

COVID-19 in Europa: le sfide per il 2021

Bruno Ciancio

3 Febbraio 2021

Cluster of pneumonia cases of unknown cause linked to Huanan seafood market in Wuhan, China, Dec 2019



Published Date: 2019-12-30 23:59:00
Subject: PRO/AH/EDR> Undiagnosed pneumonia - China (HU): RFI
Archive Number: 20191230.6864153

UNDIAGNOSED PNEUMONIA - CHINA (HUBEI): REQUEST FOR INFORMATION

A ProMED-mail post
<http://www.promedmail.org>
ProMED-mail is a program of the
International Society for Infectious Diseases
<http://www.isid.org>

[1]
Date: 30 Dec 2019
Source: Finance Sina [machine translation]
<https://finance.sina.cn/2019-12-31/detail-ihnzahk1074832.d.html?from=wap>

Wuhan unexplained pneumonia has been isolated test results will be announced [as soon as available]

On the evening of [30 Dec 2019], an "urgent notice on the treatment of pneumonia of unknown cause" was issued by the Administration and Medical Administration of Wuhan Municipal Health Committee.

On the morning of [31 Dec 2019], China Business News reporter called the official hotline of Wuhan Municipal

12320 hotline staff said that what type of pneumonia of unknown cause appeared in Wuhan this time remains

COMMUNICABLE DISEASE THREATS REPORT

Week 2, 5-11 January 2020

those for whom vaccination is contraindicated being potentially exposed to measles, as these groups are at increased risk of infection and possible complications. For a more complete overview, consult ECDC's [risk assessment](#) 'Who is at risk for measles in the EU/EEA?' published on 28 May 2019.

Actions

ECDC monitors the measles situation through epidemic intelligence and produces a monthly report with measles surveillance data from The European Surveillance System for 30 EU/EEA countries.

New! Cluster of pneumonia cases possibly associated with novel coronavirus – Wuhan, China – 2019

Opening date: 7 January 2020

Latest update: 10 January 2020

Epidemiological summary

On 31 December 2019, the Wuhan Municipal Health and Health Commission informed about a cluster of 27 pneumonia cases of unknown aetiology, including seven severe cases, with a common exposure in Wuhan's South China Seafood City market. The cases showed symptoms such as fever, dyspnoea, and radiological test compatible with bilateral lung infiltrative lesions.

Authorities placed all cases under isolation, initiated contact tracing activities and applied hygiene and environmental sanitation activities in the affected market, which was closed to the public on 1 January 2020.

Preliminary investigations suggested viral pneumonia while analysis to identify the pathogen were carried out. According to Chinese authorities, no human to human transmission could be documented. No cases among health care workers have been reported.

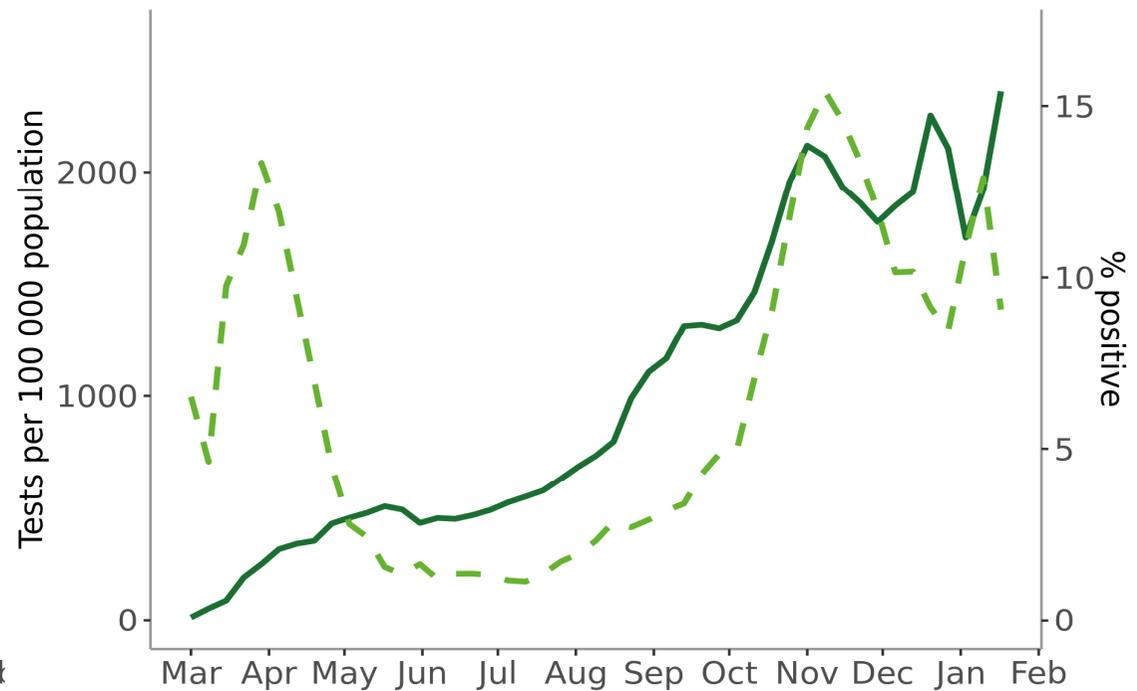
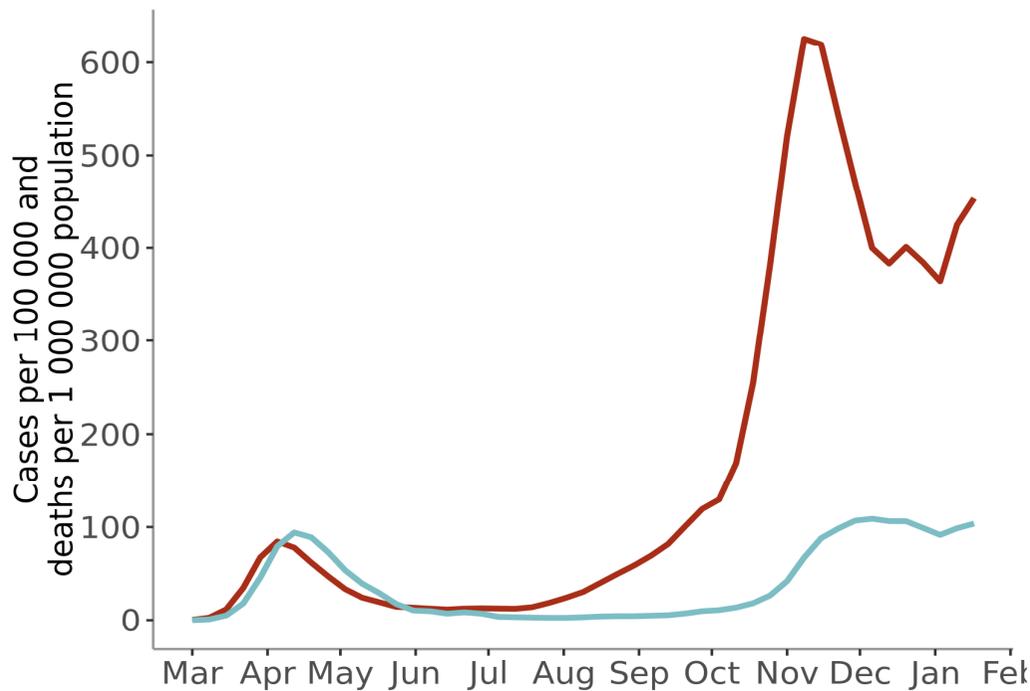
COVID-19 case and death notification rates, testing rates and test positivity, EU/EEA

