

Rijksinstituut voor Volksgezondheid
en Milieu
*Ministerie van Volksgezondheid,
Welzijn en Sport*

COVID-19

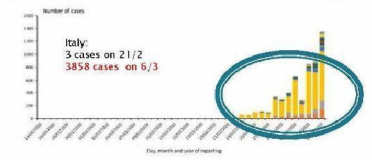
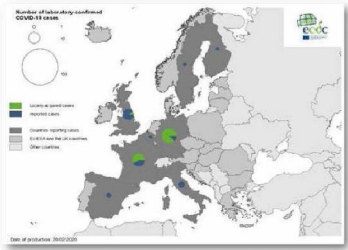
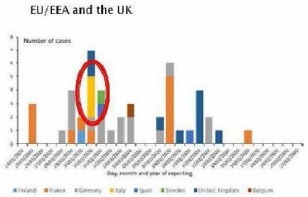
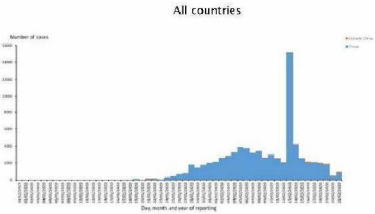
Game changers and changing the
games

5.1.2e , LCI-Cib

NVIB, nascholing 4-5 november 2021

The onset and the unfolding of the first wave; spring 2020

Distribution of COVID-19 cases (according to the applied case definition in the country) by country and region, as of 21 February 2020



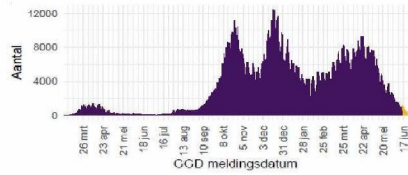
Bron: ECDC

Distribution of COVID-19 cases (according to the applied case definition in the country) in EU/EEA and the UK, as of 6 March 2020

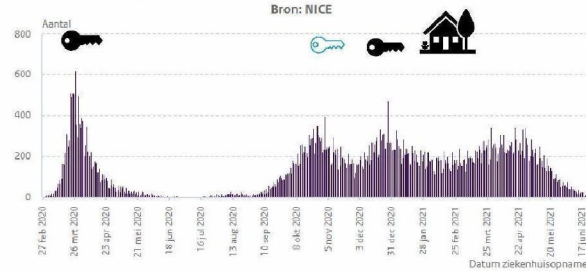
Game changer:
Massive local transmission in winter sport regions

The first, second and the third wave in the Netherlands

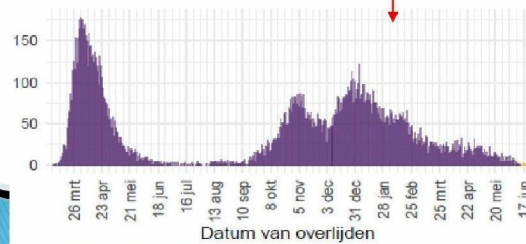
SARS-CoV-2 meldingen aan de GGD'en vanaf 27 februari 2020



In ziekenhuis opgenomen patiënten vanaf 27 februari 2020



vaccines



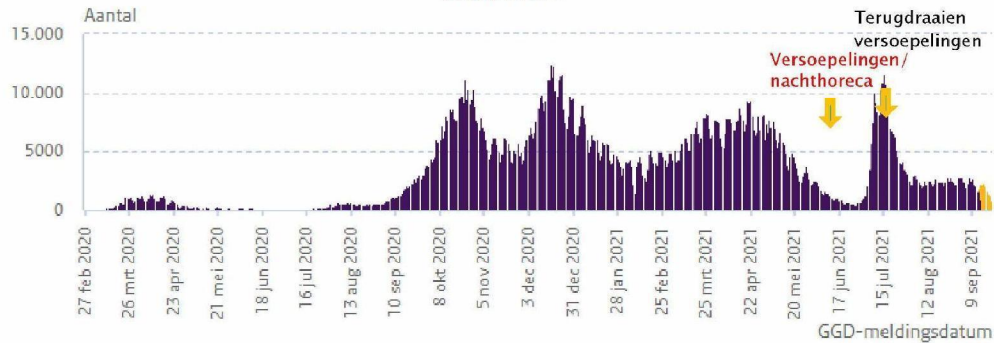
New variants	α	β	γ	Δ
Week	49	51	3	15

Gerapporteerde meldingen
■ Nieuw
■ Bestaand

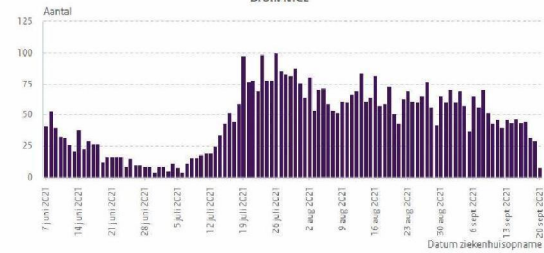
Game changers: virus variants and vaccines

Summer 2021: the COVID-19 'disco peak'

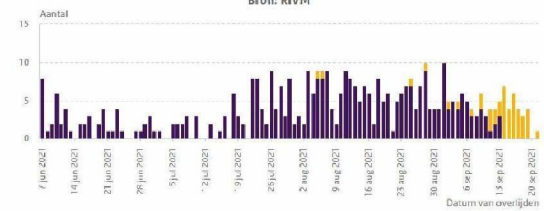
GGD Meldingen positief geteste personen per dag vanaf 27 februari 2020
Bron: RIVM



