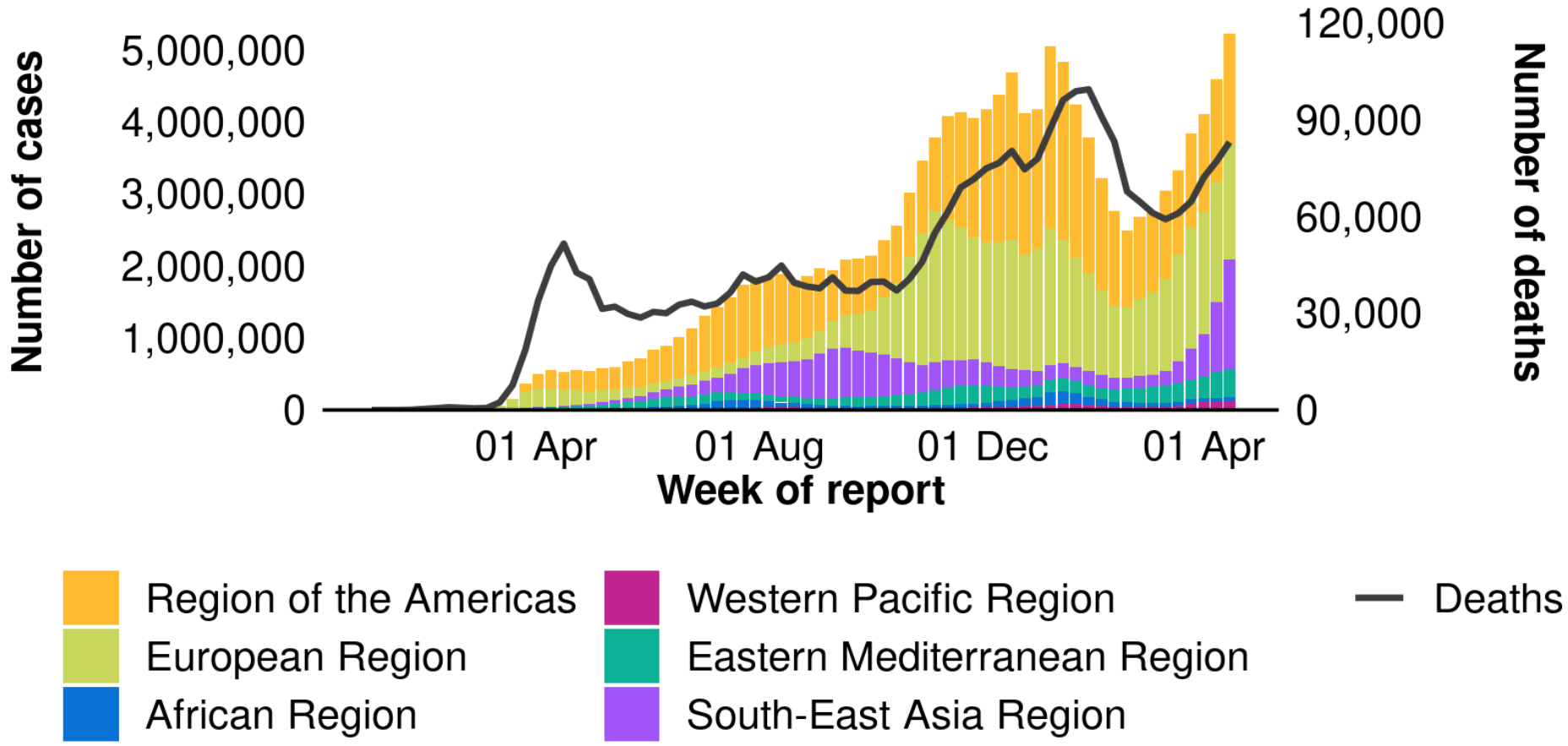
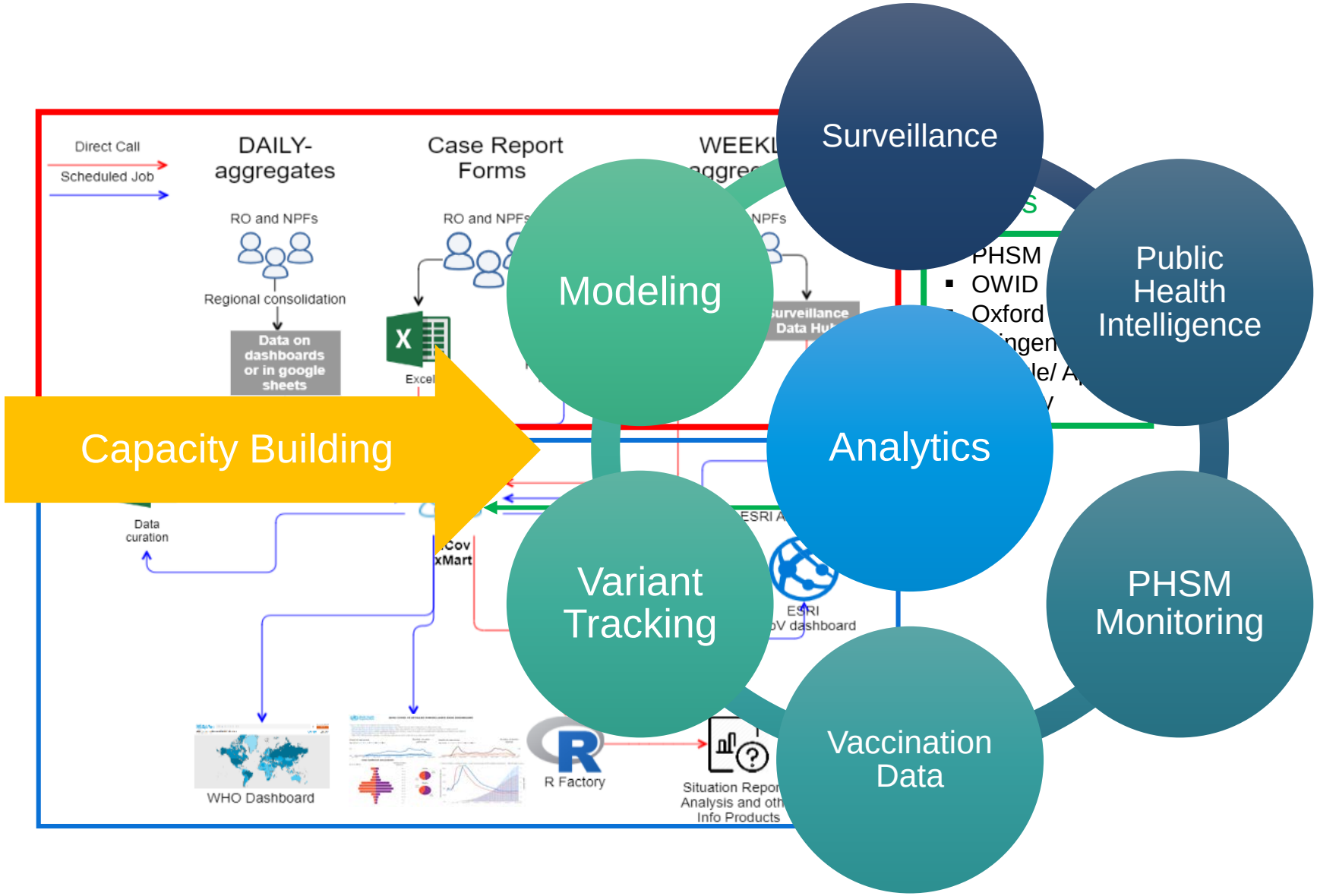
Global situation: weekly overview



