

Yeni İnfeksiyonlar: Coronavirus

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4 Şubat 2020

2000'den itibaren Yeni Virüsler

2001 Metapnömovirus

2003 Maymun çiçeği

2003 SARS

2004 Bocavirus

2008 Merkelcell polyoma virus

2009 İnfluenza H1N1

2012 MERS-CoV

2013 H7N9

2015 H5N6

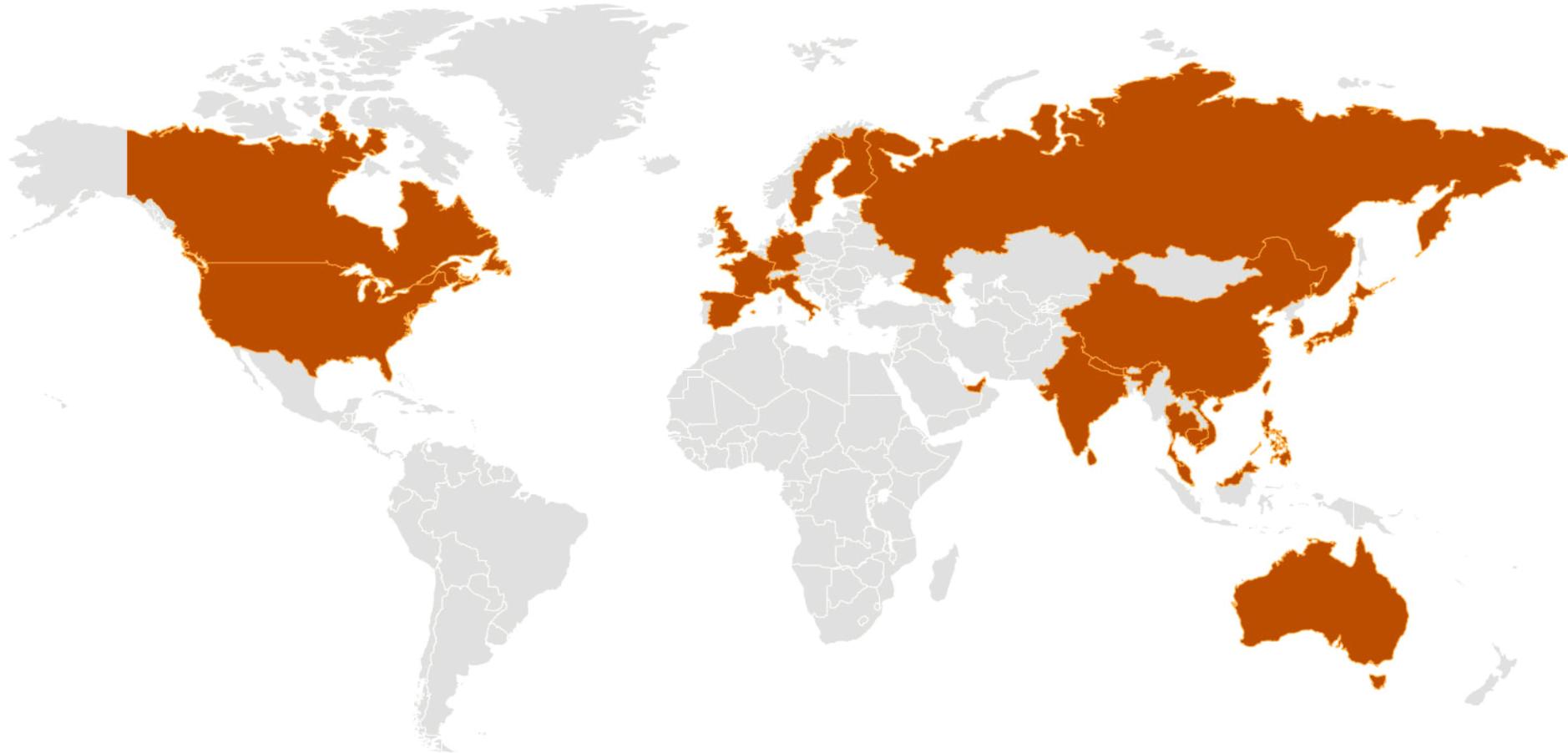
2019 2019-nCoV

31 Ocak itibariyle 2019-nCoV görüldüğü ülkeler

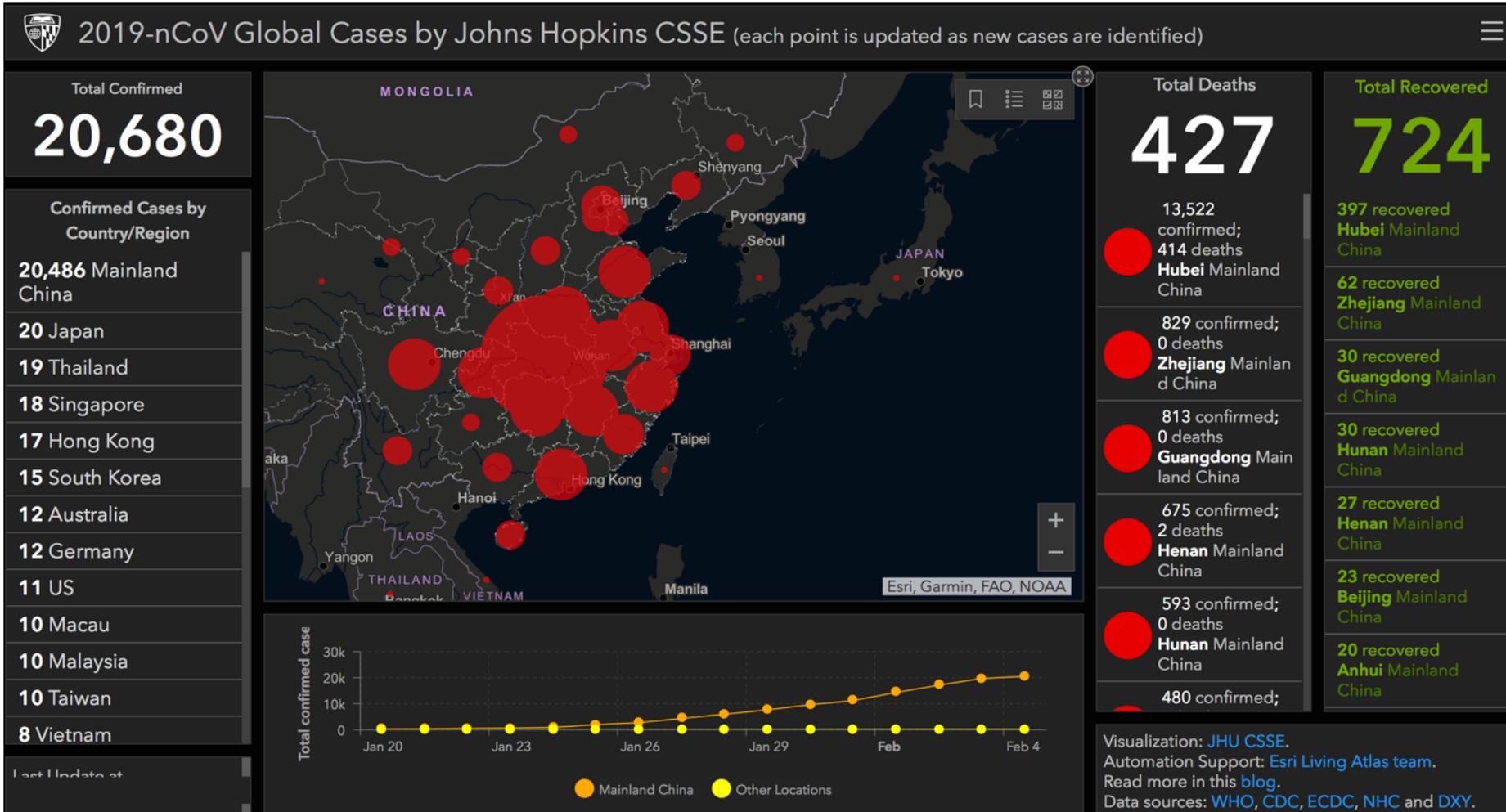
Yaklaşık 12 000 olgu

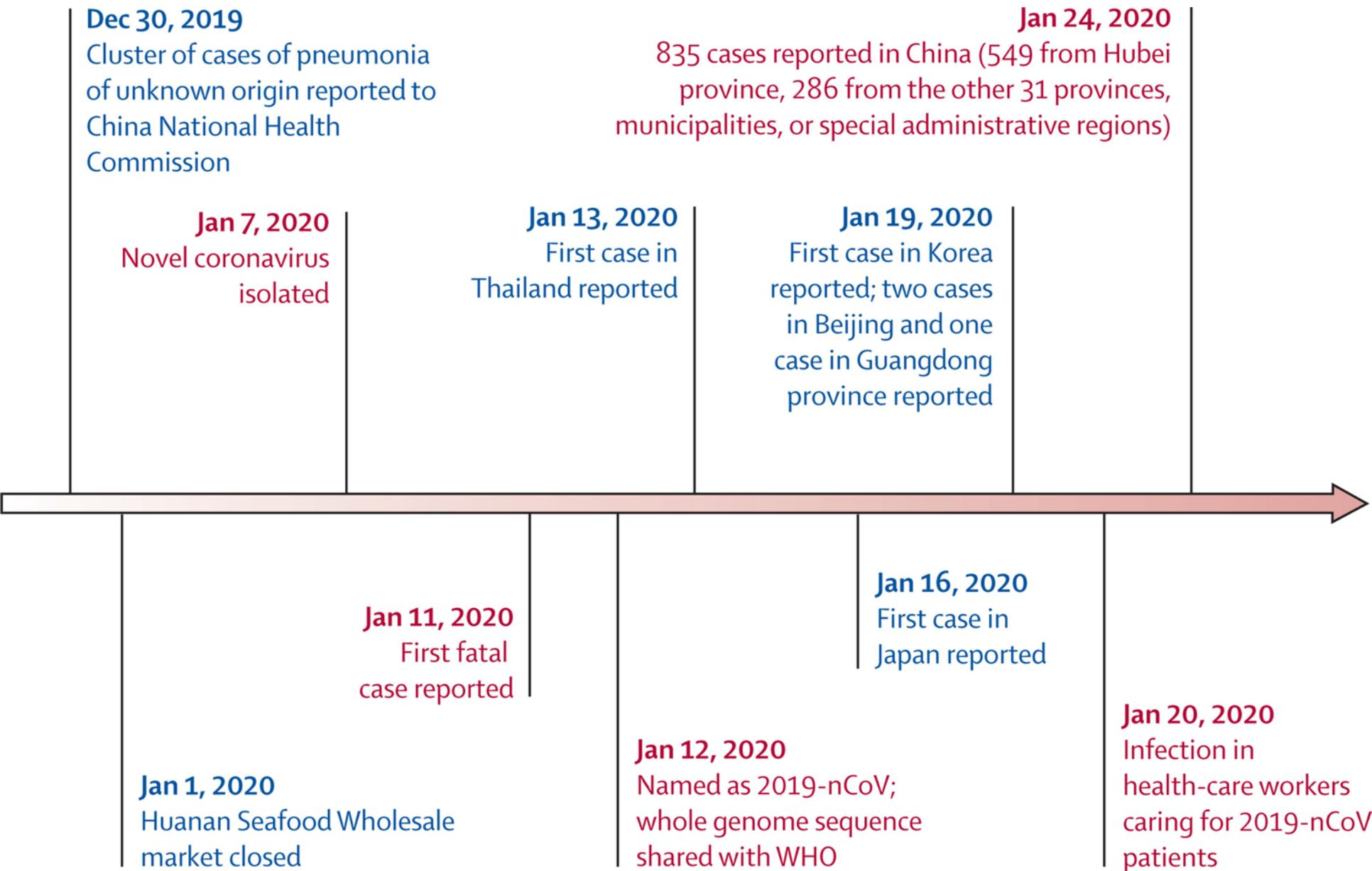
Yaklaşık 300 ölüm

Ölüm oranı: $300/12\ 000 = \%2.5$



4 Şubat 2020, 17:00 (istanbul)





EMERGING THREATS

The size and severity of disease outbreaks depends on where the causal agent sits in an evolutionary spectrum, ranging from animal viruses that have yet to leap to humans, to pathogens that have evolved to spread easily between humans.



1. Animals only
Potential threats, including pathogens from families that have caused human disease in the past.

Examples:
poxviruses, paramyxoviruses.



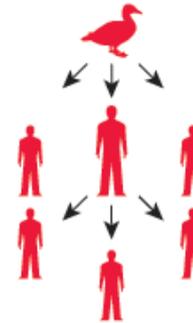
2. Limited spread
Pathogens that pass from animals to humans but do not spread further.

Examples:
H5N1 flu, Nipah, rabies.



3. Small outbreaks
Pathogens that spill over and then spread between just a few people.

Examples:
MERS, Marburg.



4. Large outbreaks and epidemics
Pathogens that spill over into large numbers of people, or spread between many people.

Examples:
Chagas disease, cholera, Ebola.

