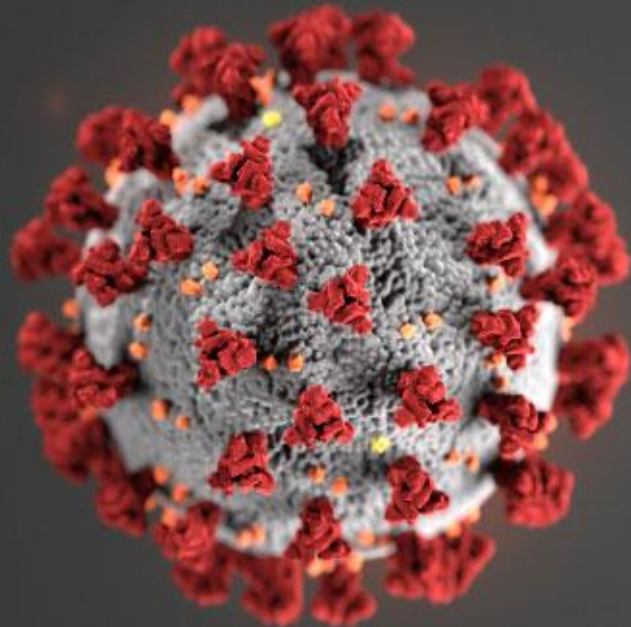


SARS-Cov-2 Report

José Luis Pires

2 Março 2021



Contents

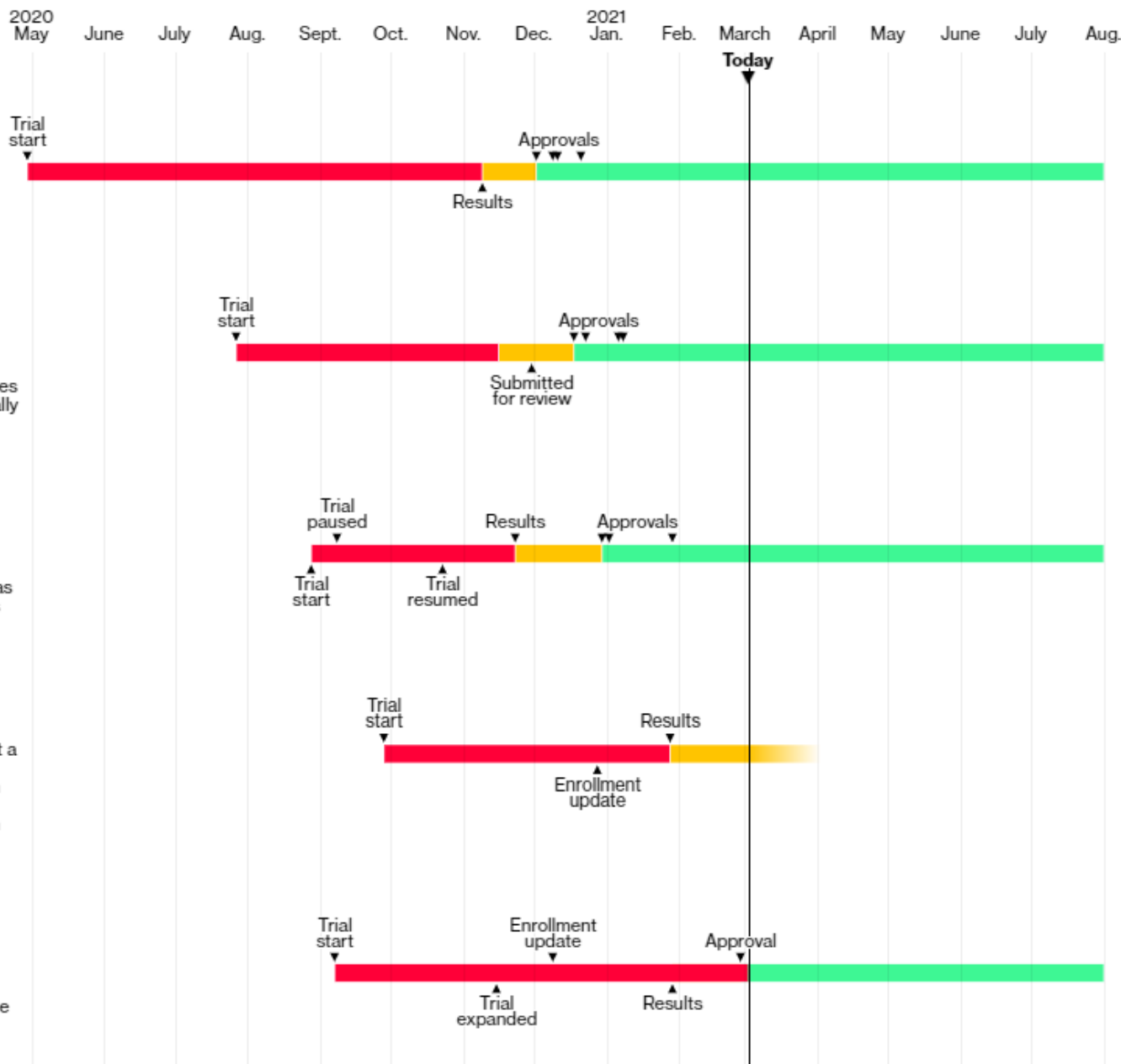
SARS-Cov-2

- [Vaccines and Products to treat COVID-19 with EUA in the United States](#)
- [Confirmed cases by Country](#)
- [Deaths by Country](#)
- [Total confirmed Covid-19 cases and deaths per million people](#)
- [Daily new confirmed Covid-19 cases and deaths per million people](#)
- [Number of COVID-19 cases reported weekly by WHO region](#)
- **Portugal**
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- **New Jersey/US**
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When to Expect the Next Vaccine

Progress: ■ Trial ■ Results expected ■ Awaiting approval ■ Available to public

Trial size Doses required Storage temperature Efficacy



Pfizer/BioNTech

44K 2 -70°C 95%

Pfizer was the first company to report positive phase 3 clinical data. It plans to produce 50M doses in 2020 and 1.3B in 2021.

Moderna

30K 2 2-8°C 95%

Moderna and Pfizer both use a new vaccine approach involving messenger RNA. Moderna expects to have 20M doses for the U.S. in December and 100M globally in Q1.

AstraZeneca/Oxford

65K 2 2-8°C 70%

AstraZeneca struck deals for 3 billion doses even before any late-stage study results. That's more than twice as many as any other candidate. Initial clinical results were mixed.

Novavax

45K 2 2-8°C 89%

This small biotech firm has never brought a product to market. It received more than \$1.6 billion from the U.S. and \$399 million from the Coalition for Epidemic Preparedness. The stock rose 3,000% in nine months.

Johnson & Johnson

70K 1 2-8°C 66%

Of the leading candidates, this is the easiest to distribute, requiring just one dose and standard refrigeration. To hedge its bets, J&J announced a separate trial with two doses in November.

Regulatory Approval

- Dec. 21: EU approves for emergency use
- Dec. 11: U.S. approves for emergency use
- Dec. 9: Canada approves for emergency use
- Dec. 2: U.K. approves for emergency use

Regulatory Approval

- Jan. 8: U.K. clears for emergency use
- Jan. 6: EU authorizes for emergency use
- Dec. 23: Canada authorizes for emergency use
- Dec. 18: U.S. authorizes for emergency use

Regulatory Approval

- Jan. 29: EU authorizes for conditional use
- Jan. 2: India authorizes for emergency use
- Dec. 30: U.K. authorizes for emergency use

Feb. 27, 2021

U.S. clears for emergency use

When to Expect the Next Vaccine

Progress: ■ Trial ■ Results expected ■ Awaiting approval ■ Available to public

👤 Trial size 💧 Doses required ❄️ Storage temperature ✅ Efficacy

2020 May June July Aug. Sept. Oct. Nov. Dec. 2021 Jan. Feb. March Today April May June July Aug.

Russia and China took the unusual step of allowing vaccine distribution before conducting large-scale clinical trials.

Sinovac Biotech

👤 26K 💧 2 ❄️ 2-8°C ✅ 50%

Sinovac's vaccine triggers an immune response using the Covid-19 virus itself, after it has been chemically inactivated.

Gamaleya

👤 40K 💧 2 ❄️ -18°C ✅ 92%

A variation of the Russian vaccine, known as Sputnik V, can be stored using standard refrigeration temperatures of 2-8°C. It's currently available in limited quantities.

CanSino Biologics

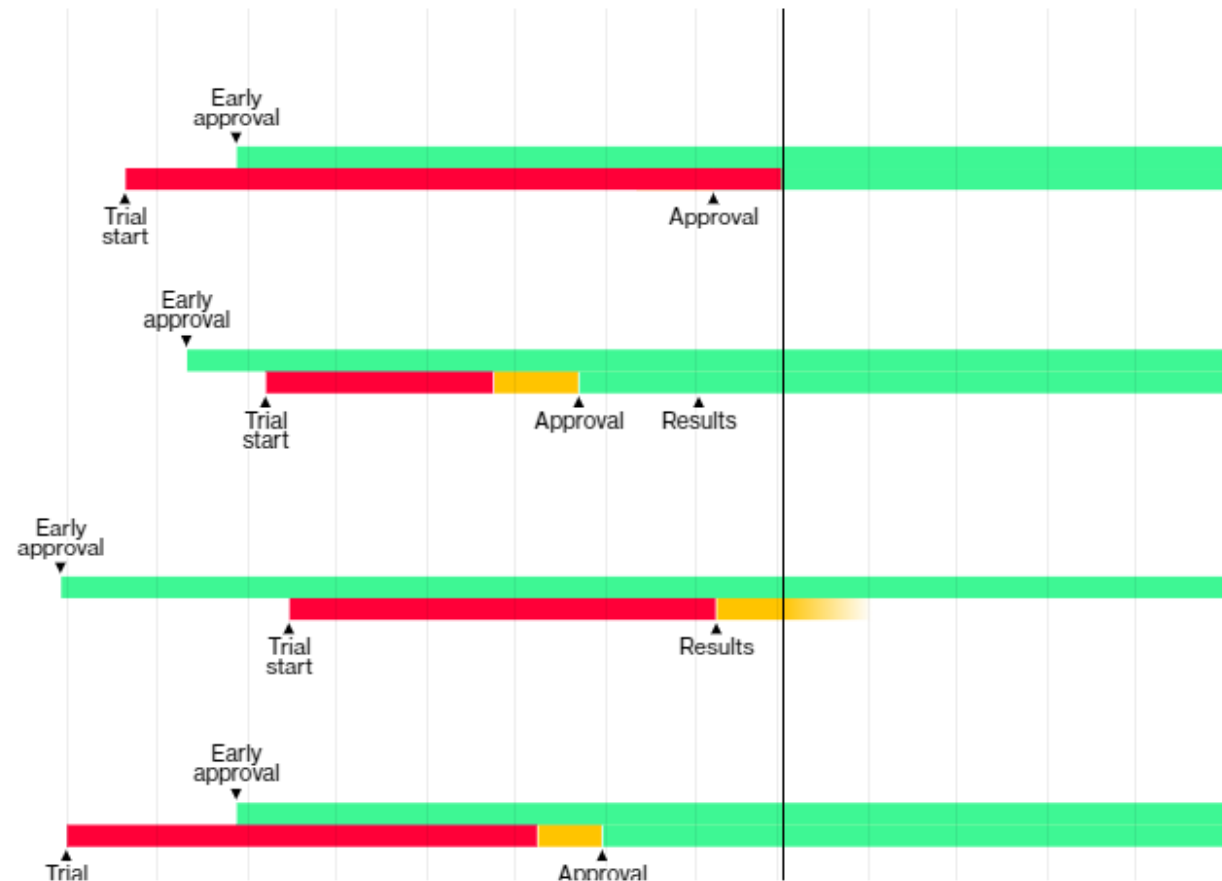
👤 40K 💧 1 ❄️ 2-8°C ✅ 66%

CanSino's shot was approved for the Chinese military even before late-stage tests began. It uses a harmless cold virus to deliver its genetic payload.

Sinopharm

👤 50K 💧 2 ❄️ 2-8°C ✅ 79%

Sinopharm administered hundreds of thousands of doses before its vaccine was fully tested.



Feb. 7, 2021
China clears for use in general public

Dec. 23, 2020
Argentina approves for emergency use

Dec. 31, 2020
China approves vaccine for general use after trial shows 79% efficacy

The Global Vaccination Campaign – sorted by Doses Administered

More than 245 million doses have been administered across 107 countries, according to data collected by Bloomberg.

The latest rate was roughly 6.79 million doses a day.

Country	Doses Administered ▼	Doses per 100 people	% of population given		Daily rate of doses administered
			1+ dose	2 doses	
<i>Global Total</i>	<i>245,920,701</i>	-	-	-	<i>6,791,190</i>
U.S.	76,899,987	23.16	15.3	7.7	1,817,502
China	40,500,000	2.89	-	-	1,550,000
EU	33,485,289	7.54	4.9	2.5	898,040
U.K. +	21,091,267	31.58	30.4	1.2	391,872
India	14,728,569	1.08	0.9	0.2	472,068
Turkey	8,899,317	10.70	8.5	2.2	260,451
Brazil	8,640,106	4.11	3.2	0.9	222,771
Israel	8,145,032	89.99	52.4	37.6	99,919
Germany	6,174,362	7.43	4.9	2.5	157,933
UAE	6,028,417	56.08	-	-	67,232
France	4,560,861	7.04	4.6	2.4	119,193
Italy	4,354,008	7.21	4.9	2.3	116,576
Spain	3,829,465	8.24	5.5	2.7	105,588
Morocco	3,801,650	10.68	10.0	0.7	175,138
Chile	3,404,494	17.82	17.5	0.3	68,602
Poland	3,336,354	8.79	5.7	3.1	88,742
Bangladesh	2,984,773	1.79	1.8	-	103,032
Indonesia	2,690,163	1.01	0.6	0.4	97,292
Mexico	2,455,095	1.92	1.5	0.4	108,606

Country	Doses Administered ▼	Doses per 100 people	% of population given		Daily rate of doses administered
			1+ dose	2 doses	
Russia	2,200,000	1.50	1.5	-	35,000
Canada +	1,916,545	5.11	2.5	1.4	56,248
Romania	1,565,021	8.07	4.9	3.2	22,276
Serbia	1,436,682	20.63	13.3	7.4	22,602
Argentina	1,049,169	2.33	1.7	0.7	46,705
Netherlands	968,765	5.62	-	-	23,146
Hungary	936,938	9.59	7.0	2.6	40,354
Greece	921,189	8.59	5.5	3.1	27,254
Portugal	868,951	8.46	5.9	2.6	26,956
Belgium	802,839	7.01	4.3	2.7	18,550
Saudi Arabia	780,667	2.29	-	-	38,070
Switzerland +	751,009	8.79	6.2	2.6	23,780
Sweden	720,631	6.98	4.6	2.4	25,901
Austria	656,670	7.41	4.8	2.6	21,229
Czech Republic	653,206	6.13	3.9	2.3	15,404
Denmark	614,322	10.58	7.4	3.2	16,837
Norway	490,925	9.16	6.1	3.0	14,532
Finland	452,469	8.20	6.7	1.5	13,782
Slovakia	439,221	8.06	5.6	2.4	10,227
Ireland	426,070	8.61	5.8	2.8	12,195

The Global Vaccination Campaign – sorted by Doses per 100 People

More than 209 million doses have been administered across 92 countries, according to data collected by Bloomberg.

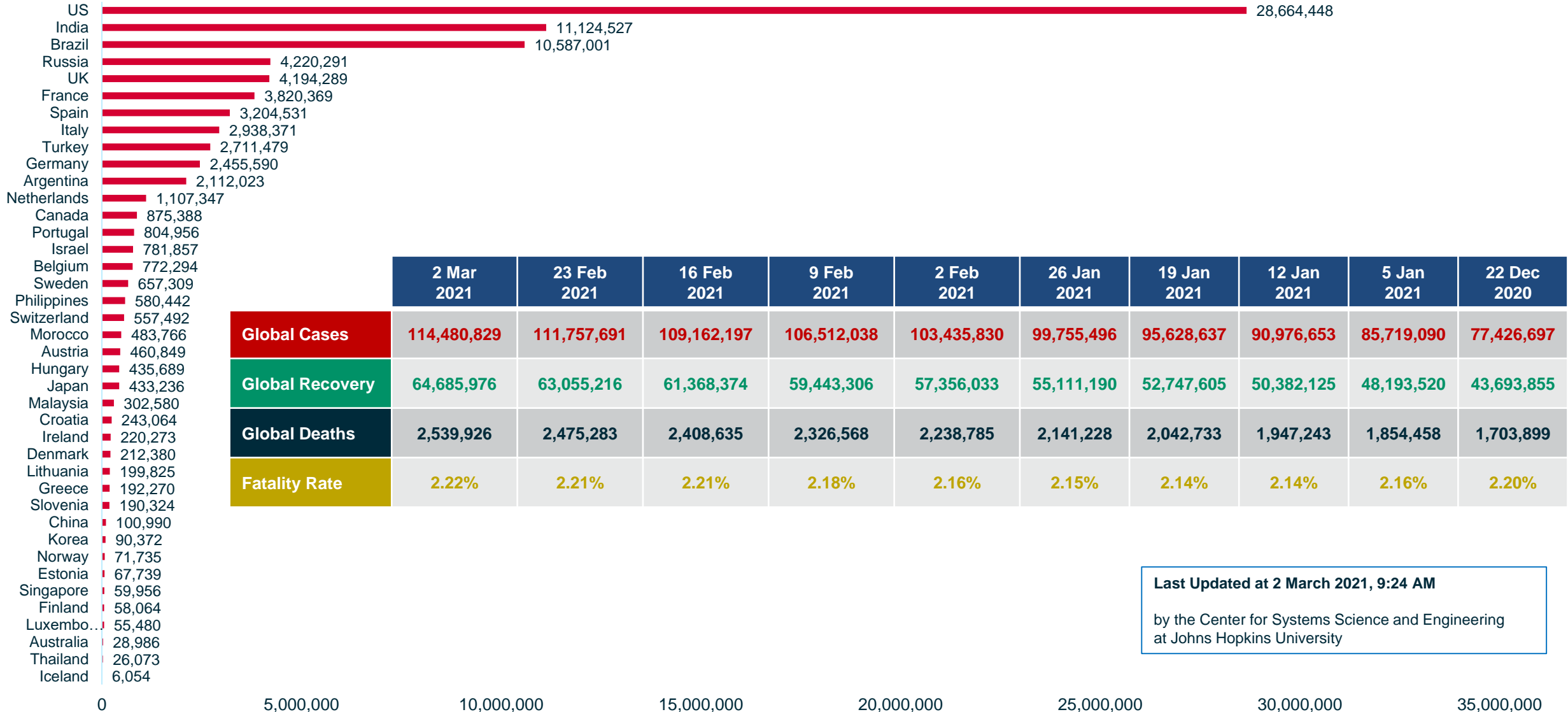
The latest rate was roughly 6.24 million doses a day.

