

COVID-19

Briefing for Virginia Healthcare Sector

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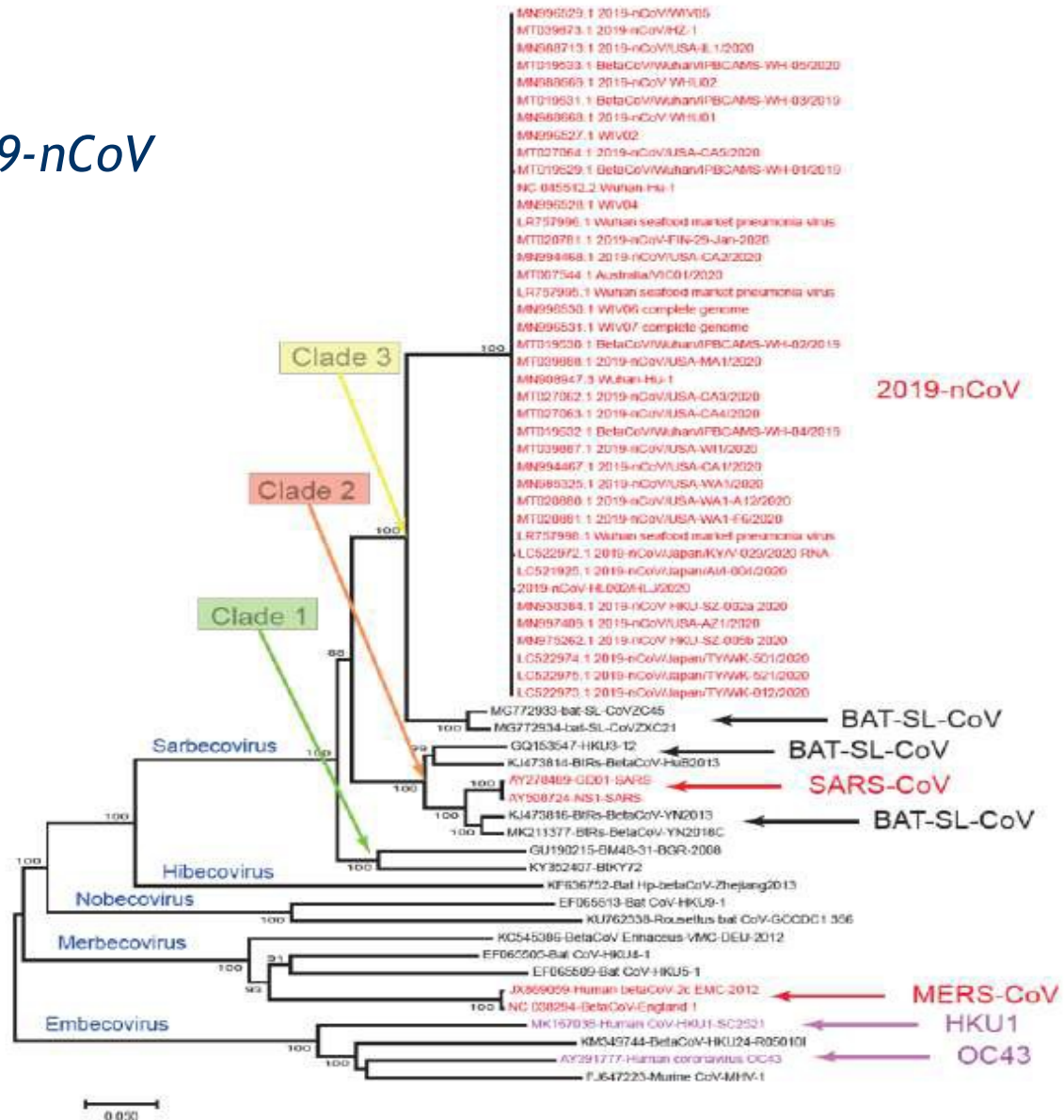
March 4, 2020