In ziekenhuis opgenomen patiënten vanaf 7 juni 2021
Bron: NICE



Overledenen per dag vanaf 7 juni 2021
Bron: RIVM



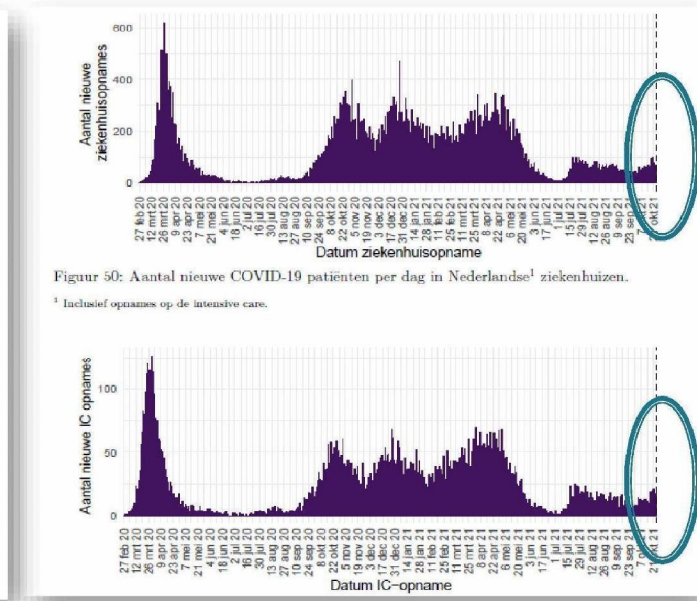
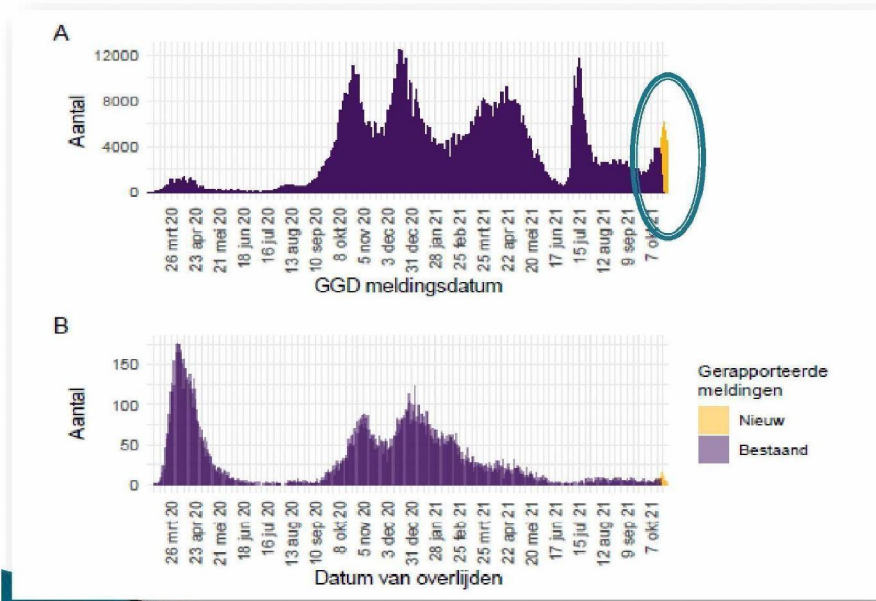
GAME CHANGERS

Developments in the summer and beyond



- ▶ Increasing immunity in the population
- ▶ Vaccination coverage
- ▶ Monitoring clusters
- ▶ Effective Source and Contact Tracing
- ▶ Impact of (new) variants
- ▶ Decreasing compliance with control measures
- ▶ Early relaxation of all control measures
- ▶ Travel-related imported cases
- ▶ Heterogeneity in the level of protection (pockets with low vaccine coverage)
- ▶ Duration protection by vaccination / natural infection
- ▶ Seasonality

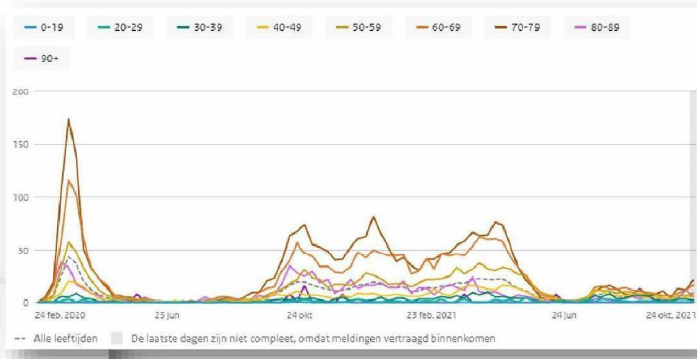
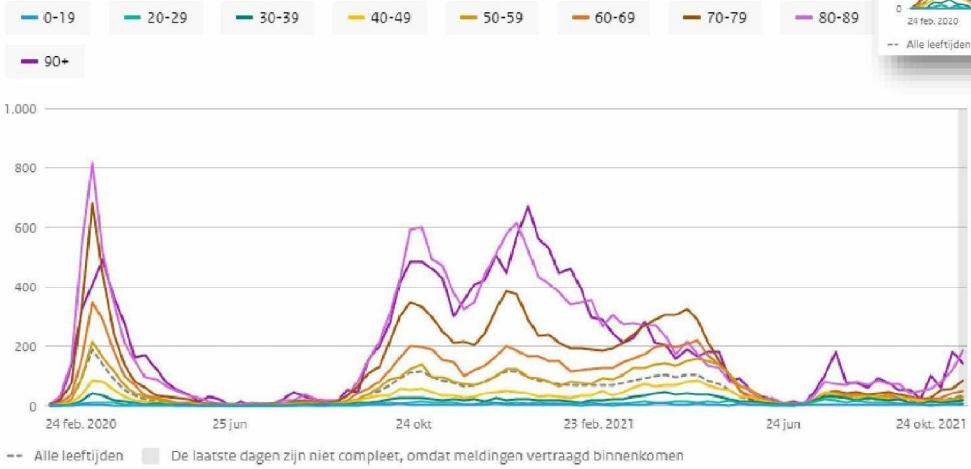
Where do we stand now?



