Impact of interventions

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## Package

## Get linelist

## Extract variables of potential interest

## # A tibble: 26,756 x 6  
## country city province date\_confirmati… travel\_history\_lo… import\_status  
## <chr> <chr> <chr> <chr> <chr> <chr>   
## 1 China Chaohu Ci… Anhui 22.01.2020 "Wuhan" imported   
## 2 China Baohe Dis… Anhui 23.01.2020 "Luzhou Hunan, vi… imported   
## 3 China High-Tech… Anhui 23.01.2020 "Yinzhou Hunan, v… imported   
## 4 China High-Tech… Anhui 23.01.2020 "" local   
## 5 China Feidong C… Anhui 23.01.2020 "Wuhan" imported   
## 6 China Lu'an City Anhui 24.01.2020 "" local   
## 7 China Fuyang Ci… Anhui 22.01.2020 "Wuhan" imported   
## 8 China Huaibei C… Anhui 25.01.2020 "Wuhan" imported   
## 9 China Huainan C… Anhui 26.01.2020 "Wuhan" imported   
## 10 China Hefei City Anhui 23.01.2020 "Wuhan" imported   
## # … with 26,746 more rows

## Estimate fraction that are imported

* Based on linelist data alone. Only countries with at least 20 total cases present are shown.
* Based on linelist data and WH0 sit reps
* Summarise and report

|  |  |  |  |
| --- | --- | --- | --- |
| Country | Cases | Fraction imported (linelist only) | Fraction imported (WHO sit reps) |
| Vietnam | 16 | 0.69 | 0.69 |
| Australia | 27 | 0.87 | 0.48 |
| Kuwait | 56 | 1.00 | 0.46 |
| Malaysia | 24 | 0.65 | 0.46 |
| Bahrain | 47 | 1.00 | 0.43 |
| Thailand | 42 | 0.35 | 0.33 |
| United Arab Emirates | 21 | 0.35 | 0.33 |
| Singapore | 106 | 0.34 | 0.29 |
| United States | 62 | 0.88 | 0.24 |
| Japan | 254 | 0.07 | 0.21 |
| France | 100 | 0.42 | 0.08 |
| Germany | 129 | 0.15 | 0.02 |
| Italy | 1689 | 0.02 | 0.01 |
| South Korea | 4212 | 0.02 | 0.00 |
| Iran | 978 | 0.00 | 0.00 |

## Plot cases over time

* Wrangle for countries of interest (with at least 40 cases)

## Warning: Missing column names filled in: 'X1' [1]

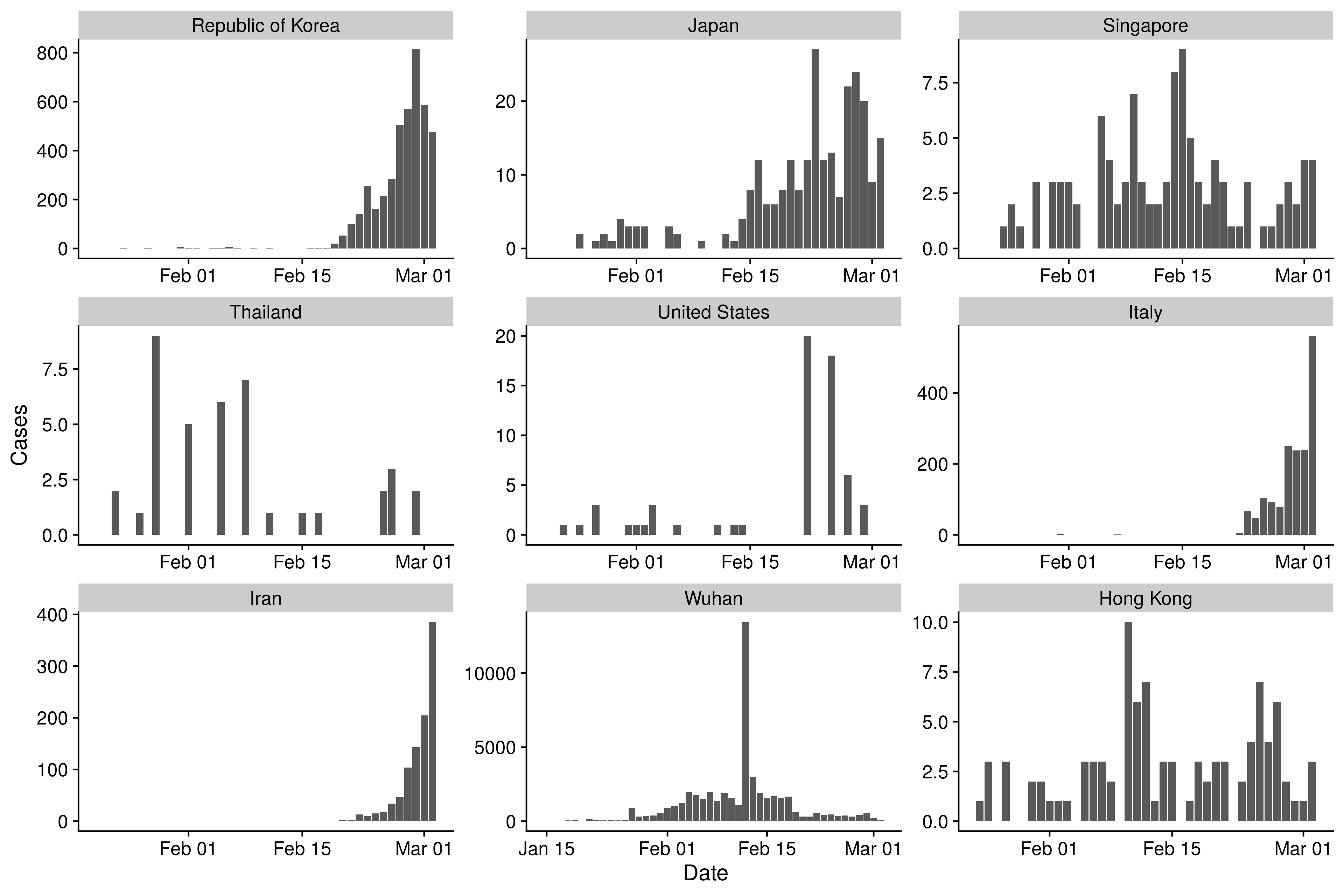
## Parsed with column specification:  
## cols(  
## X1 = col\_double(),  
## CNTY\_CODE = col\_double(),  
## date = col\_date(format = ""),  
## total\_case = col\_double()  
## )