Initially referred to as 2019-nCoV

Reservoir appears to be bats

96% identity with
bat SARS-like
coronavirus strain
BatCov RaTG13

Intermediate host
animal not yet
known



COVID-19 OUTBREAK IN CHINA

Findings Published by the World Health Organization

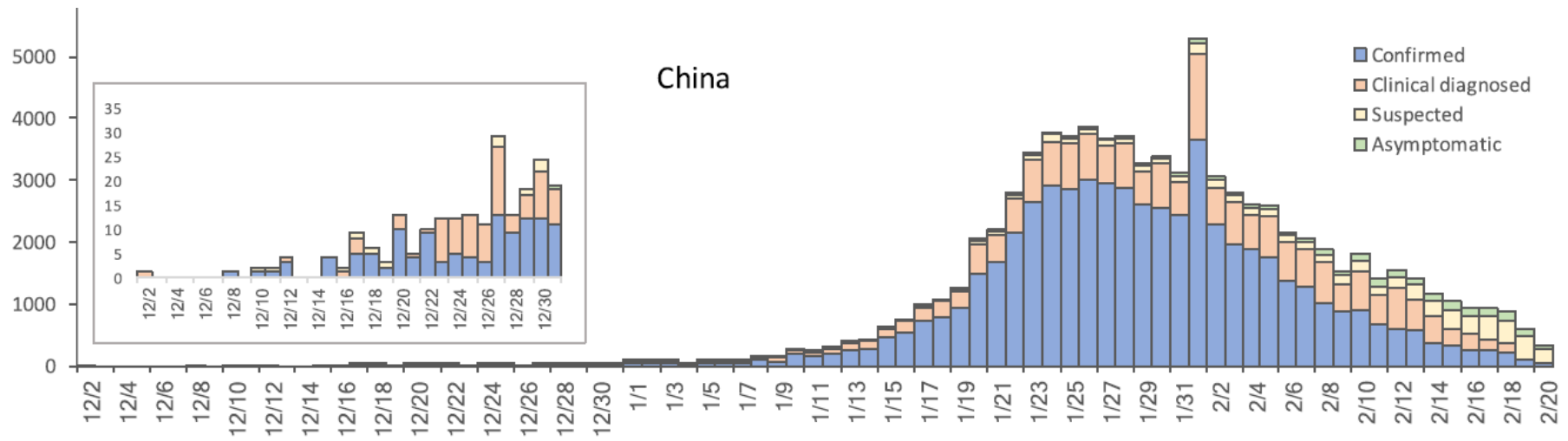
Report of the WHO-China Joint Mission

on Coronavirus Disease 2019 (COVID-19): 16-24 February 2020

Submitted February 28, 2020

www.who.int/docs/default-source/coronaviruse/who-china-joint-mission-on-covid-19-final-report.pdf

COVID-19 Outbreak in China



**Epidemic curve of COVID-19 cases reported in China
onset of illness, as of 20 February 2020**

by date of

www.who.int/docs/default-source/coronaviruse/who-china-joint-mission-on-covid-19-final-report.pdf

COVID-19 Signs and Symptoms among Confirmed Cases Reported in China

Sign or symptom*	%
Fever	87.9
Dry Cough	67.7
Fatigue	38.1
Sputum	33.4
Shortness of breath	18.6
Myalgia or arthralgia	14.8
Sore throat	13.9
Headache	13.6
Chills	11.4
Nausea or vomiting	5.0
Nasal congestion	4.8
Diarrhea	3.7

*Among 55,924 confirmed cases

Key Findings from the WHO-China Report (as of 2/20/20)

Location and Occupation

**Hubei
Province:
77.0%**

**Farmers or
Laborers:
21.6%**

Age

**Median Age:
51 years**

**Range: 2 days
- 100 years**

**30-69 years:
77.8%**

**<19 years:
2.4%**

Sex

Male: 51.1%

**Female:
48.9%**

Spectrum of Disease

Mild: 80%

**Severe:
13.8%**

Critical: 6.1%

Key Findings from the WHO-China Report (as of 2/20/20)

