

Update on 2019-nCoV

4 February 2020

Evolution of the 2019-nCoV outbreak (31 December 2019 – 4 February 2020)

Dec 31, 2019

Cluster of 27 pneumonia cases of unknown origin with 7 severe cases reported to China National Health Commission

Jan 7, 2020

Novel coronavirus isolated

Jan 11, 2020

First fatal case in China

Jan 19, 2020

First confirmed case in **Republic of Korea**

Jan 13, 2020

First confirmed case in **Nepal**

Jan 23, 2020

First confirmed case in **Singapore**

Shutdown of Wuhan City

Jan 29, 2020

First confirmed cases in **UAE, Finland** and **Italy**

Jan 28, 2020

First confirmed case in **Germany**

Jan 26, 2020

First confirmed case in **Canada**

Jan 30, 2020

1st Member States briefing

2nd Emergency Committee – WHO declares a PHEIC

First confirmed cases in **India** and **Philippines**

Feb 3, 2020

Daily **WHO Health Security Council** put in place

Jan 8, 2020

First confirmed case in **Thailand**

Jan 1, 2020

Huanan Seafood Wholesale market closed

Jan 12, 2020

Named as 2019-nCoV; Whole genome sequence shared with WHO

Jan 14, 2020

First confirmed case in **Japan**

Jan 20, 2020

Infection in health-care workers caring for 2019-nCoV Patients

First confirmed case in **USA**

China confirms human to human transmission

Jan 22-23, 2020

1st Emergency Committee

Jan 25, 2020

First confirmed cases in **Australia** and **Malaysia**

Jan 24, 2020

First confirmed cases in **France** and **Viet Nam**

Jan 31, 2020

First confirmed cases in **Russia, Spain, Sweden** and **UK**

Jan 27, 2020

First confirmed cases in **Cambodia** and **Sri Lanka**

WHO Director General in China

Feb 4, 2020

2nd Member States briefing

Feb 2, 2020

First fatal case outside China

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Signals from Event-Based Surveillance (31 Dec 2019 – 4 Feb 2020)

