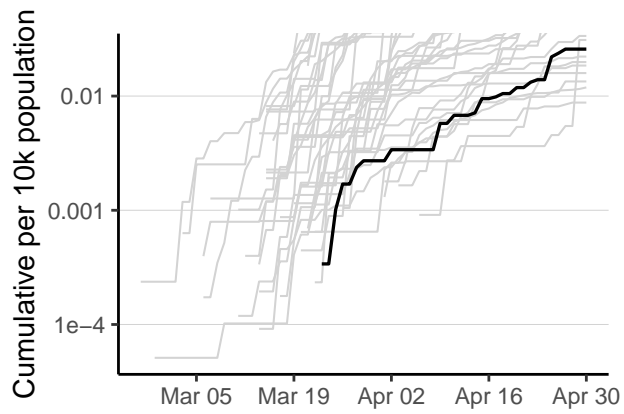
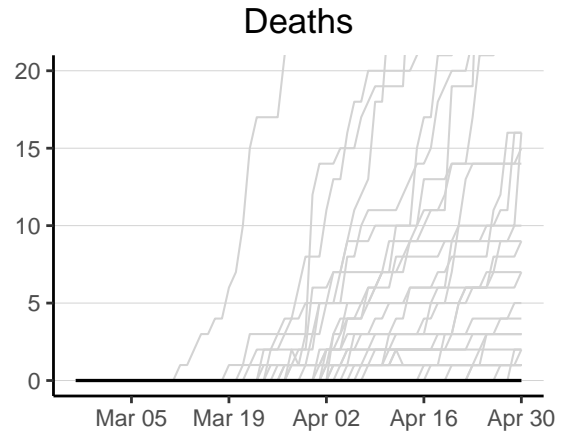
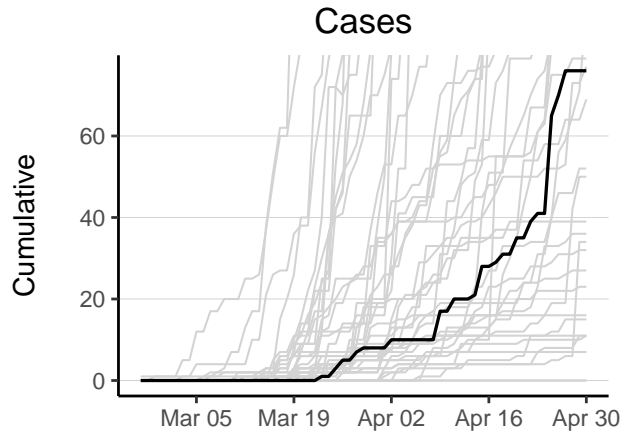
# Mauritania



# Mauritius

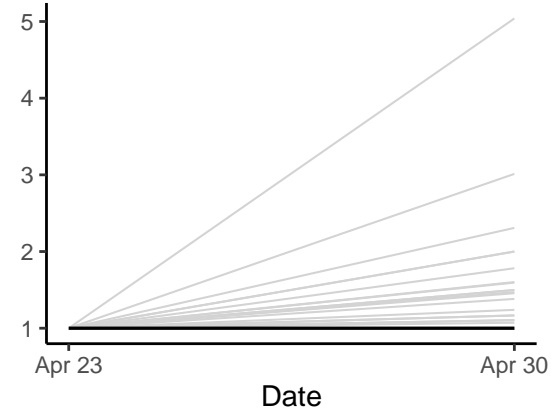
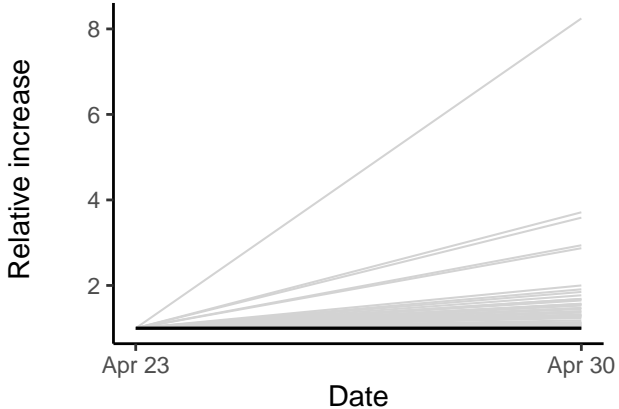
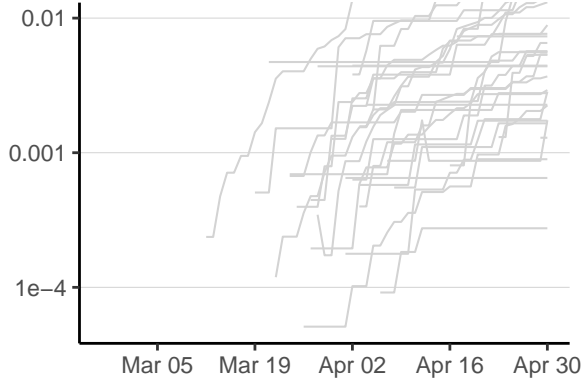
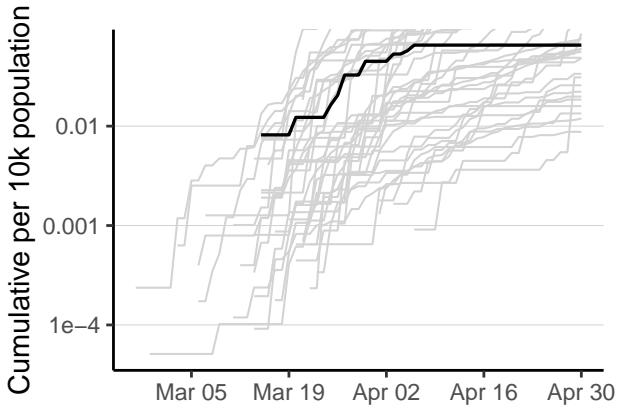
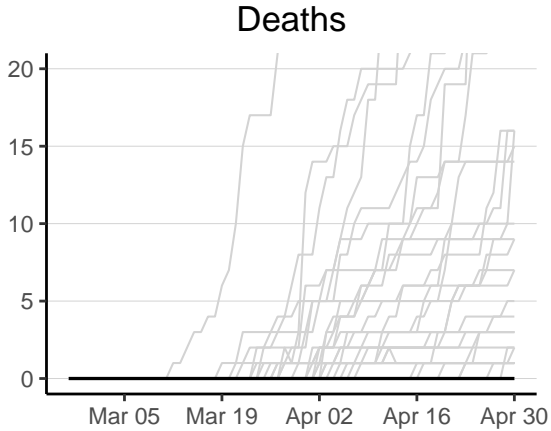
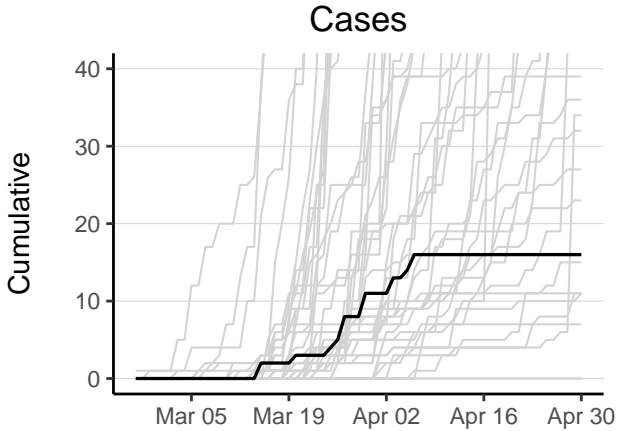


# Mozambique

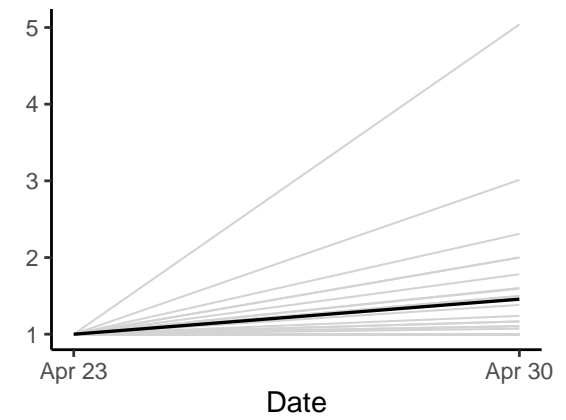
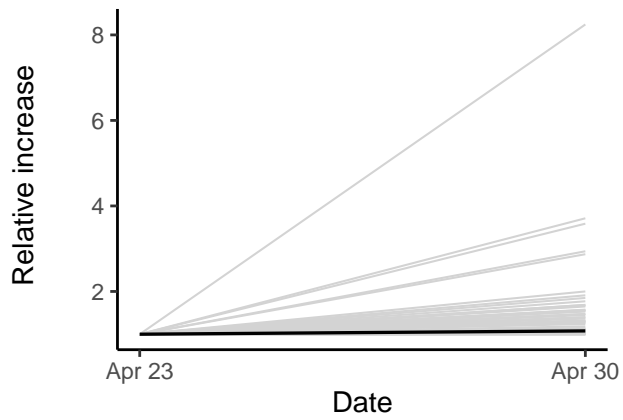
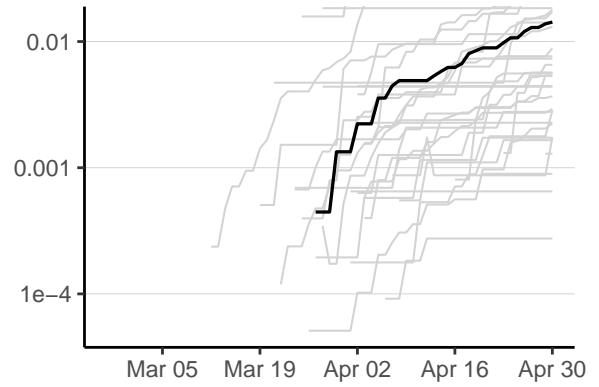
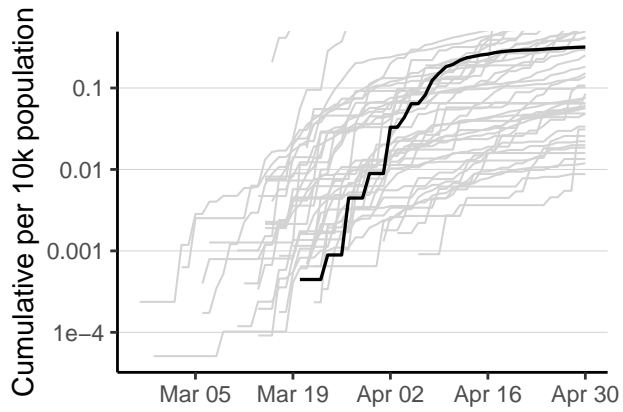
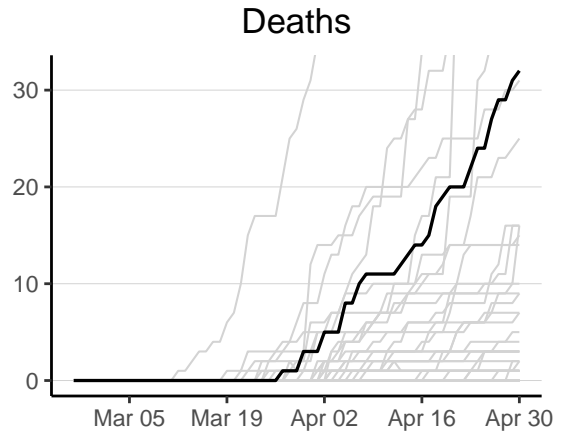
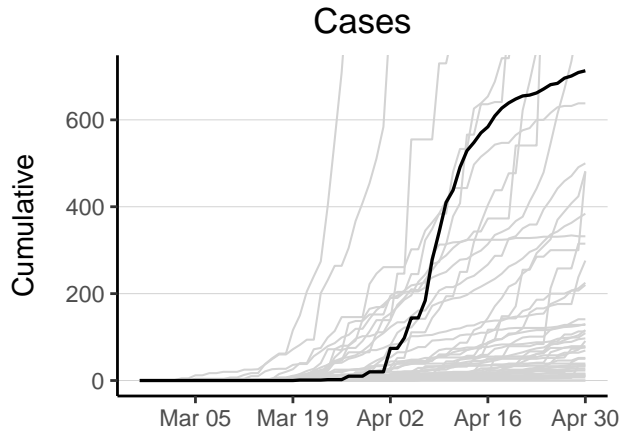