EU/EEA: 14-day COVID-19 case and death notification rates, 1 March 2020 to 17 January 2021

EU/EEA: testing rate and test positivity (%), 1 March 2020 to 17 January 2021

- 14-day case notification rate per 100 000 population
- 14-day death notification rate per 1 000 000 population

- Tests per 100 000 population
- % positive



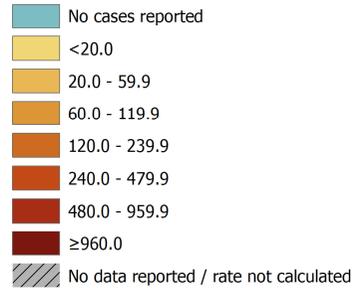
Source: ECDC Epidemic Intelligence

Source: TESSy and public websites. Data shown for countries submitting data up to 17 January 2021

14-day COVID-19 case notification rate per 100 000 weeks 1-2



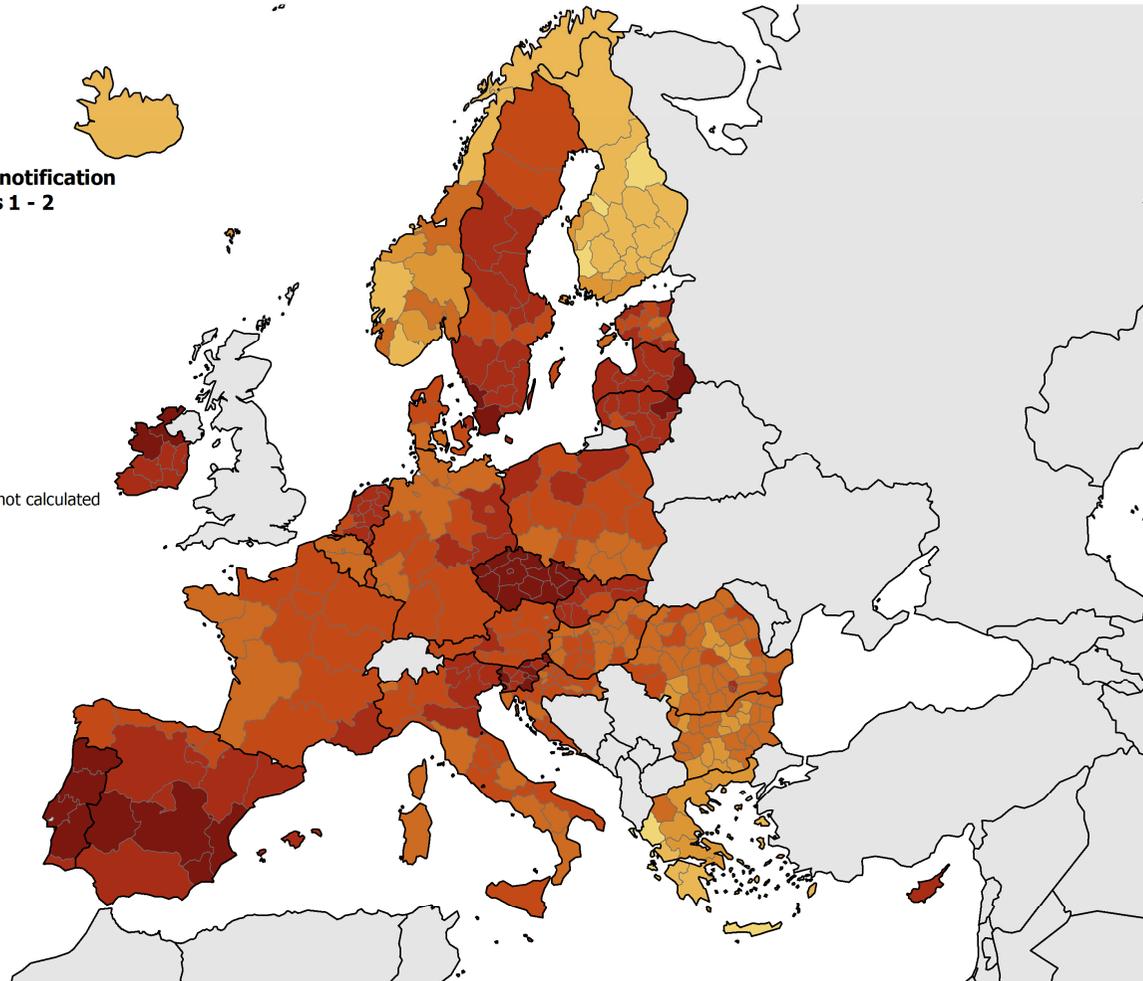
14-day COVID-19 case notification rate per 100 000 weeks 1 - 2