EIOS EPIDEMIC INTELLIGENCE
FROM OPEN SOURCES

Monitoring

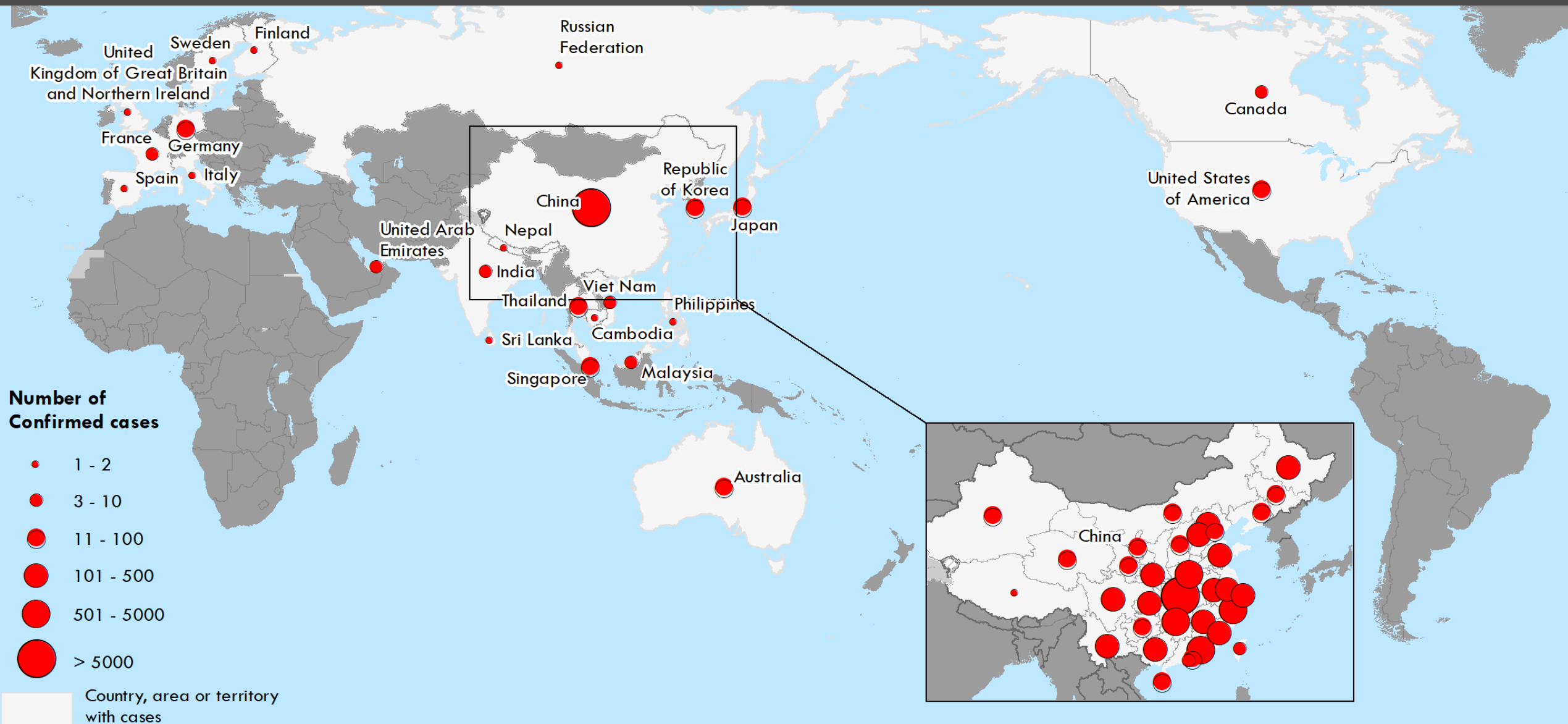


TIME PERIOD

Period: (Import Date) From 01/12/2019 00:00 to 04/02/2020 14:20



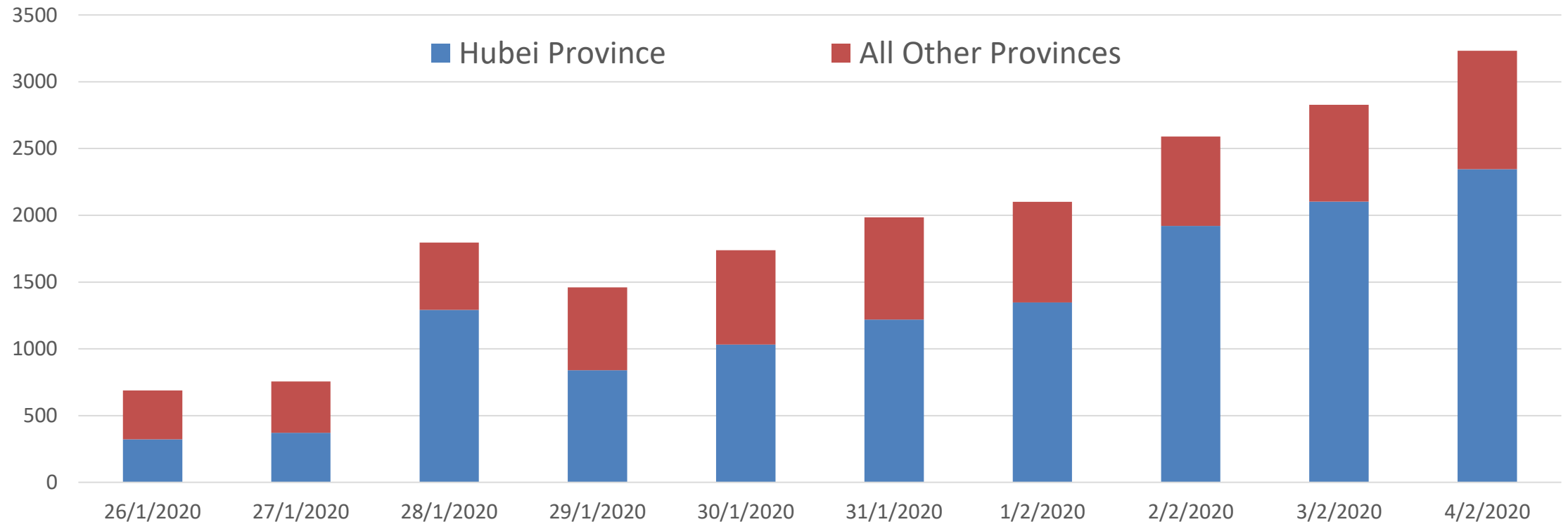
Distribution of 2019-nCoV cases, 04 February 2020 10:00 CET [n = 20,630]



Cases of 2019-nCoV inside China, 4 February 2020

- 20,471 confirmed cases and 23,214 suspected cases
- Confirmed cases in all provincial level administrative units
- 2,788 severe cases
- 425 deaths [414 in Hubei Province, 2 in Heilongjiang, Henan, Chongqing and 1 each in Hainan, Hebei, Beijing, Shanghai, Sichuan]
- 171,329 /221,015 contacts under follow-up

Confirmed Cases of 2019-nCoV by Day of Report in Hubei and other Provinces, 26 January through 4 February, 2020

