

**Supplementary Online Content**

Young BE, Ong SWX, Kalimuddin S, et al; for the Singapore 2019 Novel Coronavirus Outbreak Research Team. Epidemiologic features and clinical course of patients infected with SARS-CoV-2 in Singapore. *JAMA*. doi:10.1001/jama.2020.3204

**eMethods.** Diagnostic Testing and RNA-Dependent RNA Polymerase (*RdRp*) Sequencing of Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2) From Nasopharyngeal Samples

**eFigure 1.** Case Map of Confirmed 2019-nCoV Cases in Singapore

**eFigure 2.** Workflow of Screening and Admission for Suspected COVID-19 (as of February 8, 2020).

**eFigure 3A.** Individual Plot of Serial Cycle Threshold (Ct) Values by Day of Illness for Each Patient

**eFigure 3B.** Serial Cycle Threshold Values for All Patients by Day of Illness

**eFigure 4.** Serial Cycle Threshold (Ct) Values by Day of Illness up to Day 14, Split by Patients Who (A) Required Supplemental Oxygen and (B) Did Not Require Supplemental Oxygen

**eFigure 5.** Phylogenetic Tree of Six Patients With Available Sequences

**eTable 1.** Epidemiologic Features of Patients Infected With 2019-nCoV

**eTable 2.** Cycle Threshold Values for Respiratory, Blood, Urine, and Stool Samples by Day of Illness

**eTable 3.** Singapore 2019 Novel Coronavirus Outbreak Research Team Members

**eReferences**

This supplementary material has been provided by the authors to give readers additional information about their work.

## eMethods

### Diagnostic testing and RNA-dependent RNA polymerase (RdRp) sequencing of Severe Acute Respiratory Syndrome coronavirus 2 (SARS-CoV-2) from nasopharyngeal samples

Extraction of viral nucleic acid from respiratory specimens was performed using EZ1 virus mini kit v2.0 (Qiagen) according to the manufacturer's instruction. The RNA was used for all assays.

Three specific real-time RT-PCR methods targeting the N, S, and ORF1ab genes were designed to detect the presence of SARS-CoV-2 in clinical samples. The N gene real-time PCR was modified from and shares the same probe as the SARS-CoV N gene RT-PCR. Changes were made in the forward primer to increase sensitivity towards SARS-CoV-2, and in the reverse primer to differentiate between SARS-CoV-2 and SARS-CoV. The modified primer sequences are: forward primer 5' CTC AGT CCA AGA TGG TAT TTC T; reverse primer 5' AGC ACC ATA GGG AAG TCC. The probe sequence is: 5' FAM-ACC TAG GAA CTG GCC CAG AAG CT-BHQ1, as previously described. Thermal cycling was performed at 50°C for 20 minutes for reverse transcription, 95°C for 15 minutes, 50 cycles of 94°C for 5 seconds, then 55°C for 1 minute.

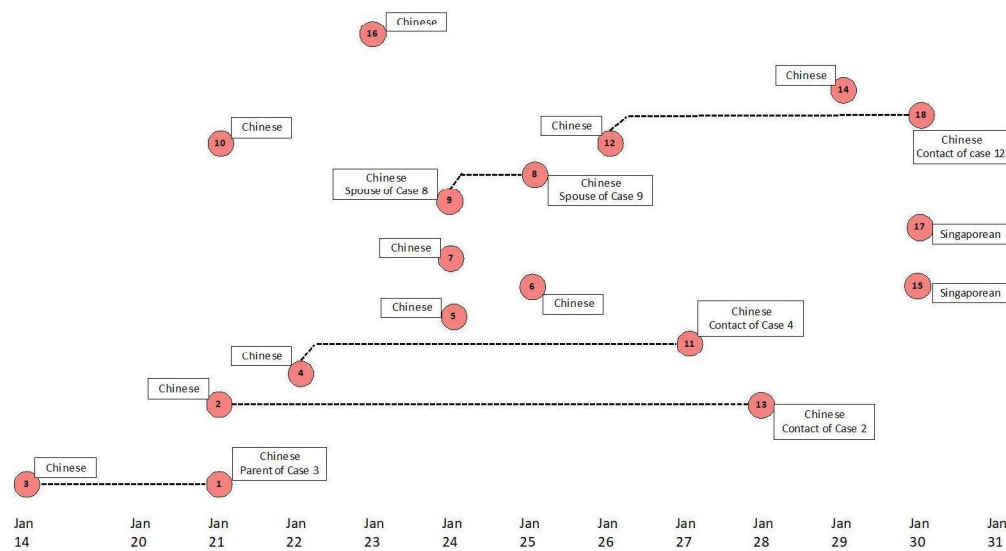
The sequences for the ORF1ab real-time RT-PCR are: forward primer 5' TCA TTG TTA ATG CCT ATA TTA ACC; reverse primer: 5' CAC TTA ATG TAA GGC TTT GTT AAG; probe: 5' FAM- AAC TGC AGA GTC ACA TGT TGA CA-BHQ1. The sequences for the S gene real-time RT-PCR are: forward primer 5' TATACATGCTCTGGGACCA; reverse primer 5' ATCCAGCCTCTTATTATGTTAGAC; probe 5' FAM-CTAAGAGGTTTGATAACCTGCCTACC-BHQ1. Thermal cycling for both ORF1ab and S gene real-time RT-PCR assays were performed at 50°C for 20 minutes for reverse transcription, 95°C for 15 minutes, 50 cycles of 94°C for 5 seconds, 50°C for 20 seconds, and 72°C for 20 seconds.

Real-time RT-PCR was performed using a LightCycler 2.0 instrument (Roche). All reactions were run on LightCycler 2.0 instrument (Roche). All samples were also tested for endogenous RNase P as an internal control.

One step RT-PCR for coronaviruses was performed using primers modified from a pan-human coronavirus sequencing assay (forward primer 5' GGTTGGACTATCCTAARTGTGA; reverse primer 5' GGCATCATCAGATAGAATCATCAT)<sup>1</sup>. This primer set was used to amplify a 440bp region using Superscript