** Data are incomplete for the current week. Cases depicted by bars; deaths depicted by line.*

World Health Organization

Epi Pillar: WHO's Comprehensive System of Information for Action



Information Products

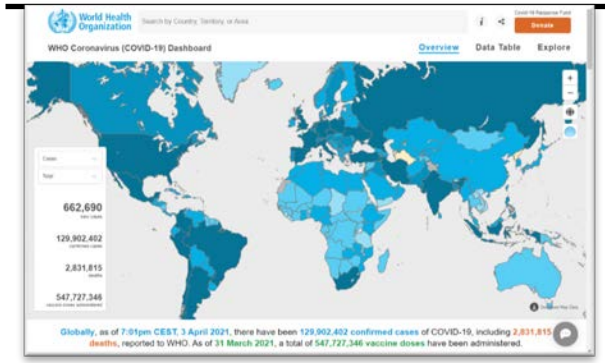
Policy Guidance

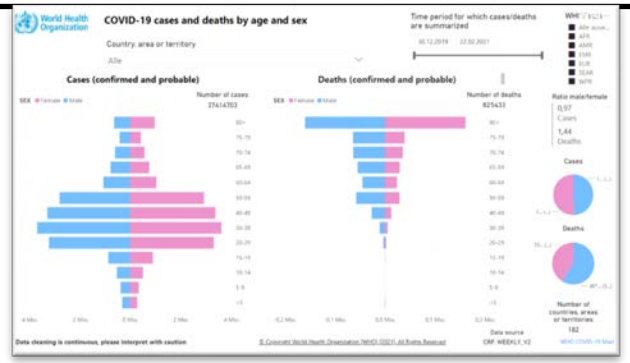
Action

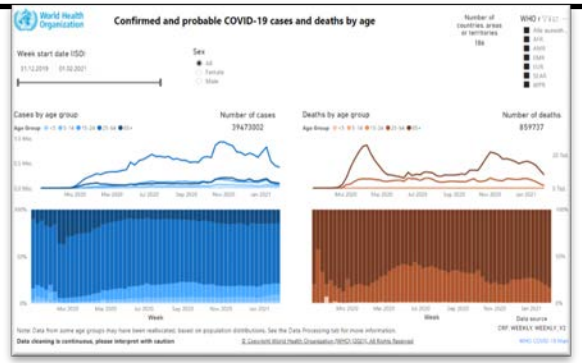
World Health Organization

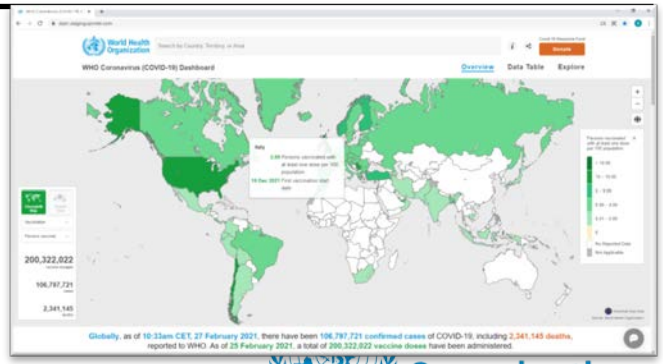
COVID-19 disease surveillance

Daily aggregated data	Case based data from Case Report Forms (CRFs)	Weekly aggregated reporting	Vaccination data
Cumulative and new cases and deaths from WHO regional offices	Data captured form case report forms and entered to regional databases, harmonized using existing systems	Data captured from case based or aggregated systems weekly	Data from RO and added from publicly available sources
> 132 million cases	**> 52 million cases, >840K deaths**	**> 42 million cases, >740K deaths**	**>604 million vaccine doses administered**
Daily tracking of the progression of the pandemic – outputted to dashboards, daily response briefings, etc.	Provides more detailed information for a subset of total cases	Essential epidemiological information on core variables	Showing which country started vaccination and doses administered





