COVID-19: Που βρισκόμαστε σήμερα με την πανδημία στην Ελλάδα

Χαράλαμπος Α Γώγος

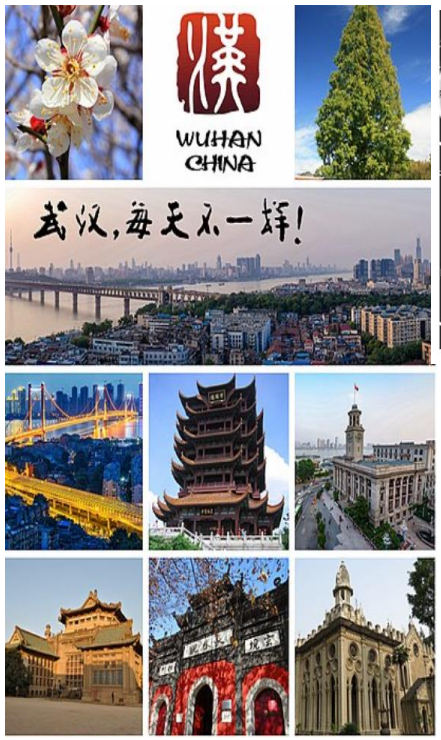
Παθολόγος - Λοιμωξιολόγος

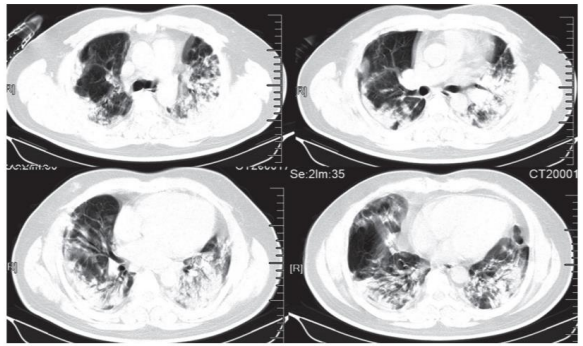
Καθηγητής Παθολογίας Πανεπιστημίου Πατρών

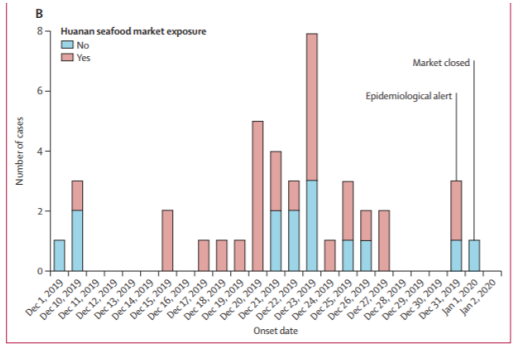
Μέλος της Επιτροπής Εμπειρογνωμόνων για την αντιμετώπιση εκτάκτων συμβάντων από λοιμώδεις παράγοντες

Once upon a time there was Wuhan...

18 months later there was a pandemic...

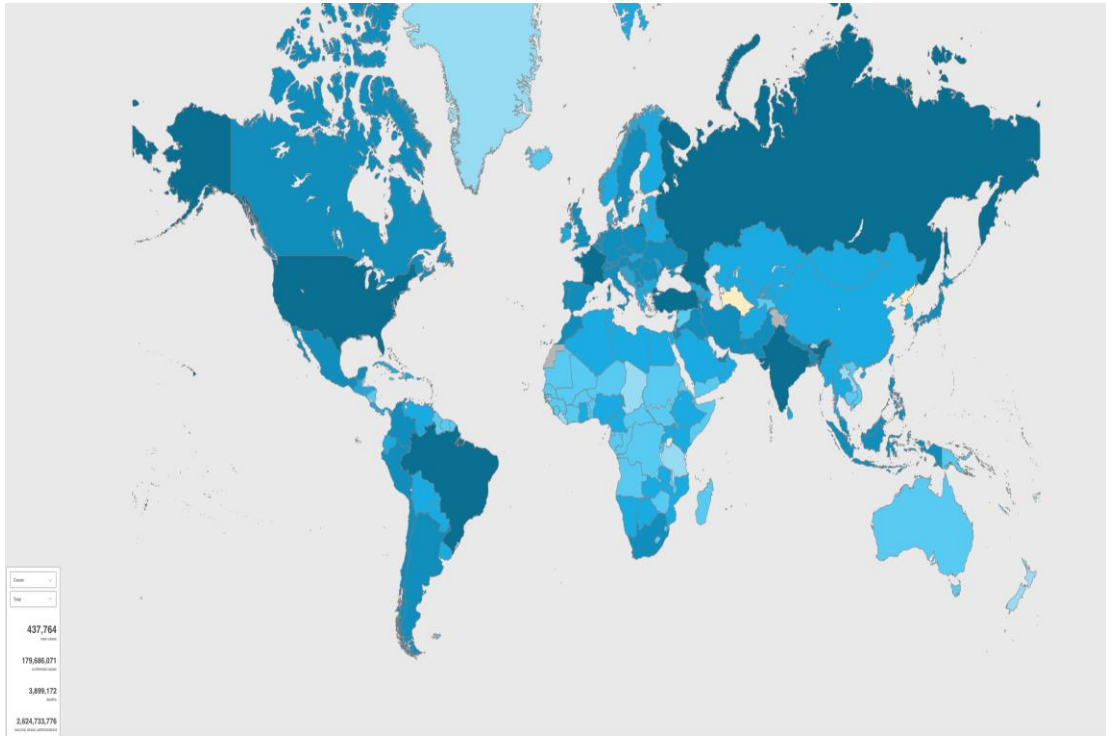




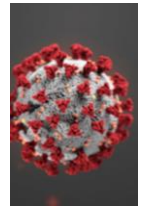


11/3/20
WHO
Global
pandemic

22/3/20
7/11/20
7/3/21
Hellenic
lockdown



COVID-19
SARS-CoV2



Dec. 31, 2019: WHO says mysterious pneumonia sickening dozens in China

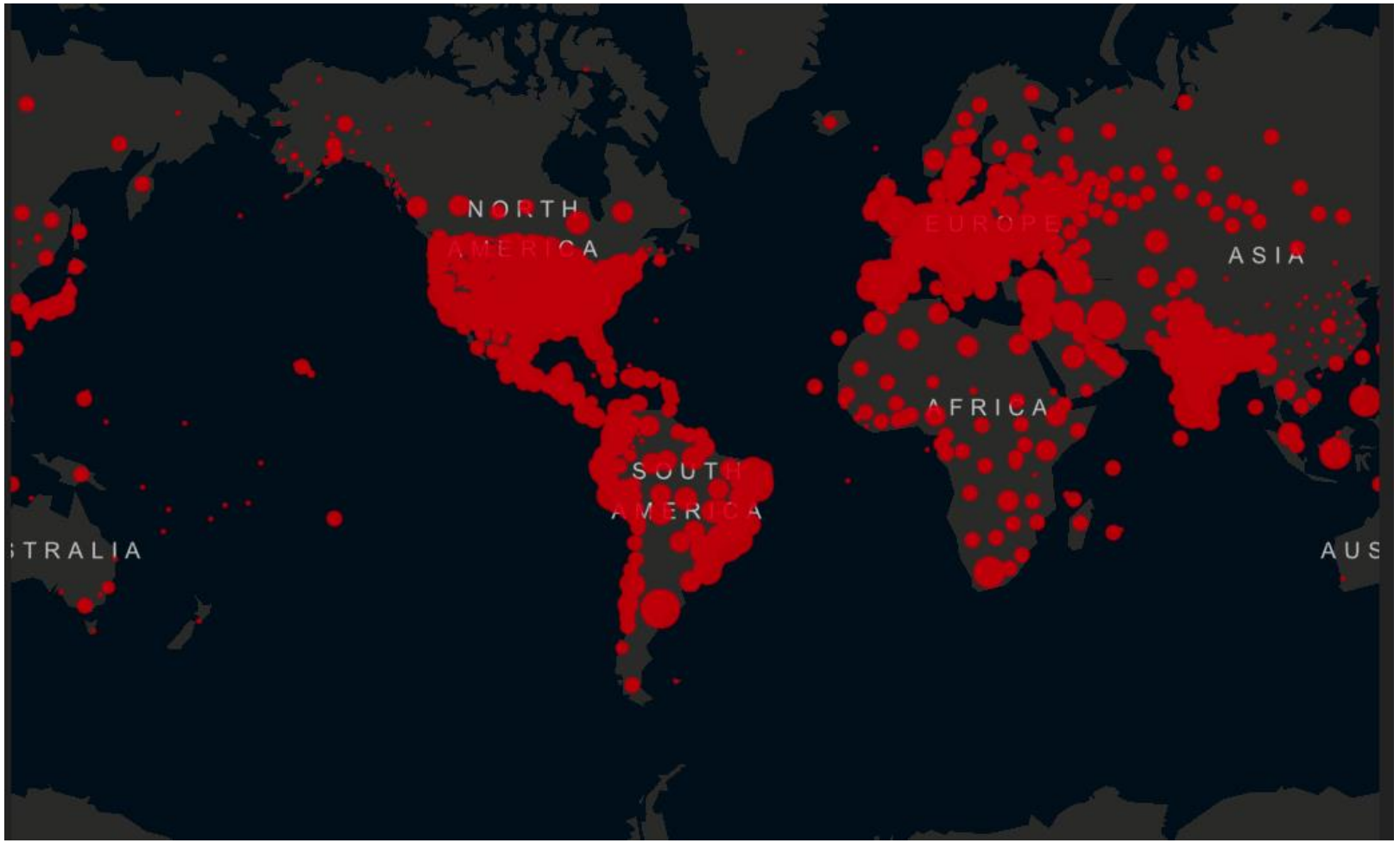
Που βρισκόμαστε με την πανδημία …

Θέματα «αιχμής»…

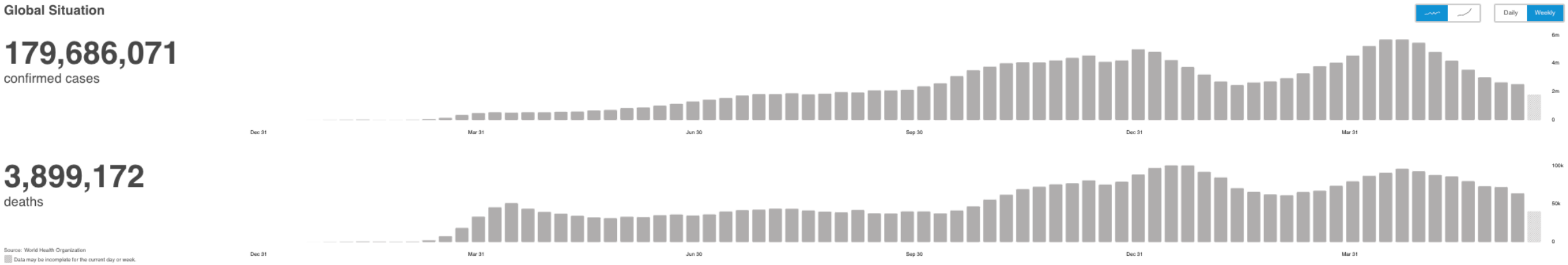
- Επιδημιολογικά δεδομένα
- Ο ρόλος των εμβολίων για τον έλεγχο της πανδημίας
- Εξελίξεις στη θεραπεία πέραν των εμβολίων
- Μακροχρόνιες επιπλοκές της COVID-19

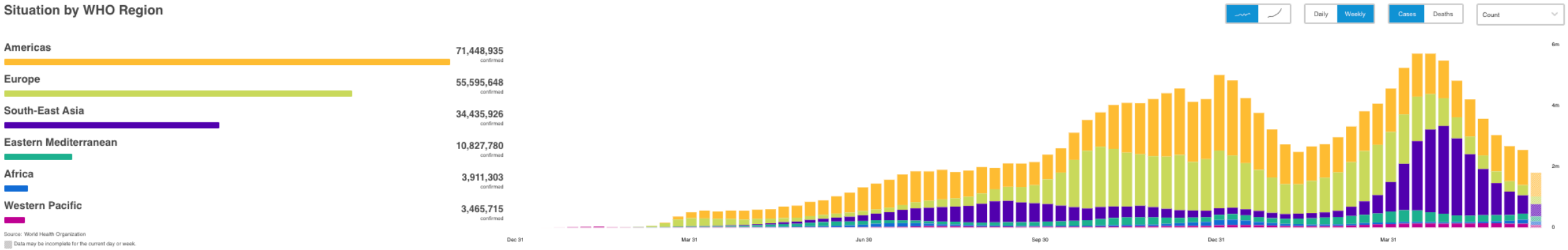
επιδημιολογία

Ποια είναι τα παγκόσμια και ελληνικά επιδημιολογικά δεδομένα



Που είμασταν και που βρισκόμαστε σήμερα παγκοσμίως (κρούσματα/θάνατοι)…

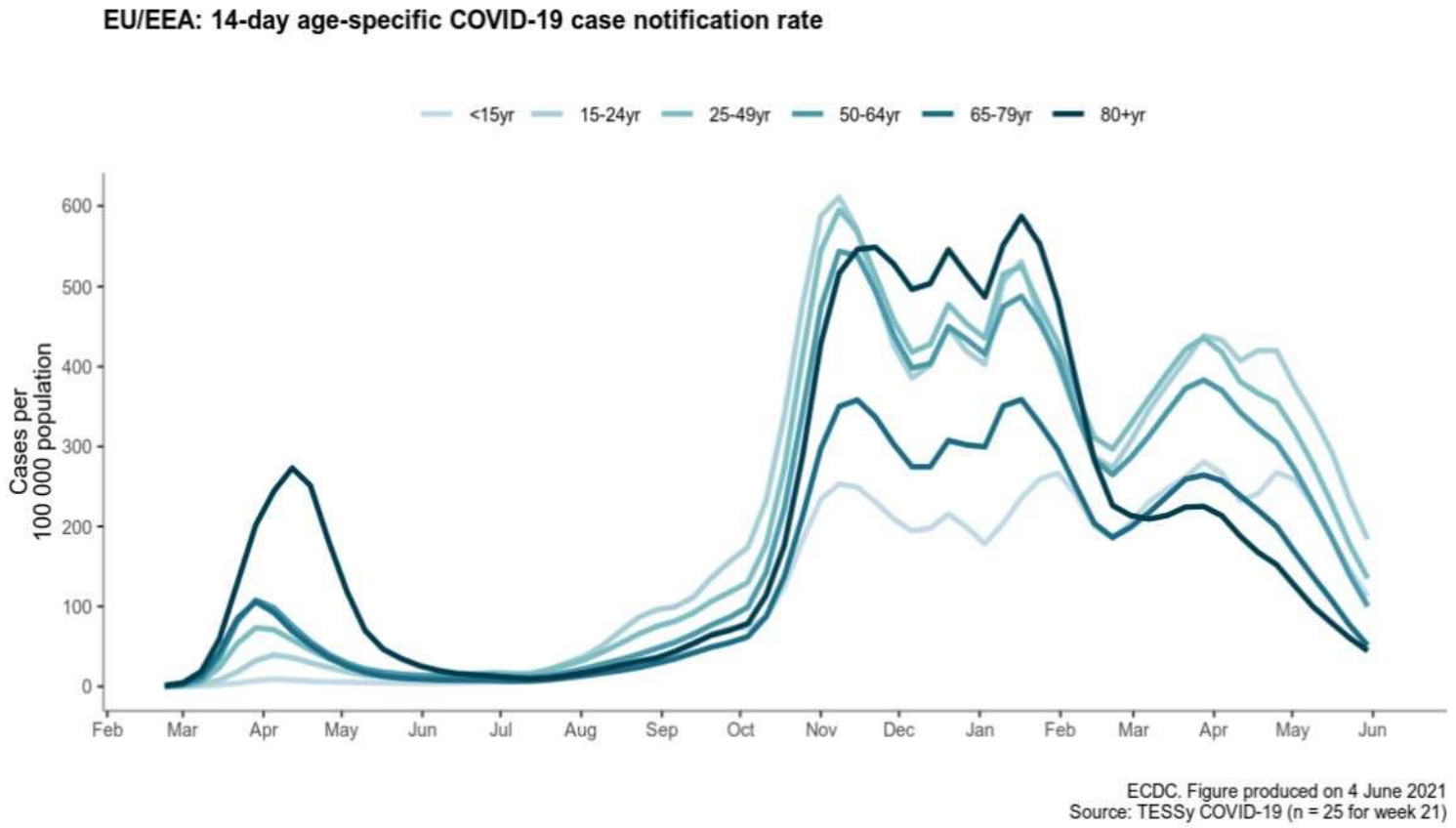




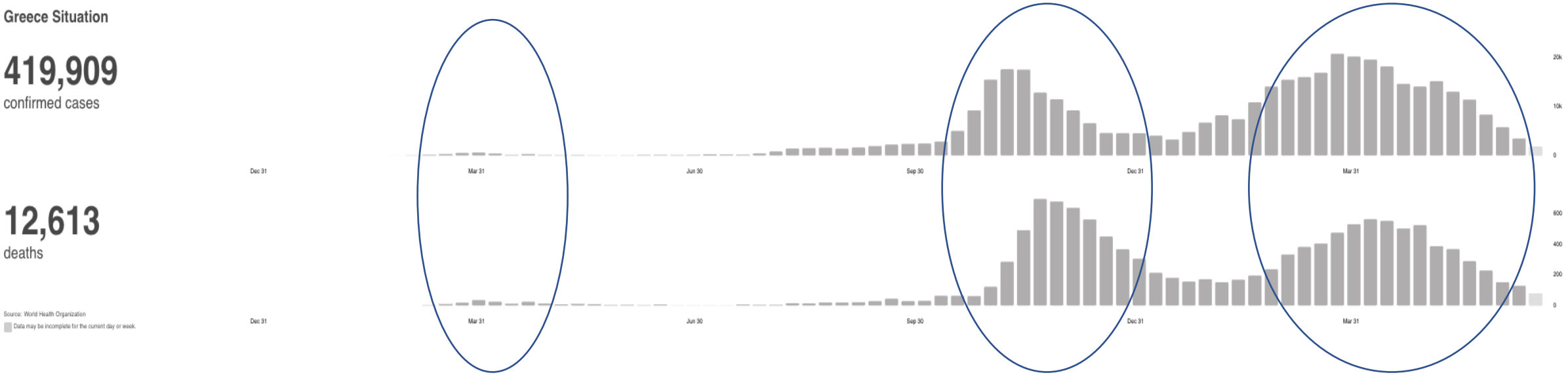
Ευρωπαϊκά δεδομένα

Epi indices & ECDC

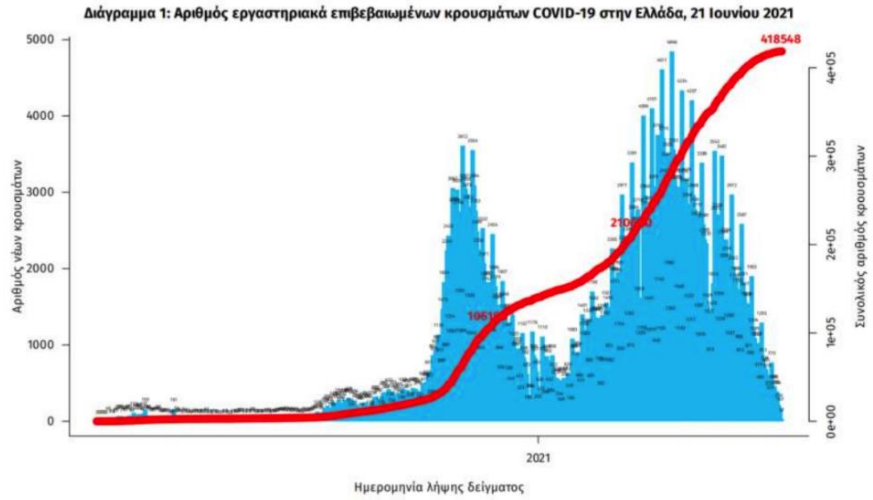
14d age specific rate/100k, pooled data 4 June 2021



Που είμασταν και που βρισκόμαστε σήμερα στην Ελλάδα (κρούσματα/θάνατοι)…



Επιδημική καμπύλη, σύνολο κρουσμάτων 21 Ιουνίου
κρούσματα & ↑ τάση



ΕΛΛΗΝΙΚΗ ΔΗΜΟΚΡΑΤΙΑ
Υπουργείο Υγείας

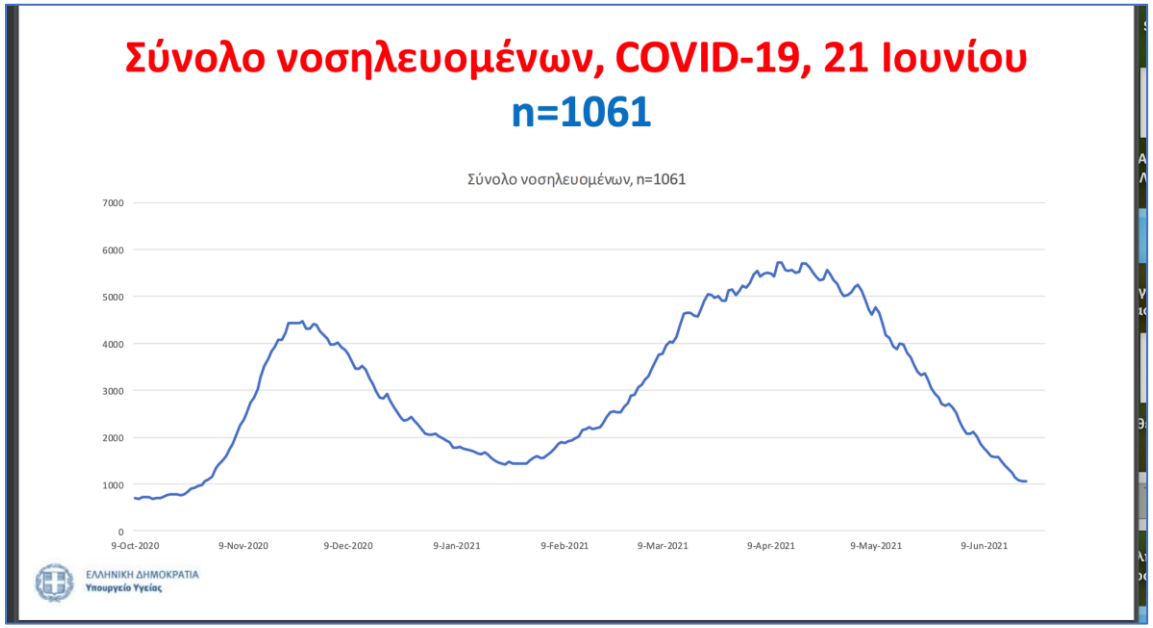
Επιδημική καμπύλη, σύνολο κρουσμάτων 21 Ιουνίου
κυλιόμενος μέσος 7 ημερών ~460

ΕΛΛΗΝΙΚΗ ΔΗΜΟΚΡΑΤΙΑ

Νέες εισαγωγές / νοσηλείες, 21 Ιουνίου
μέσος 7 ημερών ~62/d

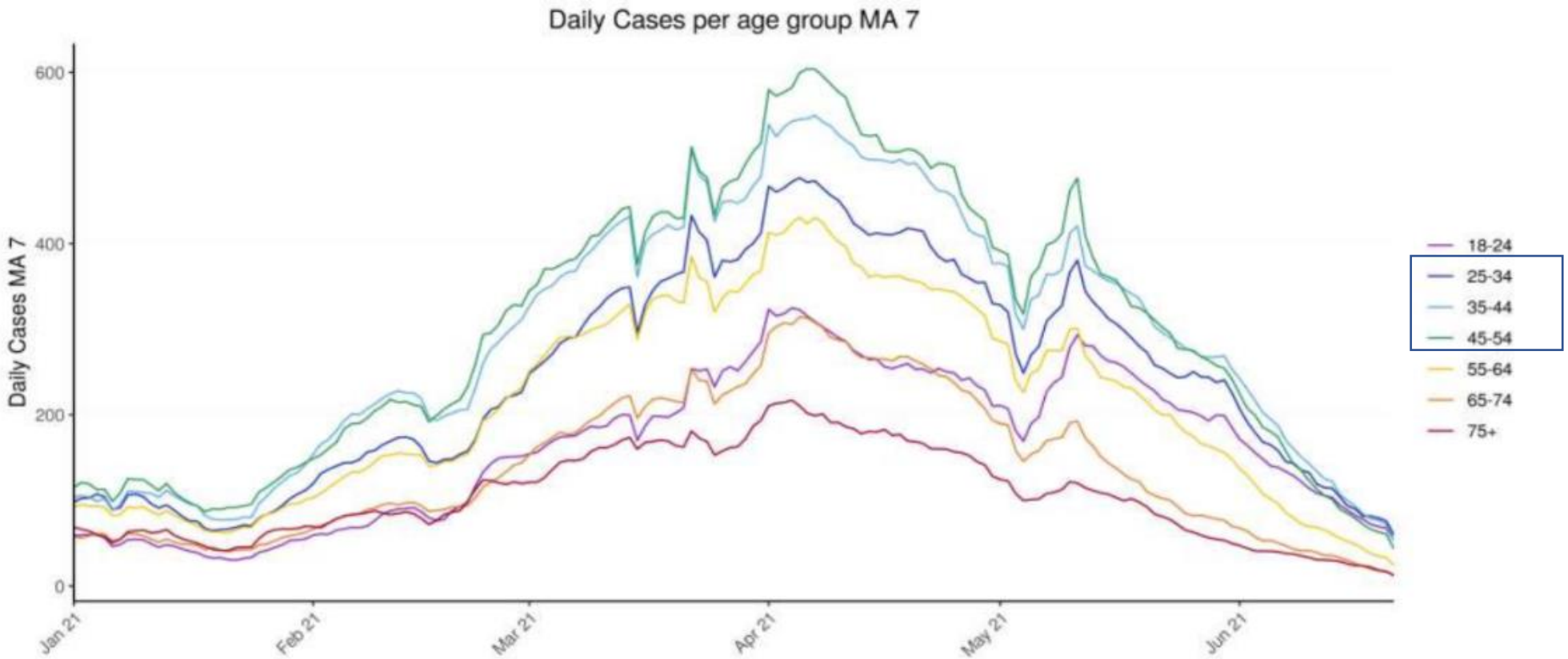
Πίεση στο σύστημα υγείας…

Σύνολο νοσηλευομένων, COVID-19, 21 Ιουνίου
n=1061



Ηλικιακή κατανομή, Ελλάδα 21 Ιουνίου

τελευταίες εβδομάδες



ΕΛΛΗΝΙΚΗ ΔΗΜΟΚΡΑΤΙΑ
Υπουργείο Υγείας

Θάνατοι συνολικά από Μάρτιο 2020, 21 Ιουνίου

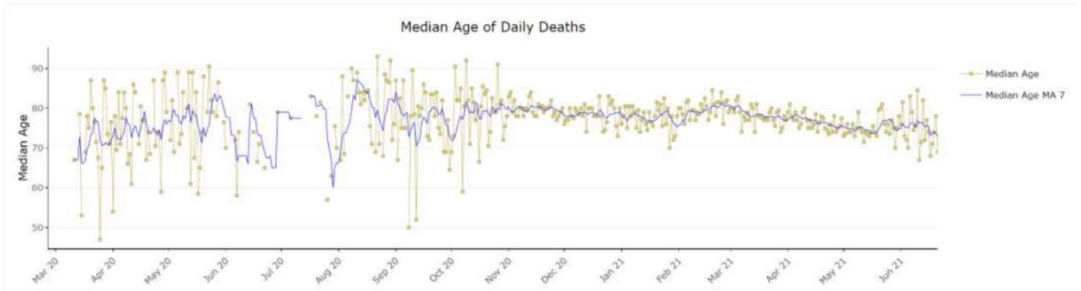
n=12565, 7d rolling avg ~17

ΕΛΛΗΝΙΚΗ ΔΗΜΟΚΡΑΤΙΑ
Υπουργείο Υγείας

θάνατοι

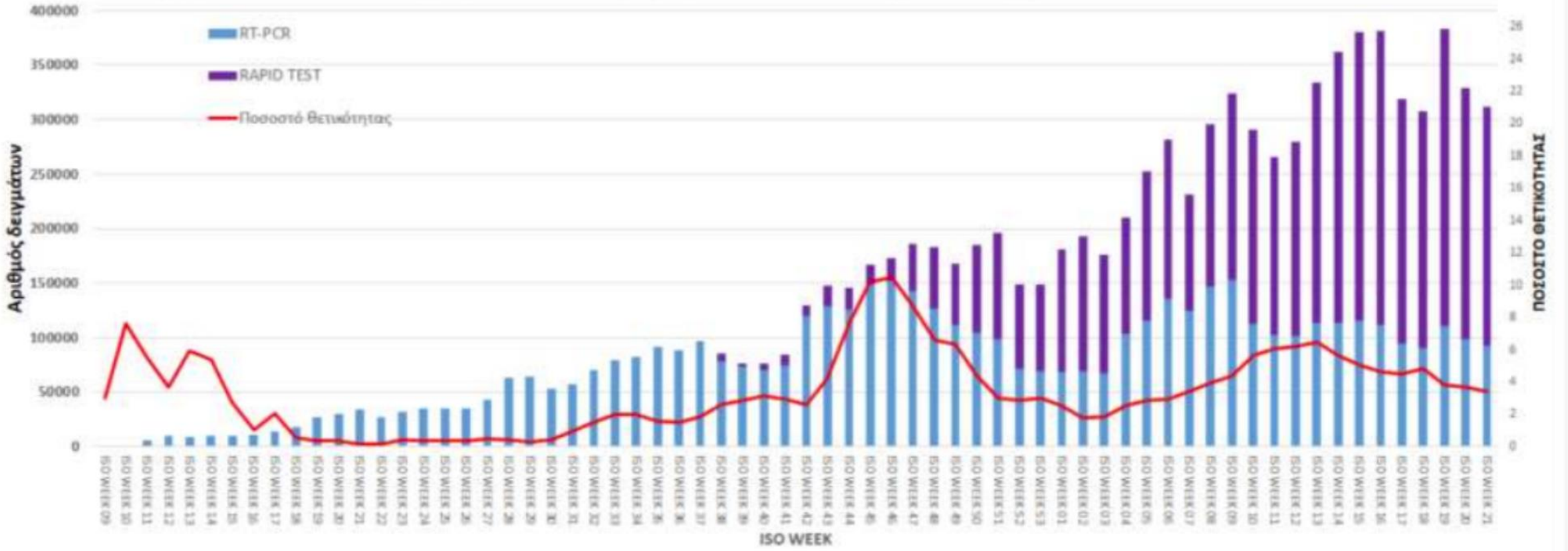
Θάνατοι-ηλικίες από Μάρτιο 2020, 21 Ιουνίου