Country	Doses Administered ▼	Doses per 100 people	% of population given		Daily rate of doses administered
			1+ dose	2 doses	
<i>Global Total</i>	245,920,701	-	-	-	6,791,190
Israel	8,145,032	89.99	52.4	37.6	99,919
Seychelles	79,438	82.75	58.2	24.5	1,980
UAE	6,028,417	56.08	-	-	67,232
U.K. 🇬🇧	21,091,267	31.58	30.4	1.2	391,872
Maldives	117,115	31.48	31.5	-	5,293
U.S.	76,899,987	23.16	15.3	7.7	1,817,502
Serbia	1,436,682	20.63	13.3	7.4	22,602
Bahrain	298,171	20.09	20.1	-	3,316
Chile	3,404,494	17.82	17.5	0.3	68,602
Malta	79,624	16.12	10.4	5.7	2,172
Barbados	36,749	12.80	12.8	-	2,887
Turkey	8,899,317	10.70	8.5	2.2	260,451
Morocco	3,801,650	10.68	10.0	0.7	175,138
Denmark	614,322	10.58	7.4	3.2	16,837
Hungary	936,938	9.59	7.0	2.6	40,354
Iceland	33,683	9.44	5.9	3.5	846
Norway	490,925	9.16	6.1	3.0	14,532
Switzerland 🇨🇭	751,009	8.79	6.2	2.6	23,780
Poland	3,336,354	8.79	5.7	3.1	88,742

Country	Doses Administered ▼	Doses per 100 people	% of population given		Daily rate of doses administered
			1+ dose	2 doses	
Cyprus	76,176	8.70	6.1	2.6	3,632
Ireland	426,070	8.61	5.8	2.8	12,195
Greece	921,189	8.59	5.5	3.1	27,254
Lithuania	237,192	8.52	5.9	2.6	7,004
Estonia	112,809	8.51	5.9	2.6	3,431
Portugal	868,951	8.46	5.9	2.6	26,956
Slovenia	172,775	8.35	5.9	2.5	4,079
Spain	3,829,465	8.24	5.5	2.7	105,588
Finland	452,469	8.20	6.7	1.5	13,782
Romania	1,565,021	8.07	4.9	3.2	22,276
Slovakia	439,221	8.06	5.6	2.4	10,227
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Italy	4,354,008	7.21	4.9	2.3	116,576
France	4,560,861	7.04	4.6	2.4	119,193
Belgium	802,839	7.01	4.3	2.7	18,550
Sweden	720,631	6.98	4.6	2.4	25,901
Singapore	360,000	6.31	4.4	1.9	13,000
Luxembourg	37,793	6.16	4.4	1.7	973

Coronavirus (SARS-CoV-2 / Covid-19) – Confirmed cases by country

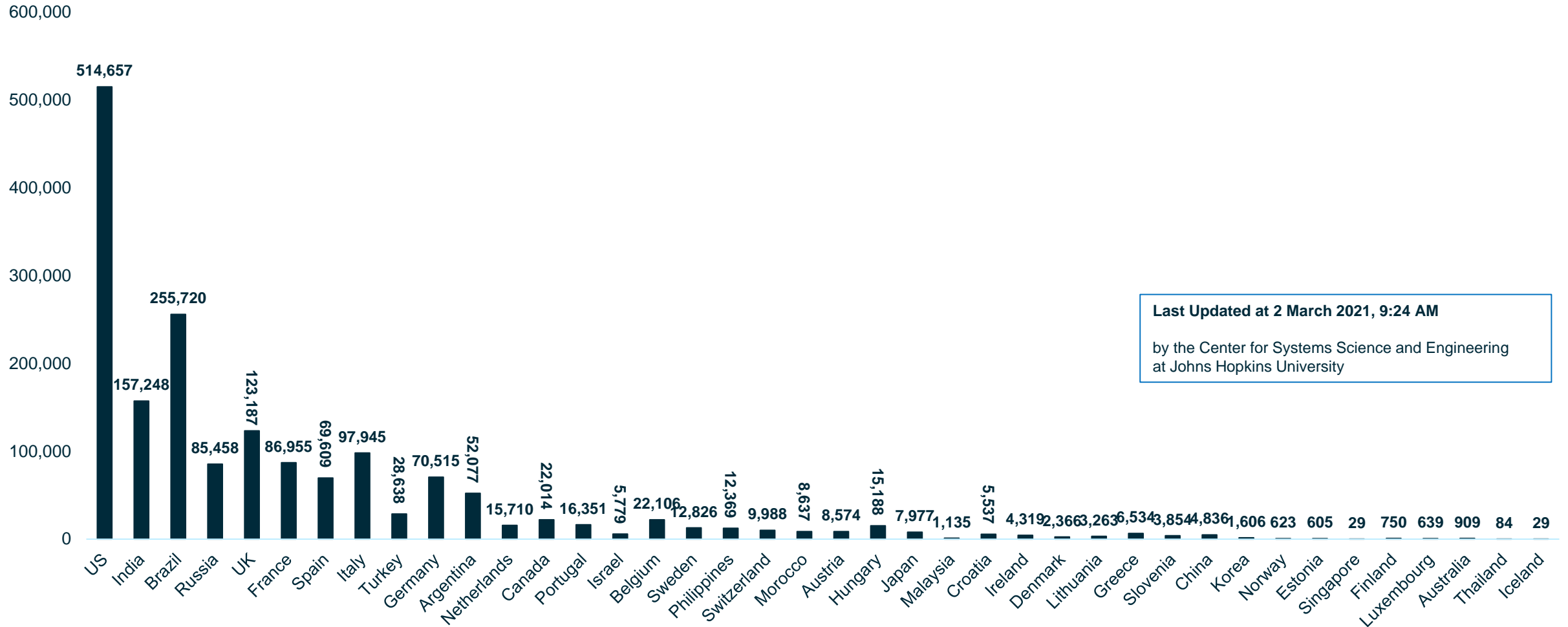
Note: Selected Countries, sorted by # of cases



Last Updated at 2 March 2021, 9:24 AM
 by the Center for Systems Science and Engineering
 at Johns Hopkins University

Coronavirus (SARS-CoV-2 / Covid-19) – Deaths by Country

Note: Selected Countries, sorted by # of cases



Last Updated at 2 March 2021, 9:24 AM
 by the Center for Systems Science and Engineering
 at Johns Hopkins University

Source: <https://gisanddata.maps.arcgis.com/apps/opsdashboard/index.html#/bda7594740fd40299423467b48e9ecf6>

Latest Cases and Deaths by TOP 10 Countries – 1 March 2021

Total Cases	
1	USA
2	India
3	Brazil
4	Russia
5	United Kingdom
6	France
7	Spain
8	Italy
9	Turkey
10	Germany
24 (24)	Portugal

Cases in last 7 days	
1	USA
2	Brazil
3	France
4	Italy
5	India
6	Czechia
7	Russia
8	Poland
9	Turkey
10	Germany
51 (39)	Portugal

Total Deaths	
1	USA
2	Brazil
3	Mexico
4	India
5	United Kingdom
6	Italy
7	France
8	Russia
9	Germany
10	Spain
25 (25)	Portugal

Deaths in last 7 days	
1	USA
2	Brazil
3	Mexico
4	Russia
5	Germany
6	France
7	United Kingdom
8	Italy
9	Spain
10	Poland
30 (22)	Portugal

Total Cases per million people	
1	Czechia
2	Slovenia
3	USA
4	Israel
5	Panama
6 (6)	Portugal
7	Bahrain
8	Georgia
9	Lithuania
10	Moldova

Cases in last 7 days per million people	
1	Czechia
2	Estonia
3	Moldova
4	Serbia
5	Hungary
6	Slovakia
7	Lebanon
8	Singapore
9	Jordan
10	Bahrain
56 (37)	Portugal

Total Deaths per million people	
1	Belgium
2	Czechia
3	Slovenia
4	United Kingdom
5	Italy
6 (6)	Portugal
7	USA
8	Hungary
9	Bosnia and Herzegovina
10	North Macedonia

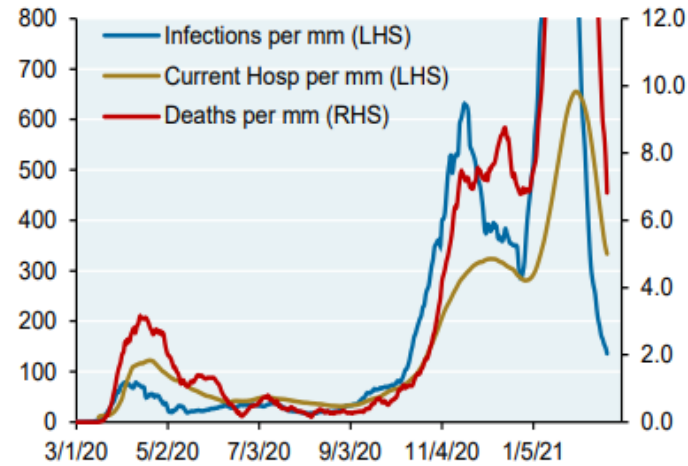
Deaths in last 7 days per million people	
1	Slovakia
2	Czechia
3	Hungary
4	Moldova
5	Bulgaria
6	Lebanon
7	Albania
8	Peru
9	USA
10	Poland
21 (4)	Portugal

Daily infections vs mortality per million

LHS – Left Hand Scale
RHS – Right Hand Scale

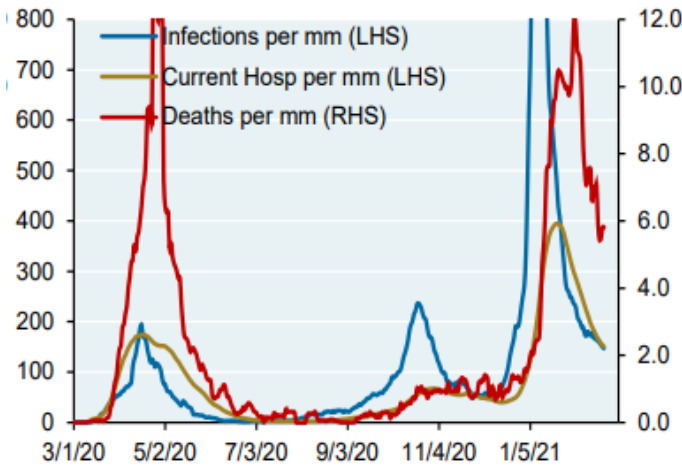
24 FEB 2021

Portugal daily infections vs mortality



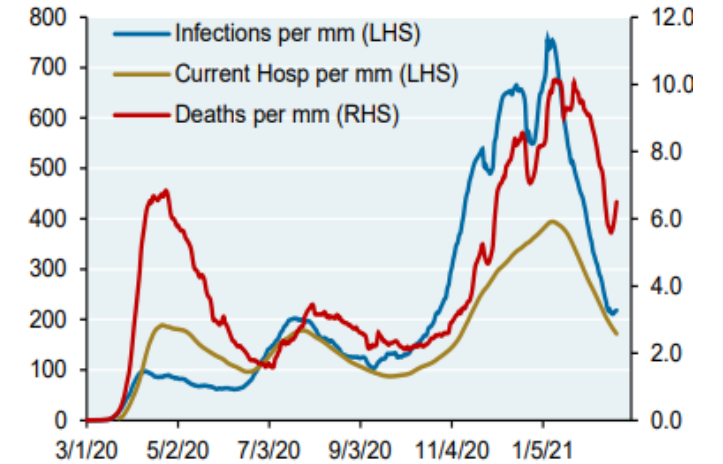
Source: JHU, ECDC, JPMAM. 02/24/2021. 7 day avg.

Ireland daily infections vs mortality



Source: JHU, ECDC, JPMAM. 02/24/2021. 7 day avg.

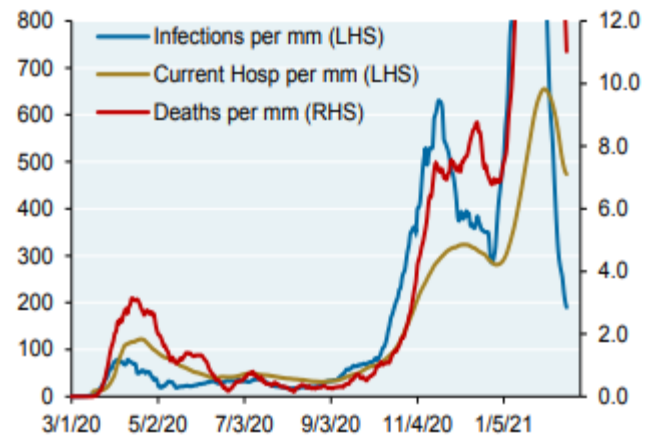
US daily infections vs mortality



Source: JHU, COVID Tracking, JPMAM. 02/24/2021. 7 day avg.

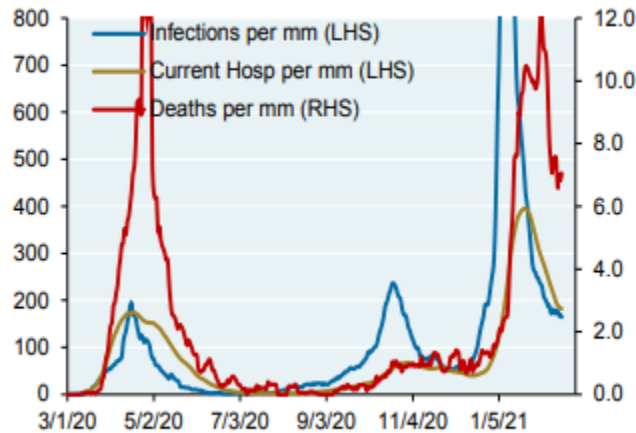
19 FEB 2021

Portugal daily infections vs mortality



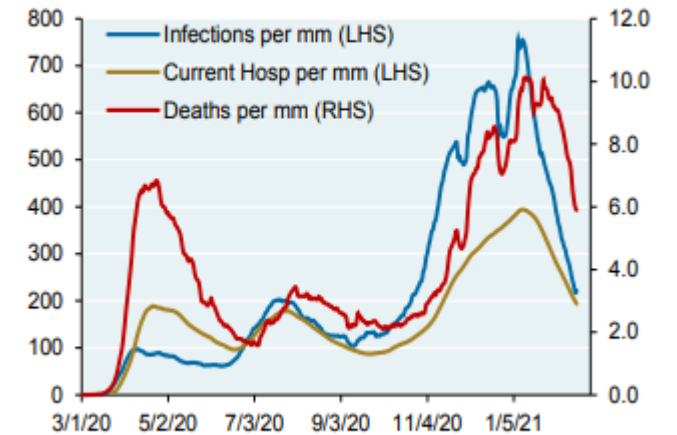
Source: JHU, ECDC, JPMAM. 02/19/2021. 7 day avg.

Ireland daily infections vs mortality



Source: JHU, ECDC, JPMAM. 02/19/2021. 7 day avg.

US daily infections vs mortality

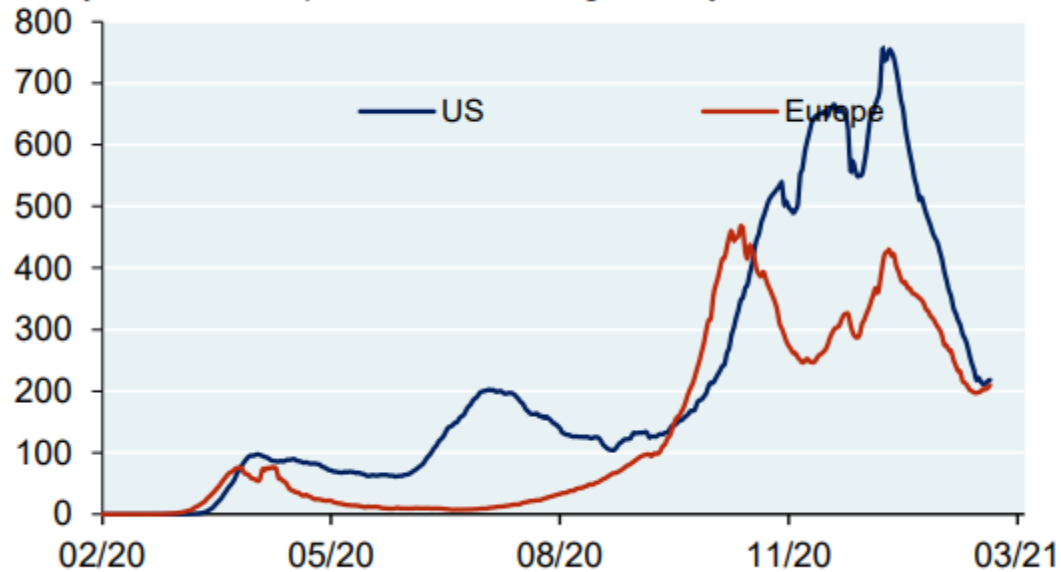


Source: JHU, COVID Tracking, JPMAM. 02/19/2021. 7 day avg.

US vs Europe infections and mortality

US vs Europe infections

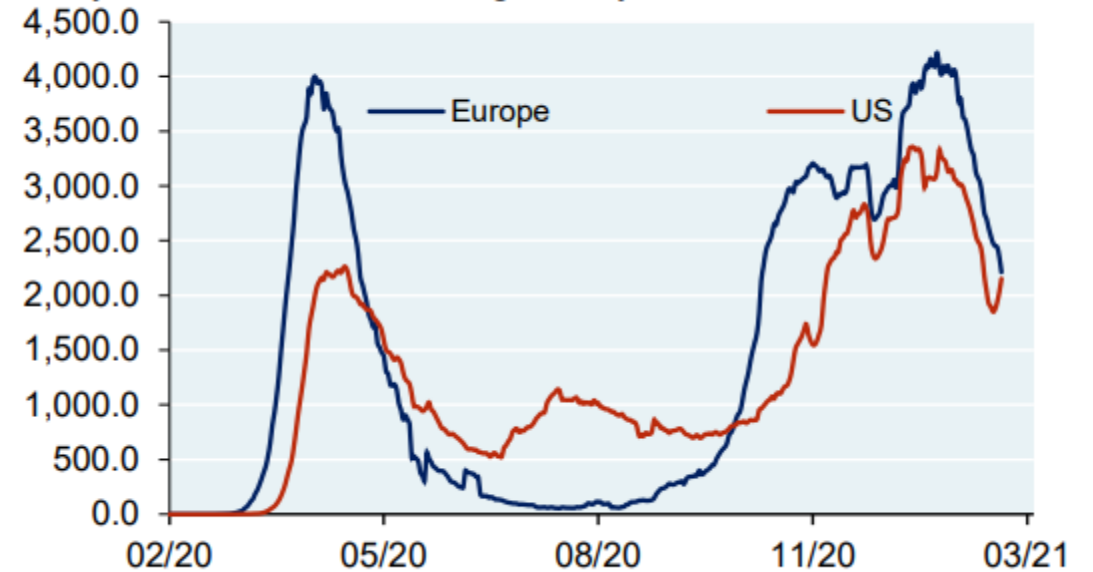
Daily infections, # per mm, smoothing = 7 days



Source: Johns Hopkins University, IMF, JPMAM. Feb 24, 2021.

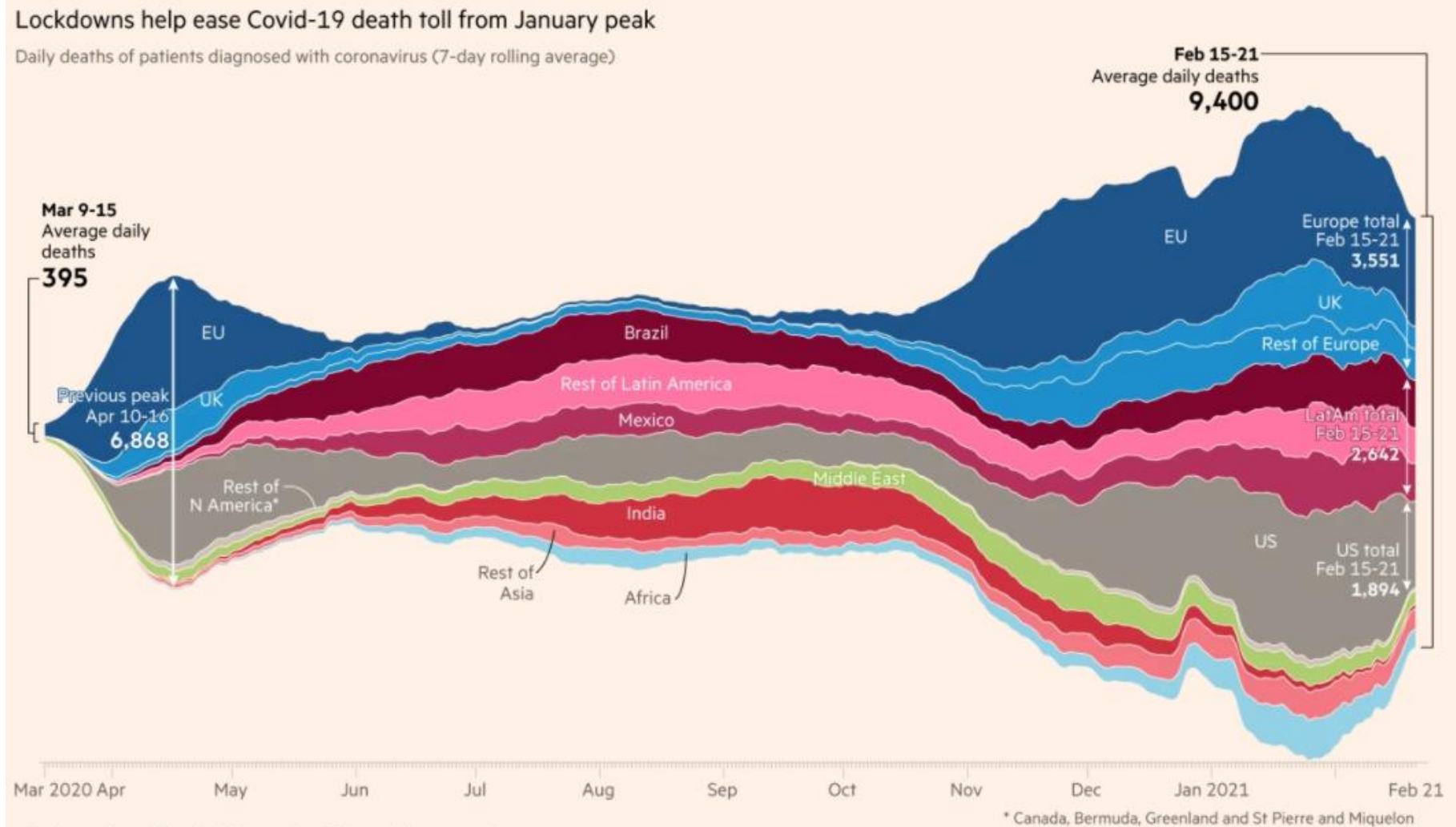
US vs Europe mortality

Daily deaths, levels, smoothing = 7 days

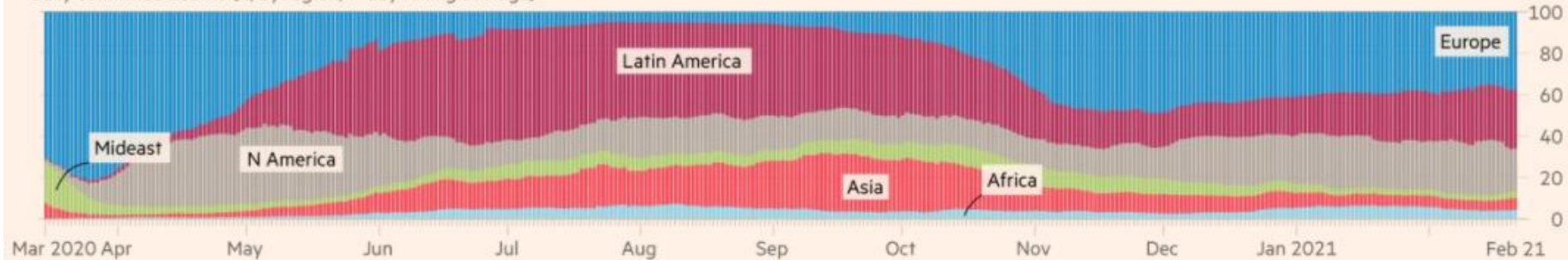


Source: Johns Hopkins University, JPMAM. Feb 24, 2021.