Regions not visible in the main map extent



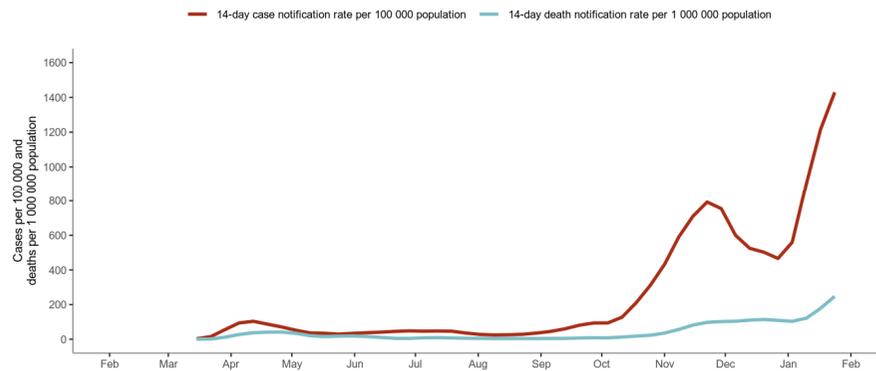
Countries not visible in the main map extent



Portogallo

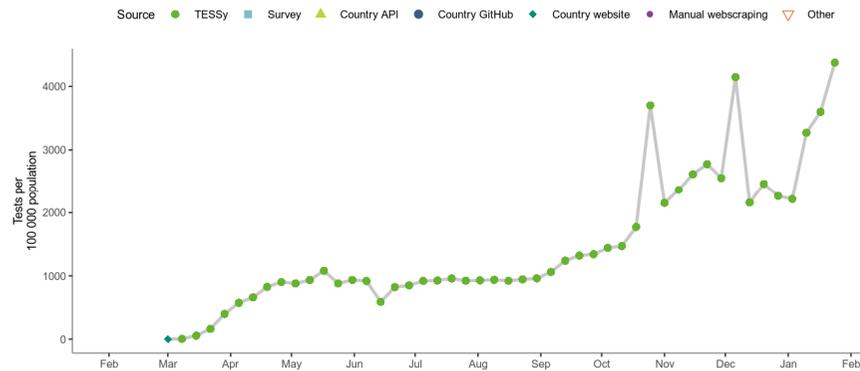
Portugal: 14-day COVID-19 case and death notification rates

National totals as of 25 Jan 2021: 636 190 cases (earliest 2020-W10, latest 2021-W03), 10 469 deaths (2020-W12, 2021-W03)



ECDC. Figure produced 28 January 2021.
Source: Epidemic intelligence, national weekly data

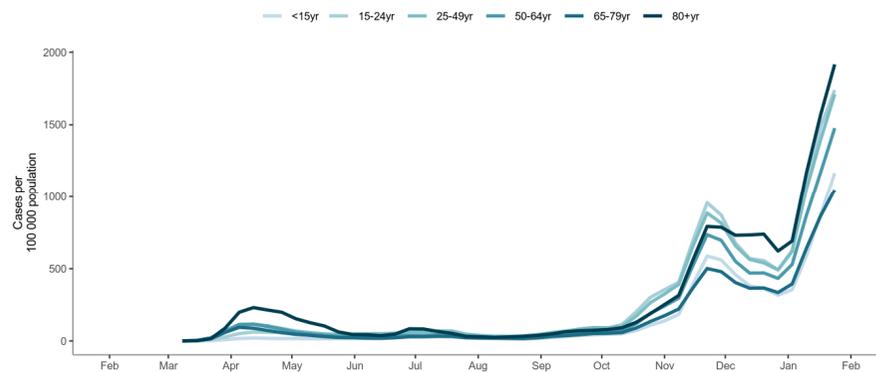
Portugal: weekly testing rate



ECDC. Figure produced 28 January 2021.
Source: TESSy/survey/online sources, weekly COVID-19 testing data

Portugal: 14-day age-specific COVID-19 case notification rate

Age-specific weekly data available from weeks ending 23 Feb to 24 Jan 2021, n = 588 329 (92.5% of the official national total to 25 Jan 2021)



ECDC. Figure produced 28 January 2021.
Source: TESSy COVID-19, national weekly data

Portugal: weekly test positivity



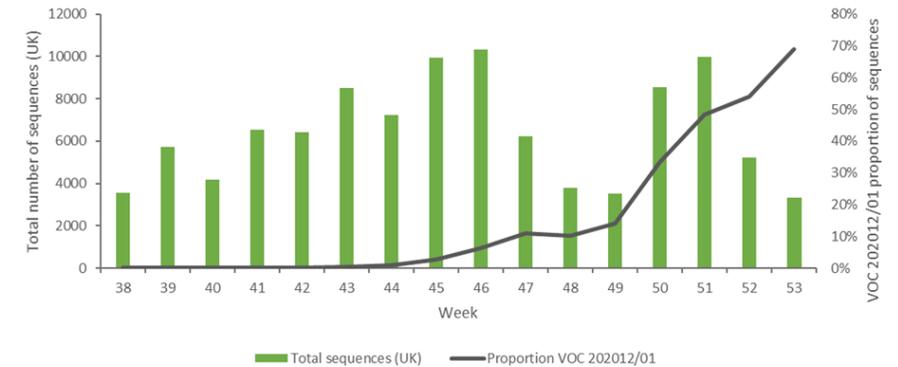
ECDC. Figure produced 28 January 2021.
Source: TESSy/survey/online sources, weekly COVID-19 testing data; Epidemic intelligence, national weekly data