* Get date of first report

|  |  |
| --- | --- |
| Country | Date of first case report |
| Wuhan | 2020-01-15 |
| Republic of Korea | 2020-01-20 |
| Japan | 2020-01-20 |
| Thailand | 2020-01-20 |
| Taiwan | 2020-01-21 |
| United States | 2020-01-23 |
| Hong Kong | 2020-01-23 |
| Singapore | 2020-01-24 |
| Italy | 2020-01-31 |
| Iran | 2020-02-20 |

* Get case counts
* Plot curves in countries of interest

## Warning: Removed 11 rows containing missing values (position\_stack).



## Get interventions

* Plot overall interventions

## Warning: Missing column names filled in: 'X8' [8]

## Parsed with column specification:  
## cols(  
## date\_intervention = col\_date(format = ""),  
## intervention = col\_character(),  
## social\_distancing = col\_character(),  
## country = col\_character(),  
## notes = col\_character(),  
## ref1 = col\_character(),  
## ref2 = col\_character(),  
## X8 = col\_character()  
## )

|  |  |
| --- | --- |
| Intervention | Countries that have implemented |
| Health screening | 5 |
| School closure | 5 |
| Remote working | 4 |
| Travel advisory | 4 |
| Government on alert | 3 |
| Lockdown | 3 |
| Quarantine | 3 |
| School closure (not related to outbreak) | 3 |
| Travel restriction | 3 |
| Isolation | 2 |
| Mandatory quarantine | 2 |
| Mass gathering advisory | 2 |
| Mass gathering cancellation | 2 |
| School restrictions | 2 |
| Social event cancellation | 2 |
| Suspending flights | 2 |
| Travel ban | 2 |
| University closure | 2 |
| Work closure (not related to outbreak) | 2 |
| [Extension] school and work closure | 1 |
| Border checks | 1 |
| Border control | 1 |
| Communication distancing | 1 |
| Communication general | 1 |
| Contact tracing | 1 |
| Containment to mitigation | 1 |
| Decontamination | 1 |
| Enhanced care | 1 |
| Entry ban | 1 |
| Government announcement | 1 |
| Healthcare restrictions | 1 |
| Mass gathering ban | 1 |
| Medical surveillance | 1 |
| Prevention measures school | 1 |
| Public information | 1 |
| Raise awareness flights | 1 |
| Raise awareness healthcare staff | 1 |
| Raise awareness public | 1 |
| Reduced shop hours | 1 |
| Resumption public services | 1 |
| Social distancing misc | 1 |
| Strengthening primary care response | 1 |
| Supply | 1 |
| Surveillance | 1 |
| Travel advice | 1 |

* Social interventions only

|  |  |
| --- | --- |
| Intervention | Countries that have implemented |
| School closure | 5 |
| Remote working | 4 |
| Lockdown | 3 |
| Quarantine | 3 |
| School closure (not related to outbreak) | 3 |
| Isolation | 2 |
| Mandatory quarantine | 2 |
| Mass gathering advisory | 2 |
| Mass gathering cancellation | 2 |
| School restrictions | 2 |
| Social event cancellation | 2 |
| University closure | 2 |
| Work closure (not related to outbreak) | 2 |
| [Extension] school and work closure | 1 |
| Communication distancing | 1 |
| Contact tracing | 1 |
| Healthcare restrictions | 1 |
| Mass gathering ban | 1 |
| Prevention measures school | 1 |
| Reduced shop hours | 1 |
| Social distancing misc | 1 |
| Travel advice | 1 |
| Travel restriction | 1 |