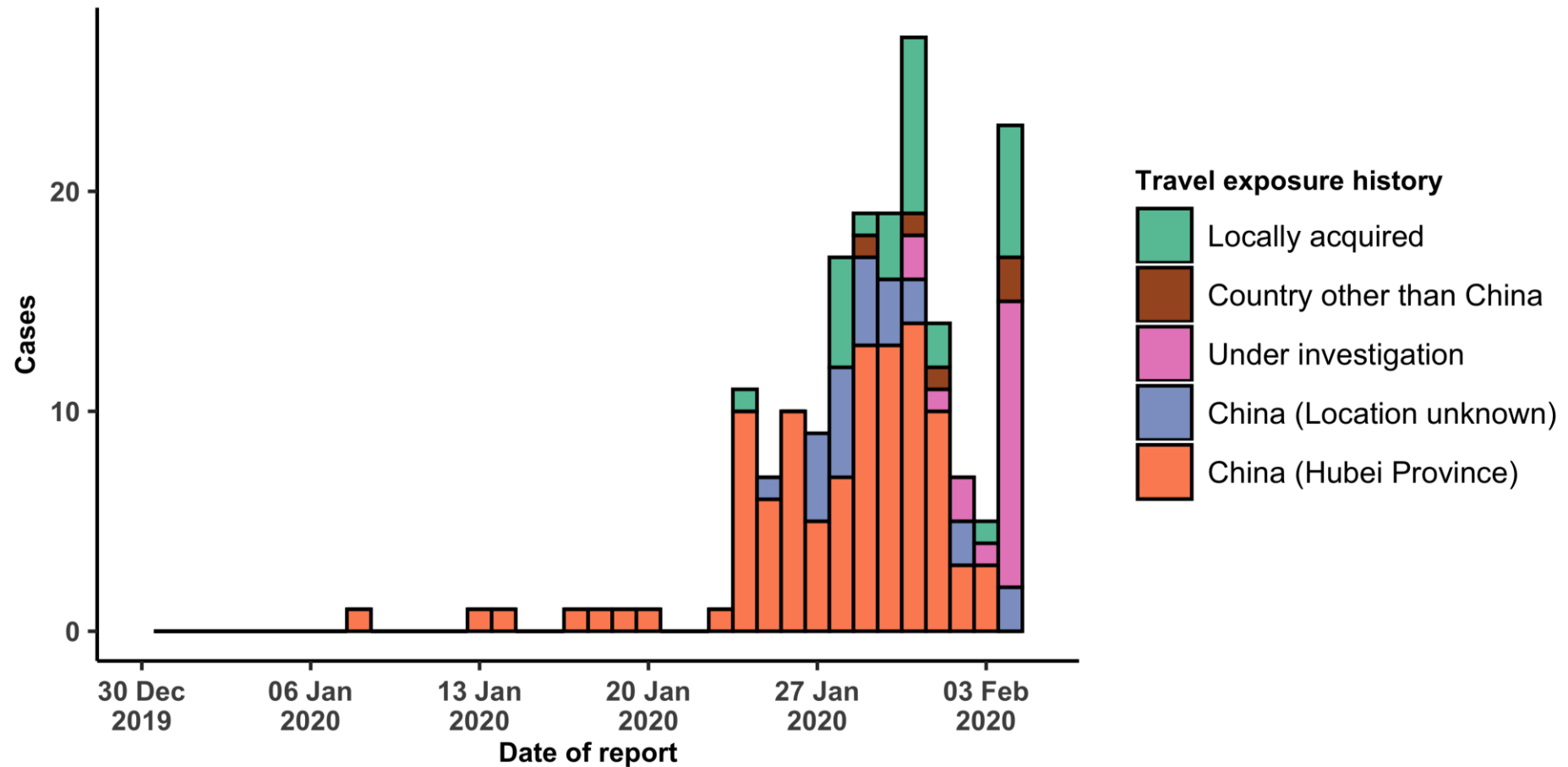


Confirmed Cases of 2019-nCoV Outside China, 4 February 2020

- 176 cases from 24 countries
- Thailand (25), Singapore (24), Japan (21), Republic of Korea (16), Australia (13), Germany (12), USA (11), Malaysia (10), Viet Nam (10), France (6), United Arab Emirates (5), Canada (4), India (3), Philippines(2), Italy (2), Russian Federation (2), United Kingdom (2), Cambodia (1), Nepal (1), Sri Lanka (1), Belgium (1), Finland (1), Spain (1), Sweden (1)
- 1 death, Philippines

Cases of 2019-nCoV Outside China by Report Date and Travel History

[N=176]

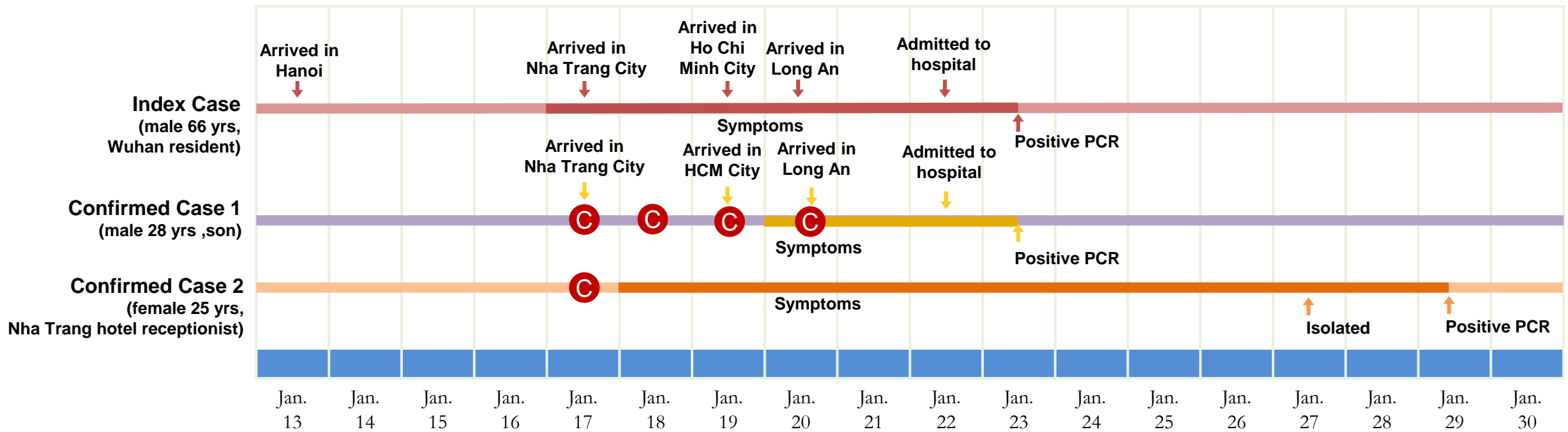


Human-to-human Cases of 2019-nCoV Outside China [N=27]

