

Hvor alvorlig er COVID-19-epidemien og hvilken behandling trenger de smittede?

Arne Broch Brantsæter

Infeksjonsmedisinsk avdeling og CBRNE-senteret

Oslo universitetssykehus

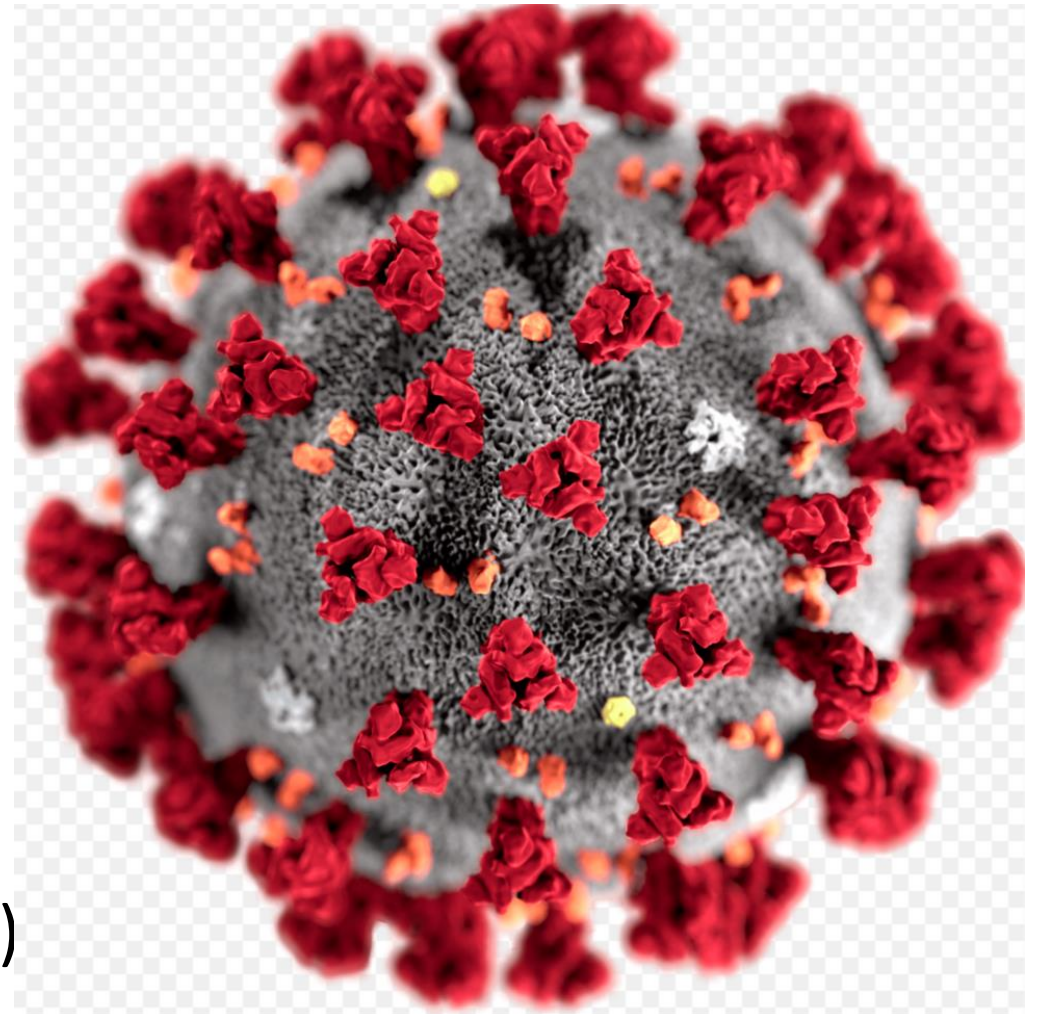
05.03.2020

Disposisjon

- Viruset
- Epidemiologi
- Sykdom og dødelighet
- Behandling
- Planscenario

Bakgrunn - Coronavirus

- Vanlig forkjølelse
- Alvorlige sykdom
 - SARS: 2002–2003
 - MERS: 2012–
 - COVID-19: 2020
- Zoonoser (flaggermus via mellomvert)