Διάμεση ηλικία θανάτων, 7d rln avg 73 yrs

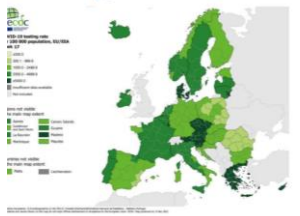


ΕΛΛΗΝΙΚΗ ΔΗΜΟΚΡΑΤΙΑ
Υπουργείο Υγείας

Διάγραμμα 9: Ποσοστό θετικότητας ανά ISO WEEK με βάση το σύνολο των ελεγχθέντων δειγμάτων COVID-19

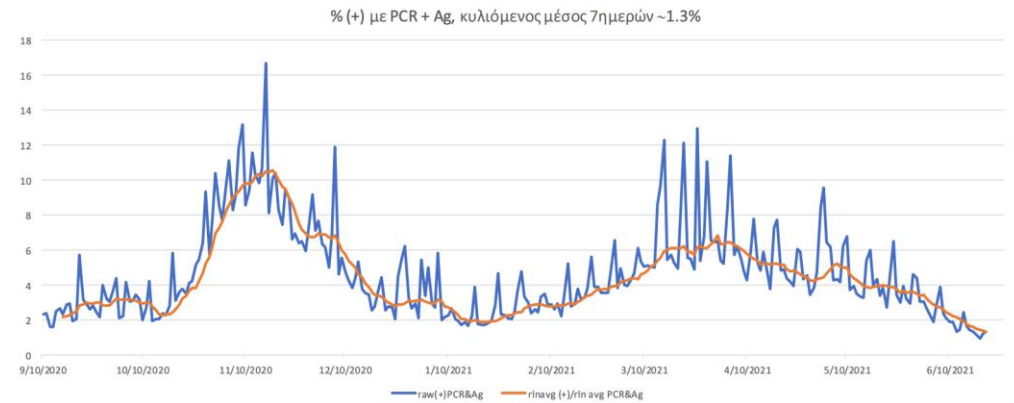


esting rates /100k population
ECDC map, 6 Μαΐου 2021



Εργαστηριακά τεστ, θετικότητα 21 Ιουνίου

% (+) τεστ, κυλιόμενος μέσος 7 ημερών - PCR+Ag ~1.3%

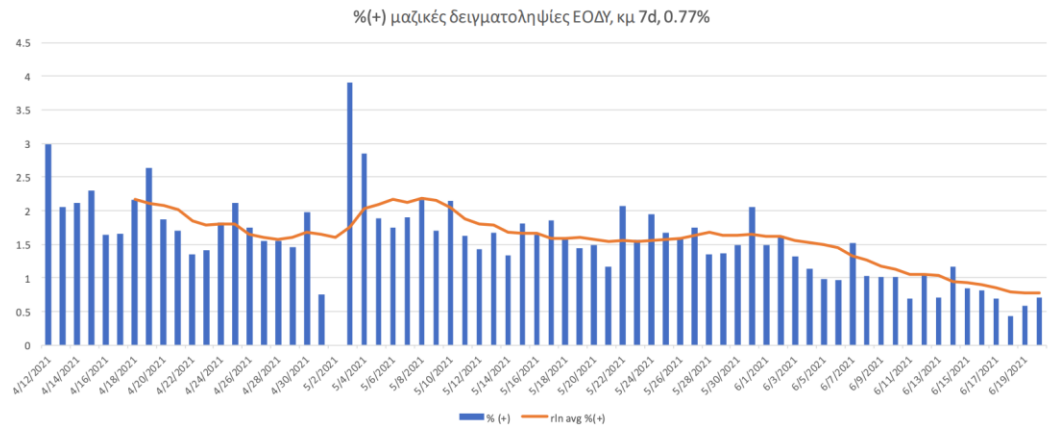


ΕΛΛΗΝΙΚΗ ΔΗΜΟΚΡΑΤΙΑ
Υπουργείο Υγείας

Εργαστηριακή θετικότητα

Εργαστηριακά τεστ, θετικότητα 21 Ιουνίου

% (+) τεστ, μαζικές ανοικτές κμ 7 ημερών ~0.77%

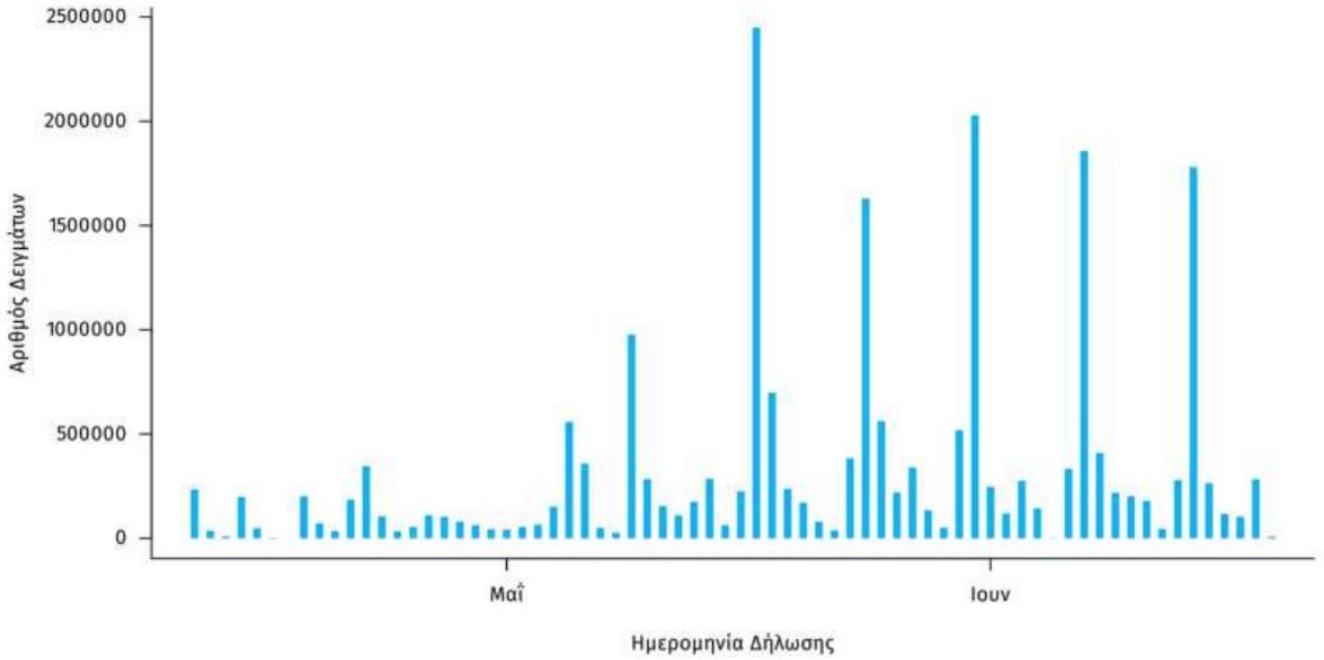


ΕΛΛΗΝΙΚΗ ΔΗΜΟΚΡΑΤΙΑ
Υπουργείο Υγείας

Self τεστ, 21 Ιουνίου

> 21.9 mil δηλώσεις αποτελέσματος έχουν καταγραφεί

Διάγραμμα 6: Ελεγχθέντα δείγματα αυτοδιαγνωστικών ελέγχων COVID-19, 21 Ιουνίου 2021



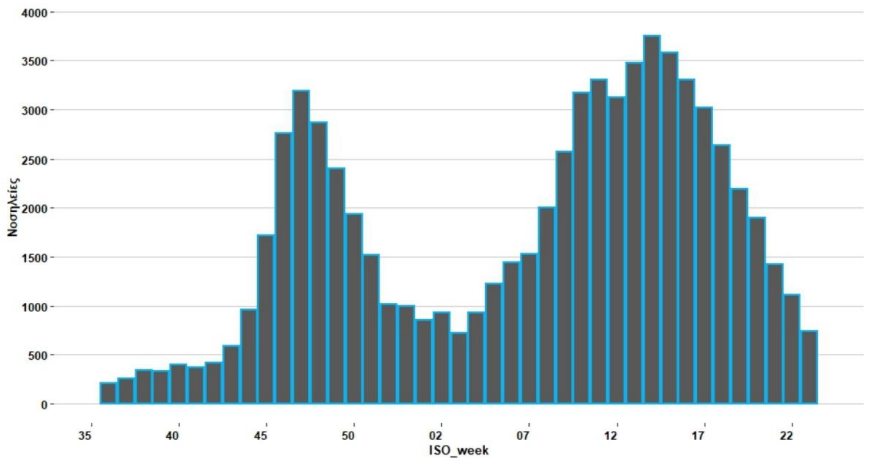
ΕΛΛΗΝΙΚΗ ΔΗΜΟΚΡΑΤΙΑ
Υπουργείο Υγείας

TV

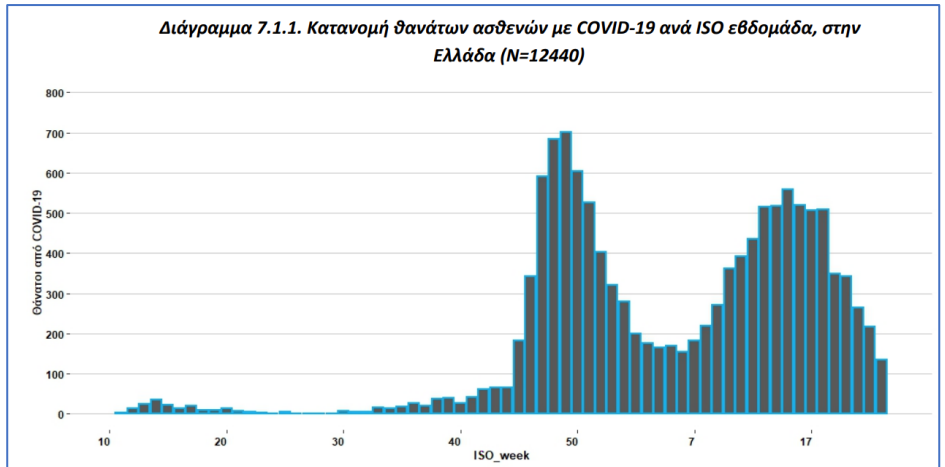
21/6/21: 0.15% → 0.03%

Νέες εισαγωγές / ΜΕΘ / Θάνατοι 21/6/21

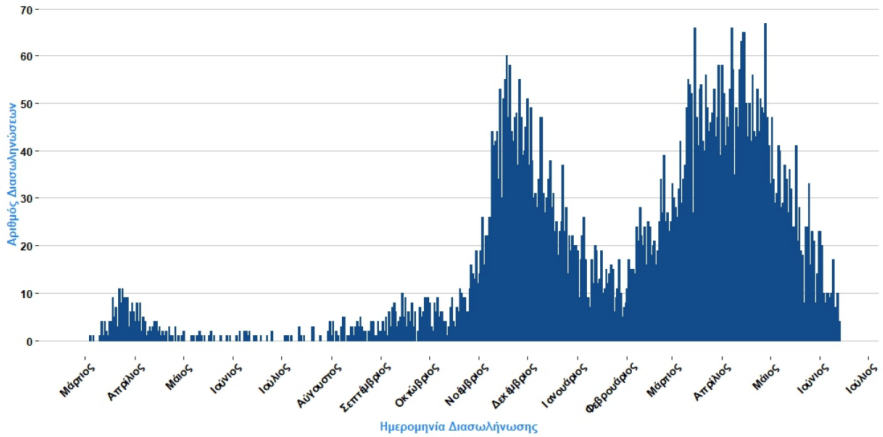
Διάγραμμα 5.2: Διαχρονική εξέλιξη των νέων νοσηλειών από 31 Αυγούστου 2020 ανά εβδομάδα αναφοράς.



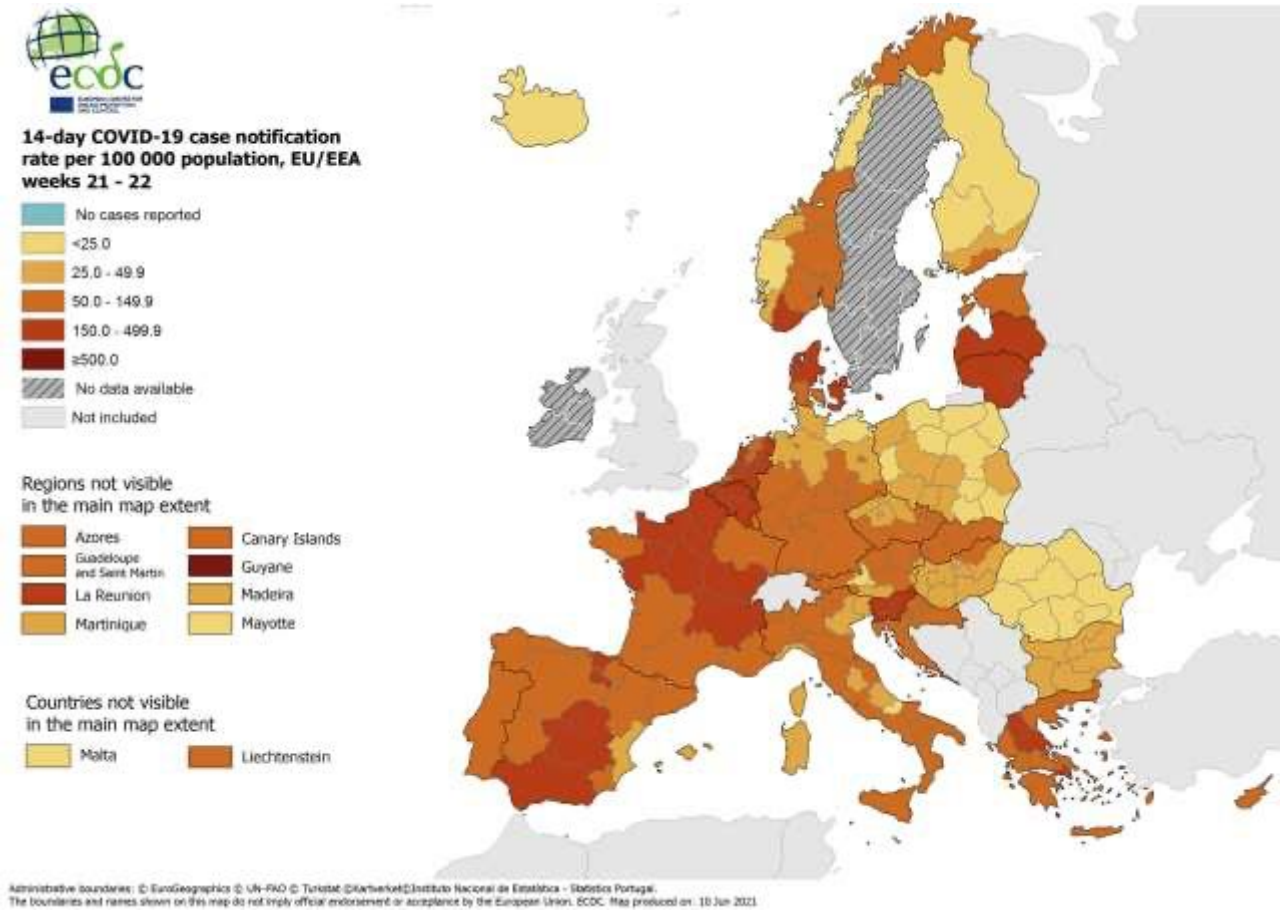
Διάγραμμα 7.1.1. Κατανομή θανάτων ασθενών με COVID-19 ανά ISO εβδομάδα, στην Ελλάδα (N=12440)



Διάγραμμα 5.1: Διαχρονική εξέλιξη των νέων διασωληνωμένων ασθενών από την έναρξη της επιδημίας



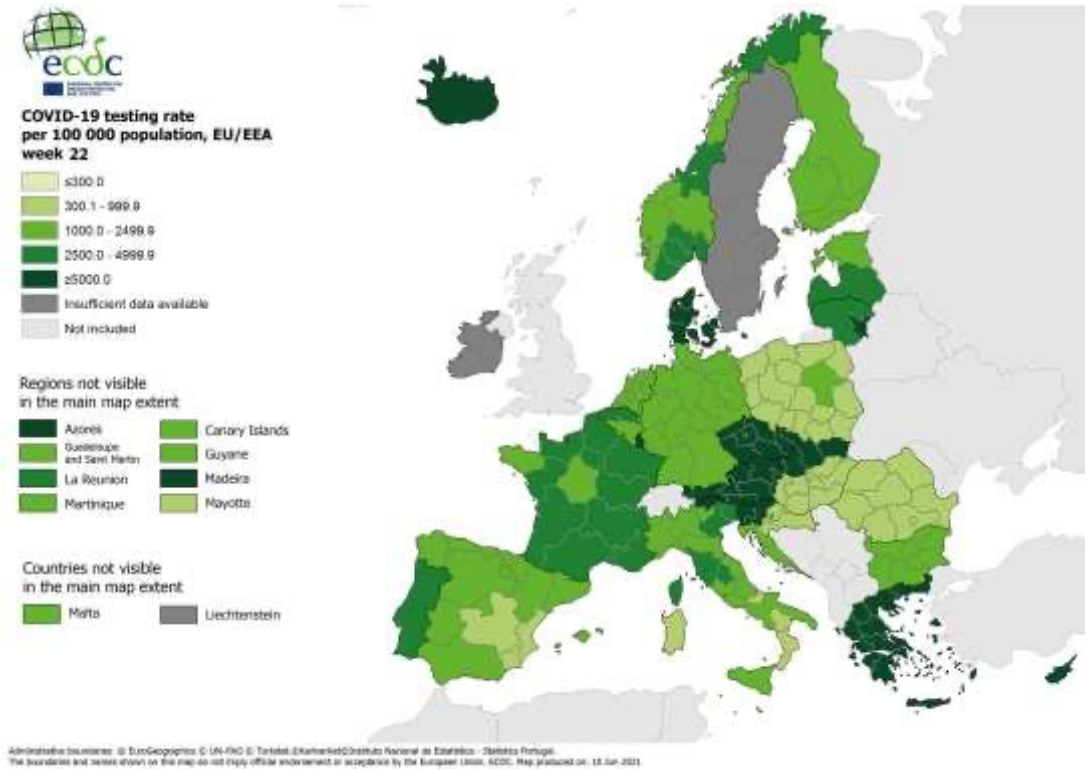
Epi indices & ECDC
14d notification rate/100k, ECDC, 10 June 2021



