

Loopt Nederland gevaar?

5.1.2e

5.1.2e

In het kort

Introductie

Onzekerheid en relevantie voor de praktijk

Lopen we gevaar en wat kunnen we eraan doen?

Observaties uit de praktijk

Vragen?

Evolution of the event

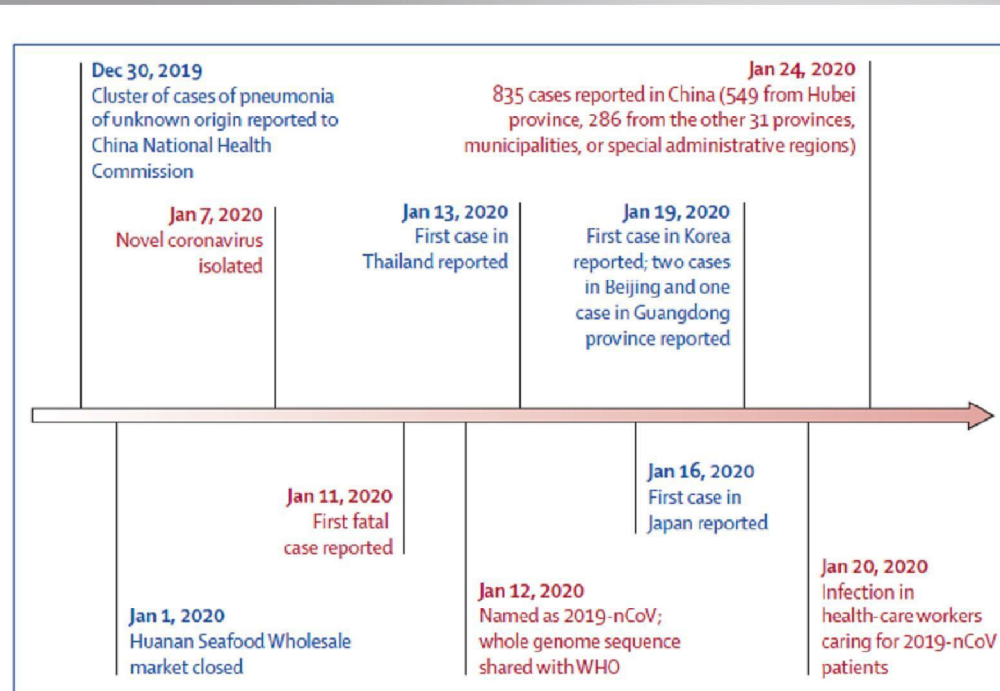
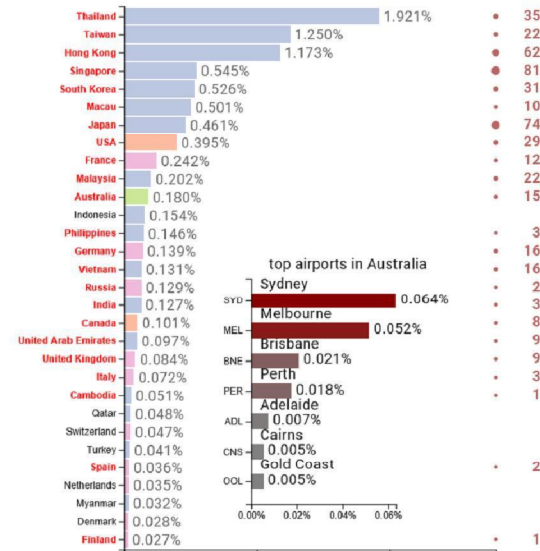


Figure: Timeline of early stages of 2019-nCoV outbreak
2019-nCoV=2019 novel coronavirus.

Relative import risk estimates

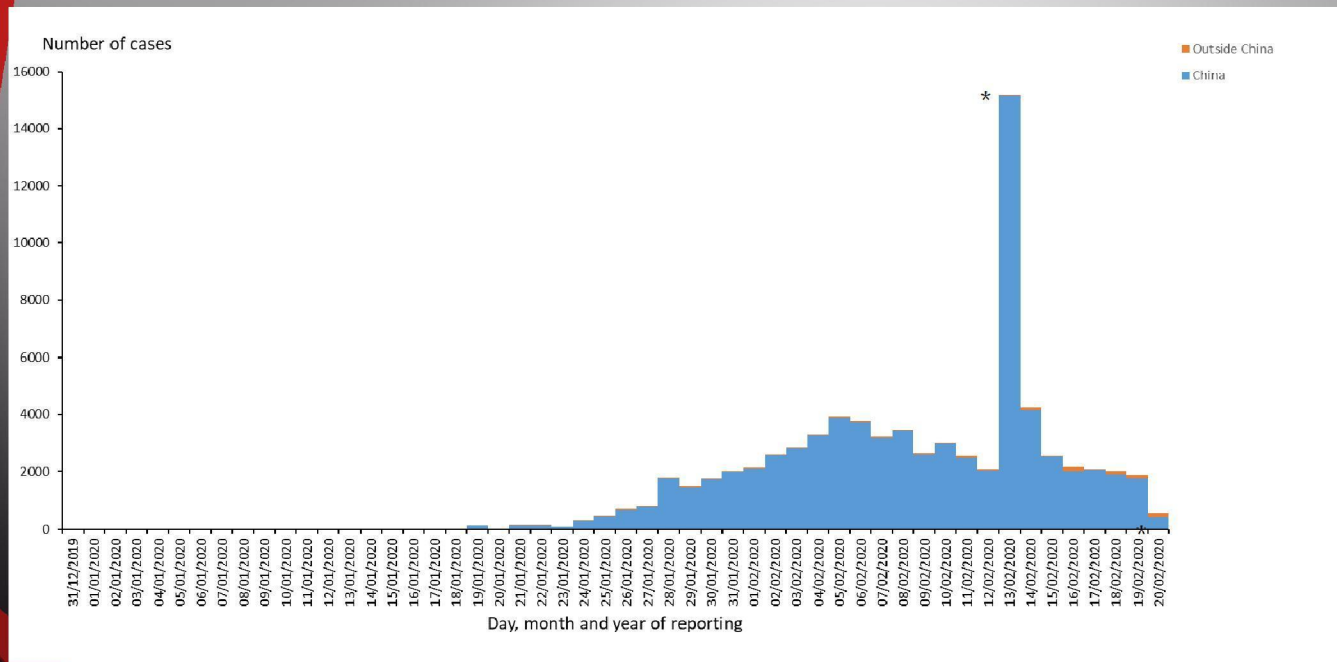
Pre-quarantine risk assessment

The initial predictions were made by the model when traffic out of Wuhan was still active and the outbreak was dominantly confined to the Hubei Province. Since the closure of Wuhan Airport, these numbers are no longer applicable to the current situation. However, they can still be useful for comparison to the [current risk assessment](#).