A CDC computer rendering of 2019-nCoV

31.12
utbrudd
pneumoni
Sjømatmarked
i Wuhan

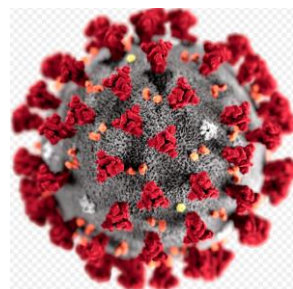


07.01
Nytt
coronavirus
påvist

23.01
Wuhan by
11 mill. innb.
settes i
karantene



01.01.
Sjømatmarket
stengt

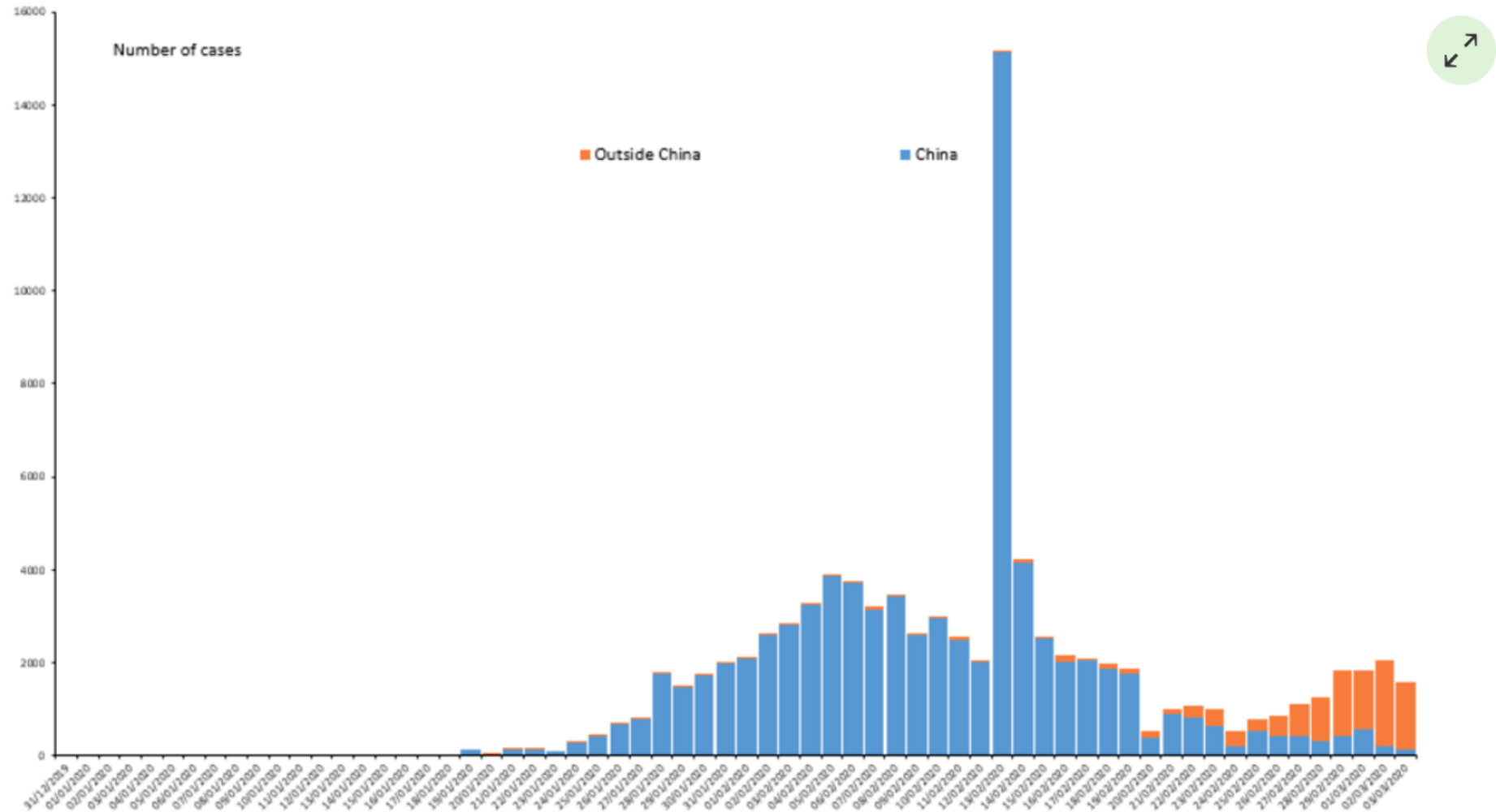


10.01.
Gensekvenser
publisert

30.01.
WHO erklærer
PHEIC



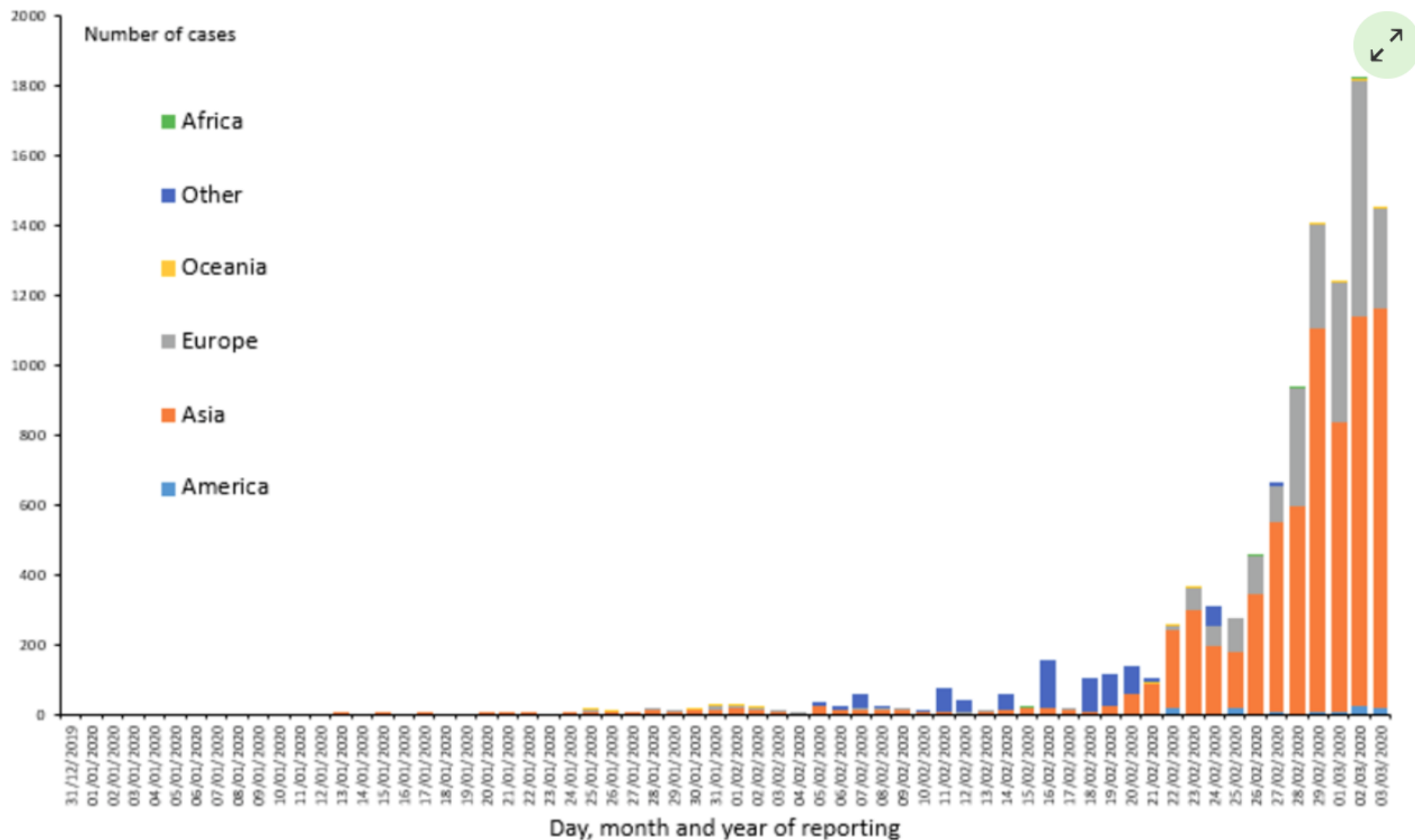
Distribution of COVID-19 cases worldwide, as of 3 March 2020



i Distribution of COVID-19 cases worldwide

Cases reported in accordance to the applied case definition in the countries. The case definition in China (Hubei province) was updated on 13 and 20 February 2020

Distribution of COVID-19 cases by continent (except China), as of 3 March 2020 (according to the applied case definition in the countries)



i Distribution of cases of COVID-19 by continent (according to the applied case definition in the countries)