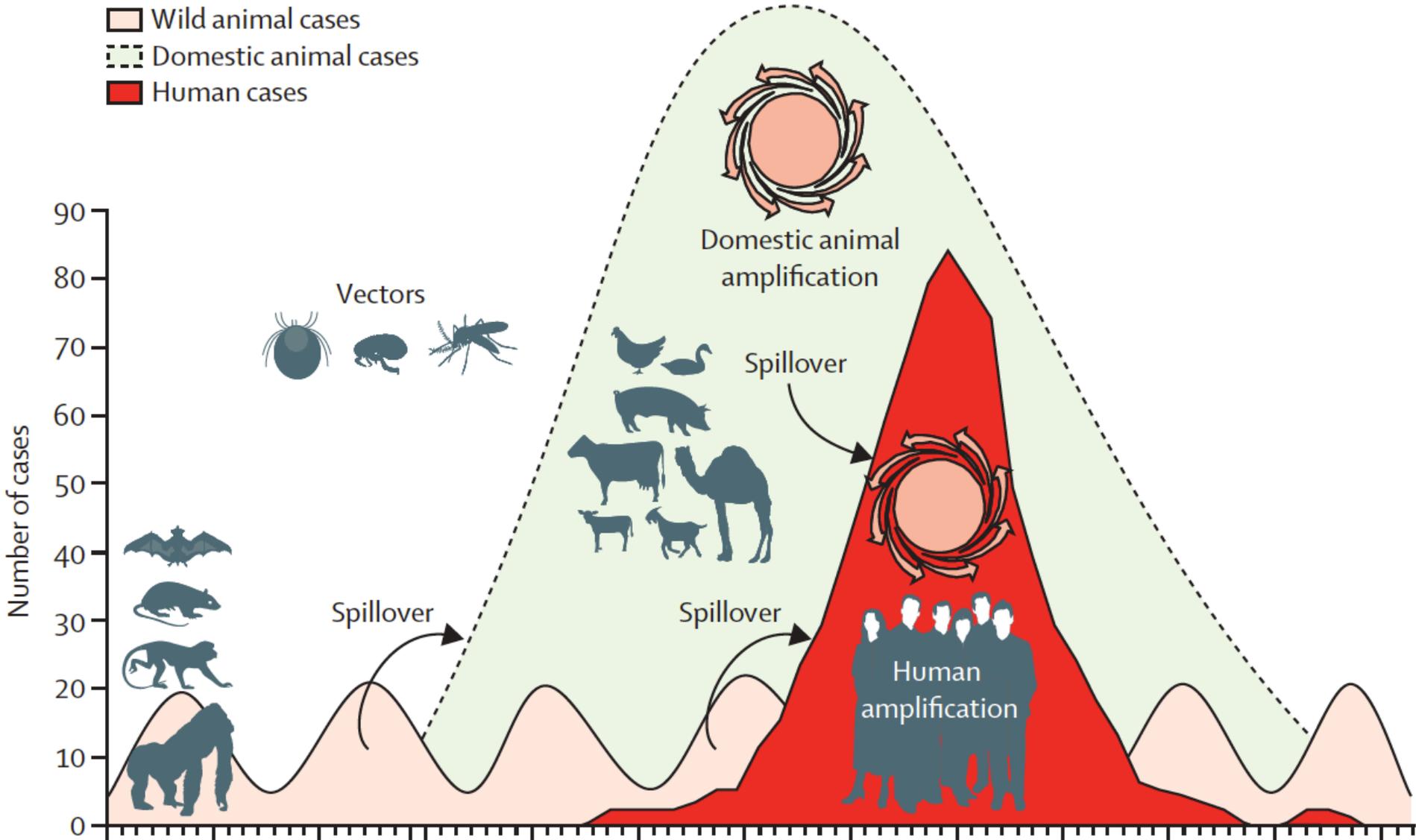


5. Human only
Animal pathogens that have evolved to become human viruses.

Examples:
HIV/AIDS, measles, tuberculosis.

A

- Wild animal cases
- Domestic animal cases
- Human cases



Yayılnma sayısı (Ro):

Bir hasta ortalama kaç kişiye bulaştırır?

How contagious is a disease?