WHO Region	Country	Description of cases
Western Pacific Region	Japan (3)	Bus driver, tour guide
	Malaysia (1)	Travel to Singapore
	Republic of Korea (2)	Contact of confirmed cases
	Singapore (4)	Health store cluster & Tourist guide
	Viet Nam (3)	Family cluster & Hotel Receptionist
South-East Asia Region	Thailand (1)	Taxi-driver
European Region	France (1)	Health care worker
	Germany (10)	Work colleagues
Region of the Americas	USA (2)	Family cluster
Total	9 countries/ 27 cases	

Chain of Transmission of 2019-nCoV in Viet Nam

C Contact with Index Patient



Severity of disease among reported 2019-nCoV patients

- Patients present with fever, cough, shortness of breath, myalgia, confusion, headache;
 - Diarrhea reported in 2-3%
- Severity ranges from mild to severe disease resulting in death
- As of 4 Feb, 2788 patients are reported as severe (14%) and an additional 425 people (2%) have died;
- Fatal cases in China strongly associated with older age (>60 years old); comorbidities are common in older patients and may not be an independent risk factor
 - Cause of death due to progressive respiratory and multi-organ failure
 - Most deaths occur after prolonged course (7-10 days)
 - 684 have recovered
- True case-fatality ratio difficult to assess, denominator (number of infections) unknown

Transmission features

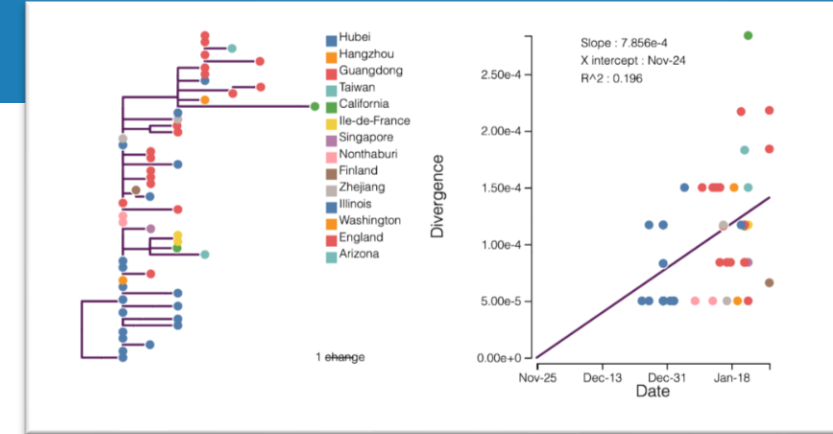
- **2019-nCoV is a zoonotic virus supported by:**

- Epidemiologic evidence of exposures of some initial cases
- Results of environmental in Huanan Seafood and live animal market
- Early phylogenetic results suggest initial human infection in ongoing human-to-human transmission

➡ Animal source not yet identified; spillover events could continue

- **Human-to-human transmission**

- Transmission via droplet, contact, fomites
 - Occurring amongst close contacts, including family members and health care workers
 - One example of health-care associated outbreak in Wuhan (involving 15 HCW), HCW infections in other cities in China, in France
 - Detailed exposure histories and investigations are needed to understand frequency and significance of transmission from asymptomatic PCR positive people; not known to be drivers of transmission for other coronaviruses
- Transmission parameter estimates
 - Estimates of R_0 ranging from 1.4-4.9 in China
 - Incubation period estimated range 1-12.5 days, median 5-6 days (WHO guidance includes 14 days)
 - Limited human to human transmission in 9 countries outside of China



54 full genomes available

WHO technical guidance to all countries for rapid identification, case management and prevention of onward spread

- **WHO Interim Guidance**

- Surveillance recommendations and case definitions for suspect and probable cases
- Laboratory testing for in suspected human cases
- Clinical management of severe acute respiratory infection when novel coronavirus (nCoV) infection is suspected
- Infection prevention and control, protection of health care workers, prevention on onward transmission in health care settings
- Home care for patients with suspected patients presenting with mild symptoms and management of contacts
- Risk communication and community engagement
- Country readiness checklist for preparedness and response to novel respiratory pathogens
- Disease commodity package for supplies necessary in identification and management of confirmed patients
- Recommendations to reduce risk of transmission from animals to humans
- Advice on the use of masks in the community, during home care and in health care settings in the context of 2019-nCoV

(New) Early Epidemiologic Investigations for 2019-nCoV

WHO has adapted influenza and MERS-CoV standardized protocols for 2019-nCoV:

- Household transmission investigation protocol for 2019-nCoV infection
- Protocol for assessment of potential risk factors for 2019-nCoV infection among health care workers in a health care setting
- The First Few X (FFX) cases and contact investigation protocol for 2019-novel coronavirus (2019-nCoV) infection