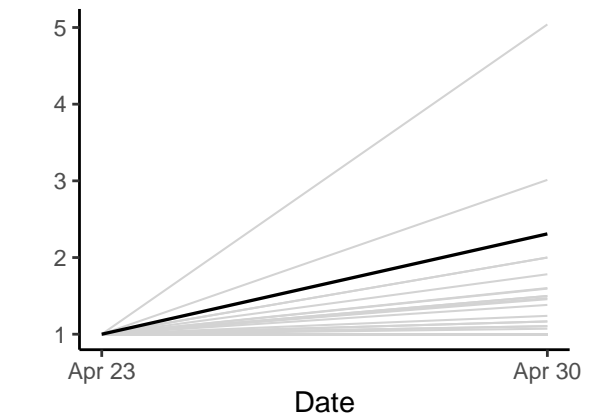
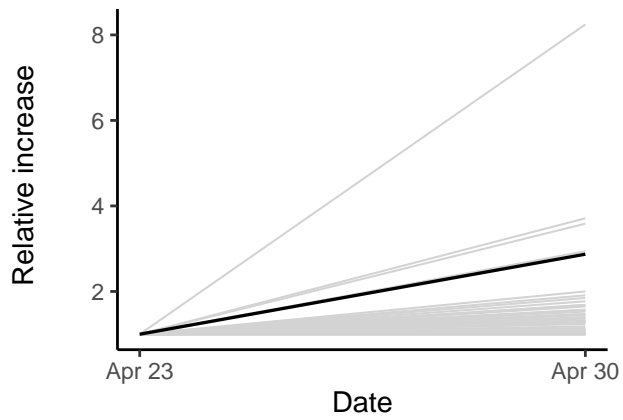
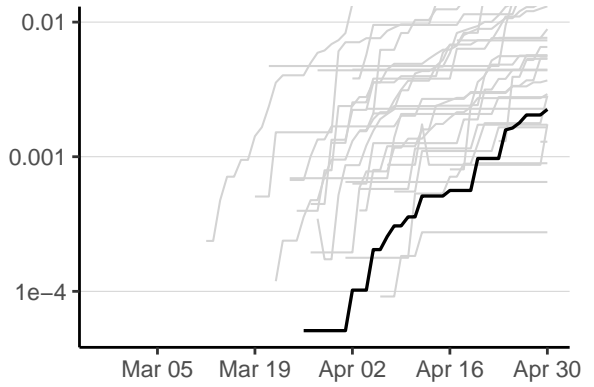
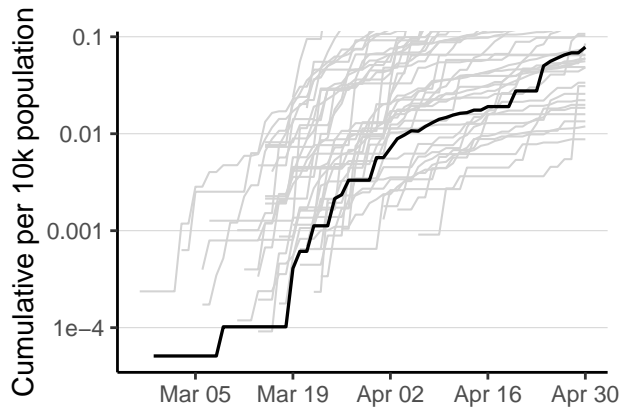
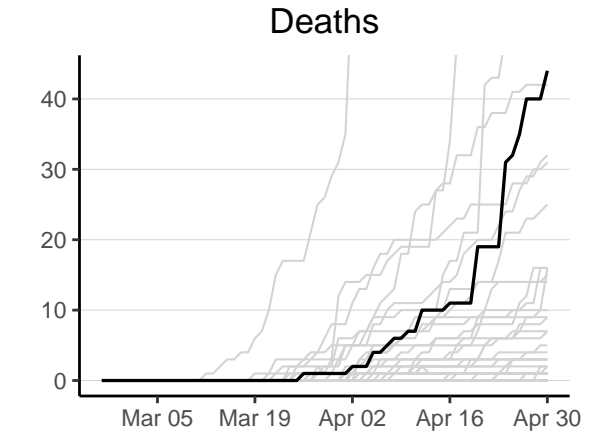
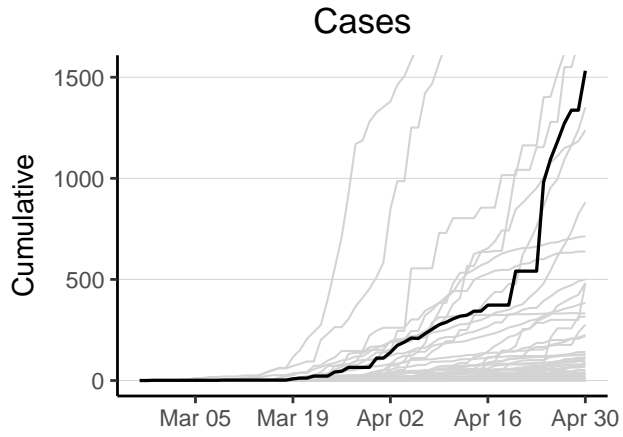
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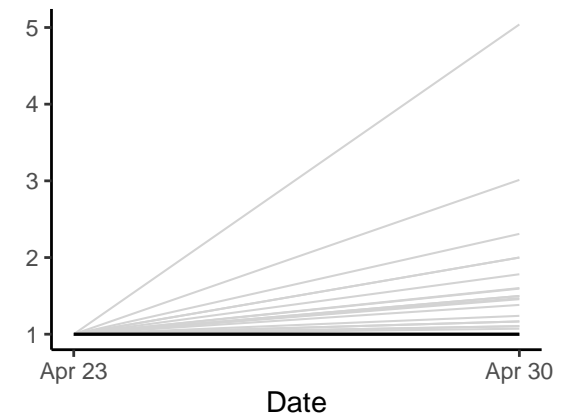
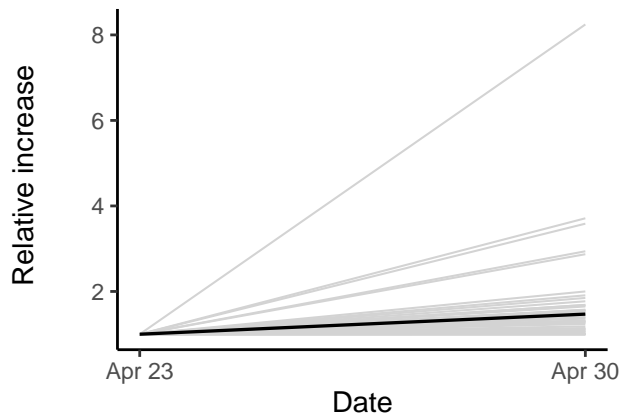
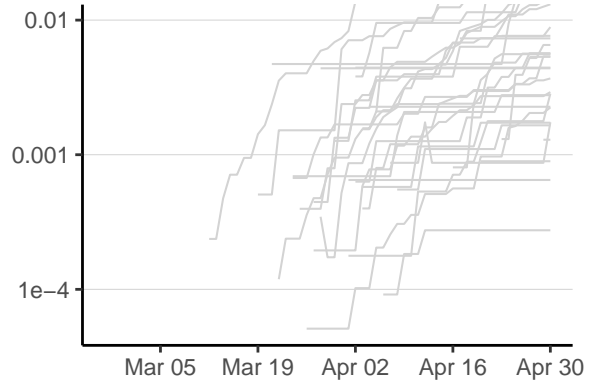
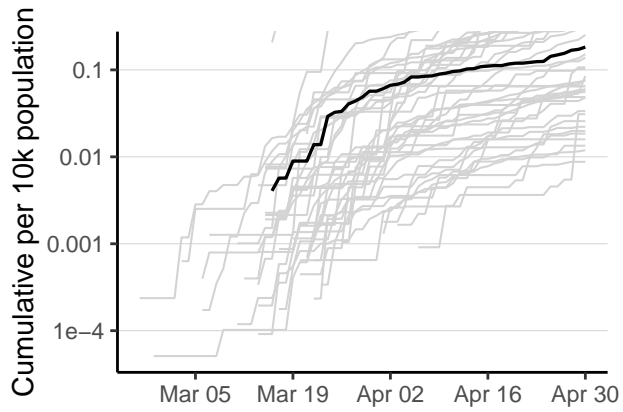
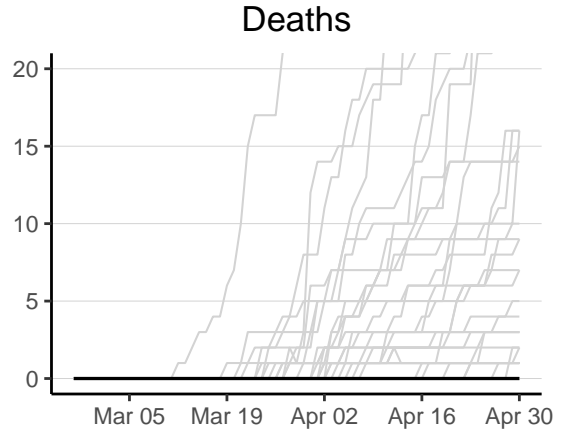
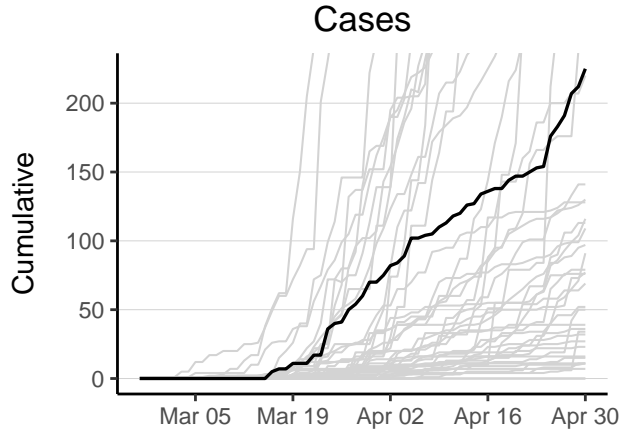
# Niger