Scientists use "R naught," or R_0 , to estimate how many other people one sick person is likely to infect



2019-nCoV
1.4-3.3

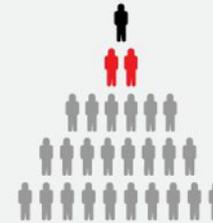
*This estimate is preliminary
and likely to change



Zika
3-6.6

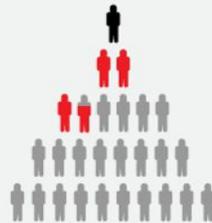


Measles
11-18



Ebola
2

*An early estimate based on
the Colombia outbreak in 2015



HIV
3.6-3.7



Seasonal flu
1.3

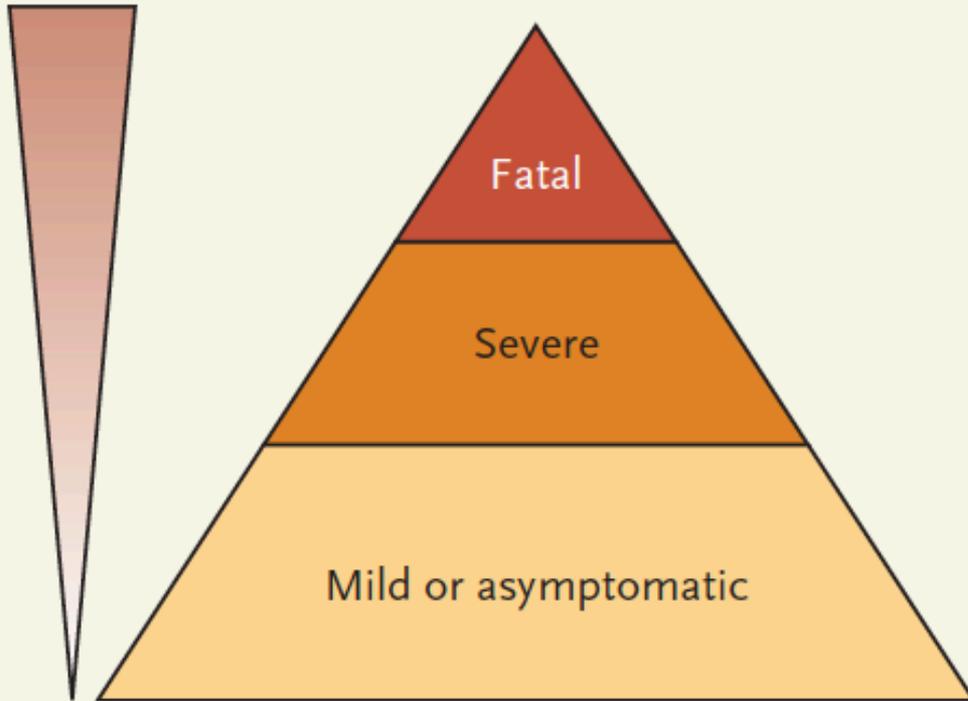


Norovirus
1.6-3.7

*An estimate based
on Réunion Island in 2006

SOURCES: Travel Medicine, PLOS One, JAMA Pediatrics, MDPI, NCBI, New England Journal of Medicine, "The Spread and Control of Norovirus Outbreaks Among Hospitals in a Region"

Ability to contain emerging virus
in absence of countermeasures



Patients seek health care and can be diagnosed and isolated, and their contacts can be traced. A caveat is that coronaviruses have a propensity for nosocomial spread.

Patients do not seek health care, do not receive a diagnosis, and may spread the virus to contacts.

	2019-nCoV*	MERS-CoV	SARS-CoV
Demographic			
Date	December, 2019	June, 2012	November, 2002
Location of first detection	Wuhan, China	Jeddah, Saudi Arabia	Guangdong, China
Age, years (range)	49 (21–76)	56 (14–94)	39·9 (1–91)
Male:female sex ratio	2·7:1	3·3:1	1:1·25
Confirmed cases	835 [‡]	2494	8096
Mortality	25 [‡] (2·9%)	858 (37%)	744 (10%)
Health-care workers	16 [‡]	9·8%	23·1%
Symptoms			
Fever	40 (98%)	98%	99–100%
Dry cough	31 (76%)	47%	29–75%
Dyspnoea	22 (55%)	72%	40–42%
Diarrhoea	1 (3%)	26%	20–25%
Sore throat	0	21%	13–25%
Ventilatory support	9·8%	80%	14–20%

Wang C, et al. A novel coronavirus outbreak of global health concern. Lancet 2020

	Coronavirüsler			İnfluenza
	2019-nCoV 2019-yeni Coronavirus	MERS-CoV Ortadoğu solunum sendromu	SARS Ciddi akut solunum yolu sendromu	pH1N1 Pandemik influenza, domuz gribi
Olgu sayısı	>20 000	2500	8000	milyonlar
Ölüm oranı (%)	2	34.5	8.5	0.02-0.4
Yayıma sayısı (Ro)	2.9	0.5	1.8	1.2
Pandemi	?	Hayır	Evet (?)	Evet
Hastane içi yayılım	düşük	%70	%50	
Kuluçka süresi	2-14	Ortalama 4	Ortalama 4	1-3