Bron: RKI (<http://rocs.hu-berlin.de/corona/docs/analysis/importrisk/#pre-quarantine-risk-assessment>)

Distribution of COVID-19 cases according to the applied case definition in the related countries, as of 20 February 2020

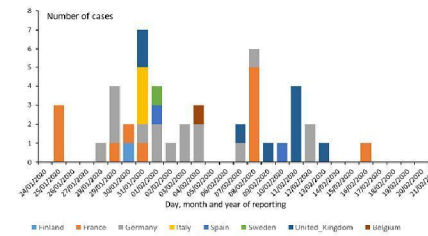


* Case definition change

N= 76.775 (John Hopkins CSSE)

BRON voor grafiek: ECDC

Distribution of laboratory-confirmed cases of COVID-19 in EU/EEA and the UK, as of 21 February 2020



EU/EEA and the UK	Imported cases	Locally	Total num	Total number of deaths
Finland	1	1	2	0
France	5	7	12	1
Germany	2	14	16	0
Italy	3	3	6	0
United_Kingdom	8	1	9	0
Spain	2	2	4	0
Sweden	1	1	2	0
Belgium	1	1	2	0

Bron: ECDC

Geographical distribution of laboratory-confirmed cases of COVID-19
in the EU/EEA and the UK, as of 20 February 2020

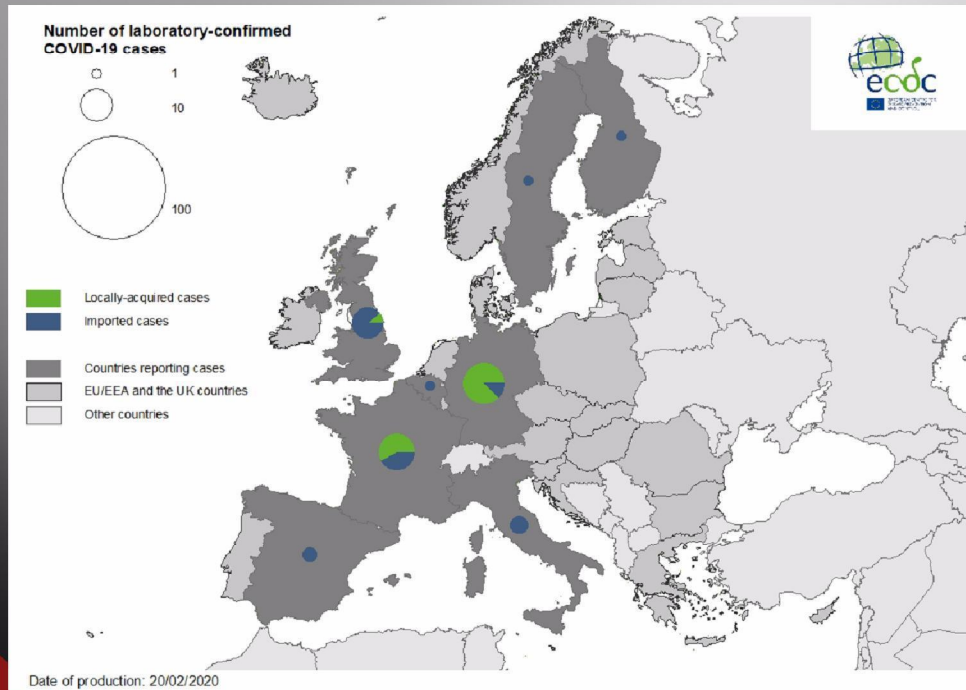


Figure 2. Epidemic curve of COVID-19 cases (n=231) identified outside of China, by date of onset of symptoms and travel history, 19 February 2020

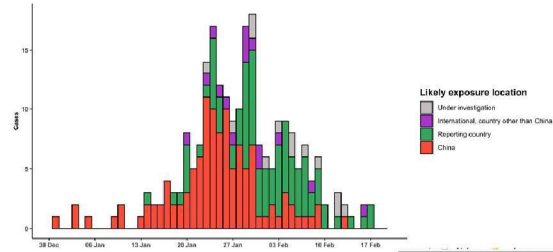
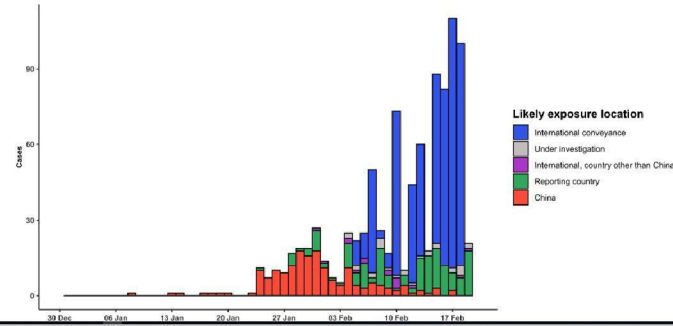


Figure 3. Epidemic curve of COVID-19 cases (n=924) identified outside of China, by date of report and likely exposure location, 19 February 2020

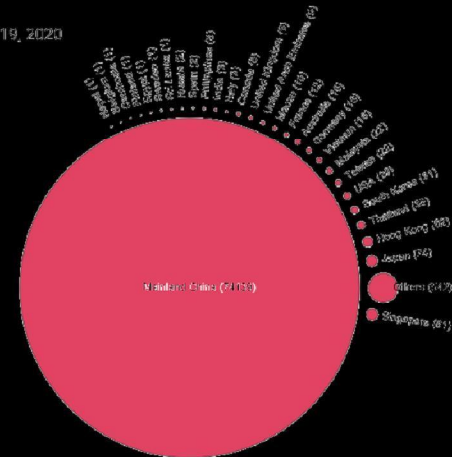


Bron: WHO, Sitrep 29, 19/02/2020

BRON: RKI (<http://rocs.hu-berlin.de/corona/docs/analysis/current/>)

The figure below is intended to convey the magnitude of impact of COVID-19 in Mainland China compared to other countries. Each affected country is depicted by a pink circle proportional to the number of cases confirmed in that country.

February 19, 2020

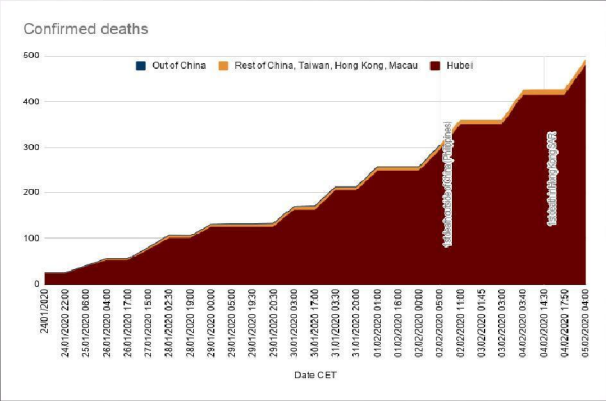
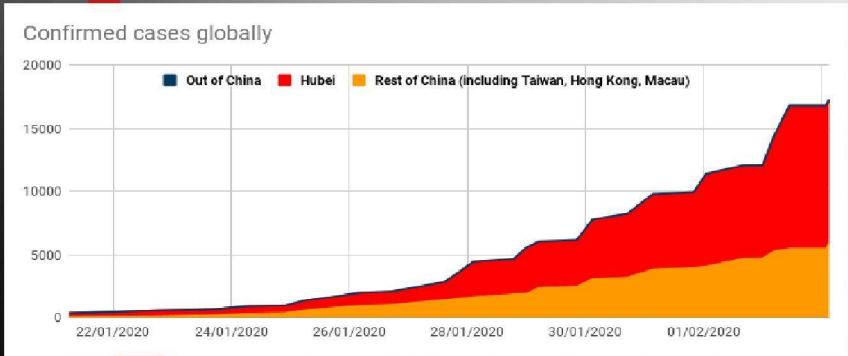