Increased detection of SARS-CoV-2 variant viruses B.1.1.7 - VOC 202012/01



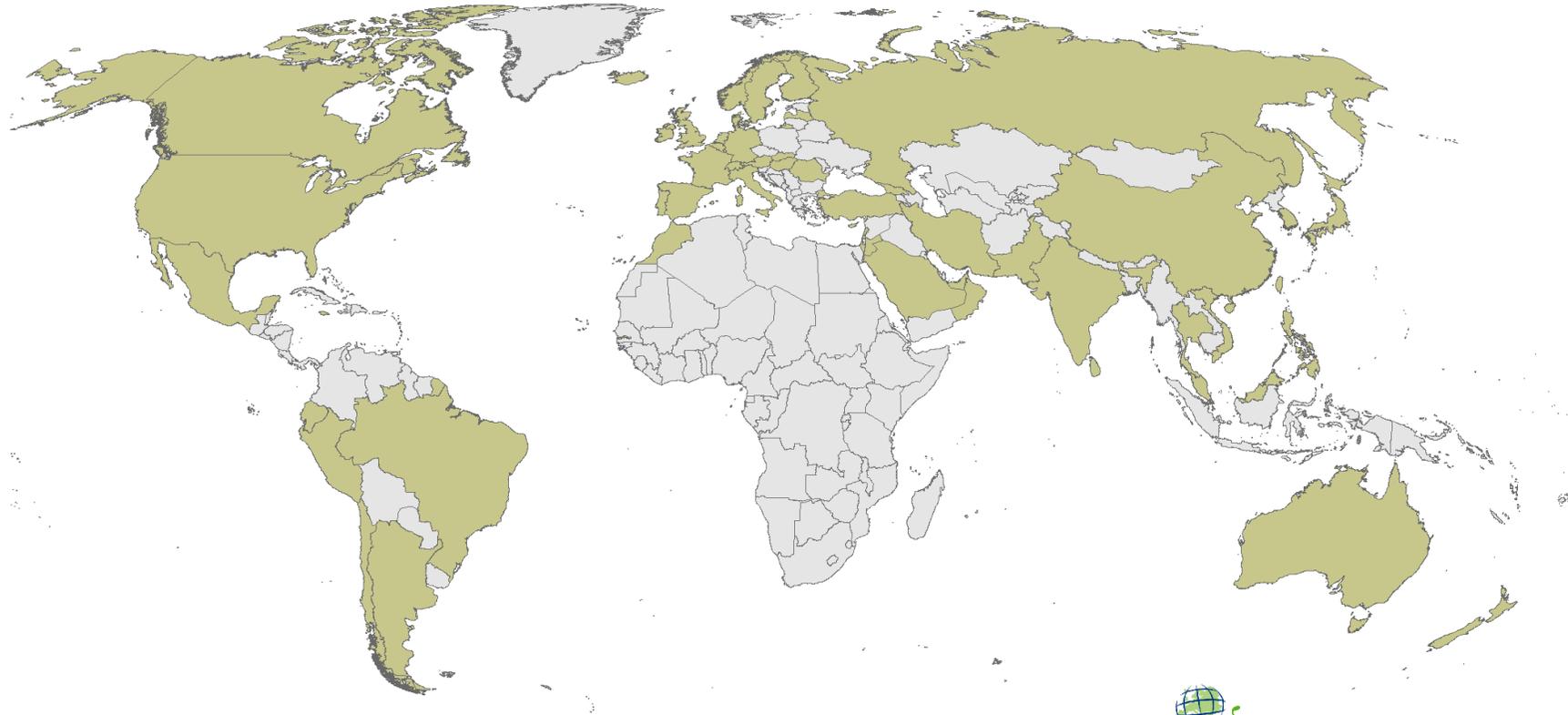
- The United Kingdom (UK) has faced a rapid increase in COVID-19 case rates, which is associated with the emergence of a new SARS-CoV-2 variant, VOC 202012/01, which has led to increased pressure to the healthcare system.
- More than 16 800 cases of this new variant have been reported from the UK.
- The new variant shows increased (app. 50% higher) transmissibility compared to previously circulating variants, but no other changes in characteristics have been observed so far.
- VOC 202012/01 is defined by multiple spike protein changes (**deletion 69-70**, deletion 144, **N501Y**, A570D, D614G, P681H, T716I, S982A, D1118H) as well as by mutations in other genomic regions
- It is also referred to as clade 20B variant following classification by Nextstrain, GISAID clade GR or Pangolin nomenclature lineage **B.1.1.7**

Proportion of UK SARS-CoV-2 sequences classified as VOC 202012/01 per week, and total sequences per week from the UK.



Weeks 1 and 2 of 2021 are omitted due to very few sequences being available.
Source: GISAID EpiCov database. More detailed national analysis of sequences from the UK can be found at the COVID-19 Genomics UK Consortium

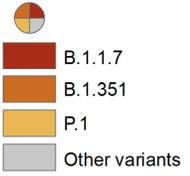
Countries reporting B1.1.7 - VOC 202012/01 cases



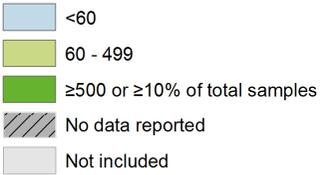
 Countries with VOC 202012/01 cases reported

- 60 countries globally reported app. 18 700 VOC202012/01 cases, about 1 300 cases in 23 countries in the EU/EEA, as of 19 January

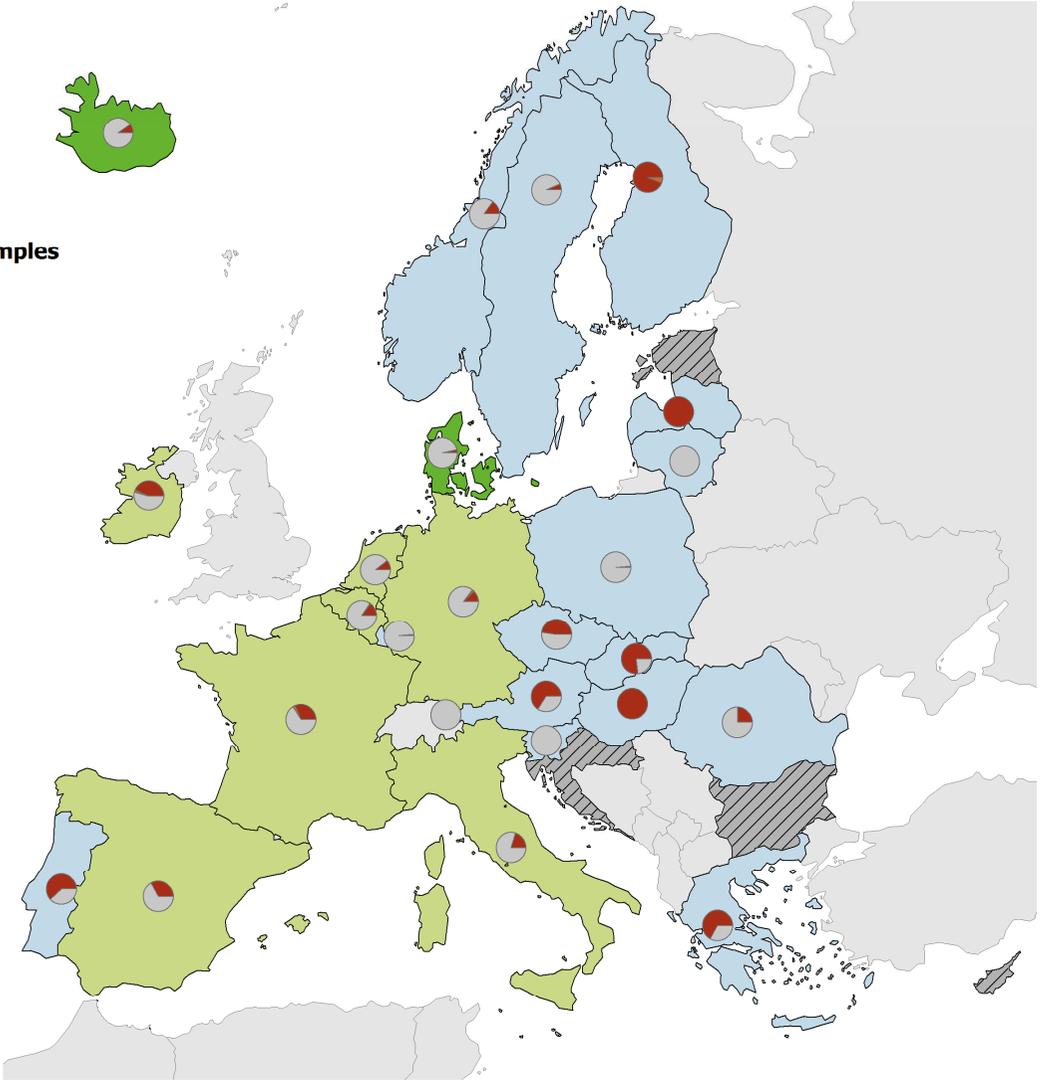
Distribution of variants among sequenced samples during week 2020-51 to 2021-02