Figuur 50: Aantal nieuwe COVID-19 patiënten per dag in Nederlandse¹ ziekenhuizen.

¹ Inclusief opnames op de intensieve care.

Where do we stand now? Hospital admissions according to age groups



ICU

RIVM

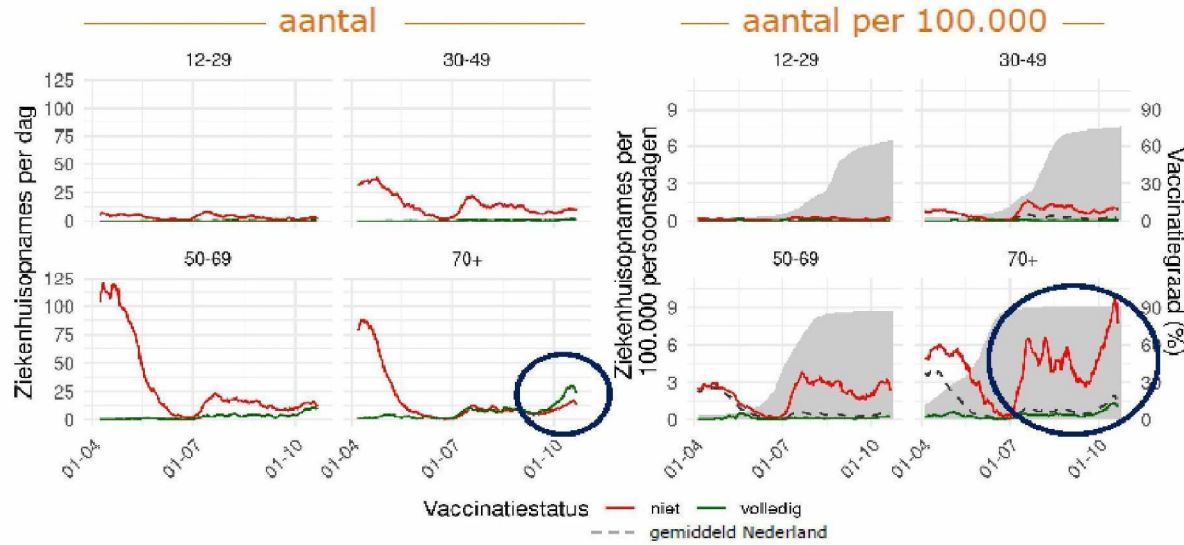
5.1.2e



Ziekenhuisopnames

opgenomen gevaccineerden:
ouderen met onderliggende medische condities

BMJ 2021;374:n2244
<http://dx.doi.org/10.1136/bmj.n2244>

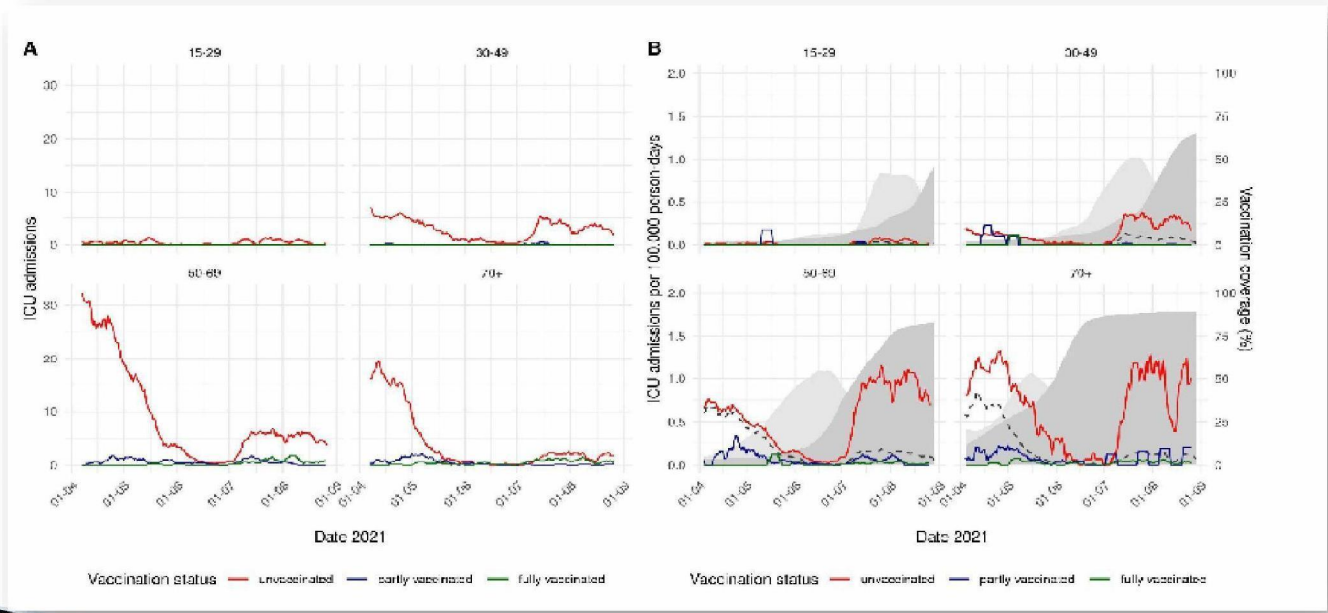