Regions	Places reporting cases	Confirmed cases	Deaths
Asia	China	80261	2946
Asia	Republic of Korea	4812	34
Asia	Iran	1501	66
Asia	Japan	254	6
Asia	Singapore	108	0

Regions	Places reporting cases	Confirmed cases	Deaths
Europe	Italy	1835	52
Europe	France	178	3
Europe	Germany	157	0
Europe	Spain	114	0
Europe	United Kingdom	40	0
Europe	Switzerland	30	0
Europe	Norway	25	0
Europe	Netherlands	18	0
Europe	Austria	18	0
Europe	Sweden	15	0
Europe	San Marino	8	1
Europe	Croatia	8	0
Europe	Belgium	8	0
Europe	Greece	7	0
Europe	Finland	6	0
Europe	Iceland	6	0
Europe	Czech Republic	5	0
Europe	Denmark	5	0
Europe	Romania	3	0
Europe	Russia	3	0
Europe	Azerbaijan	3	0
Europe	Georgia	2	0

Situasjonen i Norge

Geografisk tilhørighet

Per 03.03.20 har til sammen 33 personer testet positivt på koronavirus i Norge. Den geografiske tilhørighetene til disse tilfellene er som følger:

Agder: 3

Oslo: 7

Rogaland: 1

Troms og Finnmark: 2

Vestland: 12

Viken: 8

Coronavirus Cases:

92,870

[view by country.](#)

Deaths:

3,168

Total dødelighet 3,4%

Recovered:

48,469

ACTIVE CASES

41,233

Currently Infected Patients

34,071 (83%)

in Mild Condition

7,162 (17%)

Serious or Critical

CLOSED CASES

51,637

Cases which had an outcome:

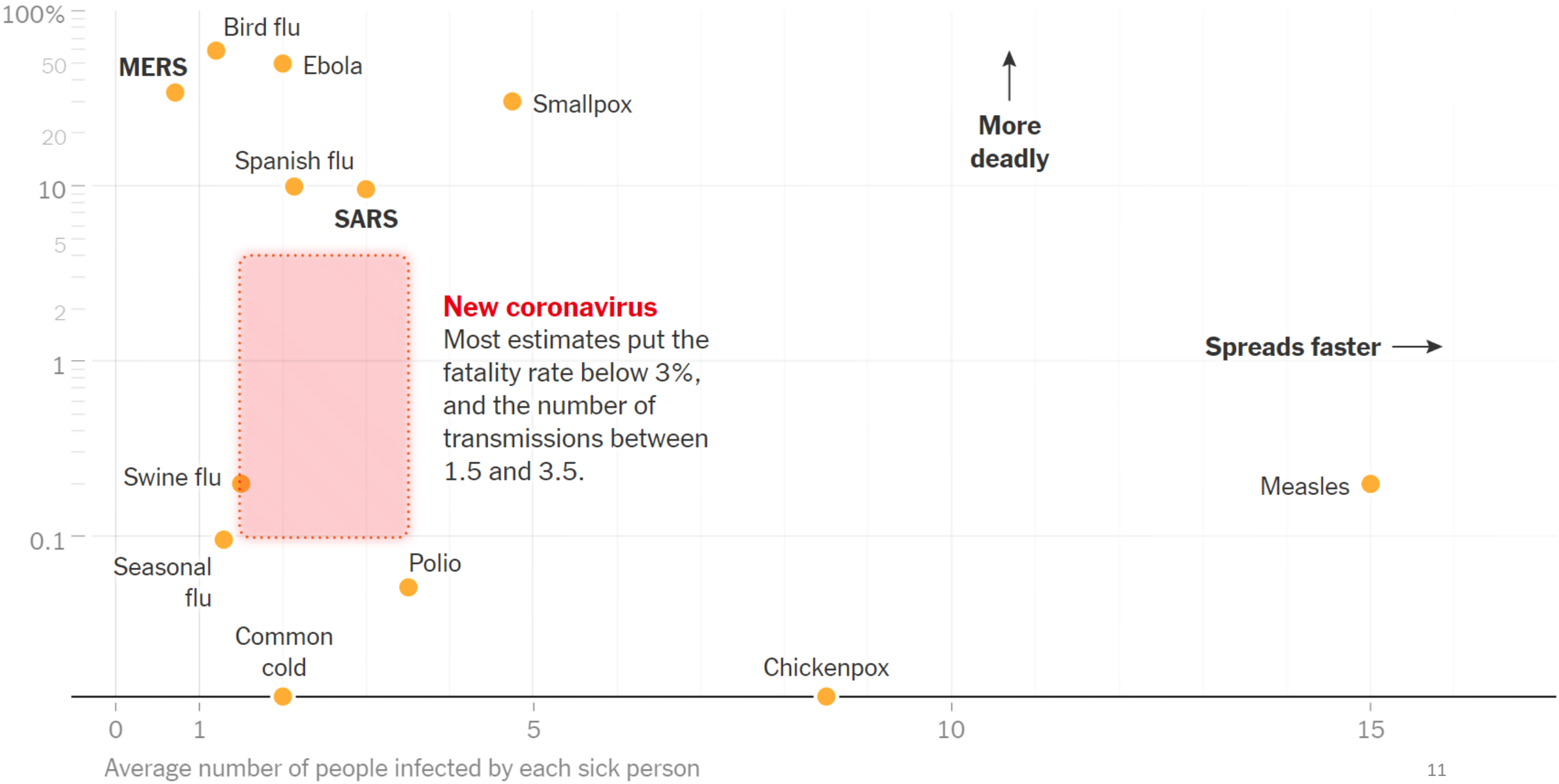
48,469 (94%)