Daily deaths of patients diagnosed with coronavirus (7-day average)



Daily confirmed deaths (% by region, 7-day rolling average)



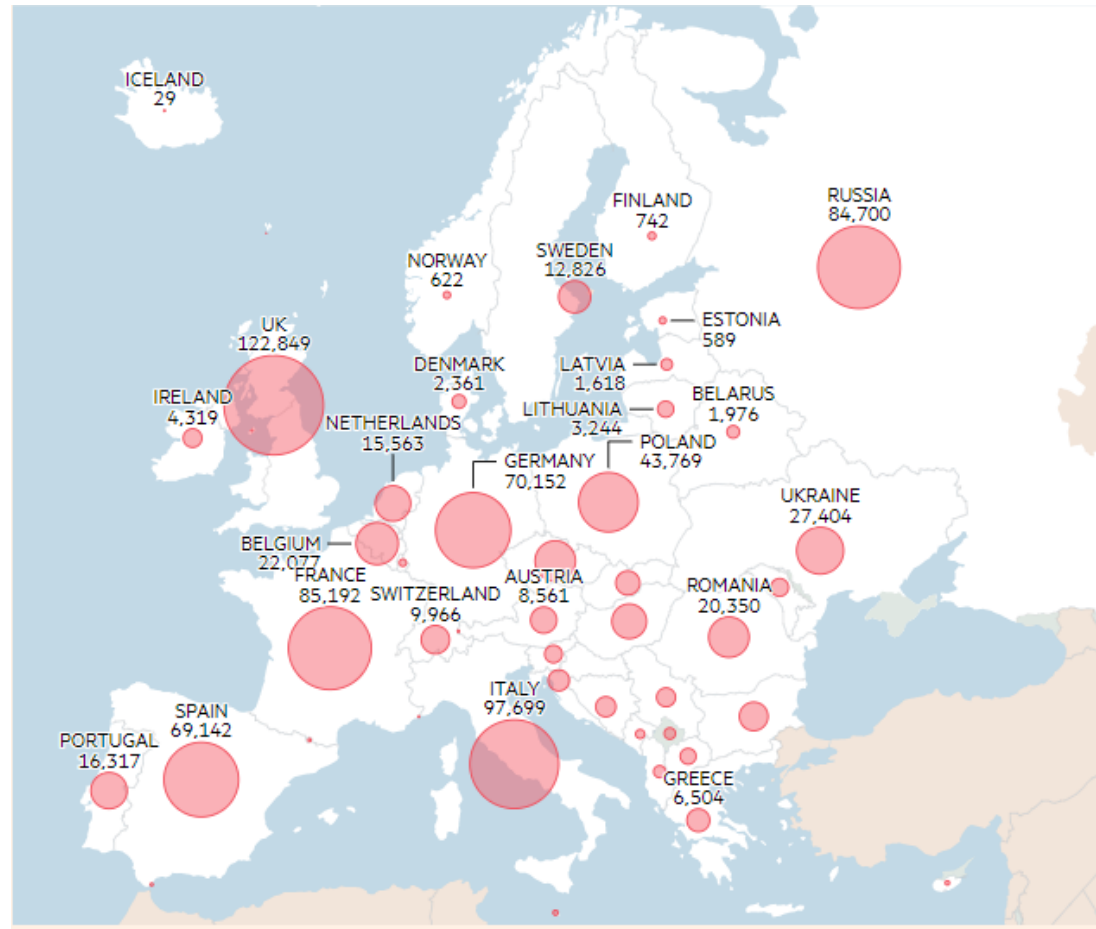
FT graphic: Steven Bernard / @sdbernard

Source: FT analysis of data from Johns Hopkins CSSE, Covid Tracking Project, UK Government coronavirus dashboard, Swedish Public Health Agency

© FT

Total deaths as of 1.12pm March 1 GMT

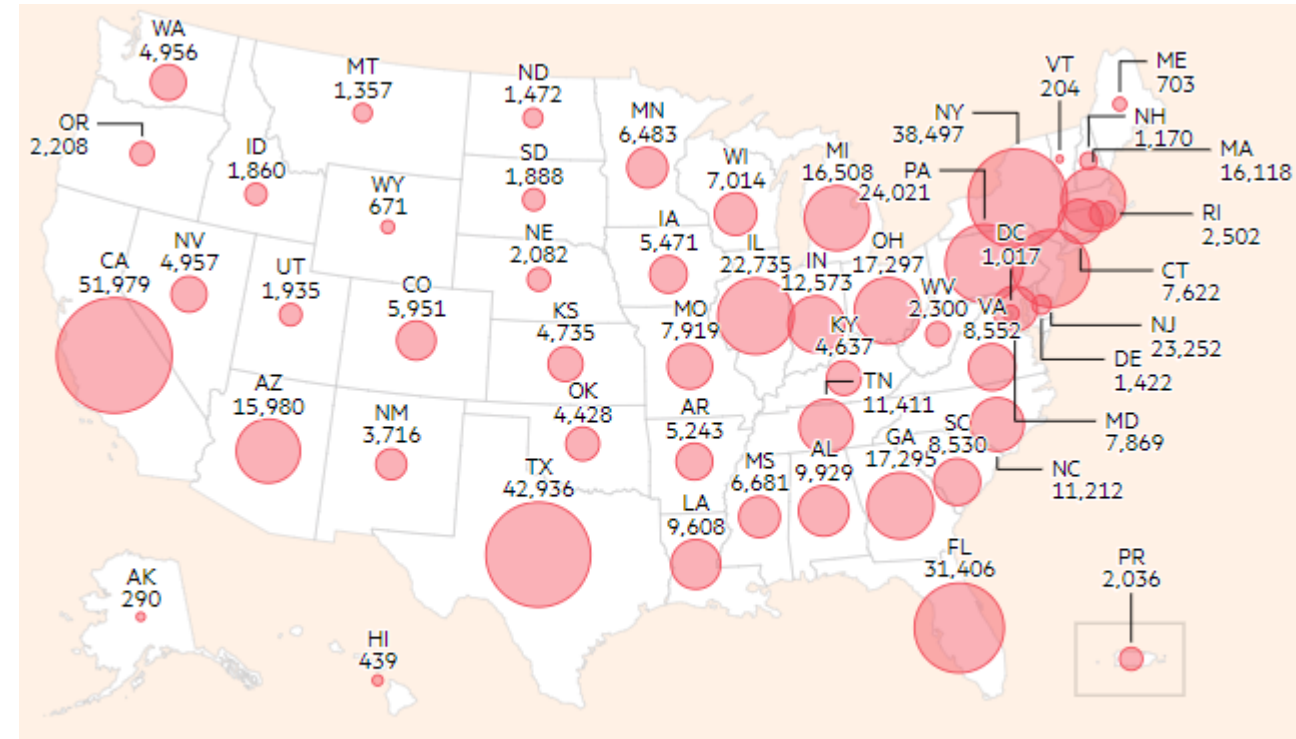
Europe



Graphic: Steven Bernard and Cale Tilford. Sources: WHO, JHU CSSE, UK gov Covid-19 dashboard, Swedish Public Health Agency; FT research © FT

Crimea is annexed by Russia but this is not recognised by the international community

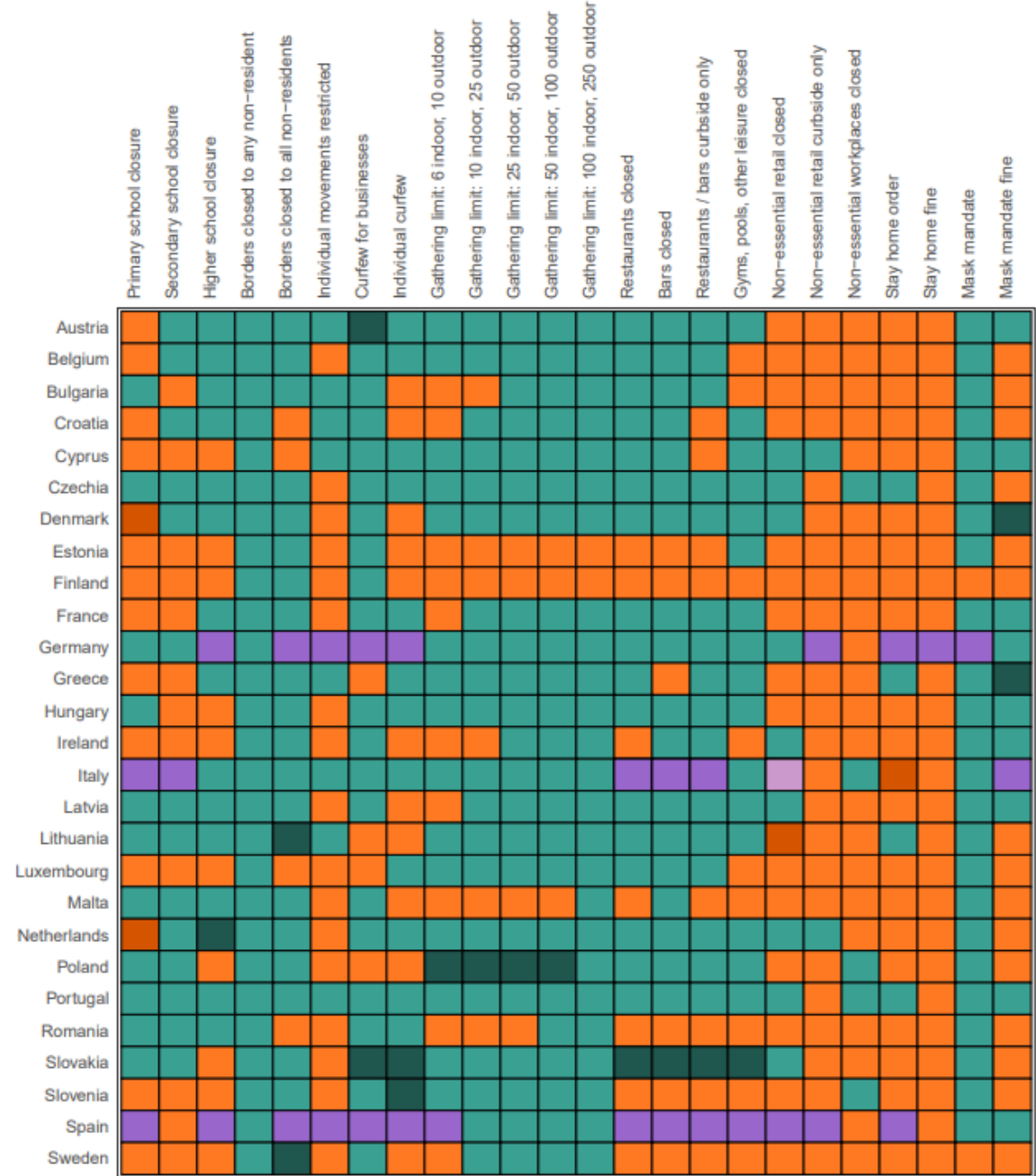
US



Graphic: Steven Bernard and Cale Tilford
Sources: Covid Tracking Project
© FT

Current mandate implementation

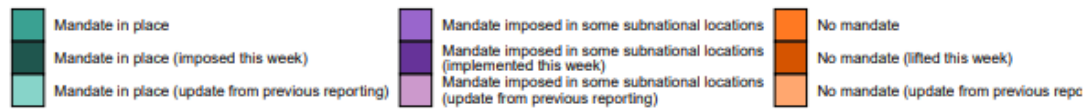
The model was run on February 24, 2021, with data through February 22, 2021



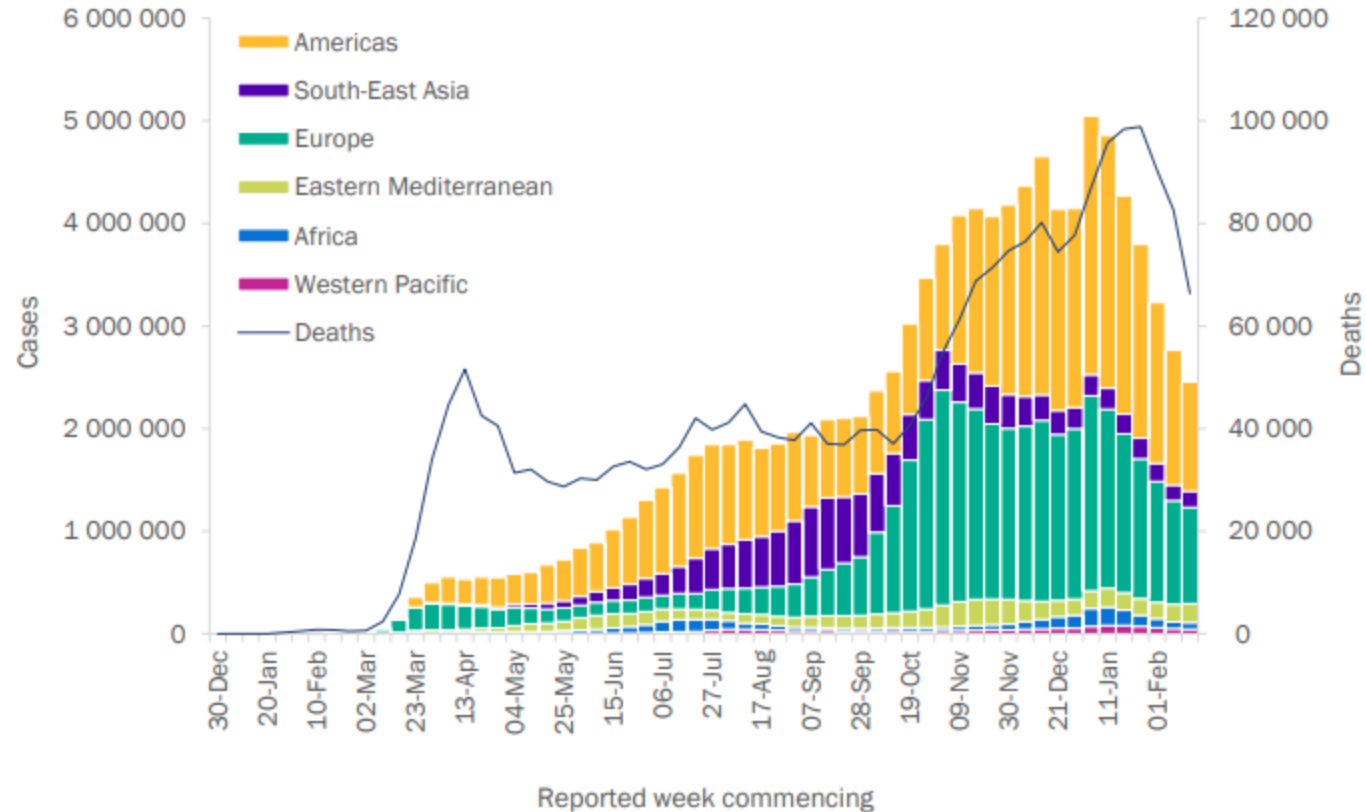
Source: Institute for Health Metrics and Evaluation



March 2021



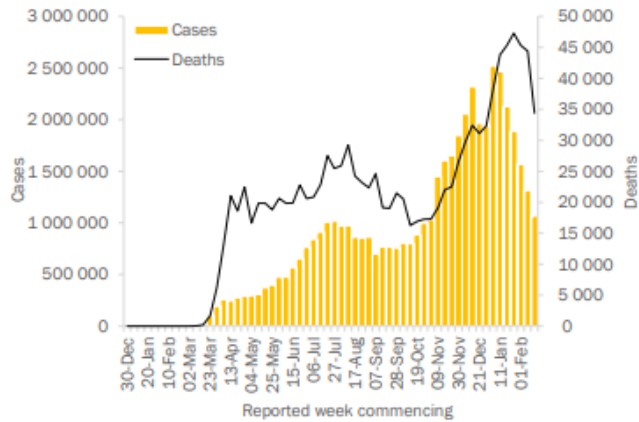
Number of COVID-19 cases reported weekly by WHO Region, and global deaths, as of 21 February 2021



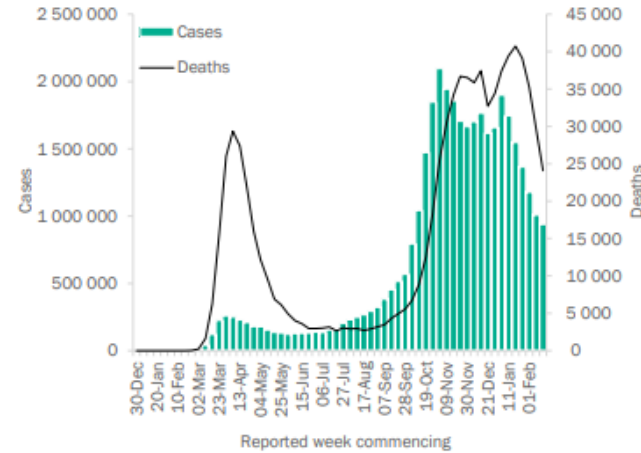
Source: WHO

Number of COVID-19 cases reported weekly by WHO Region, and global deaths, as of 21 February 2021