19

5.1.2e

et al.

ICU admissions

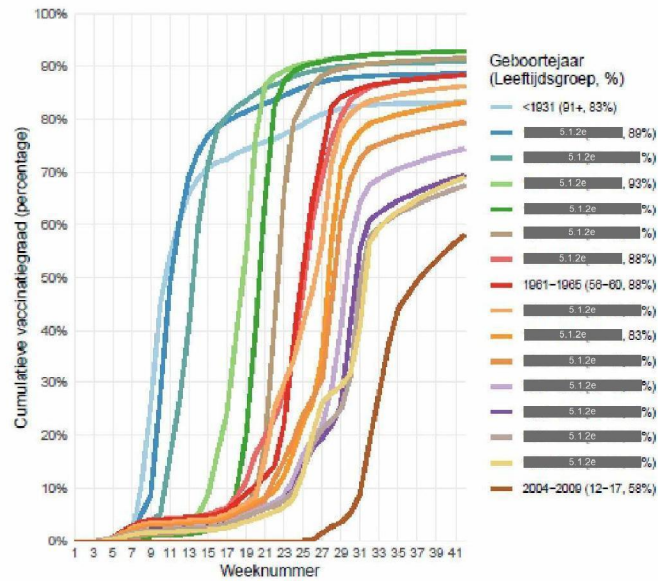
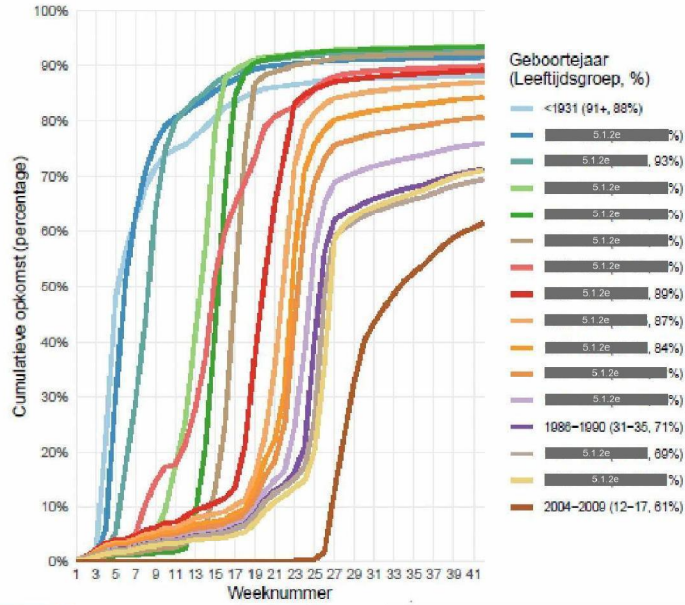


COVID-19 vaccinatieopkomst

t/m 24 oktober 2021

tenminste 1 dosis

volledige vaccinatie

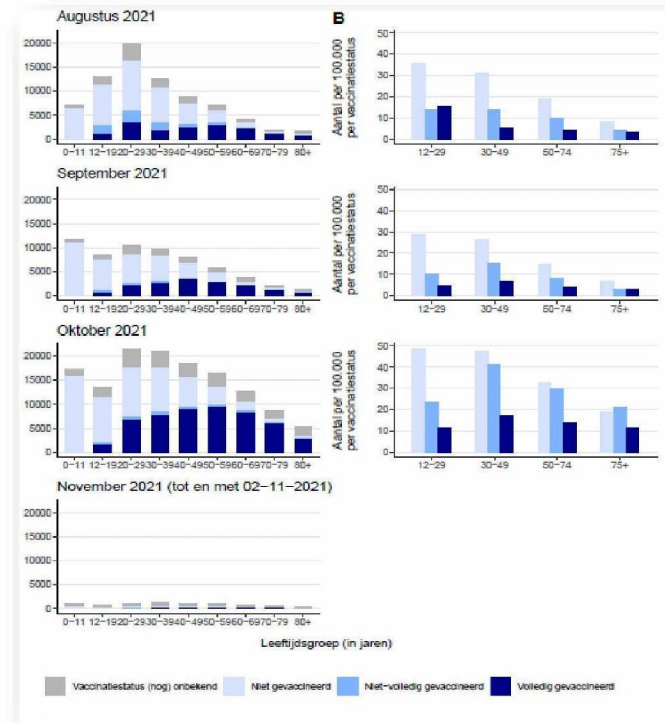


Leeftijdsgroep	Geboortejaren	Opkomst tenminste één dosis	Vaccinatiegraad volledige vaccinatie
12 en ouder	2009 en eerder	85.2%	81.8%
18 en ouder	2003 en eerder	87.3%	83.8%