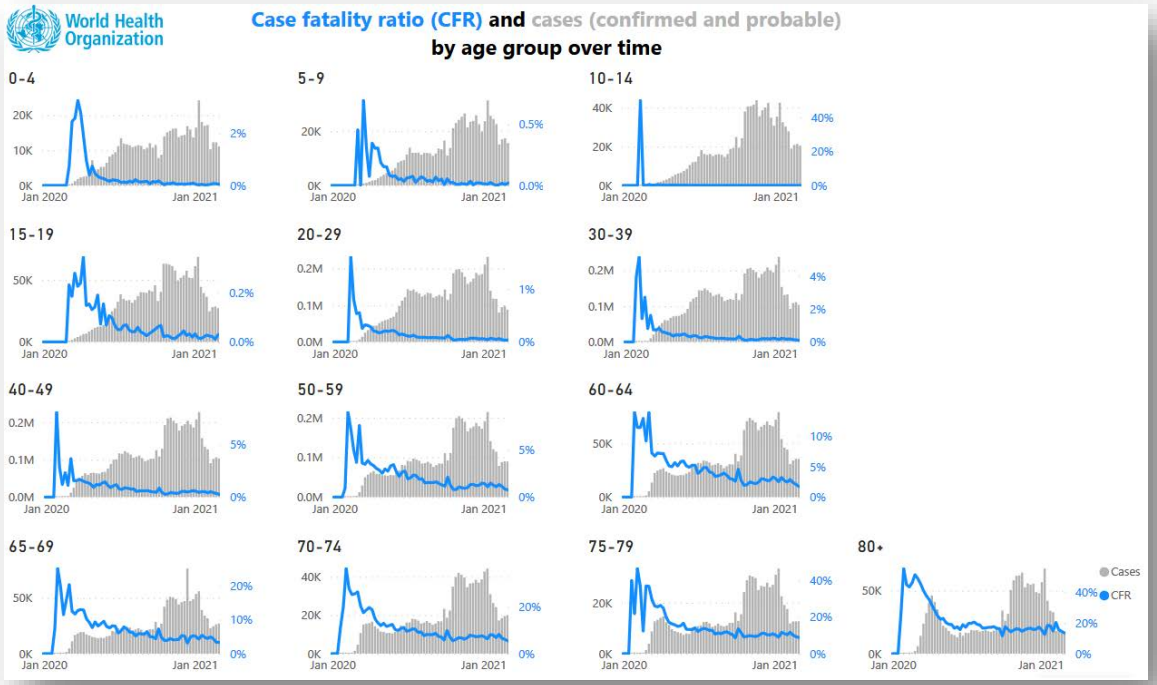




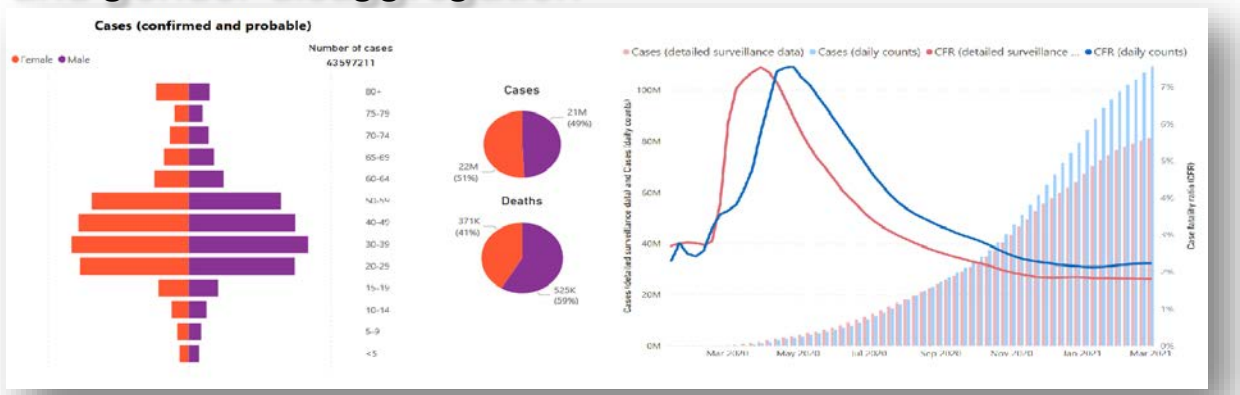
Organization

Detailed COVID-19 surveillance data

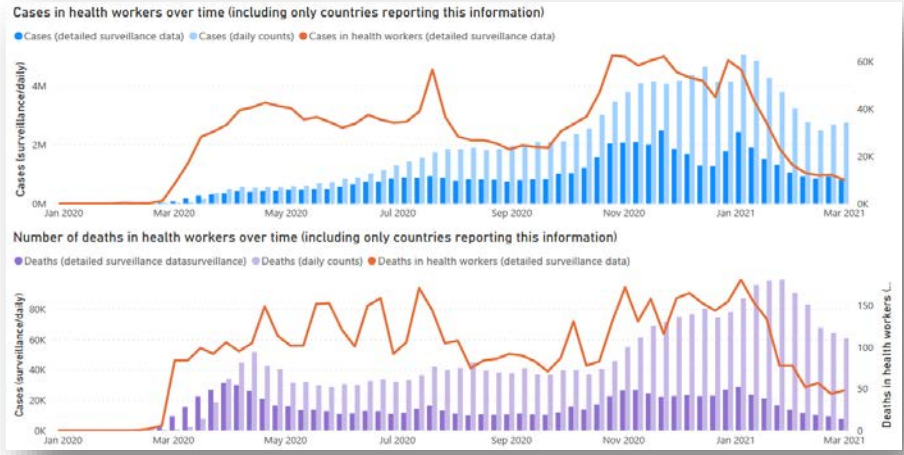
Age specific mortality rate



Age and gender disaggregation



Health worker infections and deaths

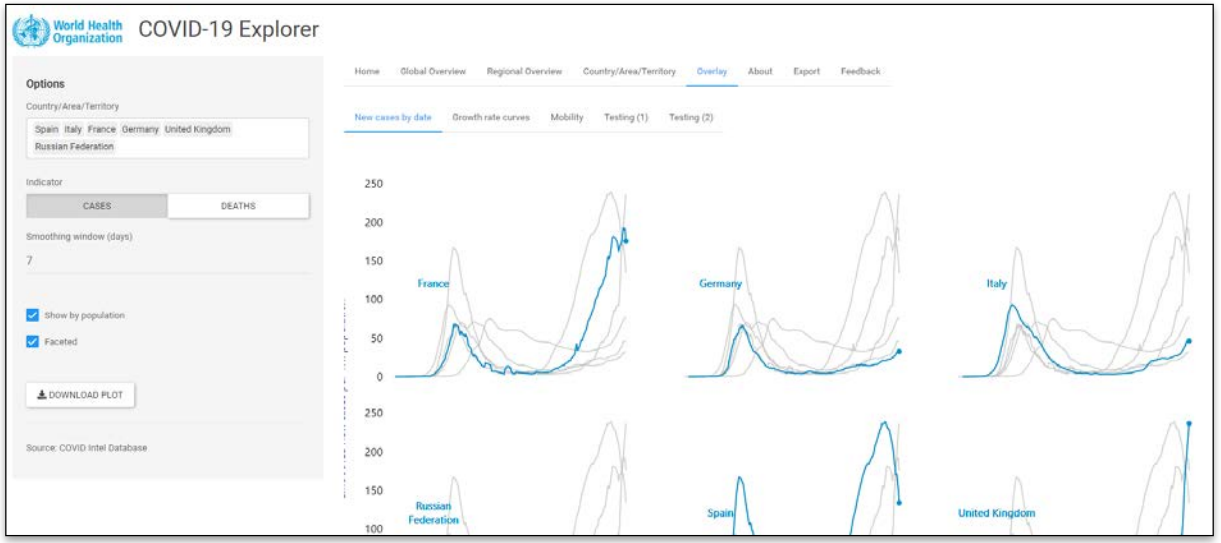


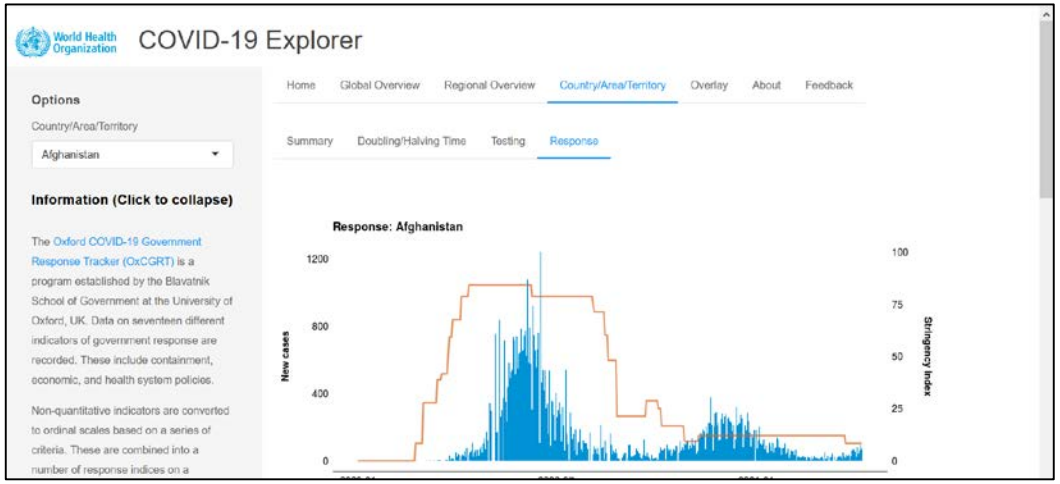
World Health Organization

COVID-19 Explorer app (Shiny) maintained in house

- Centralised and reusable approach used for app
  - Internal and external versions created
- Internally used for:
  - Preparation of morning slides
  - Country specific profiles
  - Ad-hoc analyses
- Externally on the WHO dashboard:
  - Since public launch 15 September 2020:
    - 171K single users
    - 220K single sessions

https://worldhealthorg.shinyapps.io/covid/ (External)

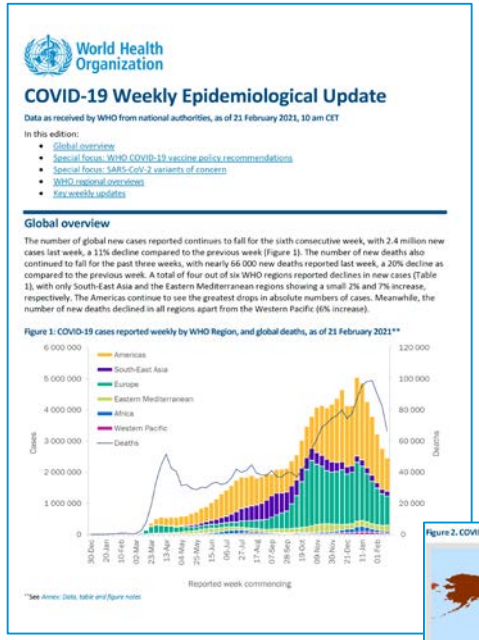


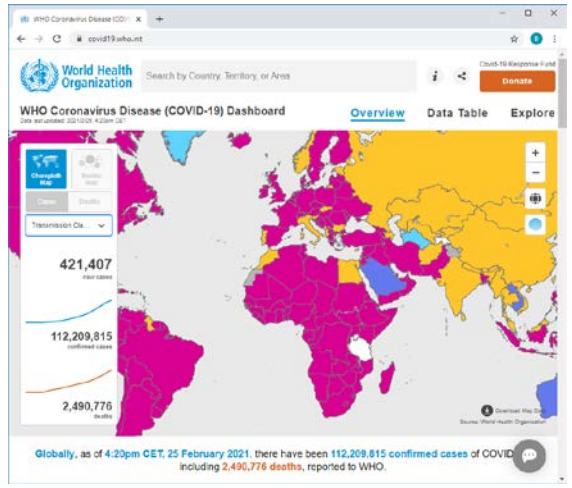


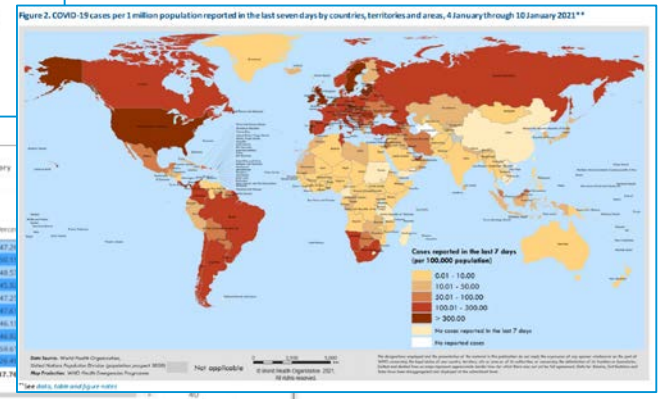
World Health Organization

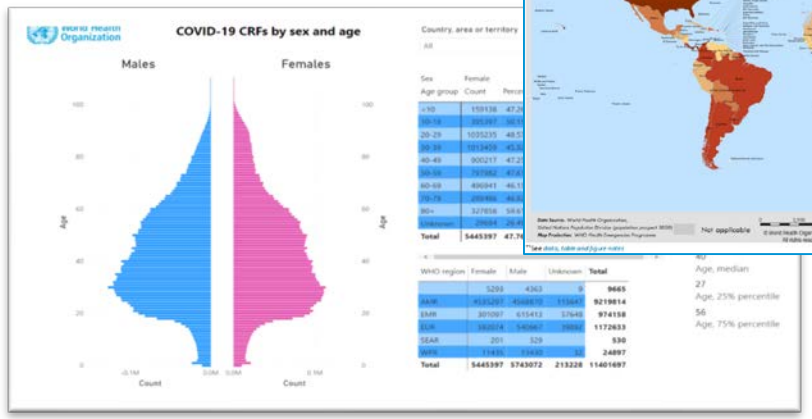
Current main outputs

- Daily data packs
- Weekly epidemiological updates
- Detailed analysis with presentations
- Dashboards
  - WHO public dashboard
  - Shiny app as data explorer (facilitating internal and external outputs)
  - Weekly dashboards (Age, Sex and HW data)