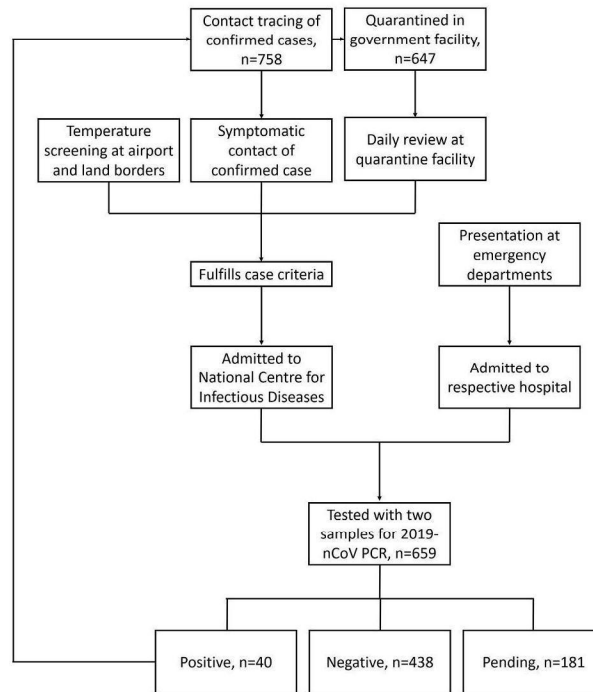


eFigure 1. Case Map of Confirmed 2019-nCoV Cases in Singapore

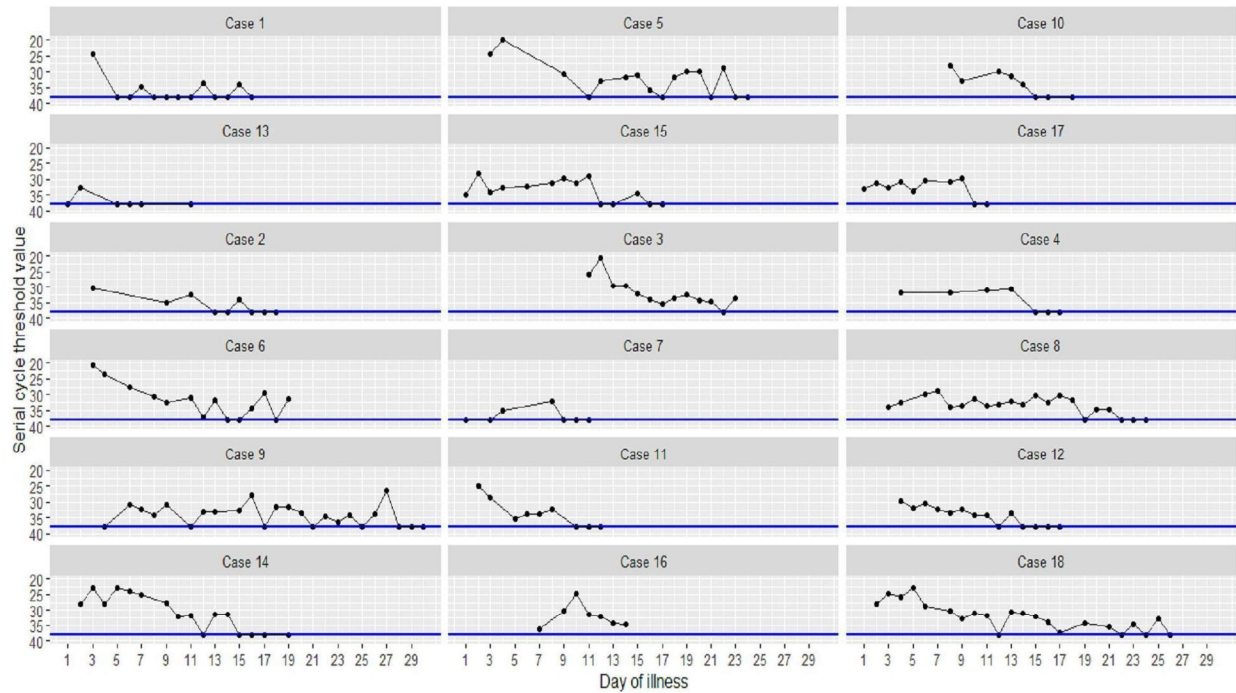


Dotted lines indicate close contact between cases. Dates refer to date of symptom onset.

**eFigure 2. Workflow of Screening and Admission for Suspected COVID-19 (as of February 8, 2020)**

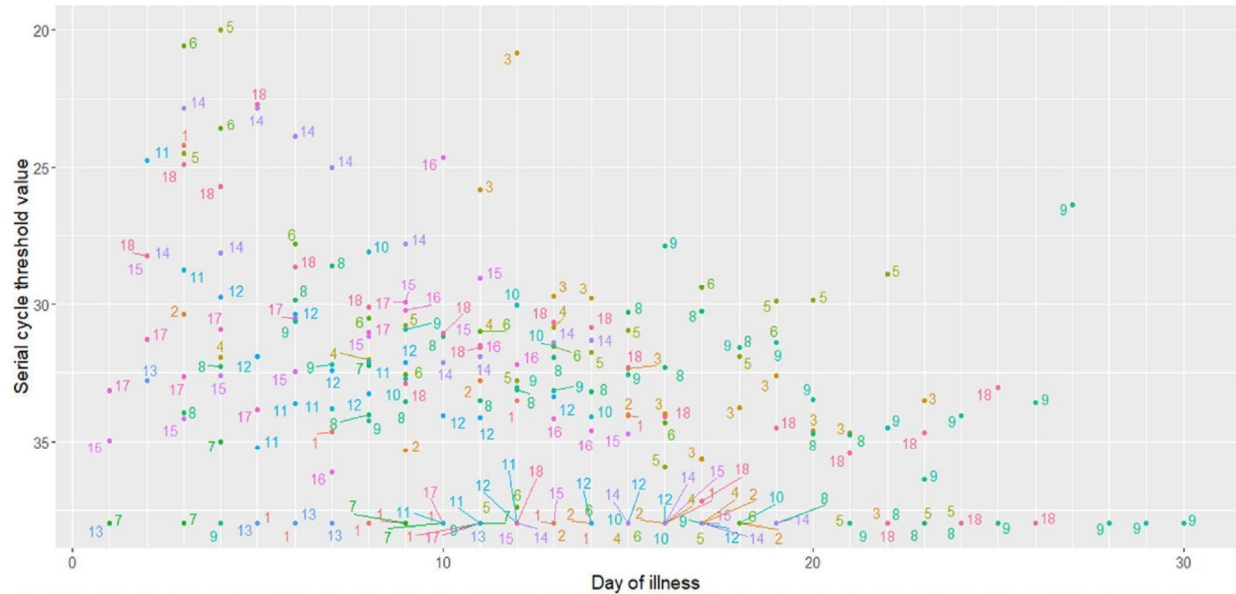


eFigure 3A. Individual Plot of Serial Cycle Threshold (Ct) Values by Day of Illness for Each Patient



Six patients (Case 1, 5, 10, 13, 15 and 17) required supplemental oxygen, while the other 12 patients did not require supplemental oxygen. Cases 1, 5, 10, 15 and 15 also received lopinavir-ritonavir. Negative PCR results (target not detected) are graphed as a Ct value of 38 for ease of viewing and interpretation (blue horizontal blue line). Cycle Threshold Value corresponds with the number of copies of the virus in a biological sample, in an inversely proportional and exponential manner.

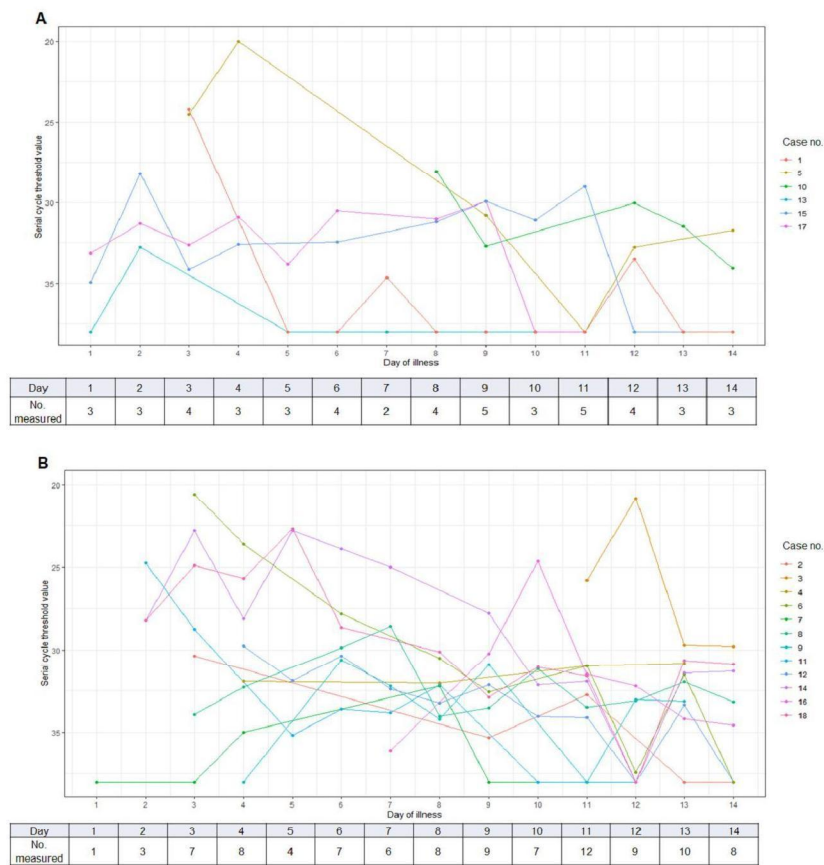
eFigure 3B. Serial Cycle Threshold Values for All Patients by Day of Illness



Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
No. measured	4	6	11	11	7	11	8	12	14	10	17	13	13	11	13	13	11	7	7	4	5	5	5	4	2	2	1	1	1	1

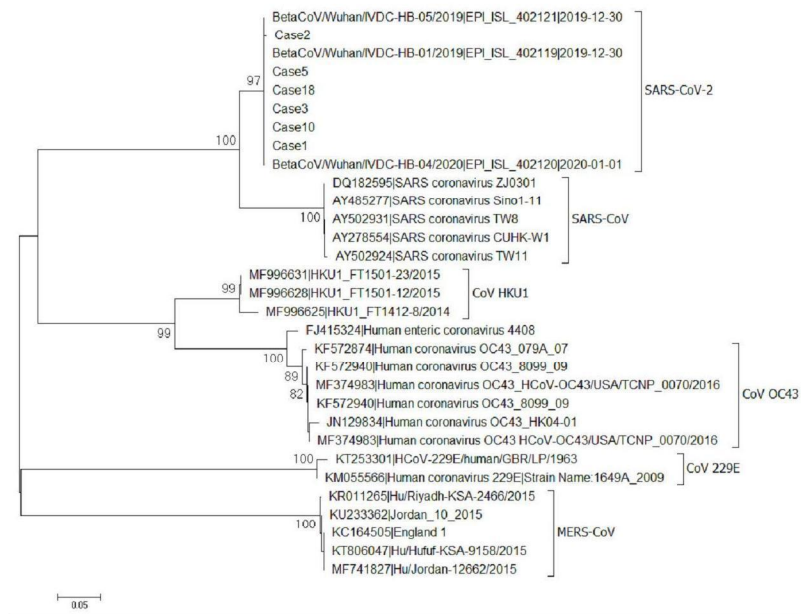
Negative PCR results (target not detected) are graphed as a Ct value of 38 for ease of viewing and interpretation. Each data point represents the lowest Ct value of that 24-hour period for each patient (case number indicated). Different colors correspond to different patients.