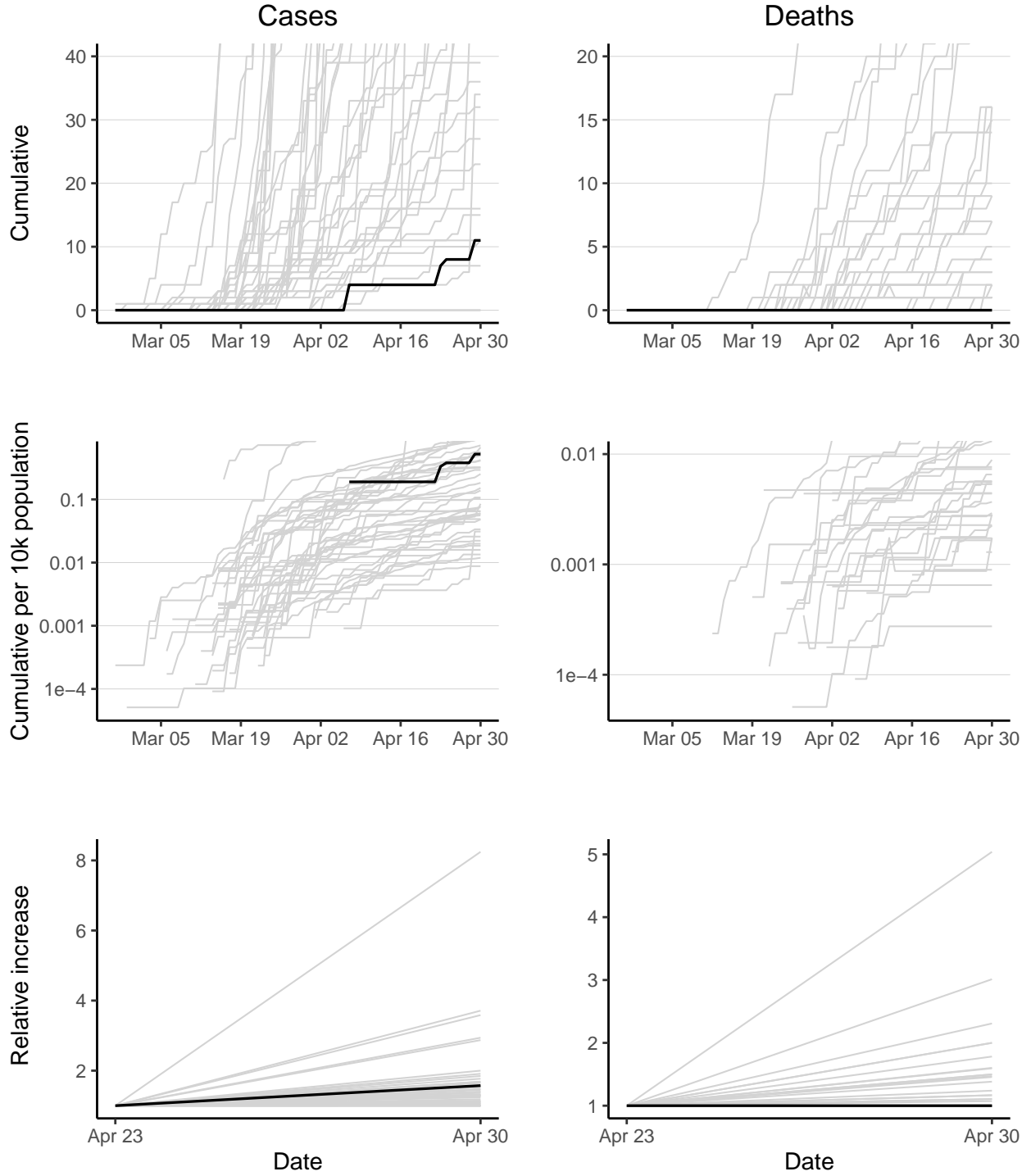
# Nigeria



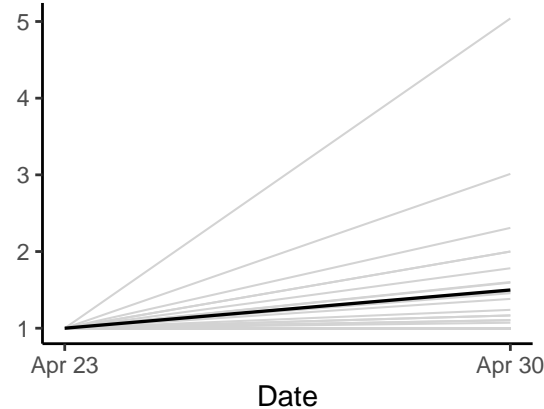
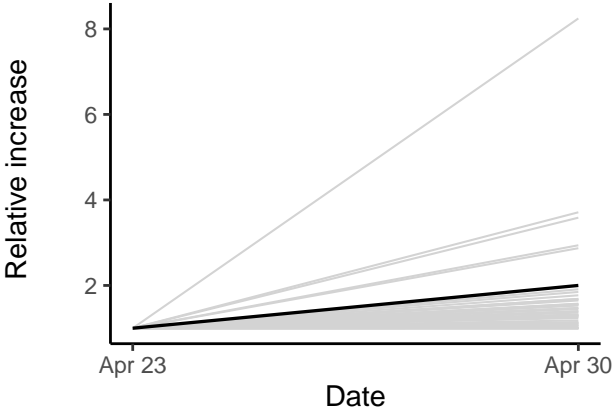
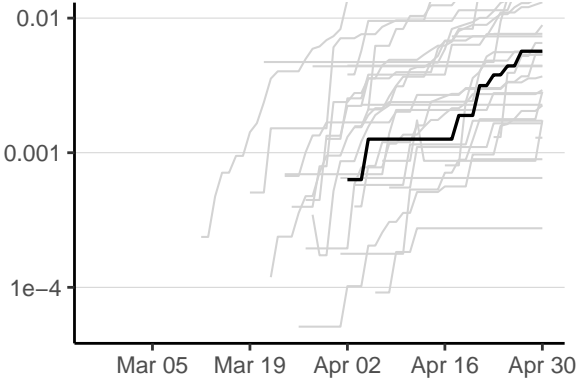
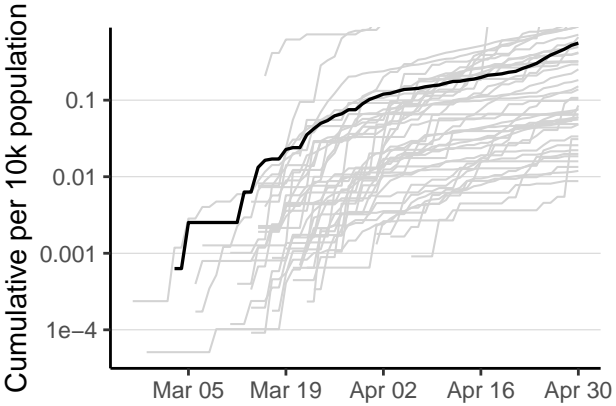
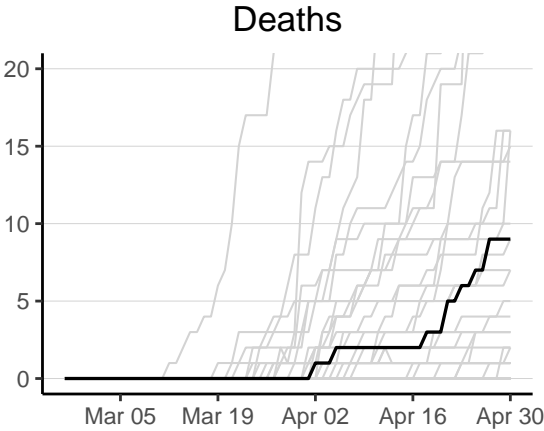
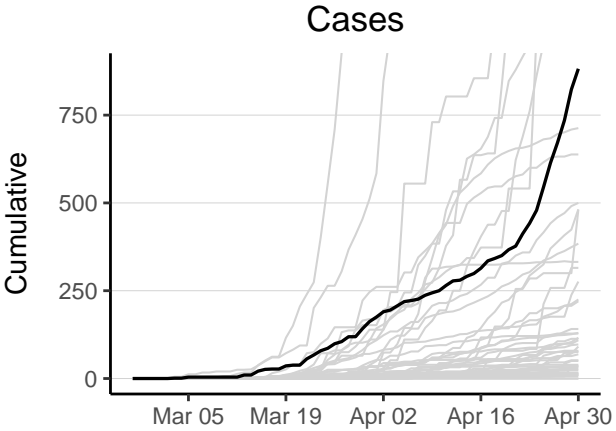
# Rwanda



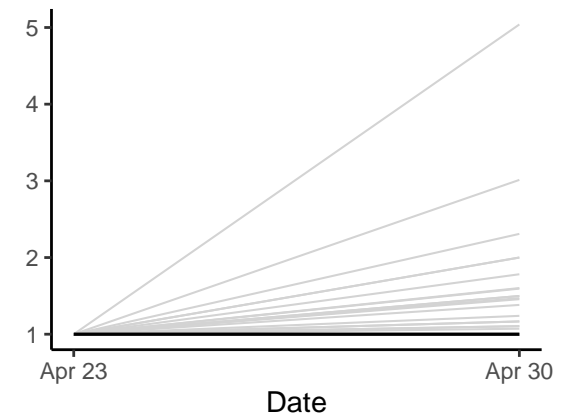
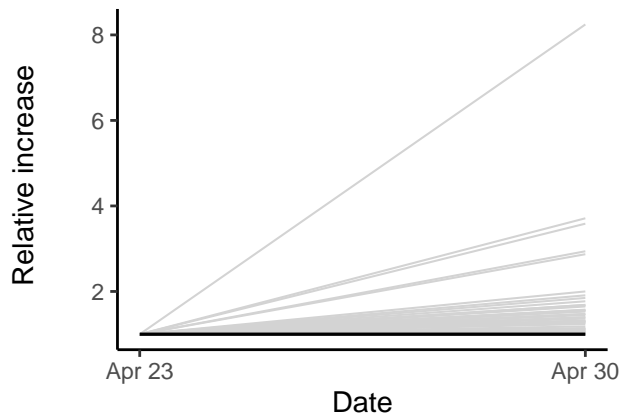
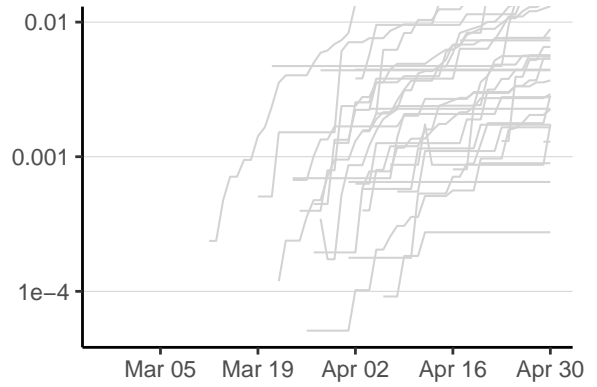
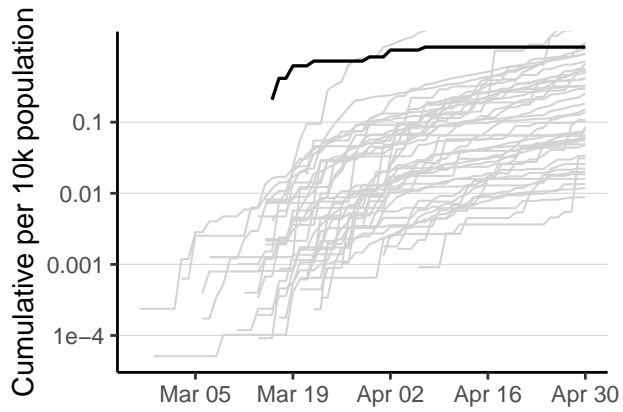
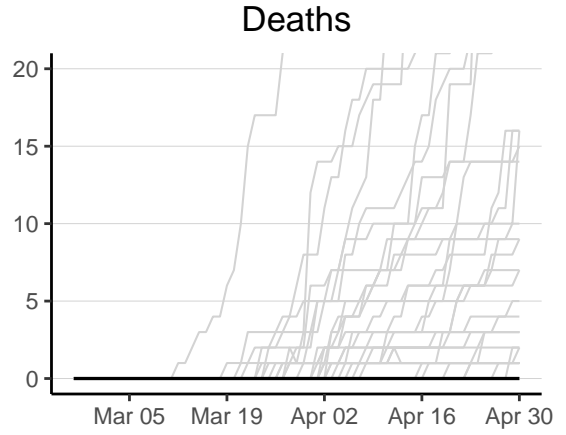
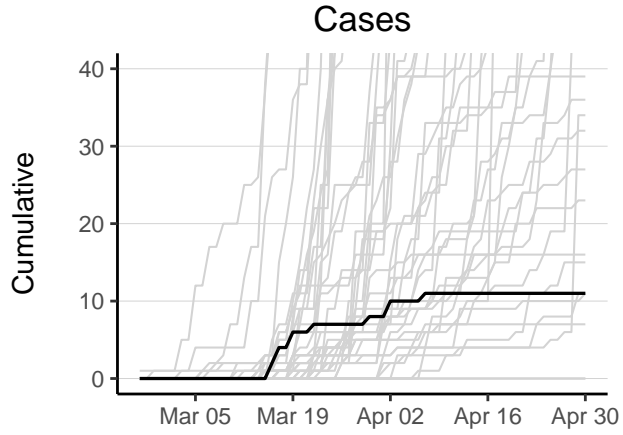
# Sao Tome and Principe