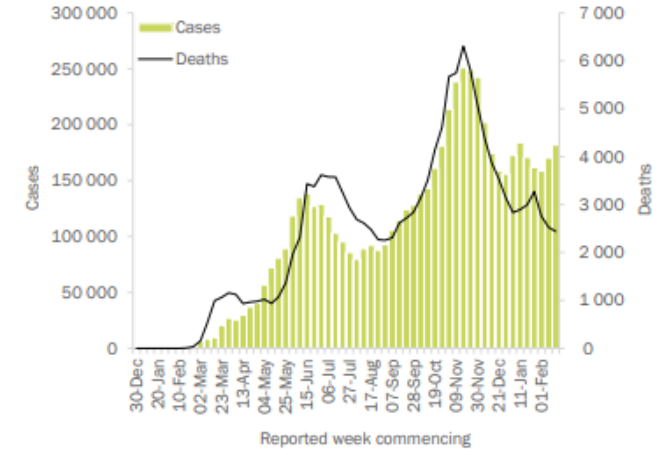
Americas



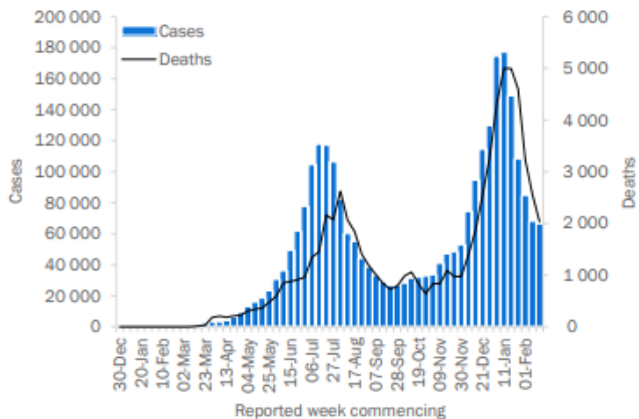
Europe



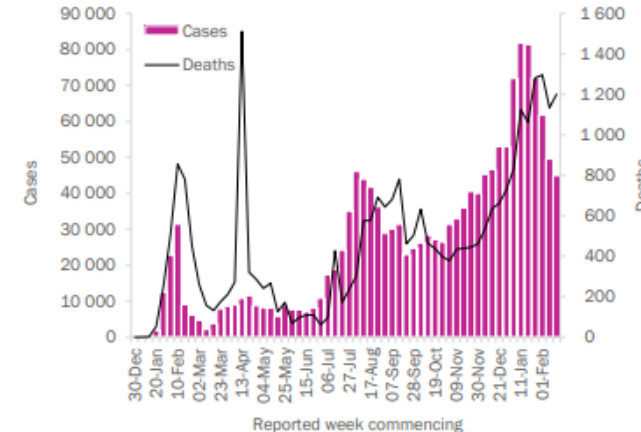
Eastern Mediterranean



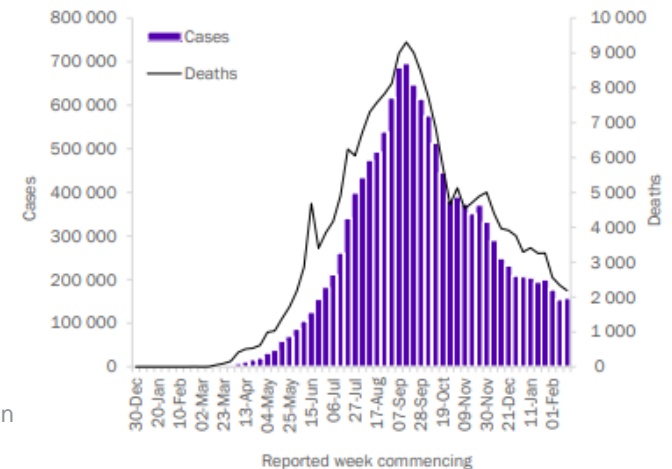
Africa



Western Pacific



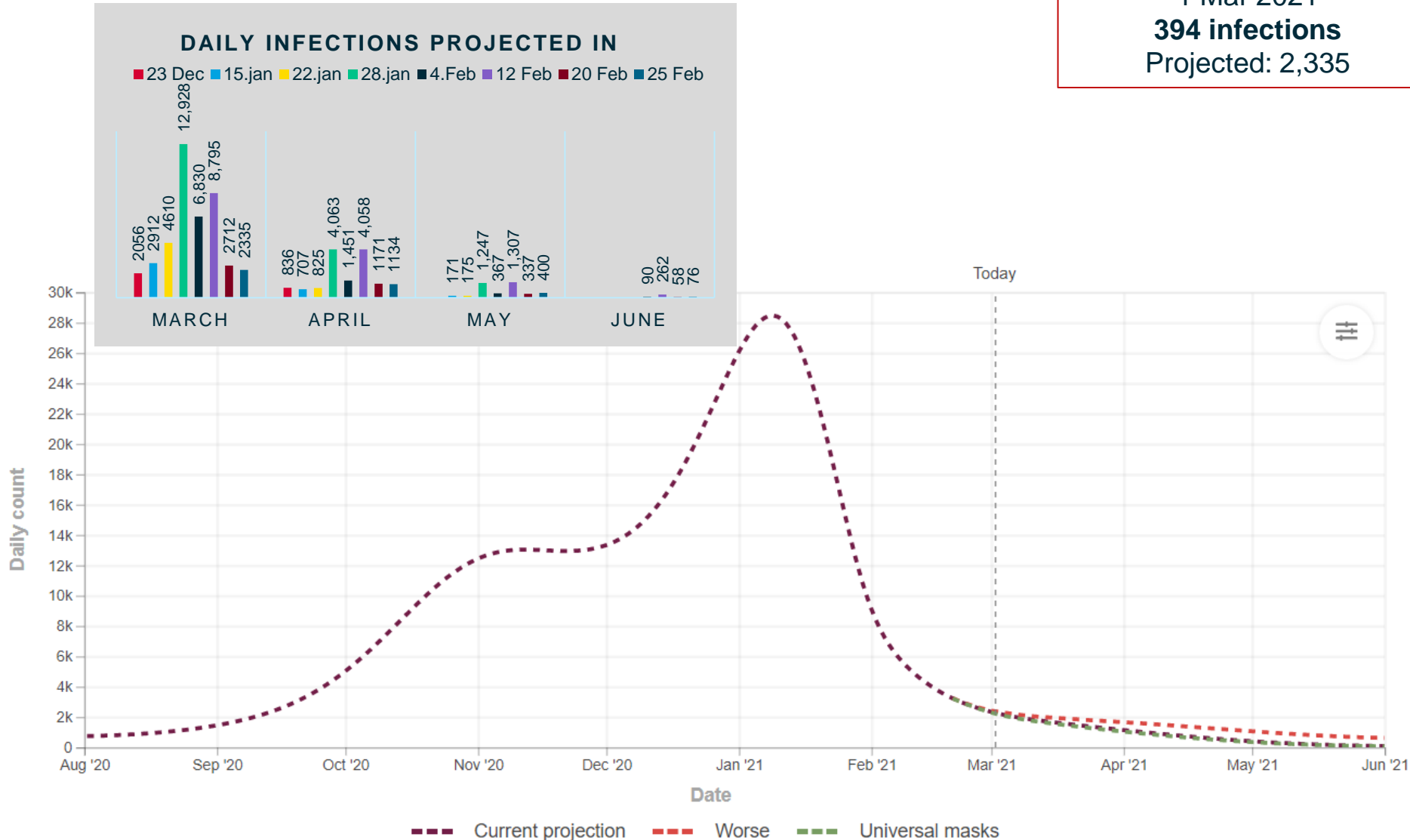
South-East Asia



Confiden

Portugal

Covid-19 Daily Infection Projections in Portugal



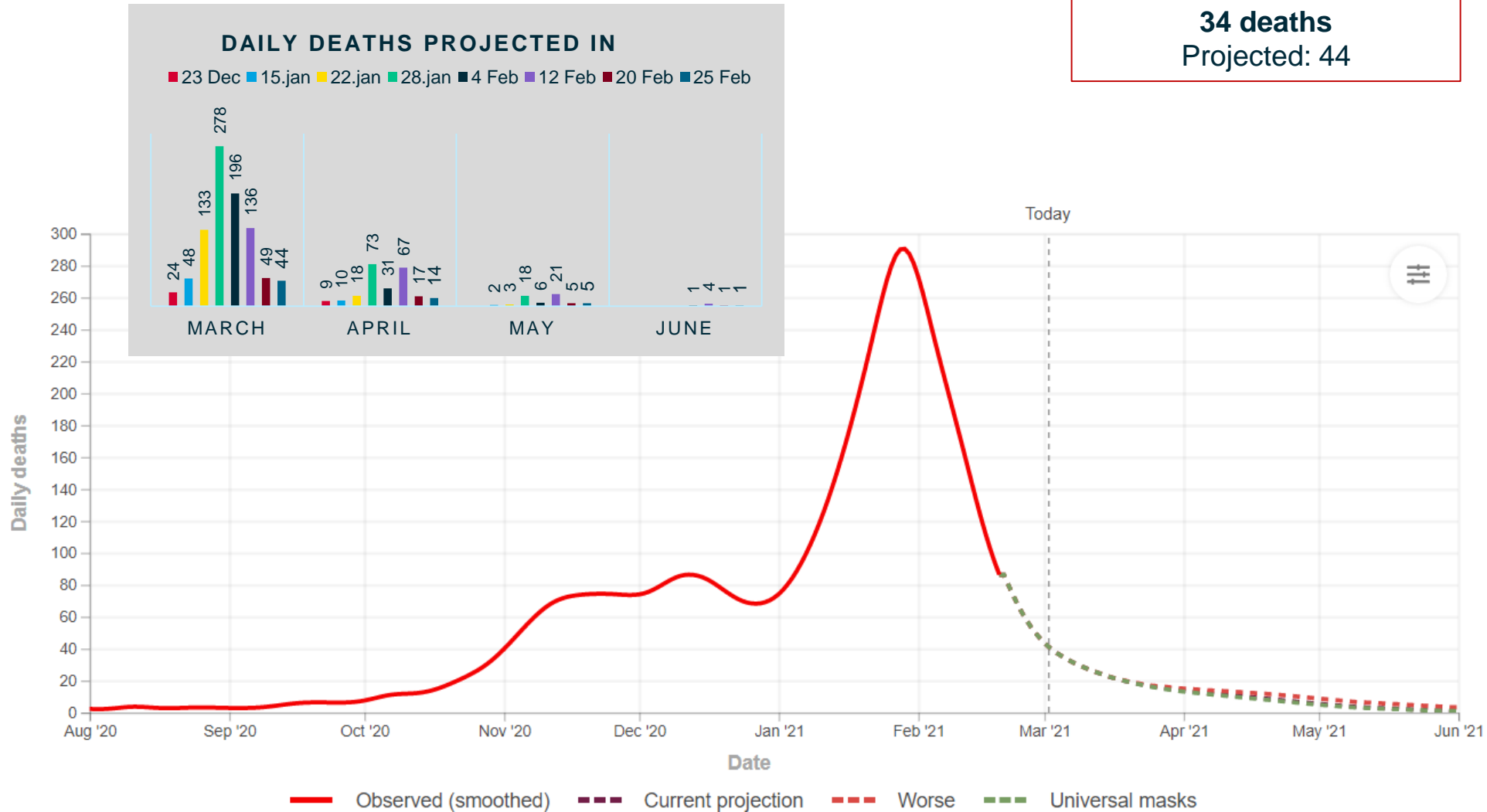
- Current projection** : Vaccine distribution is scaled up over 90 days.
- Universal masks** : Vaccine distribution is scaled up over 90 days. 95% mask usage is adopted in public.
- Rapid vaccine rollout** : Vaccine distribution is scaled up over 45 days
- Rapid vaccine rollout to high-risk** : Vaccine distribution is scaled up over 45 days. Vaccines are initially distributed to high-risk populations, followed by essential workers, and then all other adults.
- Mandates easing** : Vaccine distribution is scaled up over 90 days. Governments do not re-impose mandates if cases increase.
- No vaccine** : Assumes there is no vaccine distribution. Mask use and mandates continue at current levels.

Projection Daily Infections

For 1 June 2021

25 Feb Projection: 76

Covid-19 Daily Deaths Projections in Portugal



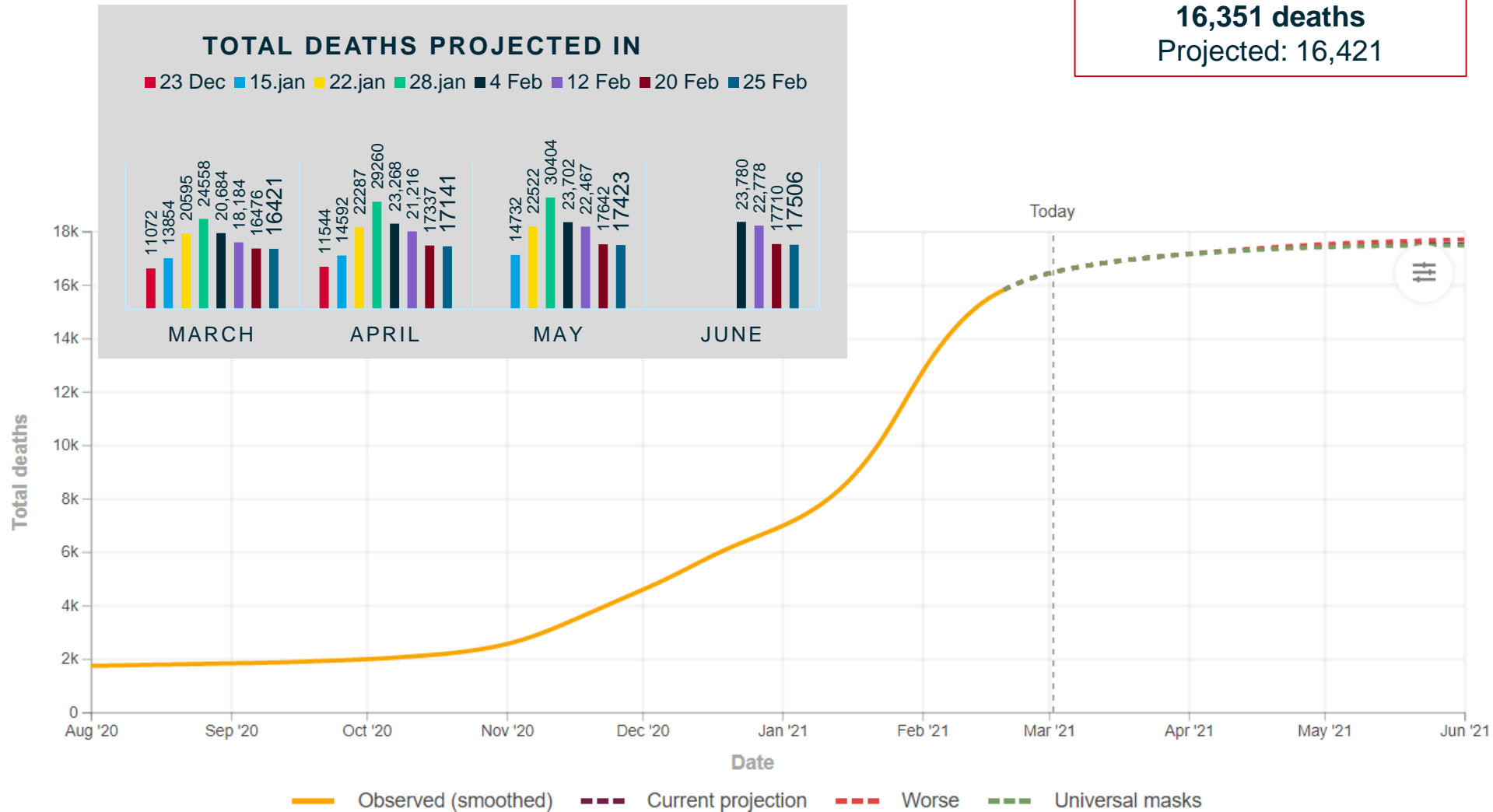
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- Mandates easing** : Vaccine distribution is scaled up over 90 days. Governments do not re-impose mandates if cases increase.
- No vaccine** : Assumes there is no vaccine distribution. Mask use and mandates continue at current levels.

**Projection
Daily Deaths**

For 1 June 2021

25 Feb Projection: 1

Covid-19 Total Deaths Projections in Portugal



- Current projection** : Vaccine distribution is scaled up over 90 days.
- Universal masks** : Vaccine distribution is scaled up over 90 days. 95% mask usage is adopted in public.
- Rapid vaccine rollout** : Vaccine distribution is scaled up over 45 days
- Rapid vaccine rollout to high-risk** : Vaccine distribution is scaled up over 45 days. Vaccines are initially distributed to high-risk populations, followed by essential workers, and then all other adults.
- Mandates easing** : Vaccine distribution is scaled up over 90 days. Governments do not re-impose mandates if cases increase.
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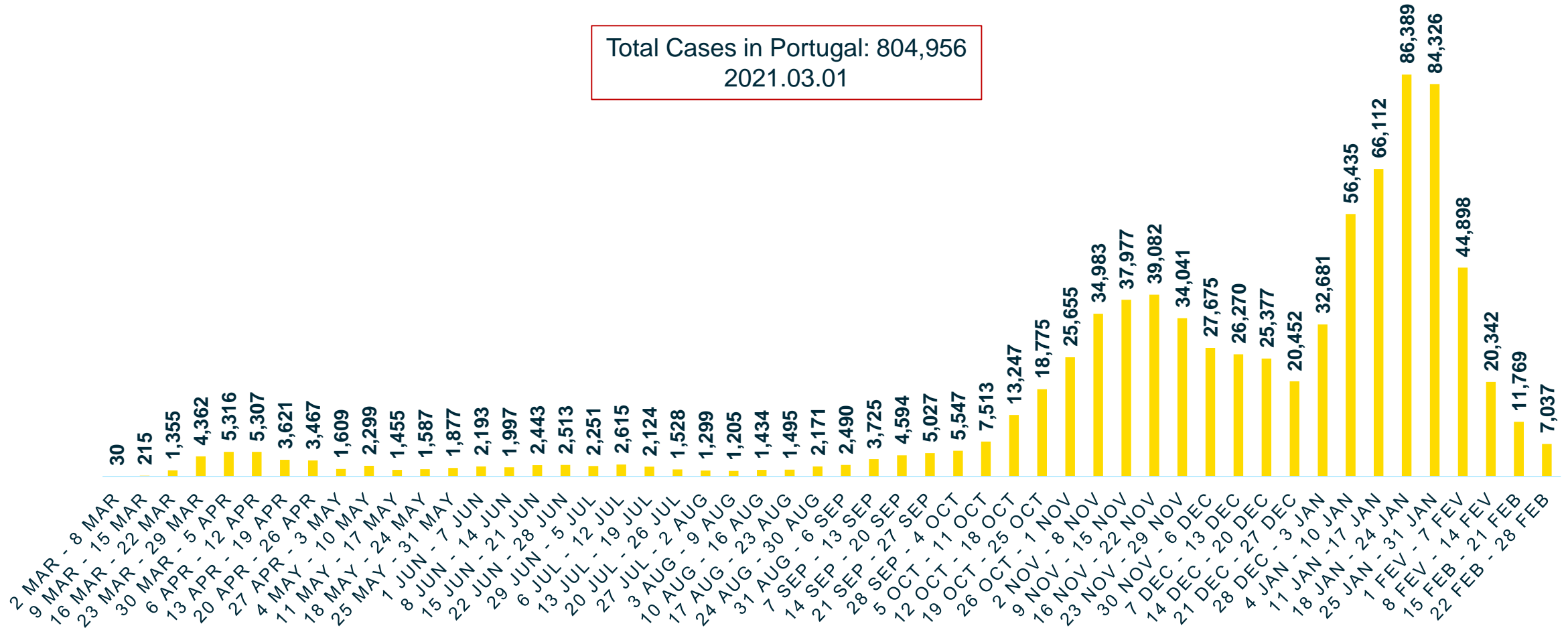
**Projection
Total Deaths**

For 1 June 2021

25 Feb Projection: 17,506

Coronavirus (SARS-CoV-2 / COVID 19) – Portugal – New cases per week

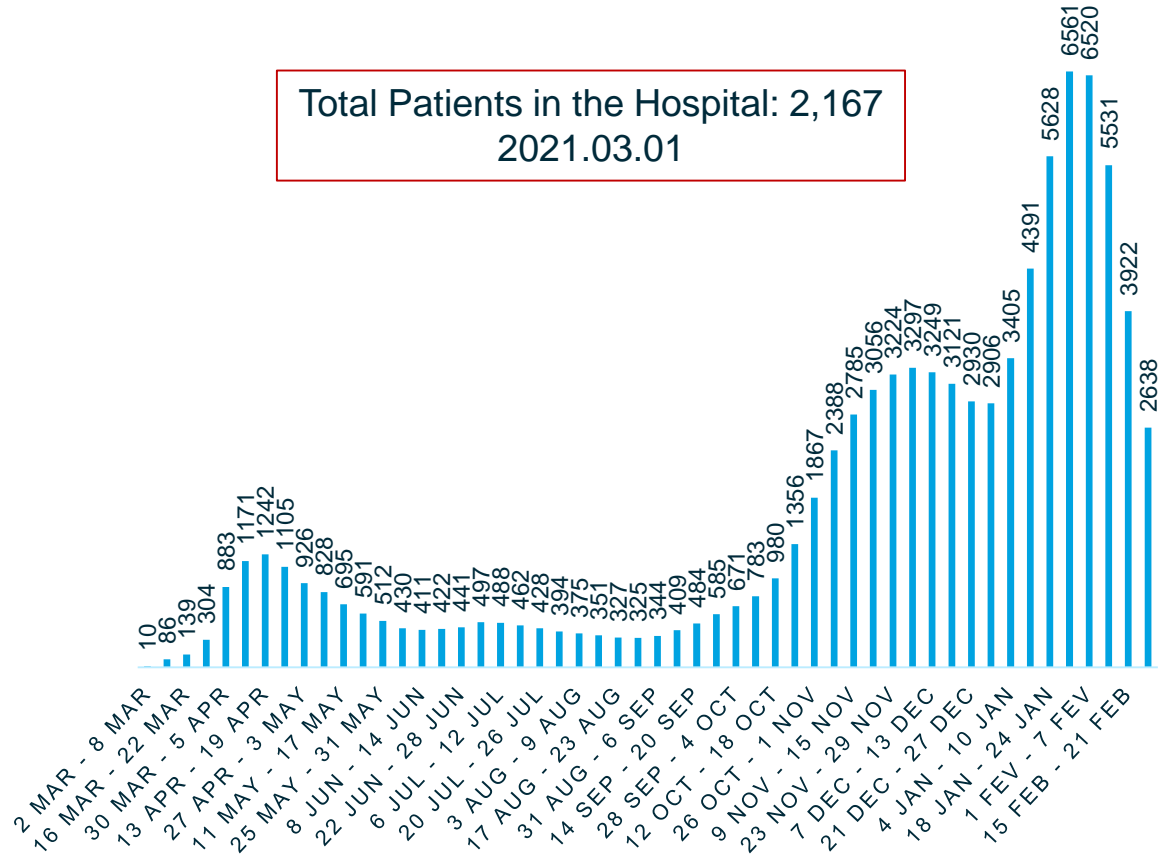
Total Cases in Portugal: 804,956
2021.03.01



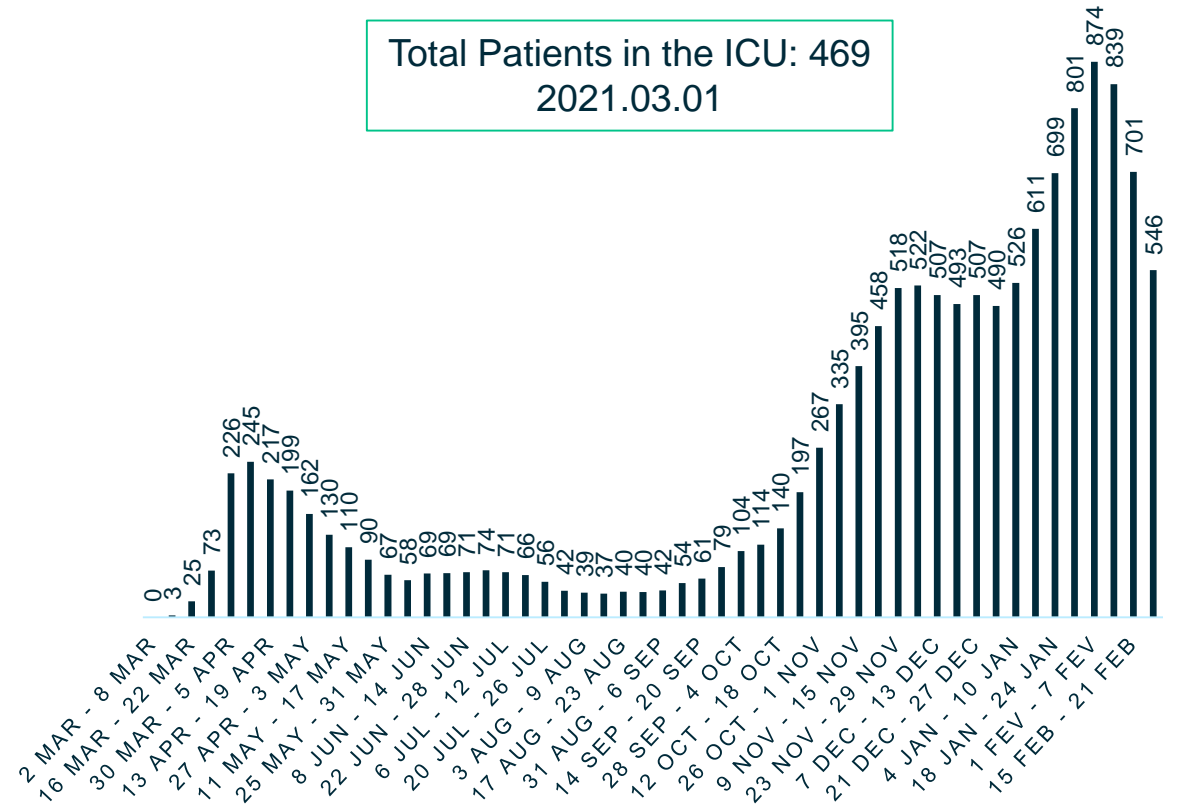
Source: <https://covid19.min-saude.pt/ponto-de-situacao-atual-em-portugal/>