Weekly average of samples collected with a published sequence during week 2020-51 to 2021-02



Countries not visible in the main map extent

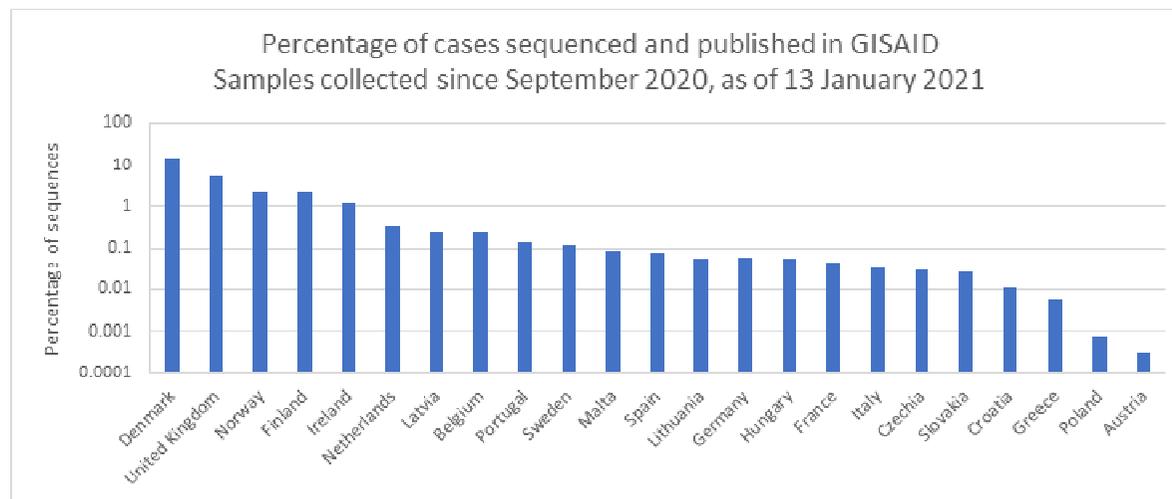
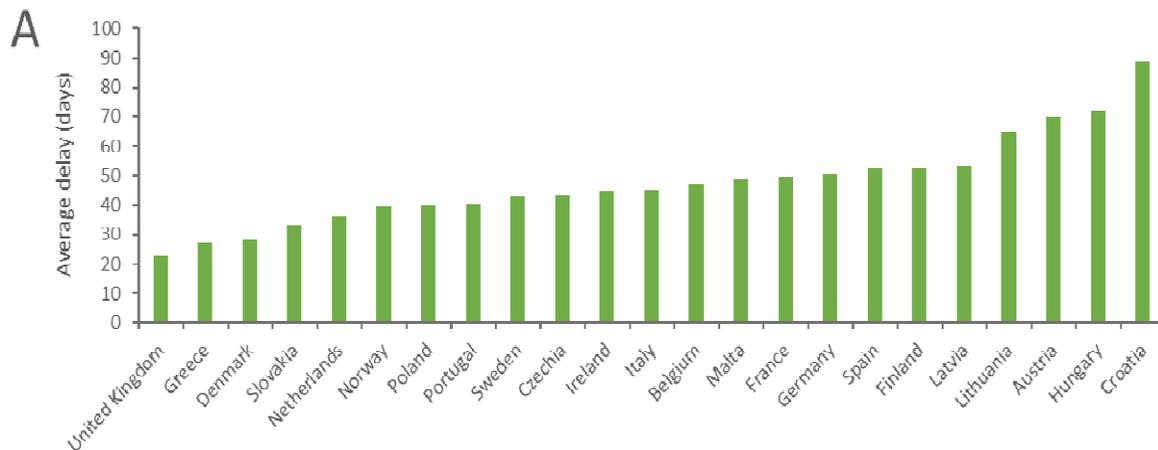


Source: GISAID EpiCoV data™. Administrative boundaries: © EuroGeographics
The boundaries and names shown on this map do not imply official endorsement or acceptance by the European Union. ECDC. Map produced on: 2 Feb 2021

Capacità di identificare varianti virali in EU/EEA



- Il sequenziamento del genoma virale o del gene S è necessario per identificare varianti virali
- Pochissimi Stati hanno sequenziato più dell' 1% dei casi da settembre 2020
- In pratica c'è un rischio altissimo che ci sfugga la diffusione di nuove varianti impedendoci di rispondere adeguatamente.