Duration of Illness

Mild Disease: ~2 Weeks

Severe or Critical Disease: 3-6 Weeks

Onset to Severe Disease: 1 Week

Onset to Death: 2-8 Weeks

Severe Disease or Death

Increased with Age

Case-fatality Rate >80 Years: 21.9%

Case-fatality Rate in Males: 4.7%

Case-fatality Rate in Females: 2.8%

Severe Disease <19 Years: 2.5%

Critical Disease <19 Years: 0.2%

Case-fatality Rate by Comorbidity

No Comorbidity: 1.4%

Cardiovascular Disease: 13%

Diabetes: 9.2%

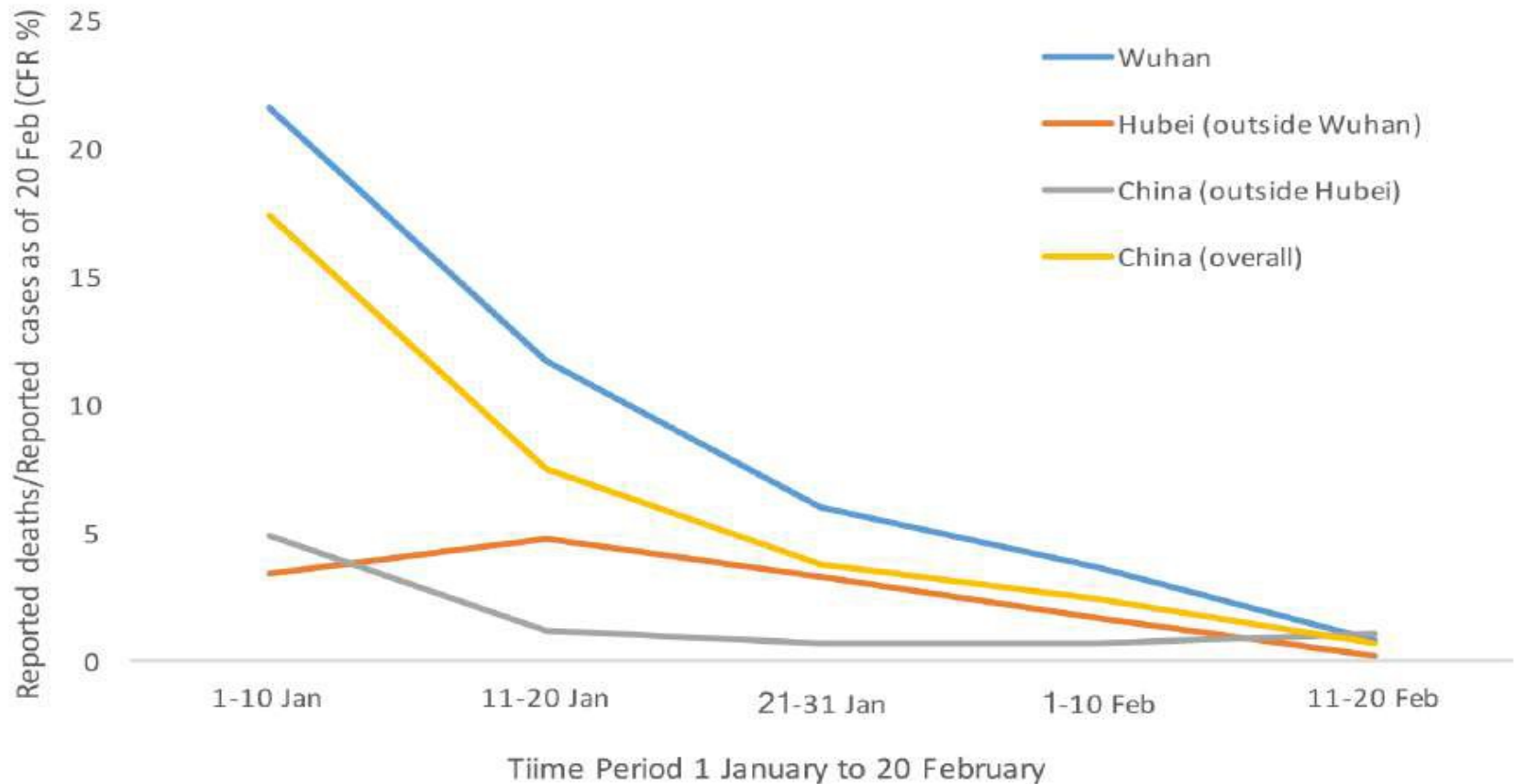
Hypertension: 8.4%

Chronic Respiratory Disease: 8.0%

Cancer: 7.6%

Case Fatality Ratio

(Reported Deaths among Total Cases)



Case fatality ratio for COVID-19 in China over time and by location, as of 20 February 2020

Key Findings from the WHO-China Report (as of 2/20/20)

Pregnant Women (n=147)

64 Confirmed Cases

**Severe Disease:
8%**

Critical: 1%

Healthcare Personnel

2,055 Confirmed Cases

**476 Hospitals
across China**

**88% from Hubei
Province**

Routes of Transmission in Outbreak in China

- Droplets and fomites during close unprotected contact
 - Airborne spread not reported in China
 - *WHO: Can be envisaged if certain aerosol-generating procedures are conducted in healthcare facilities*
- Fecal shedding from some patients in China
 - *WHO: Fecal-oral route does not appear to be a driver of transmission; its role and significance for COVID-19 remains to be determined*

Transmission in China

In setting of extreme social distancing

- Largely occurring in families
 - Guangdong and Sichuan provinces (1,836 cases)
 - 344 clusters
 - 78-85% have occurred in families
- Instances of transmission within healthcare settings, prisons and other closed settings
 - More earlier in epidemic