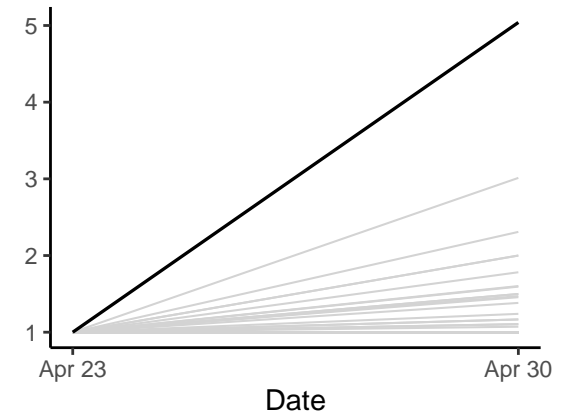
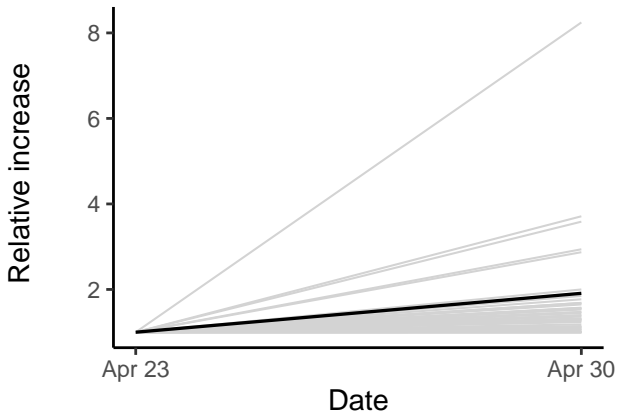
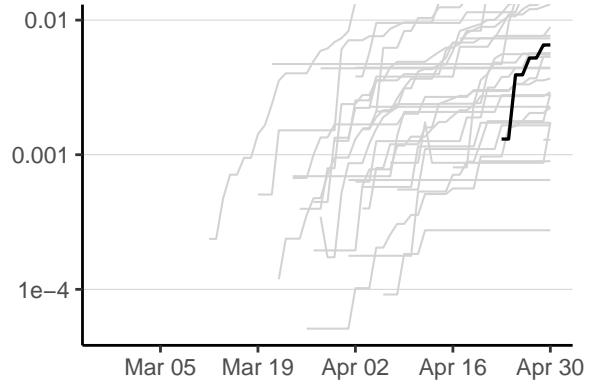
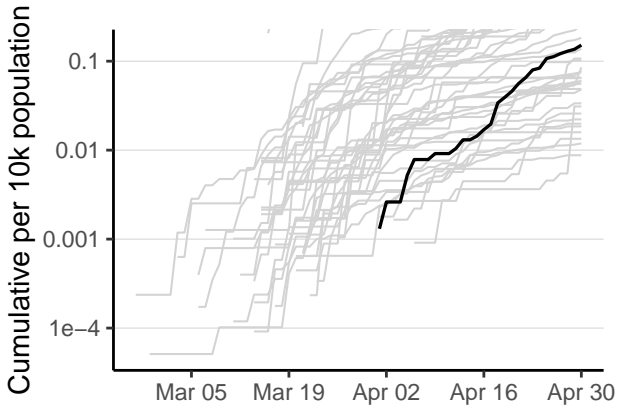
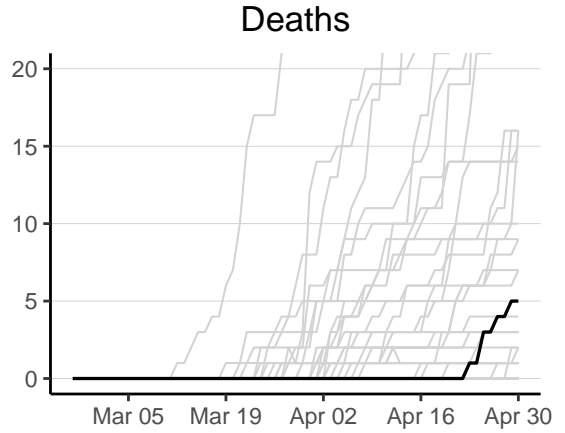
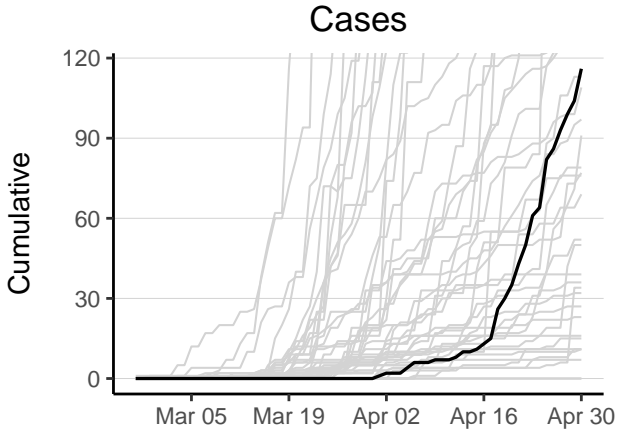
# Senegal



# Seychelles

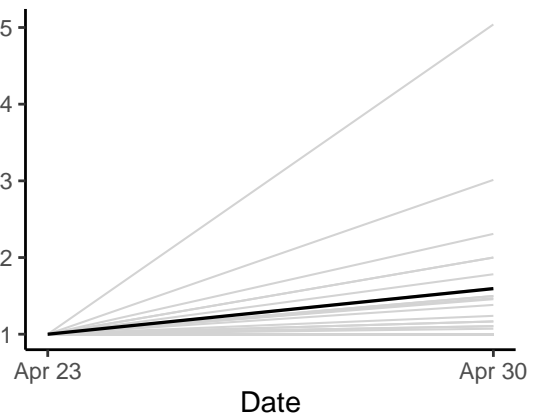
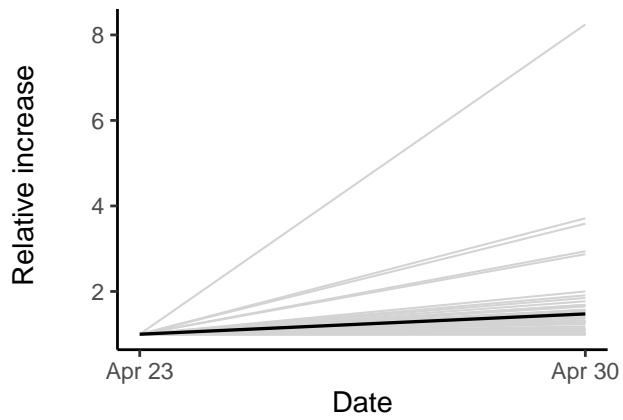
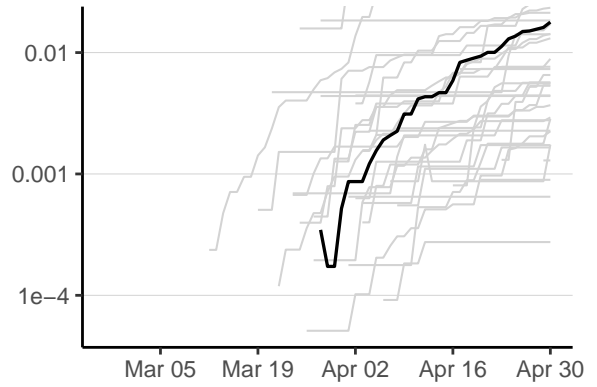
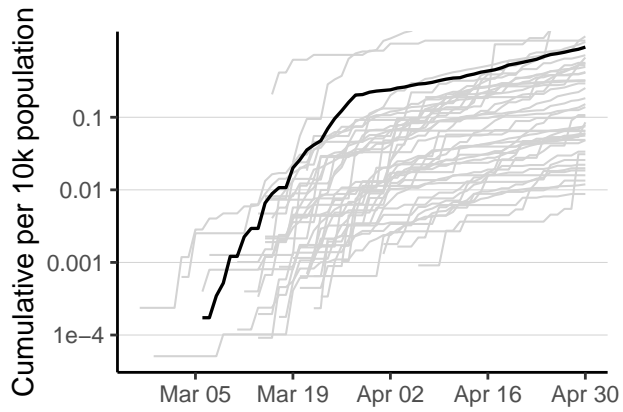
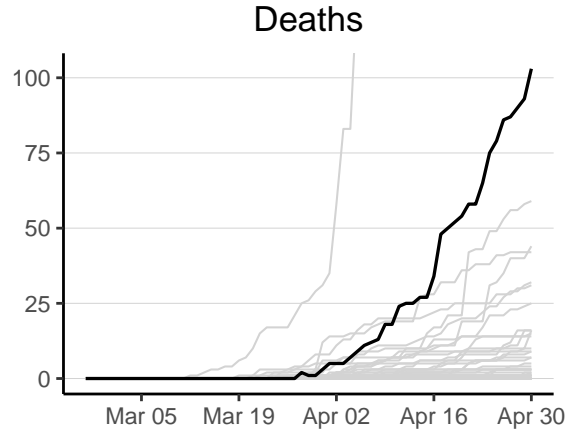
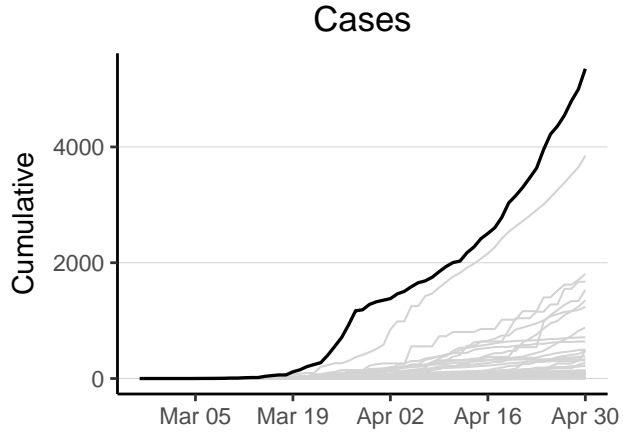