These protocols will allow further understanding of key clinical, epidemiological and virological characteristics of 2019-nCoV:

- Spectrum of disease and severity
- Extent of and risk factors for transmission
- Impact of infection prevention and control measures
- Viral load and shedding profiles

<https://www.who.int/emergencies/diseases/novel-coronavirus-2019/technical-guidance/early-investigations>

Lab and diagnostics support to regions and countries

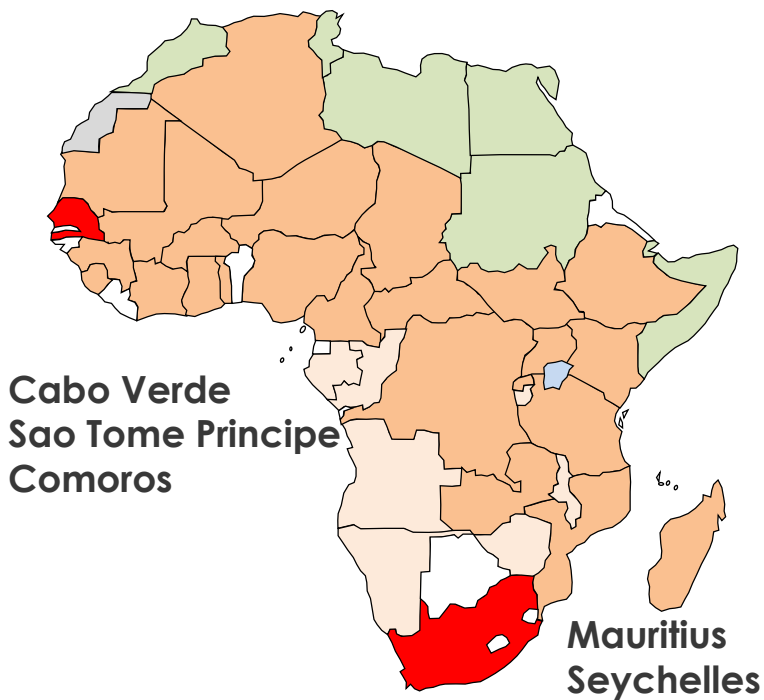
- WHO laboratory network in regular communication
- International system of reference laboratories for 2019-nCoV
 - largely aligned with influenza network of labs
- 250,000 tests will be shipped today from Germany to 70 labs globally to support influx of samples received
 - 24 labs in EURO
 - 24 labs in AFRO
 - SEARO, EMRO, WPRO will receive tests directly and distribute in the region (approx. 12-25 labs per region)

Current specialized 2019-nCoV lab network (14)

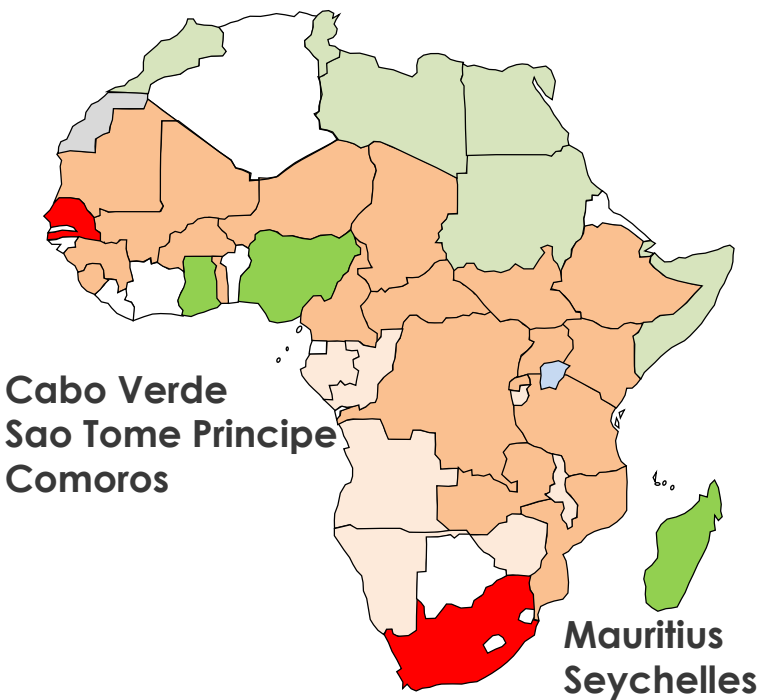
Region	Location
AFRO	Dakar, Senegal
	Johannesburg, South Africa
AMRO	Atlanta, USA
EURO	Rotterdam, the Netherlands
	London, United Kingdom
	Berlin, Germany
	Paris, France
SEARO	Pune, India
	Bangkok, Thailand
WPRO	Nagasaki, Japan
	Hong Kong SAR China
	Taipei Municipality China
	Melbourne, Australia
	Tokyo, Japan