**eFigure 4. Serial Cycle Threshold (Ct) Values by Day of Illness up to Day 14, Split by Patients Who (A) Required Supplemental Oxygen and (B) Did Not Require Supplemental Oxygen**



Negative PCR results (target not detected) are graphed as a Ct value of 38 for ease of viewing and interpretation. Each data point represents the lowest Ct value of that 24-hour period for each patient.

eFigure 5. Phylogenetic Tree of Six Patients With Available Sequences



Genetic analysis of partial RdRp gene sequence of SARS-CoV-2 strains from six of the cases.. The phylogenetic tree was inferred by Maximum Likelihood, with 1000 bootstrap validation.<sup>2</sup>

e Table 1. Epidemiologic Features of Patients Infected With 2019-nCoV

	n (%)
<b>Exposure history</b>	
Travel to Wuhan	18 (100)
Contact with Huanan seafood market	1 (5.6)
Contact with healthcare facility in China	3 (17)
Contact with known case of 2019-nCoV	10 (56)
<b>Source of referral</b>	
Self-referral to emergency department	10 (56)
Primary healthcare clinic	1 (5.6)
Screening at air or land borders	3 (17)
Contact tracing	4 (22)

eTable 2. Cycle Threshold Values for Respiratory, Blood, Urine, and Stool Samples by Day of Illness

Case No.	Sample	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	Respiratory			24.2	-	ND	ND	34.7	ND	ND	ND	ND	33.5	ND	ND	34.1	ND	ND	-	ND	ND	ND		
	Blood			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Urine			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Stool			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2	Respiratory			30.4	-	-	-	-	-	35.3	-	32.8	-	ND	ND	34.0	ND	ND						
	Blood			-	ND	-	ND	-	ND	-	-	ND	-	-	-	-	-	-						
	Urine			-	ND	-	-	-	-	-	-	-	-	-	-	-	-	-						
	Stool			-	-	ND	ND	-	ND	-	ND	-	ND	ND	-	-	-	-						
3	Respiratory											25.8	20.8	29.7	29.8	32.3	34.0	35.6	33.8	32.6	34.6	34.7	ND	33.5
	Blood											-	-	-	-	-	-	-	-	-	-	-	-	-
	Urine											-	-	-	-	-	-	-	-	-	-	-	-	-
	Stool											-	-	-	-	-	-	-	-	-	-	-	-	-
4	Respiratory				31.9	-	-	-	32.0	-	-	31.0	-	30.8	-	ND	ND	ND						
	Blood				-	-	-	-	-	-	-	-	-	-	-	-	-	-						
	Urine				-	-	-	-	-	-	-	-	-	-	-	-	-	-						
	Stool				-	-	-	-	-	-	-	-	-	-	-	-	-	-						
5	Respiratory			24.5	20.0	-	-	-	-	30.8	-	ND	32.8	-	31.8	31.0	36.0	ND	31.9	29.9	29.9	ND	28.9	
	Blood			-	-	-	-	-	-	-	-	-	-	32.7	33.6	-	-	-	-	-	-	-	-	-
	Urine			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Stool			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	Respiratory			20.6	23.6	-	27.8	-	30.5	32.6	-	31.0	37.4	31.5	ND	ND	34.3	29.4	ND	31.4				
	Blood			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Urine			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Stool			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7	Respiratory	ND	-	ND	35.0	-	-	-	32.2	ND	ND	ND												
	Blood	-	-	-	-	ND	-	-	-	-	-	-												
	Urine	-	-	-	-	ND	-	-	-	-	-	-												
	Stool	-	-	-	-	-	-	-	-	-	-	-												

8	Respiratory			34.0	32.3	-	29.9	28.6	34.0	33.5	31.2	33.5	33.1	31.9	33.2	30.3	32.3	30.3	31.6	ND	34.7	34.8	ND	ND
	Blood			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Urine			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Stool			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9	Respiratory				ND	-	30.6	32.2	34.2	30.9	-	ND	33.0	33.2	-	32.6	27.9	ND	31.6	31.4	33.5	ND	34.5	36.4
	Blood				-	-	-	ND	-	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Urine				-	-	-	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Stool				-	-	-	-	ND	ND	-	ND	-	ND	-	ND	-	-	-	-	-	-	-	-
10	Respiratory							28.1	32.7	-	-	30.0	31.5	34.1	-	ND	-	ND						
	Blood							-	-	ND	-	-	-	-	-	-	-	-						
	Urine							-	-	ND	-	-	-	-	-	-	-	-						
	Stool							-	-	-	ND	-	ND	-	-	-	-	-						
11	Respiratory		24.8	28.7	-	35.2	33.6	33.8	32.1	-	ND	ND	ND											
	Blood				-	-	ND	-	ND	-	-	-	-											
	Urine				-	-	-	-	-	-	-	-	-											
	Stool				-	-	-	26.0	26.0	-	26.0	-	-	-										
12	Respiratory				29.6	31.9	30.4	32.4	33.2	32.1	34.0	34.1	ND	33.4	ND	ND	ND	ND						
	Blood				-	ND	-	-	-	-	-	-	-	-	-	-	-	-						
	Urine				-	ND	-	-	-	-	-	-	-	-	-	-	-	-						
	Stool				-	-	-	-	-	-	-	-	-	-	-	-	-	-						
13	Respiratory	ND	32.8	-	-	ND	ND	ND	-	-	-	ND												
	Blood	-	-	-	ND	-	ND	-	-	-	-	-												
	Urine	-	-	-	-	-	-	-	ND	-	-	-												
	Stool	-	-	-	-	-	-	-	-	-	-	-	36.0	-	-									
14	Respiratory		28.2	22.8	28.1	22.8	23.9	25.0	-	27.8	32.1	31.9	ND	31.4	31.3	ND	ND	ND	-	ND				
	Blood				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
	Urine				-	-	-	ND	-	-	-	-	-	-	-	-	-	-	-	-				
	Stool				-	-	-	-	30.0	29.0	-	-	-	-	-	-	-	-	-	-				
15	Respiratory	35.0	28.2	34.2	32.6	-	32.5	-	31.2	29.9	31.1	29.0	ND	ND	-	34.7	ND							
	Blood	-	-	-	-	ND	-	ND	-	-	-	-	-	-	-	-	-	-						
	Urine	-	-	-	ND	-	-	-	-	-	-	-	-	-	-	-	-	-						