# Sierra Leone

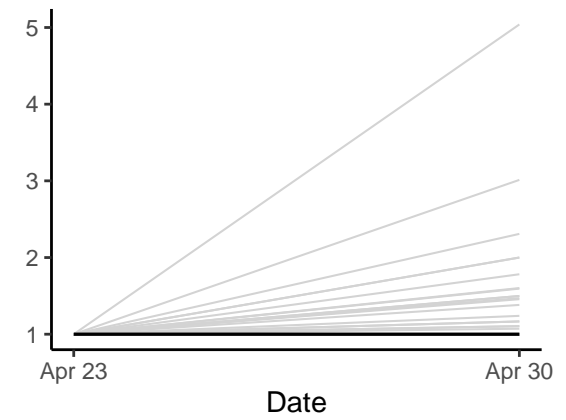
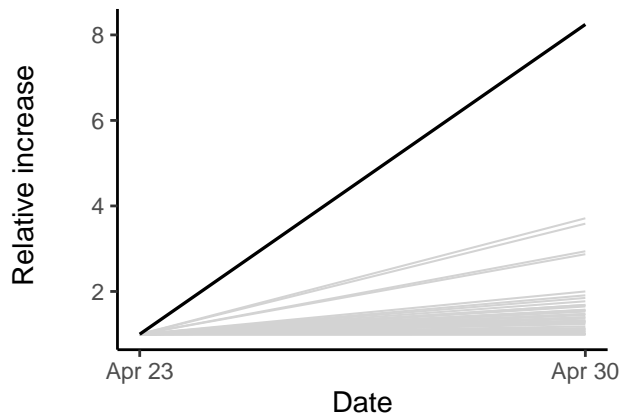
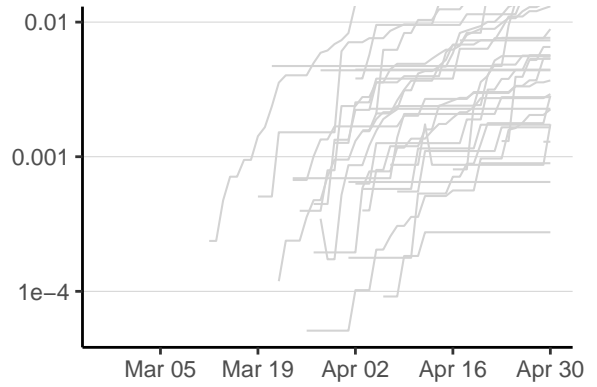
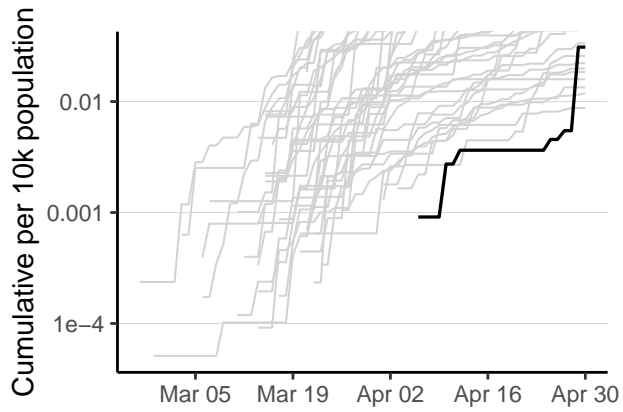
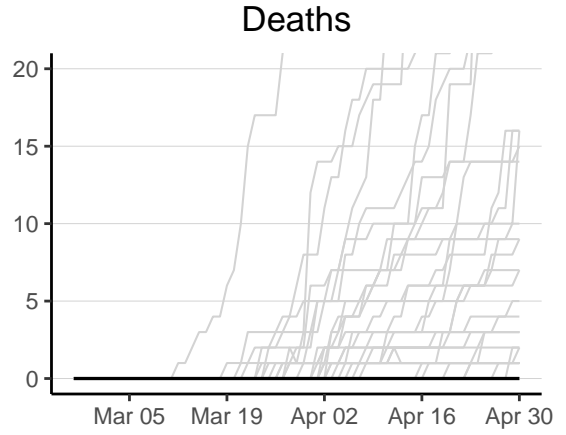
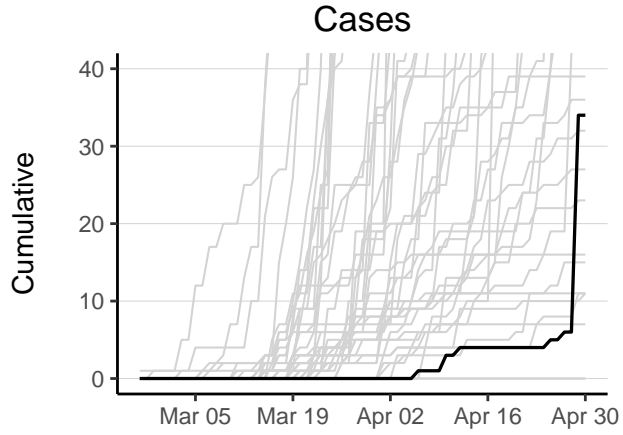




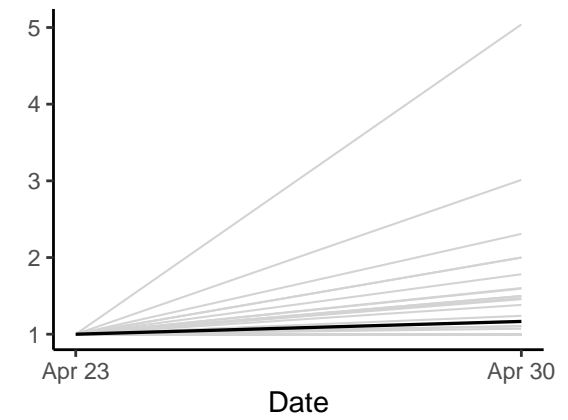
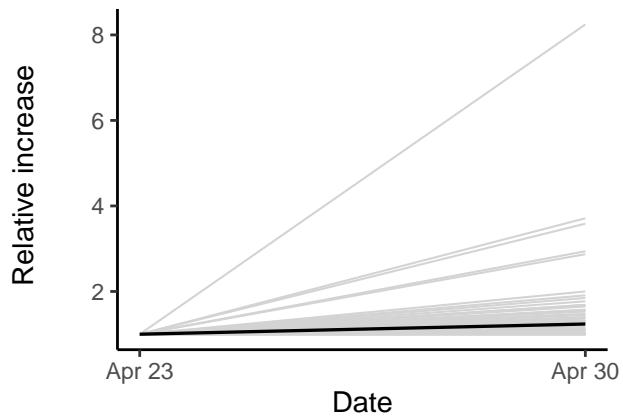
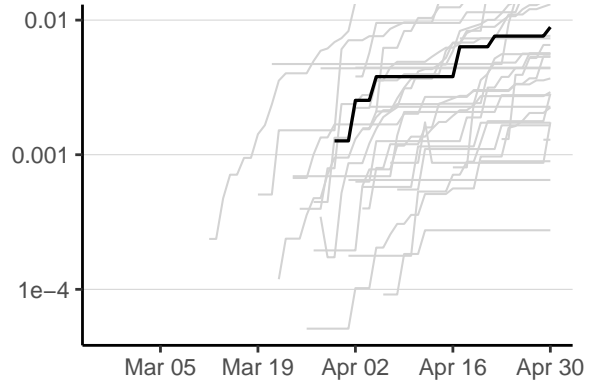
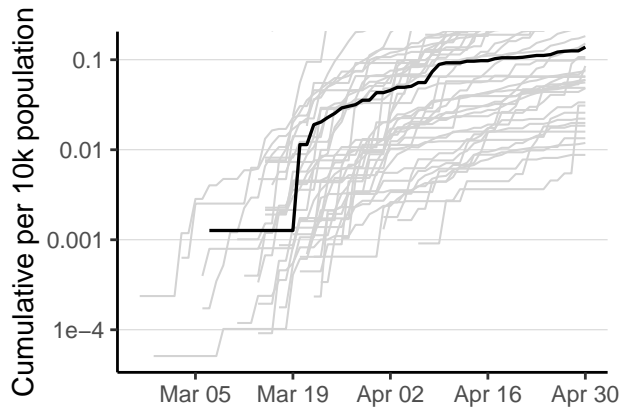
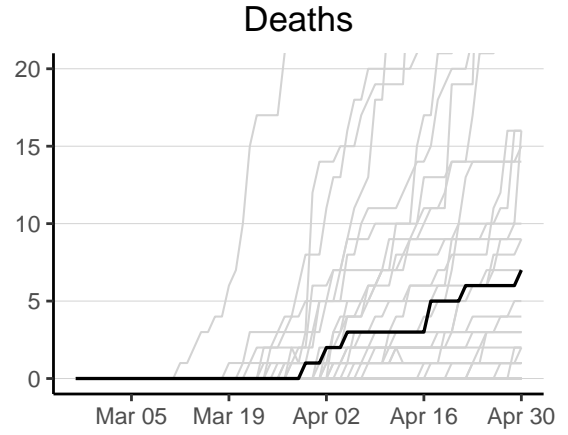
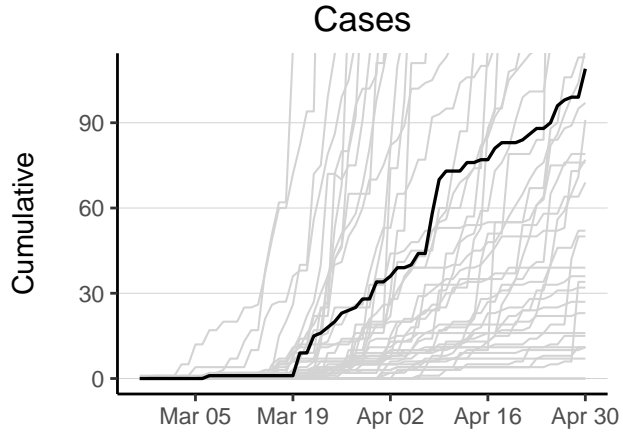
# South Africa



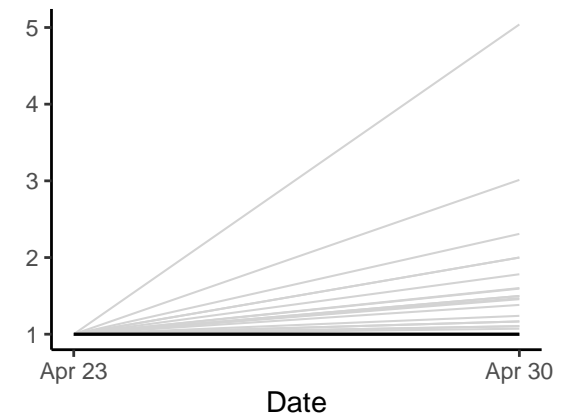
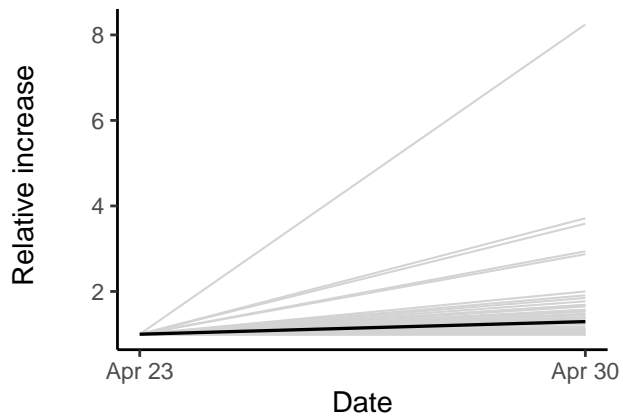
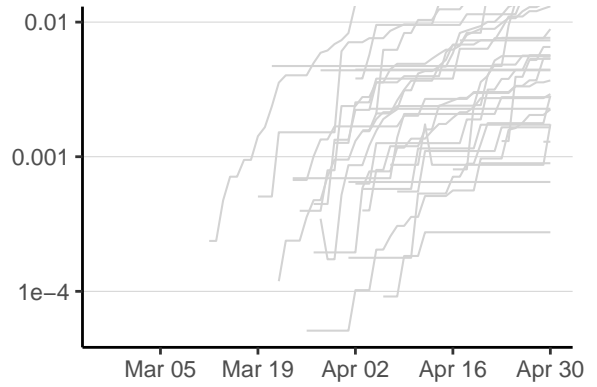
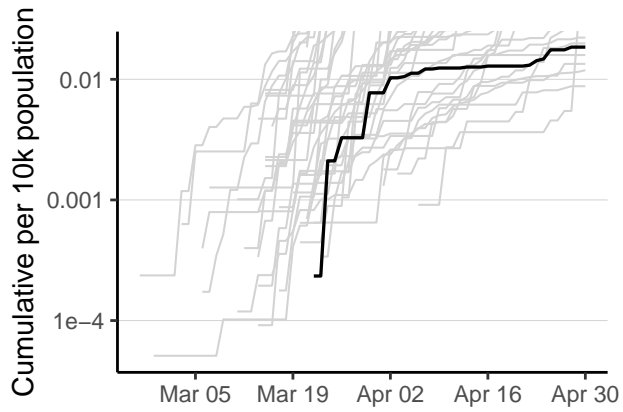
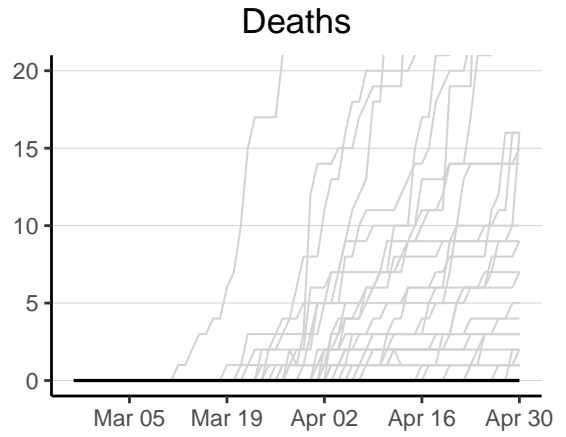
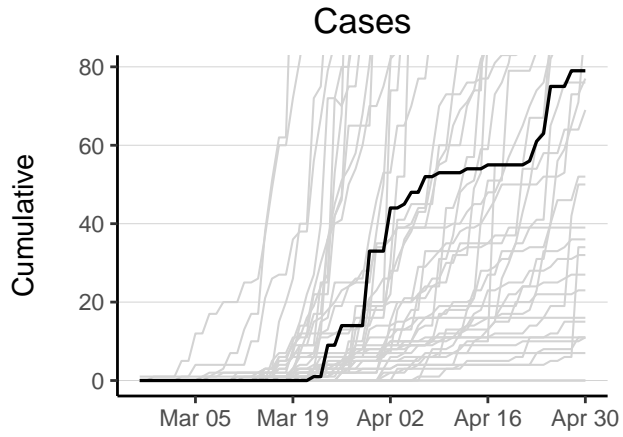
# South Sudan



