2019 Novel Coronavirus
Briefing for Virginia Hospitals

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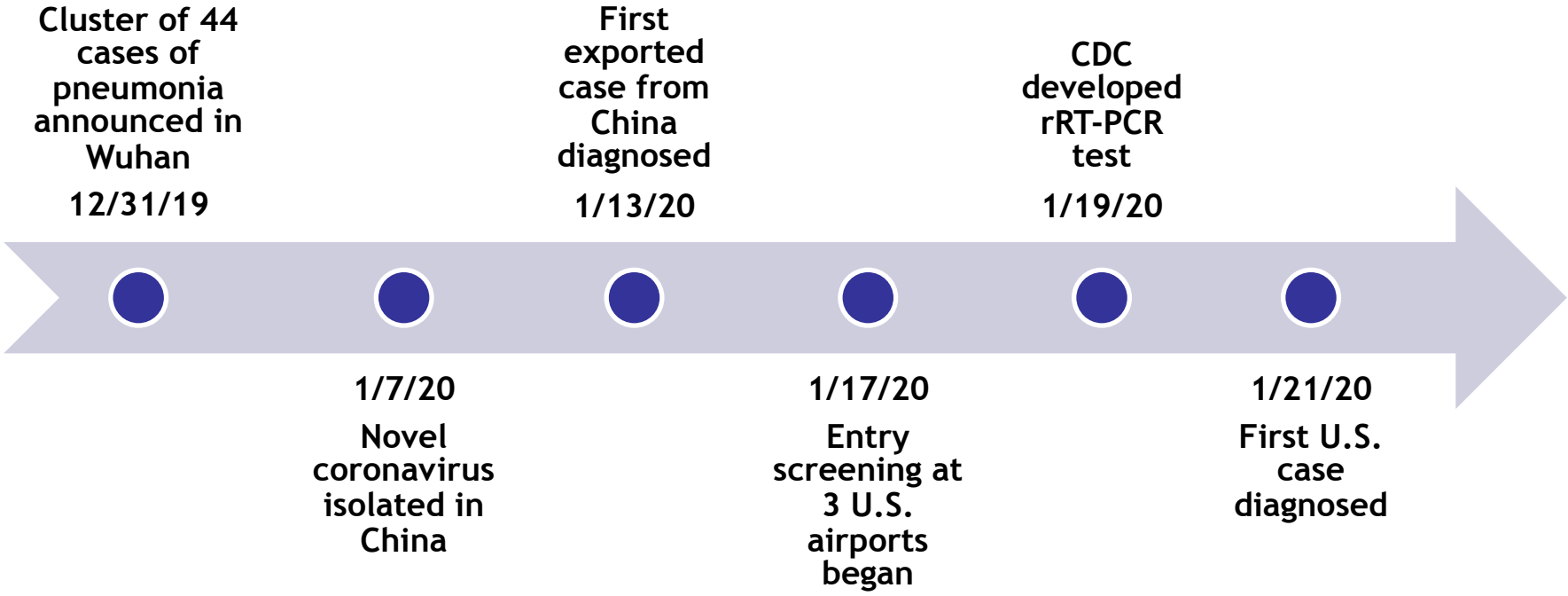
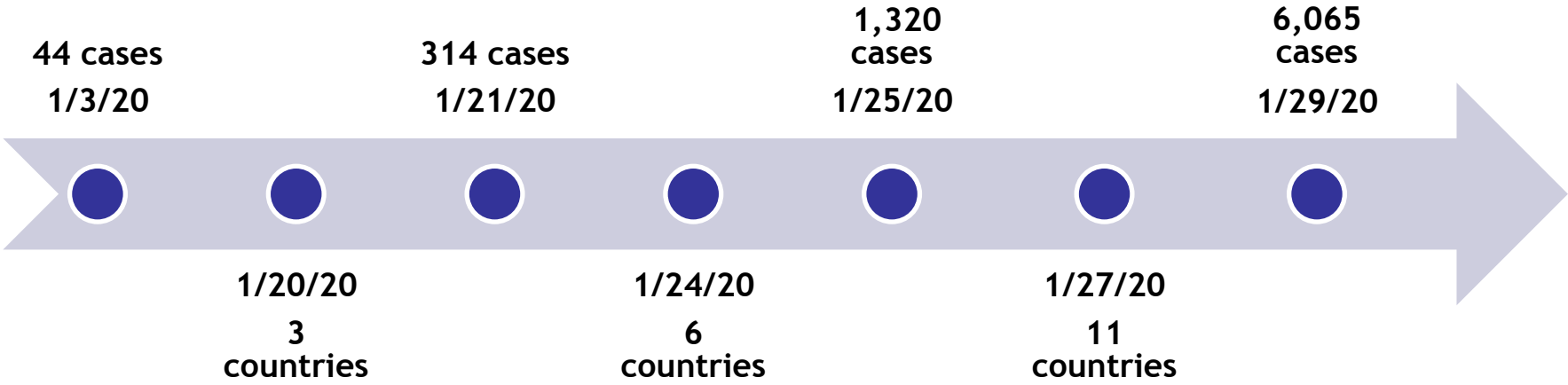
2019-nCoV Outbreak