2019–2020 U.S. Flu Season: Preliminary Burden Estimates

[Español](#)

CDC estimates* that, from October 1, 2019, through January 25, 2020, there have been:

19,000,000 – 26,000,000
flu **illnesses**



8,600,000 – 12,000,000
flu **medical visits**



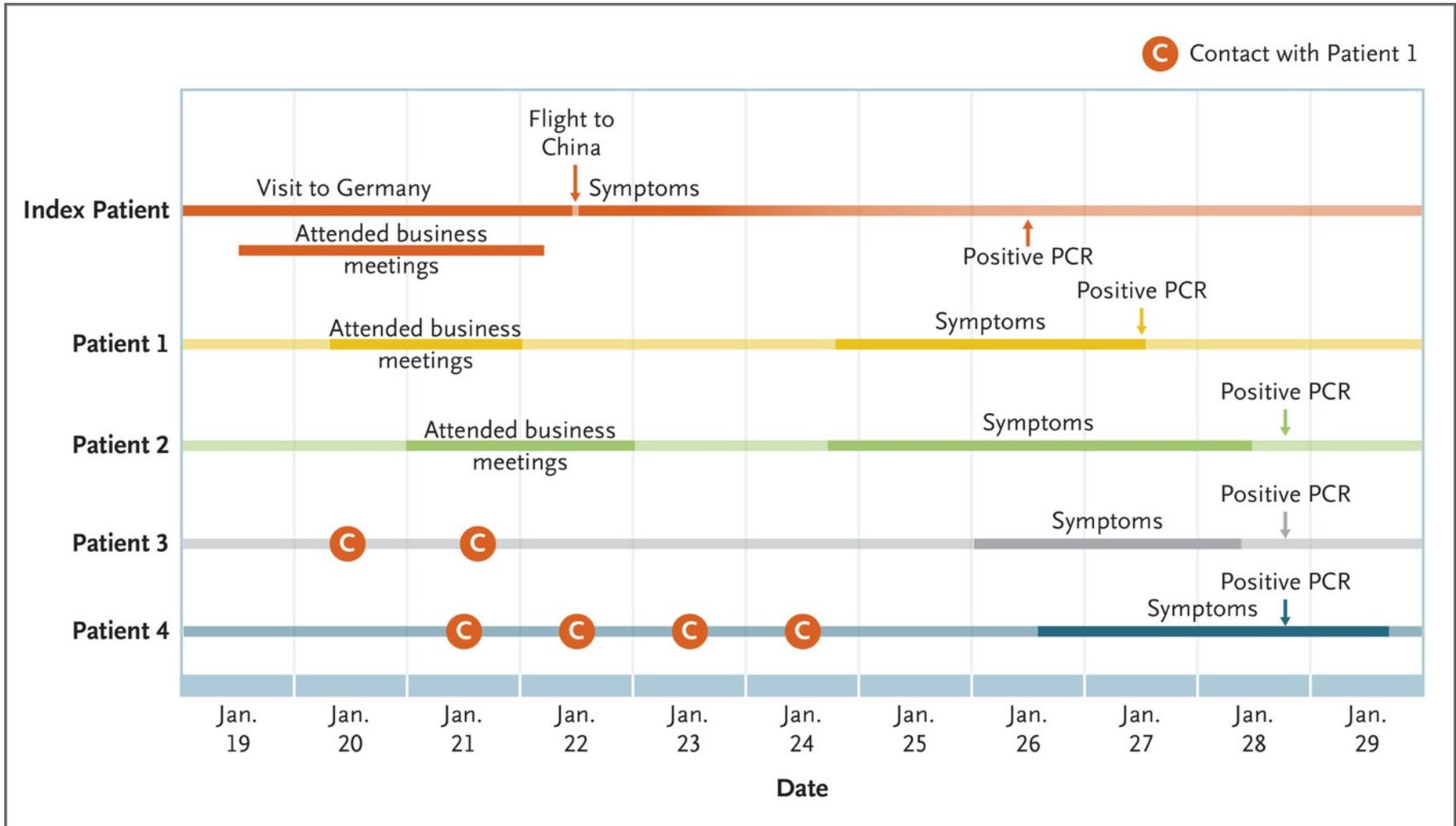
180,000 – 310,000
flu **hospitalizations**



10,000 – 25,000
flu **deaths**



Asemptomatik bir kişiden 2019-nCoV geçişi



Rothe C. Transmission of 2019-nCoV Infection from an Asymptomatic Contact in Germany. NEJM 2020