Recovered / Discharged

3,168 (6%)

Deaths

Fatality rate
(log scale)



Sykdom og behandling

- Kontakt og dråpesmitte -smitter i inkubasjonstiden?
- Fra lett (asymptomatisk) til livstruende sykdom
 - 80 % mild sykdom
- Ingen antiviral behandling med dokumentert effekt
- Hvor lenge smittsom?

Epidemiological and clinical characteristics of 99 cases of 2019 novel coronavirus pneumonia in Wuhan, China: a descriptive study

www.thelancet.com Published online January 29, 2020

Nanshan Chen*, Min Zhou*, Xuan Dong*, Jieming Qu*, Fengyun Gong, Yang Han, Yang Qiu, Jingli Wang, Ying Liu, Yuan Wei, Jia'an Xia, Ting Yu, Xinxin Zhang, Li Zhang

Jinyintan Hospital in Wuhan

99 pasienter

Alder: gjennomsnitt 55,5 år

Kjønn: menn 68 %

Kronisk sykdom: 51%

Intensivbehandling: 23%

Døde 11%

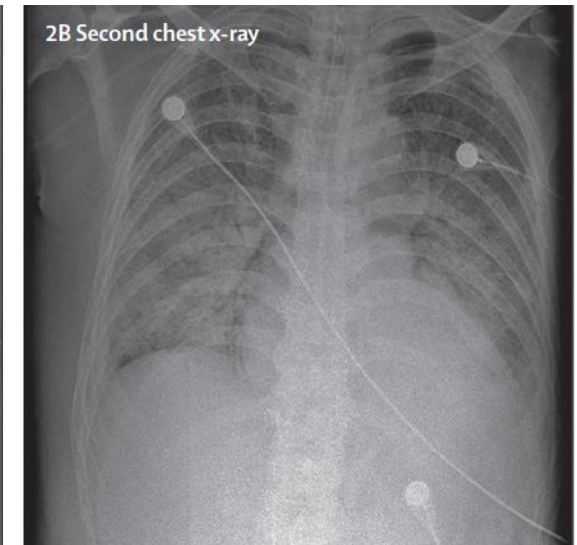
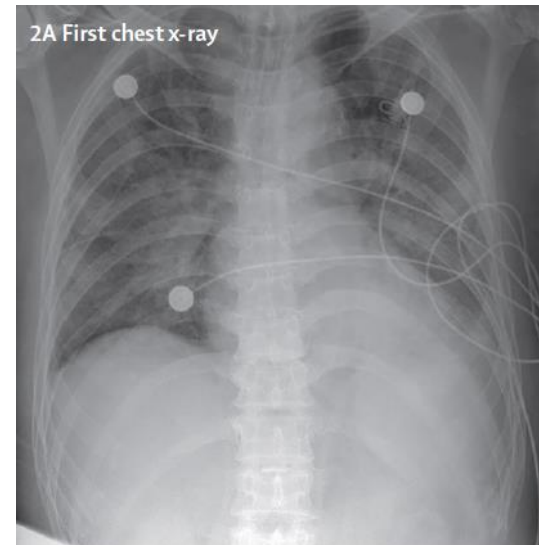
Treatment	
Oxygen therapy	75 (76%)
Mechanical ventilation	
Non-invasive (ie, face mask)	13 (13%)
Invasive	4 (4%)
CRRT	9 (9%)
ECMO	3 (3%)
Antibiotic treatment	70 (71%)
Antifungal treatment	15 (15%)
Antiviral treatment	75 (76%)
Glucocorticoids	19 (19%)
Intravenous immunoglobulin therapy	27 (27%)