References & resources

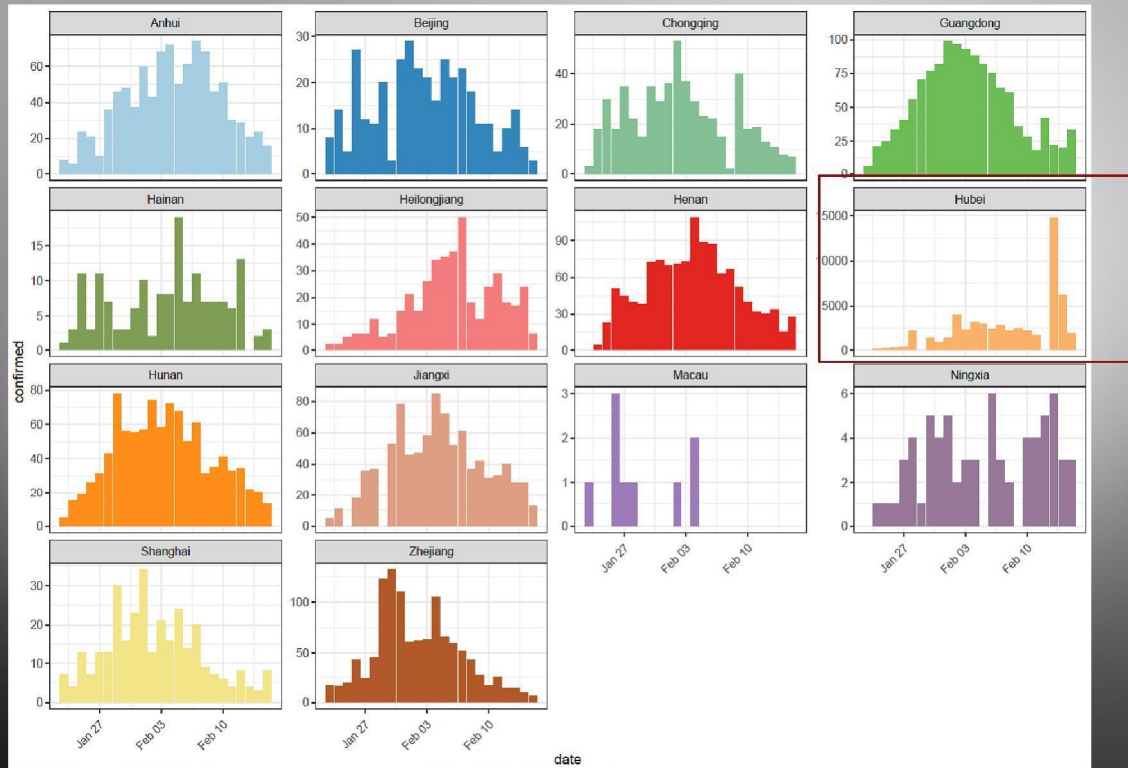
- Current case numbers: Johns Hopkins CSSE Dashboard

Coronavirus Covid-19 John Hopkins University

<https://gisanddata.maps.arcgis.com/apps/opsdashboard/>
<https://gisanddata.maps.arcgis.com/apps/opsdashboard/index.html#/bda7594740fd40299423467b48e9ecf6>



Source: Johns Hopkins as 7th February 2020 at 06:15 CET plus official sources (Italy, Germany).