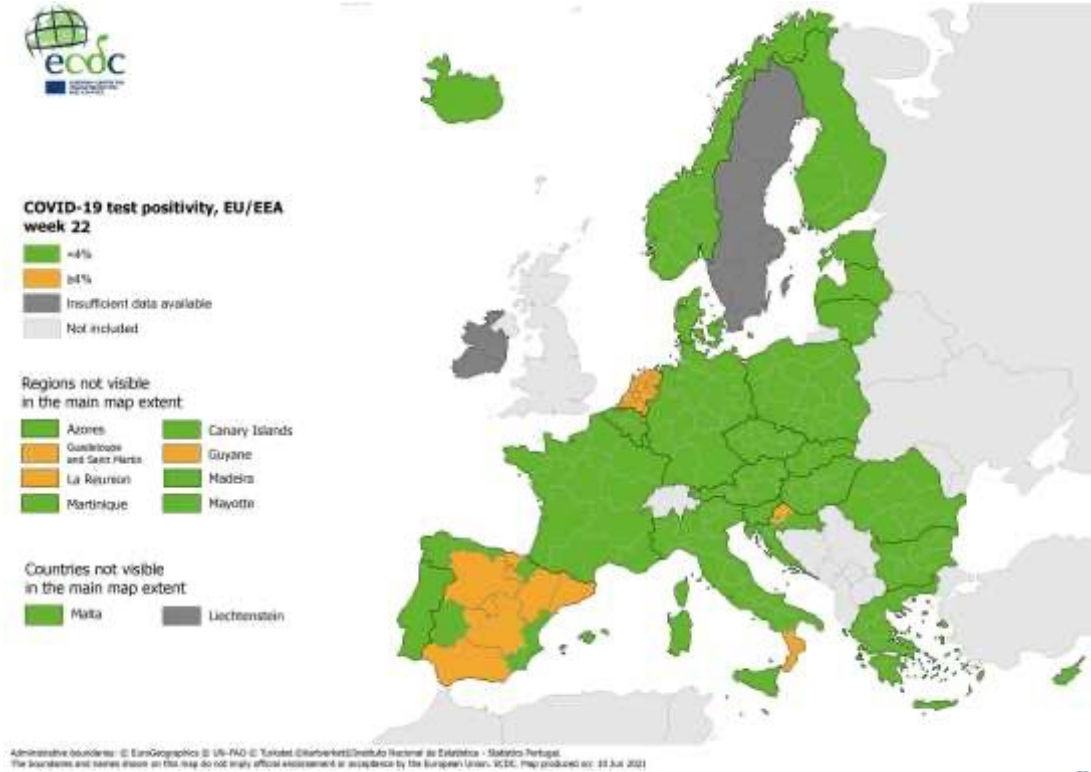
Epi indices & ECDC

testing & positivity rate, ECDC 10 June 2021

Testing / 100k population

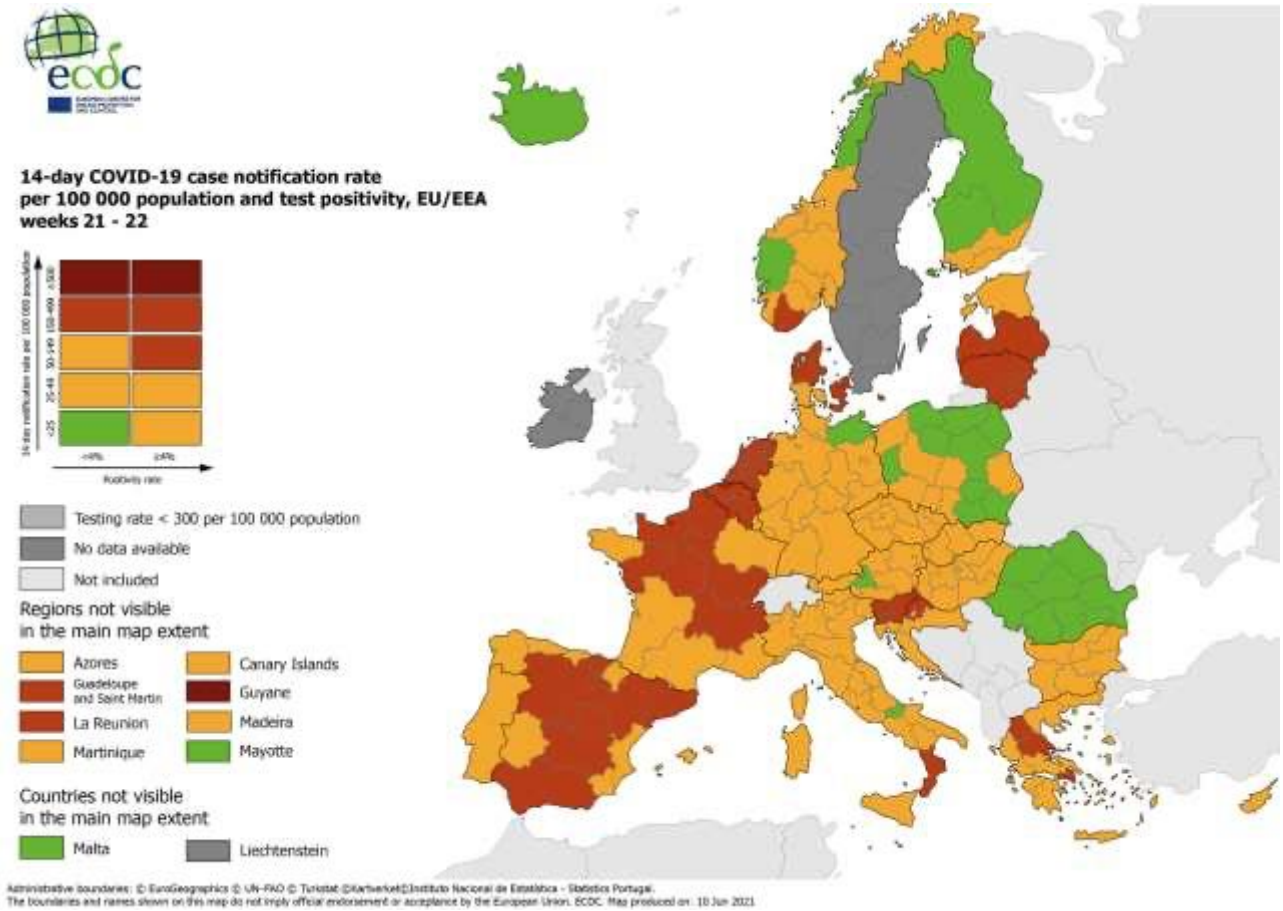


Positivity rate < 4%



Epi indices ECDC

combined indicator, ECDC, 10 June 2021



Epi indices ECDC

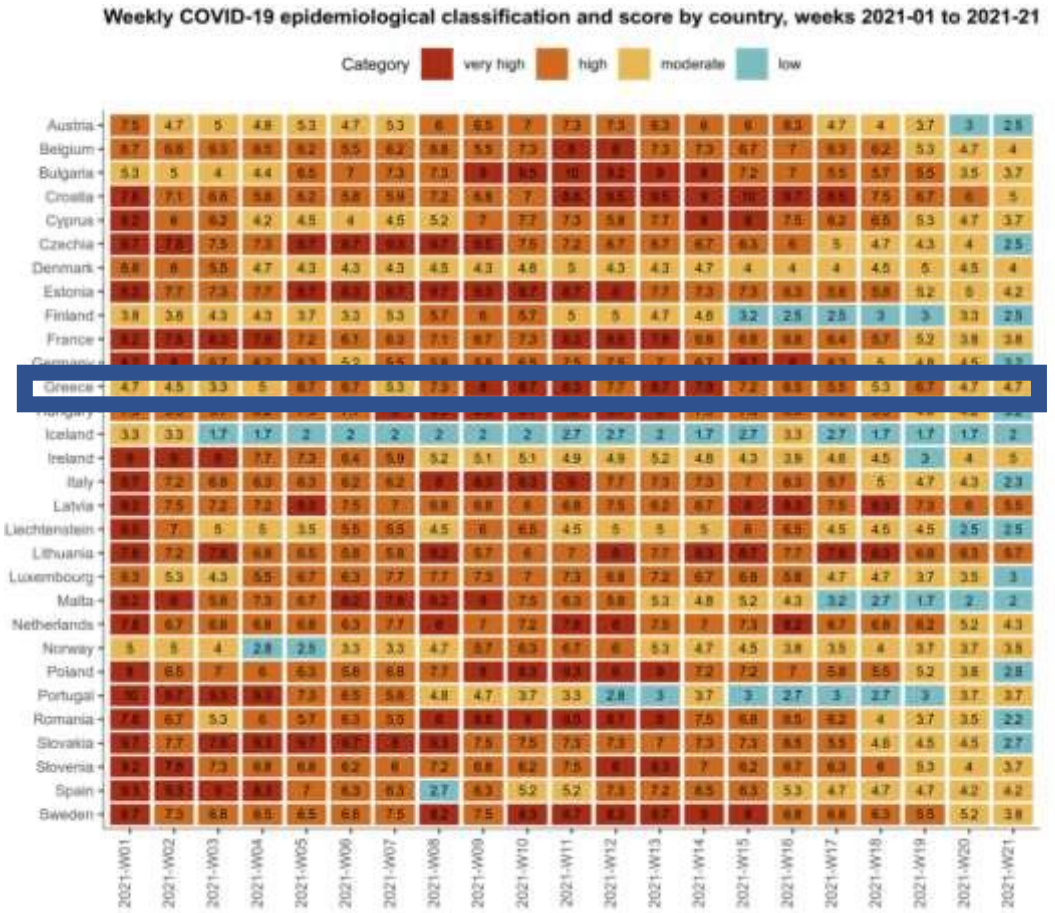
intensity and severity indicators, ECDC, 10 June 2021

new

Indicator		Domain	1	2	3	4	Source
1. 14-day case notification rates per 100k among people aged 65+ years		Severity	<20	20 - <50	50 - <150	≥150	TESSy
2. 14-day COVID-19 death rate per million		Severity	<20	20 - <40	40 - <100	≥100	EI
3. COVID-19 hospital/ICU indicator, current value as a proportion of the peak value in the country to date (%)	Weekly admissions rate per 100k	Severity	<10	10 - <25	25 - <50	≥50	TESSy or public online sources
	Current occupancy (mean weekly occupancy per 100k)		<25	25 - <50	50 - <75	≥75	Public online sources
4. 14-day COVID-19 case notification rate per 100k (all ages)		Intensity	<40	40 - 100	100 - 300	≥300	EI*
5. Test positivity (%) from all national reported tests and cases		Intensity	<2	2 - <4	4 - <10	≥10	TESSy and EI

Epi indices ECDC

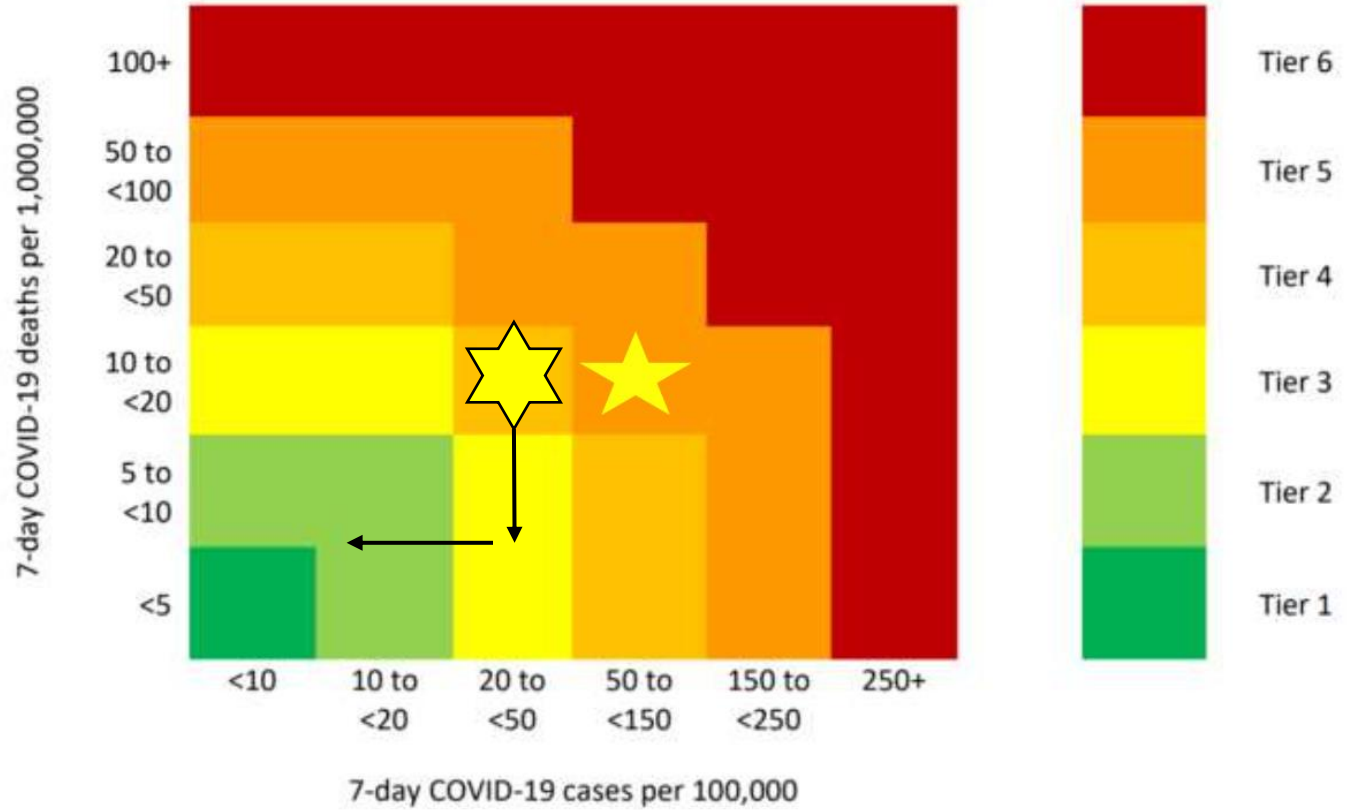
score by intensity and severity indicators, ECDC, 10 June 2021



ECDC, fine tuning when epi allows, 4 May

7d cases/100k: 61.8, 7d deaths/mil: 18.8,=tier 5

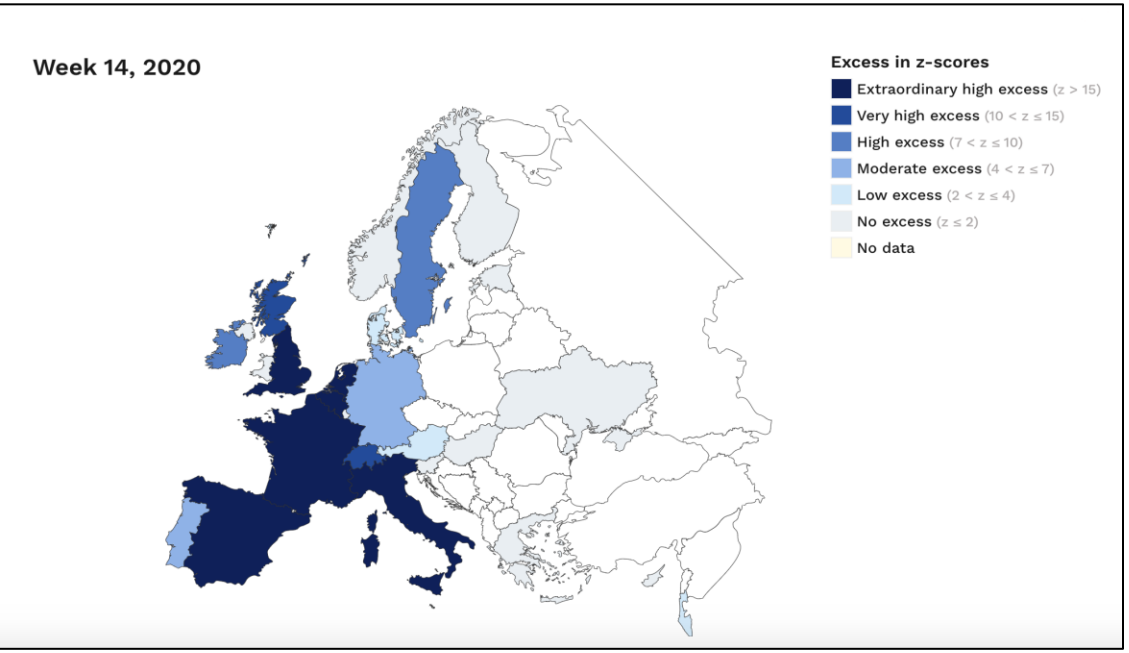
Figure 1. Tiers for determining the epidemiological status of an EU/EEA Member State

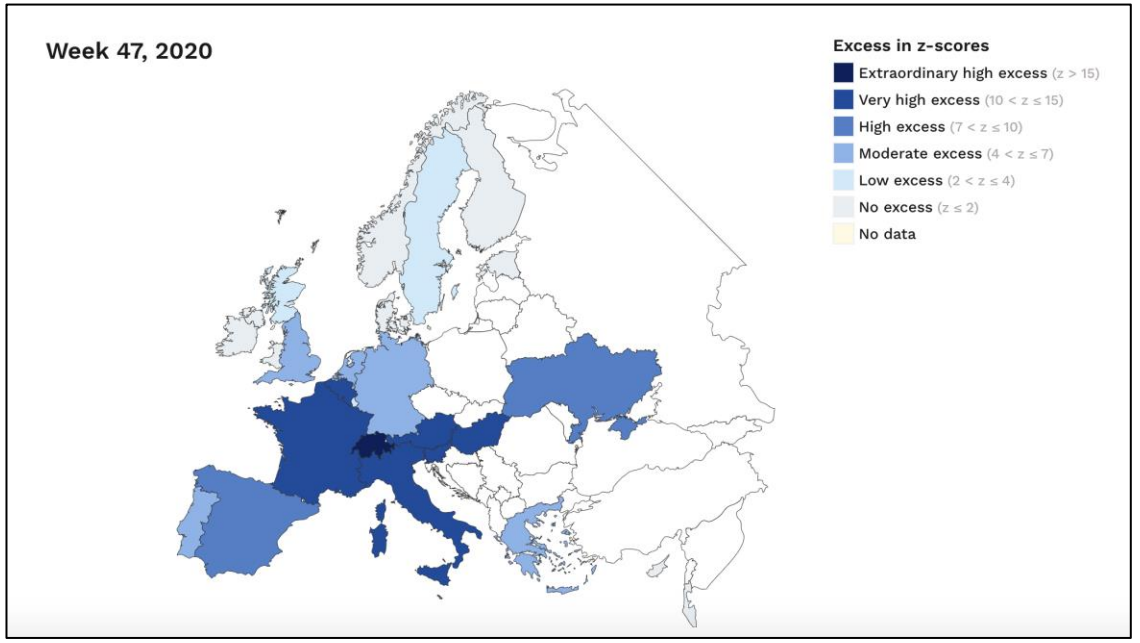


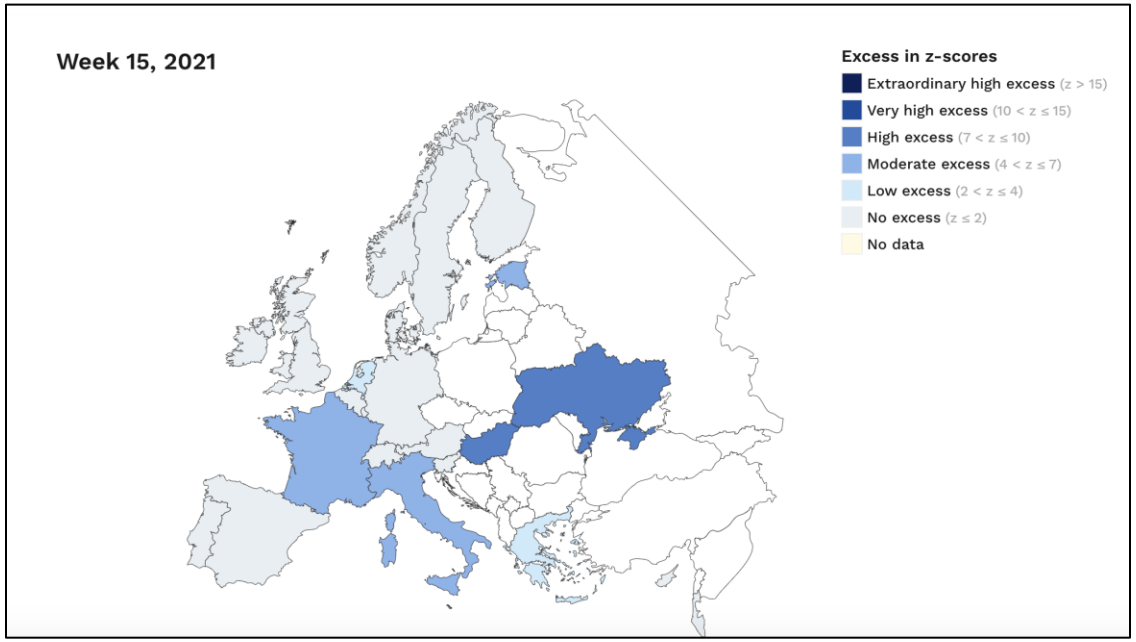
Tiers 2 to 5 match WHO's epidemiological thresholds but are extended to include a more severe tier and a more positive tier.

EUROMOMO

Exess mortality

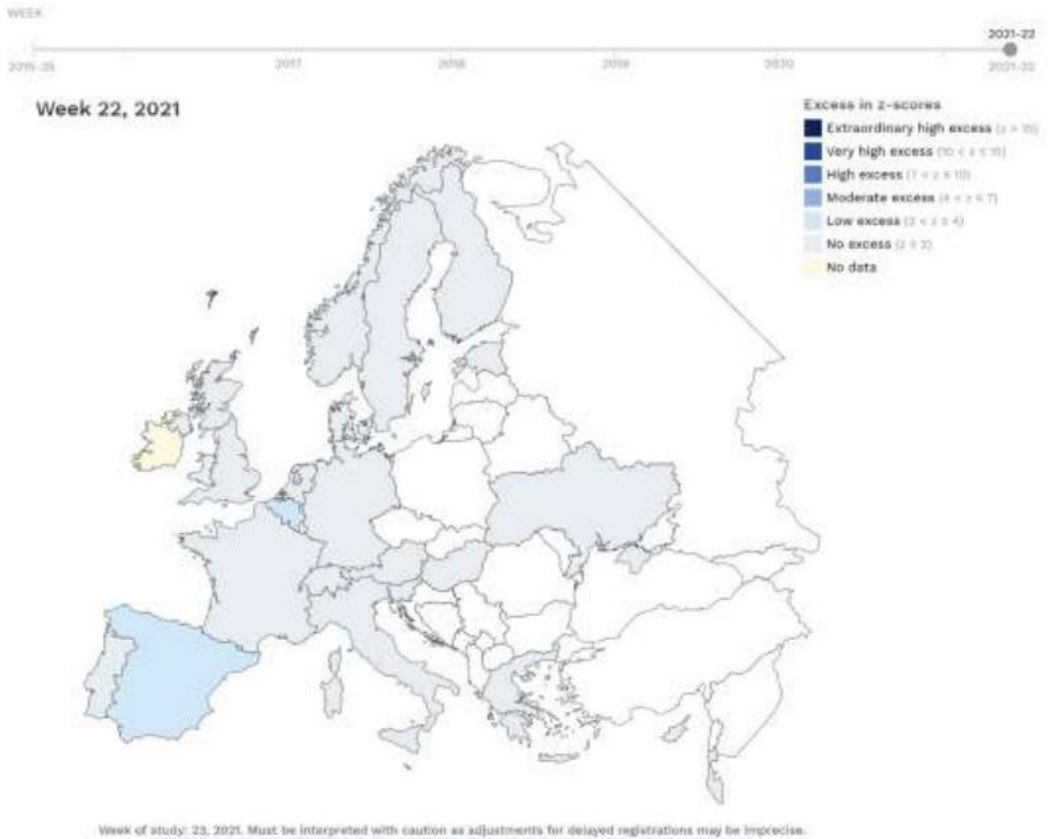




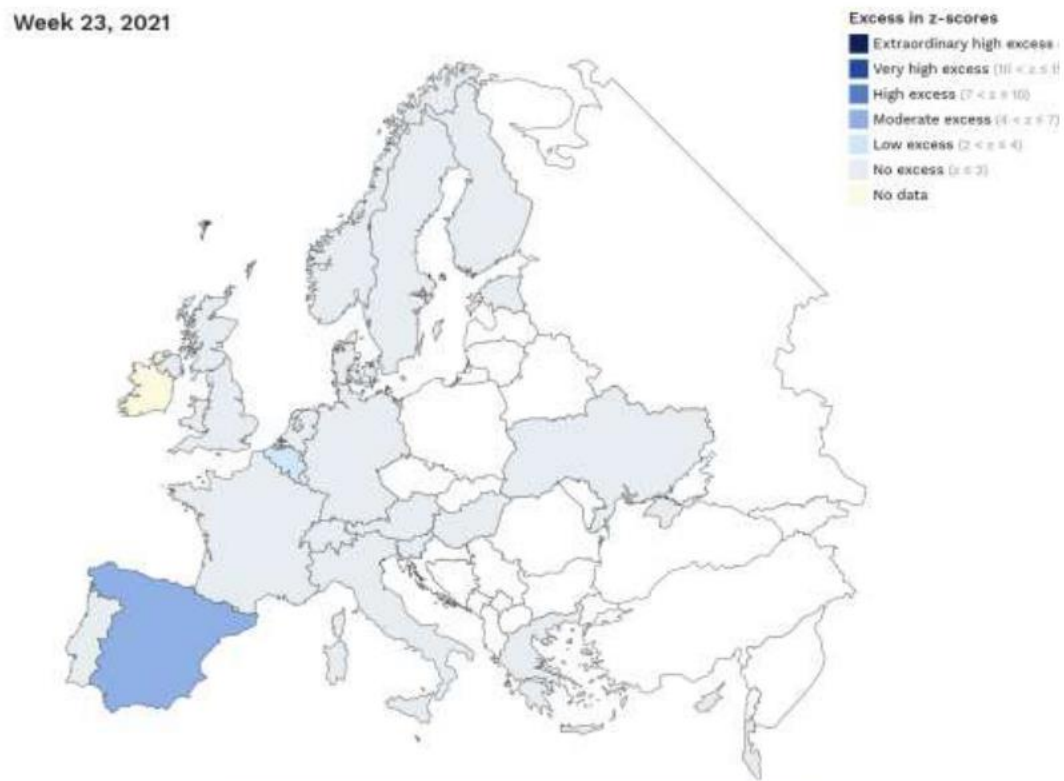


EUROMOMO

Excess mortality
EUROMOMO network 2021



wk 22, 2021



wk 23, 2021

EUROMOMO

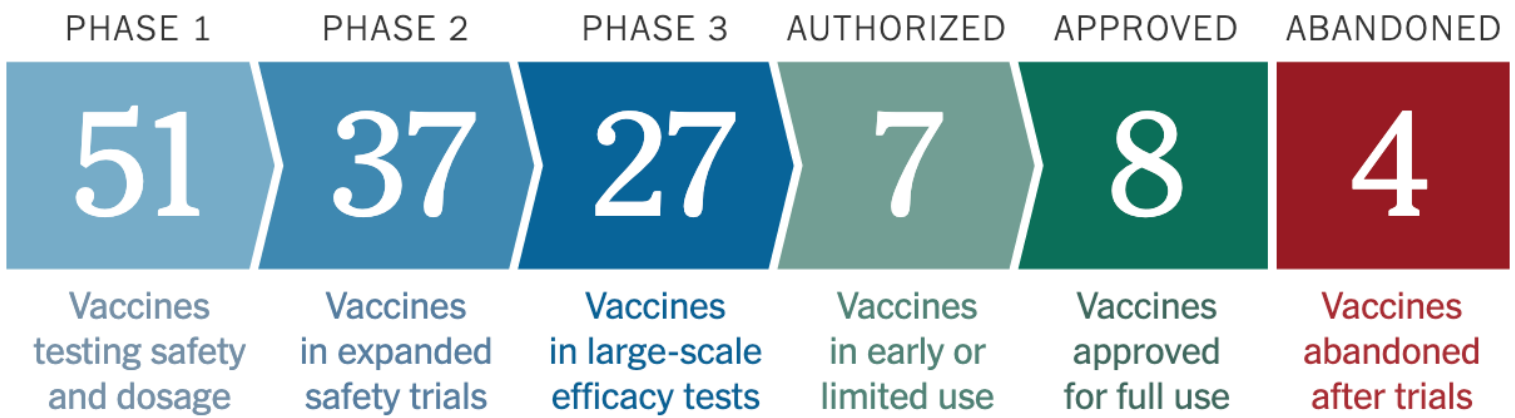
εμβόλια

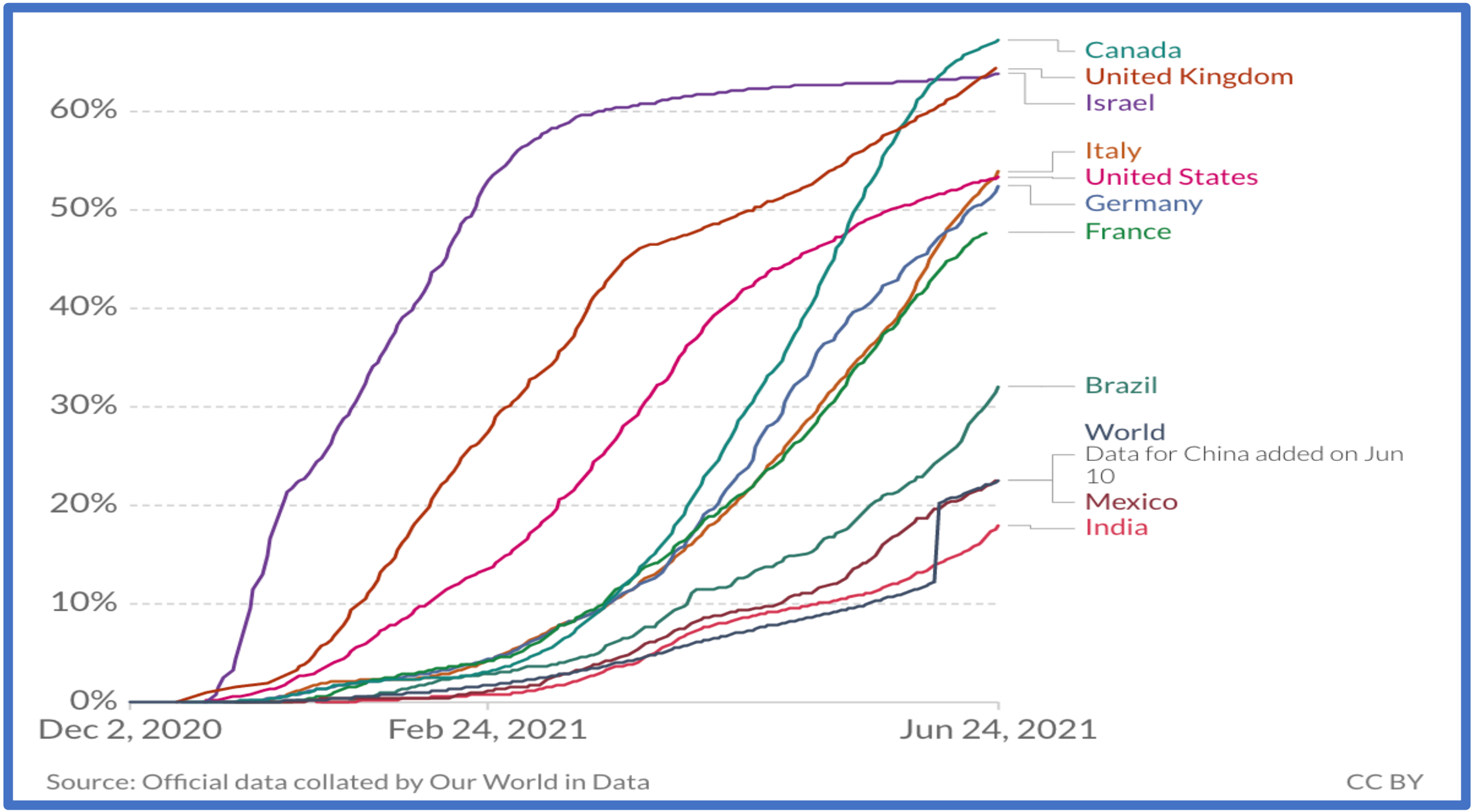
Ποια είναι η θέση των εμβολίων για τον έλεγχο της πανδημίας ;