Transport of Specimens in Africa – anticipated capacity

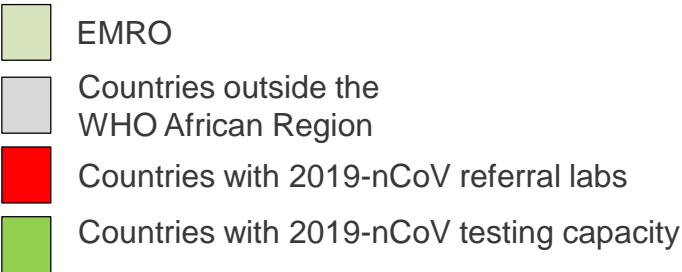
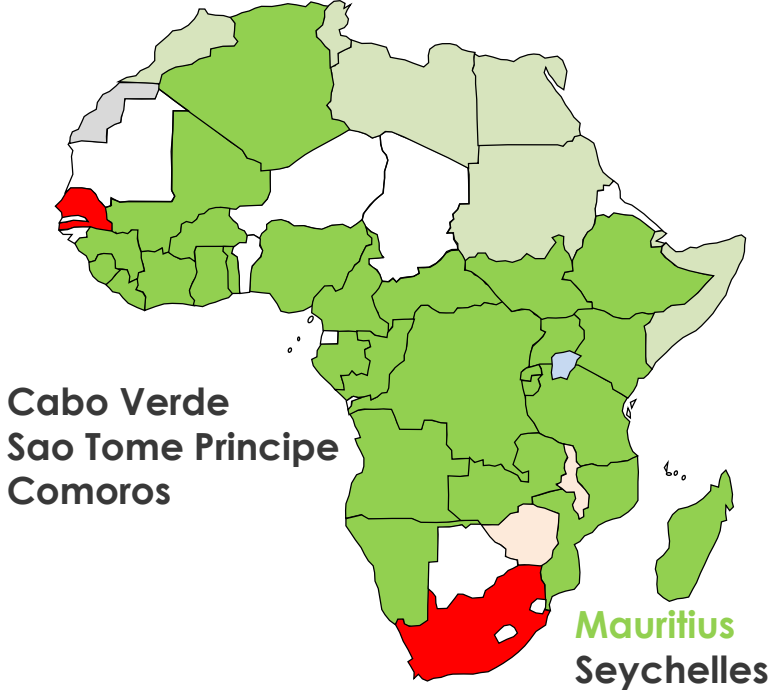
As of 3 February



As of 5 Feb



Planned end of week 7 Feb
Countries with assay up and running



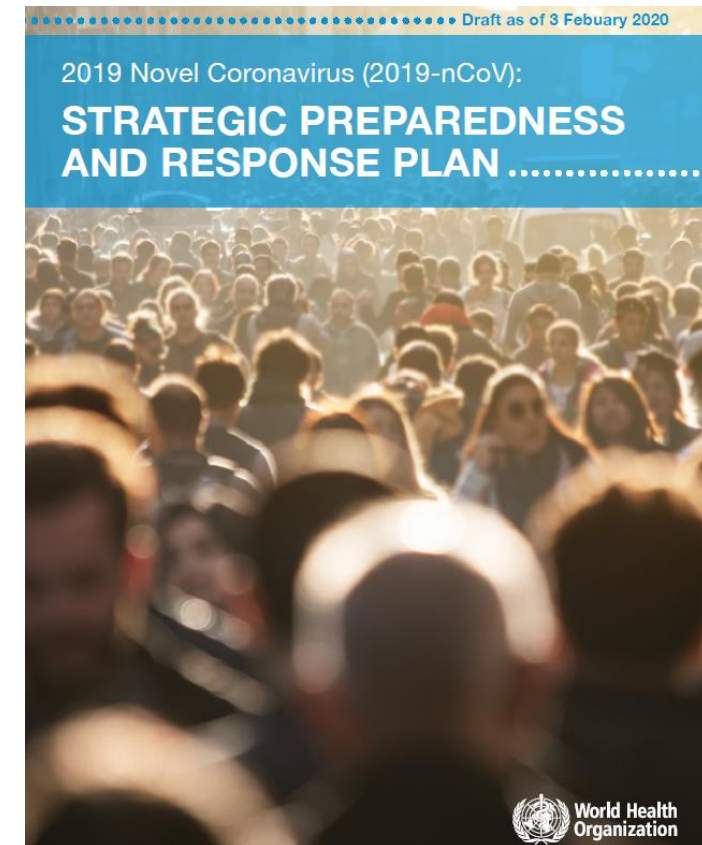
As more labs begin to test in country the need for shipping specimens internationally will decrease

Priorities for stopping transmission and mitigating the impact of 2019-nCoV globally

- **Limit human-to-human transmission**
 - Reduce secondary infections amongst close contacts and health care workers
 - Prevent transmission amplification events and super spreading events
 - Prevent further international spread
- **Identify, isolate and care for patients early**
 - Equip countries to detect, isolate and care for infected patients
 - Provide optimized care
- **Reduce transmission from animal source**
 - Identify animal source(s) and limit exposure
- **Address critical unknowns**
 - Clinical severity, extent of transmission and infection, treatment options, diagnostics, therapeutics and vaccines
- **Communicate critical risk and event information to all communities & countering misinformation**
- **Minimize social and economic impact through multisectoral partnerships**