Neue Fälle in Provinzen in China; Stand 16.02.2020

Acknowledgement: RKI, Germany



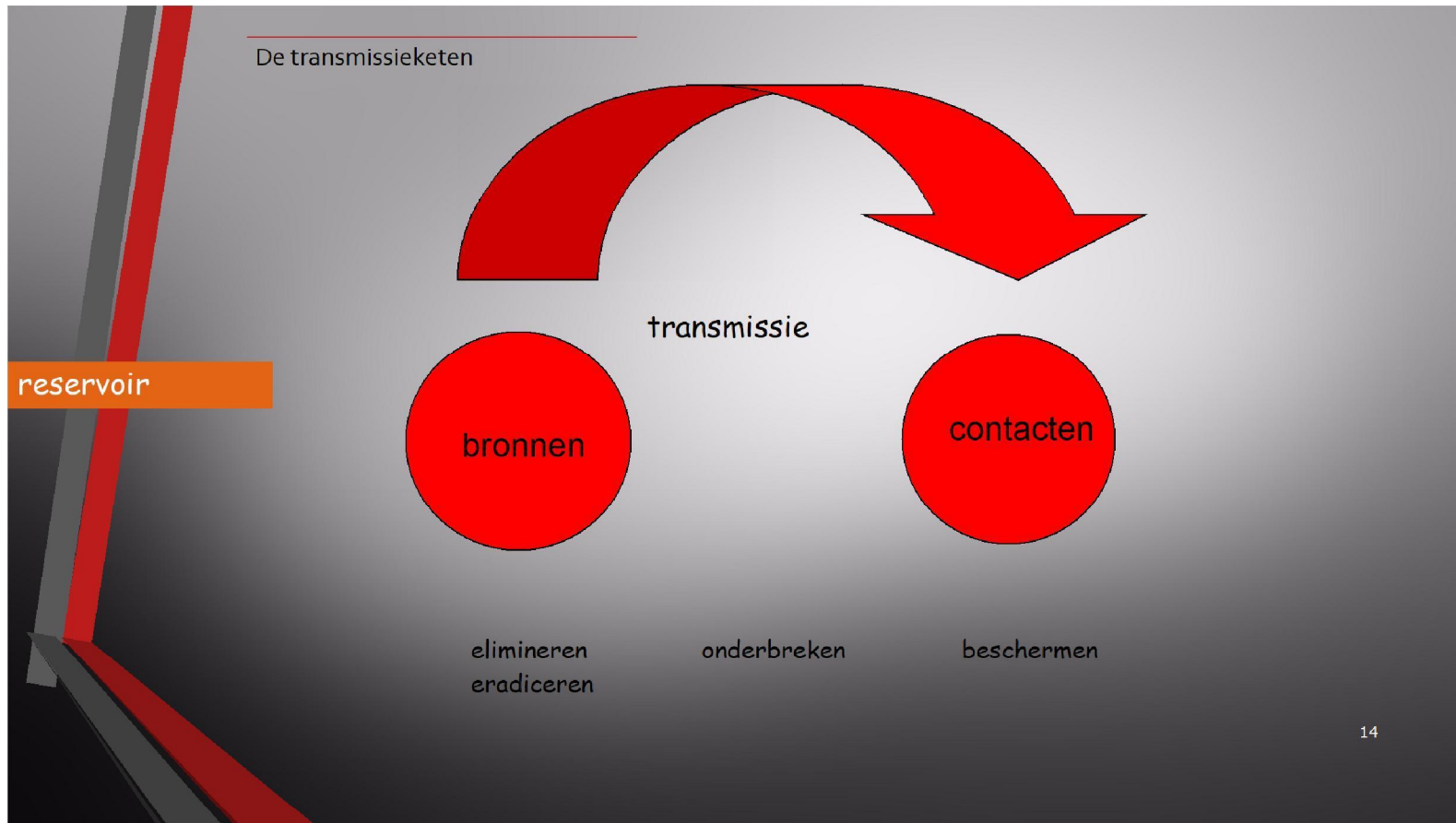
Stand 17.02.2020

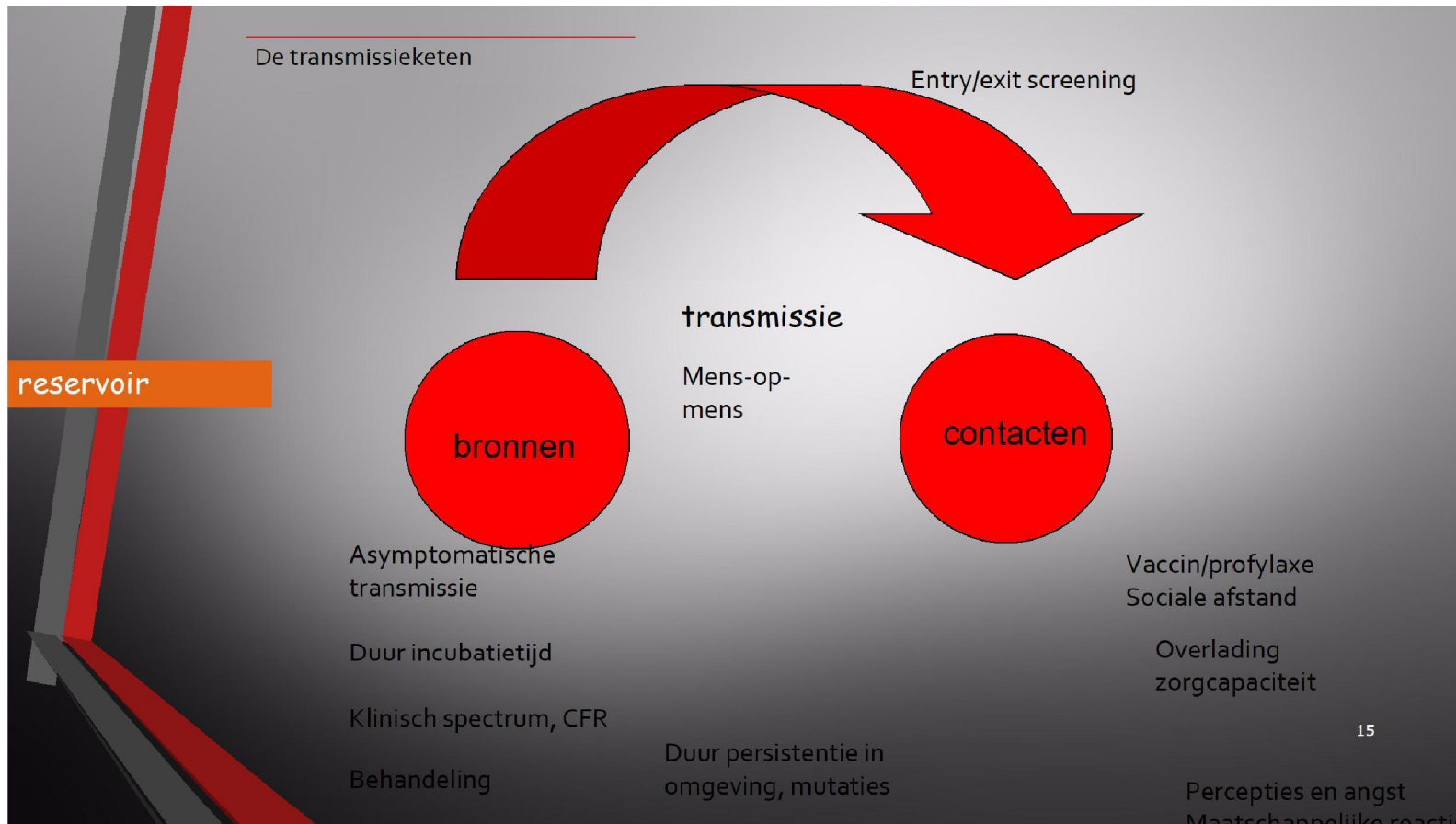
Acknowledgement: RKI, Germany

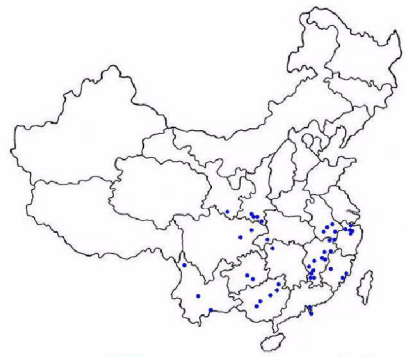
CFR: Hubei: 2,91

Rest China: 0,71 (p=0,0001, 95% CI 0,57-0,87)

Ausland: 0,4 (p=0,0001, 95% CI 0,08-1,2)







transmission

Zhang et al, 1997

????

reservoir

WGS: 96%
identiek aan
batCoV



Image Number: 5369385 Susan
[Ellis, Bugwood.org](https://www.ellis-bugwood.org/)

bronnen

? Kliniek en casus-definitie
? Asymptomatische infectie
? Asymptomatische transmissie
? Duur incubatietijd
Diagnostiek
Isolatie
? Behandeling
Opvolging

Peng Zhou et al. Nature, Jan 2020

JAMA | Original Investigation | CARING FOR THE CRITICALLY ILL PATIENT

Clinical Characteristics of 138 Hospitalized Patients With 2019 Novel Coronavirus-Infected Pneumonia in Wuhan, China

Dawei Wang, MD; Bo Hu, MD; Chang Hu, MD; Fangfang Zhu, MD; Xing Liu, MD; Jing Zhang, MD; Binbin Wang, MD; Hui Xiang, MD; Zhengshun Cheng, MD; Yong Xiong, MD; Yan Zhao, MD; Yirong Li, MD; Xinghuan Wang, MD; Zhiyong Peng, MD

KLINIEK

Table 1. Baseline Characteristics of Patients Infected With 2019-nCoV

	No. (%)			P Value ^a
	Total (N = 138)	ICU (n = 36)	Non-ICU (n = 102)	
Age, median (IQR), y	56 (42-68)	66 (57-78)	51 (37-62)	<.001
Sex				
Female	63 (45.7)	14 (38.9)	51 (37-62)	.34
Male	75 (54.3)	22 (61.1)	53 (52.0)	
Huanan Seafood Wholesale Market exposure	12 (8.7)	5 (13.9)	7 (6.9)	.30
Infected				
Hospitalized patients	17 (12.3)	9 (25.0)	8 (7.8)	.02
Medical staff	40 (29)	1 (2.8)	39 (38.2)	<.001
Comorbidities	64 (46.4)	26 (72.2)	38 (37.3)	<.001
Hypertension	43 (31.2)	21 (58.3)	22 (21.6)	<.001
Cardiovascular disease	20 (14.5)	9 (25.0)	11 (10.8)	.04
Diabetes	14 (10.1)	8 (22.2)	6 (5.9)	.009
Malignancy	10 (7.2)	4 (11.1)	6 (5.9)	.29
Cerebrovascular disease	7 (5.1)	6 (16.7)	1 (1.0)	.001
COPD	4 (2.9)	3 (8.3)	1 (1.0)	.054
Chronic kidney disease	4 (2.9)	2 (5.6)	2 (2.0)	.28
Chronic liver disease	4 (2.9)	0	4 (3.9)	.57
HIV infection	2 (1.4)	0	2 (2.0)	>.99
Signs and symptoms				
Fever	136 (98.6)	36 (100)	100 (98.0)	>.99
Fatigue	96 (69.6)	29 (80.6)	67 (65.7)	.10
Dry cough	82 (59.4)	21 (58.3)	61 (59.8)	.88
Anorexia	55 (39.9)	24 (66.7)	31 (30.4)	<.001
Myalgia	48 (34.8)	12 (33.3)	36 (35.3)	.83
Dyspnea	43 (31.2)	23 (63.9)	20 (19.6)	<.001
Expectoration	37 (26.8)	8 (22.2)	29 (28.4)	.35
Pharyngalgia	24 (17.4)	12 (33.3)	12 (11.8)	.003
Diarrhea	14 (10.1)	6 (16.7)	8 (7.8)	.20
Nausea	14 (10.1)	4 (11.1)	10 (9.8)	>.99
Dizziness	13 (9.4)	8 (22.2)	5 (4.9)	.007

JAMA | Original Investigation | CARING FOR THE CRITICALLY ILL PATIENT

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Zhenshun Chang, MD; Yong Xiong, MD; Yan Zhao, MD; Yirong Li, MD; Xinghuan Wang, MD; Zhiyong Peng, MD

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Outcome
Nosocomiale transmissie: 41%
ICU: 26%
CFR: 4,3%

The epidemiological characteristics of an outbreak of 2019
Novel Coronavirus Disease, China 2020

China CDC Weekly, vol 2
The Novel Coronavirus Pneumonia Emergency Response Epidemiology Team

KLINIEK

- 72.314 cases, 44.672 (61,8%) laboratorium bevestigd
- - leeftijd: 30-79 (86,6%)
- - diagnose gesteld in Hubei (74,7%)
- - mild (80,9 %)
- - 1023 overlijdens (CFR 2,3% in de groep lab bevestigd)
- -1716 zorgmedewerkers ; 5 overleden (CFR 0,3%)

The epidemiological characteristics of an outbreak of 2019
Novel Coronavirus Disease, China 2020

China CDC Weekly, vol 2
The Novel Coronavirus Pneumonia Emergency Response Epidemiology Team

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TABLE 1. Patients, deaths, and case fatality rates, as well as observed time and mortality for 144,072 confirmed COVID-19 cases in Mainland China as of February 11, 2020.