  - PAHO dashboard using the harmonized data from our system
  - Regular maps, graphs and detailed analysis
  - PHSM dashboard (currently only internal)
  - Vaccination data





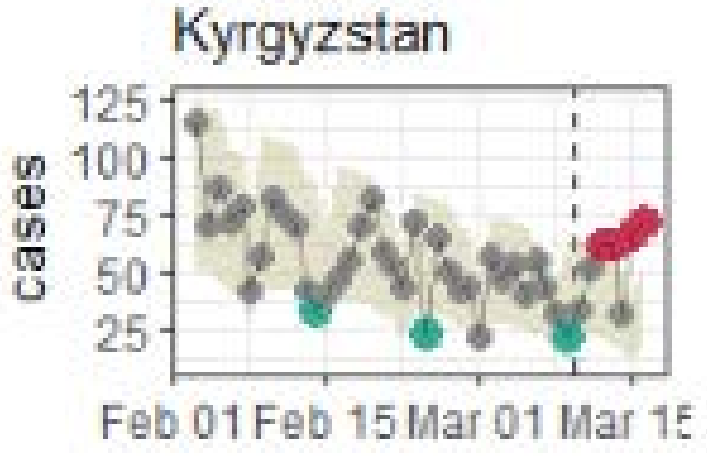


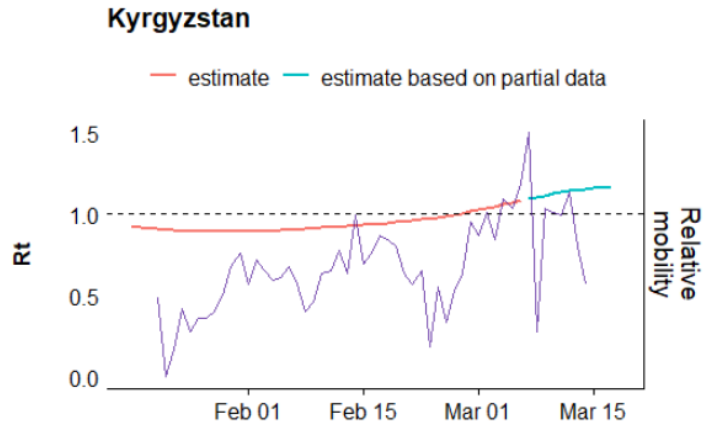


World Health Organization

Analytics: Identifying unusual trends

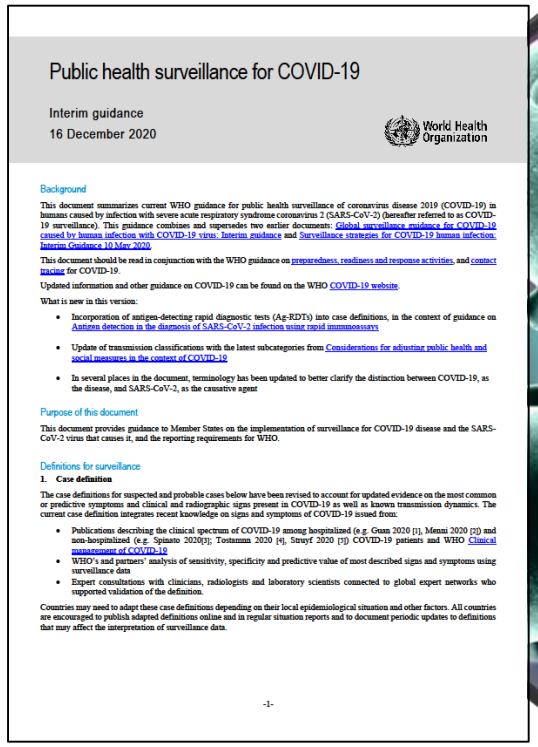
- Identification of predictors of poor epidemic trajectories
- Advanced statistical modelling and automated machine learning approaches
- Triangulation of data sources and collection of relevant data – focus at the subnational level





World Health Organization

Key Guidance to Member States



Public health surveillance for COVID-19

Interim guidance
16 December 2020

World Health Organization

Background

This document summarizes current WHO guidance for public health surveillance of coronavirus disease 2019 (COVID-19) in humans caused by infection with severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) (hereafter referred to as COVID-19 surveillance). This guidance combines and supersedes two earlier documents: Global surveillance guidance for COVID-19 caused by human infection with COVID-19 virus: Interim guidance and Surveillance strategies for COVID-19 human infection: Interim Guidance 10 May 2020.