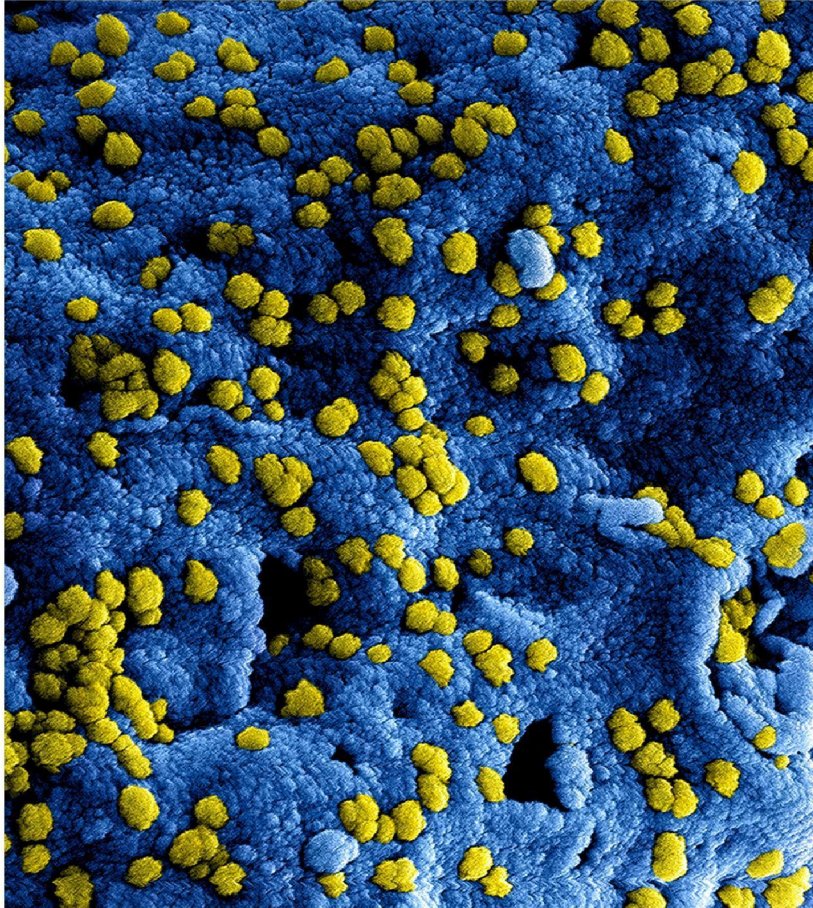


eTable 3. Singapore 2019 Novel Coronavirus Outbreak Research Team Members

Name	Highest Degree	Affiliation / Institution
Poh Lian Lim	MD	National Centre for Infectious Diseases, Singapore
Brenda Sze Peng Ang	MPH	National Centre for Infectious Diseases, Singapore
Cheng Chuan Lee	MMed	National Centre for Infectious Diseases, Singapore
Li Min Ling	MBBS	National Centre for Infectious Diseases, Singapore
Lawrence Soon U Lee	PhD	National Centre for Infectious Diseases, Singapore
Chen Seong Wong	MBBS	National Centre for Infectious Diseases, Singapore
Tau Hong Lee	MBBS	National Centre for Infectious Diseases, Singapore
Sapna Pradip Sadarangani	MBBS	National Centre for Infectious Diseases, Singapore
Ray Junhao Lin	MMed	National Centre for Infectious Diseases, Singapore
Po Ying Chia	MBBS	National Centre for Infectious Diseases, Singapore
Muchell Sharavan Sadasiv	MMed	National Centre for Infectious Diseases, Singapore
Deborah Hee Ling Ng	MBChB	National Centre for Infectious Diseases, Singapore
Chiaw Yee Choy	MBBS	National Centre for Infectious Diseases, Singapore
Tsin Wen Yeo	PhD	National Centre for Infectious Diseases, Singapore
Stephanie Sutjipto	MBBS	National Centre for Infectious Diseases, Singapore
Pei Hua Lee	MBChB	National Centre for Infectious Diseases, Singapore
Jun Yang Tay	MBBS	National Centre for Infectious Diseases, Singapore
Angela Li Ping Chow	PhD	National Centre for Infectious Diseases, Singapore
Wycliffe Wei Enli	MBBS	National Centre for Infectious Diseases, Singapore
Ding Ying	PhD	National Centre for Infectious Diseases, Singapore
Bo Yan Khoo	MBBS	National Centre for Infectious Diseases, Singapore
Woo Chiao Tay	MBBS	National Centre for Infectious Diseases, Singapore
Gabrielle Ng	MBBS	National Centre for Infectious Diseases, Singapore
Yun Yuan Mah	MBBS	National Centre for Infectious Diseases, Singapore
Wilnard Tan	MBBS	National Centre for Infectious Diseases, Singapore
Raymond Kok Choon Fong	MBBS	Changi General Hospital, Singapore
Helen May Lin Oh	MMed	Changi General Hospital, Singapore
Jaime Mei Fong Chien	MMed	Changi General Hospital, Singapore
Humaira Shafi	MBBS	Changi General Hospital, Singapore
Hau Yiang Cheong	MBBS	Changi General Hospital, Singapore
Darren Cheng Han Teo	MBBS	Changi General Hospital, Singapore
Thuan Tong Tan	PhD	Singapore General Hospital, Singapore
Limin Wijaya	MBBS	Singapore General Hospital, Singapore
Indumathi Venkatachalam	MPH	Singapore General Hospital, Singapore
Ying Ying Chua	MMed	Singapore General Hospital, Singapore
Benjamin Pei Zhi Cherng	MBBS	Singapore General Hospital, Singapore
Yvonne Fu Zi Chan	MMed	Singapore General Hospital, Singapore
Lynette Lin Ean Oon	MBBS	Singapore General Hospital, Singapore
Natalie MY Lee	BSc	Singapore General Hospital, Singapore
Jade Xiao Jue Soh	MBBS	Sengkang General Hospital, Singapore
Shuwei Zheng	MBBS	Sengkang General Hospital, Singapore
Pushpalatha Bangalore Lingegowda	MBBS	Sengkang General Hospital, Singapore
Derrick Heng	MPH	Ministry of Health, Singapore
Pream Raj	MPH	Ministry of Health, Singapore
Olivia Oh	PhD	Ministry of Health, Singapore
Constance Low	MPH	Ministry of Health, Singapore
Kelly Foo	MPH	Ministry of Health, Singapore
Khine Nandar	MPH	Ministry of Health, Singapore
Yijun Lin	MPH	Ministry of Health, Singapore
Rachael Pung	Msc	Ministry of Health, Singapore
Guanhao Chan	Bsc	Ministry of Health, Singapore
Xinyi Peh	Bsc	Ministry of Health, Singapore
Charlene Ting Ting Tow	MSc	Ministry of Health, Singapore

### eReferences

1. Laboratory guidance. <https://www.who.int/emergencies/diseases/novelcoronavirus-2019/technical-guidance/laboratory-guidance>. Accessed February 26, 2020.
2. Zhu N, Zhang D, Wang W, et al. A Novel Coronavirus from Patients with Pneumonia in China, 2019. *N Engl J Med*. 2020;382(8):727-733. doi:10.1056/NEJMoa2001017



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

# COVID-19

## VeiligheidsRegio's

### 18 mei 2020

(10)(2e)

# COVID-19 | NL

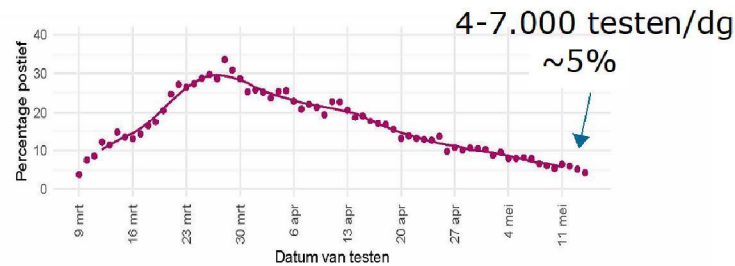
## 16 mei 2020 – monitoring



- In **Osiris** 43.681 patiënten, waarvan
- > 11.492 (26%) opgenomen in het ziekenhuis, waarvan momenteel 366 op de IC-afdelingen
  - > totaal aantal overleden patiënten 5.643

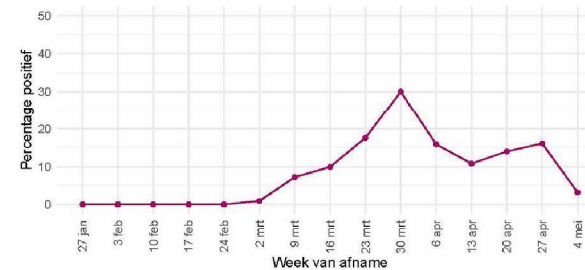
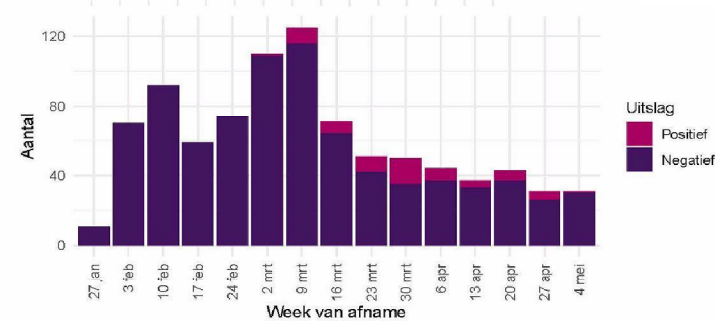
### Virologische **dagstaten**:

- > 287.943 monsters waarvan 46.706 (16%) positief

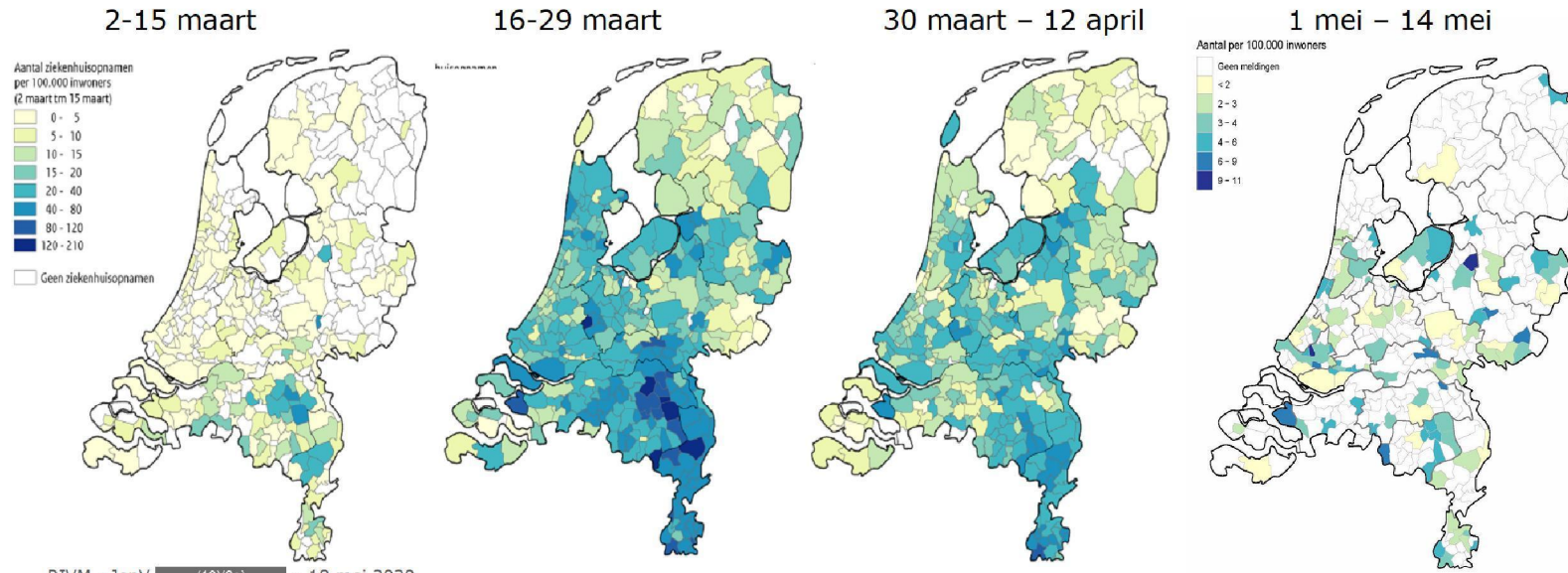
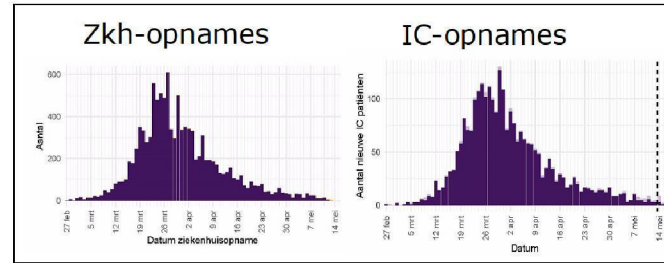


**NIVEL/RIVM huisartsen peilstations:**  
sinds 4 februari: ~893 patiënten getest  
waarvan 63 positief (7,0%)

patiënten met acute respiratoire infectie getest op SARSCoV-2



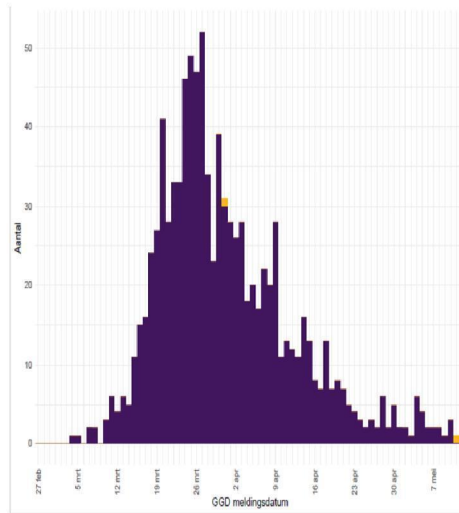
# COVID-19 uitbraak ziekenhuisopnames per 2 weken



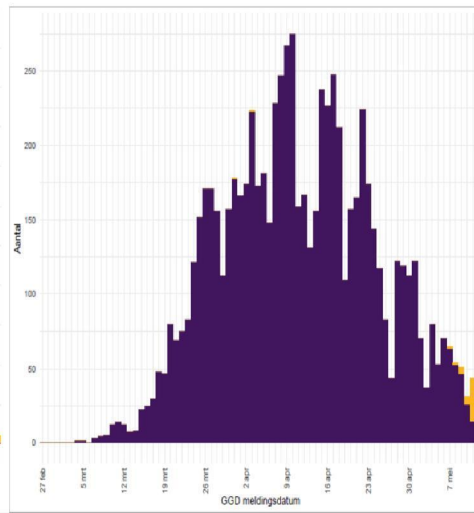
# COVID-19 | NL verpleegtehuizen



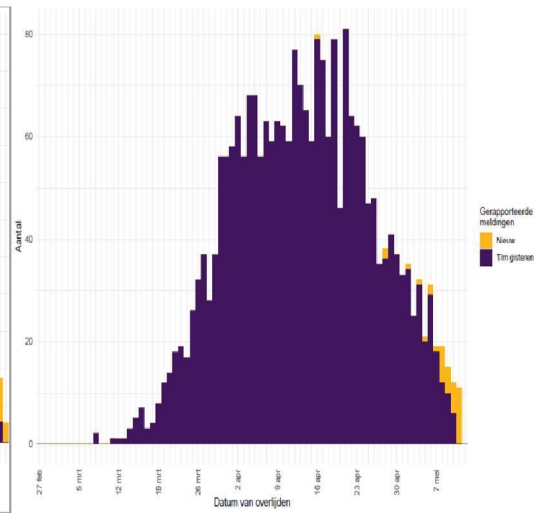
Nieuwe locaties met  
≥ 1 geval COVID-19



Bevestigde  
COVID-19+ clienten

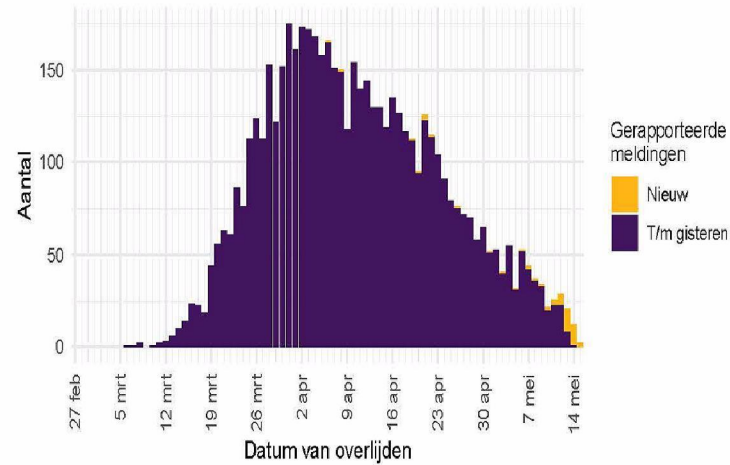


Bevestigde  
COVID-19+ overlijdens



# COVID-19 | NL

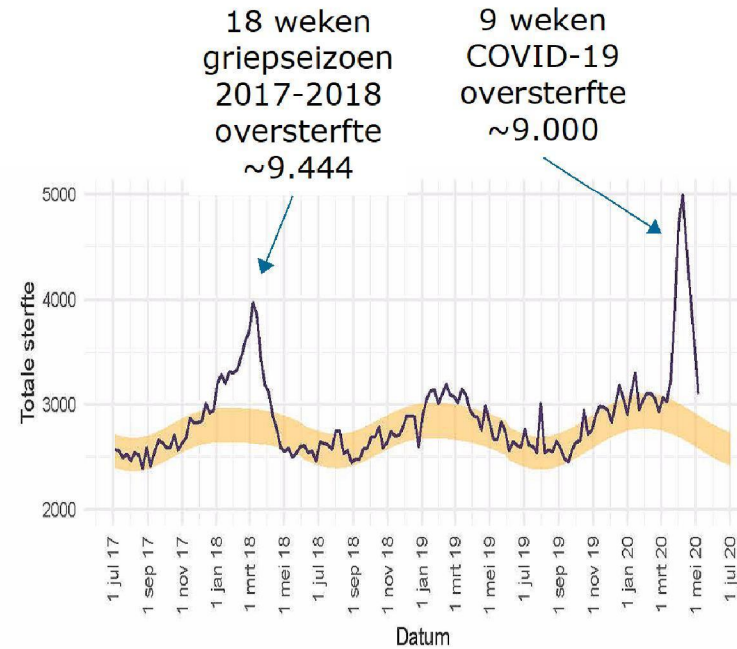
## 15 mei 2020 – overlijdens



Tot deze week:  
aantal overleden bevestigde  
COVID-19 patiënten 5.643

maar groot verschil  
In IC opnames!

CBS totale sterfte



### Basisregels voor iedereen



**Houd 1,5 meter afstand.**



**Vermijd drukte.**



**Werk zoveel mogelijk thuis.**



**Was vaak je handen.**



**Heb je verkoudheidsklachten? Blijf dan thuis.**  
Ben je ook benauwd en/of heb je koorts? Dan moeten alle huisgenoten thuisblijven.

### Stap voor stap - wat kan wanneer?

Versoepelen van maatregelen kan alleen als het coronavirus onder controle blijft.