2019-nCoV Strategic Preparedness and Response Plan

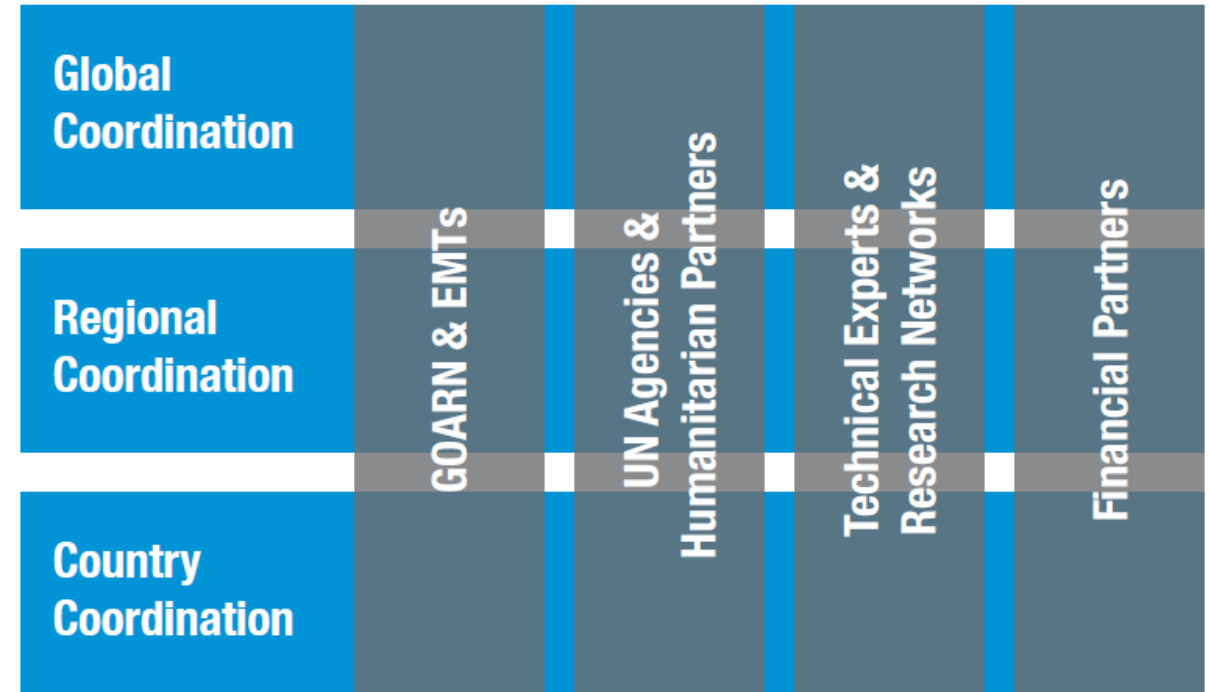
- Scope: Public health strategy to support countries to prepare and respond to nCoV-2019
- Goal: To stop further transmission of 2019-nCoV within China and to other countries, and to mitigate the impact of the outbreak in all countries
- Strategic objectives:
 - Limit human-to-human transmission
 - Identify, isolate and care for patients early
 - Identify and reduce transmission from the animal source
 - Address crucial unknowns
 - Communicate critical risk and event information
 - Minimize social and economic impact



International coordination and operational support

Rapidly establish international coordination and operational support:

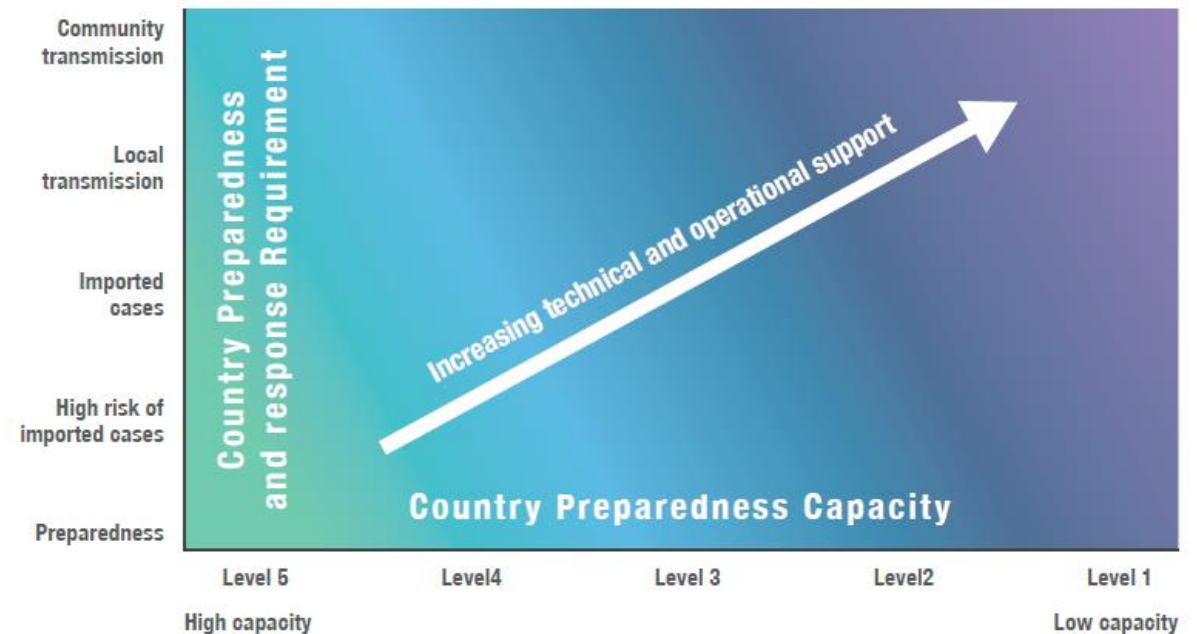
- Partner coordination
- Epidemiological analysis and forecasting
- Risk communication
- Laboratory and diagnostics
- Technical expertise and guidance
- Pandemic supply chain coordination
- Travel and trade