- Feber 83 %
- Hoste 82 %
- Tungpust 31 %
- Muskelsmerter 11 %
- Forvirring 9 %
- Hodepine 8 %
- Sår hals 5 %

Bilaterale
lungefortetninger 75 %

ARDS
Arytmi
Multiorgansvikt



Characteristics of and Important Lessons From the Coronavirus Disease 2019 (COVID-19) Outbreak in China

Summary of a Report of 72 314 Cases From the Chinese Center for Disease Control and Prevention

Age distribution (N = 44 672)

- ≥ 80 years: 3% (1408 cases)
- 30-79 years: 87% (38 680 cases)
- 20-29 years: 8% (3619 cases)
- 10-19 years: 1% (549 cases)
- < 10 years: 1% (416 cases)

Spectrum of disease (N = 44 415)

- Mild: 81% (36 160 cases)
- Severe: 14% (6168 cases)
- Critical: 5% (2087 cases)

Case-fatality rate

- 2.3% (1023 of 44 672 confirmed cases)
- 14.8% in patients aged ≥ 80 years (208 of 1408)
- 8.0% in patients aged 70-79 years (312 of 3918)
- 49.0% in critical cases (1023 of 2087)

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

29 % helsearbeidere

12 % pasienter

26 % intensivbehandlet

Zhongnan Hospital of
Wuhan University

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)	
Comorbidities	64 (46.4)	26 (72.2)	38 (37.3)	<.001
Onset of symptom to, median (IQR), d				
Hospital admission	7.0 (4.0-8.0)	8.0 (4.5-10.0)	6.0 (3.0-7.0)	.009
Dyspnea	5.0 (1.0-10.0)	6.5 (3.0-10.8)	2.5 (0.0-7.3)	.02
ARDS	8.0 (6.0-12.0)	8.0 (6.0-12.0)	8.0 (6.3-11.3)	.97

Table 4. Complications and Treatments of Patients Infected With 2019-nCoV

	No. (%)			P Value ^a
	Total (N = 138)	ICU (n = 36)	Non-ICU (n = 102)	
Complications				
Shock	12 (8.7)	11 (30.6)	1 (1.0)	<.001
Acute cardiac injury	10 (7.2)	8 (22.2)	2 (2.0)	<.001
Arrhythmia	23 (16.7)	16 (44.4)	7 (6.9)	<.001
ARDS	27 (19.6)	22 (61.1)	5 (4.9)	<.001
AKI	5 (3.6)	3 (8.3)	2 (2.0)	.11
Treatment				
Antiviral therapy	124 (89.9)	34 (94.4)	90 (88.2)	.36
Glucocorticoid therapy	62 (44.9)	26 (72.2)	36 (35.3)	<.001
CKRT	2 (1.45)	2 (5.56)	0	>.99
Oxygen inhalation	106 (76.81)	4 (11.11)	102 (100)	<.001
NIV	15 (10.9)	15 (41.7)	0	<.001
IMV	17 (12.32)	17 (47.22)	0	<.001
ECMO	4 (2.9)	4 (11.1)	0	.004

Most patients received antiviral therapy (oseltamivir, 124 [89.9%]), and many received antibacterial therapy (moxifloxacin, 89 [64.4%]; ceftriaxone, 34 [24.6%]; azithromycin, 25 [18.1%])

Hva kan vi forvente oss videre?

- Mest sannsynlig blir det en COVID-19-pandemi
- Mål å forsinke spredning og spre belastning ut over tid
- Helsedirektoratet:
 - Må planlegge for at 25% av befolkningen smittes
 - 160 000 – 280 000 ekstra kontakter med helsetjenesten
 - 14 000 – 16 500 ekstra innleggelser
 - 1400 – 2800 av disse vil kreve intensivbehandling
 - Ca. 90 % i løpet av en åtte-ukersperiode