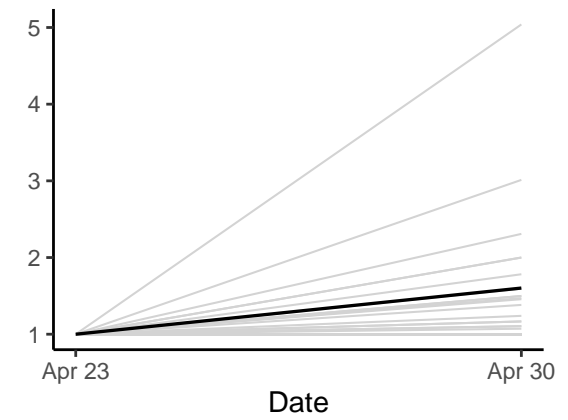
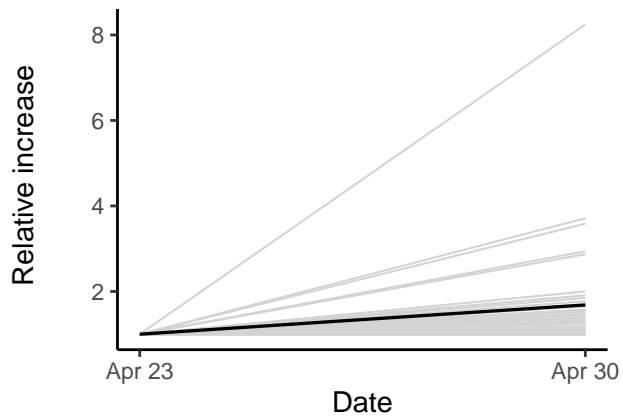
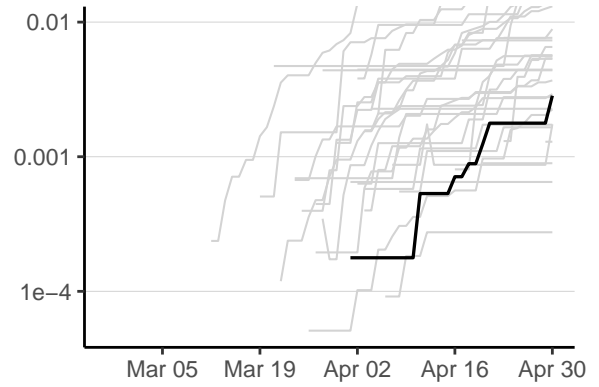
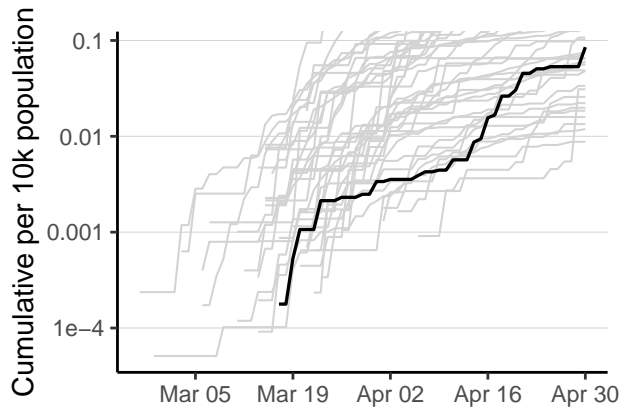
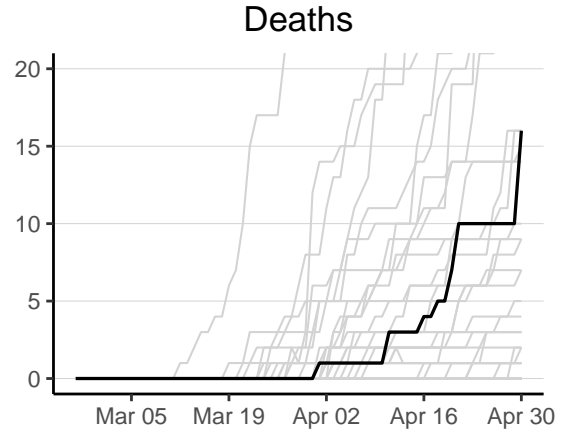
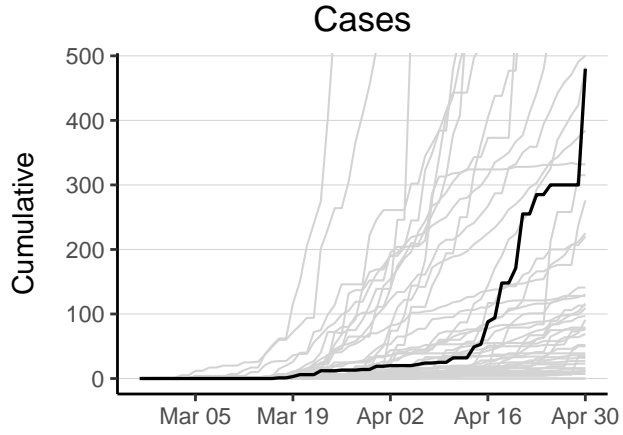
# Togo



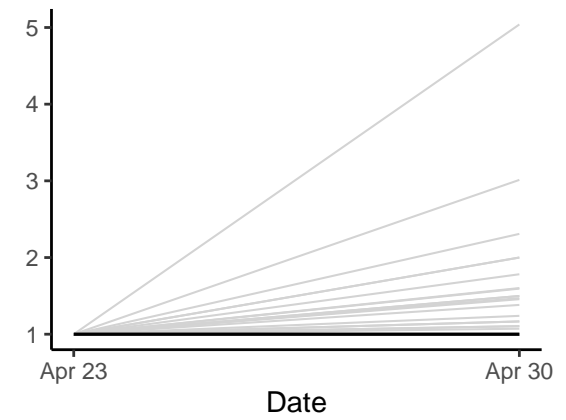
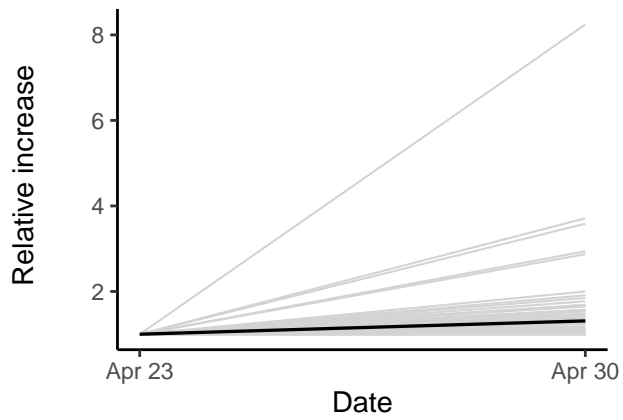
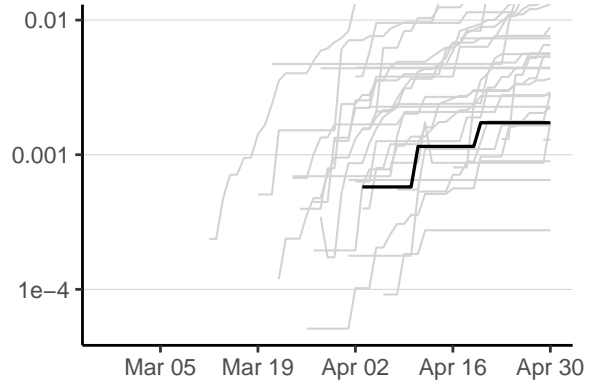
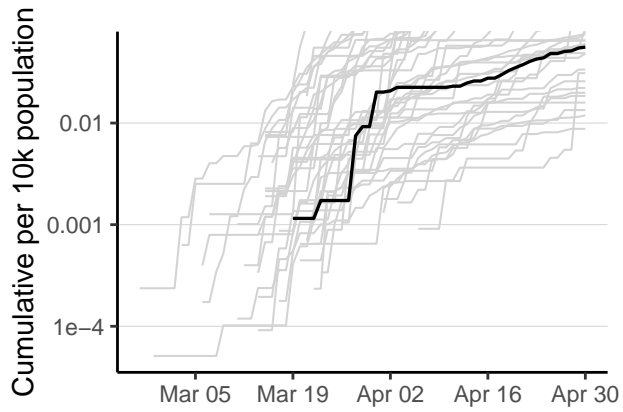
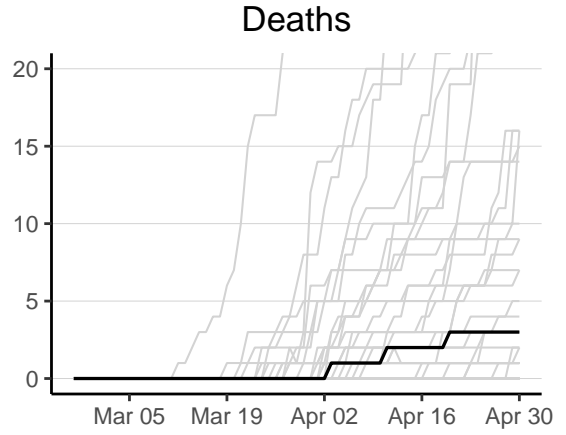
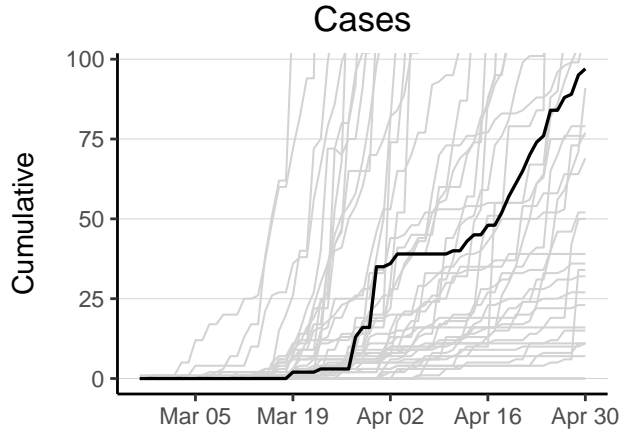
# Uganda