This document should be read in conjunction with the WHO guidance on preparedness, readiness and response activities, and contact tracing for COVID-19.

Updated information and other guidance on COVID-19 can be found on the WHO COVID-19 website.

What is new in this version:

- Incorporation of antigen-detecting rapid diagnostic tests (Ag-RDTs) into case definitions, in the context of guidance on Antigen detection in the diagnosis of SARS-CoV-2 infection using rapid immunoassays
- Update of transmission classifications with the latest subcategories from Considerations for adjusting public health and social measures in the context of COVID-19
- In several places in the document, terminology has been updated to better clarify the distinction between COVID-19, as the disease, and SARS-CoV-2, as the causative agent

Purpose of this document

This document provides guidance to Member States on the implementation of surveillance for COVID-19 disease and the SARS-CoV-2 virus that causes it, and the reporting requirements for WHO.

Definitions for surveillance

1. **Case definition**

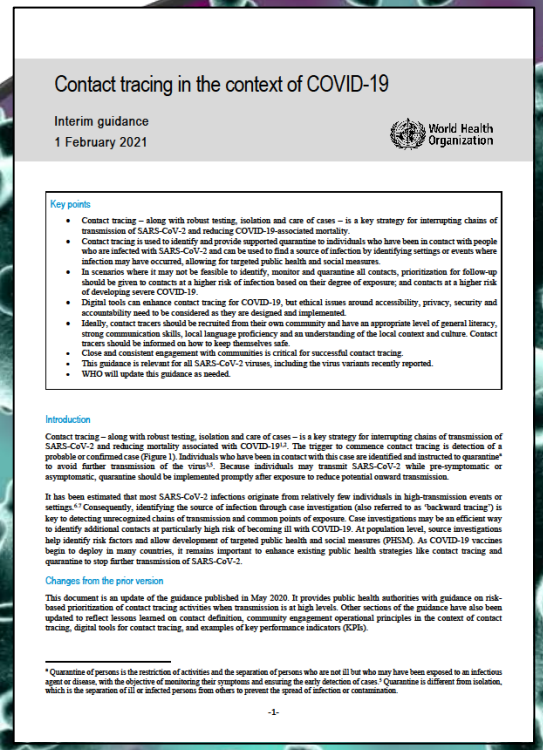
The case definitions for suspected and probable cases below have been revised to account for updated evidence on the most common or predictive symptoms and clinical and radiographic signs present in COVID-19 as well as known transmission dynamics. The current case definition integrates recent knowledge on signs and symptoms of COVID-19 issued from:

- Publications describing the clinical spectrum of COVID-19 among hospitalized (e.g. Guan 2020 [1], Menni 2020 [2]) and non-hospitalized (e.g. Spinato 2020[3]; Tostmann 2020 [4], Struyf 2020 [5]) COVID-19 patients and WHO Clinical management of COVID-19
- WHO's and partners' analysis of sensitivity, specificity and predictive value of most described signs and symptoms using surveillance data
- Expert consultations with clinicians, radiologists and laboratory scientists connected to global expert networks who supported validation of the definition.

Countries may need to adapt these case definitions depending on their local epidemiological situation and other factors. All countries are encouraged to publish adapted definitions online and in regular situation reports and to document periodic updates to definitions that may affect the interpretation of surveillance data.

-1-

Global Surveillance



Contact tracing in the context of COVID-19

Interim guidance
1 February 2021

World Health Organization

Key points

- Contact tracing – along with robust testing, isolation and care of cases – is a key strategy for interrupting chains of transmission of SARS-CoV-2 and reducing COVID-19-associated mortality.
- Contact tracing is used to identify and provide supported quarantine to individuals who have been in contact with people who are infected with SARS-CoV-2 and can be used to find a source of infection by identifying settings or events where infection may have occurred, allowing for targeted public health and social measures.
- In scenarios where it may not be feasible to identify, monitor and quarantine all contacts, prioritization for follow-up should be given to contacts at a higher risk of infection based on their degree of exposure; and contacts at a higher risk of developing severe COVID-19.
- Digital tools can enhance contact tracing for COVID-19, but ethical issues around accessibility, privacy, security and accountability need to be considered as they are designed and implemented.
- Ideally, contact tracers should be recruited from their own community and have an appropriate level of general literacy, strong communication skills, local language proficiency and an understanding of the local context and culture. Contact tracers should be informed on how to keep themselves safe.
- Close and consistent engagement with communities is critical for successful contact tracing.
- This guidance is relevant for all SARS-CoV-2 viruses, including the virus variants recently reported.
- WHO will update this guidance as needed.

Introduction

Contact tracing – along with robust testing, isolation and care of cases – is a key strategy for interrupting chains of transmission of SARS-CoV-2 and reducing mortality associated with COVID-19[1,2]. The trigger to commence contact tracing is detection of a probable or confirmed case (Figure 1). Individuals who have been in contact with this case are identified and instructed to quarantine* to avoid further transmission of the virus[3,4]. Because individuals may transmit SARS-CoV-2 while pre-symptomatic or asymptomatic, quarantine should be implemented promptly after exposure to reduce potential onward transmission.

It has been estimated that most SARS-CoV-2 infections originate from relatively few individuals in high-transmission events or settings.[6,7] Consequently, identifying the source of infection through case investigation (also referred to as "backward tracing") is key to detecting unrecognized chains of transmission and common points of exposure. Case investigations may be an efficient way to identify additional contacts at particularly high risk of becoming ill with COVID-19. At population level, source investigations help identify risk factors and allow development of targeted public health and social measures (PHSM). As COVID-19 vaccines begin to deploy in many countries, it remains important to enhance existing public health strategies like contact tracing and quarantine to stop further transmission of SARS-CoV-2.

Changes from the prior version

This document is an update of the guidance published in May 2020. It provides public health authorities with guidance on risk-based prioritization of contact tracing activities when transmission is at high levels. Other sections of the guidance have also been updated to reflect lessons learned on contact definition, community engagement operational principles in the context of contact tracing, digital tools for contact tracing, and examples of key performance indicators (KPIs).

* Quarantine of persons is the restriction of activities and the separation of persons who are not ill but who may have been exposed to an infectious agent or disease, with the objective of monitoring their symptoms and ensuring the early detection of cases.[5] Quarantine is different from isolation, which is the separation of ill or infected persons from others to prevent the spread of infection or contamination.

-1-

Contact Tracing

Considerations for implementing and adjusting public health and social measures in the context of COVID-19

Interim guidance
4 November 2020

World Health Organization

Key points

- Public health and social measures (PHSM) have proven critical to limiting transmission of COVID-19 and reducing deaths.
- The decision to introduce, adapt or lift PHSM should be based primarily on a situational assessment of the intensity of transmission and the capacity of the health system to respond, but must also be considered in light of the effects these measures may have on the general welfare of society and individuals .
- Indicators and suggested thresholds are provided to gauge both the intensity of transmission and the capacity of the health system to respond; taken together, these provide a basis for guiding the adjustment of PHSM. Measures are indicative and need to be tailored to local contexts.
- PHSM must be continuously adjusted to the intensity of transmission and capacity of the health system in a country and at sub-national levels.
- When PHSM are adjusted, communities should be fully consulted and engaged before changes are made.

Introduction

This document is an update to the interim guidance published on 16 April 2020 entitled "Considerations in adjusting public health and social measures in the context of COVID-19".

Public health and social measures (PHSM) are being implemented across the globe to limit transmission and reduce mortality and morbidity from COVID-19. PHSM include non-pharmaceutical individual and societal interventions to control COVID-19.

As the pandemic unfolds, PHSM should be regularly reviewed and adapted and their effectiveness in controlling SARS-CoV-2 transmission evaluated. This requires agile decision-making based on ongoing situational assessments at the most local administrative level possible. Such assessments should be based on a risk/benefit approach considering the intensity of transmission, the health system's capacity to respond, other contextual considerations (such as upcoming events which may alter transmission or capacity) and the overall strategic approach to responding to COVID-19 in each specific setting. Decisions to tighten, loosen, or introduce PHSM to control COVID-19 must be weighed against the impacts these measures have on societies and individuals. Considerations include impact on the economy, security, mental health and psychosocial well-being, human rights, food security, socioeconomic disparities, continuity of health and public health programmes, treatment and management of conditions other than COVID-19, gender-based violence, and public sentiment and adherence to PHSM. The overall health and wellbeing of communities should therefore be at the forefront of considerations when deciding on and implementing PHSM.