RIVM

Vaccinatiestatus van personen met positieve testuitslag, van augustus tot en met 27 oktober 2021 10:00

	Augustus		September		Oktober ²	
	Aantal	%	Aantal	%	Aantal	%
Totaal gemeld	75717	-	60843	-	96570	-
Vaccinatiestatus (nog) onbekend ⁵	10482	14%	7363	12%	18573	19%
Vaccinatiestatus bekend ⁵	65235	86%	53480	88%	77997	81%
<i>Volledig gevaccineerd⁴</i>	<i>16401</i>	<i>25%</i>	<i>16396</i>	<i>31%</i>	<i>34169</i>	<i>44%</i>
<i>Niet volledig gevaccineerd⁴</i>	<i>8045</i>	<i>12%</i>	<i>1910</i>	<i>4%</i>	<i>2347</i>	<i>3%</i>
<i>Niet gevaccineerd⁴</i>	<i>40789</i>	<i>63%</i>	<i>35244</i>	<i>66%</i>	<i>41188</i>	<i>53%</i>



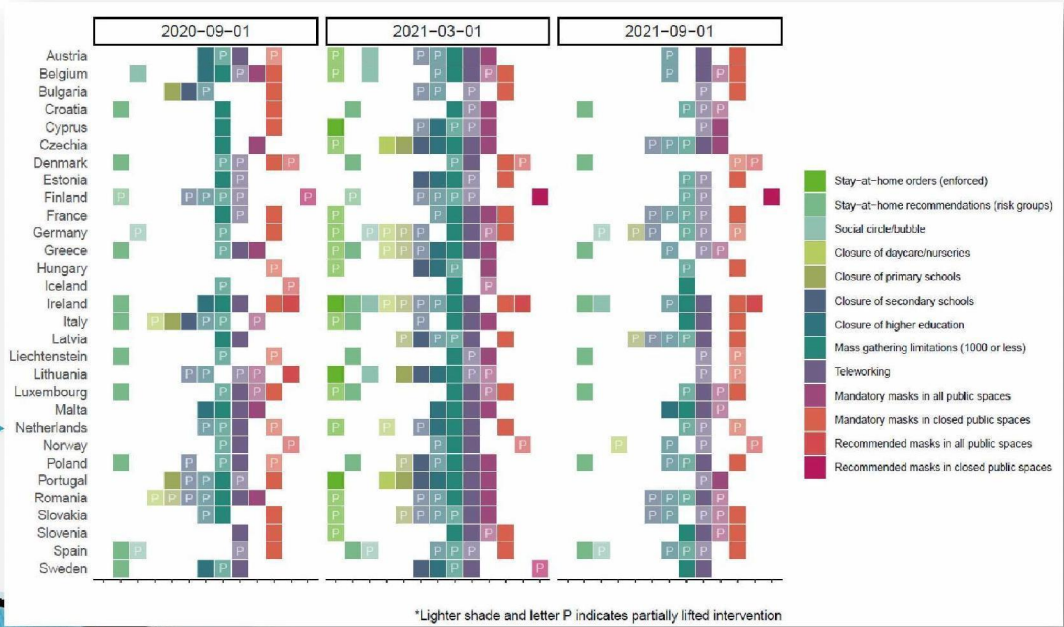
RIVM

Data 27 okt 2021

ECDC RAPID RISK ASSESSMENT

Assessing SARS-CoV-2 circulation, variants of concern, non-pharmaceutical interventions and vaccine rollout in the EU/EEA, 16th update

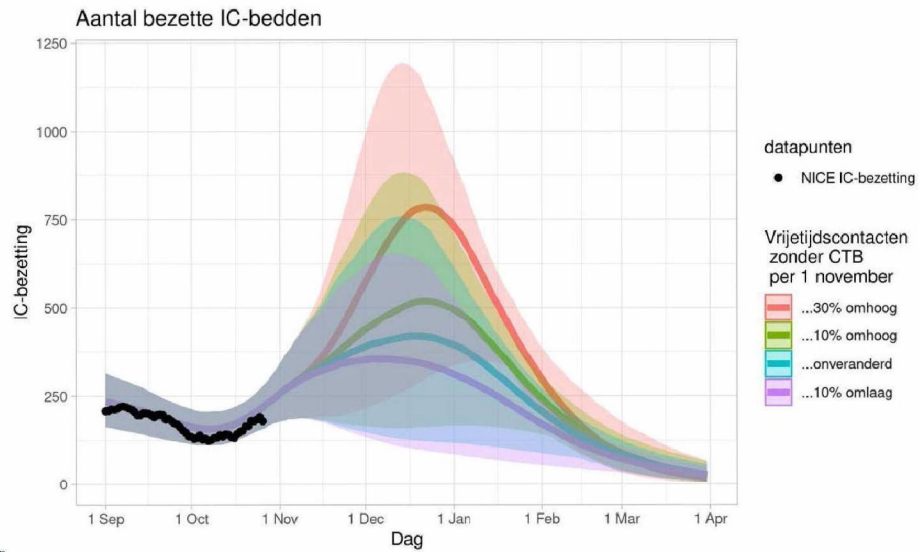
30 September, 2021



Prognoses autumn 2021 and beyond



IC-bezetting van patiënten met COVID-19

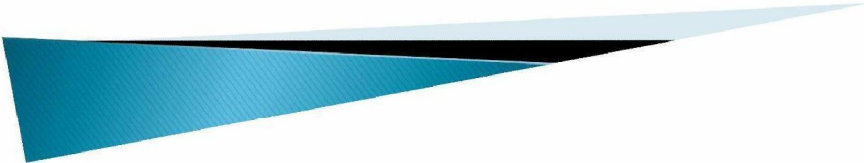


Gegevens in figuur niet gecorrigeerd voor rapportagevertraging

RIVM

5.1.2e

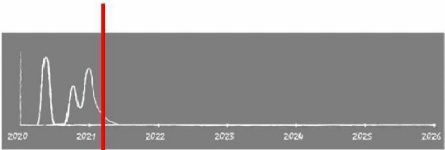
What lies ahead of us?