Coronavirus (SARS-CoV-2 / COVID 19) – Portugal – Hospital stable/ICU per week

■ Average # of Patients stable in the Hospital per week



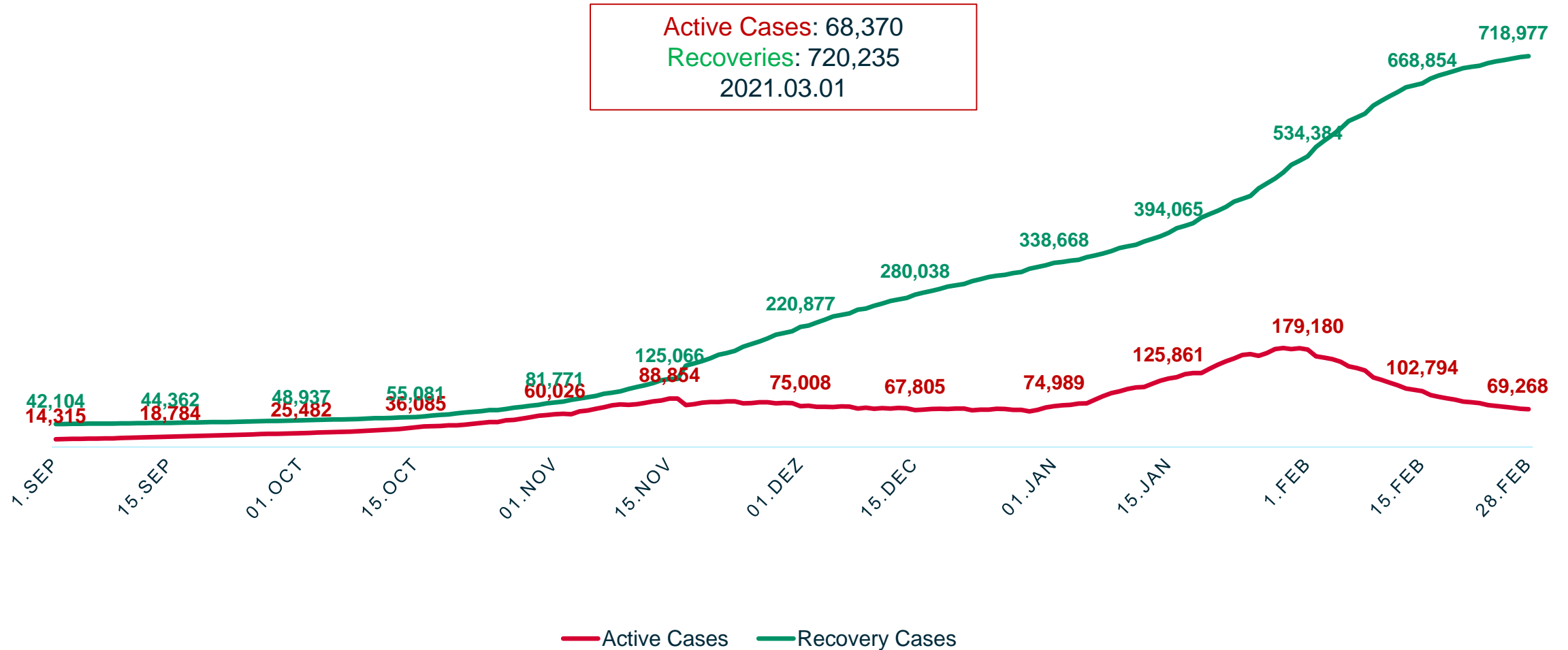
■ Average # of Patients in the ICU per week



Source: <https://covid19.min-saude.pt/ponto-de-situacao-atual-em-portugal/>



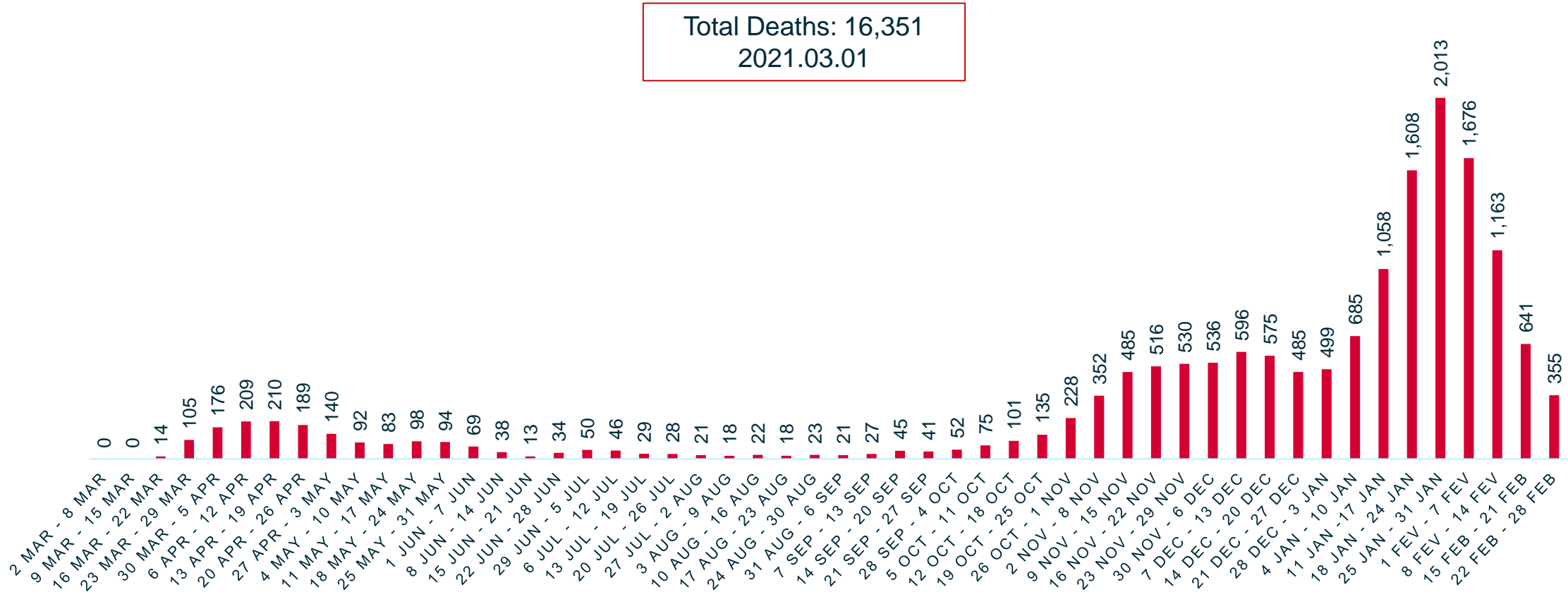
Coronavirus (SARS-CoV-2 / COVID 19) – Portugal – Active cases vs Recoveries



Source: <https://covid19.min-saude.pt/ponto-de-situacao-atual-em-portugal/>

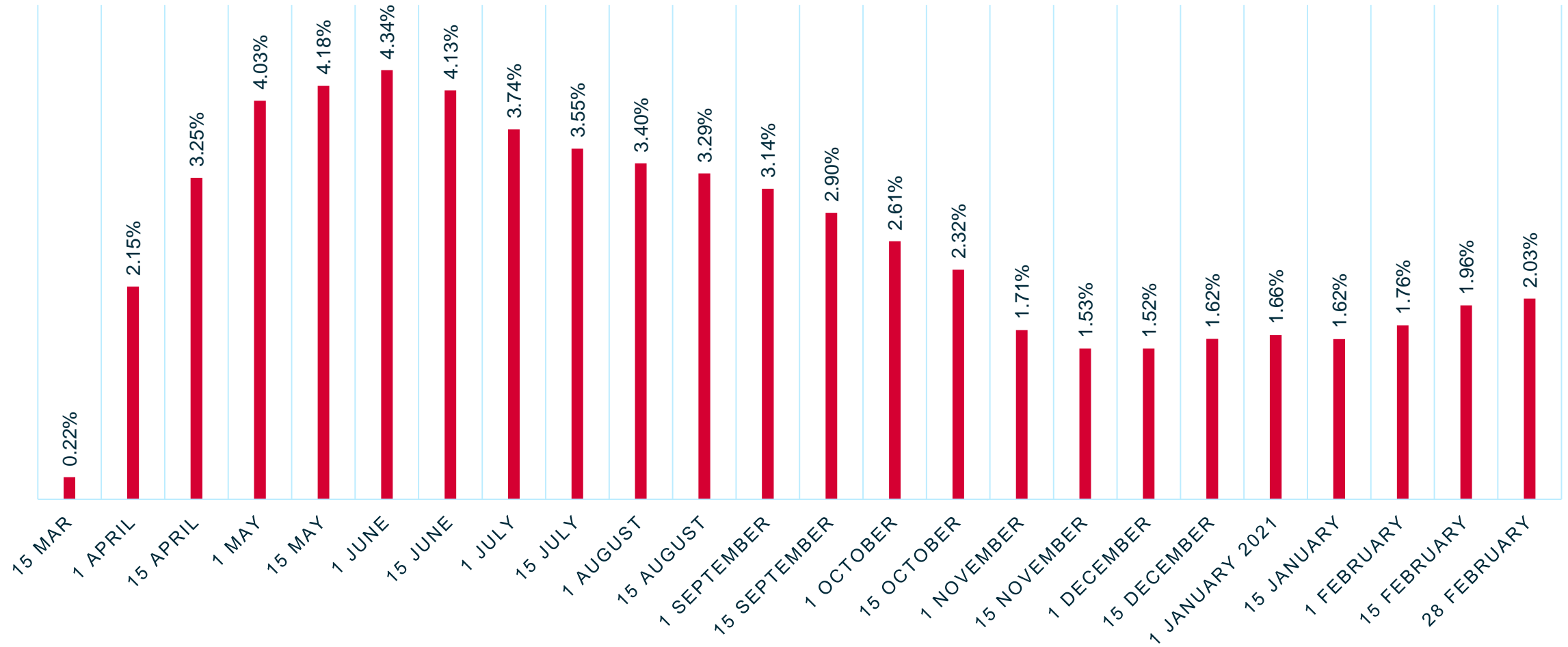
Coronavirus (SARS-CoV-2 / COVID 19) – Portugal – New deaths per week

Total Deaths: 16,351
2021.03.01



Source: <https://covid19.min-saude.pt/ponto-de-situacao-atual-em-portugal/>

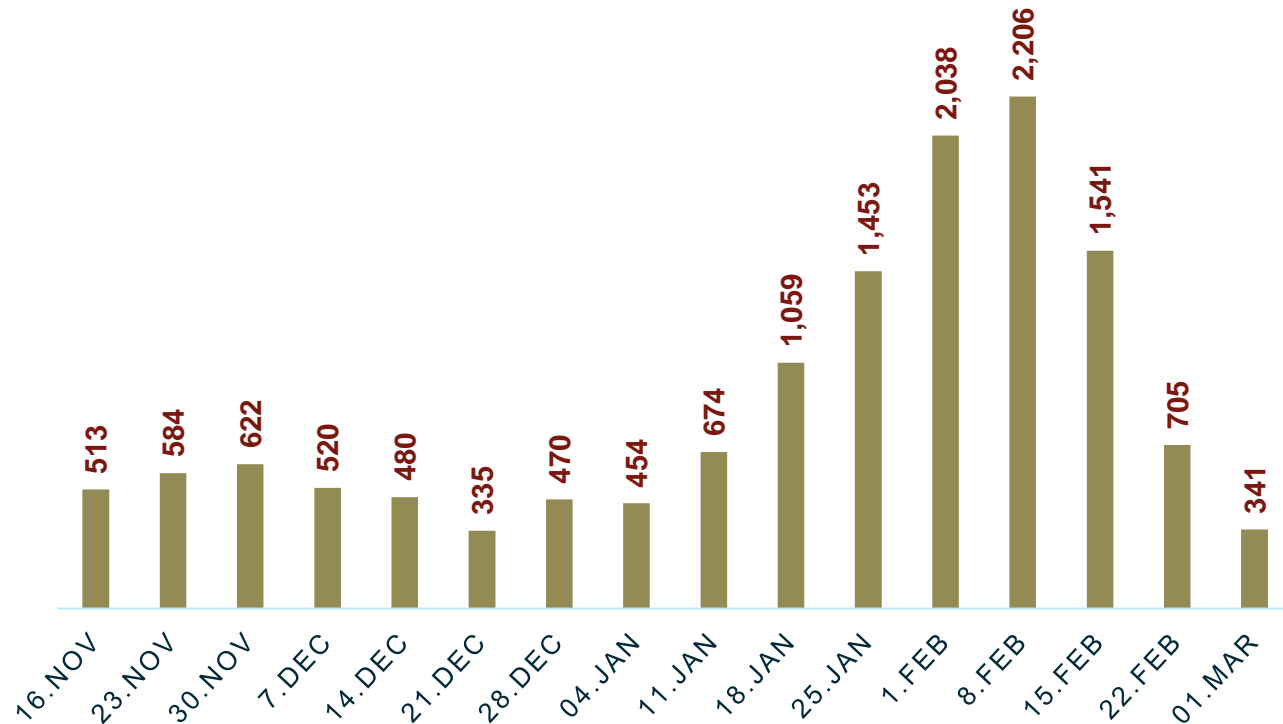
Portugal – Fatality Rate



Source: <https://covid19.min-saude.pt/ponto-de-situacao-atual-em-portugal/>

Coronavirus (SARS-CoV-2 / COVID 19) – Loures

New Cases per 100,000 population



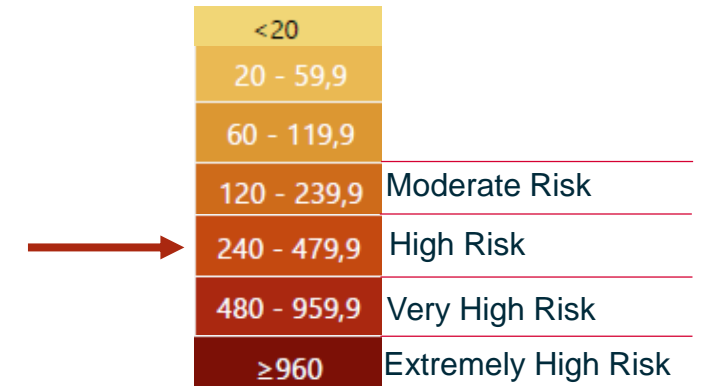
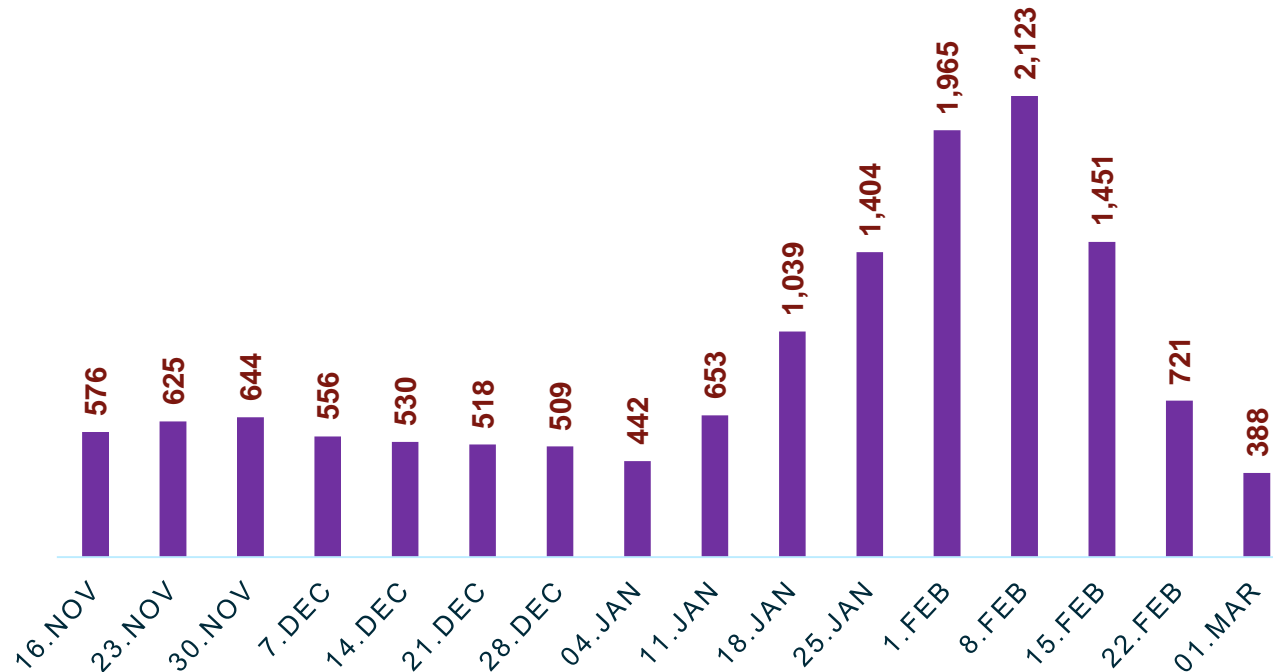
<20	
20 - 59,9	
60 - 119,9	
120 - 239,9	Moderate Risk
240 - 479,9	High Risk
480 - 959,9	Very High Risk
≥960	Extremely High Risk



Source: <https://covid19.min-saude.pt/ponto-de-situacao-atual-em-portugal/>

Coronavirus (SARS-CoV-2 / COVID 19) – Lisbon

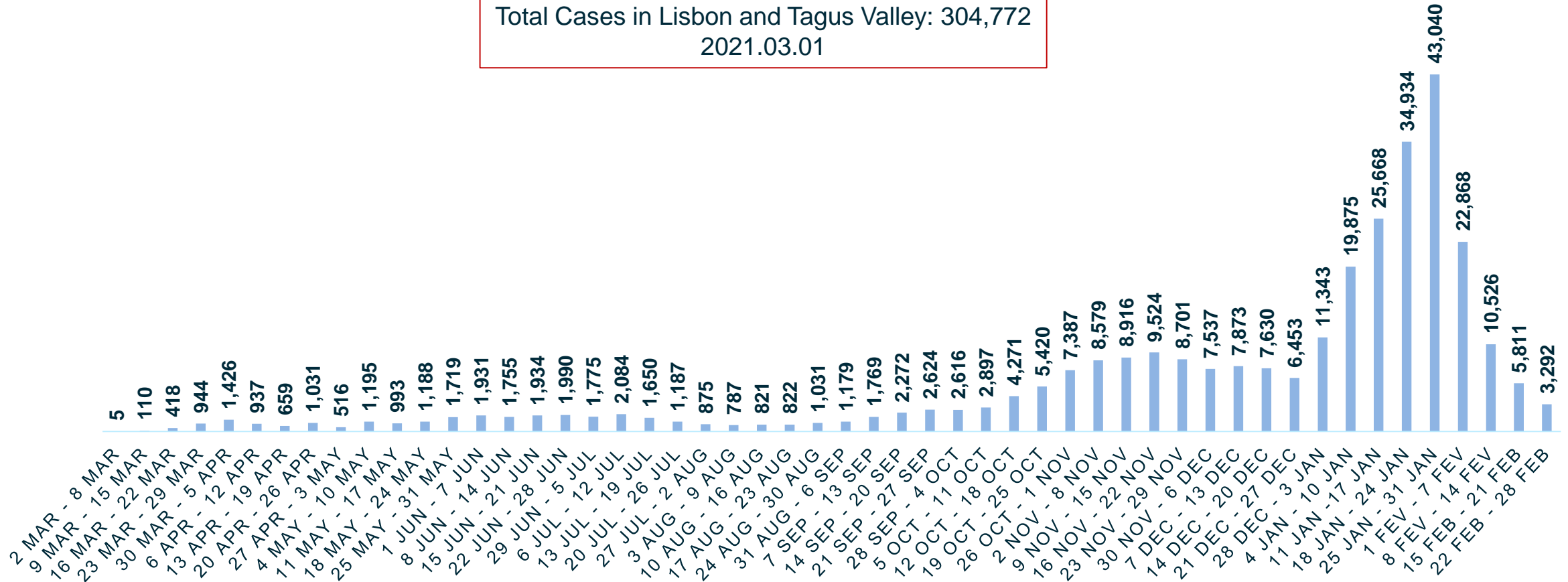
New Cases per 100,000 population



Source: <https://covid19.min-saude.pt/ponto-de-situacao-atual-em-portugal/>

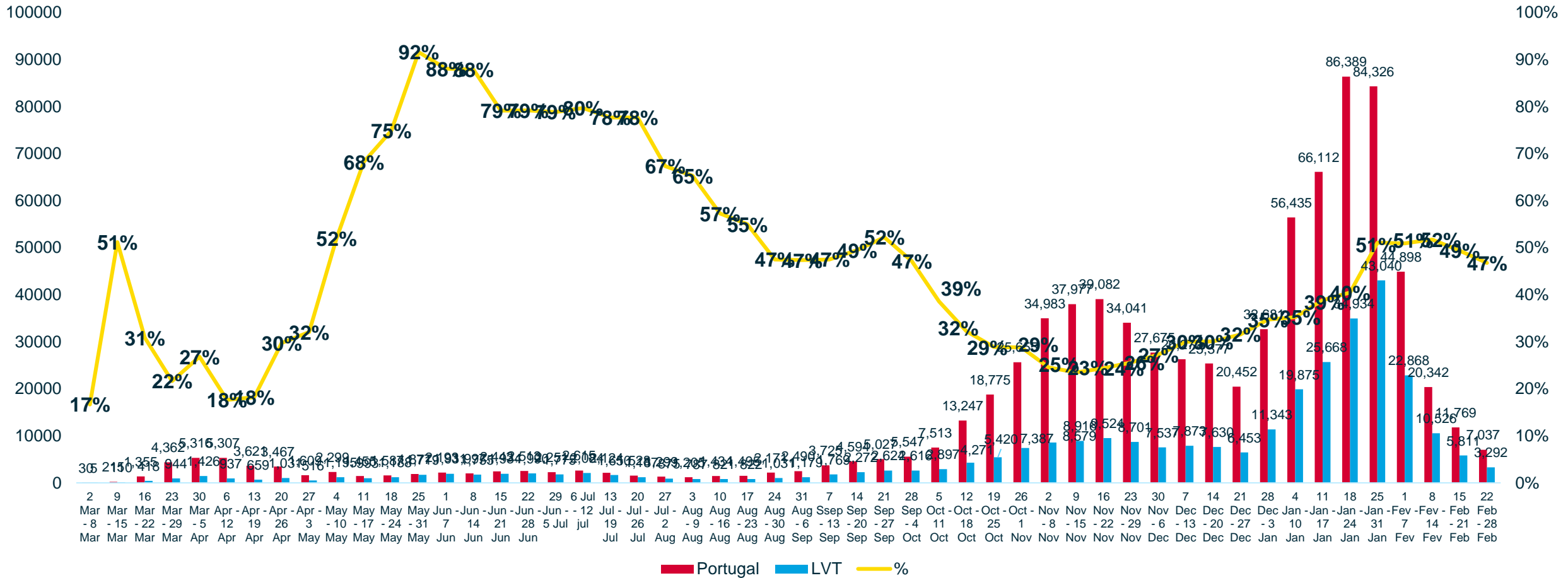
Coronavirus (SARS-CoV-2 / COVID 19) – Lisbon and Tagus Valley - New cases per week