PHSM include personal protective measures (such as hand hygiene, respiratory etiquette, mask wearing[1]; environmental measures (such as cleaning, disinfection, ventilation), surveillance and response measures (including contact tracing, isolation and quarantine); physical distancing measures (e.g. limiting the size of gatherings, maintaining distance in public or workplaces, domestic movement restrictions); and international travel-related measures.[2] PHSM act in concert, and a combination of measures is required to ensure adequate control. Measures should be tailored to the lowest administrative level for which situational assessment is possible and measures can be enacted practically.

Changes from the previous version

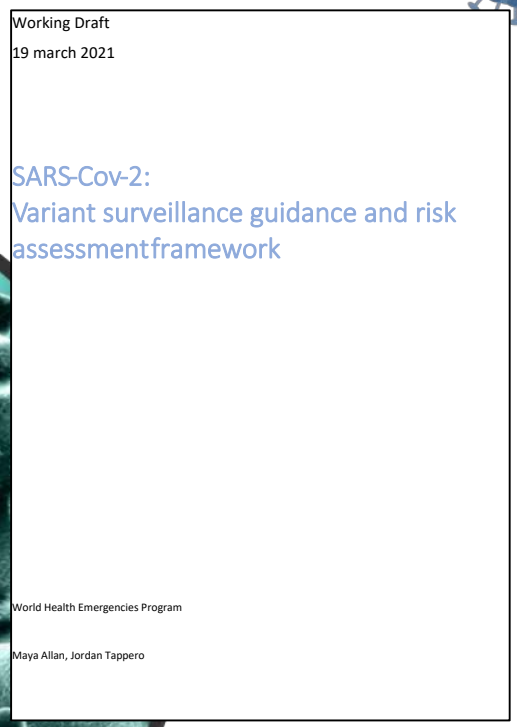
This document provides guidance to help Member States assess the situation at national and sub-national levels, as well as key recommendations about the implementation of PHSM. It should be read in conjunction with WHO interim guidance on Critical preparedness, readiness and response actions for COVID-19,[3] which addresses several other elements of preparedness, readiness and response for COVID-19 beyond PHSM.

The new guidance contains several important changes. First, it provides an updated transmission classification, sub-dividing 'community transmission' into four sub-categories, from low to very high incidence. The associated annex provides revised indicators and thresholds for determining the transmission classification, as well as the current health system capacity. The document then provides a situational assessment matrix, which takes into consideration the transmission classification and the health system response capacity to arrive at an overall Situational Level. Finally, the document provides guidance about the PHSM to implement or adjust at each Situational Level.

This guidance document is intended for public health and health services decision-makers at all operational levels (i.e., at any level at which decisions about tailored PHSM are made) and technical actors involved in relevant sectors (e.g. community engagement, education, social services) supporting or impacted by PHSM.

-1-

Adjusting PHSM



Working Draft

19 march 2021

SARS-Cov-2:
Variant surveillance guidance and risk assessmentframework

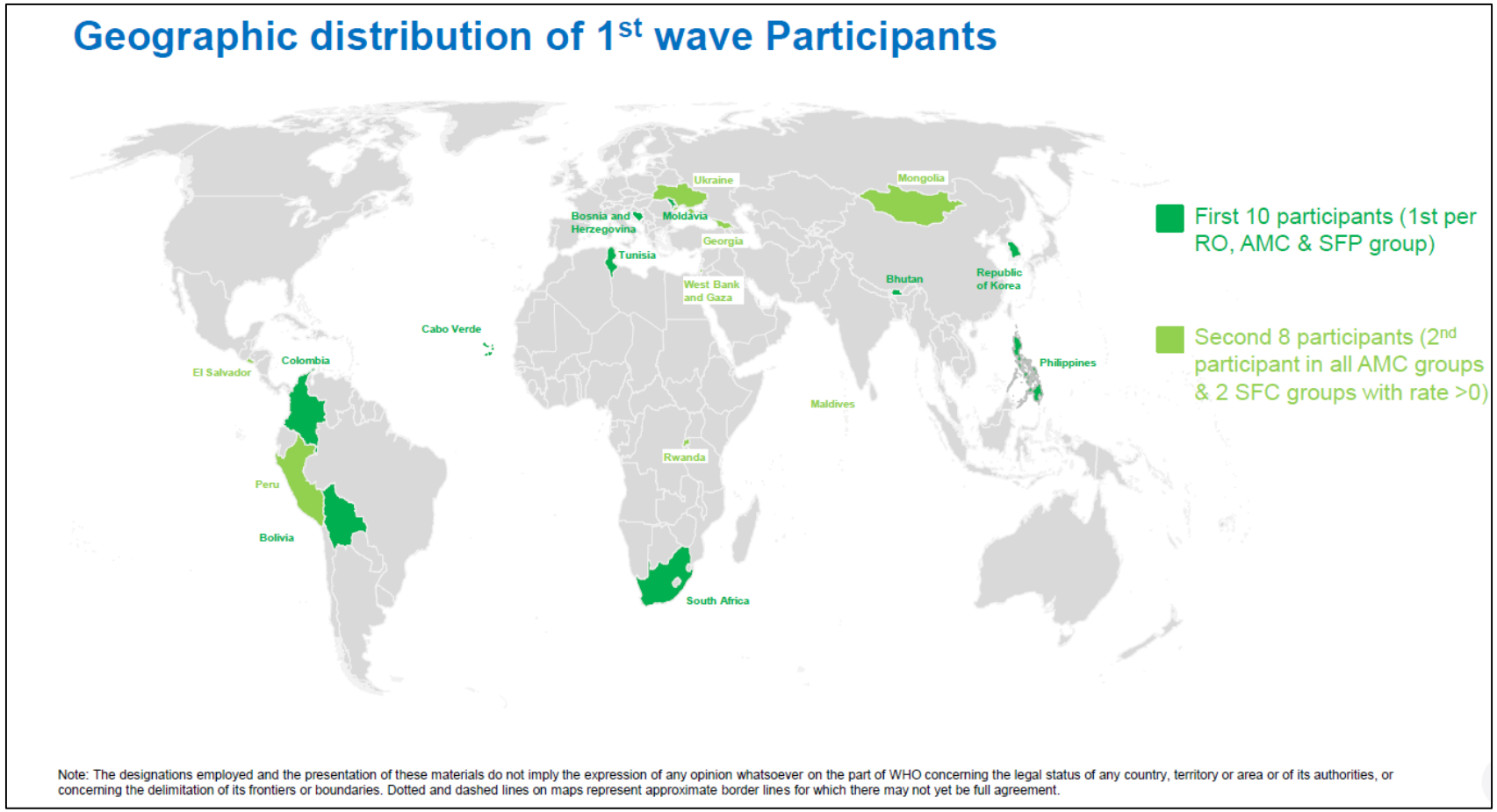
World Health Emergencies Program

Maya Allan, Jordan Tappero

Variant Surveillance (Draft)

World Health Organization

Direct action – COVAX allocations



From Signal to Variant of Interest (VOI)/ Variant of Concern (VOC) – Defining the problem

World Health Organization

COVID-19 Weekly Epidemiological Update

25 February 2021

Special edition: Proposed working definitions of SARS-CoV-2 Variants of Interest and Variants of Concern

This special edition is supplementary to the 23 February Weekly Epidemiological Update, which included a global and regional overview of COVID-19 case and death trends, and special focus updates on SARS-CoV-2 variants of concern, and WHO COVID-19 vaccine policy recommendations.

In the following, we provide working definitions for SARS-CoV-2 variants of interest and variants of concern and the associated actions WHO will take to support Member States, their national public health institutes and reference laboratories, along with the recommended actions Member States should take. It includes general and non-exhaustive guidance on the prioritization of variants of greatest public health relevance in the context of wider SARS-CoV-2 transmission, and established response mechanisms and public health and social measures (PHSM).

- The threshold for determination of a variant of interest is relatively low in order to maintain sensitive surveillance for potentially important variants.
- The threshold for determination of a variant of concern is high in order to focus attention and resources on the variants with the highest public health implications, while reducing noise and unwarranted diversion of limited resources.

These definitions will be reviewed regularly and updated as necessary.