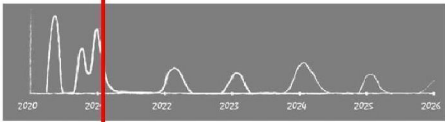
Scenario'



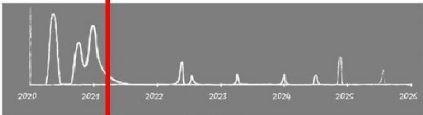
Immuniteit, vaccinaties mutaties, gedrag



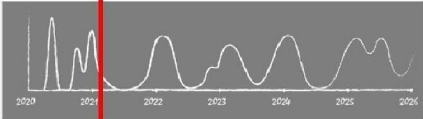
Terug naar normaal



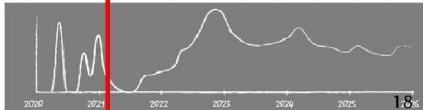
Griep+



Externe dreiging



Continue strijd



Worst case



A look into the future of the COVID-19 pandemic in Europe: an expert consultation

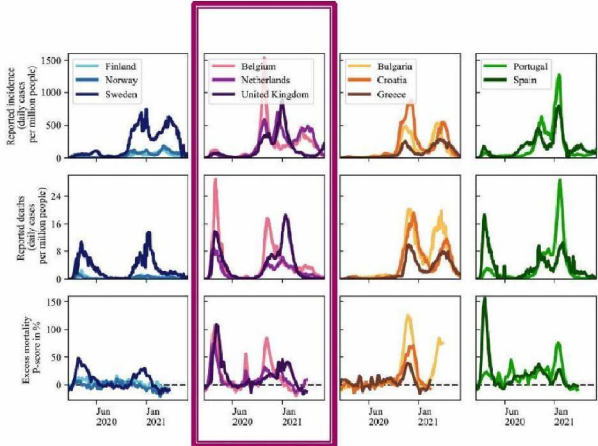


The Lancet Regional Health – Europe
Volume 8 (September 2021)
DOI: 10.1016/j.lanpe.2021.100185

- The challenges and developments:
- the progress of national and global vaccination programs -
 - the emergence and spread of variants of concern
 - and public responses to non-pharmaceutical interventions
 - A moderate, adaptive level of NPIs will thus remain necessary.



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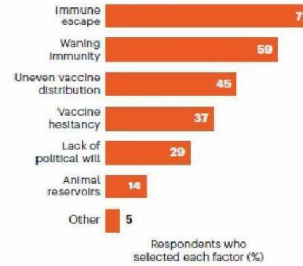
THE CORONAVIRUS WILL BECOME ENDEMIC

A *Nature* survey shows many scientists expect SARS-CoV-2 is here to stay, but it could pose less danger over time. **By Nicky Phillips**

“The virus becoming endemic is likely, but the pattern that it will take is hard to predict.”

DRIVING FACTORS

Nature asked scientists to pick three of the biggest factors that would drive SARS-CoV-2 circulation in people if it became endemic.



ENDEMIC FUTURE

In a *Nature* poll, 89% of scientists felt that SARS-CoV-2 was either very likely or likely to become an endemic virus.

How likely do you think it is that SARS-CoV-2 will become an endemic virus: that is, one that continues to circulate in pockets of the global population?



How likely do you think it is that SARS-CoV-2 can be eliminated from some regions?



110 Immunologists, infectious-disease researchers and virologists from 23 countries. Percentages do not add up to 100% because of rounding.

COVID-19: what have we learned so far in terms of governance?

- ▶ Transparency (evidence, choices)
- ▶ Decisive leadership
- ▶ Unified responses, rather than disconnected strategies
- ▶ Effective communication
- ▶ Greater role of EU and other regional blocks
- ▶ Global solidarity
- ▶ Expand capacity WHO
- ▶ Global insurance policies in place
- ▶ Vaccines
- ▶ Test responsiveness and resilience of health systems
- ▶ Accountability
- ▶ Novel approaches in pandemic response

12 Lessons learned from the management of the coronavirus pandemic

Rebecca Forman^a, Rifat Atun^b, Martin McKee^c, Elias Mossialos^{a,d,e}

^aLondon School of Economics and Political Science, WC2A 2NZ, London, UK
^bHarvard University, T.H. Chan School of Public Health, Boston, MA 02115, USA
^cLondon School of Hygiene and Tropical Medicine, WC1E 7HT, London, UK
^dImperial College London, SW7 2BX, London, UK



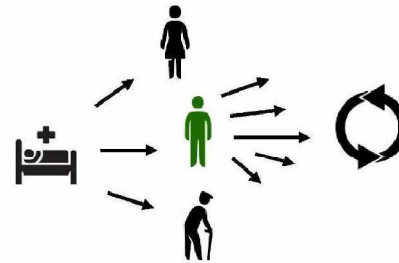
COVID-19: what have we learned so far?