COVID-19 OUTBREAK OUTSIDE OF CHINA

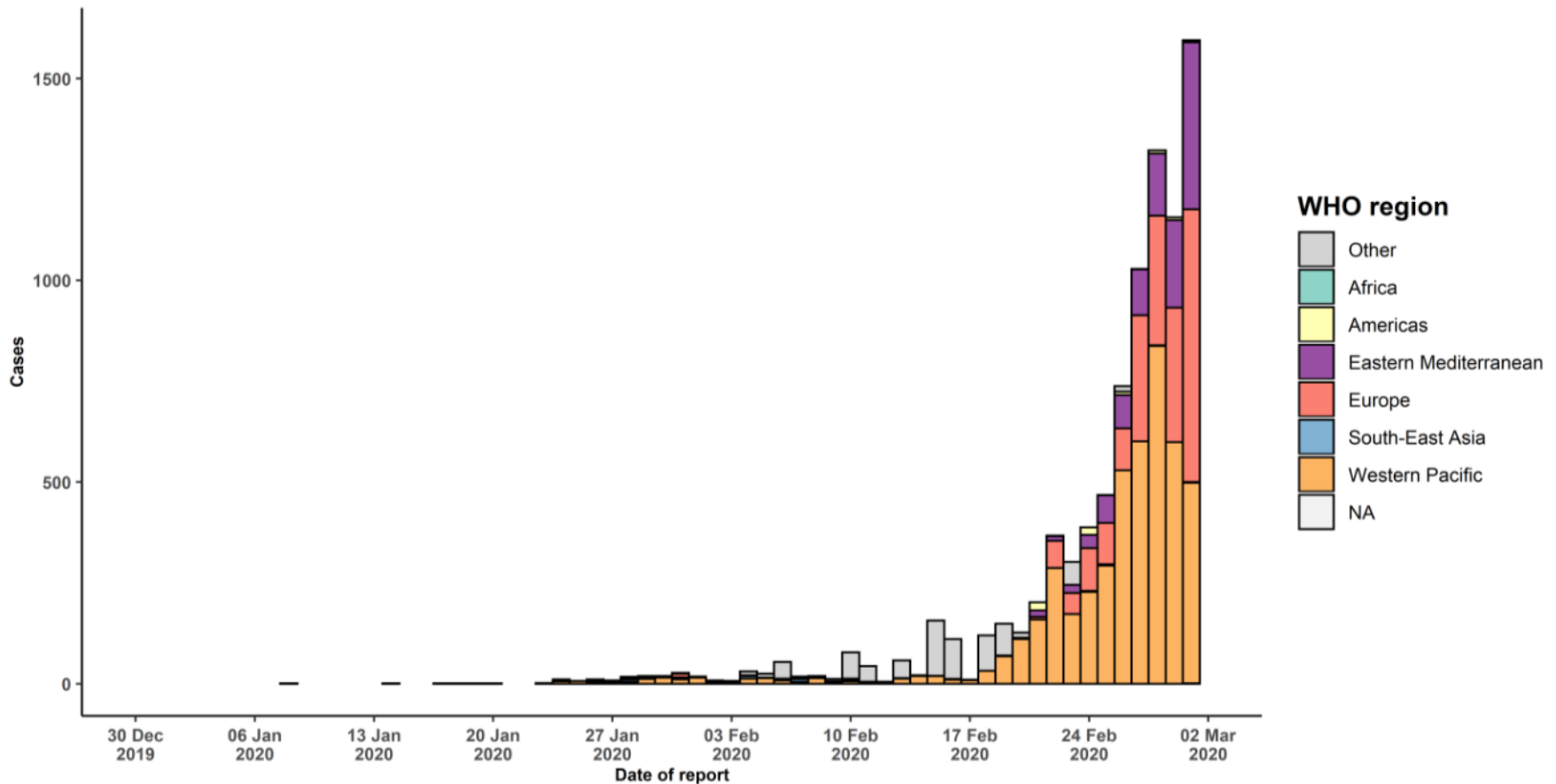
Confirmed Cases Outside of China

As of 3/2/20

Reported by the World Health Organization

Total	88,948 cases
China	80,174 cases 2,915 deaths
Outside of China	64 countries 8,774 cases; 128 deaths

Epidemic Curve of COVID-19 Cases Outside of China by Date and Region



As of March 2, 2020

Countries Outside of China with Local Transmission (by WHO regions)

As of 3/2/20

- Western Pacific - 6 countries
 - South Korea - 4,212 cases; Japan - 254 cases
- European - 13 countries
 - Italy - 1,689 cases; Germany - 129 cases; France - 100 cases
- South-East Asia - 2 countries
 - Thailand - 42 cases
- Eastern Mediterranean - 2 countries
 - Iran - 978 cases; Kuwait - 47 cases
- Americas - 2 countries
 - US - 62 cases (reported by WHO on 3/2/20); Canada - 19 cases