Working Definition of "SARS-CoV-2 Variant of Interest"

A SARS-CoV-2 isolate is a variant of interest (VOI) if it is phenotypically changed compared to a reference isolate or has a genome with mutations that lead to amino acid changes associated with established or suspected phenotypic implications[1];

AND

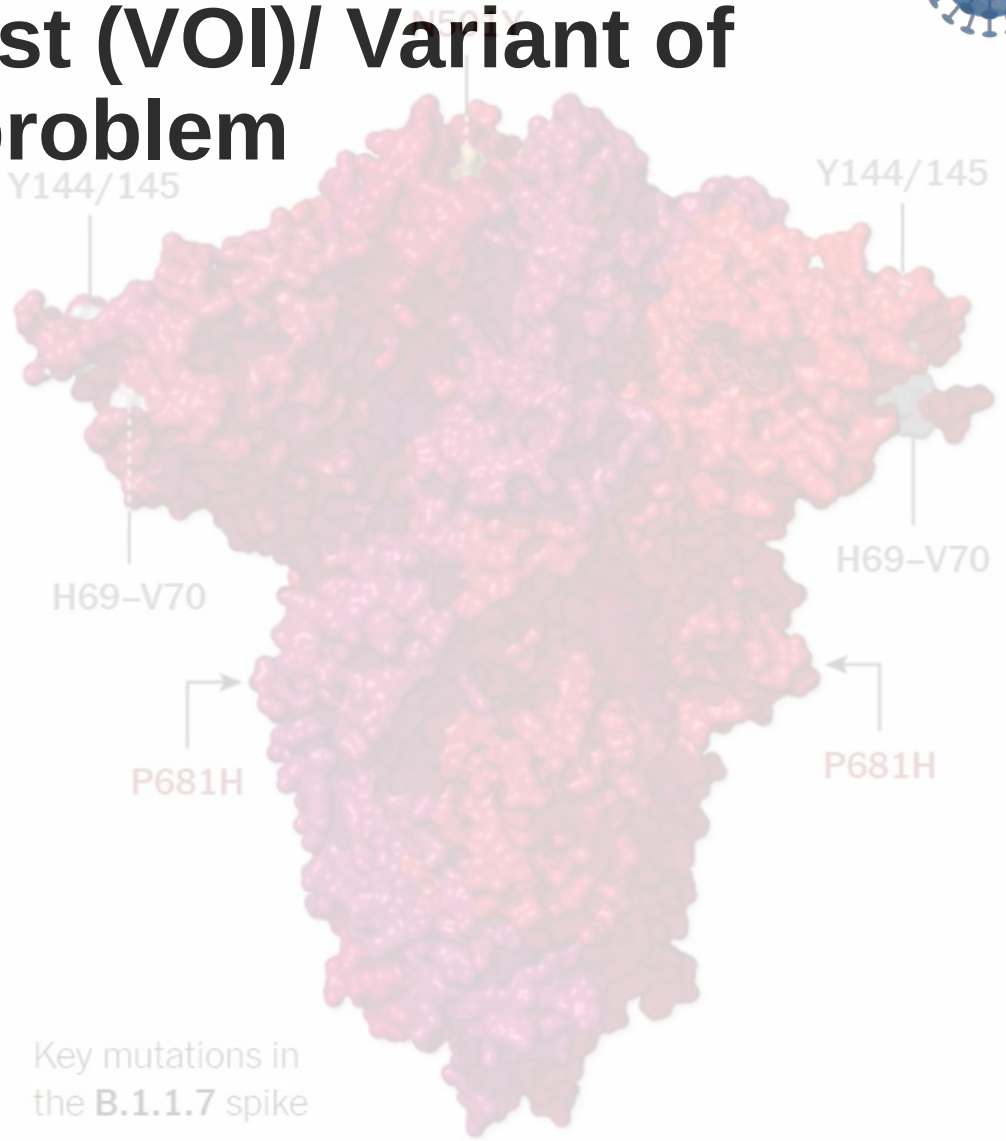
has been identified to cause community transmission[2]/multiple COVID-19 cases/clusters, or has been detected in multiple countries;

OR

is otherwise assessed to be a VOI by WHO in consultation with the WHO SARS-CoV-2 Virus Evolution Working Group.

[1] Phenotypic changes include changes in the epidemiology, antigenicity, or virulence or changes that have or potentially have a negative impact on available diagnostics, vaccines, therapeutics or public health and social measures. WHO will provide guidance on amino acid changes with established or suspected phenotypic implications, and may be informed by a database on key amino acid changes, or as reported in the scientific literature.

[2] See WHO public health surveillance for COVID-19: interim guidance for definitions



https://www.nytimes.com/interactive/2021/health/coronavirus-variant-tracker.html

World Health Organization

From Signal to VOI/VOC - Detection

Surveillance

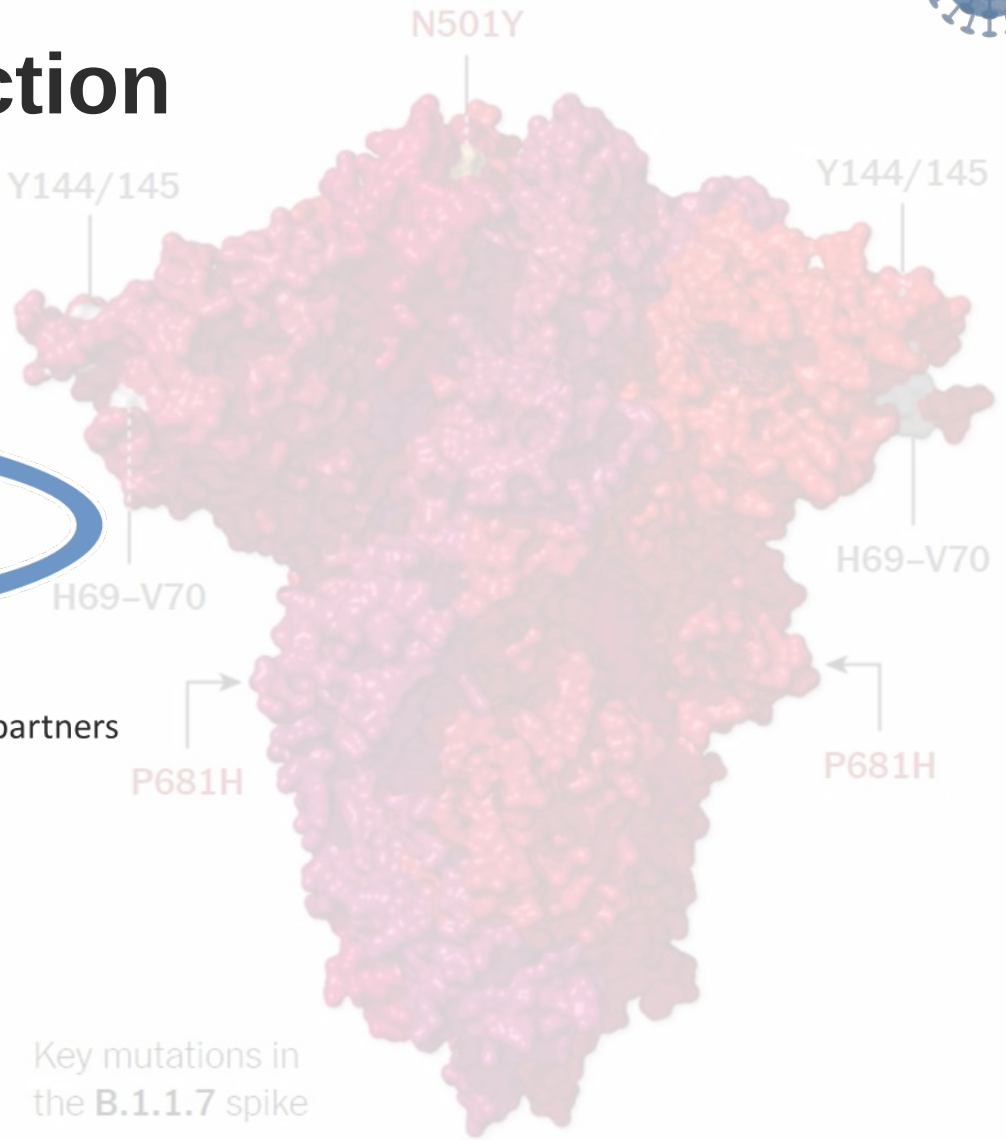
using EBS, global databases and IHR notifications

Review information, verify signals, share with technical teams, enter information in the variant database

Collaboration:

Share with RO's for verification, collaborate with other public health partners

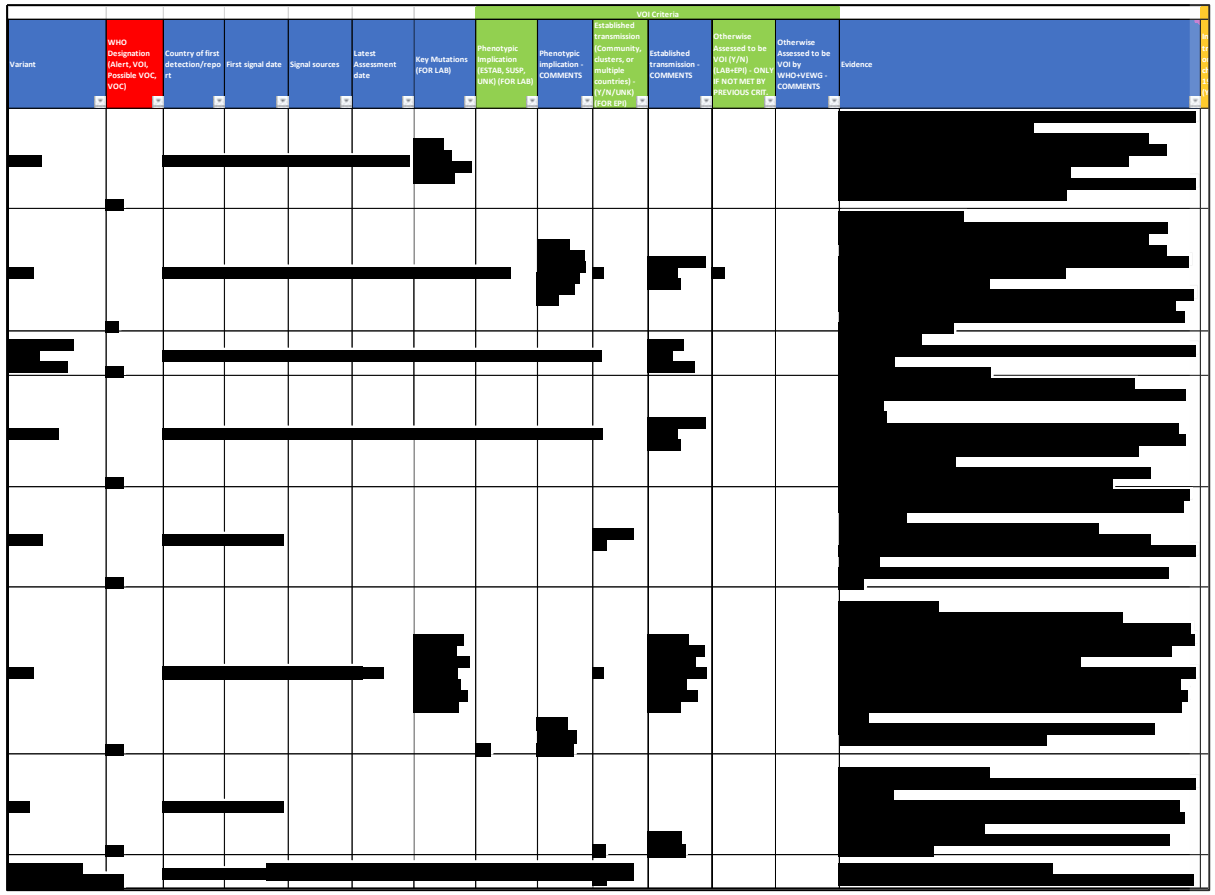
Analysis, interpretation and generation of outputs