Total Cases in Lisbon and Tagus Valley: 304,772
2021.03.01



Source: <https://covid19.min-saude.pt/ponto-de-situacao-atual-em-portugal/>

Coronavirus (SARS-CoV-2 / COVID 19) – % of new cases in Lisbon and Tagus Valley - New cases per week



Source: <https://covid19.min-saude.pt/ponto-de-situacao-atual-em-portugal/>

SARS-CoV-2 / COVID 19

Portugal - cases per 100.000

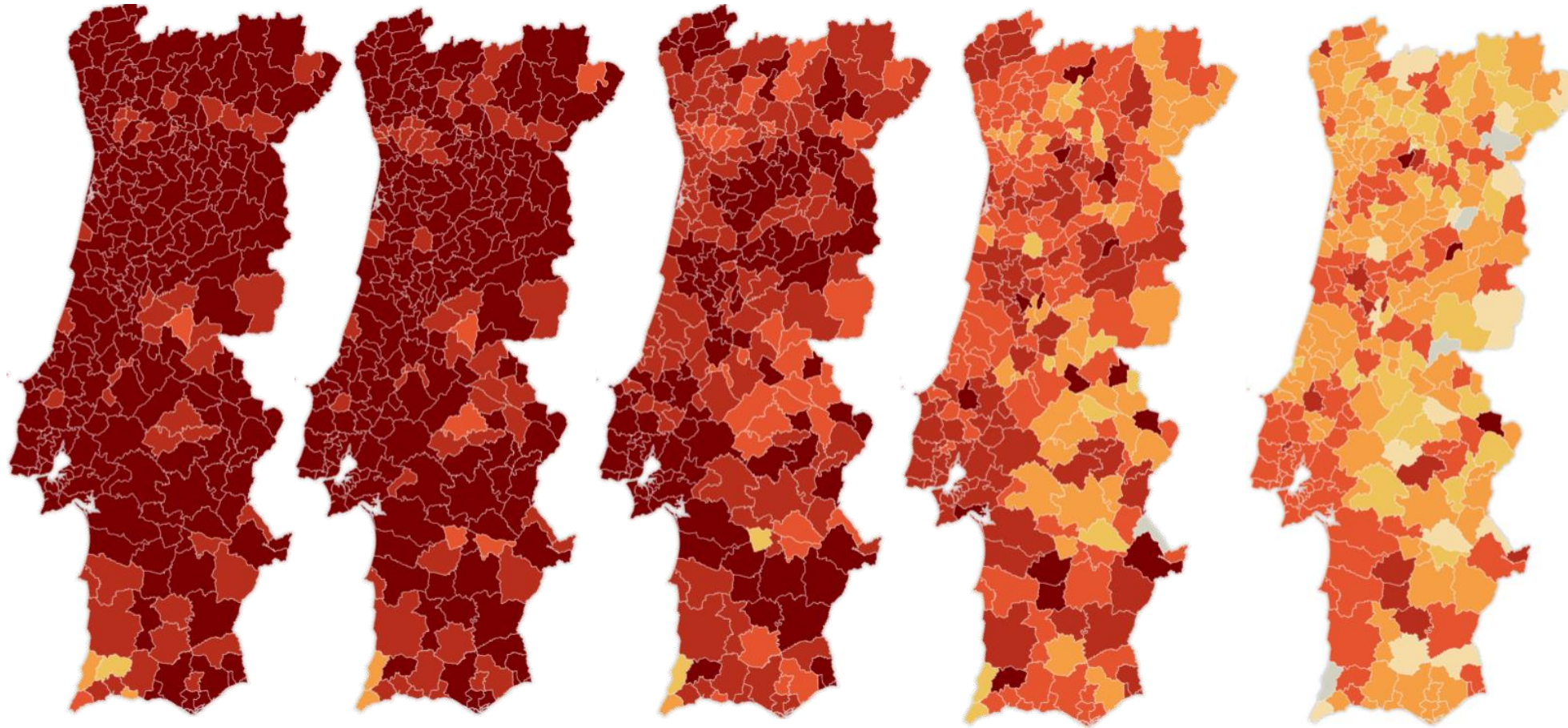
1 February

8 February

15 February

22 February

1 March

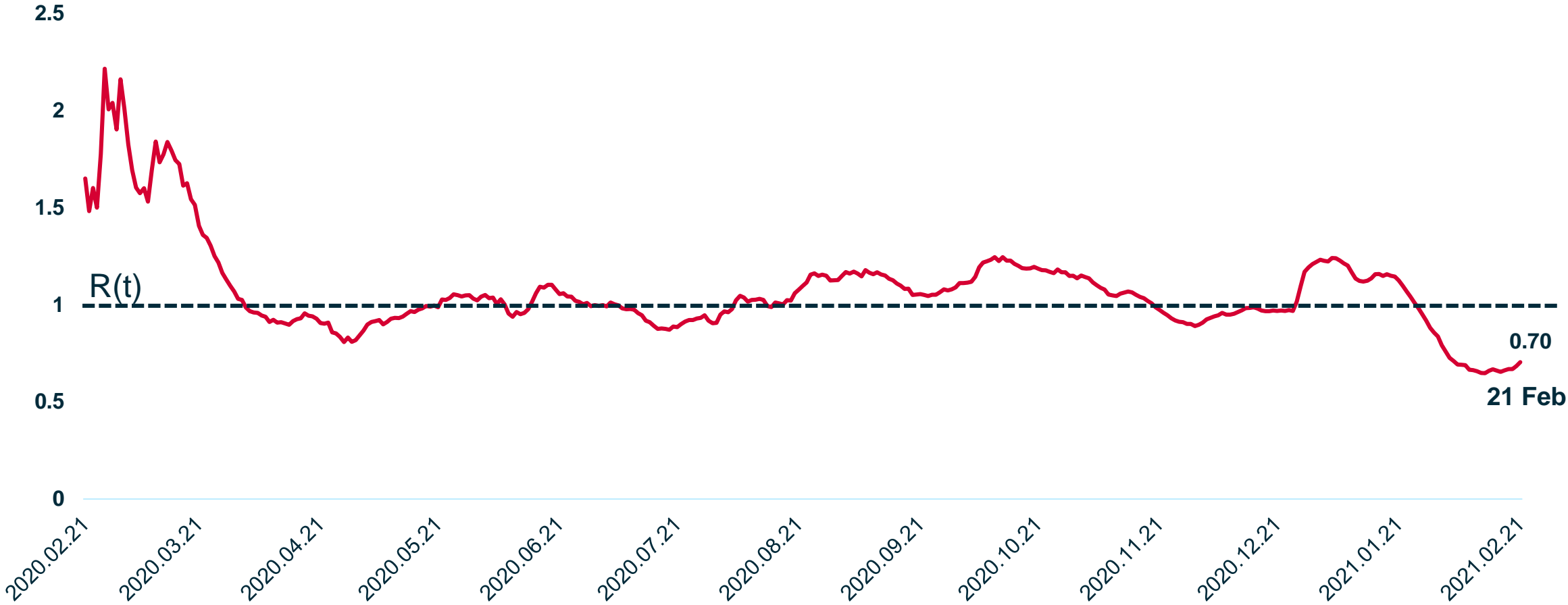


1 March 2021

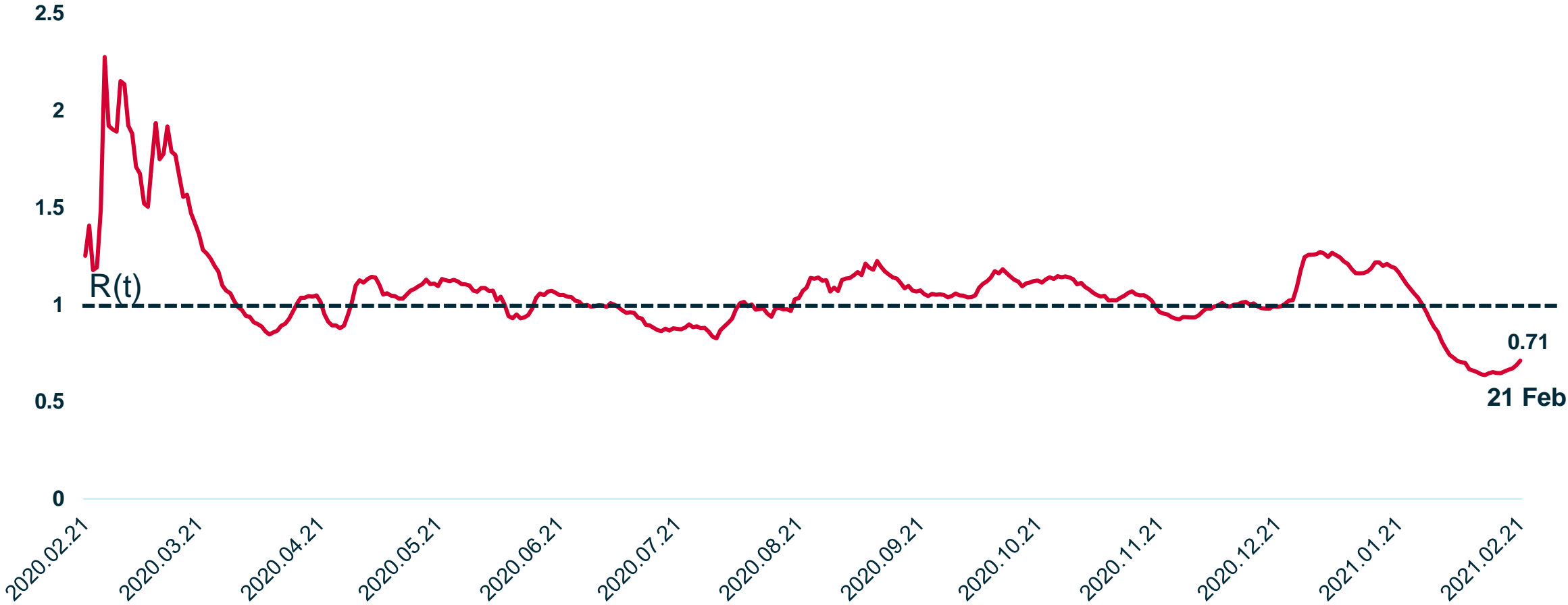


<20	
20 - 59,9	
60 - 119,9	
120 - 239,9	Moderate Risk
240 - 479,9	High Risk
480 - 959,9	Very High Risk
≥960	Extremely High Risk

Transmission Rate - R(t) in Portugal



Transmission Rate - R(t) in **Lisbon and Tagus Valley**

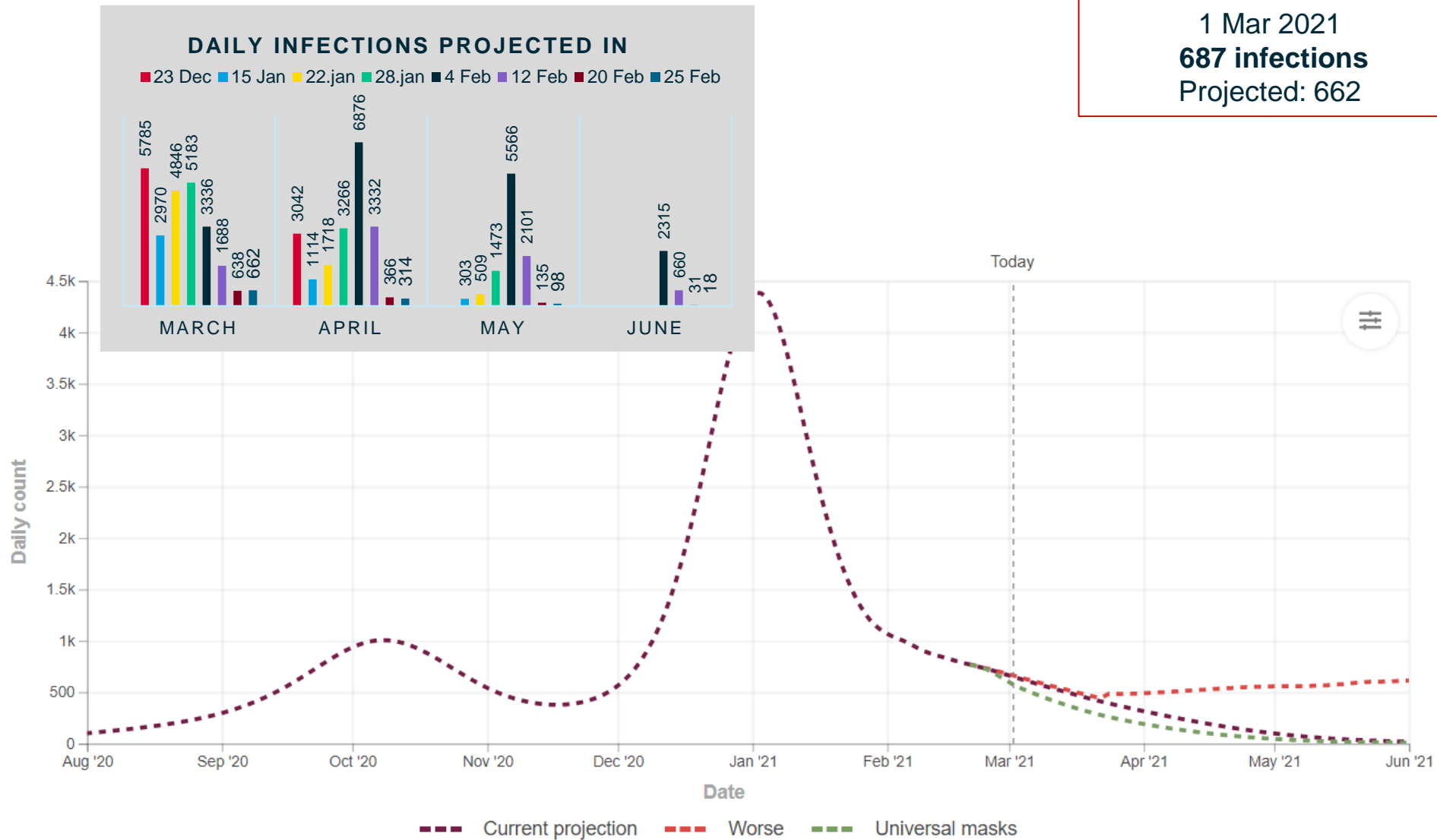


Ranking of COVID-19 among the leading **causes of mortality this week**, assuming uniform deaths of non-COVID causes throughout the year

Cause name	Weekly deaths	Ranking
COVID-19	634	1
Stroke	321	2
Ischemic heart disease	250	3
Lower respiratory infections	159	4
Alzheimer's disease and other dementias	127	5
Chronic obstructive pulmonary disease	119	6
Colon and rectum cancer	100	7
Tracheal, bronchus, and lung cancer	91	8
Diabetes mellitus	82	9
Chronic kidney disease	78	10

Ireland

Covid-19 Daily Infection Projections in Ireland



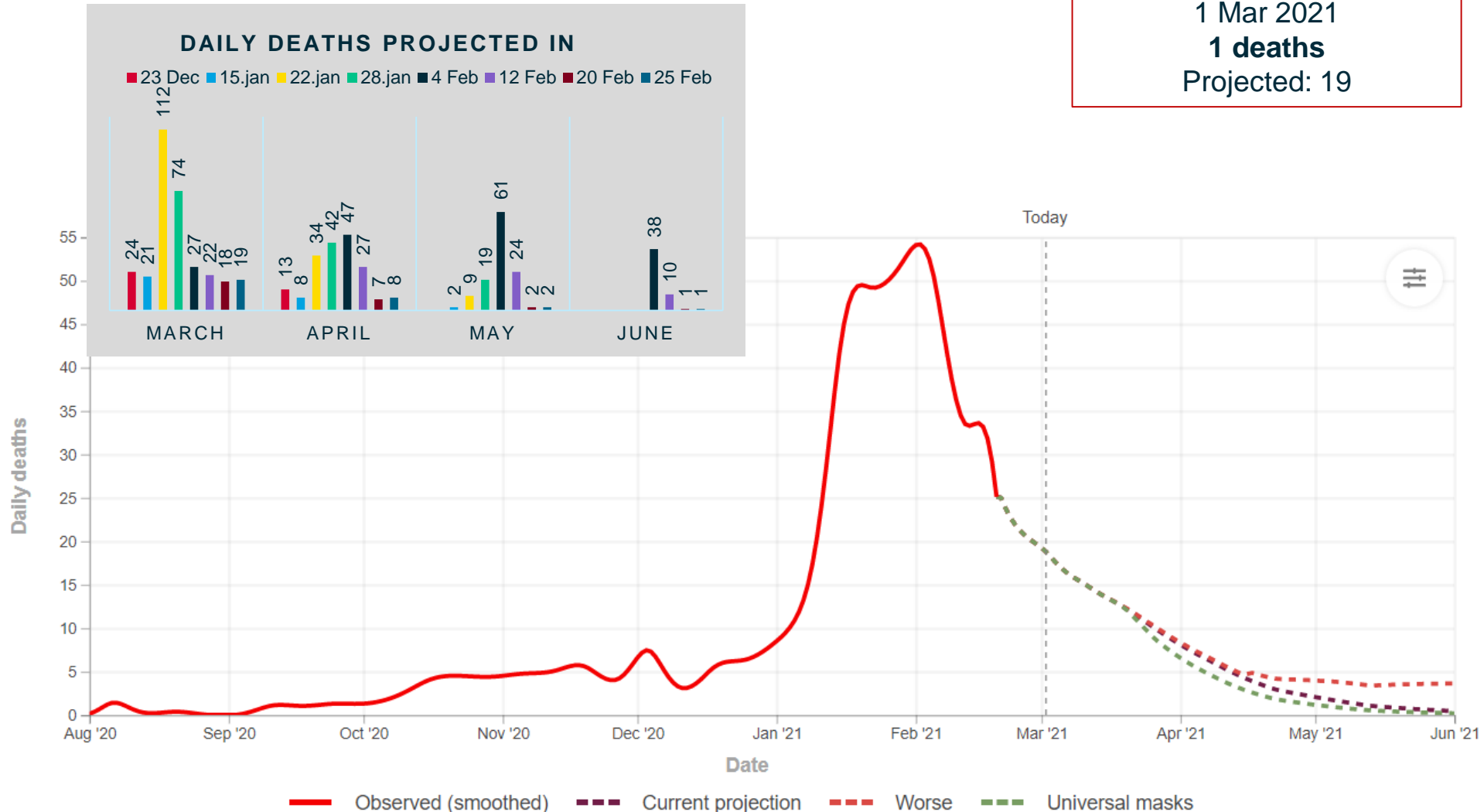
- Current projection** : Vaccine distribution is scaled up over 90 days.
- Universal masks** : Vaccine distribution is scaled up over 90 days. 95% mask usage is adopted in public.
- Rapid vaccine rollout** : Vaccine distribution is scaled up over 45 days
- Rapid vaccine rollout to high-risk** : Vaccine distribution is scaled up over 45 days. Vaccines are initially distributed to high-risk populations, followed by essential workers, and then all other adults.
- Mandates easing** : Vaccine distribution is scaled up over 90 days. Governments do not re-impose mandates if cases increase.
- No vaccine** : Assumes there is no vaccine distribution. Mask use and mandates continue at current levels.