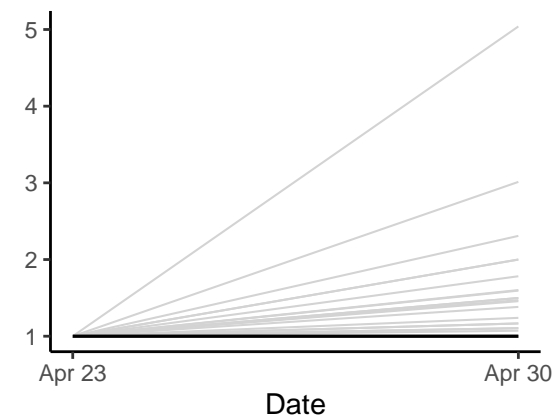
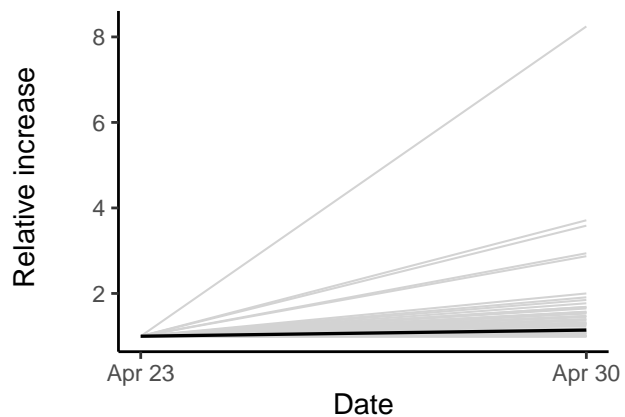
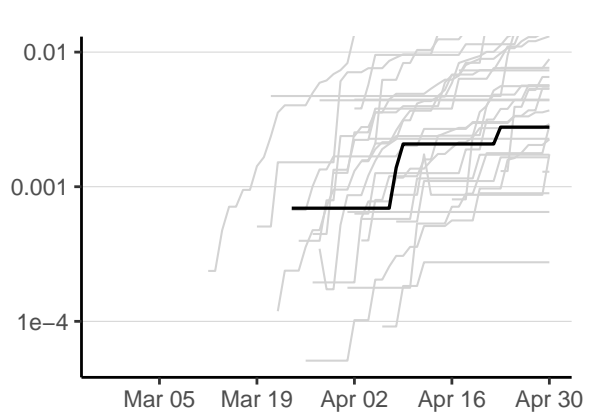
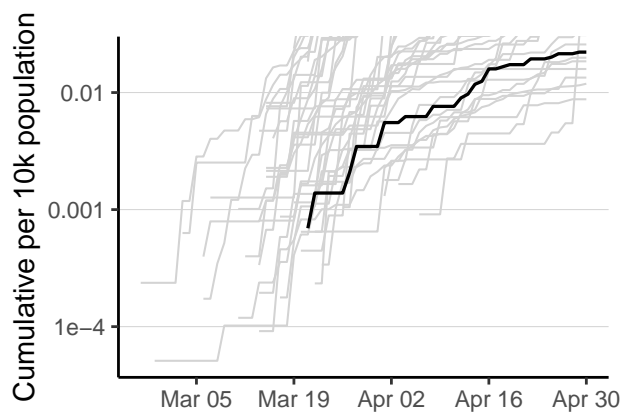
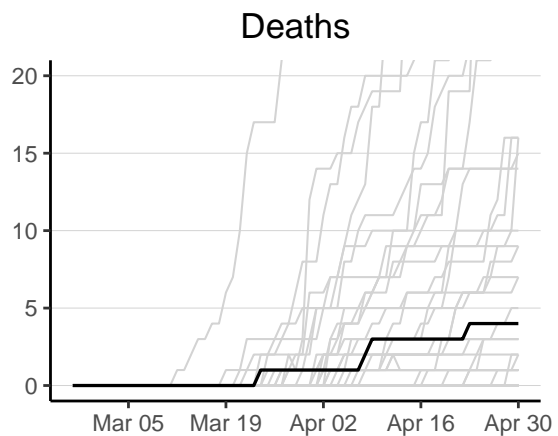
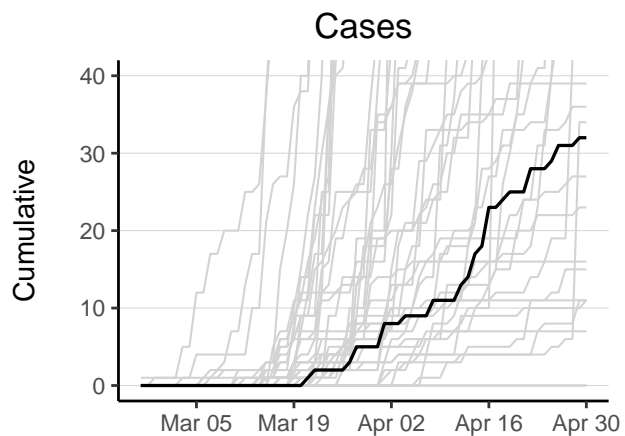
# United Republic of Tanzania



# Zambia



# Zimbabwe



# 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 30/04/2020).
- 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 30/04/2020).
- 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.
- Data are provided by WHO Afro but were smoothed where necessary (e.g. if a decrease in cumulative count was reported) for doubling time calculations.



## Extended Data tables

### Cumulative reported cases

| Country                          | Cum. reported cases | 95%CI lower | 95%CI upper |
|----------------------------------|---------------------|-------------|-------------|
| South Africa                     | 5350                | 5205.0      | 5452.1      |
| Algeria                          | 3848                | 3738.0      | 3946.1      |
| Cameroon                         | 1806                | 1728.0      | 1866.0      |
| Ghana                            | 1671                | 1605.0      | 1738.0      |
| Nigeria                          | 1532                | 1457.0      | 1584.0      |
| Guinea                           | 1351                | 1293.0      | 1411.0      |
| Cote d'Ivoire                    | 1238                | 1178.0      | 1293.0      |
| Senegal                          | 882                 | 837.0       | 934.0       |
| Niger                            | 713                 | 670.0       | 756.0       |
| Burkina Faso                     | 638                 | 597.0       | 679.0       |
| Democratic Republic of the Congo | 500                 | 464.0       | 539.0       |
| Mali                             | 482                 | 446.0       | 517.0       |
| United Republic of Tanzania      | 480                 | 444.0       | 518.0       |
| Kenya                            | 384                 | 351.0       | 416.0       |
| Mauritius                        | 332                 | 302.0       | 361.0       |
| Equatorial Guinea                | 315                 | 287.0       | 343.0       |
| Gabon                            | 276                 | 251.0       | 304.0       |
| Rwanda                           | 225                 | 203.0       | 251.0       |
| Congo                            | 220                 | 195.9       | 246.0       |
| Liberia                          | 141                 | 122.0       | 161.0       |
| Ethiopia                         | 130                 | 113.0       | 149.0       |
| Madagascar                       | 128                 | 111.0       | 146.0       |
| Sierra Leone                     | 116                 | 100.0       | 134.0       |
| Cabo Verde                       | 113                 | 95.0        | 130.0       |
| Togo                             | 109                 | 93.0        | 126.0       |
| Zambia                           | 97                  | 80.0        | 113.0       |
| Eswatini                         | 91                  | 75.0        | 107.0       |
| Uganda                           | 79                  | 64.0        | 94.0        |
| Guinea-Bissau                    | 77                  | 63.0        | 91.0        |
| Mozambique                       | 76                  | 61.0        | 91.0        |
| Benin                            | 69                  | 55.0        | 83.0        |
| Chad                             | 52                  | 40.0        | 65.0        |
| Central African Republic         | 50                  | 39.0        | 62.0        |
| Eritrea                          | 39                  | 29.0        | 49.0        |
| Malawi                           | 36                  | 27.0        | 46.0        |
| South Sudan                      | 34                  | 25.0        | 44.0        |
| Zimbabwe                         | 32                  | 23.0        | 41.0        |
| Angola                           | 27                  | 18.0        | 36.0        |
| Botswana                         | 23                  | 16.0        | 31.0        |
| Namibia                          | 16                  | 10.0        | 23.0        |
| Burundi                          | 15                  | 9.0         | 22.0        |
| Gambia                           | 11                  | 6.0         | 17.0        |
| Sao Tome and Principe            | 11                  | 6.0         | 17.0        |
| Seychelles                       | 11                  | 6.0         | 16.0        |
| Mauritania                       | 7                   | 3.0         | 12.0        |
| Comoros                          | 0                   | 0.0         | 0.0         |
| Lesotho                          | 0                   | 0.0         | 0.0         |

## Cumulative reported cases per 10,000 population

| Country                          | Cum. reported cases per 10k pop | 95%CI lower | 95%CI upper |
|----------------------------------|---------------------------------|-------------|-------------|
| Mauritius                        | 2.6238774                       | 2.4         | 2.9         |
| Equatorial Guinea                | 2.4064649                       | 2.2         | 2.6         |
| Cabo Verde                       | 2.0780959                       | 1.7         | 2.4         |
| Gabon                            | 1.3023322                       | 1.2         | 1.4         |
| Seychelles                       | 1.1368099                       | 0.6         | 1.7         |
| Guinea                           | 1.0882595                       | 1.0         | 1.1         |
| South Africa                     | 0.9259320                       | 0.9         | 0.9         |
| Algeria                          | 0.9112345                       | 0.9         | 0.9         |
| Cameroon                         | 0.7162052                       | 0.7         | 0.7         |
| Eswatini                         | 0.6656913                       | 0.5         | 0.8         |
| Ghana                            | 0.5613579                       | 0.5         | 0.6         |
| Senegal                          | 0.5563138                       | 0.5         | 0.6         |
| Sao Tome and Principe            | 0.5212578                       | 0.3         | 0.8         |
| Cote d'Ivoire                    | 0.4938325                       | 0.5         | 0.5         |
| Congo                            | 0.4194980                       | 0.4         | 0.5         |
| Guinea-Bissau                    | 0.4108181                       | 0.3         | 0.5         |
| Burkina Faso                     | 0.3230129                       | 0.3         | 0.3         |
| Niger                            | 0.3176944                       | 0.3         | 0.3         |
| Liberia                          | 0.2925932                       | 0.3         | 0.3         |
| Mali                             | 0.2526511                       | 0.2         | 0.3         |
| Rwanda                           | 0.1828980                       | 0.2         | 0.2         |
| Sierra Leone                     | 0.1516309                       | 0.1         | 0.2         |
| Togo                             | 0.1381654                       | 0.1         | 0.2         |
| Central African Republic         | 0.1071495                       | 0.1         | 0.1         |
| Botswana                         | 0.1020351                       | 0.1         | 0.1         |
| United Republic of Tanzania      | 0.0852298                       | 0.1         | 0.1         |
| Nigeria                          | 0.0782132                       | 0.1         | 0.1         |
| Kenya                            | 0.0747183                       | 0.1         | 0.1         |
| Namibia                          | 0.0653527                       | 0.0         | 0.1         |
| Eritrea                          | 0.0644628                       | 0.0         | 0.1         |
| Benin                            | 0.0600781                       | 0.0         | 0.1         |
| Democratic Republic of the Congo | 0.0594756                       | 0.1         | 0.1         |
| Zambia                           | 0.0559019                       | 0.0         | 0.1         |
| Madagascar                       | 0.0487389                       | 0.0         | 0.1         |
| Gambia                           | 0.0482435                       | 0.0         | 0.1         |
| Chad                             | 0.0335966                       | 0.0         | 0.0         |
| South Sudan                      | 0.0309769                       | 0.0         | 0.0         |
| Mozambique                       | 0.0257662                       | 0.0         | 0.0         |
| Zimbabwe                         | 0.0221622                       | 0.0         | 0.0         |
| Malawi                           | 0.0198420                       | 0.0         | 0.0         |
| Uganda                           | 0.0184912                       | 0.0         | 0.0         |
| Mauritania                       | 0.0158971                       | 0.0         | 0.0         |
| Burundi                          | 0.0134224                       | 0.0         | 0.0         |
| Ethiopia                         | 0.0119021                       | 0.0         | 0.0         |
| Angola                           | 0.0087635                       | 0.0         | 0.0         |
| Comoros                          | 0.0000000                       | 0.0         | 0.0         |
| Lesotho                          | 0.0000000                       | 0.0         | 0.0         |