Source: GISAID EpiCoV database, *Iceland has reported to ECDC that all cases in the country are sequenced within 48 hours, although these have not been uploaded to GISAID recently

Opzioni per rispondere all'emergenza delle variabili più trasmissibili



- Aumentare il sequenziamento di campioni positivi provenienti dalla comunità e sequenziare tutte le reinfezioni o i fallimenti vaccinali
- Implementare screening con RT-PCR alla ricerca della mutazione N501Y o la delezione 69-70;
- Monitorare l'incidenza delle varianti identificate;
- Identificare, tracciare e isolare i casi sospetti e confermati;
- Essere in grado di identificare rapidamente aree con improvvisi incrementi di incidenza, ospedalizzazioni o mortalità da COVID-19
- Notificare rapidamente l'identificazione di varianti attraverso EWRS e TESSy.

Opzioni per rispondere all'emergenza delle variabili più trasmissibili



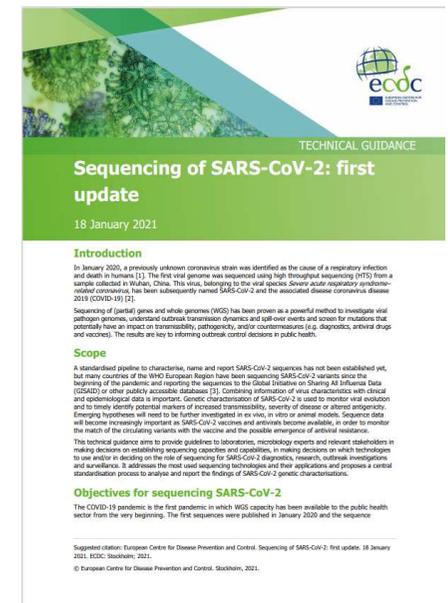
Preparare i laboratori ad affrontare un significativo aumento della richiesta di tests:

- Assicurare staff e risorse per diagnosticare e caratterizzare molti più casi;
- Aumentare la capacità di sequenziamento sfruttando tutte le strutture possibili (laboratori in strutture di salute pubblica, universitari, privati);
- Prevenire la carenza di materiale di laboratorio mantenendo una scorta di reagenti, materiali usa e getta, dispositivi di protezione personale, anticipando le ordinazioni.

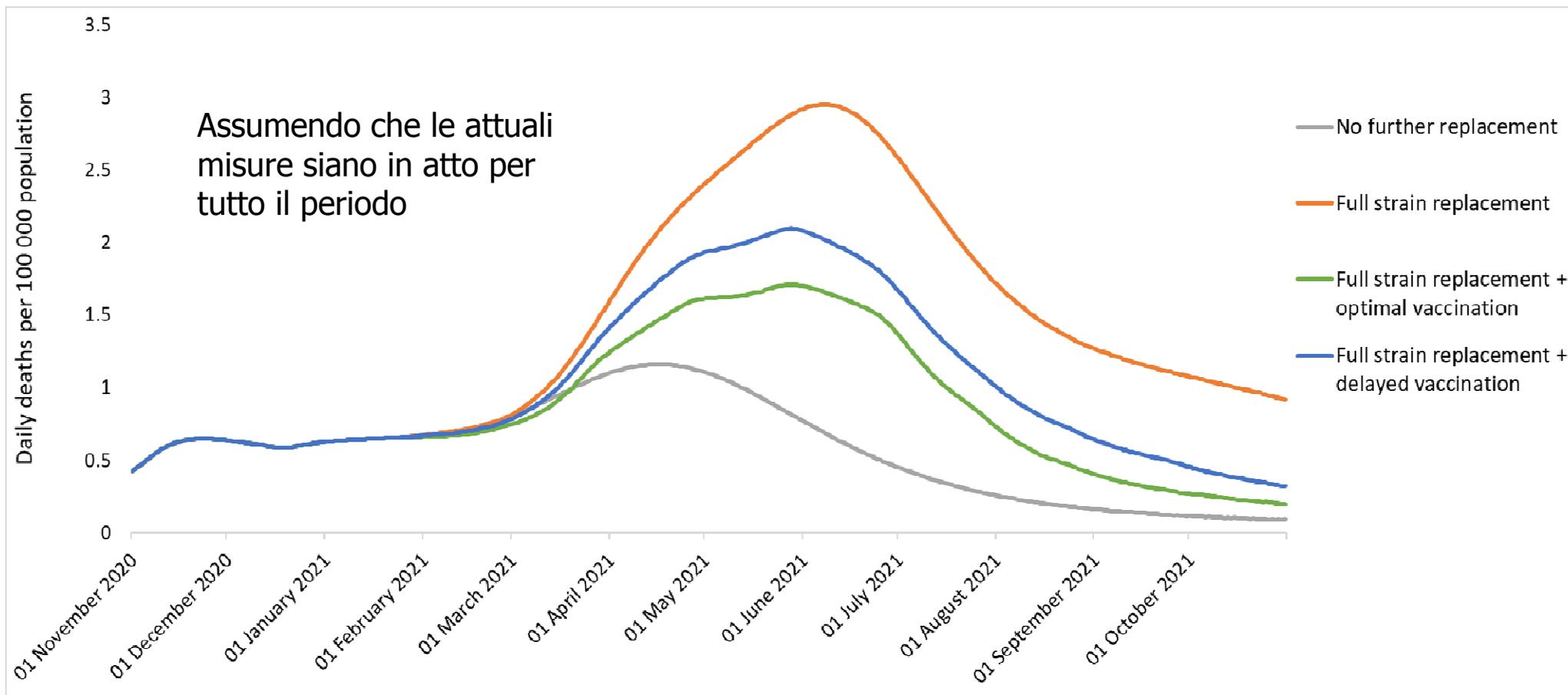
Necessità di sequenziare campioni provenienti dalla comunità

Per individuare e quantificare la presenza di nuove varianti di SARS-CoV-2 è necessario:

1. Sequenziare un campione rappresentativo di virus
2. Da diverse località geografiche
3. In diversi momenti
4. Provenienti da casi di età diversa
5. Comprendenti tutti i livelli di gravità.