Source: www.who.int/emergencies/diseases/novel-coronavirus-2019/situation-reports/

2019-nCoV Confirmed Cases

Reported by the World Health Organization

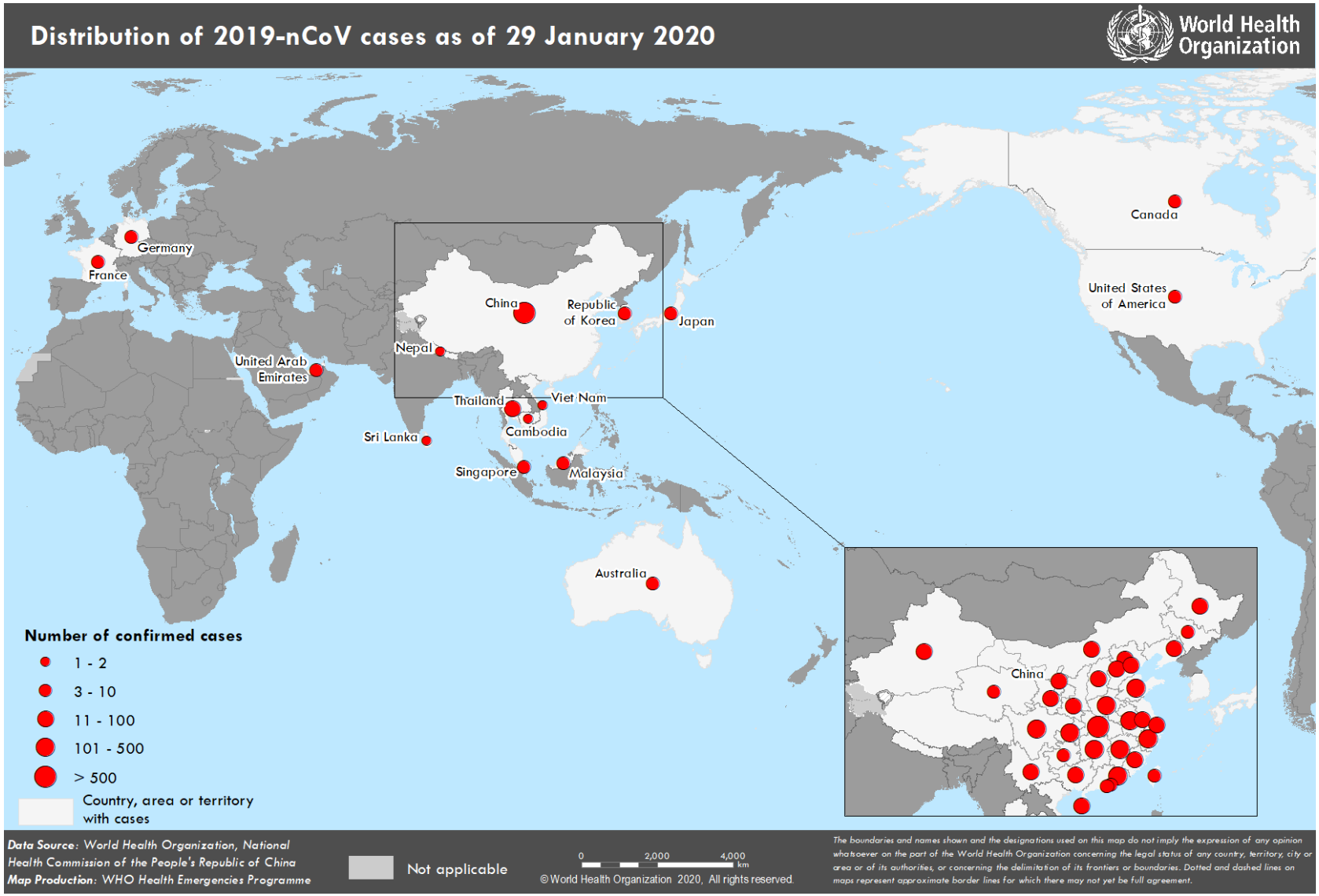


Confirmed Cases as of 1/29/20	
Total	6,065 cases
China	5,997 cases; 132 deaths
Outside of China	68 cases; 15 countries
United States	5 cases

VDH VIRGINIA DEPARTMENT OF HEALTH
To protect the health and promote the well-being of all people in Virginia.