Baseline Characteristics	Confirmed Cases, N (%)	Deaths, N (%)	Case Fatality Rate, %	Observed Time, PD	Mortality, per 10 PD
Overall	44,672	1,023	2.3	661,609	0.015
Age, years					
0–9	416 (0.9)	–	–	4,383	–
10–19	549 (1.2)	1 (0.1)	0.2	6,625	0.002
20–29	3,619 (8.1)	7 (0.7)	0.2	53,953	0.001
30–39	7,600 (17.0)	18 (1.8)	0.2	114,550	0.002
40–49	8,571 (19.2)	38 (3.7)	0.4	126,448	0.003
50–59	10,008 (22.4)	130 (12.7)	1.3	151,059	0.009
60–69	8,583 (19.2)	309 (30.2)	3.6	126,888	0.024
70–79	3,918 (8.8)	312 (30.5)	8.0	55,832	0.056
≥80	1,408 (3.2)	208 (20.3)	14.8	18,671	0.111
Sex					
Male	22,981 (51.4)	653 (63.8)	2.8	342,063	0.019
Female	21,691 (48.6)	370 (36.2)	1.7	319,546	0.012
Occupation					
Service industry	3,449 (7.7)	23 (2.2)	0.7	54,484	0.004
Farmer/laborer	9,811 (22.0)	139 (13.6)	1.4	137,992	0.010
Health worker	1,716 (3.8)	5 (0.5)	0.3	28,069	0.002
Retiree	9,193 (20.6)	472 (46.1)	5.1	137,118	0.034
Other/none	20,503 (45.9)	384 (37.5)	1.9	303,946	0.013

The epidemiological characteristics of an outbreak of 2019
Novel Coronavirus Disease , China 2020

China CDC Weekly, vol 2

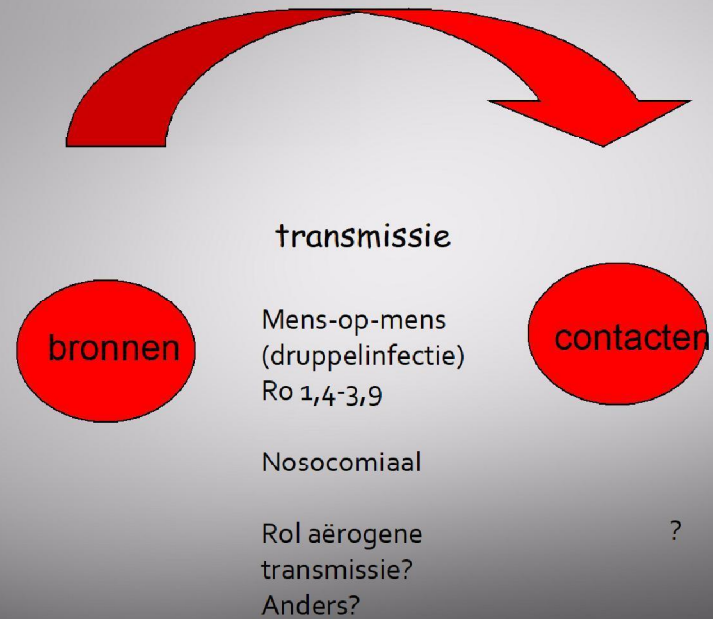
The Novel Coronavirus Pneumonia Emergency Response Epidemiology Team

KLINIEK

TABLE 1. (continued)

Baseline Characteristics	Confirmed Cases, N (%)	Deaths, N (%)	Case Fatality Rate, %	Observed Time, PD	Mortality, per 10 PD
Province					
Hubei	33,367 (74.7)	979 (95.7)	2.9	499,523	0.020
Other	11,306 (25.3)	44 (4.3)	0.4	165,086	0.003
Wuhan-related exposure ^a					
Yes	31,974 (85.8)	853 (92.8)	2.7	486,612	0.018
No	5,295 (14.2)	66 (7.2)	1.2	71,201	0.009
Missing	7,403	104	2.8	103,786	0.010
Comorbid condition ^b					
Hypertension	2,683 (12.8)	161 (39.7)	6.0	42,603	0.038
Diabetes	1,102 (5.3)	80 (19.7)	7.3	17,940	0.045
Cardiovascular disease	873 (4.2)	92 (22.7)	10.5	13,533	0.068
Chronic respiratory disease	511 (2.4)	32 (7.9)	6.3	8,083	0.040
Cancer (any)	107 (0.5)	6 (1.5)	5.6	1,690	0.036
None	15,539 (74.0)	133 (32.8)	0.9	242,948	0.005
Missing	23,690 (53.0)	617 (60.3)	2.6	331,843	0.019
Case severity ^c					
Mild	36,160 (80.9)	—	—	—	—
Severe	6,168 (13.8)	—	—	—	—
Critical	2,087 (4.7)	1,023 (100)	49.0	31,456	0.325
Missing	257 (0.6)	—	—	—	—
Period (by date of onset)					
Before Dec 31, 2019	104 (0.2)	15 (1.5)	14.4	5,142	0.029
Jan 1–10, 2020	653 (1.5)	102 (10.0)	15.6	21,687	0.047
Jan 11–20, 2020	5,417 (12.1)	310 (30.3)	5.7	130,972	0.024
Jan 21–31, 2020	26,468 (59.2)	494 (48.3)	1.9	416,009	0.012
After Feb 1, 2020	12,030 (26.9)	102 (10.0)	0.8	87,769	0.012

De transmissieketen



A familial cluster of pneumonia associated with the 2019 novel coronavirus indicating person-to-person transmission: a study of a family cluster

Jasper Fuk-Woo Chan¹, Shuofeng Yuan², Kin-Hang Kok³, Kelvin To⁴, Hin Chu⁵, Jin Yang, Panfan Xing, Jieying Liu, Cyril Chiu-Yan Yip, Rosana Wing-Shan Poon, Hoi-Wah Tsoi, Simon Kam-Fai Lo, Kwok-Hung Chan, Vincent Kwok-Man Poon, Wen-Mui Chan, Daniel Ip, Jian-Piao Cai, Vincent Chi-Chung Cheng, Honglin Chen, Kim-Ming Hui, Kwok-Yung Yuen

5.1.2e

22

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mens-op-
mens al in
december

Li et al. Early transmission
dynamics in Wuhan, China,
of novel coronavirus
infected pneumonia