STAP 1	STAP 2	STAP 3	STAP 4	STAP 5
<p><b>11 mei:</b></p> <ul style="list-style-type: none"> <li> Contactberoepen</li> <li> Buiten sporten op 1,5 meter afstand</li> <li> Bibliotheken</li> <li> (Speciaal) basisonderwijs en kinderopvang</li> </ul> <p>Praktijklessen en examens MBO vanaf 15 juni.</p> <p>Versoepeling hoger onderwijs wordt onderzocht.</p>	<p><b>1 juni:</b></p> <ul style="list-style-type: none"> <li> Terrassen</li> <li> Bioscopen (max. 30 personen)</li> <li> Restaurants / cafés (max. 30 personen)</li> <li> Culturele instellingen (max. 30 personen)</li> <li> Musea</li> <li> Voortgezet onderwijs</li> <li> In het openbaar vervoer is het dragen van een niet-medisch mondkapje verplicht. Reis niet onnodig en mijd de spits.</li> </ul>	<p><b>1 juli:</b></p> <ul style="list-style-type: none"> <li> Voorzieningen campings en vakantieparken</li> <li> Bioscopen (max. 100 personen)</li> <li> Restaurants / cafés (max. 100 personen)</li> <li> Culturele instellingen (max. 100 personen)</li> <li> Georganiseerde samenkomsten (max. 100 personen)</li> </ul>	<p><b>1 september:</b></p> <ul style="list-style-type: none"> <li> Alle sporten (binnen en buiten), incl. wedstrijden en betaald voetbal</li> <li> Sauna's</li> <li> Sekswerkers en coffeeshops</li> <li> Casino's</li> <li> Kantines</li> </ul>	<p><b>?</b></p> <ul style="list-style-type: none"> <li> Evenementen</li> </ul>

alleen samen krijgen we corona onder controle

Voor voorwaarden en meer informatie: [rijksoverheid.nl/coronavirus](https://rijksoverheid.nl/coronavirus) of bel 0800-1351

### Infectieziektebestrijding logica



# COVID-19

## overzicht toekomstscenario

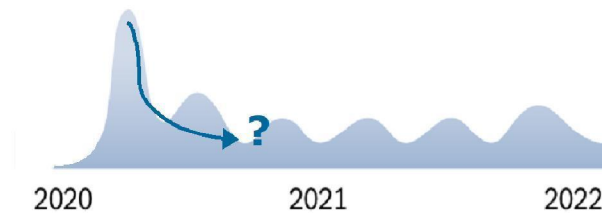


### Doelen:

1. Ziekenhuiszorg intact
  - ziekenhuisopnames
  - IC-opnames
  - overige zorg
2. Kwetsbaren beschermen
  - herkennen doelgroep
  - maatregelen verpleegtehuizen
3. Zicht op virus en verspreiding
  - early warning
  - surveillance



"veenbrand"

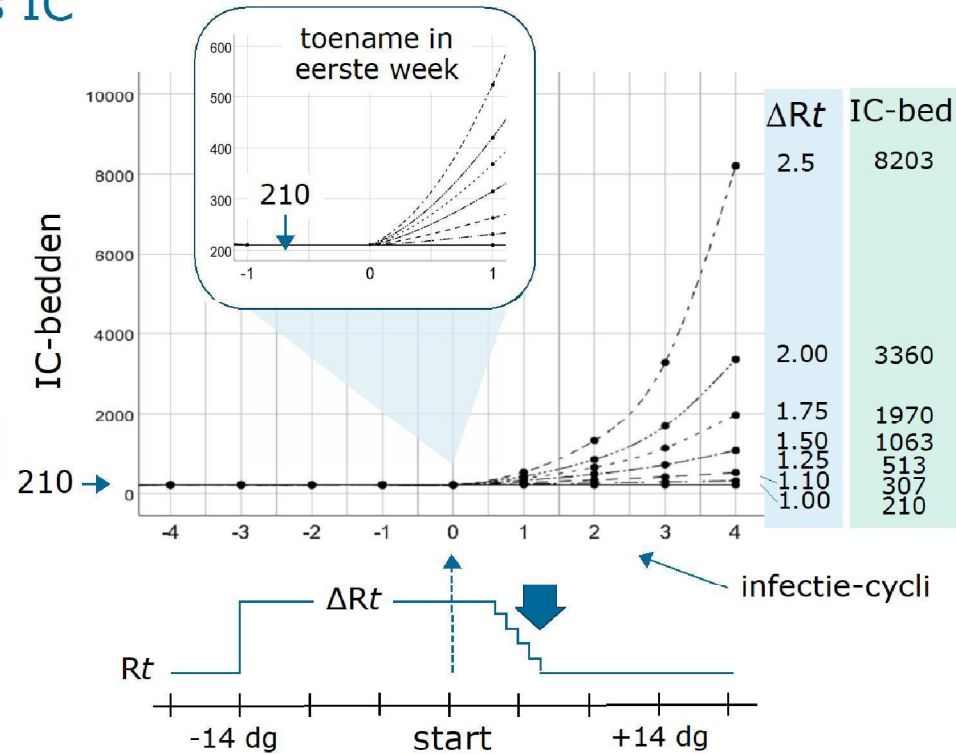
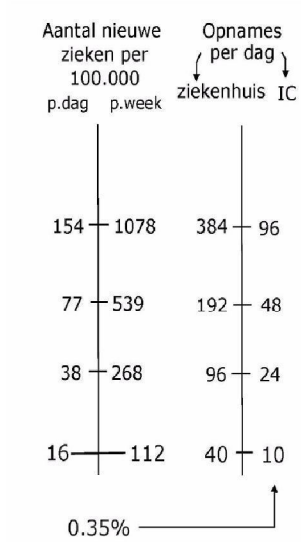


Early warning  
 Gedragsonderzoek  
 GGD/RIVM  
 Nalevingsmonitor  
 Verplaatsingsgegevens  
 telefoon

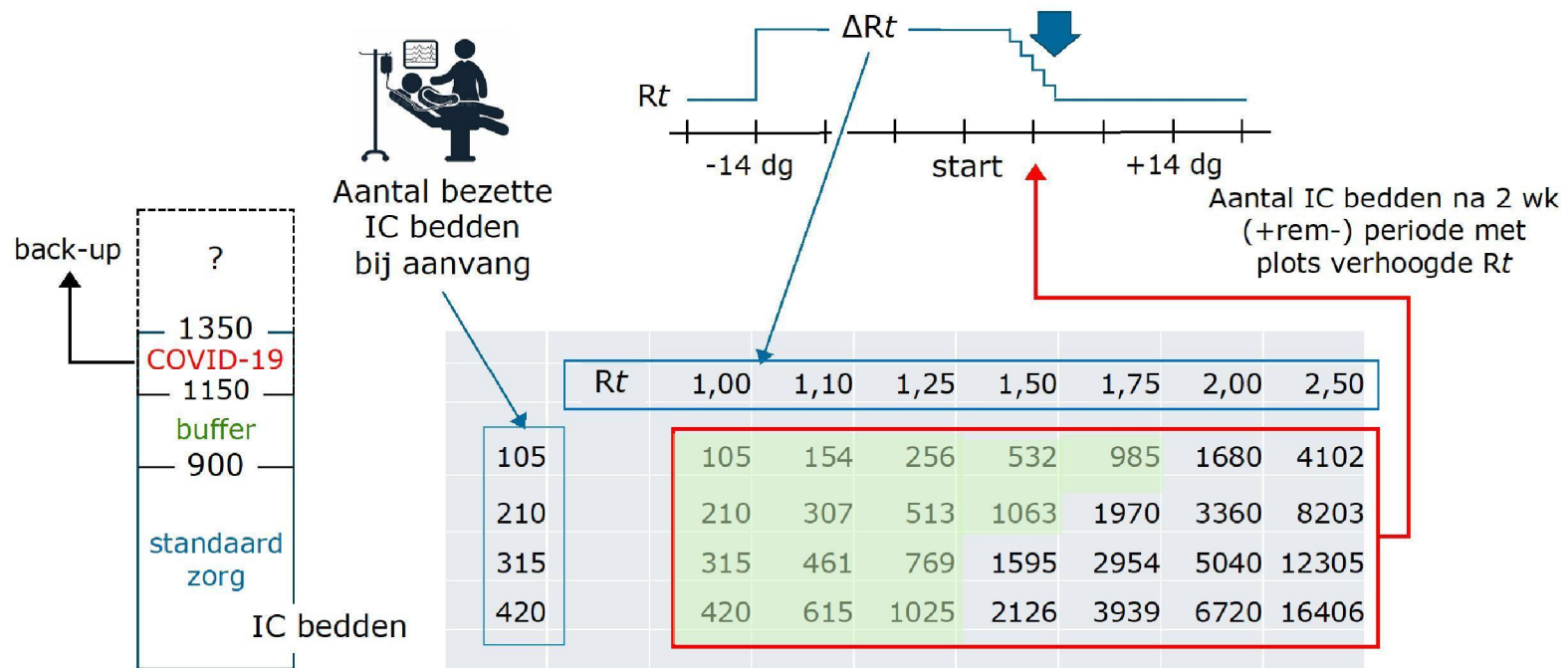


Surveillance  
 Infectieziektenradar  
 Rioolwatersurveillance  
 Surveillance zorgmedewerkers  
 NIVEL/RIVM huisarts-peilstations  
 OSIRIS GGD-contactgegevens  
 Testen in teststraten drive-through!