The New York Times

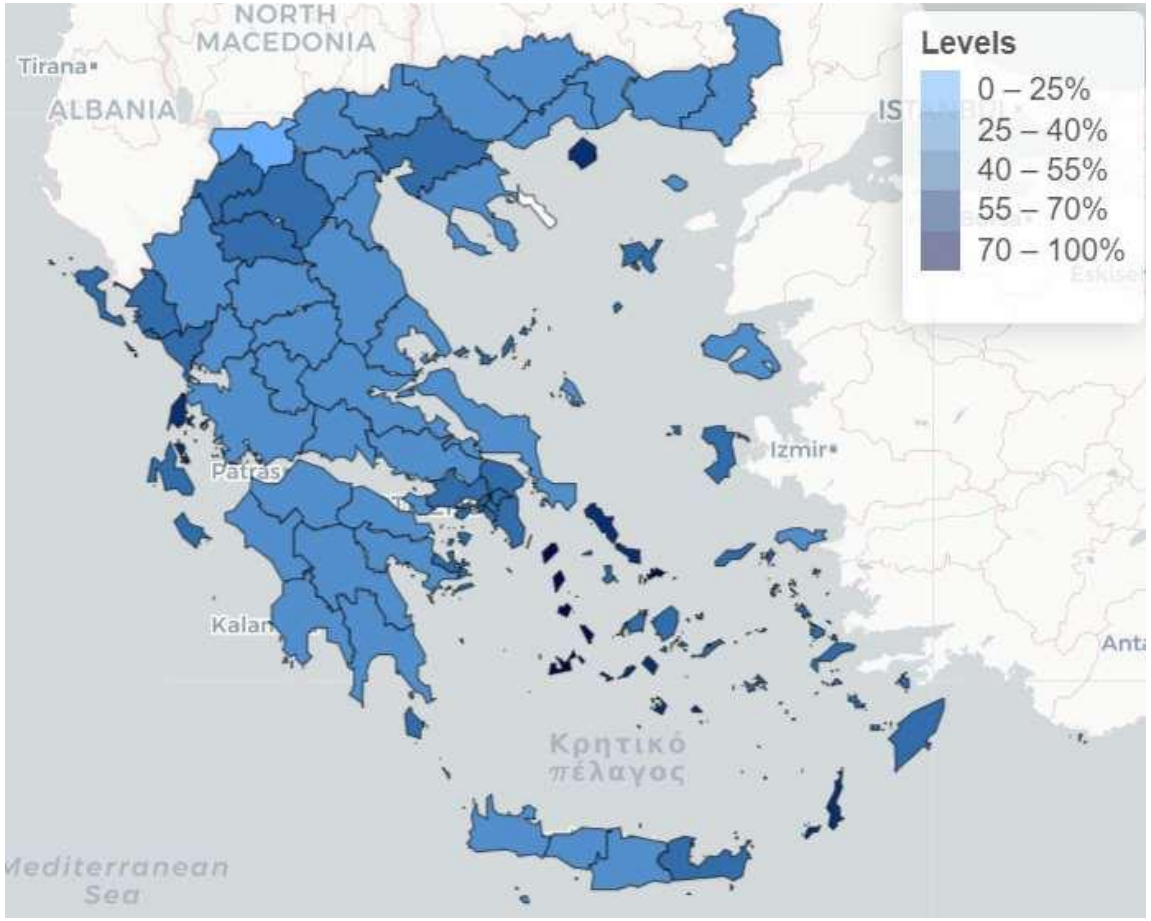
Coronavirus Vaccine Tracker

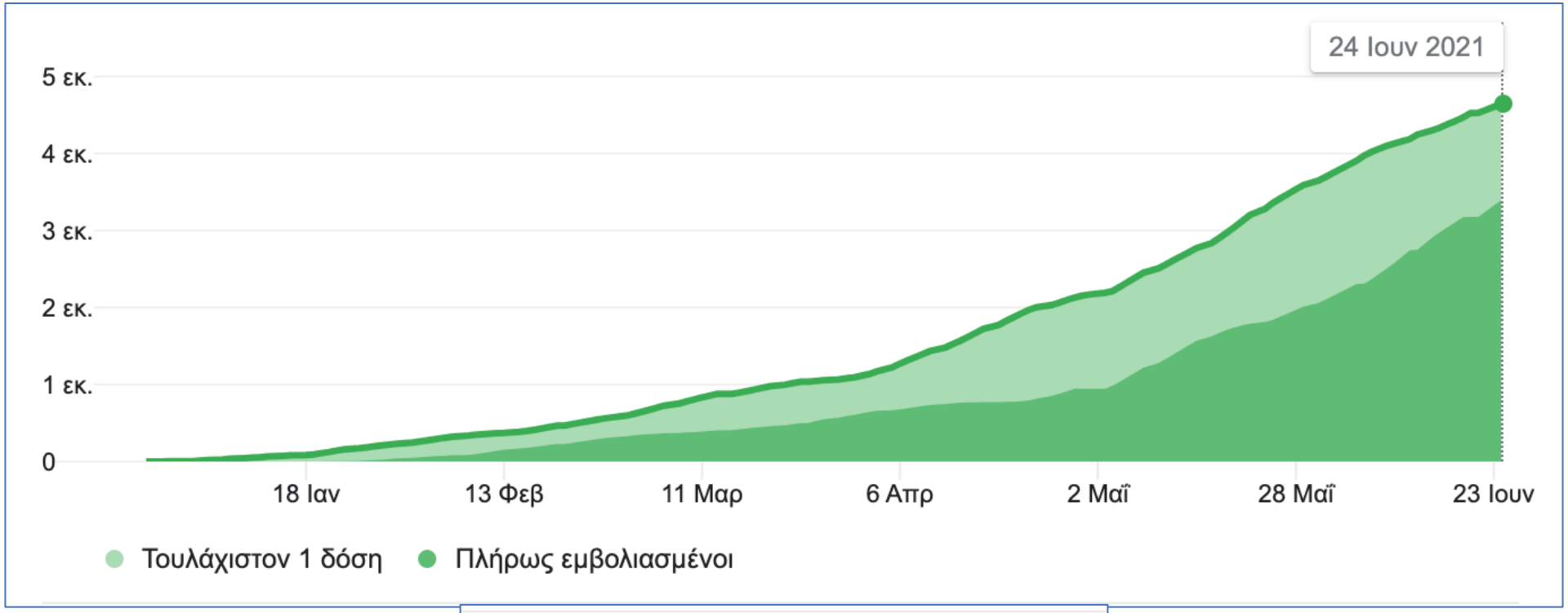
By Carl Zimmer, Jonathan Corum and Sui-Lee Wee Updated May 25, 2021




60%
50%
40%
30%
20%
10%
0%
Dec 2, 2020
Feb 24, 2021
Jun 24, 2021
Canada
United Kingdom
Israel
Italy
United States
Germany
France
Brazil
World
Data for China added on Jun 10
Mexico
India
Source: Official data collated by Our World in Data
CC BY

Χάρτης εμβολιασμού





Ελλάδα

Δόσεις που έχουν χορηγηθεί	Πλήρως εμβολιασμένοι	% πλήρως εμβολιασμένου πληθυσμού
7,82 εκ.	3,39 εκ.	31,6%

Παγκόσμια

Δόσεις που έχουν χορηγηθεί	Πλήρως εμβολιασμένοι	% πλήρως εμβολιασμένου πληθυσμού
2,84 δισ.	806 εκ.	10,3%

Εθνική Εκστρατεία Εμβολιασμού

Covid-19 | Στατιστικά δεδομένα εμβολιασμού

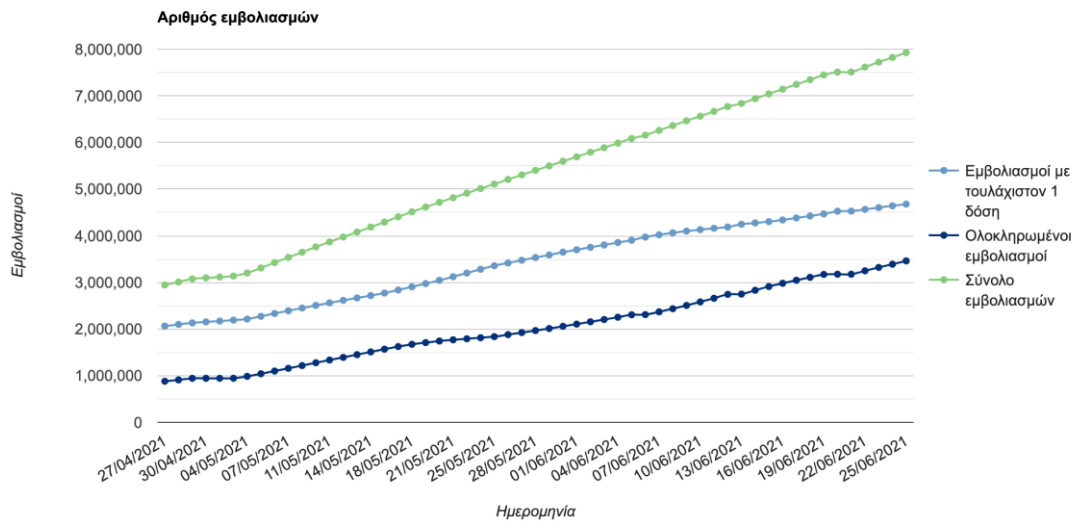
ΤΕΛΕΥΤΑΙΑ ΕΝΗΜΕΡΩΣΗ: 25/06/2021 21:00
(Τα δεδομένα ανανεώνονται κάθε ημέρα στις 21:00)

7.925.253 εμβολιασμοί έχουν πραγματοποιηθεί
+102.556 την 25/06/2021

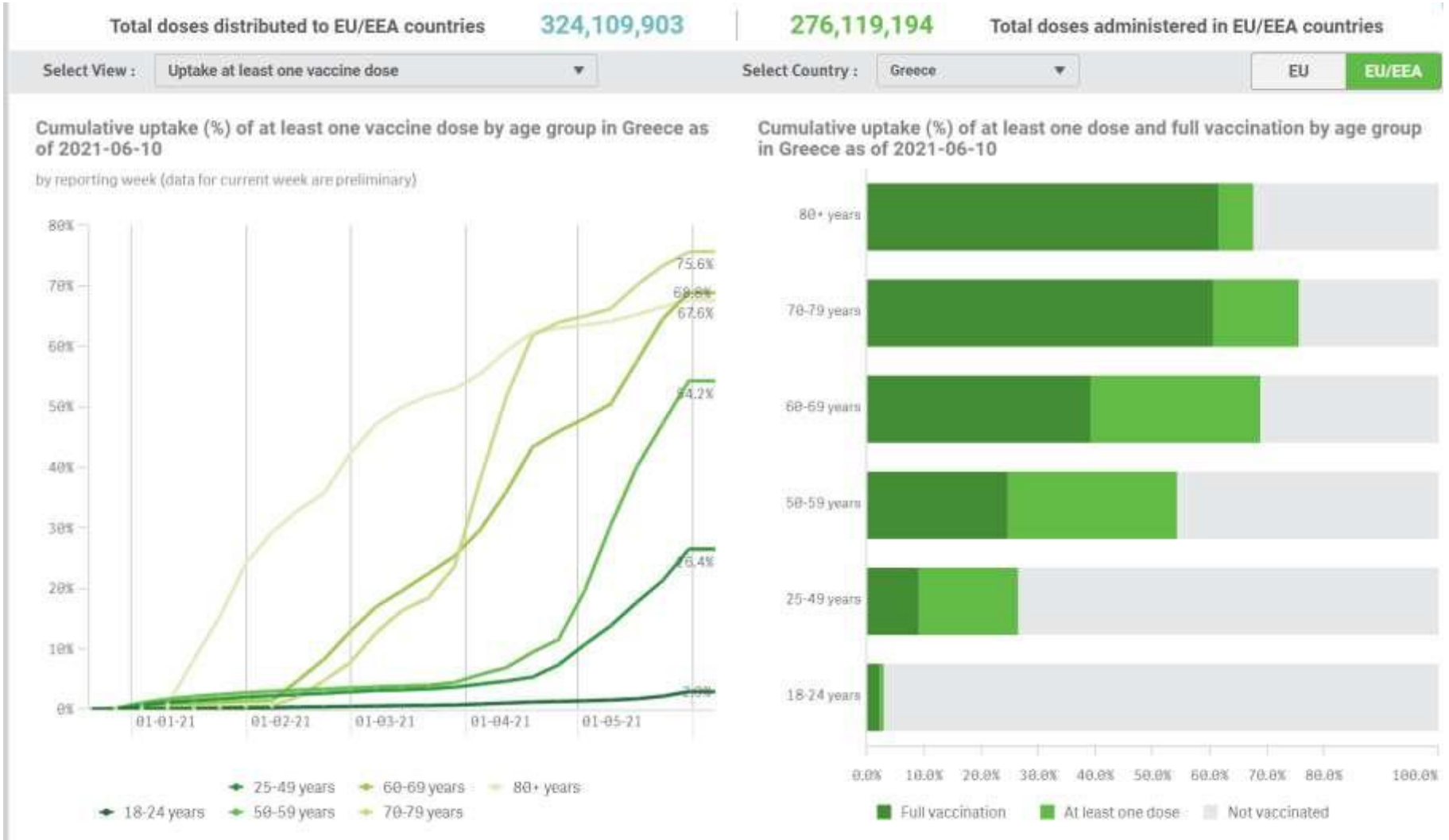
4.678.468 εμβολιασμοί με τουλάχιστον 1 δόση έχουν πραγματοποιηθεί
+36.579 την 25/06/2021

3.461.165 ολοκληρωμένοι εμβολιασμοί έχουν πραγματοποιηθεί
+71.105 την 25/06/2021

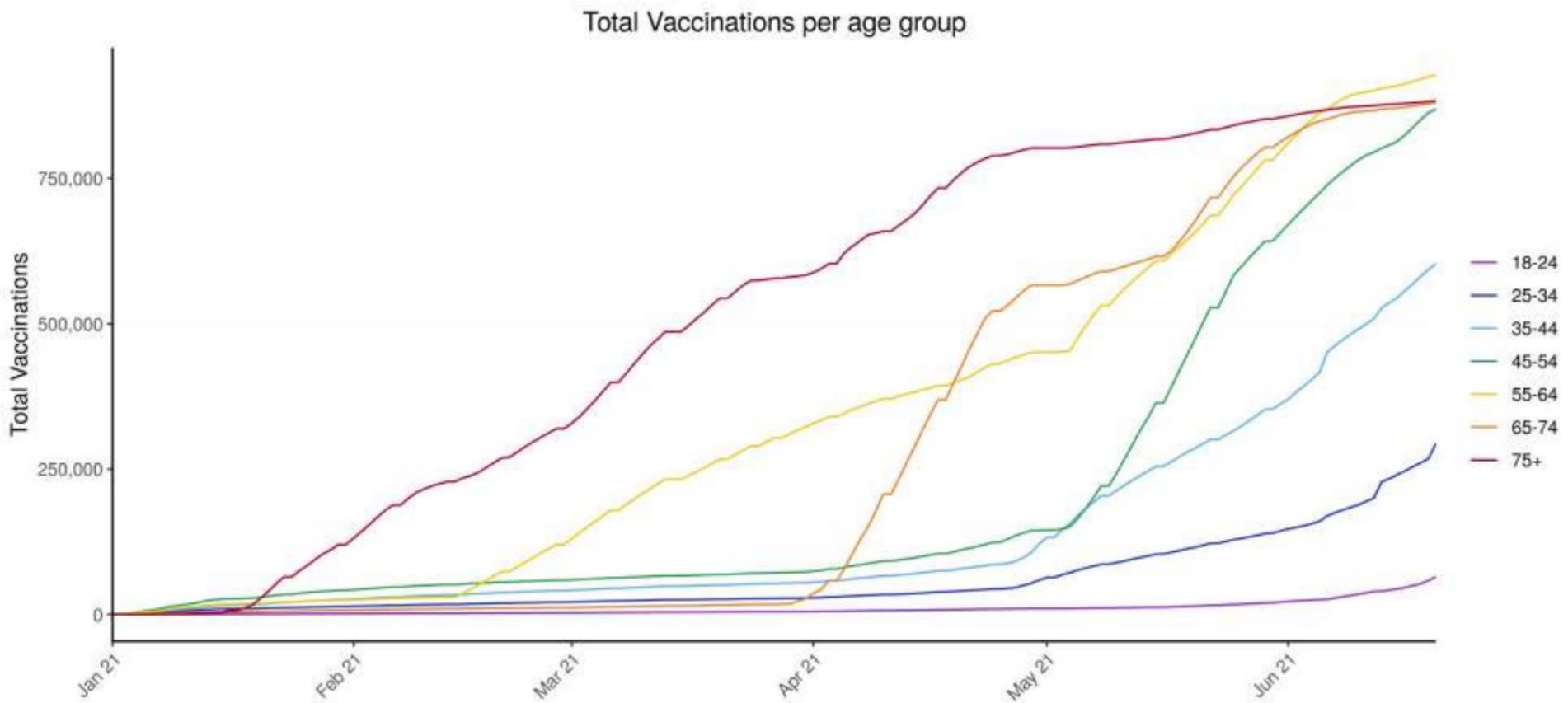
Πηγή δεδομένων: Στατιστικά εμβολιασμού για τον COVID-19 - data.gov.gr



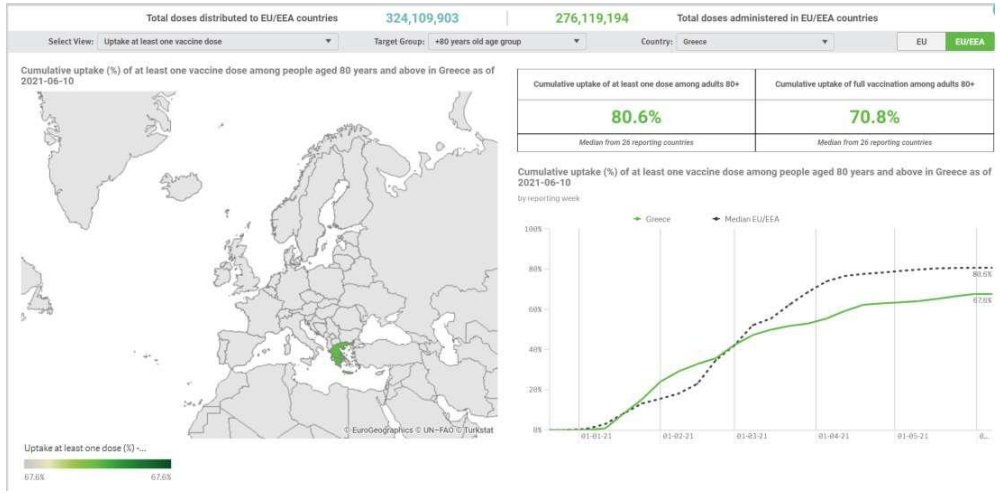
% εμβολιασμού ανά ηλικιακή ομάδα



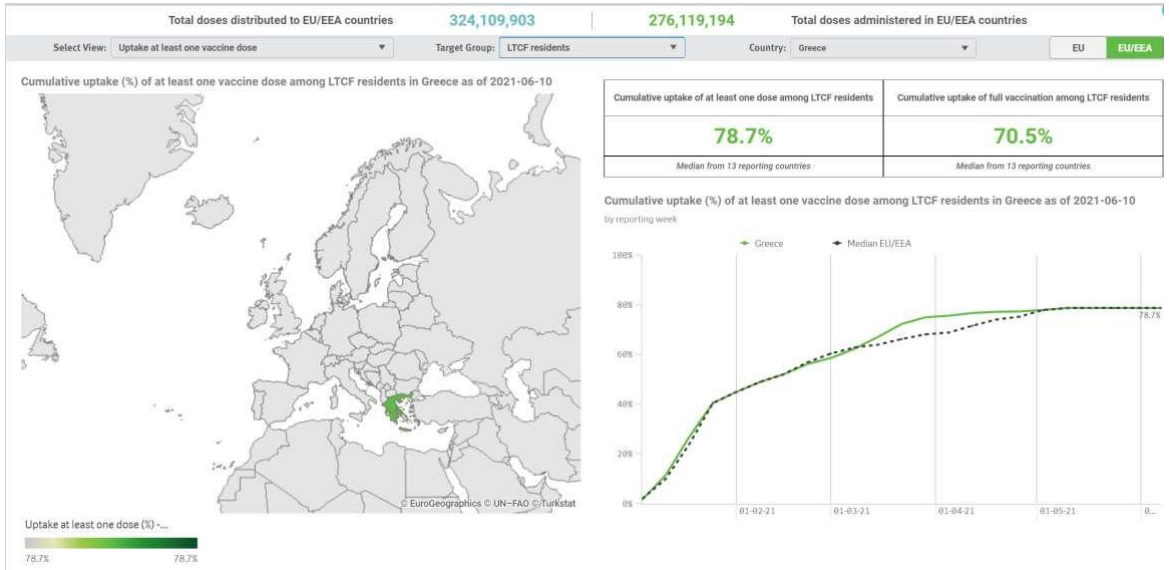
Εμβολιασμοί ανά ηλικιακή ομάδα



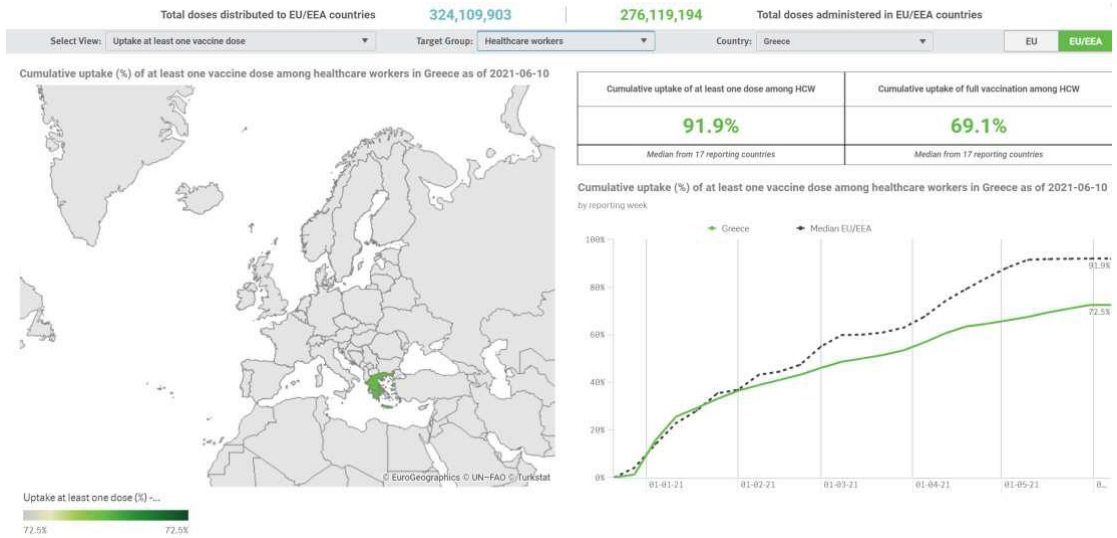
% εμβολιασμού->80 yrs old, Ελλάδα 67.6%



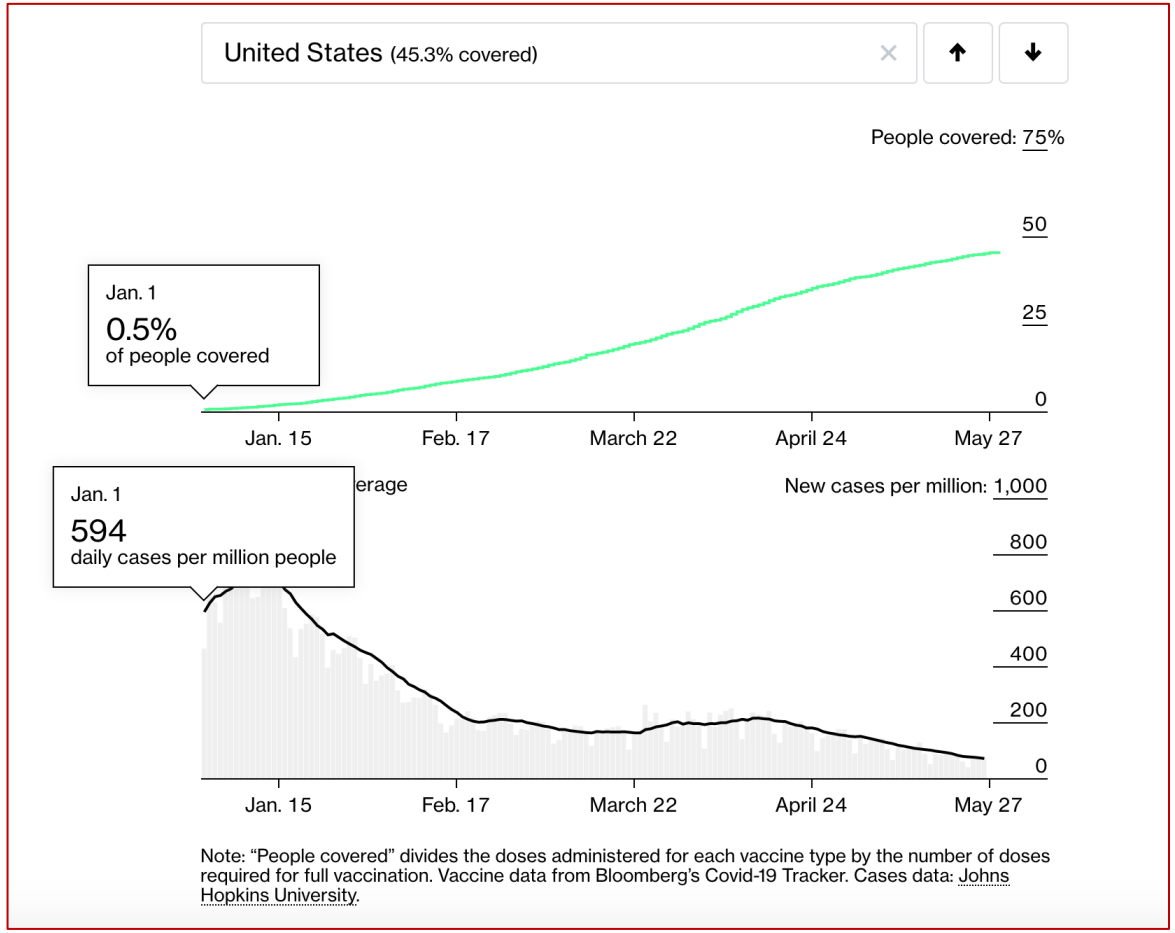
% εμβολιασμού->LTCF, Ελλάδα 78.7%



% εμβολιασμού-HCWs, Ελλάδα 72.5%



Πρώτα θετικά μηνύματα



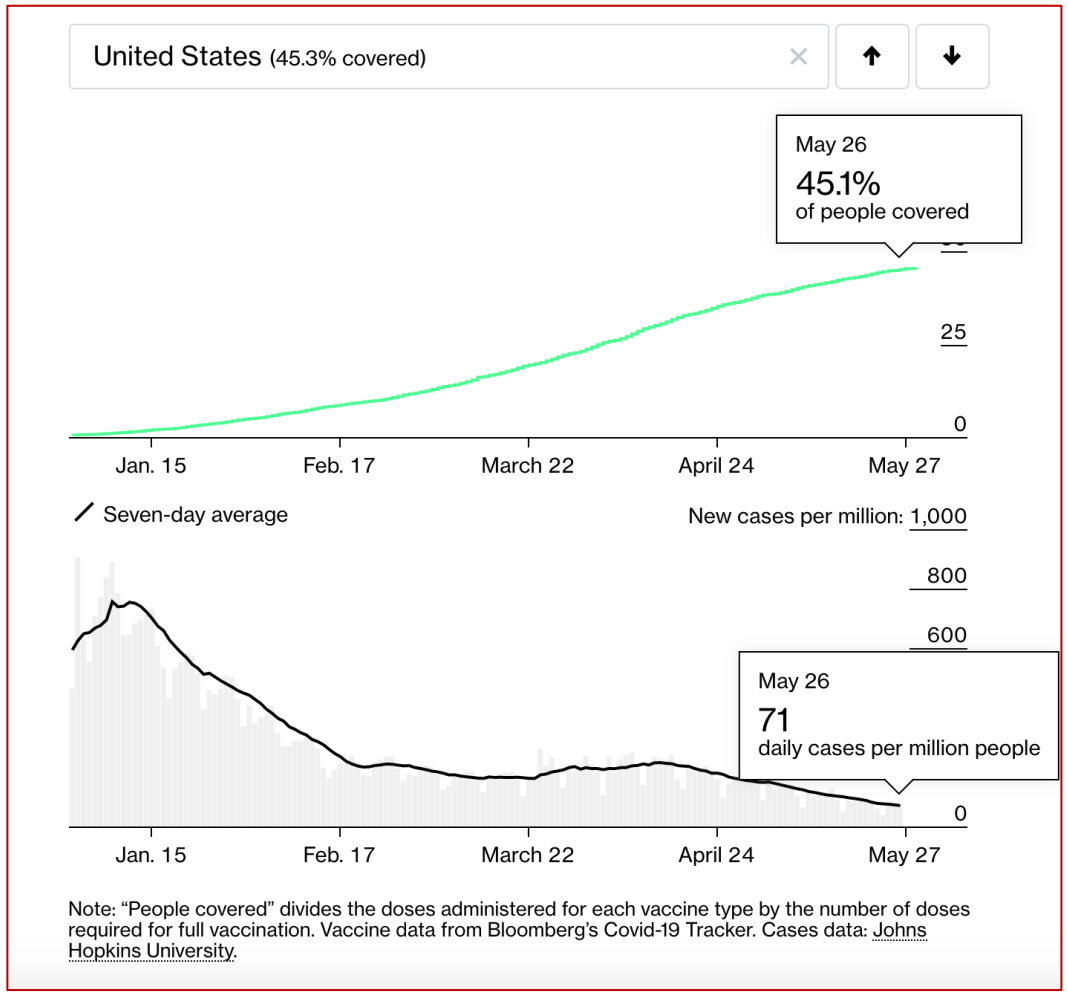


Table 1. New SARS-CoV-2 Infections among Vaccinated Health Care Workers from December 16, 2020, through February 9, 2021.