Scaling up country readiness and response operations

Scaling up country readiness and response operations:

- Country-level coordination
- Risk communication and community engagement
- Surveillance and points of entry
- Rapid response teams
- National laboratory system
- Infection prevention and control
- Case management
- Logistics and supply management



Accelerating priority research and innovation

- Address crucial unknowns regarding clinical severity extent of transmission and infection, treatment options
- Enhance global coordination of all relevant R&D stakeholders through existing mechanisms
- Support a clear and transparent global research and innovation priority setting process
- Build common platforms for standardized processes, protocols and tools, as well as for sharing specimens, data, and information



Country preparedness/response requirements and capacities

Preparedness and response requirement	Country preparedness capacity					
	Level 5	Level 4	Level 3	Level 2	Level 1	Grand Total
Community transmission	1					1
Localized transmission	4	2	1			7
Imported cases	11	1	3	1		16
High-risk of imported cases *	19	46	34	25	2	126
Preparedness	6	16	16	6		44
Grand Total	41	65	54	32	2	194

- Country preparedness and response requirement based on current situation as of February 1, 2020 and will be updated regularly based on evolving epidemiological situation
- Country preparedness capacity is based on IHR (2005) State Parties Self-Assessment Annual Reporting Tool and will be updated regularly based on country-level gap analyses.

Estimated unit costs for preparedness and response scenarios

Preparedness and response requirement	Setup cost (USD)	Monthly cost (USD)	Duration	Estimated unit cost (USD)
Community transmission	11,697,500	13,882,995	3 months	53,346,485
Local transmission	1,467,750	2,885,039	3 months	10,122,867
Imported cases	114,050	475,197	3 months	1,539,641

The estimated resource requirements outlined above are modelled on support required for a country with Level 1 or 2 preparedness capacity and are inclusive of:

- Essential supplies, as outlined in the 2019-nCoV disease commodity packages,
- Critical staffing, technical and operational support costs
- Training and incentives for national workforces

Total estimated resources required to support countries*

Country preparedness and response operations					
Preparedness and response requirement	Country preparedness capacity				
	Level 4	Level 3	Level 2	Level 1	Total
Country support factor	20%	50%	100%	100%	
Community transmission	0	0	0	0	0
Localized transmission	21,338,594	26,673,243	0	0	48,011,837
Imported cases	2,024,573	15,184,301	10,122,867	0	27,331,741
High-risk of imported cases	93,130,376	172,088,739	253,071,675	20,245,734	538,536,524
Preparedness	4,926,851	12,317,128	9,237,846	0	26,481,825
Grand Total	100,081,801	226,263,410	272,432,388	20,245,734	640,361,927

Overall estimated resources required February-April 2020

The overall estimated resources required for the international community to implement priority public health measures in support of countries to prepare and respond to nCoV-2019 for a period February-April 2020:

2019-nCoV Strategic preparedness and response pillars	Estimated requirement (USD)
A) Rapidly establishing international coordination and operations support	30,577,500
B) Scaling up country preparedness and response operations	640,361,927
C) Accelerating priority research and innovation	4,741,000
Total estimated resource requirement	675,680,427

Notes:

- Estimated resource requirements are for planning purposes, detailed operational plans will be developed with global, regional, and country level implementation partners
- Measures required to mitigate the social and economic consequences of 2019-nCoV are outside the scope of these resource requirements
- Accelerating priority research and innovation does not include the costs associated with the actual development, manufacturing, testing, and licensing of research and development products

WHO estimated resources required February-April 2020

2019-nCoV Strategic preparedness and response pillars	Estimated requirement (USD)
A) Rapidly establishing international coordination and operations	12,000,000
B) Scaling up country preparedness and response operations	45,000,000
C) Accelerating priority research and innovation	4,500,000
Total estimated resource requirement	61,500,000

WHO key priorities:

- Establish global and regional incident management teams to coordinate international technical expertise and support country preparedness and response
- Provide support to high risk/vulnerability countries to implement priority actions including the provision of essential supplies/equipment and technical/operational support
- Address crucial unknowns regarding clinical severity extent of transmission and infection, treatment options and coordinate a clear and transparent global research and innovation priority setting process

Next steps

- Rapidly establish global/regional coordination and operational support platforms
- Support high risk/high vulnerability countries to:
 - Identify appropriate coordination mechanism and key technical/operational partners at country level
 - Map existing pandemic preparedness capacity/programmes and key gaps based on needs outlined above
 - Engage with country level partners including UN country team and local donors to rapidly scale support to national systems to address key gaps
 - Establish monitoring mechanisms for key performance indicators
- Accelerate priority research and innovation