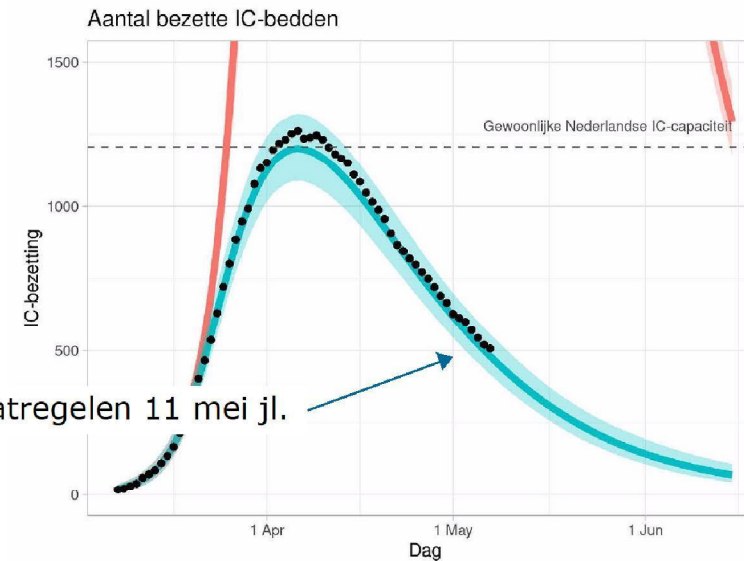
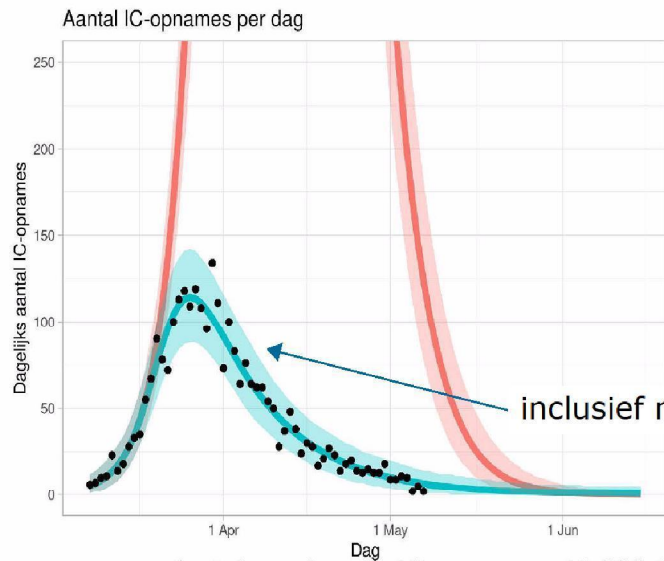
# COVID-19 toekomstscenario's IC



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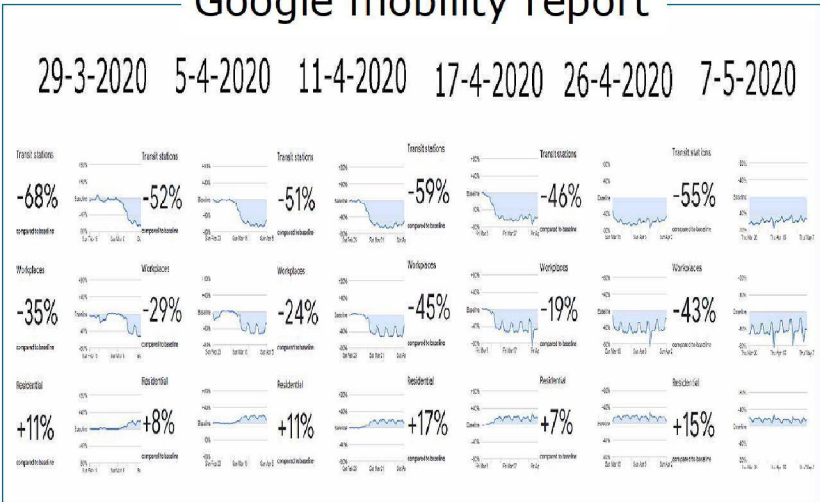
# COVID-19 opnames en bezetting IC



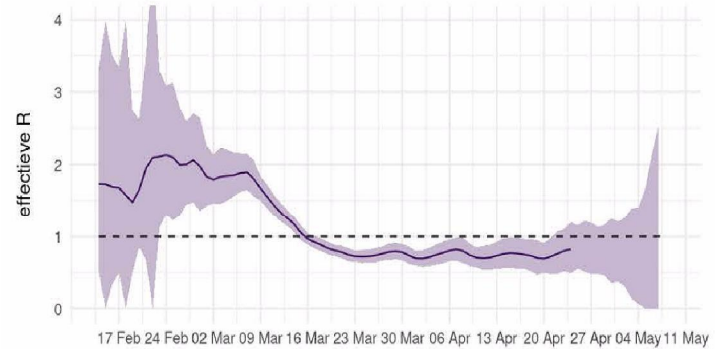
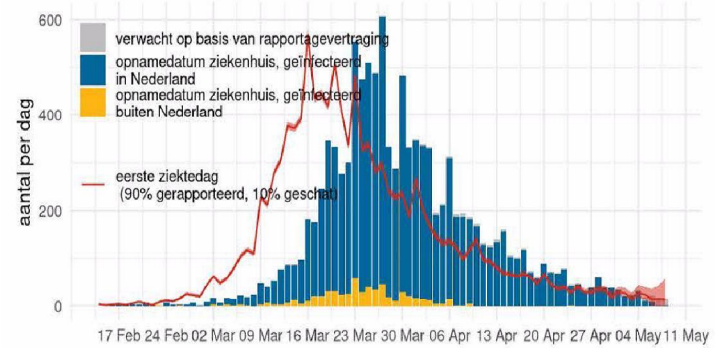
# COVID-19 indicatoren gedrag en Rt



## Google mobility report



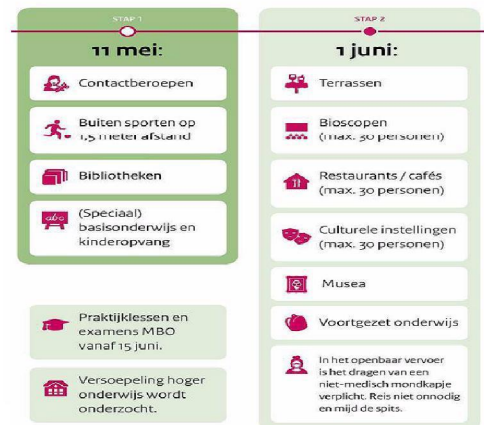
gebaseerd op ziekenhuis opnames uit OSIRIS data 2020-05-08





## COVID-19 versoepelen social distancing per 1 juni

- Beperkte opening van horeca, culture instellingen, bioscoopzalen
- Terrassen
- Musea
- Gedeeltelijk openstellen voortgezet onderwijs



- Minder contact binnen het huishouden
- Meer contact buitenshuis, aantal extra contacten binnen 1.5 m afstand hangt af van compliance
- Aantal contacten hoeft niet toe te nemen
- Herhaald, lokaal en traceerbaar contact wordt vervangen door eenmalig, mogelijk regional en moeilijk traceerbaar contact
- Risico op grotere uitbraken
- Moeilijker voor bron en contact opsporing
- Voortgezet onderwijs:
- Middelbare scholen werken als een hub in het network, dus een groter effect en groter risico dan het openen van primair onderwijs



## COVID-19

### versoepelen social distancing: ouderen per 1 juni

- Meer bezoek voor mensen van 70 jaar en ouder, tenzij klachten
- Voor ouderen die zelfstandig genoeg zijn om aan een contact survey mee te doen
- Gemiddeld aantal verschillende personen gecontacteerd per dag in april 2020 was
  - 1.5 voor 70-80 jarigen
  - 3.5 voor 80-90 jarigen
- Zorgmedewerkers rapporteren 85% van de contacten van 80-90 jarigen
  - Backer et al. Medrxiv 2020
- Verhoging van het aantal contacten brengt meer risico met zich mee voor deze ouderen