Cases in the United States

Cases Identified in the United States	
Travel-related	22
Person-to-person from known case	11
Under investigation	27
Total as of 3/3/20	60

PUBLIC HEALTH SYSTEM RESPONSE

Public Information



Comprehensive public information campaign - media, webpage, 211 call center (**1-877-ASK-VDH3**), targeted communications

Targeted Health Information

About Coronavirus Disease 2019 (COVID-19)

Travelers

Healthcare Professionals

Educational Institutions

Businesses

New or Updated CDC Guidance

Revised PUI Case
Definition

Healthcare
Infection Control
Guidance

Healthcare
Personnel with
Potential Exposure
Guidance

Pregnant Women
and Children FAQs

Inpatient Obstetric
Healthcare
Guidance

Discontinuation of
Transmission-
based Precautions

HCP Preparedness
Checklist and Tool

Strategies for
Long-Term Care
Facilities

COVID-10
Publications

Early Case Detection

Expanded Testing Criteria

Clinical Features	&	Epidemiologic Risk
Fever ¹ or signs/symptoms of lower respiratory illness (e.g. cough or shortness of breath)	AND	Any person, including health care workers ² , who has had close contact ³ with a laboratory-confirmed ⁴ COVID-19 patient within 14 days of symptom onset
Fever ¹ and signs/symptoms of a lower respiratory illness (e.g., cough or shortness of breath) requiring hospitalization	AND	A history of travel from affected geographic areas ⁵ (see below) within 14 days of symptom onset
Fever ¹ with severe acute lower respiratory illness (e.g., pneumonia, ARDS) requiring hospitalization ⁴ and without alternative explanatory diagnosis (e.g., influenza) ⁶	AND	No source of exposure has been identified

Expanded Testing Sites

- ~40 state or local public health labs, including DCLS in Virginia
- Private sector testing R&D

Reporting to Public Health

HEALTH DEPARTMENT LOCATOR

Enter Your Address or Search radius Results

Zip Code

Richmond City Health Department

400 East Cary St.
Richmond Virginia 23219

Phone: 804-205-3500

Fax: 804-371-2207

[Business Hours \(Call For Information\)](#) ▼

[Directions](#)

Richmond City Health Department – WIC Community Hospital

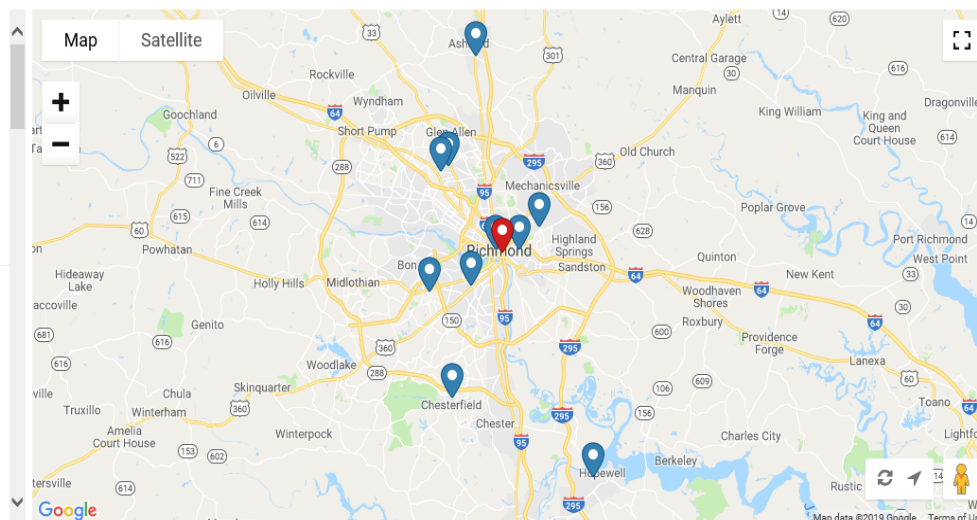
1510 North 28th St.
Suite 208
Richmond Virginia 23223

Phone: 804-786-3201

Fax: 804-225-7359

[Business Hours \(Call For Information\)](#) ▼

[Directions](#)



DCLS Guidance

- Initiated COVID-19 testing on February 29, 2020
- Specimens required for testing
 - 1 NP in VTM for COVID-19 and flu/RVP
 - 1 OP in VTM for COVID-19
 - 1 lower respiratory specimen for COVID-19 if available (e.g., sputum if productive cough)
- Turn around time for COVID-19 test results: 3-5 hours from specimen receipt
- >95% sensitivity and specificity for COVID-19 assay
- Positive COVID-19 results require confirmation at CDC