Source: www.who.int/emergencies/diseases/novel-coronavirus-2019/situation-reports/

Countries with Confirmed Cases



Source: www.who.int/emergencies/diseases/novel-coronavirus-2019/situation-reports/

Cases in the United States

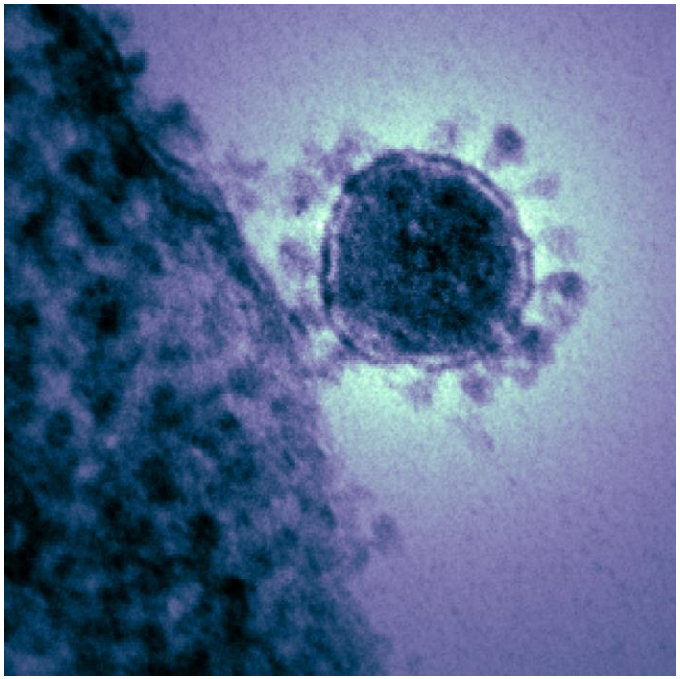
As of 1/29/20

- 5 cases
  - Travelers who recently returned from Wuhan
  - WA, IL, CA (2), AZ
- At this time NO person-to-person transmission in U.S.
- CDC considers immediate risk to public to be low
  - People exposed to ill persons are at greater risk of infection; e.g., healthcare workers and family members caring for people with 2019-CoV
- Situation is evolving
  - Future risk will depend on how well the virus spreads and how sick it makes people

Source: www.cdc.gov/coronavirus/2019-ncov/cases-in-us.html

Coronaviruses

- RNA virus
  - Alpha and beta - infect mammals
  - Delta and gamma - infect birds
- Bats are important reservoir
- Genome changes are common
  - SARS-CoV and MERS-CoV are on WHO Priority Pathogen list



Human Coronaviruses

4 HCoVs are endemic globally

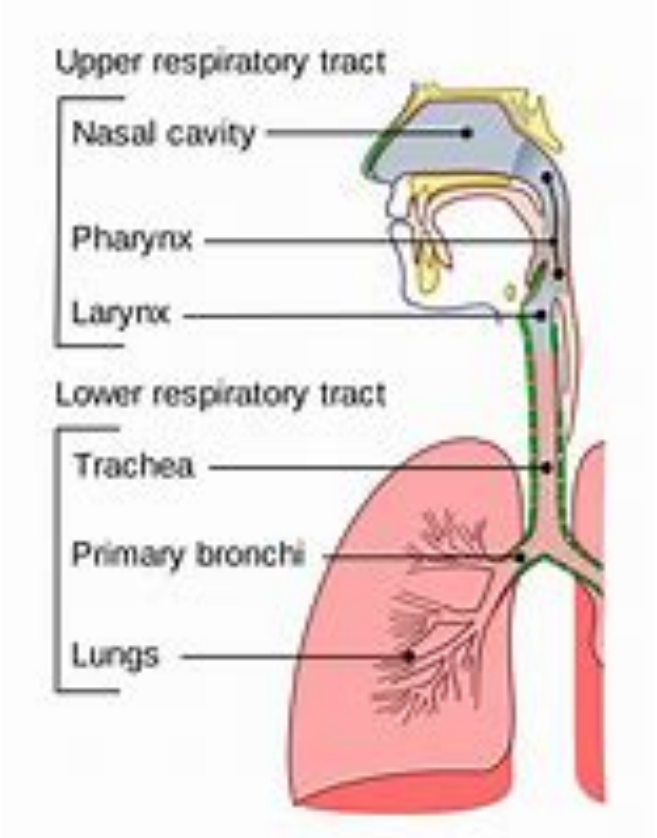
- 0%-30% of upper respiratory tract infections in adults