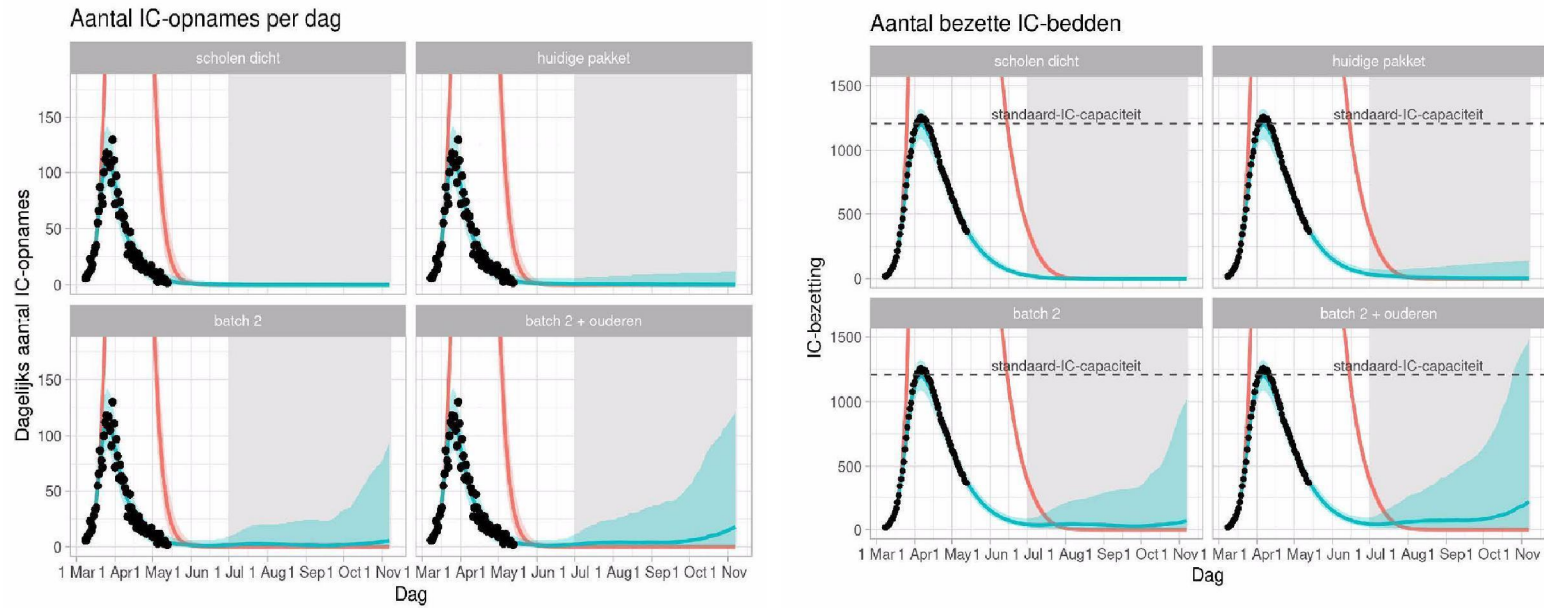
Table 2 Number of community contacts per participant in the baseline survey in 2016/2017 and the physical distancing survey in March and April 2020 in the Netherlands (mean and interquartile range), and the reduction in the mean number of contacts (mean and 95% confidence interval).

	2017		2020		Reduction (%)
	mean	(IQR)	mean	(IQR)	mean (95% CI)
Total	12.5	(2 - 17)	3.7	(0 - 4)	70.8 (70.8 - 70.8)
Participant age					
0 - 4	8.8	(2 - 11)	2.3	(0 - 3)	73.8 (73.3 - 74.0)
5 - 10	18.0	(3 - 31)	2.1	(0 - 3)	88.6 (88.4 - 88.8)
10 - 20	19.7	(4 - 31)	3.0	(0 - 4)	85.0 (84.7 - 85.3)
20 - 30	15.0	(4 - 20)	4.5	(0 - 6)	69.8 (69.5 - 70.1)
30 - 40	13.1	(3 - 17)	4.5	(0 - 6)	66.0 (65.7 - 66.2)
40 - 50	13.5	(3 - 18)	4.9	(0 - 5)	64.1 (63.7 - 64.4)
50 - 60	11.1	(1 - 14)	4.6	(0 - 6)	58.3 (58.0 - 58.7)
60 - 70	8.3	(1 - 10)	2.3	(0 - 3)	72.7 (72.3 - 73.1)
70 - 80	6.8	(1 - 8)	1.5	(0 - 2)	77.4 (76.5 - 78.3)
80 - 90	6.0	(0 - 6)	3.5	(0 - 3)	42.0 (26.8 - 57.0)

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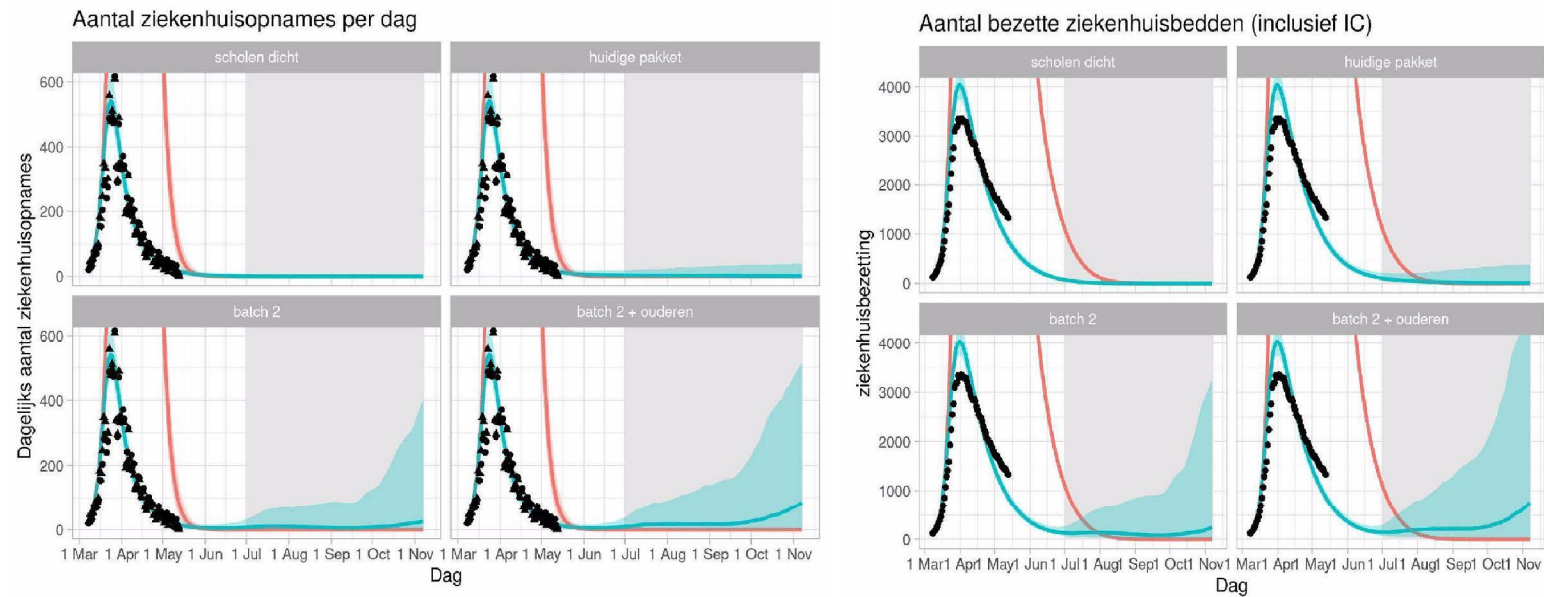
## simulaties batch 2 en ouderen: opnames en bezetting IC



# COVID-19



## simulaties batch 2 en ouderen: opnames en bezetting Zkh





# COVID-19

## simulaties batch 2 en ouderen: conclusies en doorkijk

- Met het huidige pakket aan maatregelen zitten we bij een R van ongeveer 1
- Versoepeling van maatregelen kan resulteren in langzaam stijgende incidentie
- Tenzij bron en contact opsporing effectief genoeg is om  $R=1.2$  te compenseren
- Als incidentie langzaam stijgt, is er genoeg tijd om dit op te merken en in te grijpen.
- Als we aannemen dat kinderen verminderd vatbaar en besmettelijk zijn, dan is alleen versoepeling van bezoek voor ouderen stijgende incidentie
- Als bron en contactopsporing snel en inclusief is, zijn verdere stappen in versoepeling mogelijk
- Nu monitoren hoe effectief bron en contactopsporing is.
- Als transmissie in de zomer iets minder effectief verloopt, zijn de prognoses iets te pessimistisch
- (omgekeerd: als het in de zomer goed gaat, kan het in het najaar minder worden)