<https://dgs.virginia.gov/division-of-consolidated-laboratory-services/updates/hot-topics/>

Virginia Snapshot: PUIs (as of 3/3/20)

Total Number of People Tested for COVID-19, by Region and Testing Status

	Negative	Pending*	Positive	Total^
Central	3	0	0	3
Eastern	2	0	0	2
Northern	5	0	0	5
Northwest	0	0	0	0
Southwest	1	0	0	1
Total	11	0	0	11

Clinical Management

- Currently no specific antiviral treatment
- Prompt infection prevention and control and supportive management of complications is recommended
- Patients with mild illness might not initially require hospitalization
- Signs and symptoms might worsen in 2nd week of illness
- Decision to monitor patient in an inpatient or outpatient setting is made on case-by-case basis
- Avoid corticosteroids unless indicated for other reasons

Infection Control

- Minimize chance for exposures
- Adherence to Standard, Contact, and Airborne Precautions, including the use of eye protection
- Manage visitor access and movement within the facility
- Implement engineering controls
- Monitor and manage ill and exposed healthcare personnel
- Train and educate healthcare personnel
- Implement environmental infection control

www.cdc.gov/coronavirus/2019-ncov/infection-control/control-recommendations.html

Environmental Cleaning

- A list of products with EPA-approved emerging viral pathogens claims, maintained by the American Chemistry Council Center for Biocide Chemistries (CBC), is available at:
www.americanchemistry.com/Novel-Coronavirus-Fighting-Products-List.pdf
- Products with EPA-approved emerging viral pathogens claims are expected to be effective against COVID-19 based on data for harder to kill viruses
- Follow the manufacturer's instructions for all cleaning and disinfection products (e.g., concentration, application method and contact time, PPE)

Outpatient Settings

- Ensure signs and respiratory etiquette stations are in place and easily visible at entrance points
- Promptly identify patient with possible COVID-19 and isolate from others
 - Train triage personnel to screen for travel and symptoms
- If unable to provide care in private room and/or staff without recommended PPE, arrange for patient to be seen in nearby ED
 - Transport by private car or EMS if unstable
 - Communicate with ED for transfer of information
 - Communicate with LHD if suspected PUI

Identify and Monitor People Exposed to COVID-19

- Airport screening
 - Exit & entry screening - Flights from China & Iran
 - Exit screening in Italy & Korea
- Monitoring and movement restrictions of travelers and contacts to cases
 - Contact info of travelers from China & Iran provided to state health departments
 - Other travelers instructed at airport to stay home and monitor themselves for 14 days
- Contact tracing

Travel Notices and Restrictions (as of 3/3/20)

WARNING LEVEL 3	ALERT LEVEL 2	WATCH LEVEL 1
RECOMMENDATION Avoid Nonessential Travel	RECOMMENDATION Practice Enhanced Precautions	RECOMMENDATION Practice Usual Precautions
AFFECTING China, South Korea, Iran, Italy	AFFECTING Japan	AFFECTING Hong Kong

- Reconsider cruise ship voyages to or within Asia

Entry of foreign nationals from these destinations has been suspended:

- China
- Iran

Virginia Snapshot: Travelers Under Public Health Monitoring

(as of 3/3/20)

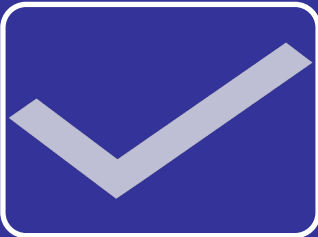
Total Number of People under Public Health Monitoring, by Monitoring Status

	Low Risk**	Medium Risk†	High Risk	Total^^
Currently under Monitoring	15	80	0	95
Completed Monitoring without further Public Health Action	13	205	0	218
Became a PUI	0	0	0	0
Total	28	285	0	313

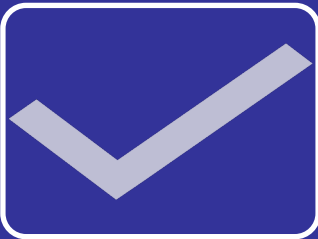
Guidance on Assessment and Monitoring of Healthcare Contacts

- Addresses assessment of risk, monitoring, and work restriction decisions for HCP with potential exposure to a patient with confirmed COVID-19
- Healthcare personnel are classified as high-, medium-, or low-risk depending on multiple factors
 - Duration of exposure, patient symptoms, if patient was wearing facemask, aerosol-generating procedures, and type of PPE used by healthcare personnel
- Recommendations for monitoring for COVID-19 and work restrictions depend on exposure risk classification