NEJM, Jan 29, 2020

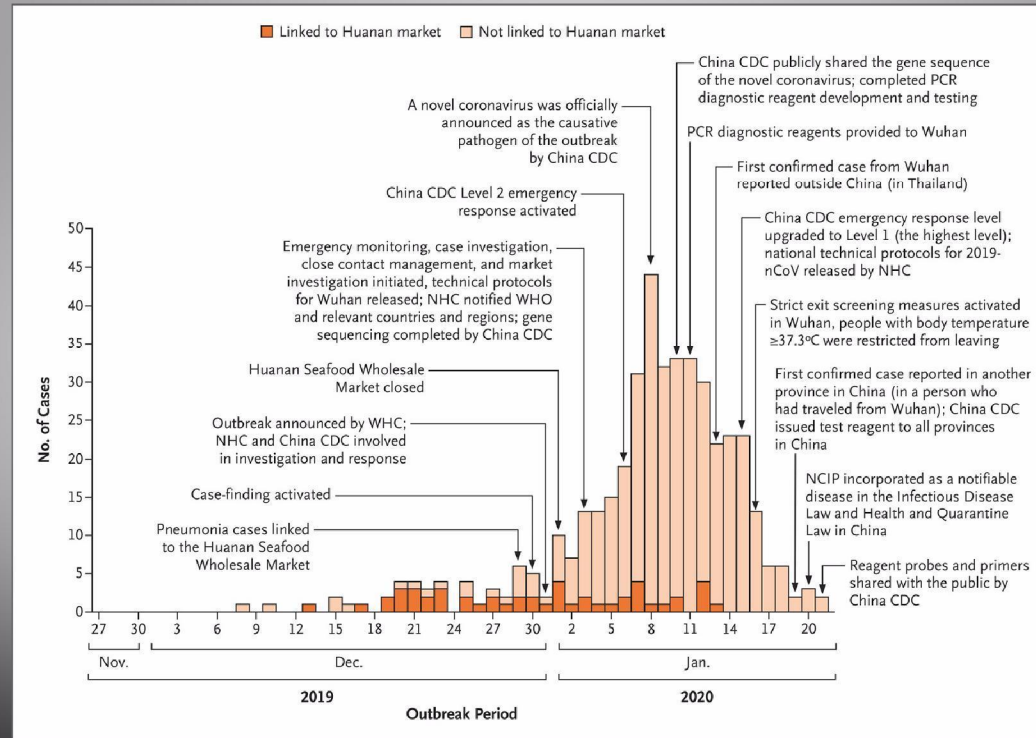
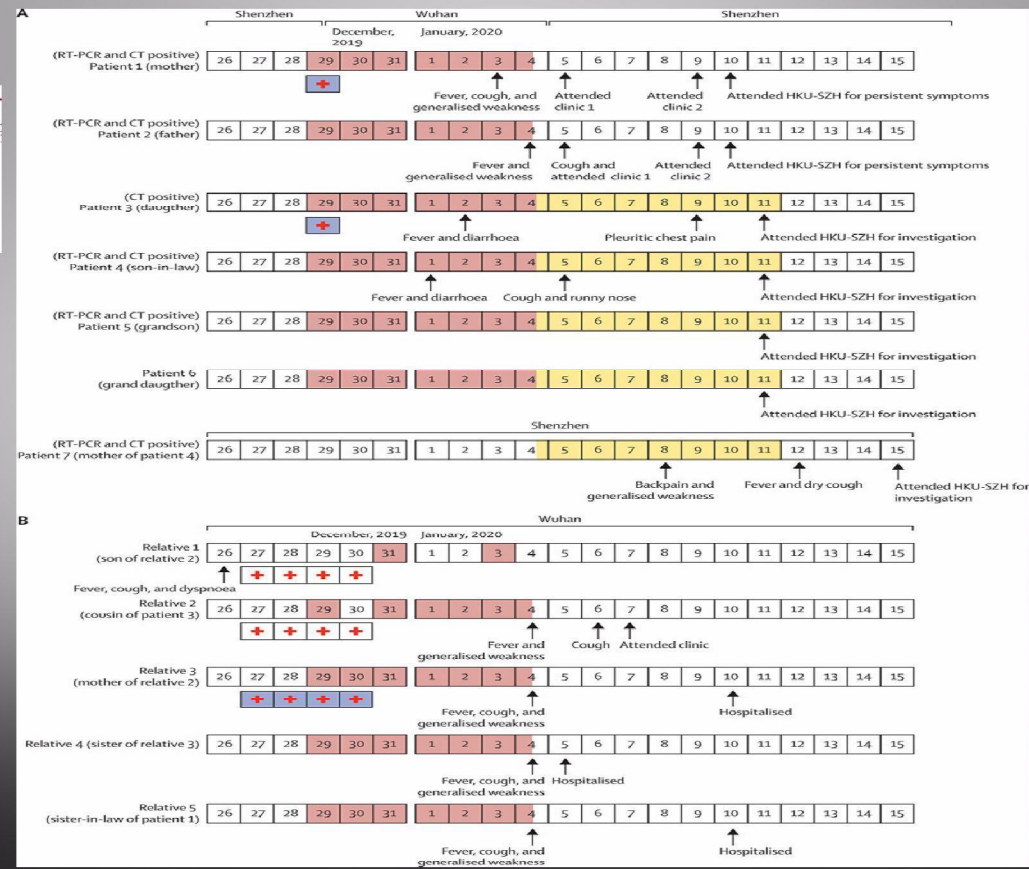


Figure 1. Onset of illness among the first 425 confirmed cases of Novel Coronavirus (2019-nCoV)-infected pneumonia (NCIP) in Wuhan, China

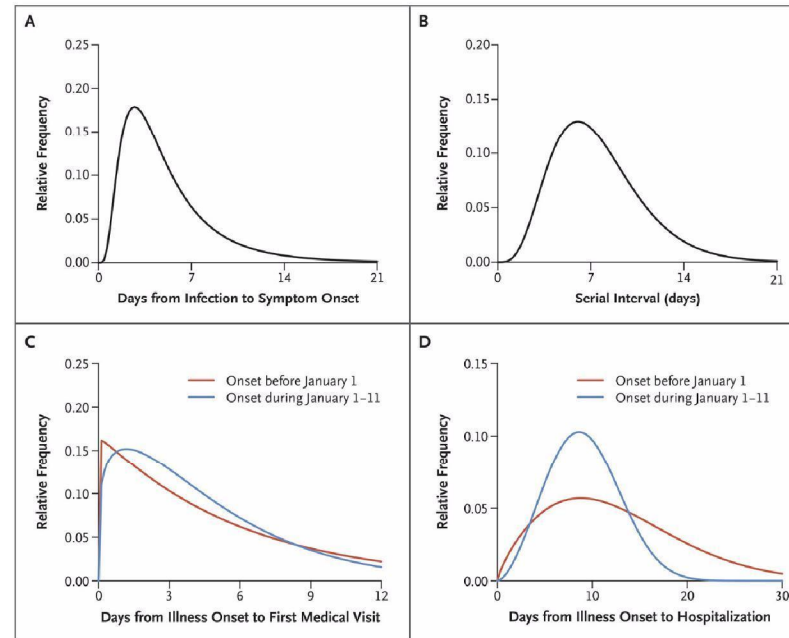
A familial cluster of pneumonia associated with the 2019 novel coronavirus indicating person-to-person transmission: a study of a family cluster

Jasper Fok-Woo Chan*, Shaoqing Yuan*, Kin-Hang Kok*, Kelvin Kai-Wang To*, Hin Chu*, Jin Yang, Fanfan Xing, Jialing Liu, Cyril Chik-Yan Yip, Rosana Wing-Shan Poon, Fui-Wah Tsai, Simon Kam-Fai Lo, Kwok-Hung Chan, Vincent Kwok-Man Poon, Wan-Mui Chan, Jonathan Daniel Ip, Jian-Piao Gao, Vincent Chi-Chung Cheng, Honglin Chen, Christopher Kim-Ming Hui, Kuok-Yung Yuen