Days after Vaccination	Vaccinated Persons		
	With New Infection (N=379)	Tested (N=14,604)*	Eligible for Testing (N=36,659)†
	number		*number (percent)*
Dose 1			
Days 1–7	145	5794	35,673 (97.3)
Days 8–14	125	7844	34,404 (93.8)
Days 15–21	57	7958	32,667 (89.1)
Day 22 or later, before dose 2	15	4286	32,327 (88.2)
Dose 2			
Days 1–7	22	5546	23,100 (63.0)
Days 8–14	8	4909	16,082 (43.9)
Day 15 or later	7	4167	14,990 (40.9)

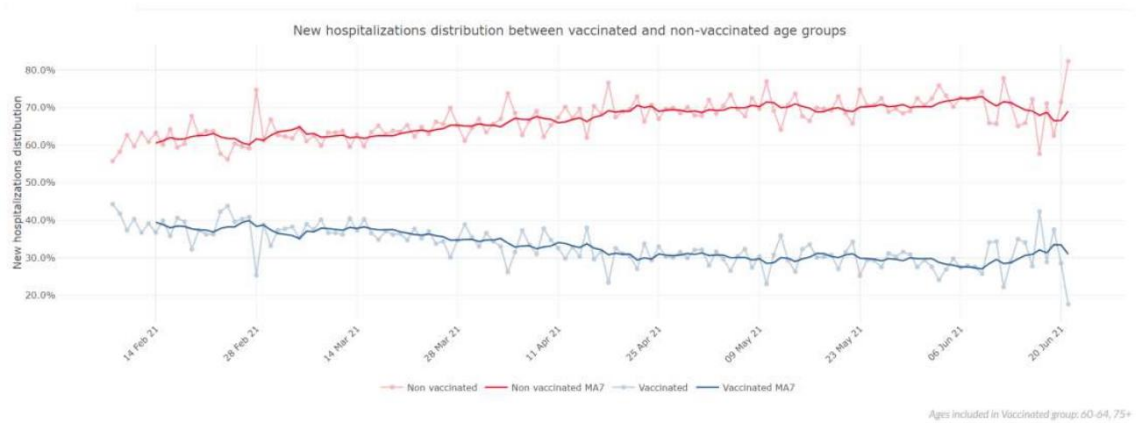
N Engl J Med, May 6,2021; 384:1774-17

Studies to date that showed COVID-19 vaccines reduce asymptomatic infection (transmission)

Setting	Finding of xx% reduction in asymptomatic	Reference
Healthcare workers in England	86%	Hall SSRN, February 22, 2021
Healthcare workers in Israel	75%	Amit, Lancet, March 6, 2021
Patients in Mayo Clinic health system	88.7%	Pawlowski medRxiv, February 27, 2021
Israel Ministry of Health (nationwide)	94%	Pfizer press release, March 11, 2021
Israel general population (Pfizer)	90%	Dagan NEJM, February 24, 2021
Pre-surgical patients in Mayo Clinic system swabbed asymptomatically	80%	Tande Clin Inf Dis, March 10, 2021
Healthcare workers in Cambridge University Hospitals	75%	Weekes Authorea, February 24, 2021
Israel population (>16) with children unvaccinated	For every 20-point increase in adult vaccination, rates of kids testing positive halves	Milman O. Medrxiv. March 31, 2021
First-line responders and HCWs in US	90%	Thompson A. MMWR, March 30, 2021

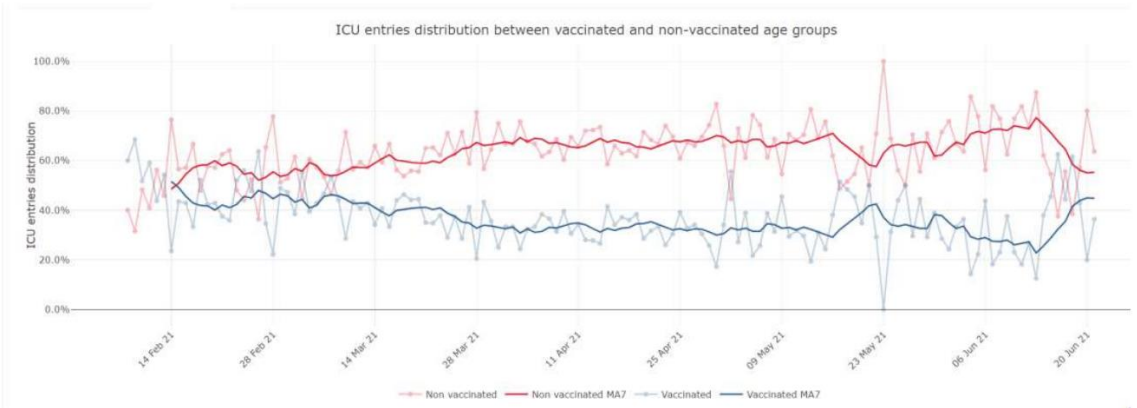
Nasal viral load values are most important determinant of transmissibility (Lancet study); Nasal viral loads from post-vaccination exposures are low and likely noninfectious per CT values (use rapid antigen tests after vaccination if want to test symptomatic)

Εμβολιασμοί σε σχέση με νοσηλείες

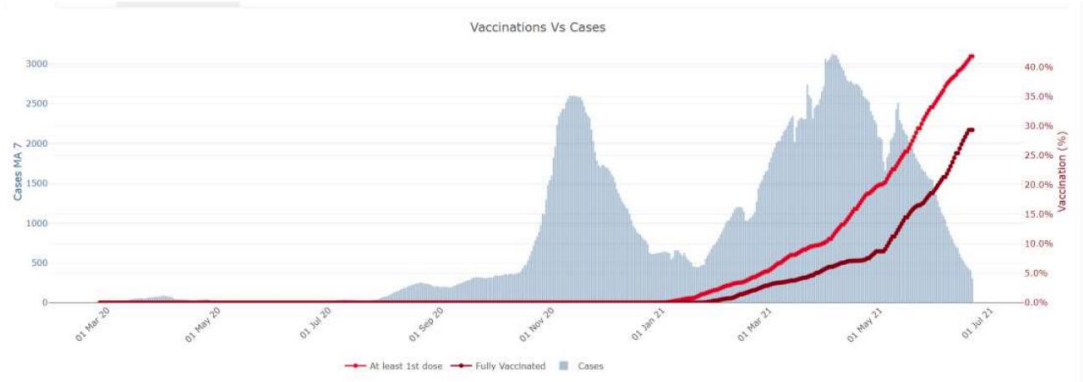


Πρώτα θετικά μηνύματα και στη χώρα μας 21/6/21

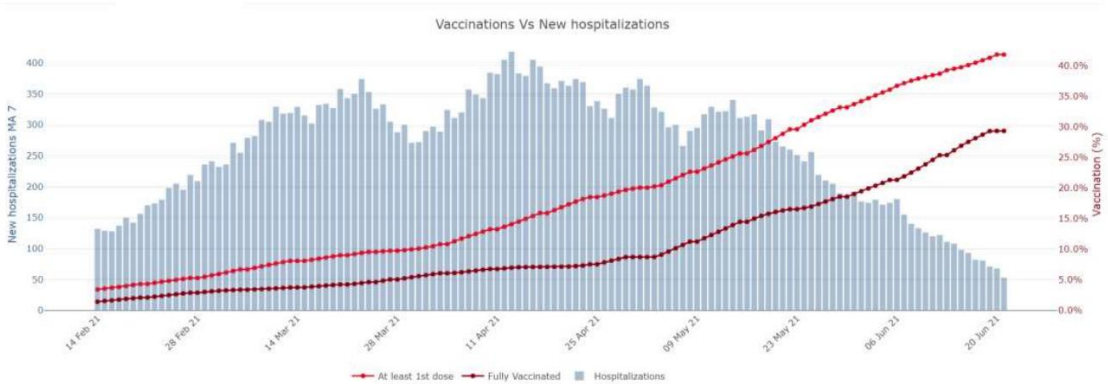
Εμβολιασμοί σε σχέση με ΜΕΘ



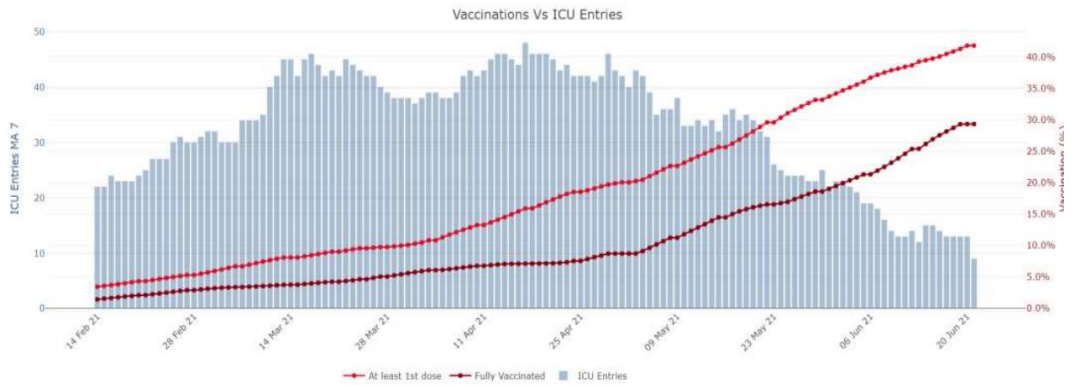
Εμβολιασμοί σε σχέση με cases



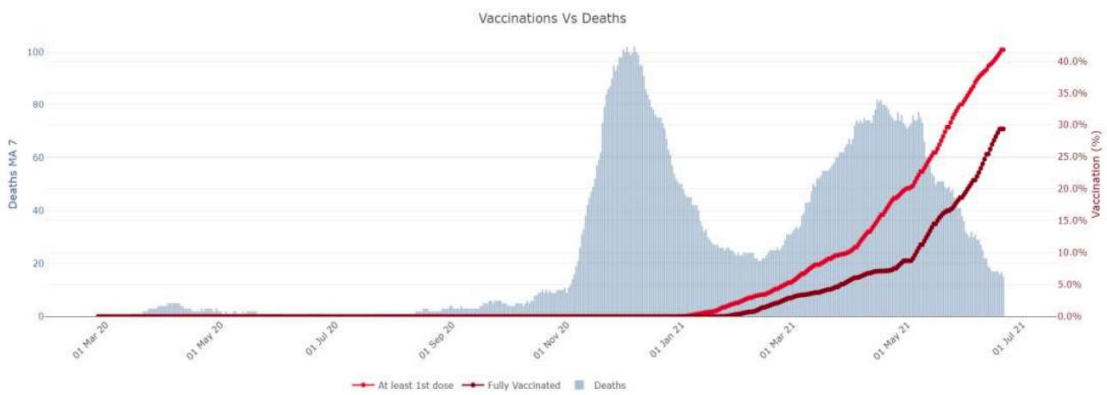
Εμβολιασμοί σε σχέση με νοσηλείες



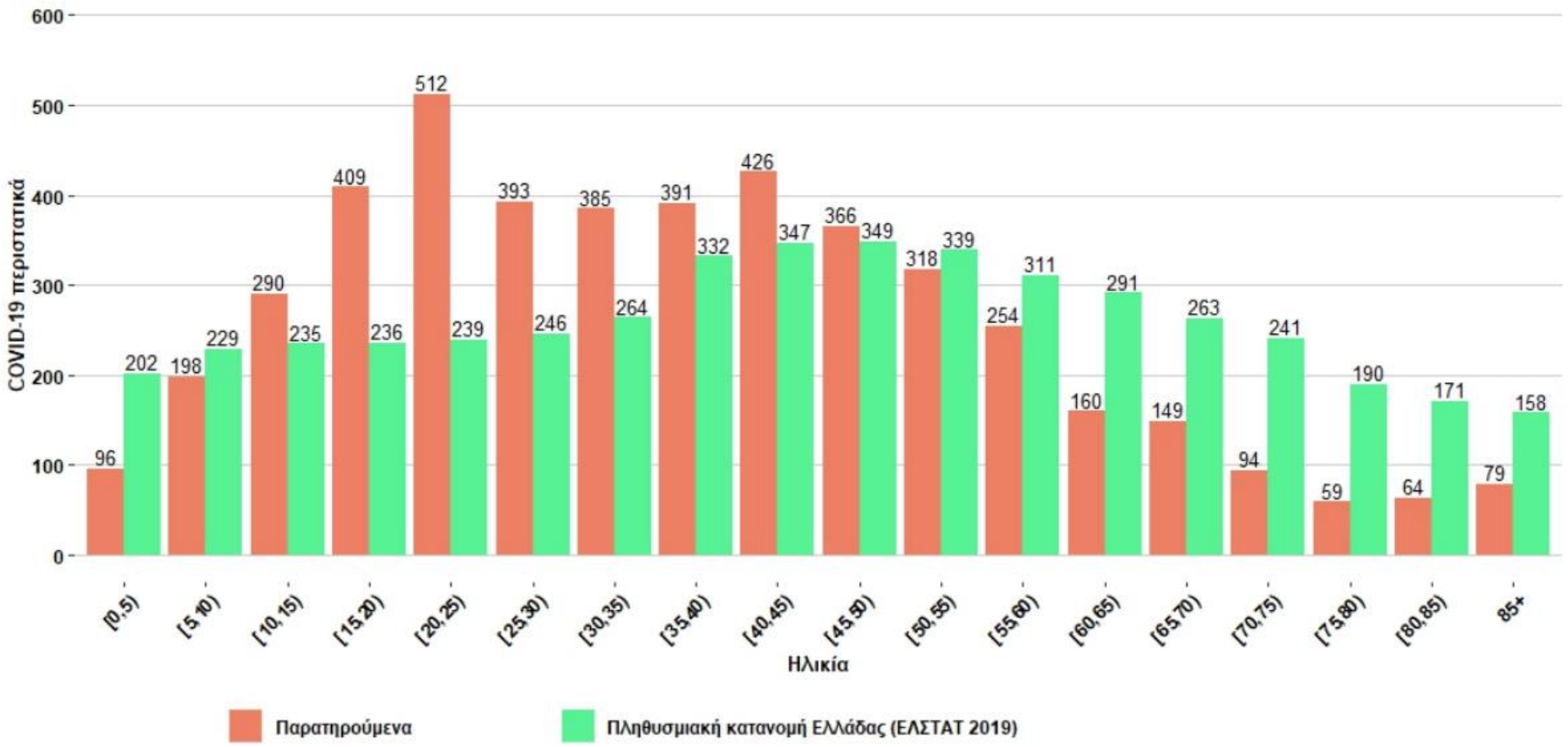
Εμβολιασμοί σε σχέση με ΜΕΘ



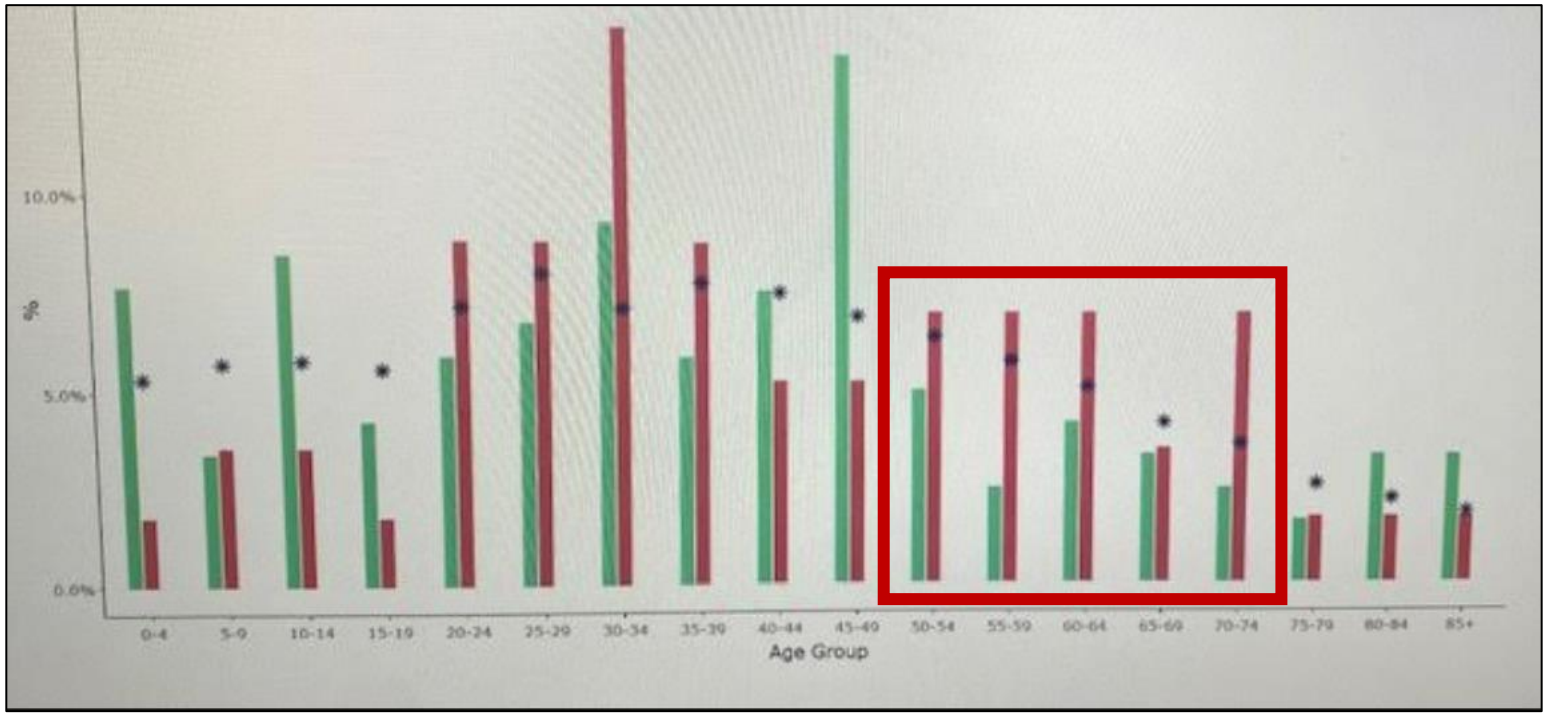
Εμβολιασμοί σε σχέση με deaths



Εμβόλια → αλλαγή σχέσης ηλικιών



Ενώ σε περιοχή χαμηλού εμβολιασμού… !!!



ερωτήσεις…

- **Πόσο κρατάει η ανοσία ?**
- **Πόσο εμποδίζουν τα εμβόλια τη μετάδοση SARS-CoV-2 ?**
- **Μπορεί να υπάρξει διαφυγή στην ανοσία (breakthrough) ?**
- **Τι θα γίνει με τα παιδιά ?**

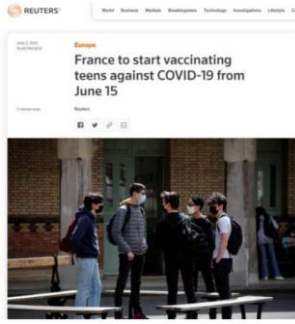
NEJM

Safety, Immunogenicity, and Efficacy of the BNT162b2 Covid-19 Vaccine in Adolescents

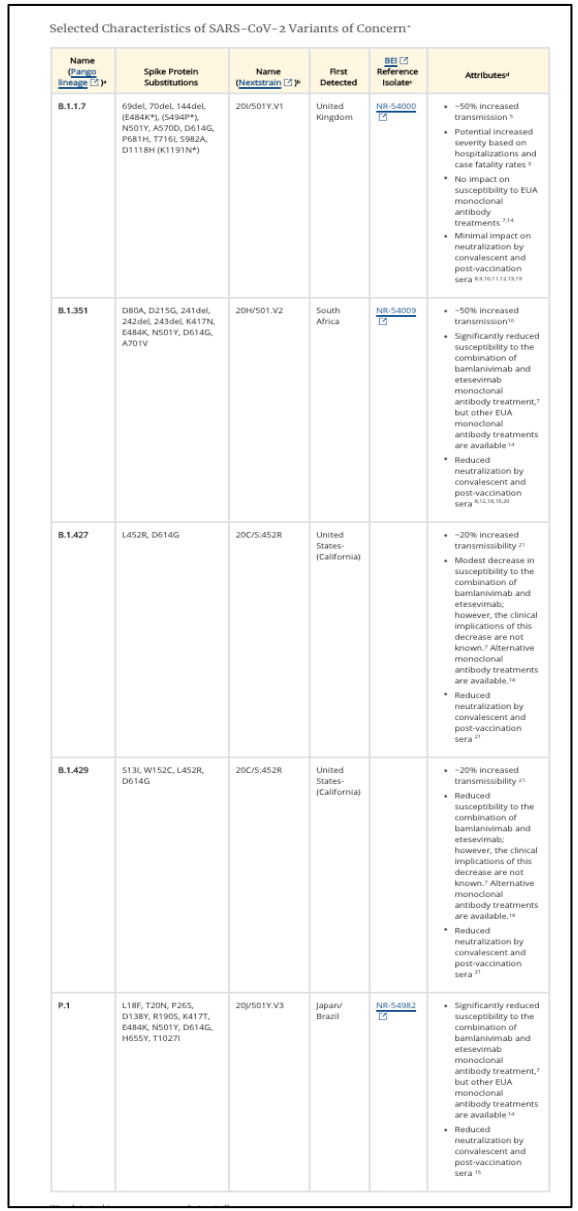
Robert W. Frenck, Jr., M.D., Nicola P. Klein, M.D., Ph.D., Nicholas Kitchin, M.D., Alejandra Gurtman, M.D., Judith Absalon, M.D., Stephen Lockhart, D.M., John L. Perez, M.D., Emmanuel B. Walter, M.D., Shelly Senders, M.D., Ruth Bailey, B.Sc., Kena A. Swanson, Ph.D., Hua Ma, Ph.D., et al., for the C4591001 Clinical Trial Group*

Table 3. Vaccine Efficacy against Covid-19 in Participants 12 to 15 Years of Age.*

Efficacy End Point†	BNT162b2		Placebo		% Vaccine Efficacy (95% CI)‡
	No. of Participants with Event/Total No.§	Surveillance Time (No. at Risk)¶	No. of Participants with Event/Total No.§	Surveillance Time (No. at Risk)¶	
Covid-19 occurrence at least 7 days after dose 2 in participants without evidence of previous infection	0/1005	0.154 (1001)	16/978	0.147 (972)	100 (75.3–100)
Covid-19 occurrence at least 7 days after dose 2 in participants with or without evidence of previous infection	0/1119	0.170 (1109)	18/1110	0.163 (1094)	100 (78.1–100)

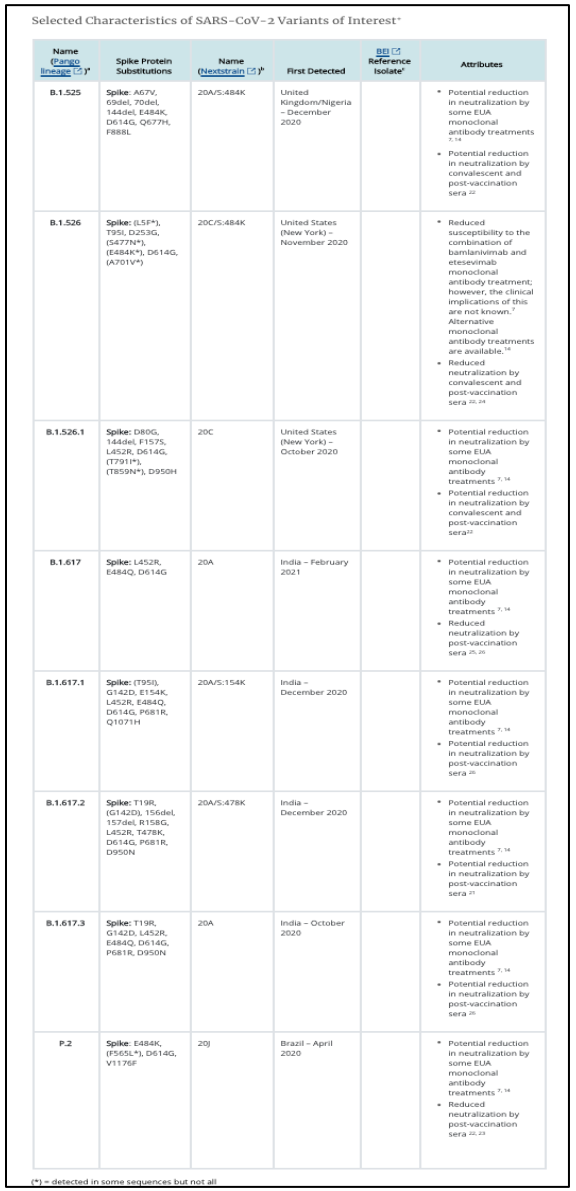


Epi: 2020-2021 → *bad news* ..??