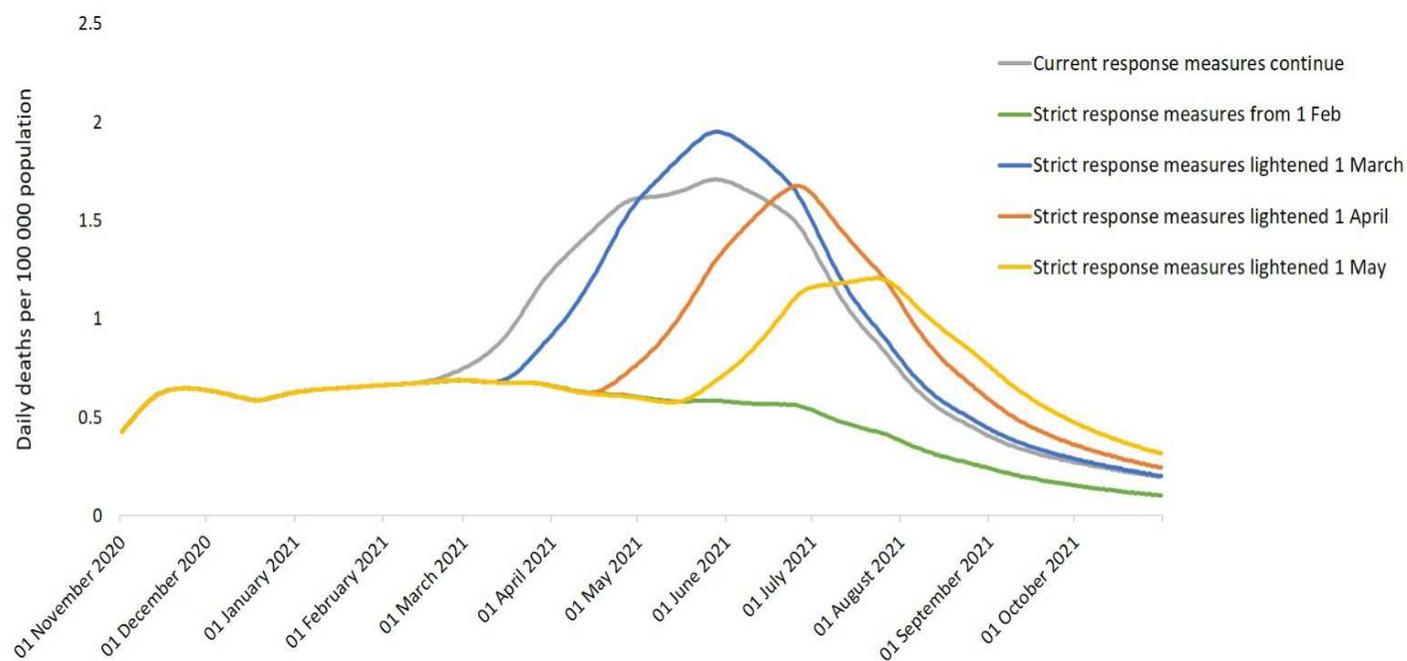


Mortalità da COVID-19 attesa in EU/EEA, in quattro scenari di circolazione di varianti virali ed efficacia delle campagne vaccinali

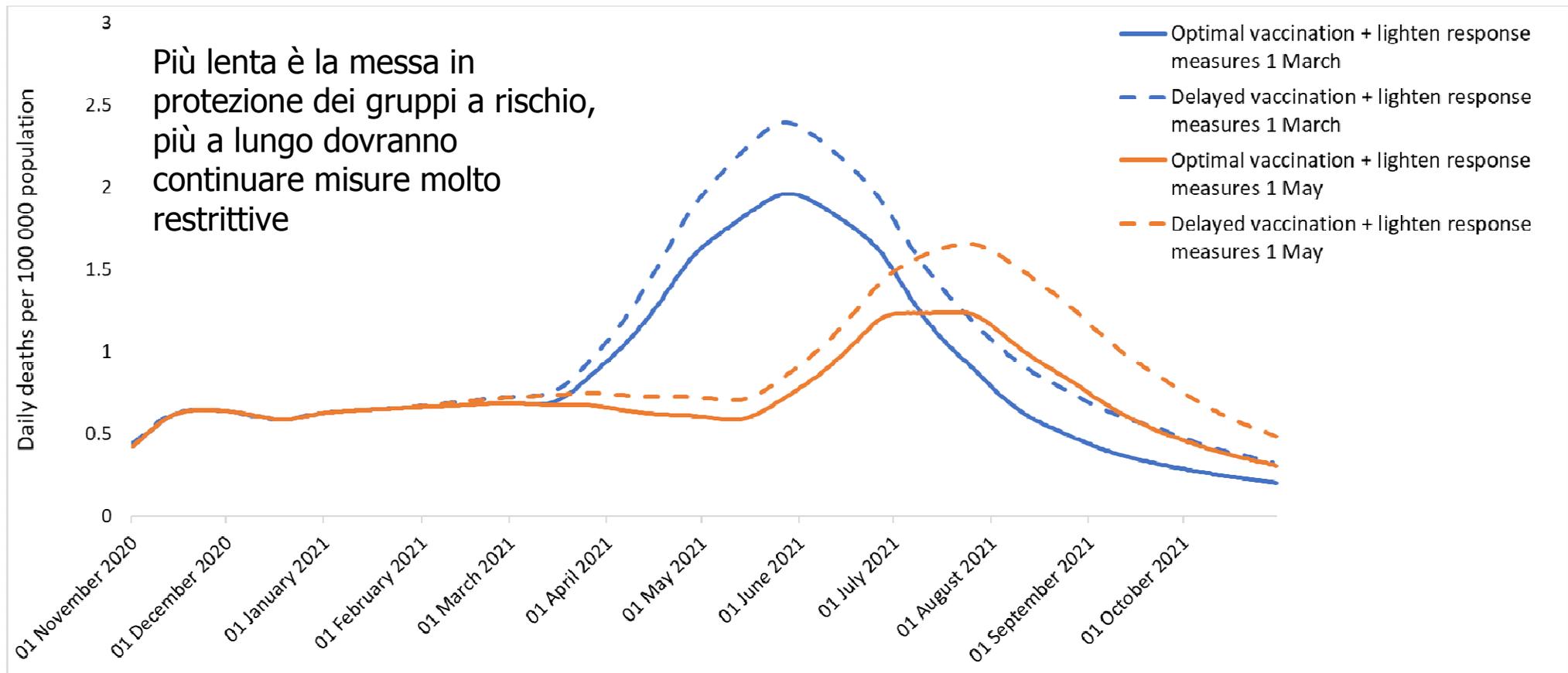


Impatto del rilassamento delle misure in presenza di un virus al 70% più trasmissibile.