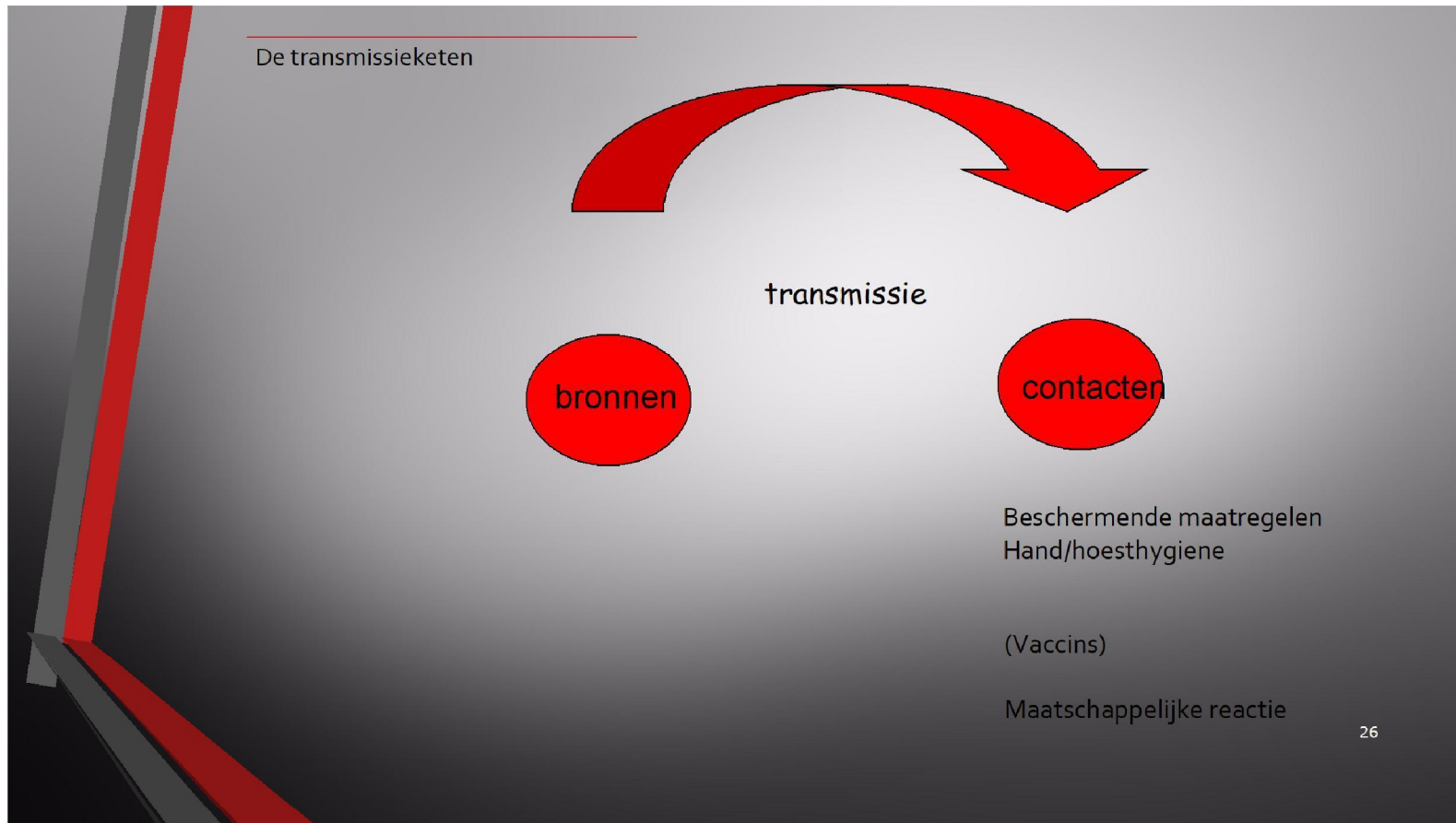


Sleutelparameters

Incubatieperiode:
gemiddeld 5,2
Verdubbelingstijd:
7,4 dagen
Serial interval: 7,5
 $R_0 = 2,2$



Li et al. Early transmission dynamics in Wuhan, China, of novel coronavirus infected pneumonia
NEJM, Jan 29, 2020



Non pharmaceutical interventions

https://www.ecdc.europa.eu/sites/default/files/documents/novel-coronavirus-guidelines-non-pharmaceutical-measures_o.pdf

Zorginstellingen

- Mondneusmaskers, oogbescherming, handschoenen, schorten in zorgsettingen (instellingen)
- Mondneusmaskers in de zorg voor verdachte gevallen (voor bevestiging diagnose)
- Belang schoonmaak en desinfectie

Gemeenschap

- Geen bewijs voor effect gebruik maskers door niet-zieke personen in de gemeenschap
- Effectiviteit hand- en hoesthygiëne

EU HEALTHY GATEWAYS JOINT ACTION
GRANT AGREEMENT NUMBER: 801493
PREPAREDNESS AND ACTION AT POINTS OF ENTRY
(PORTS, AIRPORTS, GROUND CROSSINGS)



- Entry/exit screening

- Alleen symptomatische reizigers
- Betrouwbaarheid temperatuurmeting (fout pos.)
- Bij een effectiviteit van 80 % (entry/exit) 75% of reizigers in de incubatieperiode zouden gemist worden
- 2003/SARS: Canada 7,5 mil dollars in entry screening (0 positieven)
- 2003/SARSS: Singapore, Australia (0 cases)
- 2009/H1N1: Australië 50.000 dollars costs/casus
- Duur, complex, niet proportioneel, niet kosteneffectief

Reisadvies naar uitbraakgebieden

- Omvat specifieke adviezen voor reizigers tot dringend advies om niet te reizen
- Informatie voor inkomende reizigers

https://www.ecdc.europa.eu/sites/default/files/documents/novel-coronavirus-guidelines-non-pharmaceutical-measures_o.pdf

Gevolgen voor de bestrijding in deze fase (1) Containment

Casus-definitie
Kliniek
Epidemiologische link
(uitbraakgebieden, of contact met
patienten)
Laboratoriumcriteria

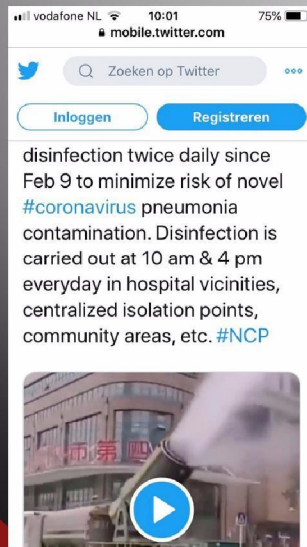
- Identificatie patiënten (case-finding)
 - Opname in strikte, aerogene isolatie (ZH)
 - Contact/druppel extramural
 - Thuisisolatie voor patienten met mild ziektebeeld
- Identificatie contacten
 - Monitoring
 - Hoog-risico contacten
 - Laag-risico contacten
- Geen entry screening
- Advies voor inkomende reizigers uit China
- Nut maskers voor de algemene bevolking niet aangetoond
- Belang hand/hoesthygiëne

Gevolgen voor de
bestrijding in de volgende
fase(n)
mitigatie

Casus-definitie
Mogelijk alleen ziekenhuis-
opnamen?
Risicogroepen?
Anders?

- Identificatie patiënten (case-finding)
 - Welke patienten? Alleen ernstige kliniek?
Risicogroepen??
- Voorbereiding op piekbelasting in de zorg
 - Capaciteit/efficiënte opnames stoppen
- Identificatie contacten: nog relevant?
- Advies voor inkomende reizigers?
- Belang hand/hoesthygiëne
- Grote evenementen?
- Vaccinatie??