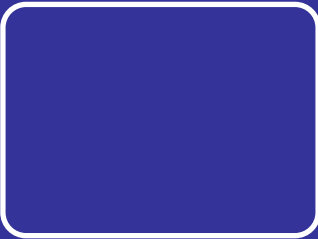
Pandemic Criteria



Causing severe illness and death

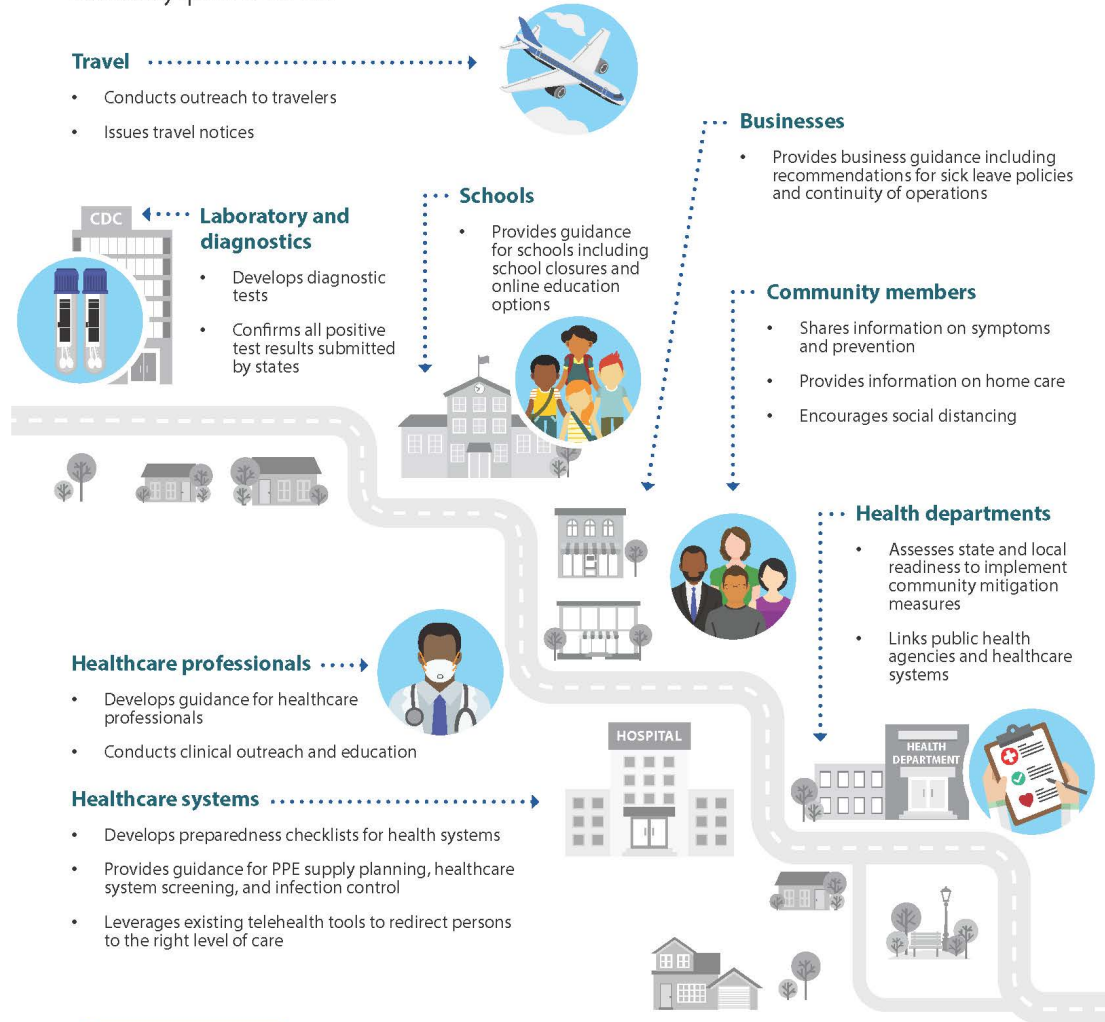


Sustained person-to-person spread



Worldwide spread of a new disease

CDC is aggressively responding to the global outbreak of COVID-19 and preparing for the potential of community spread in the U.S.