2 highly pathogenic HCoVs

- Lower respiratory tract infections
- 2002 – SARS
- 2012 – MERS

2019-nCoV

- Still learning about virus
- Respiratory symptoms have ranged from mild to severe



2019-nCoV

Cases outside of China

Review of 36 of 56 cases reported as of 1/28/20

- Median age = 45 years
- Range = 2-74 years
- 71% male

Cases in China

- 5,997 confirmed
- 1,239 severe
- 132 deaths

- **CDC COCA Call: Interim Guidance for Clinicians - 1/31/20 2:00 PM -3:00 PM**
- Current guidance based on SARS and MERS
- China has reported transmission before symptoms appear, which differs from SARS and MERS
- CDC is gathering data on whether asymptomatic spread with 2019-nCoV may be happening

Epidemiologic Comparison

Reported by the World Health Organization

CoV	Origin	Cases	Deaths
2019-nCoV **As of 1/29/20**	Dec 2019 (China)	6,065	132 **CFR = 2-4%**
MERS-CoV	2012 (Saudi Arabia)	2,494	858 **CFR = 34%**
SARS-CoV	2002 (China)	8,098 (None since 2004)	774 **CFR = 10%**

Sources: www.who.int/health-topics/coronavirus; diseases/novel-coronavirus-2019/situation-reports/

Transmissibility Comparison

Disease	R_0
MERS-CoV	< 1
Seasonal influenza	1-2
2019-nCoV	1.4-2.5 WHO (1.5-3.0 CDC)
SARS-CoV	3
Measles	12-18

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

WHO Strategic Objectives

- Identify, isolate and care for patients early, including providing optimized care for infected patients
- Identify and reduce transmission from the animal source
- Address crucial unknowns regarding clinical severity, extent of transmission and infection, treatment options, and accelerate the development of diagnostics, therapeutics and vaccines
- Communicate critical risk and event information to all communities and counter misinformation
- Minimize social and economic impact through multisectoral partnerships

U.S. Public Health Response

- Entry screening at 20 U.S. airports
- CDC Level 3 Travel Advisory - Avoid all nonessential travel to China
- Surveillance
- Diagnostic test developed
- Ongoing research on therapeutics
- Started on vaccine development
- Information and guidance
  - CDC website; HANs

Public Health Response in Virginia

- Coordinating with CDC and other states
- Coordinating with healthcare for early case detection and infection control
  - Guidance from CDC, VDH and DCLS
- PUI case management; contact tracing and monitoring
- Preparing for the potential of further spread in U.S.
  - Working under ICS

Public Health Response in Virginia

Education and information

- www.vdh.virginia.gov/coronavirus
- Press releases
- Targeted education
  - Colleges and universities
  - DOE
  - Local emergency managers

CDC Patient Under Investigation Criteria

As of 1/29/20

Fever **AND** symptoms of lower respiratory illness (e.g., cough, difficulty breathing) **AND** in the last 14 days before symptom onset:

- History of travel from Wuhan, China **OR**
- Close contact with a person who is under investigation for 2019-nCoV while that person was ill