- ▶ Laboratory capacity
- ▶ Surveillance and **high capacity for source and contact tracing**
- ▶ (real-time) analysis
- ▶ **Cluster monitoring**
- ▶ Importance of modeling
- ▶ Stepwise approach to relaxation of measures
- ▶ Clarity about required behavior (hygiene, social distancing, teleworking, testing, isolation, quarantine)
- ▶ **Continuous monitoring of compliance and behavior**
- ▶ Clear command and control structure
- ▶ Communication
- ▶ Protection of the vulnerable groups/people
- ▶ Access to hospital care
- ▶ Availability of medical countermeasures (treatment, antivirals)
- ▶ Availability of non-medical countermeasures
- ▶ Vaccines

Contact tracing for COVID-19

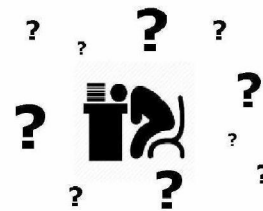
CT is key in the COVID-19 pandemic, but faces challenges in practice:

- Rapid and large scale spread of pathogen (many index cases)
- Complex contact networks
- Limited knowledge (especially in beginning of pandemic)

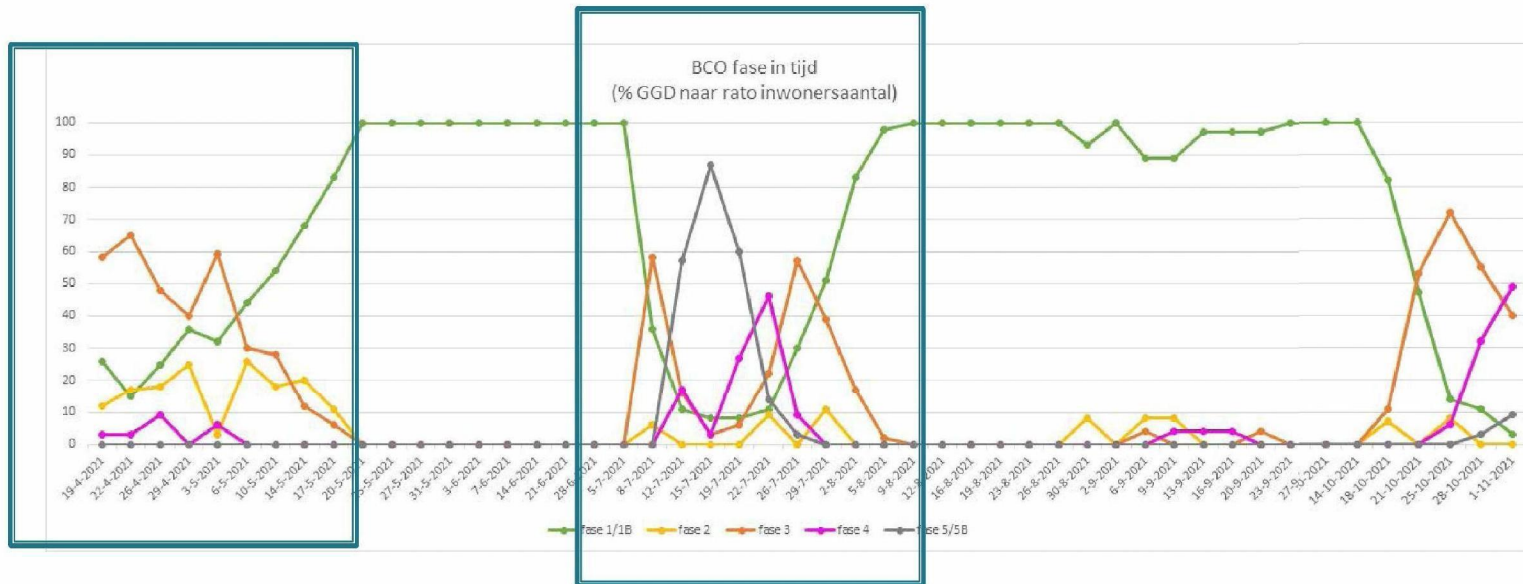


Consequences for CT:

- Difficult (impossible?) to fully and timely facilitate contact tracing
- Limited opportunities to collect (surveillance) data
- Limited control/overview over pandemic

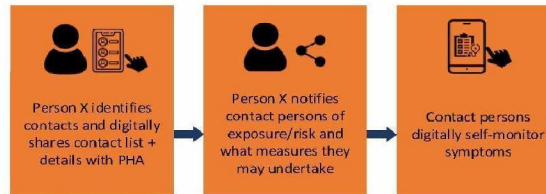
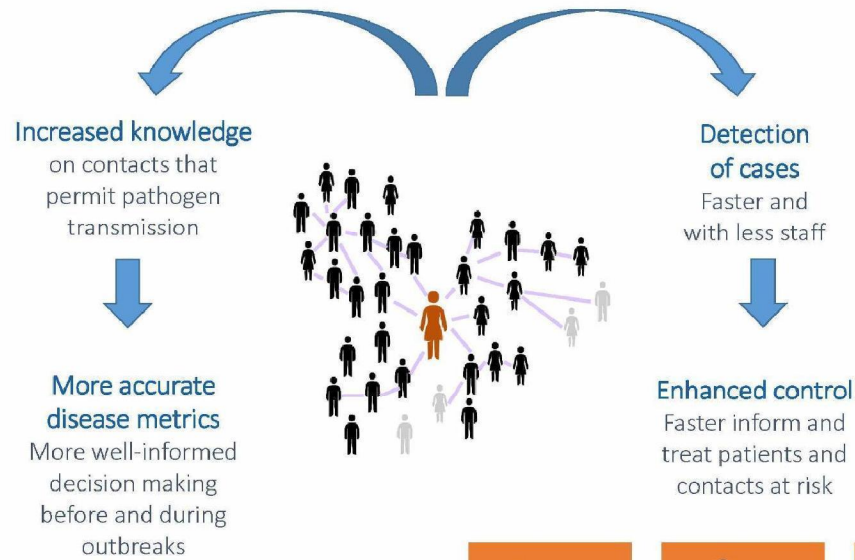