Per ogni mese di misure più severe si osserva un ritardo e una riduzione del picco di morti



Impatto sulla mortalità di eventuali ritardi nella vaccinazione, in base alle misure in atto.



Priorità 2021

- Proteggere i gruppi a rischio di morte nel più breve tempo possibile
- Individuare, investigare e monitorare l'emergenza di nuove varianti
- Rafforzare le misure di contenimento anche di fronte a una situazione epidemiologica in miglioramento
- Rafforzare i sistemi di sorveglianza, incluso il monitoraggio dell'efficacia vaccinale

Grazie

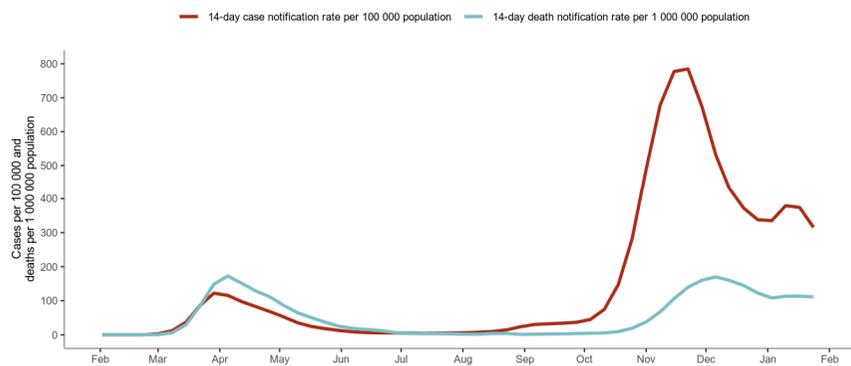


Country overview report <http://covid19-country-overviews.ecdc.europa.eu/> COVID-19 dashboard
<https://qap.ecdc.europa.eu/public/extensions/covid-19/covid-19.html>

Italia

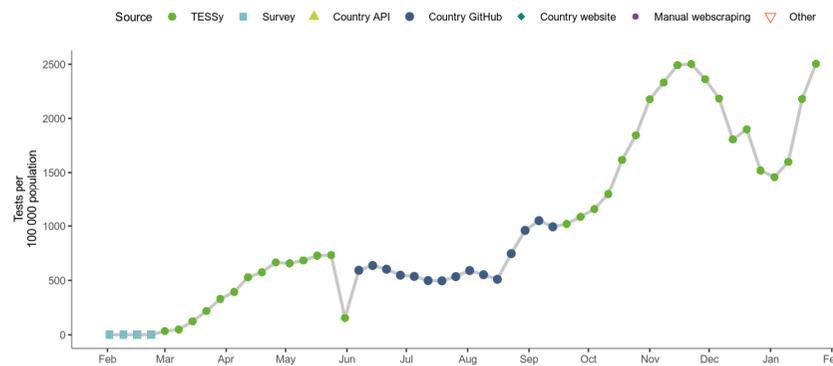
Italy: 14-day COVID-19 case and death notification rates

National totals as of 25 Jan 2021: 2 466 813 cases (earliest 2020-W05, latest 2021-W03), 85 461 deaths (2020-W08, 2021-W03)



ECDC. Figure produced 28 January 2021.
Source: Epidemic intelligence, national weekly data

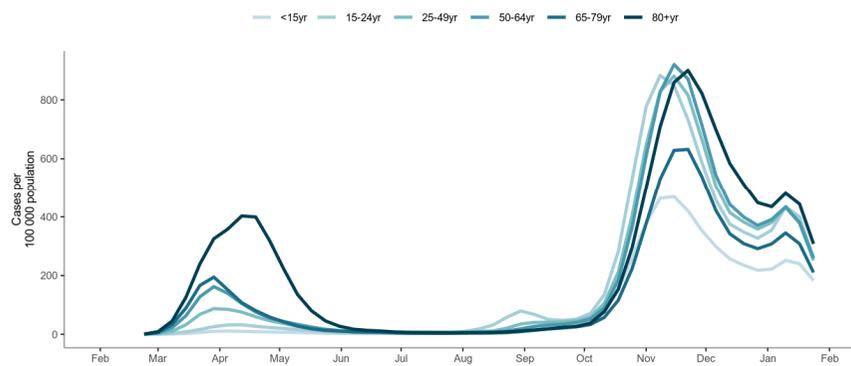
Italy: weekly testing rate



ECDC. Figure produced 28 January 2021.
Source: TESSy/survey/online sources, weekly COVID-19 testing data

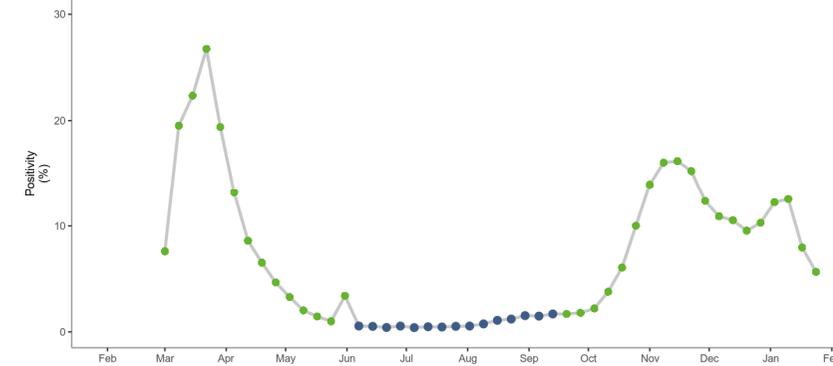
Italy: 14-day age-specific COVID-19 case notification rate

Age-specific weekly data available from weeks ending 2 Feb to 24 Jan 2021, n = 2 462 224 (99.8% of the official national total to 25 Jan 2021)



ECDC. Figure produced 28 January 2021.
Source: TESSy COVID-19, national weekly data

Italy: weekly test positivity



ECDC. Figure produced 28 January 2021.
Source: TESSy/survey/online sources, weekly COVID-19 testing data; Epidemic intelligence, national weekly data