Selected Characteristics of SARS-CoV-2 Variants of Concern*

Name (Pango lineage)	Spike Protein Substitutions	Name (Nextstrain)	First Detected	BEI Reference Isolate	Attributes
B.1.1.7	69del, 70del, 144del, (E484K*), (S494P*), N501Y, A570D, D614G, P681H, T716I, S982A, D1118H (K1191N*)	20I/501Y.V1	United Kingdom	NR-54000	• ~50% increased transmission [5] • Potential increased severity based on hospitalizations and case fatality rates [6] • No impact on susceptibility to EUA monoclonal antibody treatments [7,14] • Minimal impact on neutralization by convalescent and post-vaccination sera [8,9,10,11,12,13,19]
B.1.351	D80A, D215G, 241del, 242del, 243del, K417N, E484K, N501Y, D614G, A701V	20H/501.V2	South Africa	NR-54009	• ~50% increased transmission [16] • Significantly reduced susceptibility to the combination of bamlanivimab and etesevimab monoclonal antibody treatment,[7] but other EUA monoclonal antibody treatments are available [14] • Reduced neutralization by convalescent and post-vaccination sera [8,12,18,19,20]
B.1.427	L452R, D614G	20C/S:452R	United States-(California)		• ~20% increased transmissibility [21] • Modest decrease in susceptibility to the combination of bamlanivimab and etesevimab; however, the clinical implications of this decrease are not known.[7] Alternative monoclonal antibody treatments are available.[14] • Reduced neutralization by convalescent and post-vaccination sera [21]
B.1.429	S13I, W152C, L452R, D614G	20C/S:452R	United States-(California)		• ~20% increased transmissibility [21] • Reduced susceptibility to the combination of bamlanivimab and etesevimab; however, the clinical implications of this decrease are not known.[7] Alternative monoclonal antibody treatments are available.[14] • Reduced neutralization by convalescent and post-vaccination sera [21]
P.1	L18F, T20N, P26S, D138Y, R190S, K417T, E484K, N501Y, D614G, H655Y, T1027I	20J/501Y.V3	Japan/ Brazil	NR-54982	• Significantly reduced susceptibility to the combination of bamlanivimab and etesevimab monoclonal antibody treatment,[7] but other EUA monoclonal antibody treatments are available [14] • Reduced neutralization by convalescent and post-vaccination sera [15]



Selected Characteristics of SARS-CoV-2 Variants of Interest*

Name (Pango lineage)	Spike Protein Substitutions	Name (Nextstrain)	First Detected	BEI Reference Isolate	Attributes
B.1.525	**Spike:** A67V, 69del, 70del, 144del, E484K, D614G, Q677H, F888L	20A/S:484K	United Kingdom/Nigeria – December 2020		• Potential reduction in neutralization by some EUA monoclonal antibody treatments [7, 14] • Potential reduction in neutralization by convalescent and post-vaccination sera [22]
B.1.526	**Spike:** (L5F*), T95I, D253G, (S477N*), (E484K*), D614G, (A701V*)	20C/S:484K	United States (New York) – November 2020		• Reduced susceptibility to the combination of bamlanivimab and etesevimab monoclonal antibody treatment; however, the clinical implications of this are not known.[7] Alternative monoclonal antibody treatments are available.[14] • Reduced neutralization by convalescent and post-vaccination sera [22, 24]
B.1.526.1	**Spike:** D80G, 144del, F157S, L452R, D614G, (T791I*), (T859N*), D950H	20C	United States (New York) – October 2020		• Potential reduction in neutralization by some EUA monoclonal antibody treatments [7, 14] • Potential reduction in neutralization by convalescent and post-vaccination sera[22]
B.1.617	**Spike:** L452R, E484Q, D614G	20A	India – February 2021		• Potential reduction in neutralization by some EUA monoclonal antibody treatments [7, 14] • Reduced neutralization by post-vaccination sera [25, 26]
B.1.617.1	**Spike:** (T95I), G142D, E154K, L452R, E484Q, D614G, P681R, Q1071H	20A/S:154K	India – December 2020		• Potential reduction in neutralization by some EUA monoclonal antibody treatments [7, 14] • Potential reduction in neutralization by post-vaccination sera [26]
B.1.617.2	**Spike:** T19R, (G142D), 156del, 157del, R158G, L452R, T478K, D614G, P681R, D950N	20A/S:478K	India – December 2020		• Potential reduction in neutralization by some EUA monoclonal antibody treatments [7, 14] • Potential reduction in neutralization by post-vaccination sera [23]
B.1.617.3	**Spike:** T19R, G142D, L452R, E484Q, D614G, P681R, D950N	20A	India – October 2020		• Potential reduction in neutralization by some EUA monoclonal antibody treatments [7, 14] • Potential reduction in neutralization by post-vaccination sera [26]
P.2	**Spike:** E484K, (F565L*), D614G, V1176F	20J	Brazil – April 2020		• Potential reduction in neutralization by some EUA monoclonal antibody treatments [7, 14] • Reduced neutralization by post-vaccination sera [22, 23]

(*) = detected in some sequences but not all

SOS

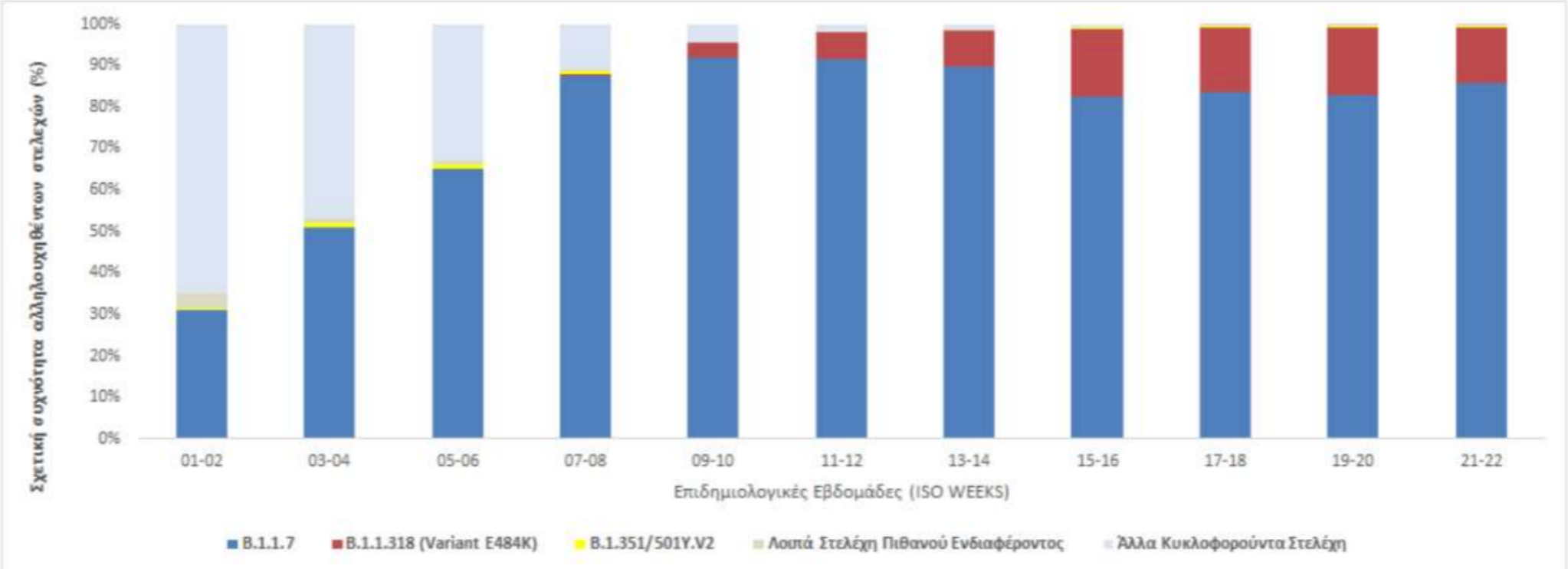
WHO label	Lineage + additional mutations	Country first detected (community)	Spike mutations of interest	Year and month first detected	Evidence for impact on transmissibility	Evidence for impact on immunity	Evidence for impact on severity	Transmissi in EU/EEA
Alpha	**B.1.1.7**	United Kingdom	N501Y, D614G, P681H	September 2020	Yes (v) [1]	No	Yes (v) [3, 4]	Dominating
	B.1.1.7+E484K	United Kingdom	E484K, N501Y, D614G, P681H	December 2020	Yes (v) [1]	Neutralisation (v) [2, 5]	Yes (v) [3]	Outbreaks
Beta	**B.1.351**	South Africa	K417N, E484K, N501Y, D614G, A701V	September 2020	Yes (v) [6]	Escape (v) [7, 8]	Yes (v) [4, 9]	Community
Gamma	**P.1**	Brazil	K417T, E484K, N501Y, D614G, H655Y	December 2020	Yes (v) [10]	Neutralisation (v) [11]	Yes (v) [4]	Community
Delta	**B.1.617.2**	India	L452R, T478K, D614G, P681R	December 2020	Yes (v) [12-14]	Escape (v) [15]		Community

Variants, 17 Ιουνίου
εθνικό δίκτυο ΕΟΔΥ

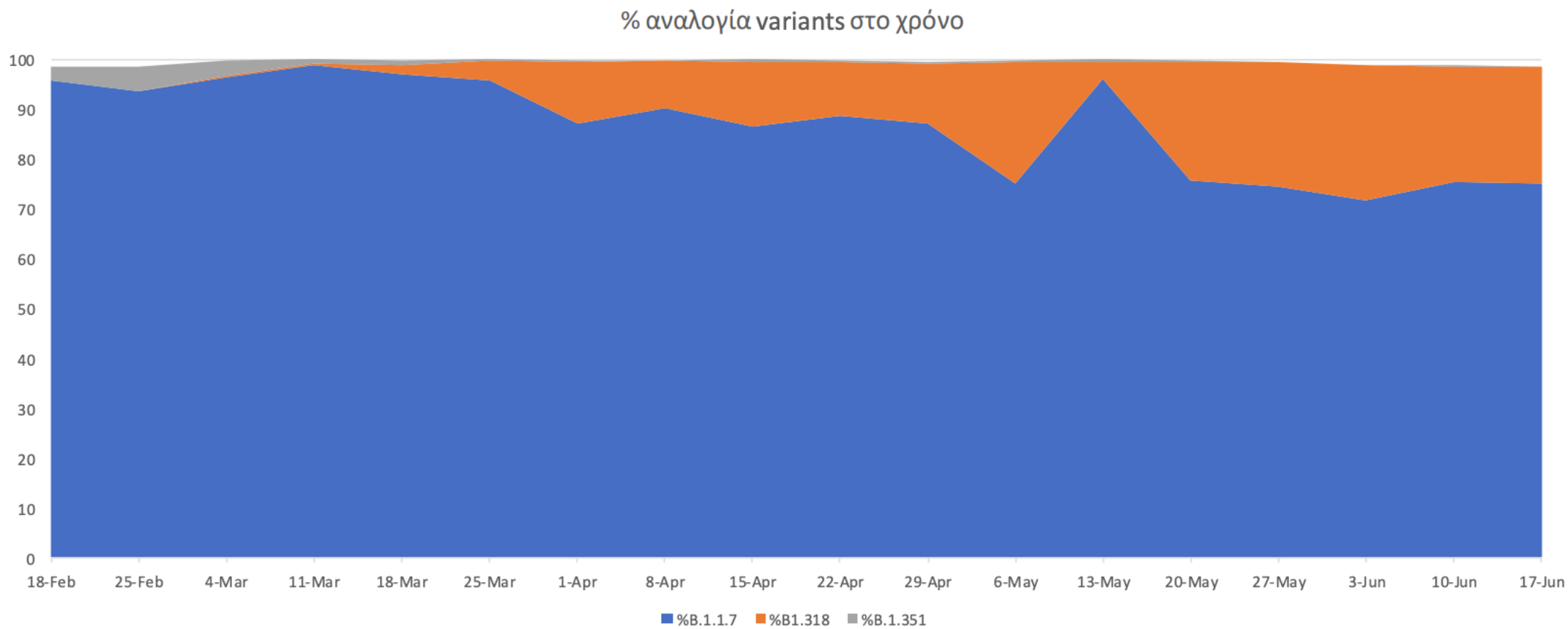
Στέλεχος	Αριθμός νεοαπομονωθέντων στελεχών	Σύνολο στελεχών	Ποσοστό επί του συνόλου
B.1.1.7 (Variant VOC 202012/01)	1358	12398	83,47%
B.1.1.318 (Variant E484K)	421	2242	15,09%
B.1.351/501Y.V2/South Africa (Variant VOC 202012/02)	3	92	0,62%
Variant SGeneDelete	0	43	0,29%
B.1.1.523 (Variant E484K)	7	19	0,13%
C.36	5	12	0,08%
B.1.617.2 (VOC-21APR-02)	5	11	0,07%
B.1.525 (VOI)	5	8	0,05%
B.1.1 (Variant E484K)	0	7	0,05%
Variant Y453F	0	6	0,04%
B.1.1.220 (Variant E484K)	0	2	0,01%
B.1.1.345 (Variant E484K)	0	2	0,01%
B.1.623	2	2	0,01%
P.1.2 (VOC-21JAN-02)	1	2	0,01%
A.27	0	1	0,01%
AT.1	1	1	0,01%
B.1.1.198 (Variant E484K)	0	1	0,01%
B.1.617 (VUI-21APR-01)	0	1	0,01%
B.1.617.1 (VUI-21APR-01)	0	1	0,01%
C.11	1	1	0,01%
R1 (Variant E484K)	0	1	0,01%
Variant 19B/A.23.1	0	1	0,01%
Σύνολο	1809	14854	100,00%

Variants, 17 Ιουνίου
εθνικό δίκτυο ΕΟΔΥ

Διάγραμμα 9. Σχετική συχνότητα αλληλουχηθέντων δειγμάτων από τυχαία δειγματοληψία ανά είδος στελεχών, ανά 15νθήμερο, από την έναρξη της λειτουργίας του Εθνικού Δικτύου Γονιδιωματικής Επιτήρησης του ιού SARS CoV-2 έως 06/06/2021



Variants, 17 Ιουνίου
εθνικό δίκτυο ΕΟΔΥ



Variants, 17 Ιουνίου
εθνικό δίκτυο ΕΟΔΥ

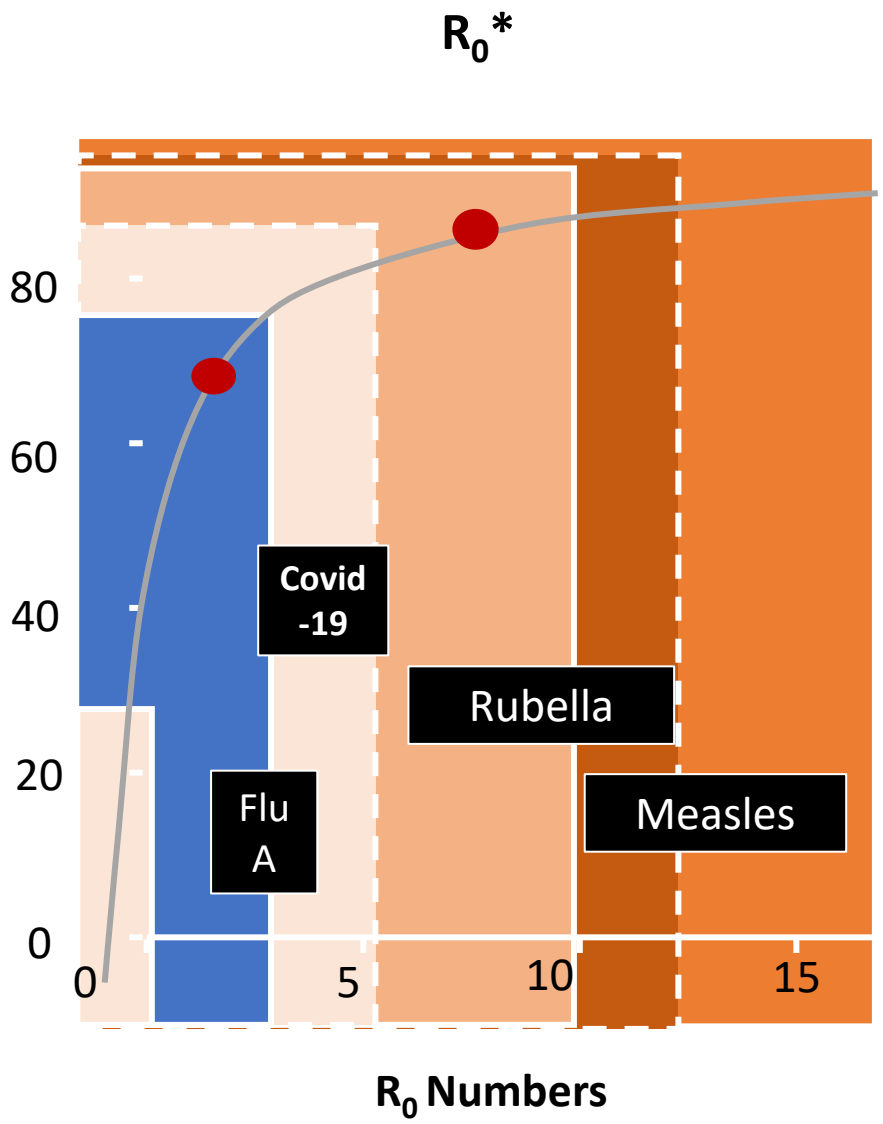
Ανάγκη γονιδιωματικής επιτήρησης !!!!
SOS: Delta variant

ΠΕΡΙΦΕΡΕΙΑ	B.1.1.7/UK					Z/ South Africa
	Εβδομάδες 21-22	Συνολικό διάστη... επ...		...ησης	Εβδομάδες 21-22	Συνολικό διάστημα επιτήρησης
ΑΝΑΤΟΛΙΚΗΣ ΜΑΚΕΔΟΝΙΑΣ ΚΑΙ ΘΡΑΚΗΣ				1,32%	-	0,00%
ΑΤΤΙΚΗΣ		...,00%		11,07%	0,36%	0,17%
ΒΟΡΕΙΟΥ ΑΙΓΑΙΟΥ			40,00%	3,37%	0,00%	0,00%
ΔΥΤΙΚΗΣ ΕΛΛΑΔΑΣ		...%	9,94%	5,72%	0,00%	0,07%
ΔΥΤΙΚΗΣ ΜΑΚΕΔΟΝΙΑ...		...5,24%	7,14%	0,63%	0,00%	0,00%
ΗΠΕΙΡΟΥ		69,39%	-	8,16%	-	2,04%
ΘΕΣΣΑΛΙΑ...	-	81,14%	-	0,51%	-	0,00%
ΙΟΝ...	-	78,40%	-	2,40%	-	0,00%
ΚΕΝ...	96,69%	77,36%	3,31%	0,31%	0,00%	1,78%
ΚΡΗΤ...	100,00%	97,34%	0,00%	0,00%	0,00%	0,00%
ΝΟΤΙΟ...	100,00%	71,43%	0,00%	0,89%	0,00%	0,00%
ΠΕΛΟΠΟ...	83,61%	83,87%	14,75%	9,95%	0,00%	0,00%
ΣΤΕΡΕΑΣ Ε...ΑΔΑΣ	61,11%	68,62%	38,89%	29,62%	0,00%	0,59%
Σύνολο	**85,79%**	**77,68%**	**13,46%**	**8,51%**	**0,13%**	**0,29%**

Ποια είναι τα ποσοστά της ανοσίας αγέλης που χρειάζονται για τον έλεγχο της πανδημίας

- **70-75 %** φαίνεται ασφαλές
- **80-90%** επί εμφανίσεων «δύσκολων» στελεχών
- Superspreading ?
- Εποχιακή κατανομή
- Μείωση διασποράς και φορτίου στο σύστημα υγείας και στο 50%
  - *Έλεγχος σε εθνικό επίπεδο μέσα στο 2021 (Φθινόπωρο)*
  - *Έλεγχος σε παγκόσμιο επίπεδο προς τα τέλη του 2022*
- Προβλήματα: διαθεσιμότητα (τρίτες χώρες) / αποδοχή / αποτελεσματικότητα σε μεταλλάξεις
- Παιδικός εμβολιασμός ??? / αναμνηστικές δόσεις ??? / διαφορετικές πλατφόρμες ???

Herd immunity



1-1/R0

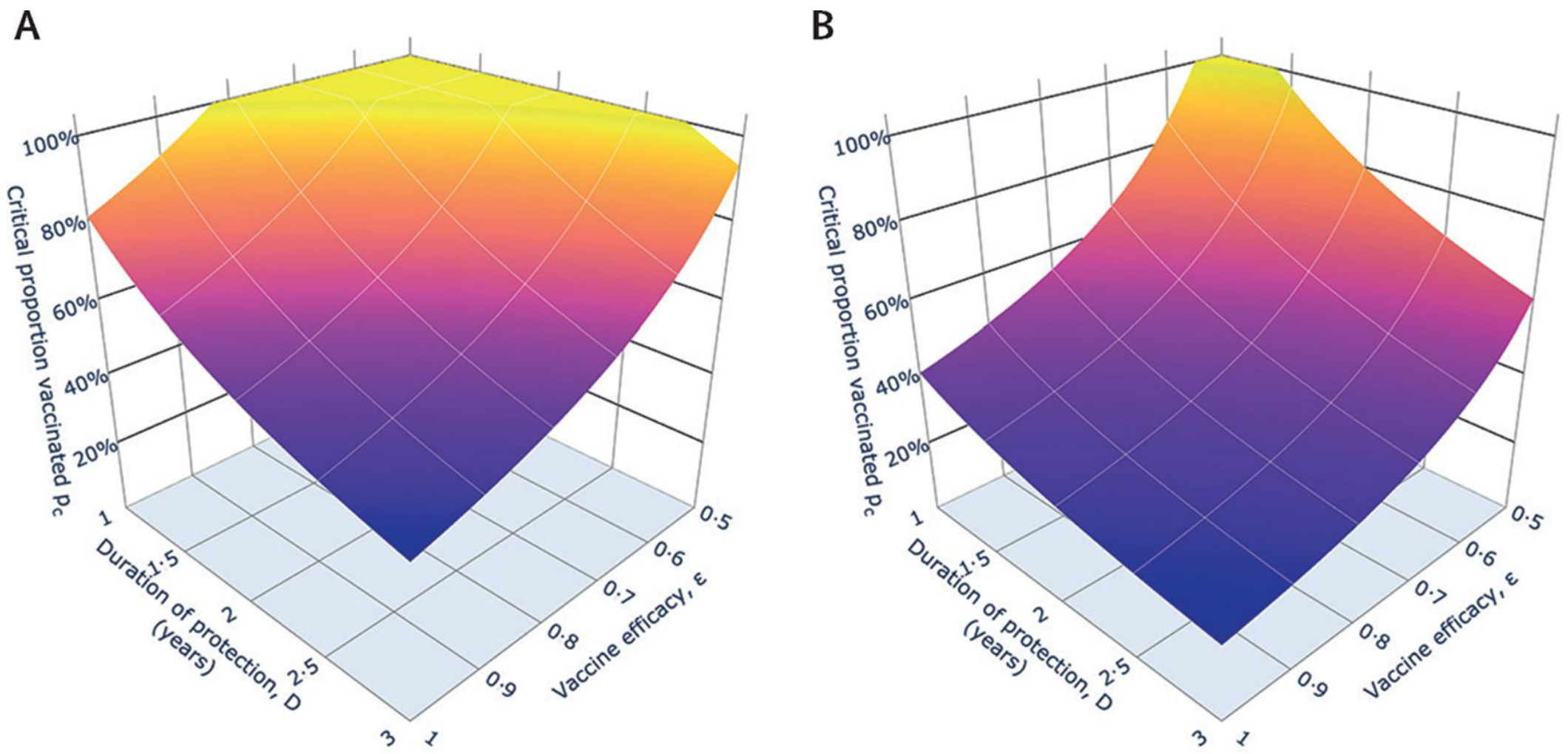
Assumes randomly missing homogenous population and last protection.

Fine. Vaccines. 2011;52:911

Herd immunity for SARS-CoV-2

- Epidemiological models of the herd immunity threshold for SARS-CoV-2 currently range **from 60% to 75% of the population (80-90 % ???)**
  - This equates to 200 million people in the US and **5.6 (6.4 ???) billion people worldwide**[1]

Randolph. Immunity. 2020;52:737
Bloom. NEJM. 2020:[Epub].



The Lancet 2020 3961614-1616DOI: (10.1016/S0140-6736(20)32318-7

Υπάρχει το ενδεχόμενο μεταλλάξεων που θα καθιστούν τα εμβόλια μη αποτελεσματικά ;

- Αργή εμφάνιση μεταλλάξεων
- Προς το παρόν αποτελεσματικά (70-95% -- AZ → B1.351? / B.1.617.2?)
- Αντισωματική απάντηση vs **κυτταρική ανοσία**
- Ίσως νεότερες μεταλλάξεις προβληματικές (Δέλτα)
- Πρόληψη μετάδοσης μέσω εμβολιασμού ??? (φαίνεται επαρκής) / ανάγκη για μελέτες CDC) – breakthrough μολύνσεις ???
- Σημαντικός ο **γρήγορος και εκτεταμένος εμβολιασμός**

- Ανοσία μετά νόσηση μικρότερης διάρκειας ???
- Θεραπεία με μονοκλωνικά λιγότερο αποτελεσματική ???

Delta variant

HEALTH AND SCIENCE

WHO says delta is becoming the dominant Covid variant globally

PUBLISHED FRI, JUN 18 2021•12:02 PM EDT UPDATED FRI, JUN 18 2021•1:04 PM EDT

Berkeley Lovelace Jr.
@BERKELEYJR

SHARE

KEY POINTS

- Covid-19 variant delta, first identified in India, is becoming the dominant variant of the disease worldwide, the WHO's chief scientist said Friday.
- That's because of its "significantly increased transmissibility," Dr. Soumya Swaminathan, the WHO's chief scientist, said during a news conference.
- Studies suggest delta is around 60% more transmissible than alpha, the variant first identified in the U.K.

GLOBAL HEALTH

Europe Watches With Worry As The Delta Variant Spreads Fast In The U.K. And Lisbon

June 21, 2021 · 5:00 AM ET

JACLYN DIAZ

Delta variant

HEALTH AND SCIENCE

WHO says delta is the fastest and fittest Covid variant and will 'pick off' most vulnerable

PUBLISHED MON, JUN 21 2021•3:05 PM EDT UPDATED MON, JUN 21 2021•7:03 PM EDT

Berkeley Lovelace Jr.
@BERKELEYJR

SHARE

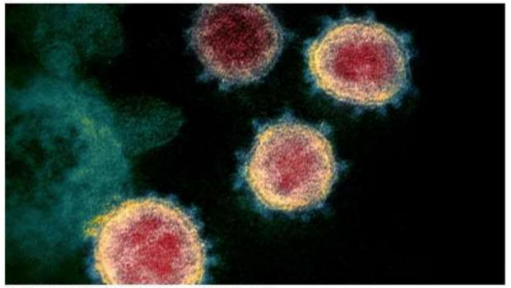
KEY POINTS

- The highly contagious delta variant is the fastest and fittest coronavirus strain that will "pick off" the most vulnerable people, the World Health Organization said.
- Delta has the potential "to be more lethal because it's more efficient in the way it transmits between humans," the WHO's Dr. Mike Ryan said.