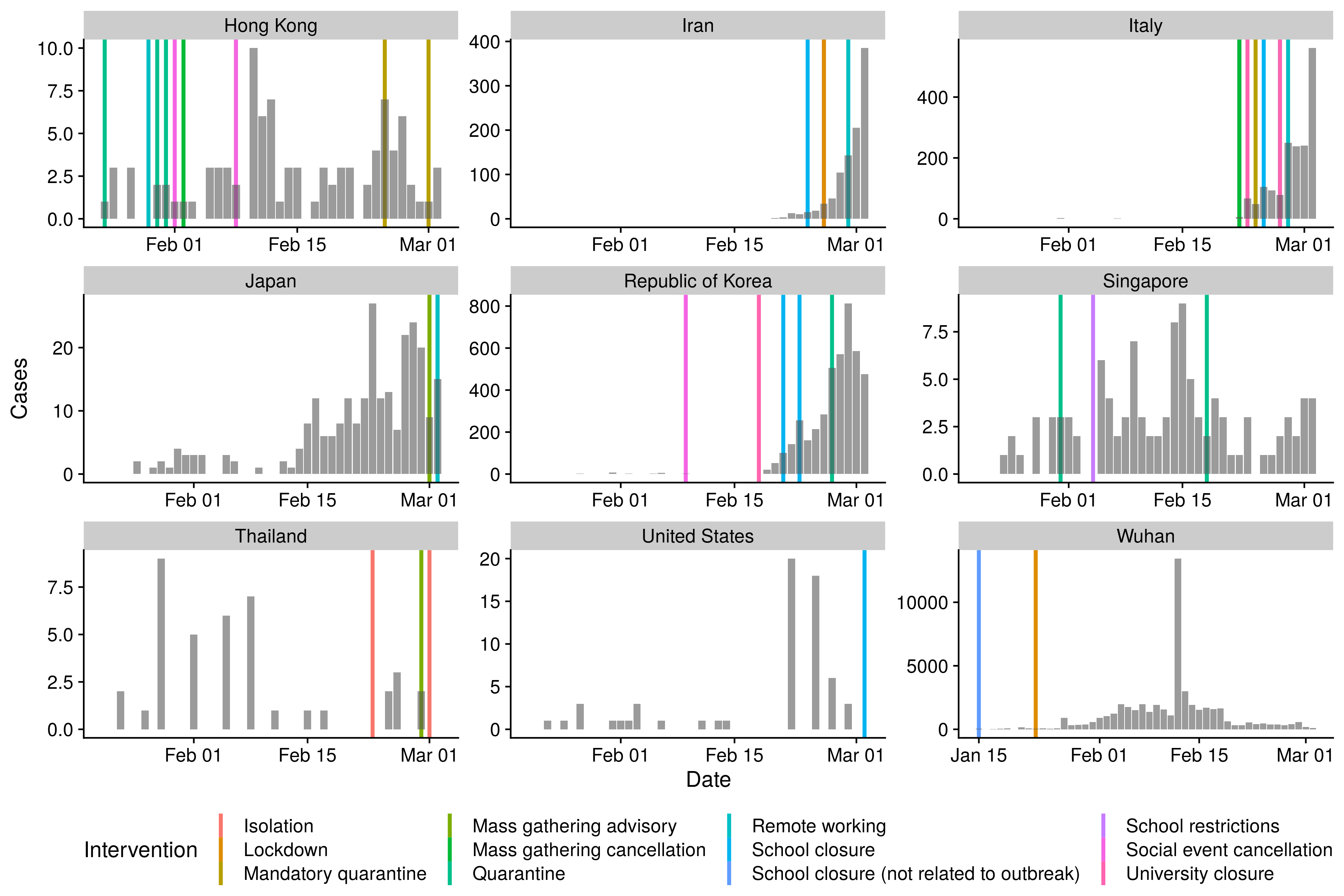
* Non-social interventions

|  |  |
| --- | --- |
| Intervention | Countries that have implemented |
| Health screening | 5 |
| Travel advisory | 4 |
| Government on alert | 3 |
| Travel restriction | 3 |
| Suspending flights | 2 |
| Travel ban | 2 |
| Border checks | 1 |
| Border control | 1 |
| Communication general | 1 |
| Containment to mitigation | 1 |
| Decontamination | 1 |
| Enhanced care | 1 |
| Entry ban | 1 |
| Government announcement | 1 |
| Medical surveillance | 1 |
| Public information | 1 |
| Raise awareness flights | 1 |
| Raise awareness healthcare staff | 1 |
| Raise awareness public | 1 |
| Resumption public services | 1 |
| Strengthening primary care response | 1 |
| Supply | 1 |
| Surveillance | 1 |
| Travel advice | 1 |

* Plot social interventions

## Warning: Column `country` joining factor and character vector, coercing into  
## character vector

## Warning: Removed 11 rows containing missing values (position\_stack).



* Plot non-social interventions

## Warning: Column `country` joining factor and character vector, coercing into  
## character vector

## Warning: Removed 11 rows containing missing values (position\_stack).