SHARE



1K



435

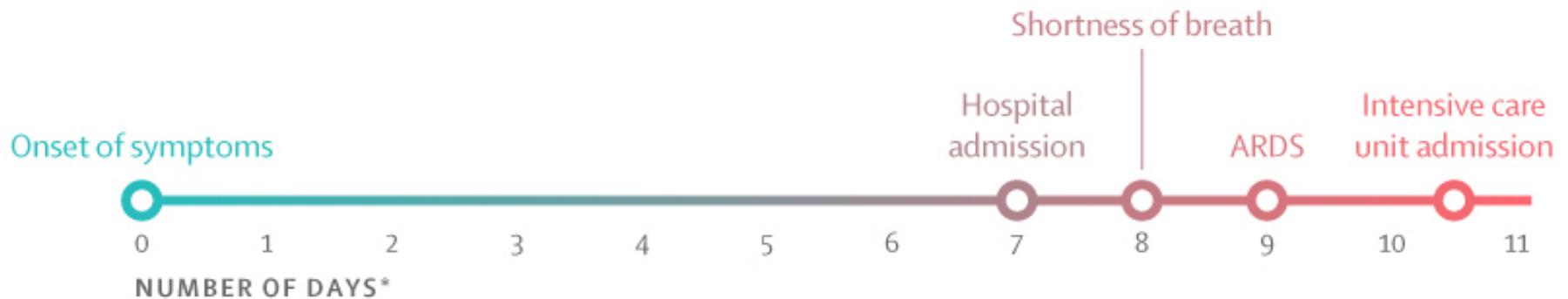


Germans repatriated from Wuhan, China, arrive at an army barracks on 1 February to be examined for signs of infection with the new coronavirus. FRANK RUMPENHORST/PICTURE-ALLIANCE/DPA/AP IMAGES

Study claiming new coronavirus can be transmitted by people without symptoms was flawed