Numbers Still Small, But More Transmissible Delta Variant Grew Nearly 30% Last Week In California

By Tom Tapp
June 21, 2021 7:57pm

1 COMMENTS



An electron microscope image of SARS-CoV-2, the virus that causes Covid-19

Delta variant

Press release

Vaccines highly effective against B.1.617.2 variant after 2 doses

New study by PHE shows for the first time that 2 doses of the COVID-19 vaccines are highly effective against the B.1.617.2 variant first identified in India.

From: Public Health England
Published 22 May 2021
Last updated 22 May 2021 — See all updates

- the Pfizer-BioNTech vaccine was 88% effective against symptomatic disease from the B.1.617.2 variant 2 weeks after the second dose, compared to 93% effectiveness against the B.1.1.7 variant
- 2 doses of the AstraZeneca vaccine were 60% effective against symptomatic disease from the B.1.617.2 variant compared to 66% effectiveness against the B.1.1.7 variant
- both vaccines were 33% effective against symptomatic disease from B.1.617.2, 3 weeks after the first dose compared to around 50% effectiveness against the B.1.1.7 variant

Delta variant: Το αναδυόμενο πρόβλημα…

Θεραπεία

Εξελίξεις στη θεραπεία πέραν των εμβολίων;

- Τρέχουσες θεραπείες μέτρια αποτελεσματικές (remdesivir + dexa)
- Ανοσοτροποίηση ελπιδοφόρα (tocilizumab / baricitinib)
- Ο ρόλος του anakinra
- Μονοκλωνικά / πλάσμα
- Invermectin (έγκαιρη χορήγηση)
- Νεότερα αντιϊκά (p.o.)
- Εισπνεόμενα (exosomes-CD24)

IDSA Recommendations FOR Treatment of Patients With COVID-19

In line with NIH Guidelines

- Overarching goal: recruit patients into ongoing trials to provide needed evidence regarding efficacy and safety of potential therapies

IDSA Guidance	Patient Population	Treatment
Recommends	▪ **Hospitalized with critical* COVID-19**	▪ **Dexamethasone† vs none**
Suggests	▪ **Hospitalized with severe‡ COVID-19**	▪ **Dexamethasone† vs none**
	▪ **Hospitalized with severe*‡ COVID-19**	▪ **Remdesivir§ vs no antiviral**
	▪ **Hospitalized with severe‡ COVID-19 and corticosteroids contraindicated**	▪ **Baricitinib + remdesivir vs remdesivir alone**
Recommends only in clinical trial	▪ Hospitalized with COVID-19	▪ Convalescent plasma
	▪ Hospitalized with COVID-19	▪ Baricitinib + remdesivir + corticosteroids

*Mechanical ventilation or ECMO. Includes end organ dysfunction (eg, ARDS). †If unavailable, methylprednisolone and prednisone acceptable at equivalent total daily doses. ‡$SpO_2 \leq 94\%$ on room air, including those on supplemental oxygen. §For patients on supplemental oxygen, 5 days suggested; for patients on mechanical ventilation or ECMO, 10 days.

IDSA. COVID-19 Guideline, Part 1: Treatment and Management. Version 3.6.0.

May 25, 2021

Summary Recommendations

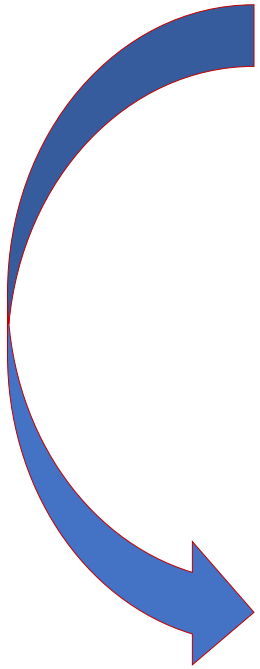
- The COVID-19 Treatment Guidelines Panel (the Panel) recommends using either **baricitinib**[a] **(BIIa)** or **tocilizumab (BIIa)** (listed alphabetically) in combination with **dexamethasone** alone or **dexamethasone plus remdesivir** for the treatment of COVID-19 in hospitalized patients on high-flow oxygen or noninvasive ventilation who have evidence of clinical progression or increased markers of inflammation.
- Among hospitalized patients with hypoxemia who require supplemental oxygen therapy, there is insufficient evidence to identify which patients would benefit from the addition of baricitinib or tocilizumab to dexamethasone (with or without remdesivir). Some Panel members would add either baricitinib[a] or tocilizumab to patients who are exhibiting signs of systemic inflammation and rapidly increasing oxygen needs while on dexamethasone, but who do not yet require noninvasive ventilation or high-flow oxygen.
- In the rare circumstance when corticosteroids cannot be used, the Panel recommends using **baricitinib**[a] in combination with **remdesivir** for the treatment of COVID-19 in hospitalized, nonintubated patients who require oxygen supplementation **(BIIa)**.
- There is insufficient evidence for the Panel to recommend either for or against the use of baricitinib in combination with dexamethasone for the treatment of COVID-19 in hospitalized patients who require invasive mechanical ventilation.
- The Panel **recommends against** the use of **baricitinib** in combination with **tocilizumab** for the treatment of COVID-19, except in a clinical trial **(AIII)**. Because both baricitinib and tocilizumab are potent immunosuppressants, there is the potential for an additive risk of infection.
- There is insufficient evidence for the Panel to recommend either for or against the use of baricitinib for the treatment of COVID-19 in children

Anakinra (IL-1ra)

Clinical Trial

SAVE → SAVE MORE

Hellenic Institute for the Study of Sepsis



SAVE clinical trial

suPAR-guided Anakinra treatment for Validation of the risk and Early management of severe respiratory failure by COVID-19) (EudraCT number 2020- 001466-11; approval 38/20 of the National Ethics Committee of Greece, approval IS 028/20 of the National Organization for Medicine of Greece, ClinicalTrials.gov identifier, NCT04357366).

SAVE MORE clinical trial

suPAR-GUIDED ANAKINRA TREATMENT FOR VALIDATION OF THE RISK AND EARLY MANAGEMENT OF SEVERE RESPIRATORY FAILURE BY COVID-19: THE SAVE-MORE DOUBLE-BLIND, RANDOMIZED, PHASE III CONFIRMATORY TRIAL

EMA authorization ?

COVID-19 treatments under development: Outpatient patients (1/2)

	Company	Candidate (MoA)	RoA	Ongoing Development	Evidence	Regulatory Status[1]	Earliest Global Authorization
Binding Antibodies	REGENERON / Roche	**REGN-COV** (anti-SARS-CoV-2 mAb cocktail)	IV	Ph1/2/3 REGN High-risk pts	Reduction of viral load and time to symptom alleviation, combined hospitalization and death rate by 70%, 57% and 72% reductions in COVID-19 related medical visits in the overall and with at least one risk factor pts populations, across 1,200 and 2,400mg doses	**FDA EUA** (Nov '20) in mild to moderate high-risk patients; request to expand over the lower 1,200mg dose **EMA CHMP recommend**. (Mar '21) for pts who do not require supplemental oxygen and who are at high risk of developing severe disease	Nov 11 '20 (US EUA, outpatients)
			IV, SC	Ph2 REGN Low-risk pts	"Rapid and significant antiviral effects" when delivered by either IV or SC administration	FDA BLA	
	Lilly / AbCellera	**Bamlanivimab** (anti-SARS-CoV-2 mAb)	IV	Ph2/3 Lilly BLAZE-1	Reduced viral load, lower rates of symptoms and hospitalization (1.7% vs. 6% for PBO) Concerns that a "substantial increase" in the "California" and "New York" variants has rendered the monotherapy ineffective	**FDA EUA** revoked (Apr '21) over emergence of new viral variants **EMA CHMP recommend.** (Mar '21) for pts who do not require supplemental oxygen and who are at high risk of developing severe disease	Nov 9 '20 (US EUA, outpatients)
	Lilly	**Bamlanivimab Etesevimab** (anti-SARS-CoV-2 mAb combination)	IV	Ph2/3 Lilly BLAZE-1	Reduced risk of hospitalizations and death by 87%, reduction in viral load (at day 11), improvement in symptoms and COVID-related hospitalization and ER visits	**FDA EUA** (Feb '21) for mild to moderate high-risk patients **EMA CHMP recommend**. (Mar '21) for pts who do not require supplemental oxygen and who are at high risk of developing severe disease FDA BLA (2Q21)	Feb 9 '21 (US EUA, outpatients)
	CELLTRION	**CT-P59** (anti-SARS-CoV-2 mAb)	IV	Ph2/3 Celltrion	Lower 40mg/kg dose reduced rate of progression to severe disease by 54%, time to clinical recovery and 7-day viral load vs placebo, with population above age 50 benefiting more from the treatment	**CMA Korea** (Feb '21) for adults with either moderate COVID-19, mild symptoms and at least one underlying medical condition, or those aged 80 years and over **EMA CHMP recommend**. (Mar '21) for pts who do not require supplemental oxygen and who are at high risk of developing severe disease	Feb 5 '21 (Korea CMA, outaptients)
Entry blockers	AI Therapeutics	**Apilimod dimesylate** (PIKfyve inhibitor)	Oral	Ph2 AI Tx	PCD Mar '21		2Q21

Apr 2021

COVID-19 treatments under development: Outpatient patients (2/2)

	Company	Candidate (MoA)	RoA	Ongoing Development	Evidence	Regulatory Status[1]	Earliest Global Authorization
Protease inhibitors	Pfizer	**PF-07321332** (3CL protease inhibitor)	Oral	Ph1			1Q22
	• Preclinical programs are being pursued by several pharmas and biotechs, including Novartis, A2A, LAXAI, Anvive, Diamond and Sunshine Biopharma						
Replication inhibitors (Antivirals)	GILEAD	**Veklury** (remdesivir) (RNA polymerase inhibitor)	Inhaled	Ph1b/2 Gilead	PCD Mar '21		May 1 '20 (US EUA, inpatients)
	APPILI THERAPEUTICS	**Avigan** (favipiravir) (RNA polymerase inhibitor)	Oral	Ph3 Appili Tx PRESECO	PCD Aug '21		3Q20 (Russia & India, outpatients)
	MERCK Ridgeback Biotherapeutics	**Molnupiravir** (ribonucleoside analog)	Oral	Ph2a Ridgeback	Benefit on the secondary endpoint of "time to negativity of infectious virus isolation in nasopharyngeal swabs" (0% for molnupiravir and 24% for placebo) and "no safety signal"		3Q21
				Ph2/3 Merck MOVE-OUT	Lower percentage of hospitalized patients and/or who died in Ph2 part vs placebo; while also narrowing Ph3 portion to evaluate only a twice daily 800 mg dose		
					Sep/Oct '21 Ph3 final read-out		
	Roche ATEA	**AT-527** (RNA polymerase inhibitor)	Oral	Ph2 Roche Ph3* * start 2Q21	2Q21 Ph2 read-out		3Q21
	synairgen plc	**SNG001** (Interferon beta-1a)	Inhaled	Ph2/3 NIAID ACTIV-2			2Q21

Apr 2021

Latest news (19/6/21) …

ORIGINAL ARTICLE

Tofacitinib in Patients Hospitalized with Covid-19 Pneumonia

Patrícia O. Guimarães, M.D., Ph.D., Daniel Quirk, M.D., M.P.H., Remo H. Furtado, M.D., Ph.D., Lilia N. Maia, M.D., Ph.D., José F. Saraiva, M.D., Ph.D., Murillo O. Antunes, M.D., Ph.D., Roberto Kalil Filho, M.D., Ph.D., Vagner M. Junior, M.D., Alexandre M. Soeiro, M.D., Alexandre P. Tognon, M.D., Ph.D., Viviane C. Veiga, M.D., Ph.D., Priscilla A. Martins, M.D., et al., for the STOP-COVID Trial Investigators*

June 16, 2021
DOI: 10.1056/NEJMoa2101643

29 References

Abstract

BACKGROUND

The efficacy and safety of tofacitinib, a Janus kinase inhibitor, in patients who are hospitalized with coronavirus disease 2019 (Covid-19) pneumonia are unclear.

METHODS

We randomly assigned, in a 1:1 ratio, hospitalized adults with Covid-19 pneumonia to receive either tofacitinib at a dose of 10 mg or placebo twice daily for up to 14 days or until hospital discharge. The primary outcome was the occurrence of death or respiratory failure through day 28 as assessed with the use of an eight-level ordinal scale (with scores ranging from 1 to 8 and higher scores indicating a worse condition). All-cause mortality and safety were also assessed.

RESULTS

A total of 289 patients underwent randomization at 15 sites in Brazil. Overall, 89.3% of the patients received glucocorticoids during hospitalization. The cumulative incidence of death or respiratory failure through day 28 was 18.1% in the tofacitinib group and 29.0% in the placebo group (risk ratio, 0.63; 95% confidence interval [CI], 0.41 to 0.97; P=0.04). Death from any cause through day 28 occurred in 2.8% of the patients in the tofacitinib group and in 5.5% of those in the placebo group (hazard ratio, 0.49; 95% CI, 0.15 to 1.63). The proportional odds of having a worse score on the eight-level ordinal scale with tofacitinib, as compared with placebo, was 0.60 (95% CI, 0.36 to 1.00) at day 14 and 0.54 (95% CI, 0.27 to 1.06) at day 28. Serious adverse events occurred in 20 patients (14.1%) in the tofacitinib group and in 17 (12.0%) in the placebo group.

CONCLUSIONS

Among patients hospitalized with Covid-19 pneumonia, tofacitinib led to a lower risk of death or respiratory failure through day 28 than placebo. (Funded by Pfizer; STOP-COVID ClinicalTrials.gov number, NCT04469114.)

NEJM CareerCenter

PHYSICIAN JOBS JUNE 17, 2021

Hematology / Oncology — New Jersey
RWJBarnabas Health seeking full-time Hematologist/Oncologists for unique opportunities - Central NJ

Hematology / Oncology — New York
Medical Oncologist Phelps Memorial Hospital - Northwell Health

Obstetrics & Gynecology — Richland, Washington State
Obstetrician/Gynecologist

Ophthalmology — Rochester, New York
Pediatric Ophthalmologist

Surgery, Plastic — Texas
Houston Plastic Surgery | 90th Percentile Earning Potential | No Call

Psychiatry — Bedford, New Hampshire
Adult Psychiatrist

Η Ελληνική συνδρομή στη θεραπεία της COVID-19

7. ΤΡΕΧΟΥΣΕΣ ΚΛΙΝΙΚΕΣ ΜΕΛΕΤΕΣ ΣΤΗΝ ΕΛΛΑΔΑ

Οι ασθενείς έχουν την επιλογή να συμμετέχουν σε μία από τις κάτωθι κλινικές μελέτες που διεξάγονται στη χώρα μας

Λίστα Κλινικών μελετών

1. **Τίτλος Κλινικής Δοκιμής «Προσωποποιημένη ανοσοθεραπεία στην αποτελεσματική αντιμετώπιση της οργανικής δυσπραγίας που συνδέεται με λοίμωξη από τον νέο ιό SARS-CoV-2 (COVID-19): Η μελέτη ESCAPE»**
Κωδικός πρωτοκόλλου: ESCAPE
Κωδικός ΕΕΔ : 30/20
EudraCT: 2020-001039-29
Χορηγός: Ελληνικό Ινστιτούτο Μελέτης της Σήψης / Ελλάδα

2. **Τίτλος Κλινικής Δοκιμής: «**Μια Πολυκεντρική, Προσαρμοστική, Τυχαιοποιημένη Τυφλή Ελεγχόμενη Δοκιμή ασφάλειας και αποτελεσματικότητας των ερευνητικών θεραπειών για τη θεραπεία του COVID-19 σε νοσηλευόμενους ενήλικες»
Κωδικός πρωτοκόλλου: DMID-20-0006/INSIGHT 010
Κωδικός ΕΕΔ : 31/20
EudraCT: 2020-001052-18
Χορηγός: Regents of the University of Minnesota, U.S.A

3. **Τίτλος Κλινικής Δοκιμής: «**Η ΦΩΣΦΟΡΙΚΗ ΧΛΩΡΟΚΙΝΗ ΓΙΑ ΛΟΙΜΩΞΕΙΣ ΑΠΟ ΤΟ ΝΕΟ ΚΟΡΟΝΟΪΟ SARS-CoV-2: Η ΑΝΟΙΚΤΟΥ-ΤΥΠΟΥ, ΜΗ ΤΥΧΑΙΟΠΟΙΗΜΕΝΗ ΜΕΛΕΤΗ ΗΟΡΕ**»**
Κωδικός πρωτοκόλλου: UNIKINON-01/HOPE
Κωδικός ΕΕΔ : 32/20
EudraCT: 2020-001345-38
Χορηγός: UNI-PHARMA ΚΛΕΩΝ ΤΣΕΤΗΣ ΦΑΡΜΑΚΕΥΤΙΚΑ ΕΡΓΑΣΤΗΡΙΑ Α.Β.Ε.Ε.

4. **Τίτλος Κλινικής Δοκιμής:** «Αξιολόγηση του κινδύνου από τον βιοδείκτη suPAR και πρώιμη αντιμετώπιση της σοβαρής αναπνευστικής ανεπάρκειας της νόσου COVID-19 με την χορήγηση anakinra: Η ανοικτού-τύπου, μη τυχαιοποιημένη μελέτη SAVE»
Κωδικός πρωτοκόλλου: SAVE
Κωδικός ΕΕΔ : 38/20

5. **Τίτλος Κλινικής Δοκιμής: «**Η τριϊωδοθυρονίνη για την θεραπεία των σοβαρά νοσούντων ασθενών με λοίμωξη από COVID-19 (μελέτη Thy-Support)**»**
Κωδικός πρωτοκόλλου: T3inj-02/Thy-Support
Κωδικός ΕΕΔ : 41/20
EudraCT: 2020-001623-13
Χορηγός: UNI-PHARMA ΚΛΕΩΝ ΤΣΕΤΗΣ ΦΑΡΜΑΚΕΥΤΙΚΑ ΕΡΓΑΣΤΗΡΙΑ Α.Β.Ε.Ε/ Ελλάδα

6. **Τίτλος Κλινικής Δοκιμής:** «Αξιολόγηση της αντιφλεγμονώδους δράσης της κλαριθρομυκίνης στην πρώιμη βελτίωση της λοίμωξης από τον ιό SARS-CoV-2 (COVID-19): Η ανοικτή, μη-τυχαιοποιημένη μελέτη ACHIEVE»
Κωδικός πρωτοκόλλου: ACHIEVE
Κωδικός ΕΕΔ : 45/20
EudraCT: 2020-001882-36
Χορηγός: Ελληνικό Ινστιτούτο Μελέτης της Σήψης / Ελλάδα

7. **Τίτλος Κλινικής Δοκιμής: «**Προοπτική, Πολυκεντρική, Τυχαιοποιημένη, Ελεγχόμενη με Εικονικό Φάρμακο, Διπλή – Τυφλή Μελέτη, για την αξιολόγηση της Αποτελεσματικότητας, της Ασφάλειας και της Ανεκτικότητας του IMU-838, ως Επιπρόσθετης Θεραπείας στην Καθιερωμένη Θεραπεία Εκλογής από τον Ερευνητή, σε Ασθενείς με Νόσο από Κορονοϊό 19 (COVID-19)**»**
Κωδικός πρωτοκόλλου: P2-IMU-838 COV
Κωδικός ΕΕΔ : 50/20
EudraCT: 2020-001264-28
Χορηγός: Immunic AG, Γερμανία

8. **Τίτλος Κλινικής Δοκιμής:** «Μία τυχαιοποιημένη κλινική μελέτη για την ενίσχυση της εκπαιδευμένης ανοσιακής απόκρισης μέσω εμβολιασμού με Bacillus Calmette-Guérin με σκοπό την πρόληψη της COVID-19 λοίμωξης: Μελέτη ACTIVATE II»
Κωδικός πρωτοκόλλου: ACTIVATE II
Κωδικός ΕΕΔ : 52/20
EudraCT: 2020-002448-21
Χορηγός: Ελληνικό Ινστιτούτο Μελέτης της Σήψης / Ελλάδα

9. **Τίτλος Κλινικής Δοκιμής:** «Μια Διεθνής Πολυκεντρική, Προσαρμοστική, Τυχαιοποιημένη Διπλά-Τυφλή, Ελεγχόμενη με Εικονικό Φάρμακο Δοκιμή Ασφάλειας, Ανεκτικότητας και Αποτελεσματικότητας της Έναντι-Κορονοϊού Υπεράνοσης Ενδοφλέβιας Ανοσοσφαιρίνης για τη Θεραπεία Ενηλίκων Νοσηλευομένων Ασθενών κατά την έναρξη Κλινικής Εξέλιξης της COVID-19, INSIGHT 013, ITAC»
Κωδικός πρωτοκόλλου: INSIGHT 013, ITAC
Κωδικός ΕΕΔ: 103/20

Μακροχρόνιες επιπλοκές

Μακροχρόνιες επιπλοκές της COVID-19 long-COVID / post-COVID

- 10-80 % (20-30%) !!!
- Πολλαπλά συστήματα
- Κυρίως αναπνευστικές και καρδιολογικές επιπλοκές / θρομβοεμβολές / ΨΧ προβλήματα
- Μείζον θέμα λόγω μεγάλου αριθμού ασθενών
- Ψ/Χ υποστήριξη νοσησάντων!!!

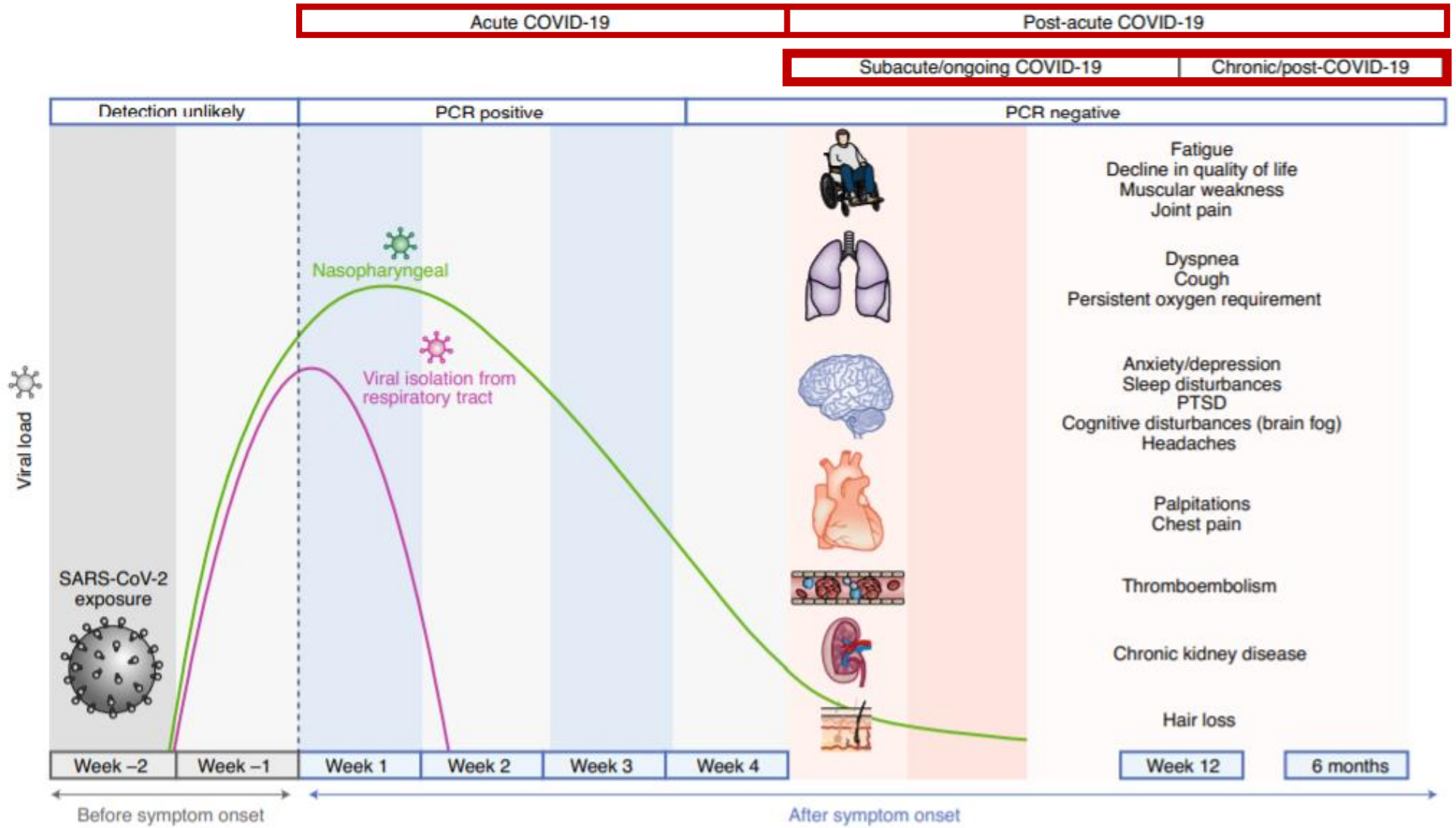


Fig. 1 | Timeline of post-acute COVID-19. Acute COVID-19 usually lasts until 4 weeks from the onset of symptoms, beyond which replication-competent SARS-CoV-2 has not been isolated. Post-acute COVID-19 is defined as persistent symptoms and/or delayed or long-term complications beyond 4 weeks from the onset of symptoms. The common symptoms observed in post-acute COVID-19 are summarized.