**Projection
Daily Infections**

For 1 June 2021

25 Feb Projection: 18

Covid-19 Daily Deaths Projections in Ireland



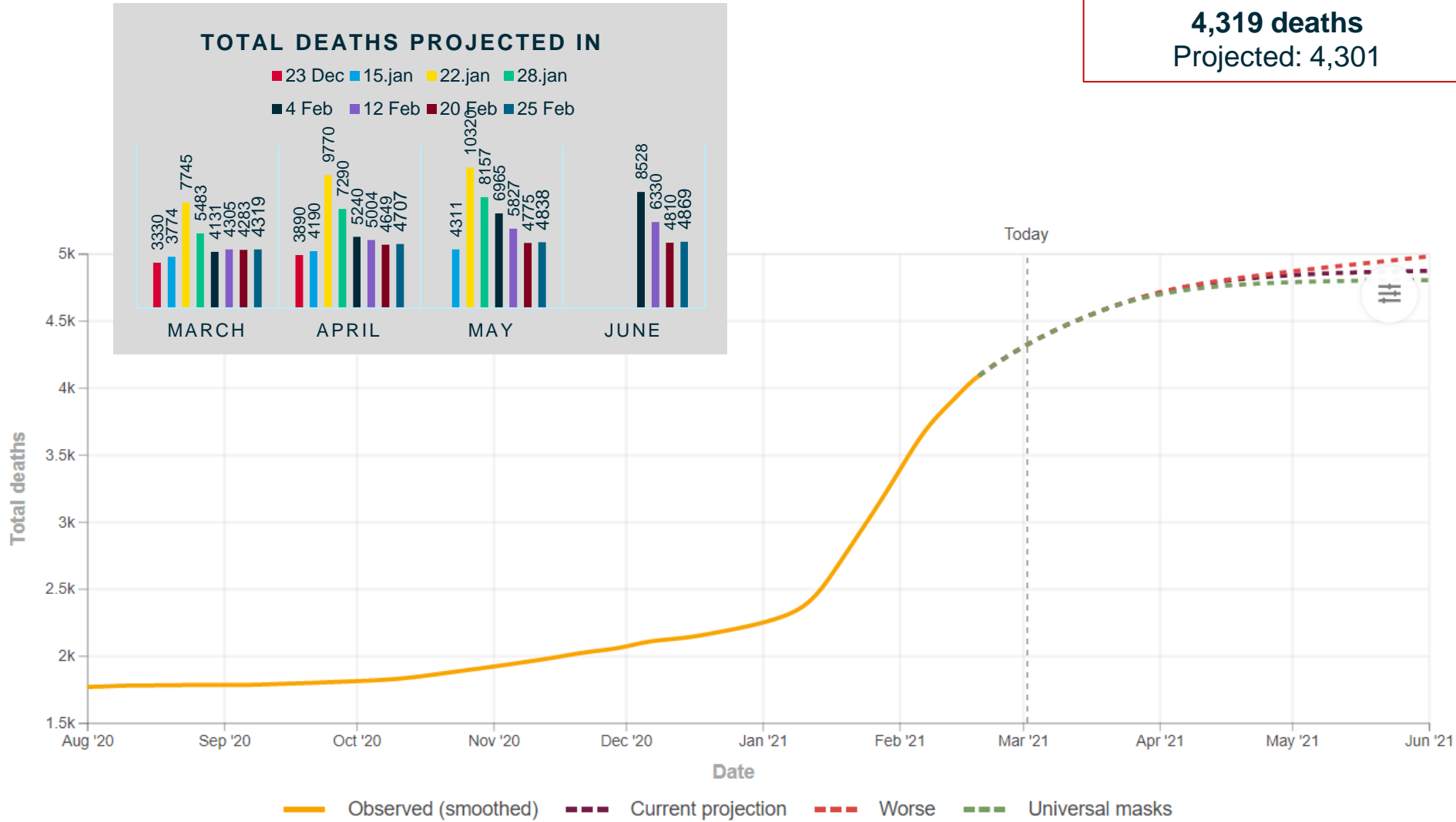
- Current projection** : Vaccine distribution is scaled up over 90 days.
- Universal masks** : Vaccine distribution is scaled up over 90 days. 95% mask usage is adopted in public.
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- Mandates easing** : Vaccine distribution is scaled up over 90 days. Governments do not re-impose mandates if cases increase.
- No vaccine** : Assumes there is no vaccine distribution. Mask use and mandates continue at current levels.

**Projection
Daily Deaths**

For 1 June 2021

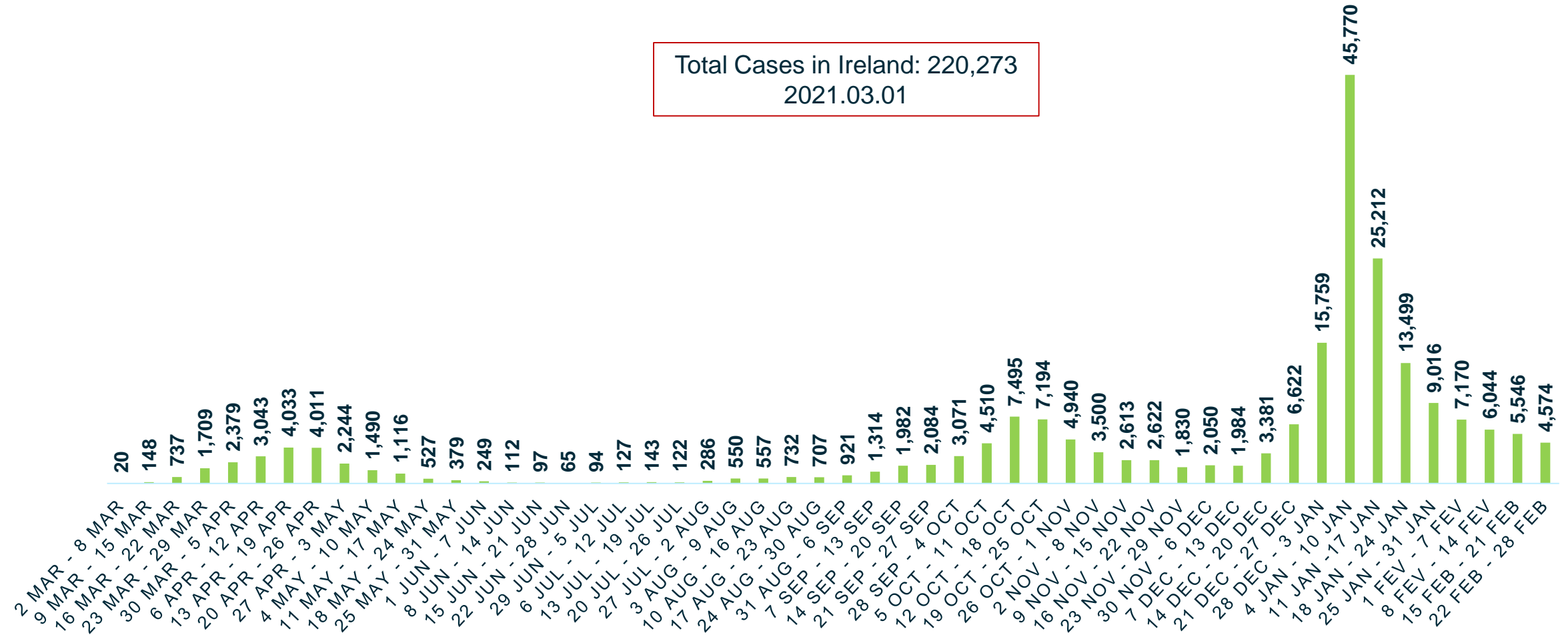
25 Feb Projection: 1

Covid-19 Total Deaths Projections in Ireland



- Current projection** : Vaccine distribution is scaled up over 90 days.
- Universal masks** : Vaccine distribution is scaled up over 90 days. 95% mask usage is adopted in public.
- Rapid vaccine rollout** : Vaccine distribution is scaled up over 45 days
- Rapid vaccine rollout to high-risk** : Vaccine distribution is scaled up over 45 days. Vaccines are initially distributed to high-risk populations, followed by essential workers, and then all other adults.
- Mandates easing** : Vaccine distribution is scaled up over 90 days. Governments do not re-impose mandates if cases increase.
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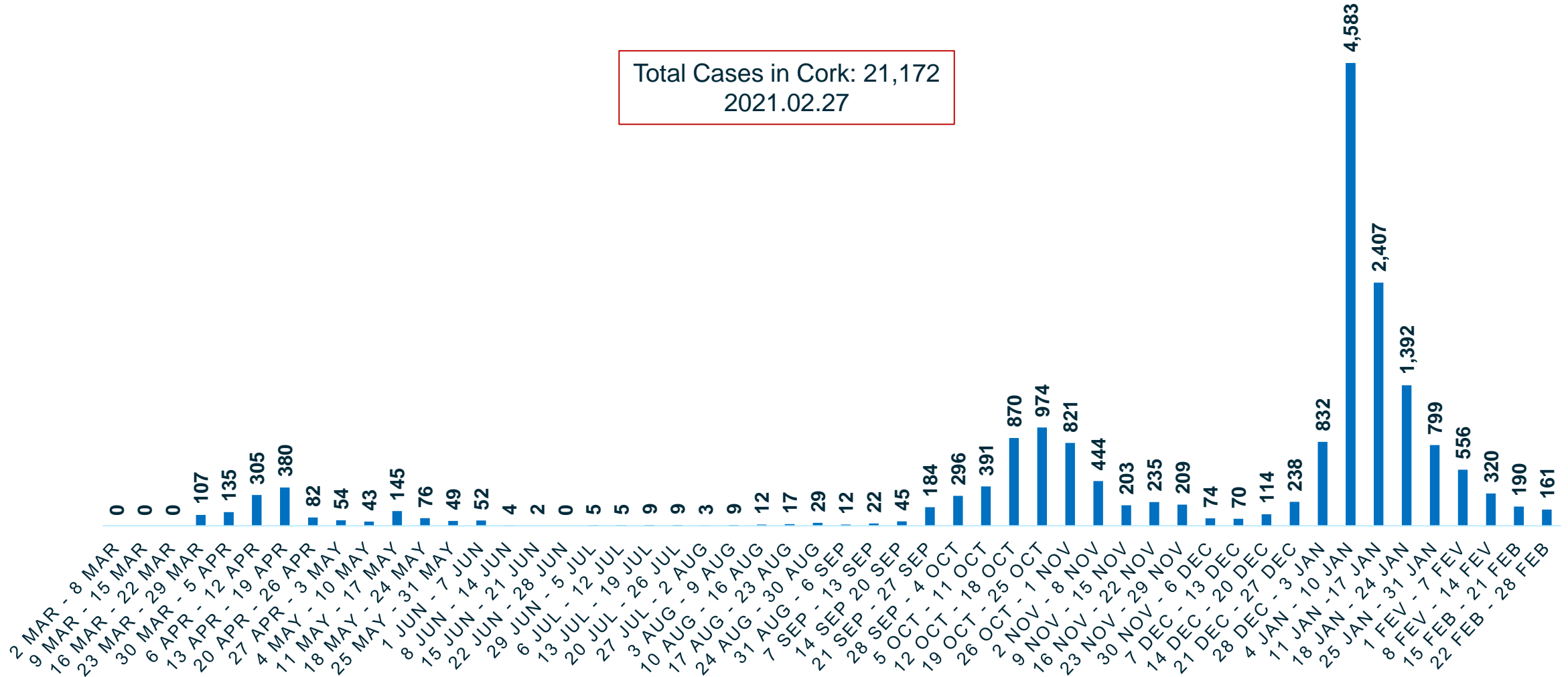
Coronavirus (SARS-CoV-2 / COVID 19) – Ireland - New cases per week



Source: <https://covid19.min-saude.pt/ponto-de-situacao-atual-em-portugal/>

Coronavirus (SARS-CoV-2 / COVID 19) – **Cork** - New cases per week

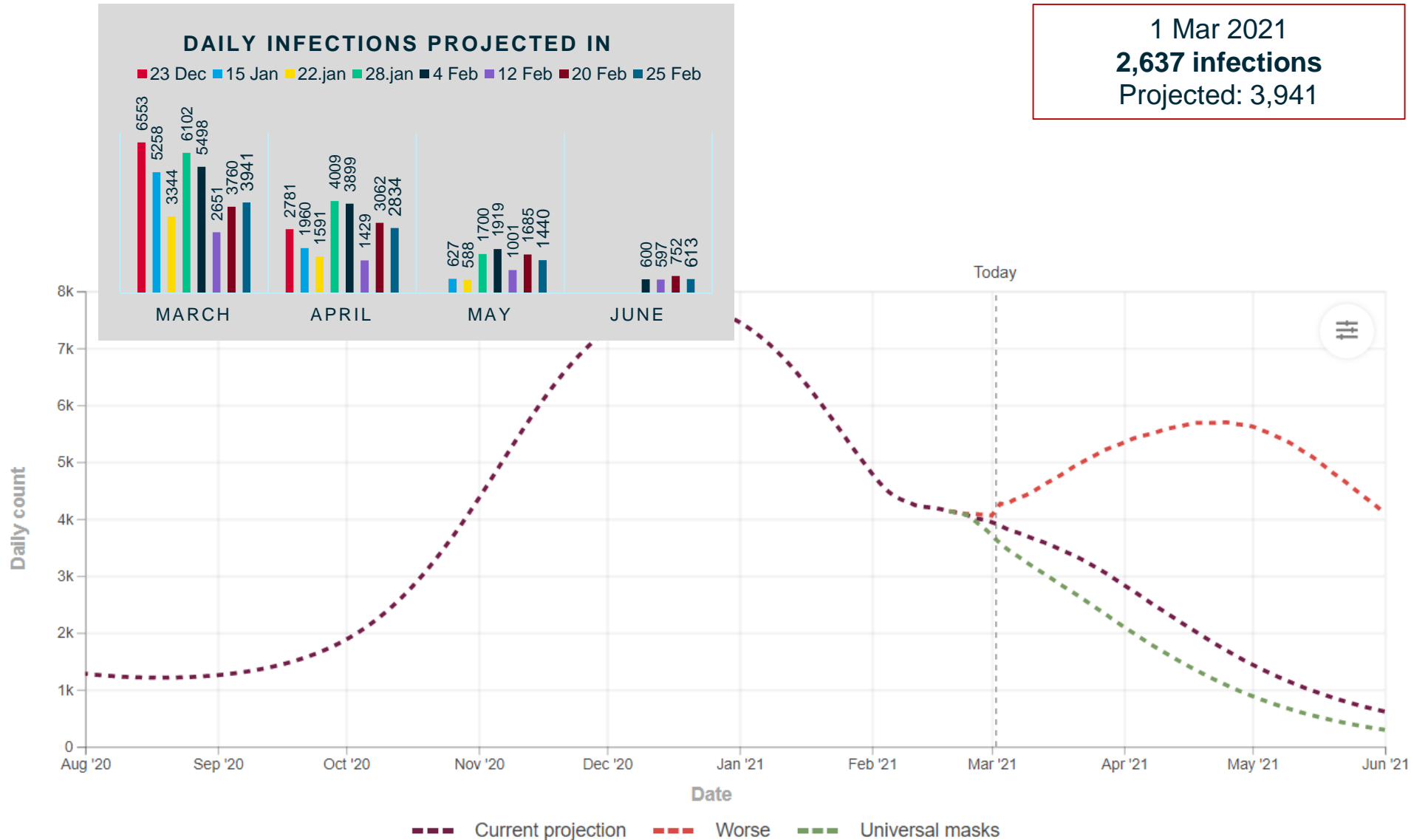
Total Cases in Cork: 21,172
2021.02.27



Source: <https://covid19.min-saude.pt/ponto-de-situacao-atual-em-portugal/>

New Jersey

Covid-19 Daily Infection Projections in New Jersey



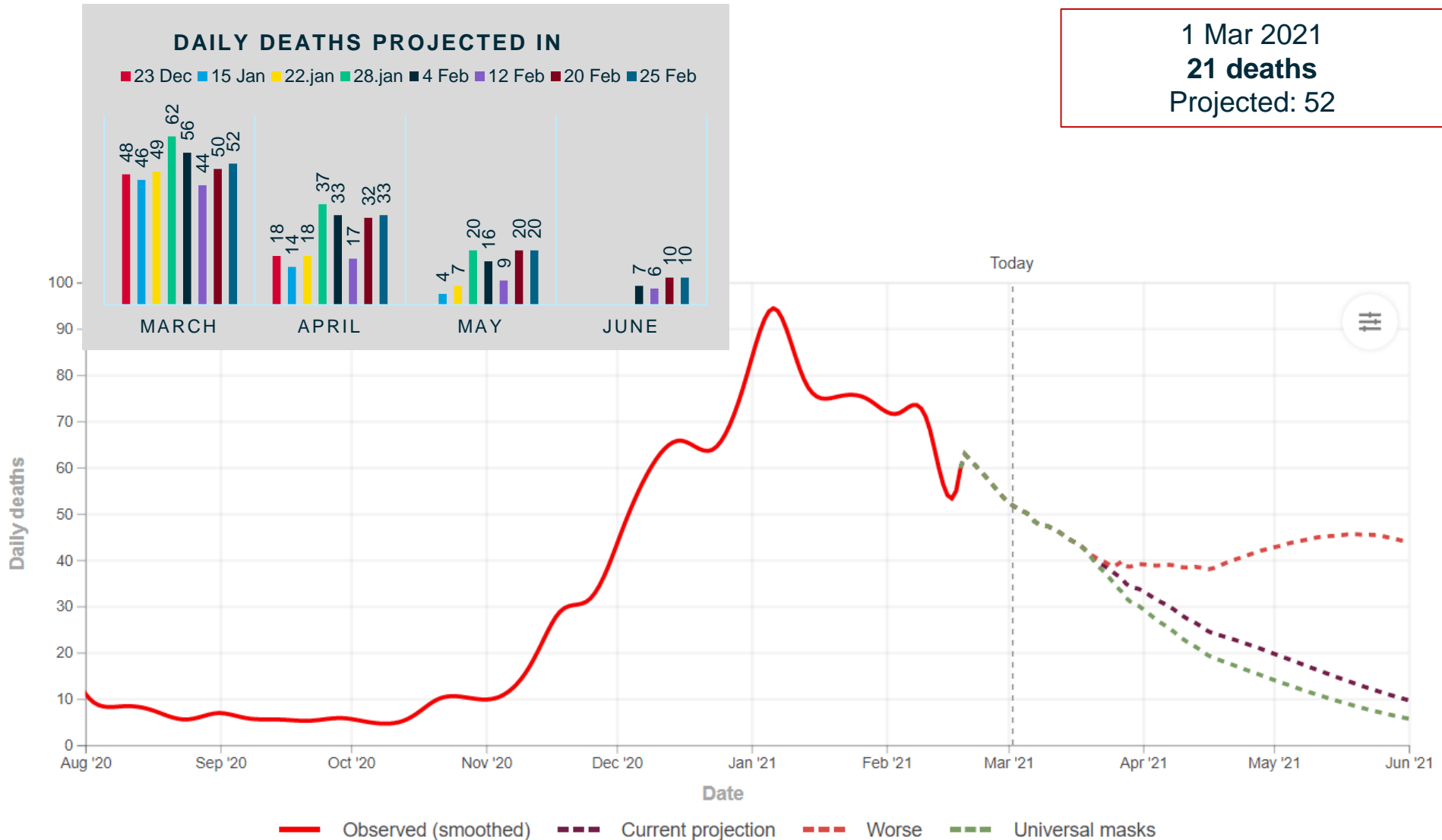
- Current projection** : Vaccine distribution is scaled up over 90 days.
- Universal masks** : Vaccine distribution is scaled up over 90 days. 95% mask usage is adopted in public.
- Rapid vaccine rollout** : Vaccine distribution is scaled up over 45 days
- Rapid vaccine rollout to high-risk** : Vaccine distribution is scaled up over 45 days. Vaccines are initially distributed to high-risk populations, followed by essential workers, and then all other adults.
- Mandates easing** : Vaccine distribution is scaled up over 90 days. Governments do not re-impose mandates if cases increase.
- No vaccine** : Assumes there is no vaccine distribution. Mask use and mandates continue at current levels.