## Cumulative deaths

| Country                          | Cum. reported deaths | 95%CI lower | 95%CI upper |
|----------------------------------|----------------------|-------------|-------------|
| Algeria                          | 444                  | 408         | 481         |
| South Africa                     | 103                  | 85          | 119         |
| Cameroon                         | 59                   | 46          | 71          |
| Nigeria                          | 44                   | 33          | 56          |
| Burkina Faso                     | 42                   | 32          | 53          |
| Niger                            | 32                   | 23          | 41          |
| Democratic Republic of the Congo | 31                   | 22          | 42          |
| Mali                             | 25                   | 17          | 34          |
| Ghana                            | 16                   | 10          | 23          |
| Liberia                          | 16                   | 10          | 23          |
| United Republic of Tanzania      | 16                   | 10          | 23          |
| Kenya                            | 15                   | 9           | 22          |
| Cote d'Ivoire                    | 14                   | 8           | 21          |
| Mauritius                        | 10                   | 4           | 14          |
| Congo                            | 9                    | 5           | 15          |
| Senegal                          | 9                    | 5           | 14          |
| Guinea                           | 7                    | 3           | 12          |
| Togo                             | 7                    | 3           | 12          |
| Sierra Leone                     | 5                    | 2           | 9           |
| Zimbabwe                         | 4                    | 1           | 8           |
| Ethiopia                         | 3                    | 1           | 6           |
| Gabon                            | 3                    | 1           | 6           |
| Malawi                           | 3                    | 0           | 6           |
| Zambia                           | 3                    | 0           | 6           |
| Angola                           | 2                    | 0           | 5           |
| Benin                            | 2                    | 0           | 5           |
| Chad                             | 2                    | 0           | 5           |
| Botswana                         | 1                    | 0           | 3           |
| Burundi                          | 1                    | 0           | 3           |
| Cabo Verde                       | 1                    | 0           | 3           |
| Equatorial Guinea                | 1                    | 0           | 3           |
| Eswatini                         | 1                    | 0           | 3           |
| Gambia                           | 1                    | 0           | 3           |
| Guinea-Bissau                    | 1                    | 0           | 3           |
| Mauritania                       | 1                    | 0           | 3           |
| Central African Republic         | 0                    | 0           | 0           |
| Comoros                          | 0                    | 0           | 0           |
| Eritrea                          | 0                    | 0           | 0           |
| Lesotho                          | 0                    | 0           | 0           |
| Madagascar                       | 0                    | 0           | 0           |
| Mozambique                       | 0                    | 0           | 0           |
| Namibia                          | 0                    | 0           | 0           |
| Rwanda                           | 0                    | 0           | 0           |
| Sao Tome and Principe            | 0                    | 0           | 0           |
| Seychelles                       | 0                    | 0           | 0           |
| South Sudan                      | 0                    | 0           | 0           |
| Uganda                           | 0                    | 0           | 0           |

## Cumulative deaths per 10,000 populations

| Country                          | Cum. reported deaths per 10k pop | 95%CI lower | 95%CI upper |
|----------------------------------|----------------------------------|-------------|-------------|
| Algeria                          | 0.1051424                        | 0.1         | 0.1         |
| Mauritius                        | 0.0790325                        | 0.0         | 0.1         |
| Liberia                          | 0.0332021                        | 0.0         | 0.0         |
| Cameroon                         | 0.0233976                        | 0.0         | 0.0         |
| Burkina Faso                     | 0.0212642                        | 0.0         | 0.0         |
| Cabo Verde                       | 0.0183902                        | 0.0         | 0.1         |
| South Africa                     | 0.0178264                        | 0.0         | 0.0         |
| Congo                            | 0.0171613                        | 0.0         | 0.0         |
| Niger                            | 0.0142584                        | 0.0         | 0.0         |
| Gabon                            | 0.0141558                        | 0.0         | 0.0         |
| Mali                             | 0.0131043                        | 0.0         | 0.0         |
| Togo                             | 0.0088730                        | 0.0         | 0.0         |
| Equatorial Guinea                | 0.0076396                        | 0.0         | 0.0         |
| Eswatini                         | 0.0073153                        | 0.0         | 0.0         |
| Sierra Leone                     | 0.0065358                        | 0.0         | 0.0         |
| Senegal                          | 0.0056767                        | 0.0         | 0.0         |
| Guinea                           | 0.0056387                        | 0.0         | 0.0         |
| Cote d'Ivoire                    | 0.0055845                        | 0.0         | 0.0         |
| Ghana                            | 0.0053751                        | 0.0         | 0.0         |
| Guinea-Bissau                    | 0.0053353                        | 0.0         | 0.0         |
| Botswana                         | 0.0044363                        | 0.0         | 0.0         |
| Gambia                           | 0.0043858                        | 0.0         | 0.0         |
| Democratic Republic of the Congo | 0.0036875                        | 0.0         | 0.0         |
| Kenya                            | 0.0029187                        | 0.0         | 0.0         |
| United Republic of Tanzania      | 0.0028410                        | 0.0         | 0.0         |
| Zimbabwe                         | 0.0027703                        | 0.0         | 0.0         |
| Mauritania                       | 0.0022710                        | 0.0         | 0.0         |
| Nigeria                          | 0.0022463                        | 0.0         | 0.0         |
| Benin                            | 0.0017414                        | 0.0         | 0.0         |
| Zambia                           | 0.0017289                        | 0.0         | 0.0         |
| Malawi                           | 0.0016535                        | 0.0         | 0.0         |
| Chad                             | 0.0012922                        | 0.0         | 0.0         |
| Burundi                          | 0.0008948                        | 0.0         | 0.0         |
| Angola                           | 0.0006491                        | 0.0         | 0.0         |
| Ethiopia                         | 0.0002747                        | 0.0         | 0.0         |
| Central African Republic         | 0.0000000                        | 0.0         | 0.0         |
| Comoros                          | 0.0000000                        | 0.0         | 0.0         |
| Eritrea                          | 0.0000000                        | 0.0         | 0.0         |
| Lesotho                          | 0.0000000                        | 0.0         | 0.0         |
| Madagascar                       | 0.0000000                        | 0.0         | 0.0         |
| Mozambique                       | 0.0000000                        | 0.0         | 0.0         |
| Namibia                          | 0.0000000                        | 0.0         | 0.0         |
| Rwanda                           | 0.0000000                        | 0.0         | 0.0         |
| Sao Tome and Principe            | 0.0000000                        | 0.0         | 0.0         |
| Seychelles                       | 0.0000000                        | 0.0         | 0.0         |
| South Sudan                      | 0.0000000                        | 0.0         | 0.0         |
| Uganda                           | 0.0000000                        | 0.0         | 0.0         |

## Doubling time (cases)

| Country                          | Doubling time (days) | 95%CI lower | 95%CI upper |
|----------------------------------|----------------------|-------------|-------------|
| South Sudan                      | 2.3                  | 1.4         | 3.1         |
| Equatorial Guinea                | 3.7                  | 3.2         | 4.1         |
| Central African Republic         | 3.8                  | 2.8         | 5.1         |
| Eswatini                         | 4.5                  | 3.6         | 5.6         |
| Nigeria                          | 4.6                  | 4.4         | 4.9         |
| Senegal                          | 7.0                  | 6.5         | 7.6         |
| Sierra Leone                     | 7.5                  | 6.1         | 9.7         |
| Mozambique                       | 7.9                  | 5.9         | 10.5        |
| Guinea                           | 8.5                  | 7.9         | 9.1         |
| Cabo Verde                       | 9.3                  | 7.4         | 12.2        |
| United Republic of Tanzania      | 9.3                  | 8.3         | 10.5        |
| Gabon                            | 9.5                  | 8.2         | 11.3        |
| Mali                             | 9.7                  | 8.7         | 11.1        |
| Sao Tome and Principe            | 10.7                 | 5.3         | 36.3        |
| Malawi                           | 10.8                 | 7.0         | 19.0        |
| Cameroon                         | 10.9                 | 10.3        | 11.7        |
| Guinea-Bissau                    | 11.2                 | 8.3         | 15.8        |
| Chad                             | 11.4                 | 7.9         | 18.1        |
| South Africa                     | 12.5                 | 12.1        | 13.0        |
| Rwanda                           | 12.6                 | 10.4        | 15.4        |
| Ghana                            | 13.1                 | 12.2        | 14.1        |
| Liberia                          | 14.5                 | 11.3        | 19.4        |
| Democratic Republic of the Congo | 14.6                 | 12.7        | 16.9        |
| Burundi                          | 15.6                 | 7.6         | 60.6        |
| Algeria                          | 17.4                 | 16.5        | 18.4        |
| Zambia                           | 17.9                 | 13.2        | 25.8        |
| Cote d'Ivoire                    | 18.5                 | 16.8        | 20.2        |
| Uganda                           | 18.8                 | 13.0        | 29.7        |
| Benin                            | 19.8                 | 13.5        | 32.1        |
| Kenya                            | 20.5                 | 17.3        | 24.9        |
| Togo                             | 22.7                 | 16.3        | 34.6        |
| Congo                            | 28.9                 | 22.5        | 38.6        |
| Zimbabwe                         | 36.3                 | 19.0        | 143.1       |
| Angola                           | 41.2                 | 18.8        | 177.3       |
| Ethiopia                         | 42.6                 | 29.0        | 70.9        |
| Gambia                           | 50.9                 | 16.9        | Inf         |
| Niger                            | 65.4                 | 52.4        | 85.4        |
| Burkina Faso                     | 79.0                 | 62.0        | 105.0       |
| Madagascar                       | 86.3                 | 49.9        | 193.4       |
| Botswana                         | 109.2                | 36.3        | Inf         |
| Mauritius                        | 534.5                | 266.8       | Inf         |
| Eritrea                          | NA                   | Inf         | Inf         |
| Mauritania                       | NA                   | Inf         | Inf         |
| Namibia                          | NA                   | Inf         | Inf         |
| Seychelles                       | NA                   | Inf         | Inf         |
| Comoros                          | NA                   | NA          | NA          |
| Lesotho                          | NA                   | NA          | NA          |

## Doubling time (deaths)

| Country                          | Doubling time (days) | 95%CI lower | 95%CI upper |
|----------------------------------|----------------------|-------------|-------------|
| Sierra Leone                     | 3.0                  | 2.3         | 12.0        |
| Gabon                            | 4.4                  | 3.0         | Inf         |
| Nigeria                          | 5.8                  | 4.1         | 8.4         |
| Benin                            | 7.0                  | 3.5         | Inf         |
| Liberia                          | 7.0                  | 3.9         | 14.1        |
| Ghana                            | 8.4                  | 4.8         | 19.3        |
| United Republic of Tanzania      | 10.3                 | 5.3         | 24.2        |
| South Africa                     | 10.4                 | 8.0         | 13.9        |
| Congo                            | 12.0                 | 5.1         | 50.9        |
| Senegal                          | 12.0                 | 5.3         | Inf         |
| Mali                             | 12.6                 | 7.5         | 26.6        |
| Niger                            | 12.9                 | 7.9         | 26.6        |
| Cameroon                         | 15.0                 | 10.3        | 24.4        |
| Democratic Republic of the Congo | 22.6                 | 13.1        | 63.0        |
| Guinea                           | 31.5                 | 9.5         | Inf         |
| Togo                             | 31.5                 | 9.5         | Inf         |
| Burkina Faso                     | 48.5                 | 24.5        | 181.9       |
| Algeria                          | 48.8                 | 38.9        | 65.3        |
| Kenya                            | 70.3                 | 23.4        | Inf         |
| Angola                           | NA                   | Inf         | Inf         |
| Botswana                         | NA                   | Inf         | Inf         |
| Burundi                          | NA                   | Inf         | Inf         |
| Cabo Verde                       | NA                   | Inf         | Inf         |
| Cote d'Ivoire                    | NA                   | Inf         | Inf         |
| Equatorial Guinea                | NA                   | Inf         | Inf         |
| Eswatini                         | NA                   | Inf         | Inf         |
| Ethiopia                         | NA                   | Inf         | Inf         |
| Gambia                           | NA                   | Inf         | Inf         |
| Malawi                           | NA                   | Inf         | Inf         |
| Mauritania                       | NA                   | Inf         | Inf         |
| Mauritius                        | NA                   | Inf         | Inf         |
| Zambia                           | NA                   | Inf         | Inf         |
| Zimbabwe                         | NA                   | Inf         | Inf         |
| Central African Republic         | NA                   | NA          | NA          |
| Chad                             | NA                   | NA          | NA          |
| Comoros                          | NA                   | NA          | NA          |
| Eritrea                          | NA                   | NA          | NA          |
| Guinea-Bissau                    | NA                   | NA          | NA          |
| Lesotho                          | NA                   | NA          | NA          |
| Madagascar                       | NA                   | NA          | NA          |
| Mozambique                       | NA                   | NA          | NA          |
| Namibia                          | NA                   | NA          | NA          |
| Rwanda                           | NA                   | NA          | NA          |
| Sao Tome and Principe            | NA                   | NA          | NA          |
| Seychelles                       | NA                   | NA          | NA          |
| South Sudan                      | NA                   | NA          | NA          |
| Uganda                           | NA                   | NA          | NA          |