Nature Medicine | VOL 27 | April 2021 | 601–615

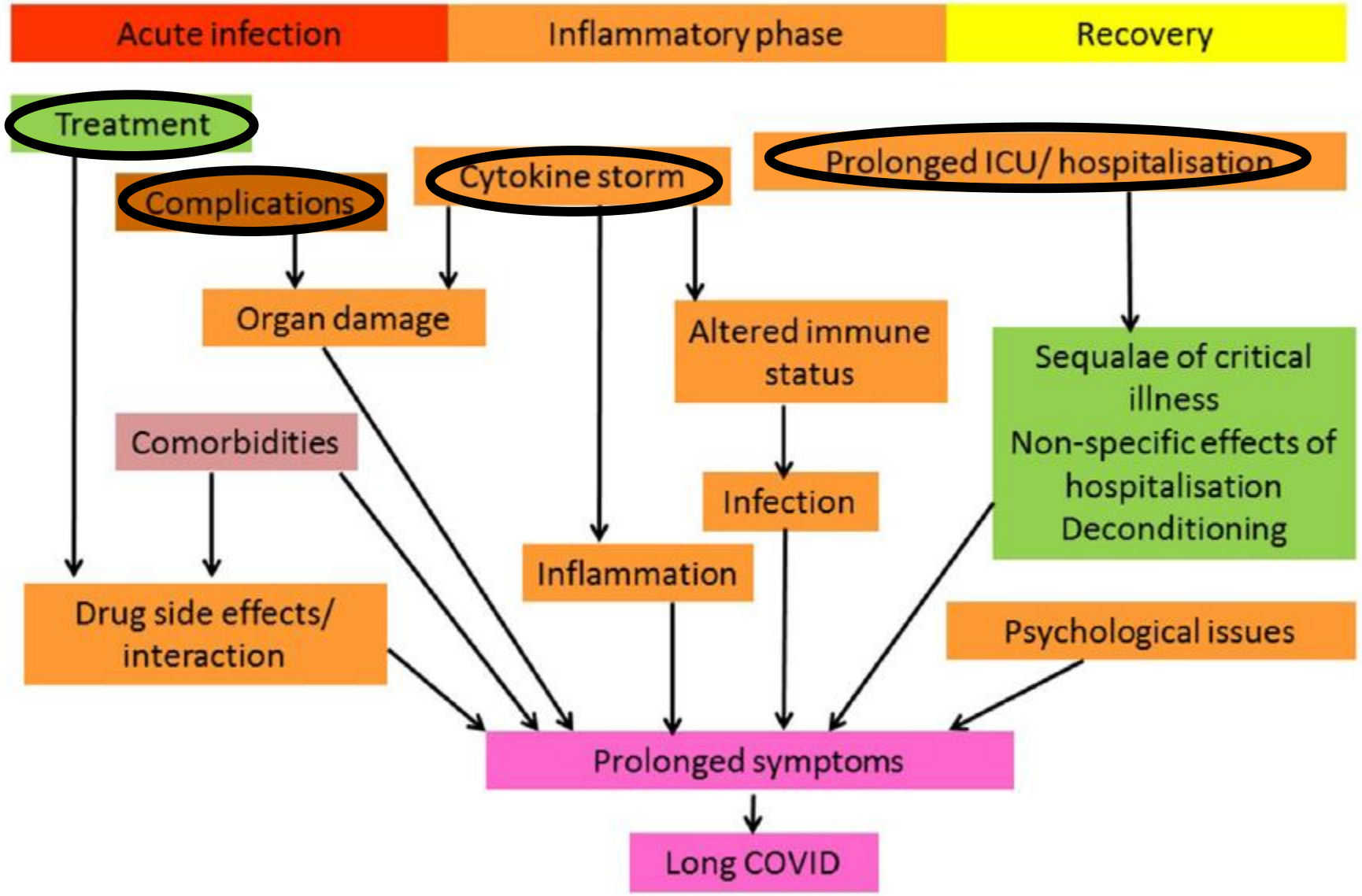


Fig. 2. Various pathophysiological mechanism of "Long COVID".

Organ – system dysfunction

Acute Complications of COVID-19

Neuropsychiatric
- Cerebrovascular accident
- Large vessel disease
- Encephalopathy, delirium
- Anosmia, ageusia

Respiratory
- Pneumonia
- Hypoxemic respiratory failure, ARDS

Cardiovascular
- Arrhythmia
- Myocarditis

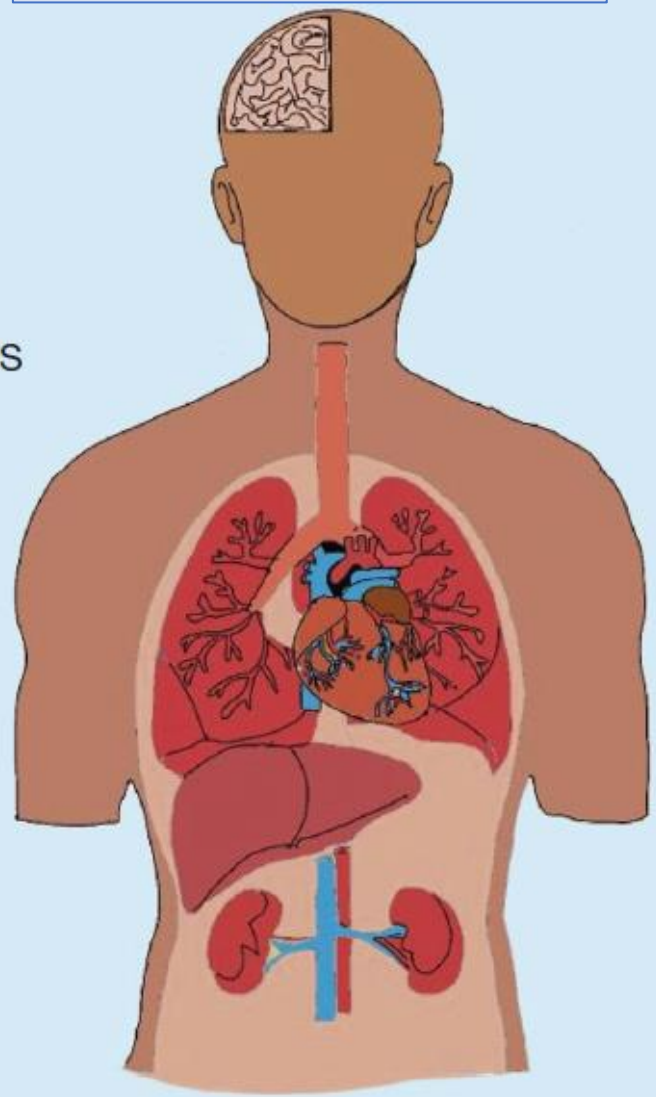
Hematologic, Vascular
- Coagulopathy
- Thrombotic events

Renal
- Acute kidney injury

Gastrointestinal, Hepatobiliary
- Diarrhea
- Acute liver injury

Musculoskeletal
- Rhabdomyolysis

Dermatologic
- Livedo reticularis
- Maculopapular or urticarial rash



Post-COVID Symptoms, Sequelae

Neuropsychiatric
- Neurocognitive deficits
- Mood changes
- Sensory & motor deficits
- Chronic fatigue and sleep disruption

Respiratory
- Persistent dyspnea
- Chronic cough

Cardiovascular
- Chest pain
- Palpitations

Hematologic, Vascular
- Persistent or recurrent thrombosis

Renal
- Chronic kidney disease

Gastrointestinal, Hepatobiliary
- Persistent liver dysfunction

Musculoskeletal
- Muscle wasting
- Weakness
- Deconditioning

Dermatologic
- Hair loss

Figure 1 – *Model of acute pulmonary and extrapulmonary complications of coronavirus disease 2019 (COVID-19) with projected post-COVID-19 symptoms and end-organ sequelae.*

CHEST 2021; 159(3):949-958

Post-COVID
Εξωτερικό Ιατρείο

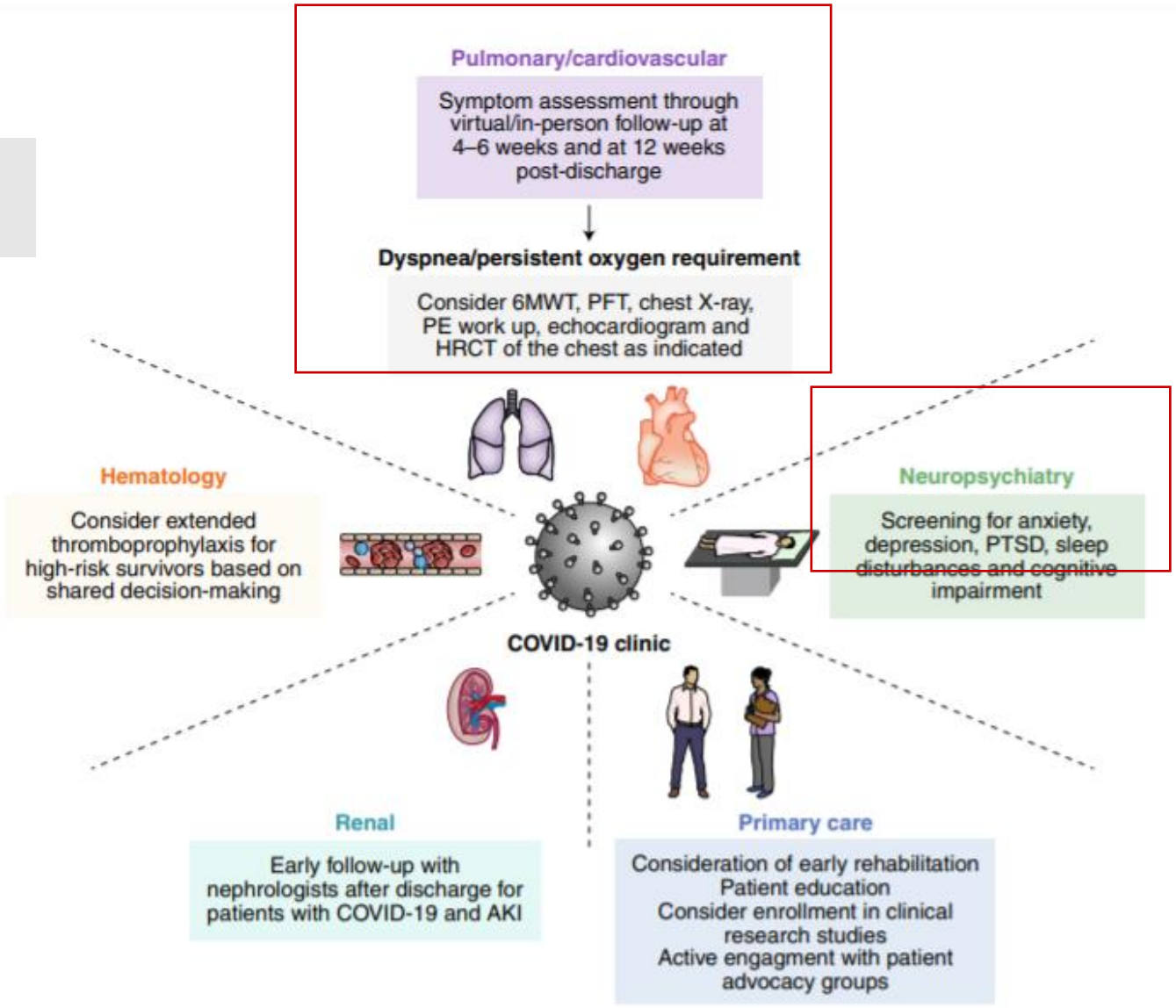


Fig. 2 | Interdisciplinary management in COVID-19 clinics. Multidisciplinary collaboration is essential to provide integrated outpatient care to survivors of acute COVID-19 in COVID-19 clinics. Depending on resources, prioritization may be considered for those at high risk for post-acute COVID-19, defined as those with severe illness during acute COVID-19 and/or requirement for care in an ICU, advanced age and the presence of organ comorbidities (pre-existing respiratory disease, obesity, diabetes, hypertension, chronic cardiovascular disease, chronic kidney disease, post-organ transplant or active cancer). The pulmonary/cardiovascular management plan was adapted from a guidance document for patients hospitalized with COVID-19 pneumonia[76]. HRCT, high-resolution computed tomography; PE, pulmonary embolism.

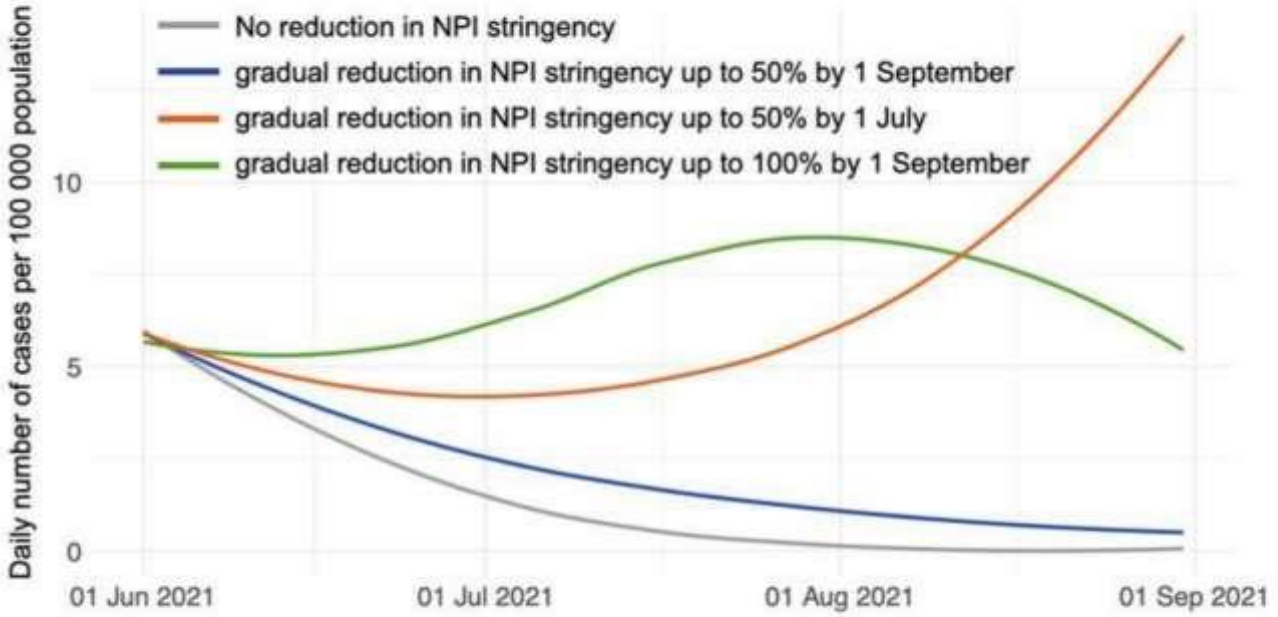
Nature Medicine | VOL 27 | April 2021 | 601–615

Σενάρια / Προβλέψεις / Δράσεις

Measures & modelling ECDC, 10 June 2021

4 scenarios

Figure 4. Estimation of possible changes in daily COVID-19 incidence in the EU/EEA according to four NPI relaxation scenarios24 May – –31 August 2021.



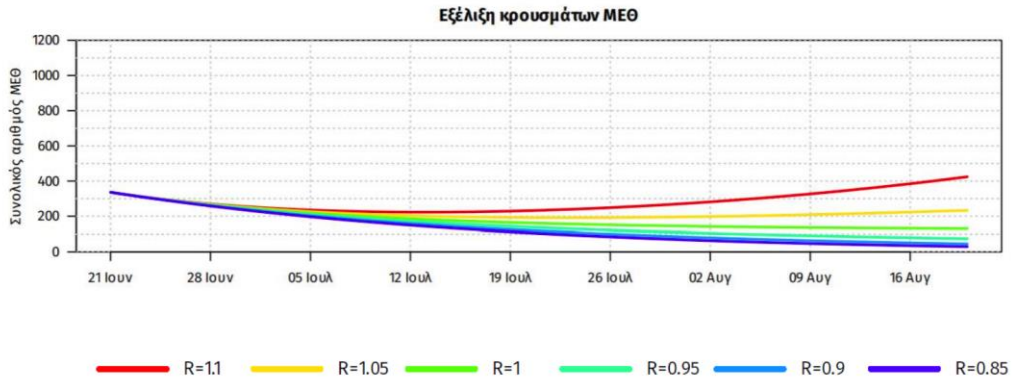
Note: no change in contact reduction (grey) or, alternatively, that current NPIs are gradually reduced up to 50% (green) by 1 July 2021 or 50% (blue) or 100% (orange) by 1 September 2021. We assume that age-prioritised vaccine rollout continues at current rates and that there is no replacement with a new variant. Note that although it appears that case numbers would fall to very low levels if vaccination rates and NPIs are maintained, this does not equate to an elimination scenario.

Measures & modelling ECDC, 10 June 2021 scenarios for variants

Figure 5. Proportional increase in the cumulative incidence of COVID-19 in six hypothetical scenarios of strain replacement with variants in EU/EEA between 1 June and 31 August 2021.

Variant scenarios	NPI scenarios: No reduction in NPI stringency	50% reduction in stringency of NPIs by 1 Sept	50% reduction in stringency of NPIs by 1 July	100% reduction in stringency of NPIs by 1 Sept
	Proportional increase in cumulative incidence:			
none	1 *baseline*	1.6	5	4.6
Transmissibility +20%* no vaccine escape	1	1.7	5.6	5.4
Transmissibility +20%* 20% reduction in vaccine efficacy against infection	1	1.7	6.1	6
Transmissibility +20%* 50% reduction in vaccine efficacy against infection	1	1.8	6.9	7.2
Transmissibility +50%* No vaccine escape	1.8	19.5	201.2	365.4
Transmissibility +50%* 20% reduction in vaccine efficacy against infection	7.6	183.9	2067.9	4145.7
Transmissibility +50%* 50% reduction in vaccine efficacy against infection				

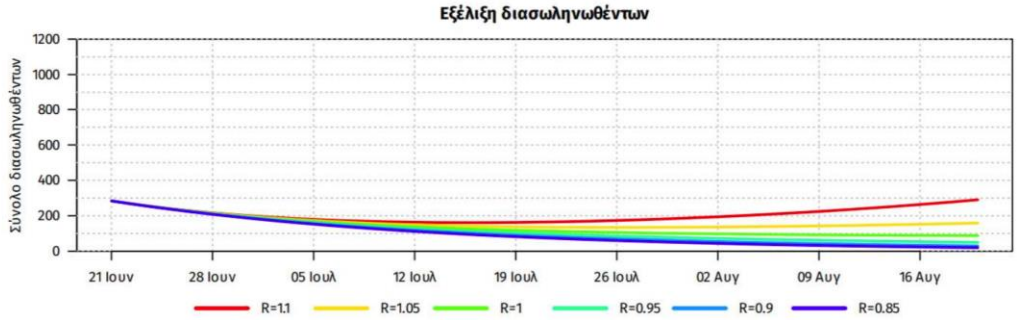
Προβολή κάλυψης ΜΕΘ
21 Ιουνίου 2021



ΕΛΛΗΝΙΚΗ ΔΗΜΟΚΡΑΤΙΑ
Υπουργείο Υγείας

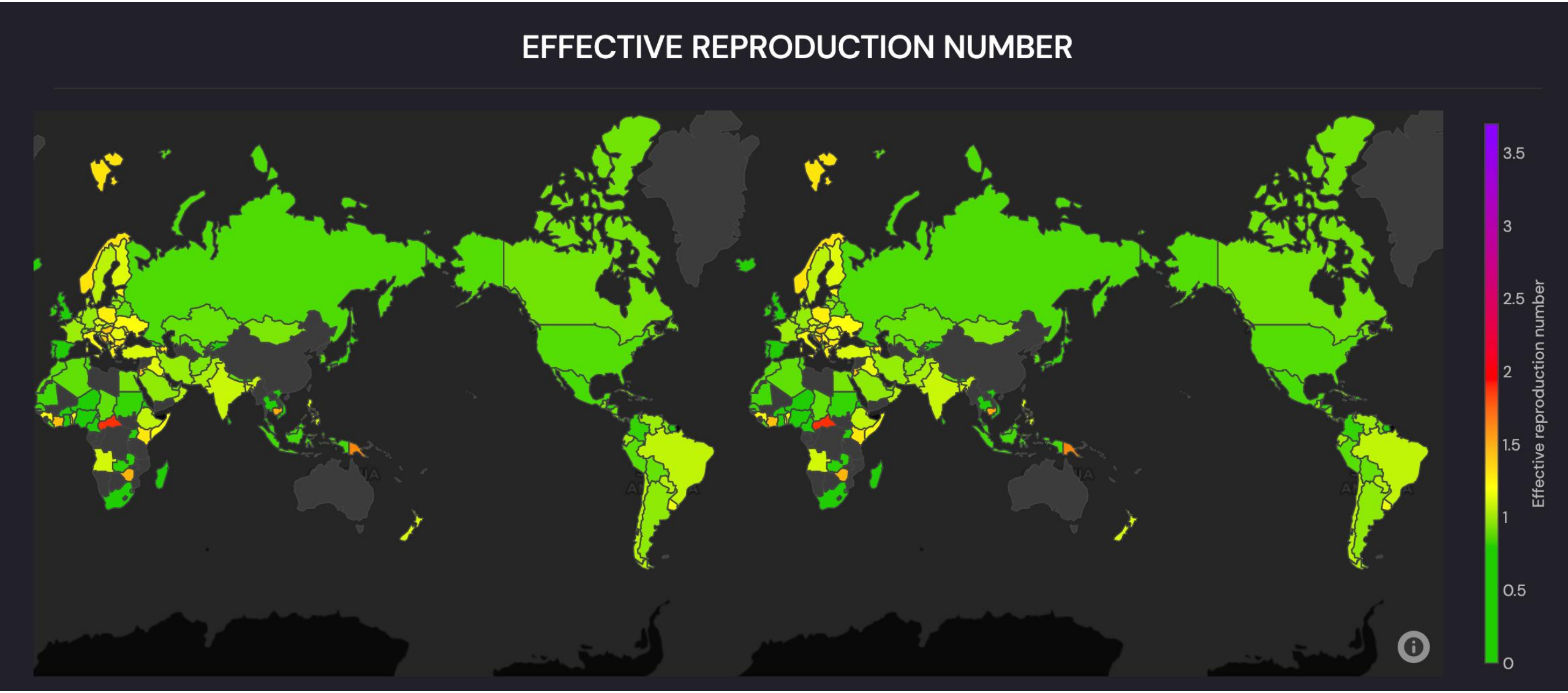
Ο ρόλος του Rt

Προβολή κάλυψης διασωληνωμένων
21 Ιουνίου 2021



ΕΛΛΗΝΙΚΗ ΔΗΜΟΚΡΑΤΙΑ
Υπουργείο Υγείας

The good news…



Δράσεις για το Σύστημα Υγείας στη χώρα μας

- Ενίσχυση **προγραμμάτων εμβολιασμού** / προνόμια εμβολιασμένων / επέκταση εμβολιασμού σε αναπτυσσόμενες χώρες
- Συνεχής **γονιδιωματική επιτήρηση** / ιχνηλάτηση – επιτήρηση – απομόνωση / επιτάχυνση τροποποίησης εμβολίων για νέα αναδυόμενα στελέχη
- Μέτρα **μείωσης μετάδοσης** κατά τους χειμερινούς μήνες (τηλε-εργασία / τηλε-εκπαίδευση) / επίταση μέτρων ατομικής προστασίας / προστασία ευπαθών ομάδων
- Ενίσχυση **νοσοκομειακών δομών** / σχέδια έκτακτης ανάγκης / εκπαίδευση / πρωτόκολλα
- Ιατρεία **long-term** COVID
- Ενίσχυση **πρωτοβάθμιας** φροντίδας υγείας / διασύνδεση δομών
- Βελτίωση συστήματος **καταγραφής !!!**
- Διαδικασία διασφάλισης **ποιότητος** στην Υγεία (αξιολόγηση)

- **Πρόβλεψη και διαχείριση νέων επιδημιών**

Προκλήσεις για τα κράτη / κυβερνήσεις

- Στήριξη και είσχυση στο **Σύστημα Υγείας**
  - *Non-COVID νοσήματα / εμβόλια - εμβολιασμοί / Συνέχεια του ΕΣΥ – ιδιωτική ιατρική / **Δημόσια Υγεία***
- Στήριξη της **Οικονομίας**
  - *Ανεργία (493 εκ) / δημ. χρέος / προγράμματα ενίσχυσης*
- Αναβάθμιση και προσαρμογή στην **Εκπαίδευση**
  - *Εκπαιδευτικές απώλειες / Εκπαιδευτική μεταρρύθμιση / τηλε-εκπαίδευση*
- Προσαρμογή προγραμμάτων **εθνικής ασφάλειας σε ανθρωπιστική βάση**
  - *Μετανάστευση / περιορισμοί / superspreading*
- Αντιμετώπιση της **Κλιματικής Αλλαγής**
  - *“green recovery” προγράμματα / αντιμετώπιση καταστροφών / διοξείδιο του άνθρακος*
- Εγκυρη **Ενημέρωση** / Αποκατάσταση **εμπιστοσύνης** πολιτών
  - *Επικοινωνία / Παραπληροφόρηση / καθορισμός ρόλων / κοινωνικό στίγμα / ΜΜΕ*

World Future Council

VOICE OF FUTURE GENERATIONS

COVID-19

Immediate targeted actions required out of deep respect for life on earth:

1. **Ensuring the right to health for all**

Health is a fundamental human right. International solidarity is required, so that all people in all countries have access to health services of quality, leaving no one behind. There must be full access to prevention, diagnosis, treatment and medicines. The international community and governments have a to e ous food. Children, refugees, internally displaced persons, elderly and persons with disabilities are amongst the most vulnerable. They deserve special attention. We promote integrative health which supports resilience of the people and the planet.

Υγεία για όλους

2. **Providing financial and investment relief**

We urge OECD governments to support the already established Global Humanitarian Response Plan a n the h ee fundamental rights to health, water, food, housing and education. In order « to build back better », the significant reduction of developing countries' foreign debt will have to be complemented by better access to sustainable investment for developing countries.

Οικονομική και επενδυτική στήριξη

3. **Creating decent and sustainable jobs**

National governments as well as international economic and financial stimulus and recovery packages should secure millions of decent jobs, specifically for young women and men who are affected most by th e re resilient, greener, healthier and safer for all. Economic stimulus packages must support meeting the Paris goal of limiting climate change to 1.5 degrees.

Στήριξη της εργασίας / απασχόλησης

4. **Halting armed conflicts**

Armed conflicts kill many innocent people, aggravate the health and economic impact of pandemics, destroy the natural environment and thwart measures to contain the pandemic and deliver healthcare. We emphatically endorse the United Nations initiative for a global ceasefire, and call on all warring p oys fo their obligations under the UN Charter to resolve international conflicts through diplomacy, mediation, arbitration and adjudication, and to reduce military budgets in order to release funds for public health and sustainable development.

Έλεγχος συγκρούσεων / συρράξεων

5. **Securing children's rights**

Millions of girls and boys are experiencing a deep cut in the enjoyment of their rights like the right to education, to health, to food, to play and to protection. We urge governments to develop measures to k their e

Δικαιώματα παιδιών

6. **Empowering and protecting women and girls**

Wom violе value d.

Προστασία γυναικών

7. **Valuing health workers and service providers**

Tribute needs to be given to all health workers, caregivers, food and basic services' providers for being at th ney nee

Στήριξη υγειονομικών

8. **Respecting nature and its life cycles**

In order to prevent future pandemics we need to recognise the links between human health, infectious diseases, destruction of our ecosystems and planetary health. Every country must do its part to develop and implement comprehensive legislation to further sustainable energy and agroecological practices, protect animal welfare, ban wildlife sales, protect wildlife and ban trafficking of wildlife across borders. Markets for live animals need to be studied to address the disease vectors. Polic banr towards an increase of protected areas on land and sea, as well as a substantial worldwide increase in forest cover, including through afforestation and reforestation, in order to ensure living organisms in the biosphere have the needed space without human interference. Actions addressed above should be integrated in the 2020/2021 meetings of the UN, the UN Biodiversity Summit and the World Food Systems Summit.

Προστασία φυσικού περιβάλλοντος

9. **Accelerating action on climate change**

Addressing the COVID-19 crisis cannot come at the expense of solving the climate crisis: Governments need to continue developing rapid and far-reaching decarbonization of our energy and food systems by p Gove nd unle cooling and cooking. We need to mitigate climate change through agroecology and sustainable forests. Investments should be redirected from subsidizing fossil fuels towards meeting the Paris Climate Agreement Goals. Action addressed above should be reinforced at the next UN Climate Summit.

Κλιματική αλλαγή

10. **Enhancing effective global cooperation**

In order to better manage pandemics and other global health and environment issues, the UN should enh ies and

Διεθνείς συνεργασίες / αλληλεγγύη

Business as usual is not an option. We must lay the foundations for a peaceful world of solidarity, equity and sustainability, by spreading effective future just policy solutions.

COVID-19

We know much more than before, but still less than we need

ευχαριστώ

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