Projection Daily Infections

For 1 June 2021

25 Feb Projection: 613

Covid-19 Daily Deaths Projections in New Jersey



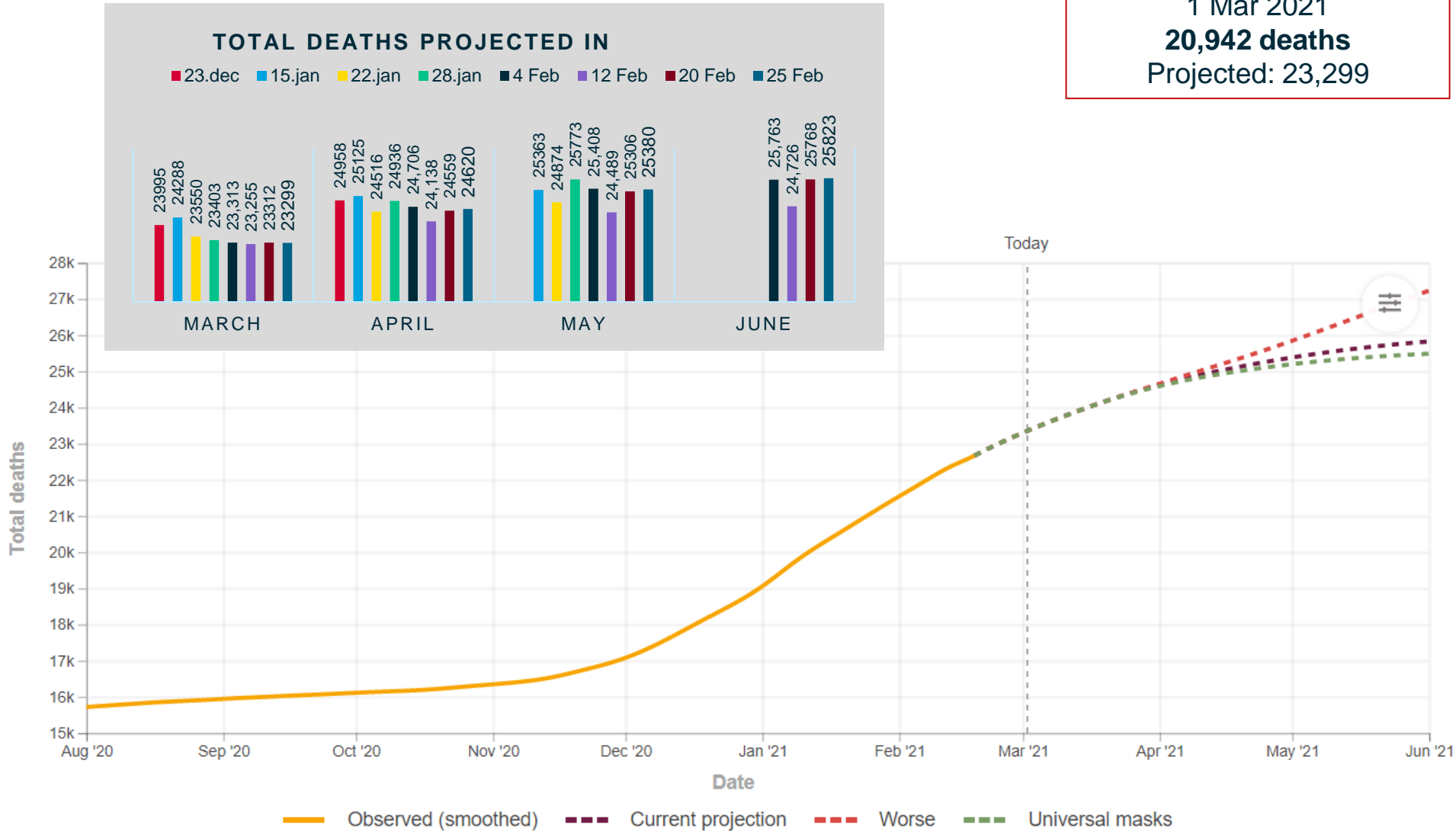
- Current projection** : Vaccine distribution is scaled up over 90 days.
- Universal masks** : Vaccine distribution is scaled up over 90 days. 95% mask usage is adopted in public.
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- Mandates easing** : Vaccine distribution is scaled up over 90 days. Governments do not re-impose mandates if cases increase.
- No vaccine** : Assumes there is no vaccine distribution. Mask use and mandates continue at current levels.

**Projection
Daily Deaths**

For 1 June 2021

25 Feb Projection: 10

Covid-19 Total Deaths Projections in New Jersey



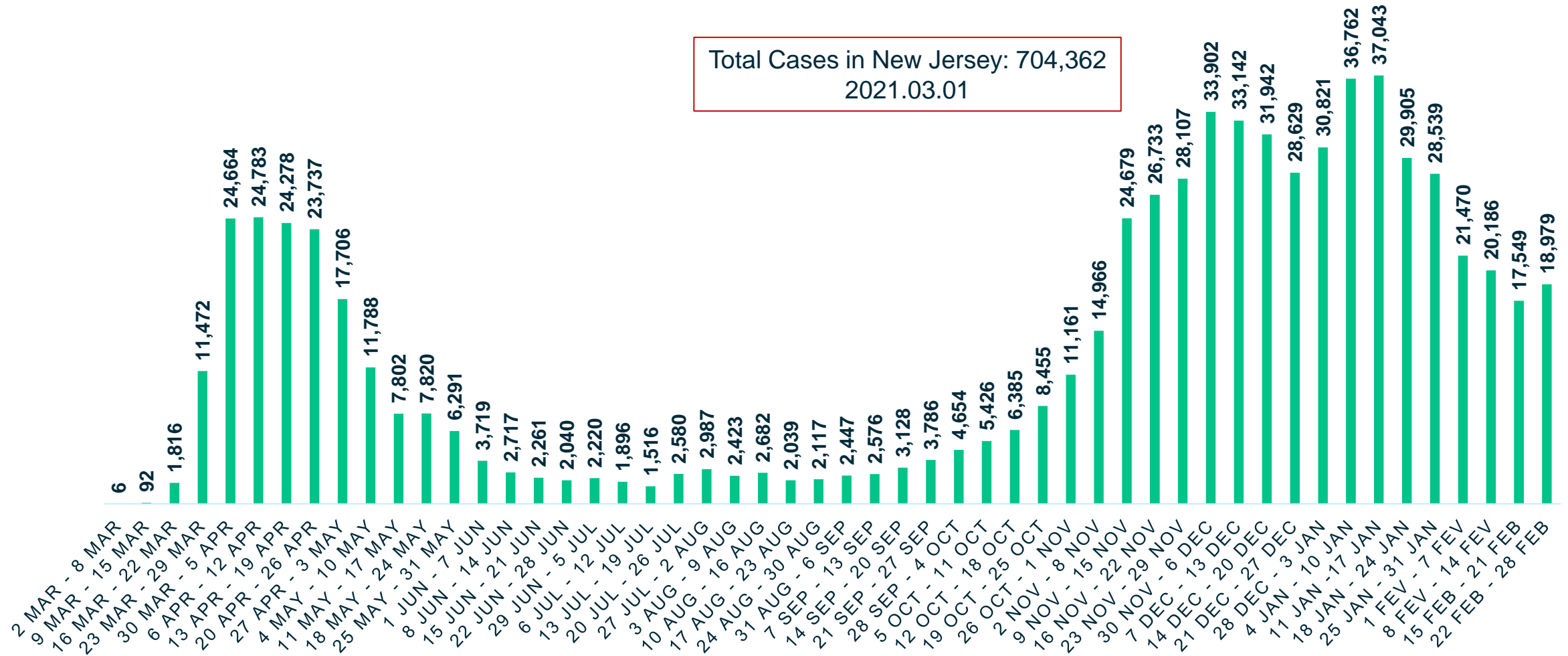
- Current projection** : Vaccine distribution is scaled up over 90 days.
- Universal masks** : Vaccine distribution is scaled up over 90 days. 95% mask usage is adopted in public.
- Rapid vaccine rollout** : Vaccine distribution is scaled up over 45 days
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- Mandates easing** : Vaccine distribution is scaled up over 90 days. Governments do not re-impose mandates if cases increase.
- No vaccine** : Assumes there is no vaccine distribution. Mask use and mandates continue at current levels.

Projection Total Deaths

For 1 June 2021

25 Feb Projection: 25,823

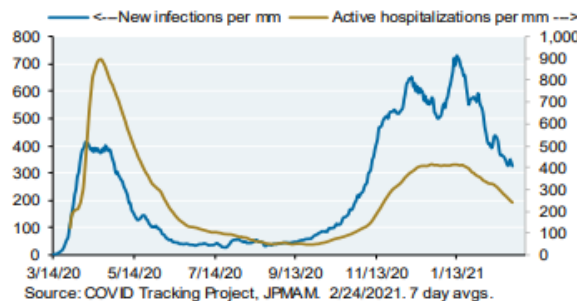
Coronavirus (SARS-CoV-2 / COVID 19) – **New Jersey** - New cases per week



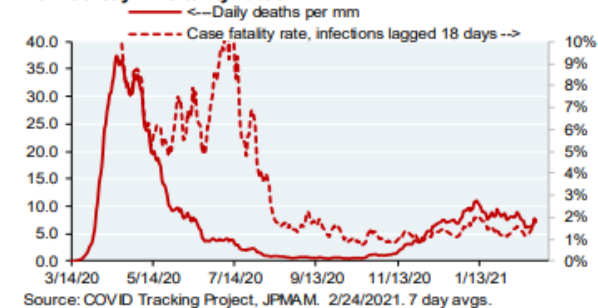
Source: <https://covid19.min-saude.pt/ponto-de-situacao-atual-em-portugal/>

New Jersey Coronavirus tracking

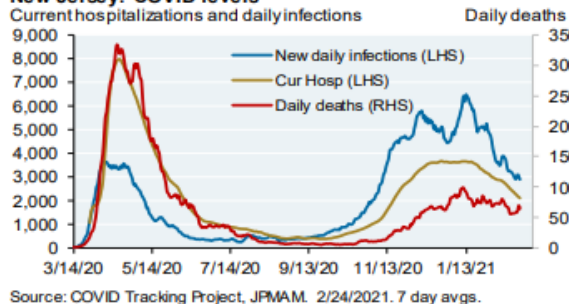
New Jersey: virus rates per mm



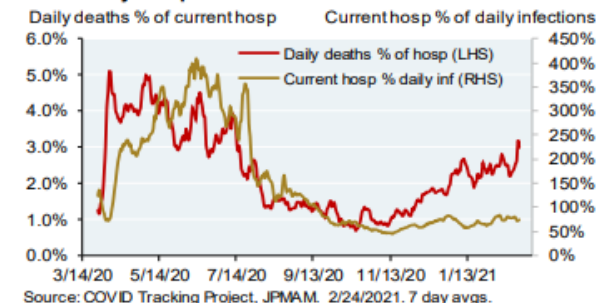
New Jersey: mortality rates



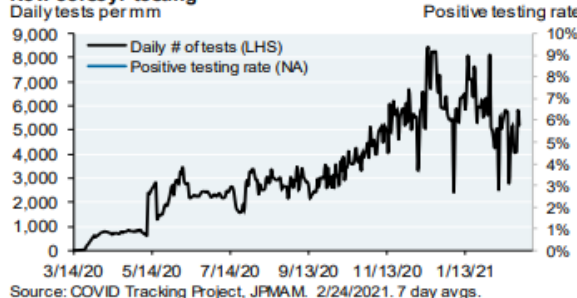
New Jersey: COVID levels



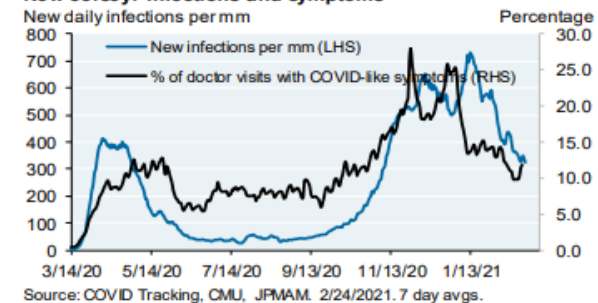
New Jersey: hospitalization data



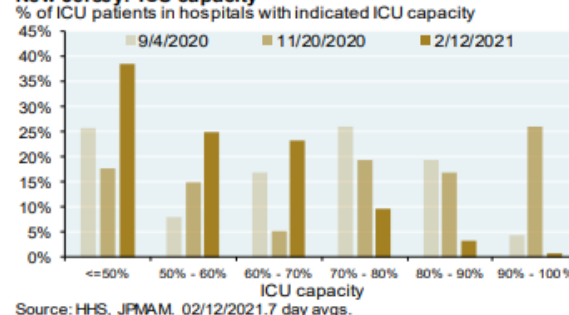
New Jersey: testing



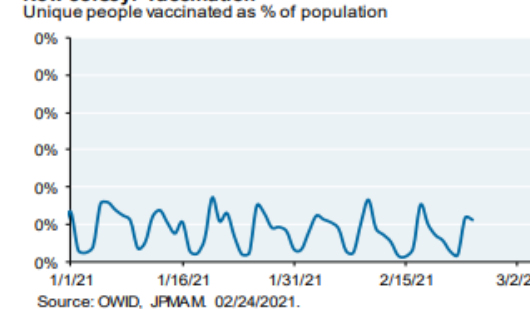
New Jersey: infections and symptoms



New Jersey: ICU capacity



New Jersey: vaccination



Recent News

Latest News

- **Flowserve Corporation is providing pumps, valves, and seals to Pfizer to support the production of its Covid-19 vaccine.** Pfizer needed immediate support to replace a mechanical mixer seal on its Covid-19 vaccine production line, which Flowserve has rebuilt. The company will also provide Pfizer with a cryogenic valve application to support their expanded production capabilities of the vaccine.
- **Healthcare supply chain management company McKesson has begun distributing Johnson & Johnson's Janssen Covid-19 vaccine in the US.** The Janssen vaccine was granted emergency use authorisation (EUA) from the US Food and Drug Administration (FDA) last week and is the first one-shot Covid-19 vaccine authorised in the US.
- Sorrento Therapeutics and its subsidiary Scilex have entered into an exclusive licensing agreement with Aardvark Therapeutics to acquire the latter's proprietary formulation Delayed Burst Release Low Dose Naltrexone (DBR-LDN), or ARD-301, to **treat chronic pain, fibromyalgia, and chronic post-Covid syndrome.** This study will be conducted in multiple Phase II programmes planned for this year.
- The US Government has procured a minimum of 100,000 doses of Eli Lilly's bamlanivimab and etesevimab, two monoclonal antibody drugs indicated for Covid-19. **Bamlanivimab and etesevimab combined were recently granted emergency use authorisation (EUA) for treating mild to moderate Covid-19 symptoms in patients at the risk of developing severe disease or being hospitalised.**
- The US Food and Drug Administration (FDA) granted EUA for a third Covid-19 vaccine. The authorisation allows **Johnson & Johnson's Janssen Covid-19 vaccine to be distributed across the US and to be administered to individuals aged 18 years and older.**
- **Moderna is making new investments to boost capacity at its own and partner's manufacturing facilities in order to increase its global 2022 capacity to about 1.4 billion Covid-19 vaccine doses.** The investments will support the increase in production of the Moderna COVID-19 vaccine and potential vaccine boosters needed to address emerging SARS-CoV-2 variants.
- **Independent analysis carried out in the UK shows that the Pfizer/BioNTech vaccine is highly effective against Covid-19, including symptomatic disease, after the first dose.** Early data from Public Health England's SIREN study revealed promising impact in healthcare workers aged below 65. Data further revealed that one dose of the vaccine could reduce the risk of contracting Covid-19 by more than 70%, which rose to 85% after the second dose.

Latest News (cont.)

- **Novavax has completed the enrolment of PREVENT-19, its pivotal Phase III study in the US and Mexico.** The trial will evaluate the safety, efficacy, and immunogenicity of the company's Covid-19 vaccine candidate NVX-CoV2373.
- **Sanofi has entered into an agreement with Janssen to support the manufacturing of the latter's Covid-19 vaccine** to meet the global supply requirements. This is Sanofi's second commitment to leverage its manufacturing network to bolster global Covid-19 vaccine supply.
- **Pfizer and BioNTech have submitted new data to the US Food and Drug Administration (FDA) that showed their Covid-19 vaccine was stable when stored between -25°C and -15°C (-13°F to 5°F),** which is temperatures of pharmaceutical freezers.
- **Chugai Pharmaceutical has concluded a license agreement with Roche to develop and market AT-527, a new oral drug for Covid-19, in Japan.** Global Phase II clinical studies of AT-527 are currently ongoing in mild to moderate Covid-19 patients.
- According to Nikkei, **Fujifilm Holdings will restart clinical trials of Avigan, its antiviral drug for treating Covid-19, in Japan.** The drug's approval was delayed because of inconclusive trial data, according to a Japanese health ministry panel in December 2020. The new study will involve approximately 270 patients and Fujifilm will seek approval again in October 2021.
- Researchers from the British Columbia Centre for Disease Control and Institut National de Sante Publique du Quebec in Canada have announced that **the second dose of Pfizer/BioNTech's Covid-19 vaccine could be delayed to extend supply to all priority groups. This is because the vaccine had an efficacy of up to 92.6% between the first and second doses, according to documents submitted to the US Food and Drug Administration (FDA).**
- **Novavax has signed a Memorandum of Understanding (MOU) with Gavi, the vaccine alliance, to supply 1.1 billion cumulative doses of NVX-CoV2373,** the company's recombinant protein-based Covid-19 vaccine candidate, for the COVAX facility. The vaccine doses are expected to be manufactured and distributed across the world by Novavax and the Serum Institute of India.
- **Pfizer and BioNTech have dosed the first participants in a global Phase II/III study to assess their Covid-19 vaccine in healthy pregnant women aged over 18.** The randomised, placebo-controlled trial will assess the safety, immunogenicity, and tolerability of the vaccine to prevent Covid-19 in 4,000 healthy women who are between 24 and 34 weeks pregnant.
- **Pfizer and BioNTech announced that the companies have signed an agreement with the European Commission (EC), the executive branch of the European Union (EU), to supply 200 million additional doses of their Covid-19 vaccine.** The agreement brings the total supply of the vaccine to EU to 500 million doses; the EC can also exercise the option to request supply an additional 100 million doses of the vaccine.

Latest News (cont.)

- **The World Health Organization (WHO) has approved two additional versions of the AstraZeneca/University of Oxford Covid-19 vaccine for emergency use.** The vaccines in question are being produced by AstraZeneca-SKBio in South Korea and the Serum Institute of India. This approval allows the vaccines to be rolled out globally with the help of the COVAX facility.
- **There is growing controversy over a World Health Organization investigation into the origins of the Covid-19 pandemic** after one of its members said China had refused to hand over key data, and the US national security adviser said he had “deep concerns” about the initial findings.
- **Sanofi’s two Covid-19 vaccines are entering new phases of trials in coming weeks** and both could be available by the end of the year, said Thomas Triomphe, head of Sanofi Pasteur.
- **CureVac has announced the European Medicines Agency (EMA) has begun a rolling submission of CVnCoV, the company’s mRNA-based Covid-19 vaccine candidate.** The EMA’s rolling submission will accelerate time to potential marketing authorisation of CVnCoV.
- **New data from the US Centers for Disease Control and Prevention show allergic reactions to Covid-19 are rare and anaphylaxis,** one type of severe reaction, occurs in 2 to 5 people for every million vaccinated in the US. The update from the CDC draws on data from the agency’s system to monitor vaccine side effects. When anaphylaxis occurs it is almost always within half an hour of administering the vaccine, the CDC said. The system hasn’t found any link between Covid vaccines and death, the agency said on its website.
- **Indian pharmaceutical company Biological E is looking to contract manufacture approximately 600 million doses of Johnson and Johnson Covid-19 vaccine** each year, according to Reuters.
- **Eli Lilly announced that it has been granted emergency use authorisation (EUA)** by the US Food and Drug Administration (FDA) for combining investigational bamlanivimab (LY-CoV555) and etesevimab (LY-CoV016).
- Chinese Sinovac Biotech announced that it has been granted a **conditional marketing authorisation by the China National Medical Products Administration (NMPA) for CoronaVac,**

Latest News (cont.)

- **The WHO insisted on Monday that the AstraZeneca vaccine was still a vital tool in the global fight against the coronavirus pandemic**, after South Africa delayed the start of its inoculation programme over concerns about its efficacy against a virus variant.
- Chinese **Sinovac Biotech announced that it has been granted a conditional marketing authorisation by the China National Medical Products Administration (NMPA) for CoronaVac**, the company's Covid-19 vaccine, for individuals aged over 18.
- **Veru published positive data regarding a cancer drug's potential in fighting the Covid-19 disease**. The prostate cancer treatment achieved positive efficacy and safety data in the company's Phase II clinical trial in hospitalised patients suffering from acute respiratory distress syndrome caused by Covid-19.
- There's "a reasonable chance" that vaccines will stay ahead of virus mutations, said Scott Gottlieb, a former head of the US Food and Drug Administration. "I think there's a rule of thumb we can assume that **the vaccines are probably going to be about 20% less effective against these new variants from Brazil and South Africa,**" Gottlieb said on CBS's "Face the Nation."
- **Dr. Anthony Fauci warned Americans not to delay their second doses of the coronavirus vaccine**, after other health experts suggested recently there may be a benefit to pushing more people to get a first shot and possibly delaying the follow-ups a bit.
- **Johnson & Johnson announced that its subsidiary Janssen has submitted an emergency use authorisation application** to the US Food and Drug Administration (FDA) for its investigational single-shot Covid-19 vaccine candidate.
- **Novavax announced multiple regulatory agencies, including in the UK, the European Union, the US and Canada, will begin the rolling review process for authorisation of NVX-CoV2373**, its Covid-19 vaccine. While the reviews are underway, the company will complete its pivotal Phase III trials in the UK and US and continue to share data with the regulatory agencies.
- According to a peer-reviewed paper in the Lancet, **Russia's Sputnik V vaccine reported 91.6% efficacy in fighting the Covid-19 disease in Phase III trials**.

Sources

- https://en.wikipedia.org/wiki/Timeline_of_the_2019%E2%80%9320_Wuhan_coronavirus_outbreak
- <https://www.seattletimes.com/seattle-news/health/coronavirus-timeline-how-the-outbreak-unfolded/>
- <https://gisanddata.maps.arcgis.com/apps/opsdashboard/index.html#/bda7594740fd40299423467b48e9ecf6>
- <https://www.who.int/emergencies/diseases/novel-coronavirus-2019/situation-reports>
- <https://www.pharmaceutical-technology.com/news/coronavirus-a-timeline-of-how-the-deadly-outbreak-evolved/>
- <https://www.cphi-online.com/updated-covid19-pharma-tracker-news082415.html>
- <https://www.dgs.pt/em-destaque.aspx>

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