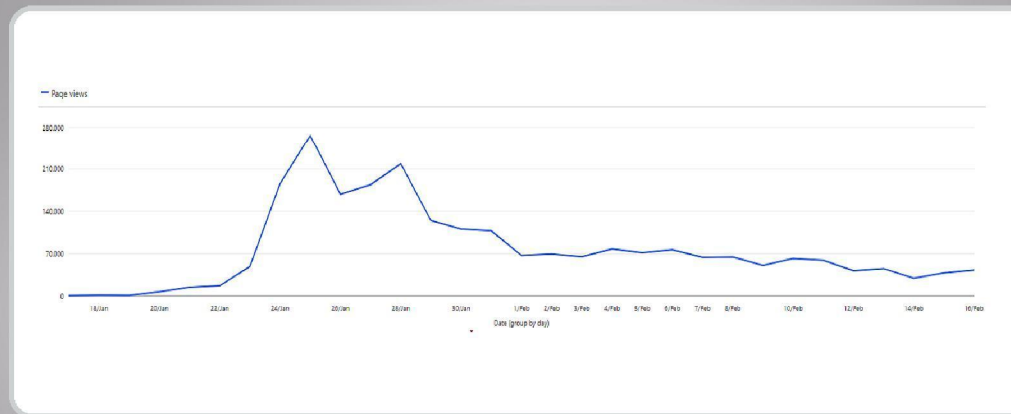
Loopt Nederland gevaar?



- Veranderende epidemiologie/ wetenschappelijke onzekerheden
- Gevolgen voor maatregelen
- Contextverschillen (zorg, gedrag, public health beleid, maatschappelijke draagvlak maatregelen, maatschappelijke acceptatie risico's, omgaan met onzekerheden, percepties, communicatie, middelen)



RIVM=Webpaginabezoeken



2.181.000
paginabezoeken
25 januari kreeg
RIVM.nl in totaal
330.000
paginabezoeken.
(hoogst aantal)

Observaties

onrust en communicatie

Social media activiteit



WHO PHEIC

Repatriering
uit Wuhan

Observaties

onrust en communicatie

Zorgen voor de zorgmedewerkers

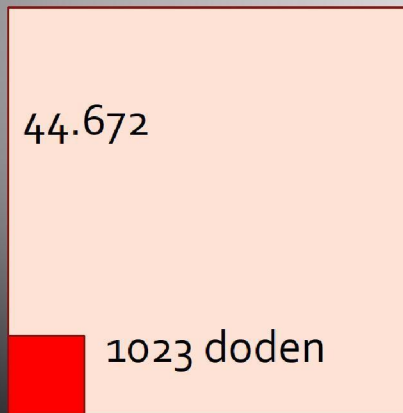
- Transmissie naar zorgmedewerkers is in China aangetoond, lijkt een grotere rol te hebben gespeeld bij begin uitbraak
- Niet bekend in hoeverre hier om gebrek aan persoonlijke bescherming/ suboptimale bescherming
- Buiten China speelt dit geen rol van betekenis

Zorgen voor/van patiënten

nCoV – Wuhan coronavirus versus SARS

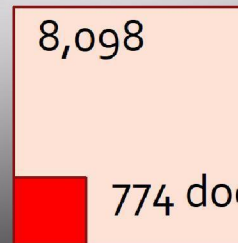
zieken en sterftepercentage

Wuhan coronavirus
2019-2020



sterfte 2.3 %
opname ziekenhuis ?

SARS
2002-2003



sterfte 9.6%
opname ziekenhuis 100%

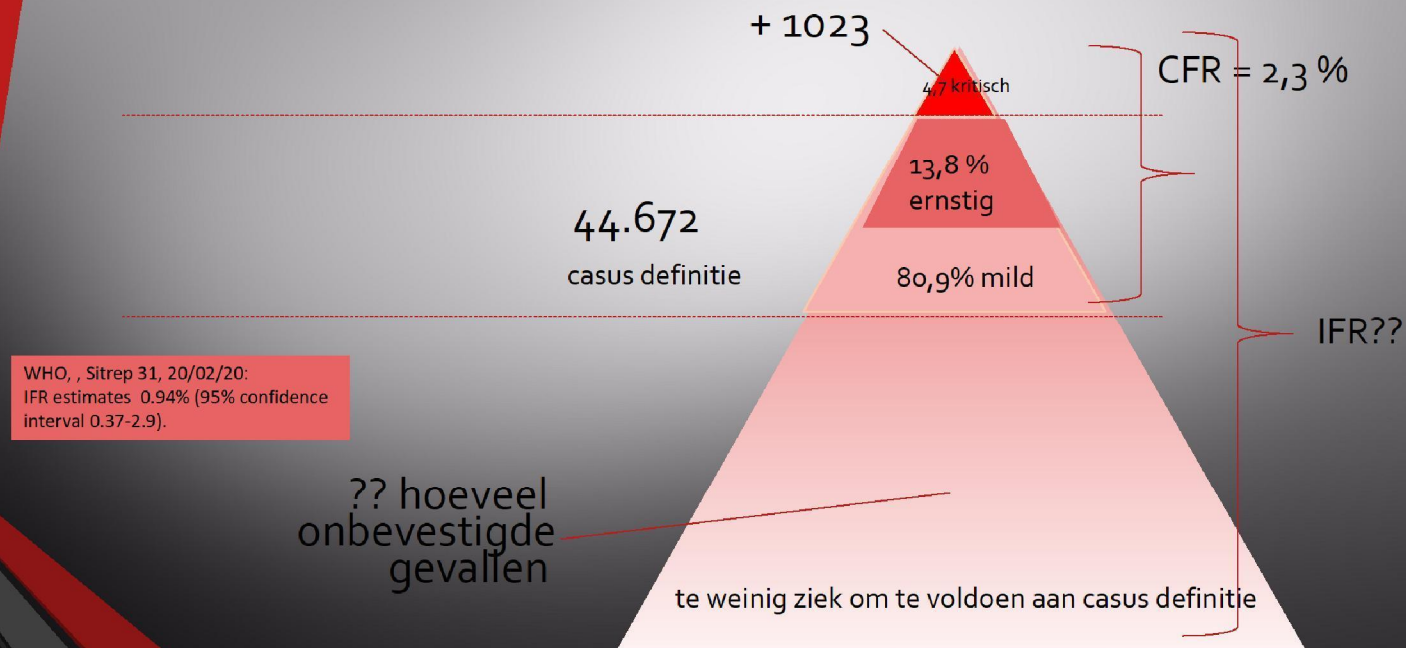
longontsteking
in Nederland

meerdere
oorzaken

opnames
~35.000 per jr

sterfte
~3225 per jr
8-9% +

nCoV – casus definitie en ziektepyramide effect op sterftepercentage



Zorgen voor/van bevolking

Gerichte communicatie
Meerdere kanalen
Ingaan op vragen die bij het publiek leven

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

Meer weten over het nieuwe coronavirus?
Kijk op rivm.nl/nieuwcoronavirus

Heeft het nut om een mondkapje draag te dragen tegen het coronavirus?

Actuele informatie over het nieuwe coronavirus (COVID-19)
Publicatiedatum 20-02-2020 10:30

Het RIVM krijgt veel vragen over het nieuwe coronavirus. Actuele informatie over COVID-19 kunt vinden op de website.

- Algemene informatie is te vinden op de website
- Vragen en antwoorden zijn te vinden op de website

Nee.
Het coronavirus kan zich niet verspreiden via de gewone post of pakketpost.

Dank voor uw
aandacht!

samenvattend

Hoog risico voor reizigers
naar provincie
Hubei/China

Laag risico voor Europa
(alle gevallen tot nu toe
hebben bewezen
epidemiologische
verbanden)

De impact van onbekende
ketens van transmissie kan
hoog zijn

Kans op importgeval in NL
nog steeds aanwezig