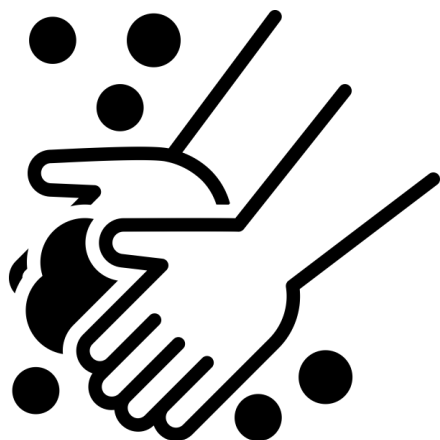
Vaccination and Treatment

- Clinical trials for treatment and vaccines in development
- **Treatment**
 - Currently no specific antiviral treatment
 - Supportive care
 - Research is ongoing
- **Vaccine**
 - Currently no vaccine
 - NIH research and development ongoing
 - Projected timeline = 12-18 months

List of treatments and vaccines in development

www.clinicaltrialsarena.com/analysis/coronavirus-mers-cov-drugs/

Nonpharmaceutical Interventions



Nonpharmaceutical Interventions: Resources

- Preventing COVID-19 Spread in Communities:
www.cdc.gov/coronavirus/2019-ncov/community/index.html
- CDC Community Mitigation Guidelines to Prevent Pandemic Influenza-United States, 2017:
www.cdc.gov/mmwr/volumes/66/rr/rr6601a1.htm#suggestedcitation

Build on Pandemic Influenza Preparedness

- COVID-19 seems to be spreading much like flu
- Pan flu preparedness ongoing since 2004
 - 2019 - Cardinal Resolve exercise involving over 400 stakeholders from across Virginia
- VDH reviewing pan flu plans and guidance to inform COVID-19 preparedness
- VDH actively encouraging partners in all sectors to review their pandemic flu plans and adapt them to this situation

Healthcare Surge Planning

- Meet with staff now to educate them on COVID-19 and what to do to prepare
- Prepare your facility to safely triage and manage patients with respiratory illness, including COVID-19
 - Become familiar with infection prevention and control guidance for managing COVID-19 patients
- Explore alternatives to face-to-face triage and visits
- Plan to optimize your facility's supply of PPE if there are shortages

Healthcare Supply of PPE

- U.S. healthcare systems are reporting higher than normal use for N95 respirators
- Some healthcare systems have begun reporting that orders for N95 respirators and facemasks are not being filled or are only being partially filled by distributors
- Major pharmacy chains have reported stock outs of N95 respirators and facemasks with delays in replenishment of inventory
- **CDC is encouraging healthcare systems to implement strategies to conserve supplies**

Healthcare Supply of PPE

- Strategies for Ensuring Healthcare Systems Preparedness and Optimizing N95 Supplies:
www.cdc.gov/coronavirus/2019-ncov/hcp/healthcare-supply-ppe.html
- CDC Webinar:
www.cdc.gov/vaccines/videos/coronavirus/COVID-19-webinar.pdf
- VDH does not have PPE available for external entities. Report any healthcare facility supply chain issues to the Regional Healthcare Coalition. They may be able to leverage existing resources to support coalition members.

Resources for Healthcare Facilities

- Steps Healthcare Facilities Can Take Now to Prepare for Coronavirus Disease 2019 (COVID-19):
www.cdc.gov/coronavirus/2019-ncov/healthcare-facilities/steps-to-prepare.html
- Interim Guidance for Healthcare Facilities: Preparing for Community Transmission of COVID-19 in the United States:
www.cdc.gov/coronavirus/2019-ncov/healthcare-facilities/guidance-hcf.html
- Strategies to Prevent Spread of COVID-19 in Long-Term Care Facilities: www.cdc.gov/coronavirus/2019-ncov/healthcare-facilities/prevent-spread-in-long-term-care-facilities.html
- Interim ICD-10 Coding Guidance for COVID-19:
www.cdc.gov/nchs/data/icd/ICD-10-CM-Official-Coding-Gudance-Interim-Advice-coronavirus-feb-20-2020.pdf

Knowledge Gaps

- Source of infection
- Pathogenesis and virulence evolution of the virus
- Transmission dynamics
 - Role of aerosol transmission in non-healthcare settings
 - Role of fecal-oral transmission
- Viral shedding
- Risk factors for infection
 - Asymptomatic infection
- Seasonality

Take Home Messages

- Currently, there are no cases in Virginia
- More U.S. cases and community spread is expected
- An effective response requires a healthcare system approach
- Everyone has a role to play in preparing for COVID-19 in the community

General COVID-19 Resources

Virginia Department of Health (VDH)

- [35 Local Health Districts](#)
- www.vdh.virginia.gov/coronavirus

Centers for Disease Control and Prevention (CDC)

- COVID-19 Website: www.cdc.gov/coronavirus/2019-nCoV
- Health Alert Network (HAN):
<https://emergency.cdc.gov/han/2020.asp>

World Health Organization (WHO)

- www.who.int/emergencies/diseases/novel-coronavirus-2019



Thank you!

Please send questions to:

respiratory@vdh.virginia.gov