By [Kai Kupferschmidt](#) | Feb. 3, 2020 . 5:30 PM

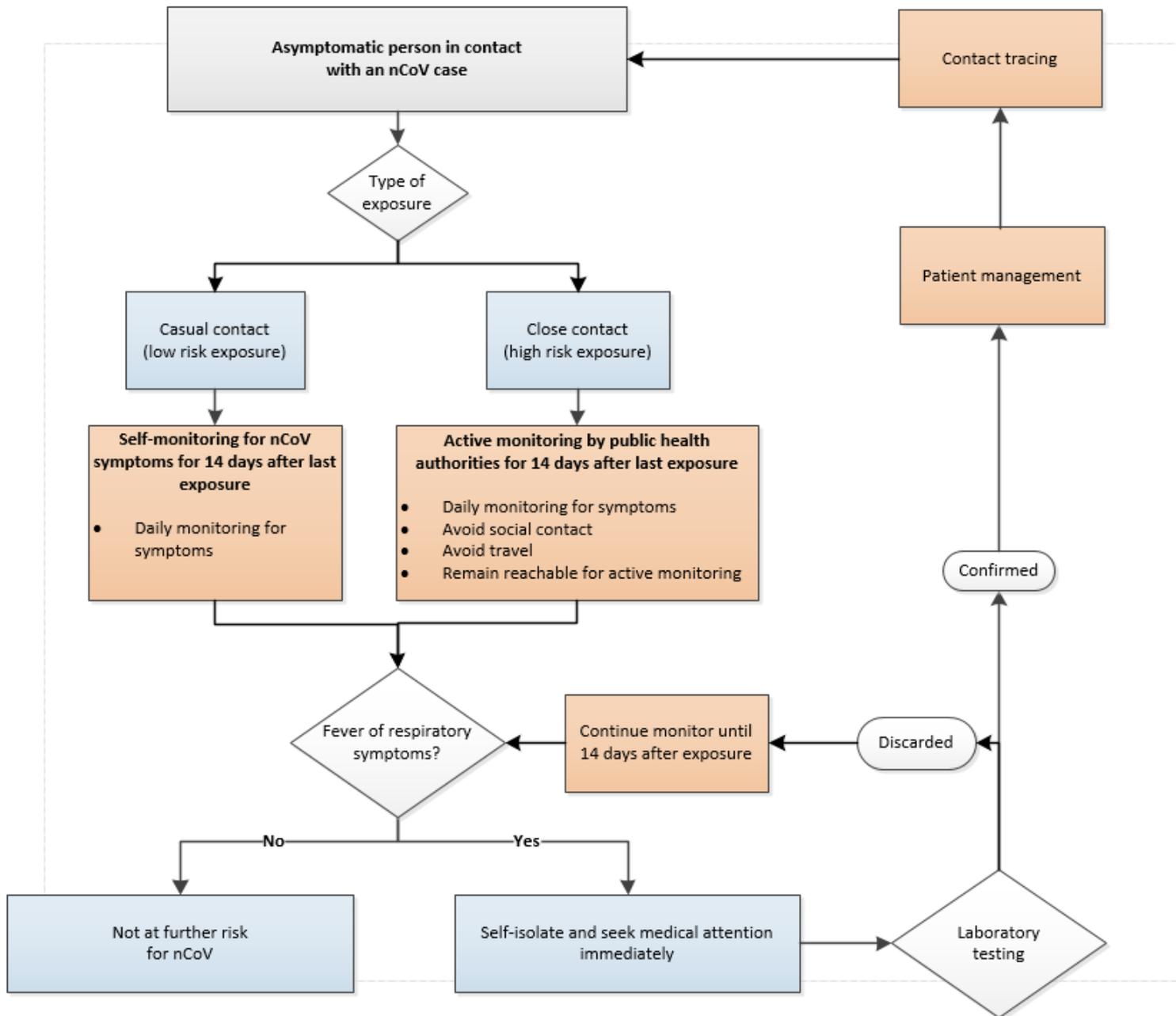
Timeline of coronavirus onset



ARDS=Acute respiratory disease syndrome

*Median time from onset of symptoms, including fever (in 98% of patients), cough (75%), myalgia or fatigue (44%), and others.

THE LANCET



Advice to healthcare workers: management of patients with 2019-nCoV infection

Insert National Logo
here

What is the novel coronavirus?

- An **outbreak of acute respiratory tract infection** linked to a novel coronavirus (2019-nCoV) is ongoing in China, with most cases linked to the city of Wuhan.
- Although a number of the initially reported cases occurred among people that had visited a wet market, human-to-human transmission is ongoing, and healthcare workers have also been infected.

When to suspect an 2019-nCoV infection?

When assessing patients with **acute respiratory infection (sudden onset of at least one of the following: cough, sore throat, shortness of breath)** within 14 days after returning from China

or

with any respiratory symptoms, who had been in contact with people diagnosed with a 2019-nCoV infection.

How to handle these patients?

- Provide the patient with a surgical mask; Separate from other patients in waiting areas; examine in a separate consultation room
- Apply standard precautions including hand hygiene and use personal protective equipment for contact and droplet transmission: surgical mask, eye protection, gown and gloves.
- Obtain diagnostic samples for 2019-nCoV.

Care of patients with 2019-nCoV infection:

- Admit to a single or isolation room.
- Use personal protective equipment for contact and droplet transmission: surgical mask, eye protection, gown and gloves.
- When performing aerosol-generating procedures, such as tracheal intubation, broncho-alveolar lavage, other diagnostic airway procedures and manual ventilation, use personal protective equipment for airborne transmission. A well-fitted FFP3 respirator, tight-fitting eye protection, gloves and long-sleeved impermeable protective gowns.
- Health care personnel should self-monitor for any respiratory symptoms and fever in the 14 days following the last exposure to a confirmed case.



Insert national link here

www.ecdc.europa.eu/en/novel-coronavirus-china

Report the case to public health authorities.

Travel advice: outbreak of a novel coronavirus 2019-nCoV

*Insert national
logo here*

What is the novel Coronavirus?

An outbreak of a new coronavirus is currently ongoing in China. The virus can cause symptoms such as cough, fever and shortness of breath. In a limited number of cases it has led to more severe infections, even death.

How does the virus spread?

You can get the infection through close contact with a person who has symptoms from the virus (mostly cough).

Travellers FROM China

If you recently returned from a stay in China, and suddenly develop cough, sore throat or shortness of breath, within 14 days since your return:

1. Stay home and call XXXX for advice, mentioning that you were in XX, China.
2. Seek medical advice from your primary care provider; make sure to mention that you were in xx, China.
3. Go to XXXX health facility for advice and care; make sure to mention that you were in xx, China.

Travellers TO China



Avoid contact with sick people, in particular those with a cough.



Avoid visiting markets and places where live or dead animals are handled.



Wash your hands with soap and water OR use an alcohol based disinfectant solution before eating, after using the toilet and after any contact with animals.



Avoid contact with animals, their excretions or droppings.



Insert national link here

www.ecdc.europa.eu/en/novel-coronavirus-china