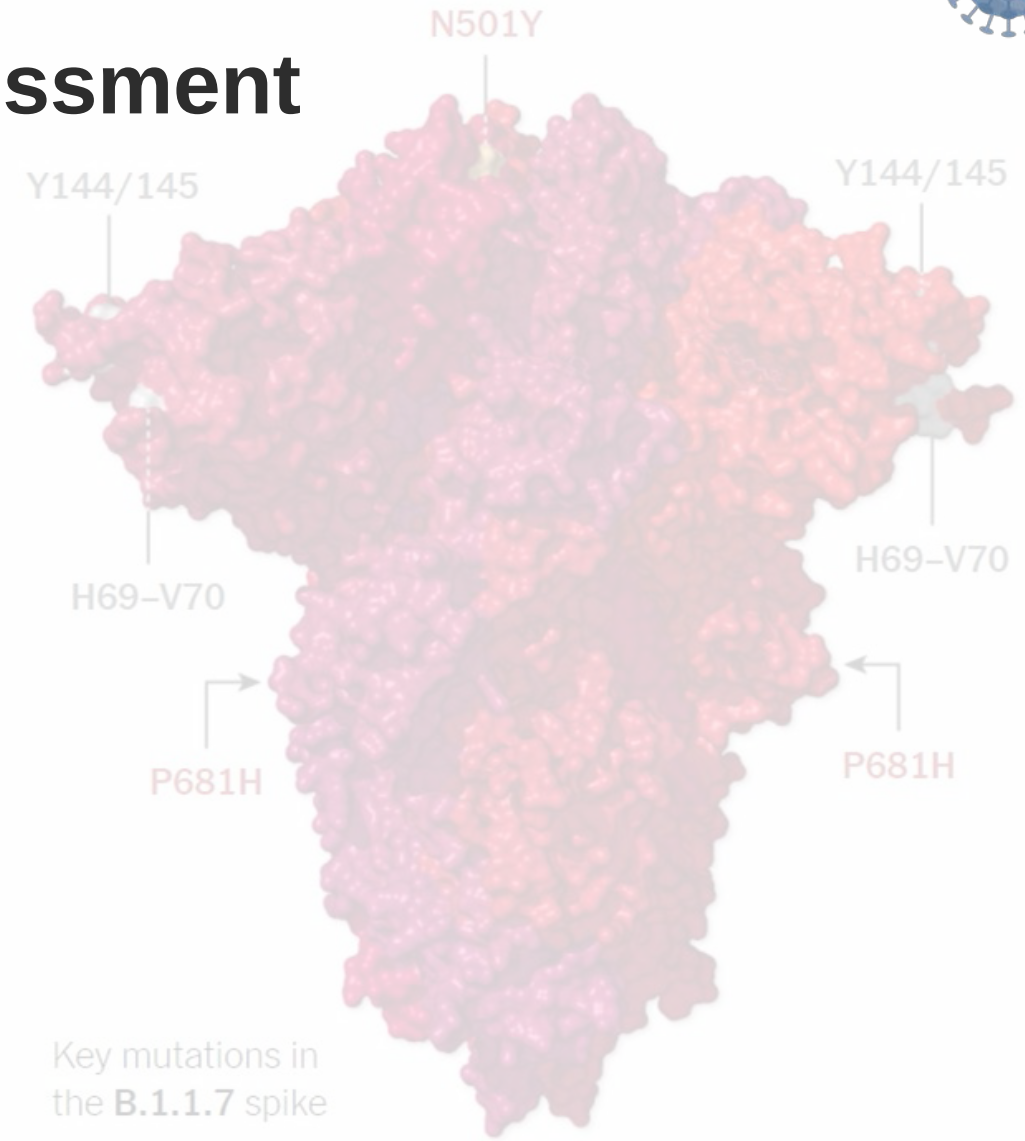


https://www.nytimes.com/interactive/2021/health/coronavirus-variant-tracker.html

World Health Organization

From Signal to VOI/VOC - Assessment

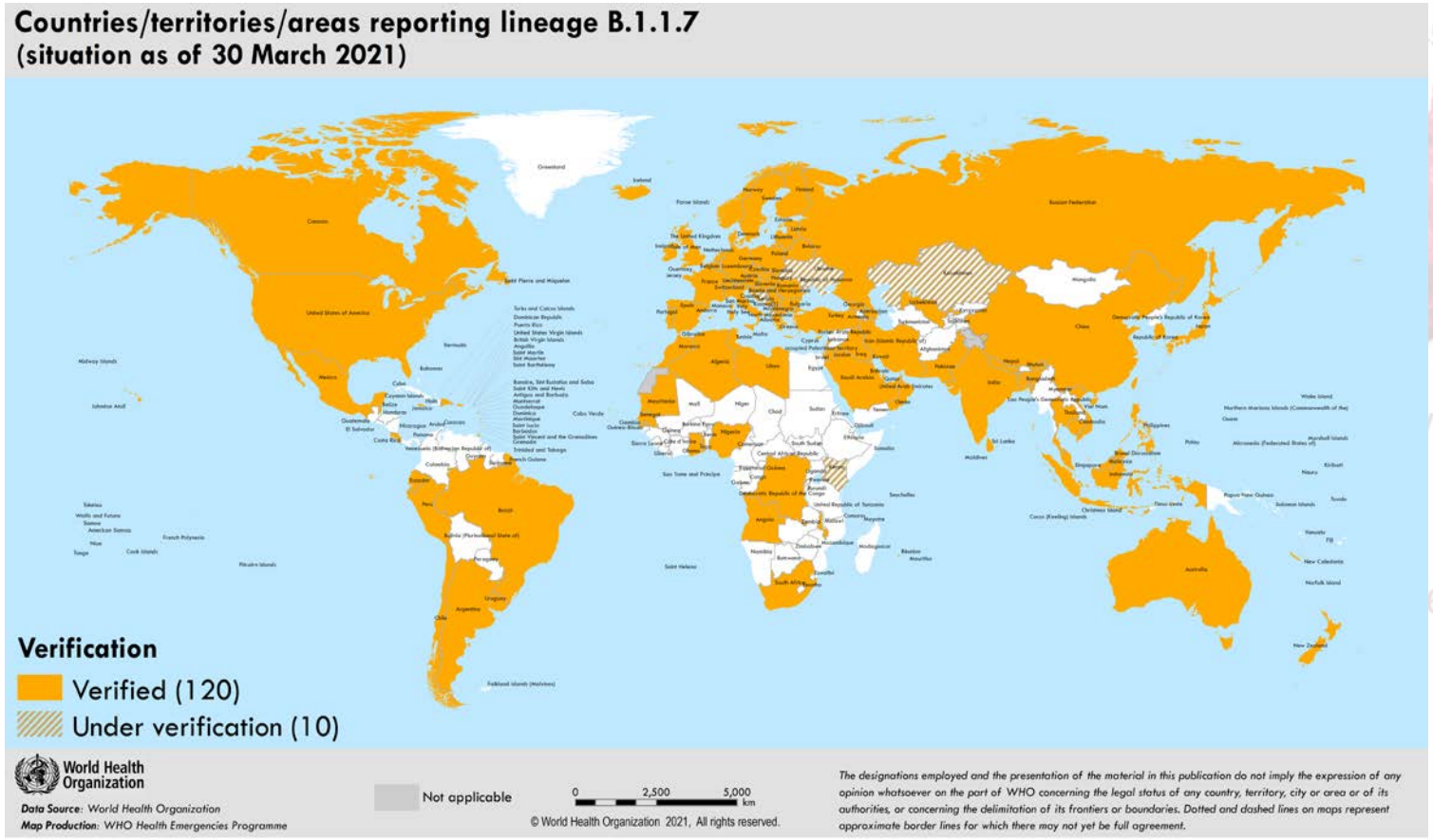




https://www.nytimes.com/interactive/2021/health/coronavirus-variant-tracker.html

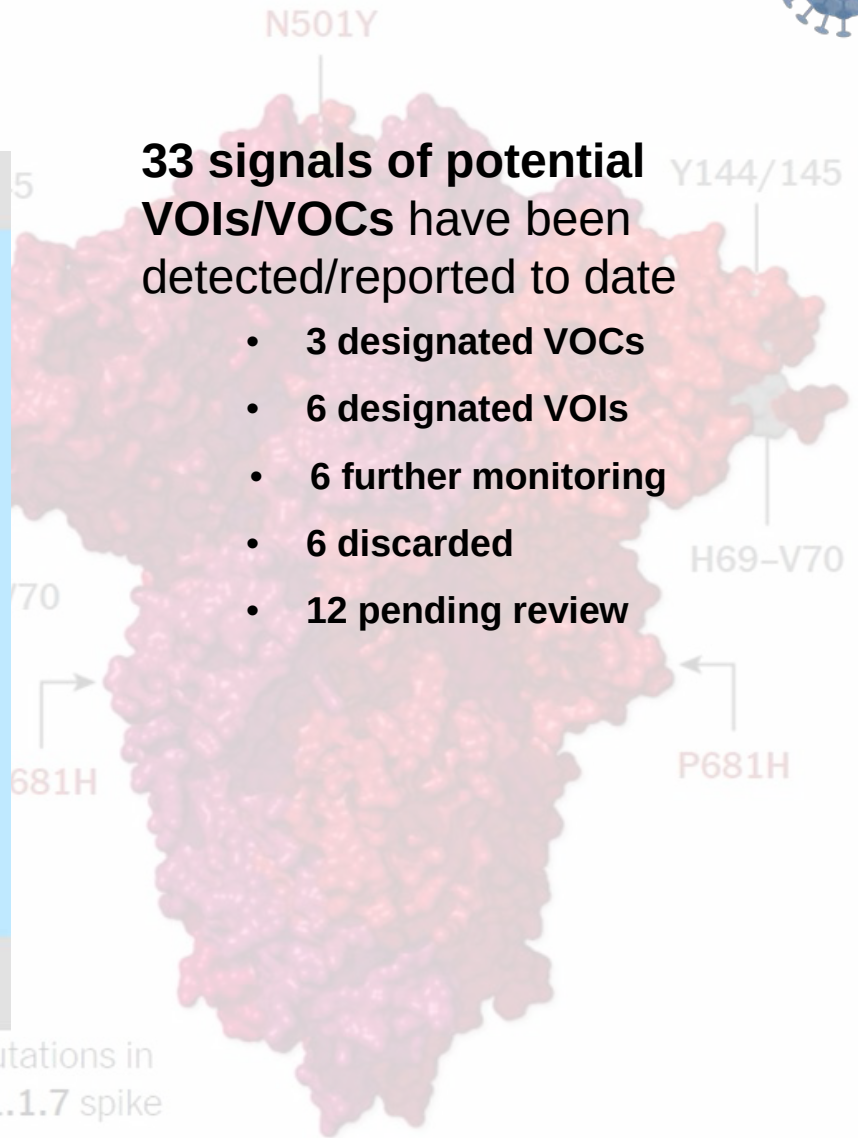
World Health Organization

From Signal to VOI/VOC - Tracking



33 signals of potential VOIs/VOCs have been detected/reported to date

- **3 designated VOCs**
- **6 designated VOIs**
- **6 further monitoring**
- **6 discarded**
- **12 pending review**

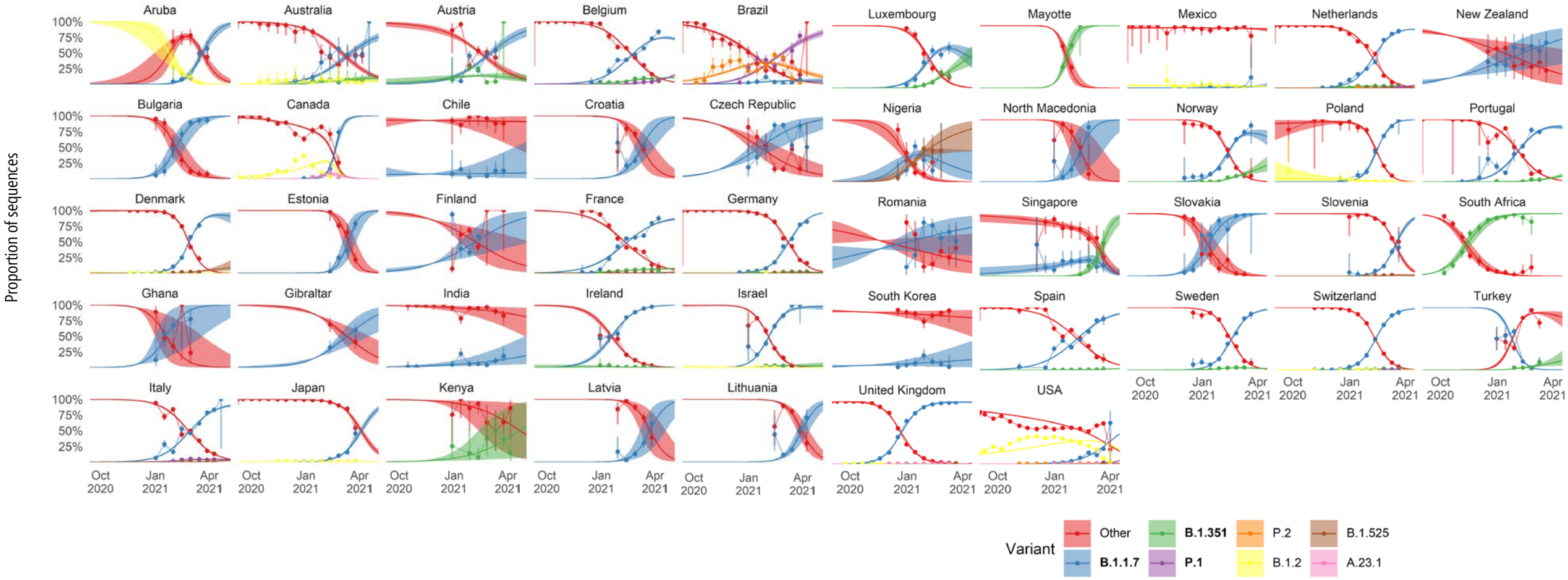


https://www.nytimes.com/interactive/2021/health/coronavirus-variant-tracker.html

World Health Organization

VOC transmissibility

VOCs: Replacement effects

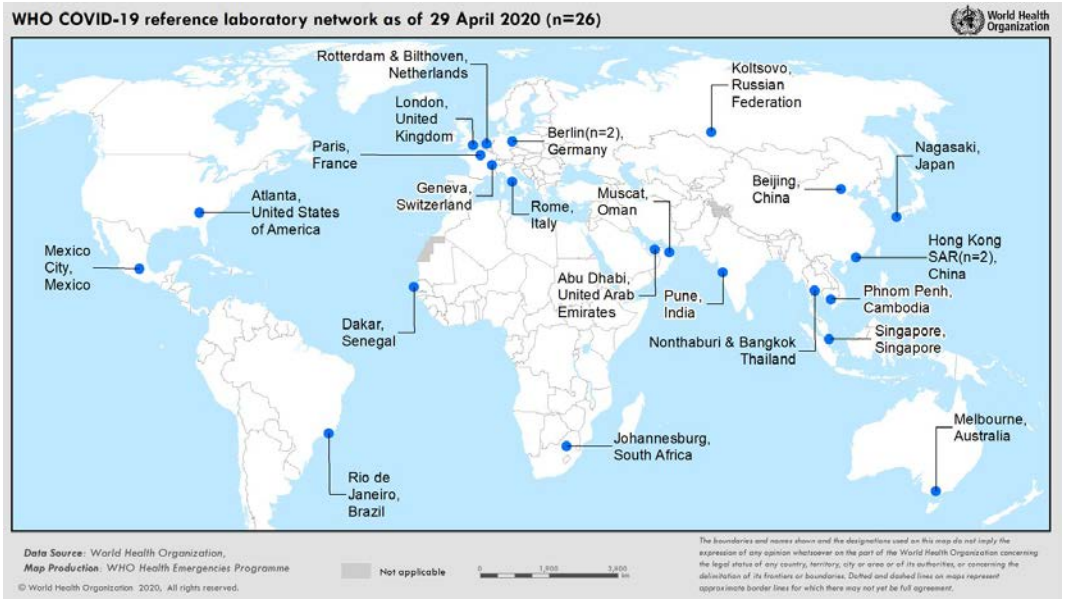


Data source: GISAID

Public Health and Social Measures (PHSM) in the context of VOCs

- Increased transmissibility
  - PHSM may need to be implemented more consistently over longer periods of time or be potentially more stringent
  - Higher herd immunity threshold; PHSM may need to be maintained for longer periods of time as vaccines are being rolled out
- Role of vaccines in reducing transmission still not fully understood
  - WHO currently reviewing recommendations on individualized measures for persons with immunity
- PHSM applied have been successful + adjustment of PHSM should continue to be driven by the epidemiology, irrespective of presence of VOCs

Increasing capacities



- **Surveillance and Contact Tracing**
  - Regional and Country Offices lead
  - Technical missions
  - Webinars
  - Study protocols (e.g. Unity Studies)
- **Increasing strategic testing and “intelligent” sequencing**
  - Increasing Ag based RDT use
  - Increasing sequencing capacities worldwide
    - Leveraging existing/building systems (GISRS, polio, TB/HIV…)
    - In country academic, private, commercial sequencing capacities; vet labs
    - External support – SARS-CoV-2 reference lab, GISRS, AFRO/Africa CDC, countries with additional capacities
  - GISRS Sequencing guidance (*pending*)

World Health Organization


World Health Organization
Search by Country, Territory, or Area
Covid-19 Response Fund
Donate
WHO Coronavirus (COVID-19) Dashboard
Overview
Data Table
Explore
covid19.who.int
pavlinb@who.int
Globally, as of 10:48am CEST, 8 April 2021, there have been 132,485,386 confirmed cases of COVID-19, including 2,875,672 deaths, reported to WHO. As of 7 April 2021, a total of 650,382,819 vaccine doses have been administered.