Preparedness: sustainable, high-quality source and contact tracing to inform scientific advice on measures and policy decisions



Uniformity
Optimal capacity
System performance gaps

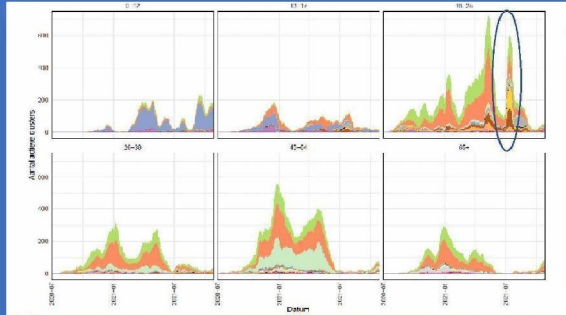
Innovative methods to sample contact networks of infected persons; work in progress



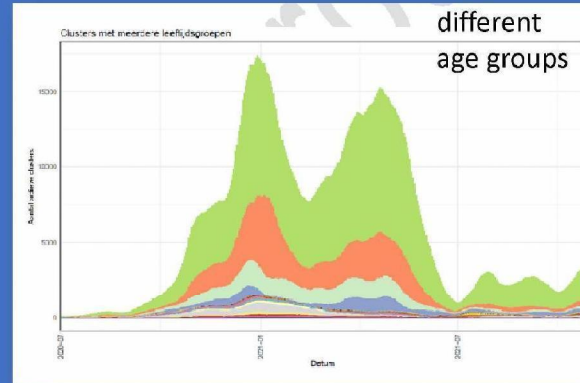
RIVM, ^{5.1.2a}
5.1.2e

Stein ML, et al. BMC Infectious Diseases 2015
Stein ML, et al. American Journal of Public Health 2015
Stein ML, et al. PLOS ONE 2018
Helms et al. BMC Infectious Diseases 2021

Cluster monitoring: essential information for control interventions!



Feesten, studentenvereniging, horeca



Clusters with different age groups

thuis, bezoek, vrienden werk

Absoluut aantal clusters en absoluut aantal clusters per leeftijdscategorie, uitgesplitst naar type setting

- Cluster setting**
- Overige gezondheidszorg
 - Verpleeghuis of woonzorgcentrum voor ouderen
 - Workeerzorg voor mensen met een beperking
 - Overige woonzorginstelling
 - Dagopvang voor ouderen en mensen met een beperking
 - Overige dagopvang
 - Uitbaat
 - Thuisituatie (thuisgenoten en partner, niet samenwonend)
 - Bezoek in de thuisituatie (van of bij familie, vrienden, enz.)
 - Werksituatie
 - School en kinderopvang
 - Medereiziger / reis / vakantie
 - Vlucht
 - Horeca
 - Feest (feest, verjaardag, borrel, bruiloft, enz.)
 - Studentenvereniging/-activiteiten
 - Vrijtijdsbesteding, zoals sportclub
 - Religieuze bijeenkomsten

BRON: RIVM

Vergelijking najaar 2020 en 2021

Verschillen

Changing the games!

(Social) Media: pro-active strategies
Innovation

Publics participation

Massive testing and self testing as control interventions


Up-to-date IT infrastructure; making use of big data and AI tools

Understanding of networks and their dynamics

Person centered prevention and care

Surge capacity and mechanisms for upscaling

Joint preparedness initiatives
HERA, WHO hub for pandemic and epidemic intelligence



Food for thought
Vertaling weergeven

5.1.2e

GGD-arts probeert jongeren rappend over te halen...
youtube.com

16:55
tiktok.com

5.1.2e

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Media exposure examples

Indicators

GNI per capita
 Trade resilience
 Logistics performance index
 Governmental response index
 Deaths
 Economic globalization index
 Social globalization index
 Global health security index

Country profiles and trade resilience

Robust and responsive	Stringent, but fragile	Laissez-faire	Procrastinators	Early victims	Late victims	Never had a chance
Iceland	Ukraine	Sweden	Brazil	Portugal	Argentina	Morocco
South Korea			Indonesia	France	US	Tunisia
Norway				Belgium	Colombia	Egypt
New Zealand				The Netherlands	South Africa	Guatemala
				Italy	Russia	Bolivia
						Paraguay
						Peru

International trade resilience and the Covid-19 pandemic, Mena et al. J Bus Res 2022 Jan; 138: 77–91.

Public Health Emergency COVID-19 Initiative



Thank you for
your attention!

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