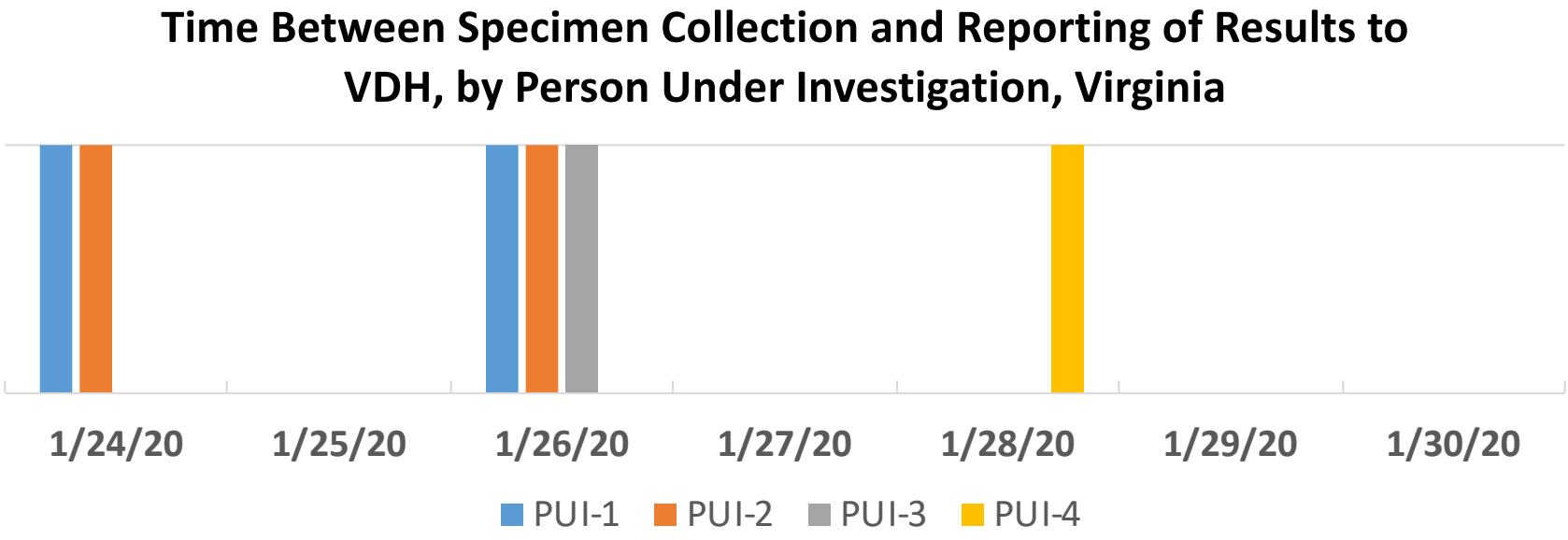
OR

Fever **OR** symptoms of lower respiratory illness (e.g., cough, difficulty breathing) **AND** in the last 14 days before symptom onset:

- Close contact with an ill laboratory-confirmed 2019-nCoV patient

Source: www.cdc.gov/coronavirus/2019-nCoV/clinical-criteria.html

PUIs in Virginia



CDC Infection Prevention and Control Recommendations for Healthcare

Prepare

- Train and educate healthcare personnel
- Implement engineering controls
- Implement environmental infection control
- Establish reporting within healthcare facilities and to public health authorities

2019 Novel Coronavirus (2019-nCoV) Hospital Preparedness Checklist: https://www.cdc.gov/coronavirus/2019-ncov/hcp/hcp-hospital-checklist.html

Source: www.cdc.gov/coronavirus/2019-nCoV/infection-control.html

CDC Infection Prevention and Control Recommendations for Healthcare

- Minimize chance for exposures before & upon arrival and during the visit
- Standard, contact, and airborne precautions, including the use of eye protection
- Manage visitor access and movement within the facility
- Monitor exposed healthcare personnel

Source: www.cdc.gov/coronavirus/2019-nCoV/infection-control.html

DCLS

Division of Consolidated Laboratory Services

2019-nCoV: Current DCLS Testing Guidance

SPECIMEN COLLECTION – CDC Testing*: Collect 1 of each specimen type below. Store and ship at 4˚C.

1 - Lower respiratory tract specimen:

- sputum
- 2-3mL bronchoalveolar lavage or tracheal aspirate

1 - Upper respiratory tract specimen:

- nasopharyngeal (NP) swab and oropharyngeal (OP) swab in VTM (in separate vials of VTM)
- 2-3mL nasopharyngeal wash/aspirate
- 2-3mL nasal aspirate

1 – Serum specimen:

- 5-10mL whole blood in serum separator tube (**adults/children**)
- ≥1mL whole blood in serum separator tube (**infants**)

*** Additional specimen types (e.g. urine and stool) should be collected and saved, if possible.**

All suspected patients under investigation (PUIs) must be evaluated and approved for testing by the Virginia Department of Health (VDH) prior to submission to DCLS. Contact your local health department epidemiology representative for assistance.

SPECIMEN COLLECTION - DCLS Testing:
1 – combined NP/OP swab in VTM

SPECIMEN SUBMISSION:

- Complete the DCLS Micro_Viro Form§§
- Indicate **"2019 novel Coronavirus testing"** on the DCLS form
- Package and ship specimens to DCLS refrigerated on ice packs
- Contact DCLS to coordinate testing and courier transport of specimens:
  EMRS: 804-335-4617
  Lead Scientist, Dr. LaToya Griffin-Thomas: 804-385-8057

DGS
DEPARTMENT OF GENERAL SERVICES

DCLS

Division of Consolidated Laboratory Services

2019-nCoV: Current DCLS Testing Guidance

Testing at DCLS

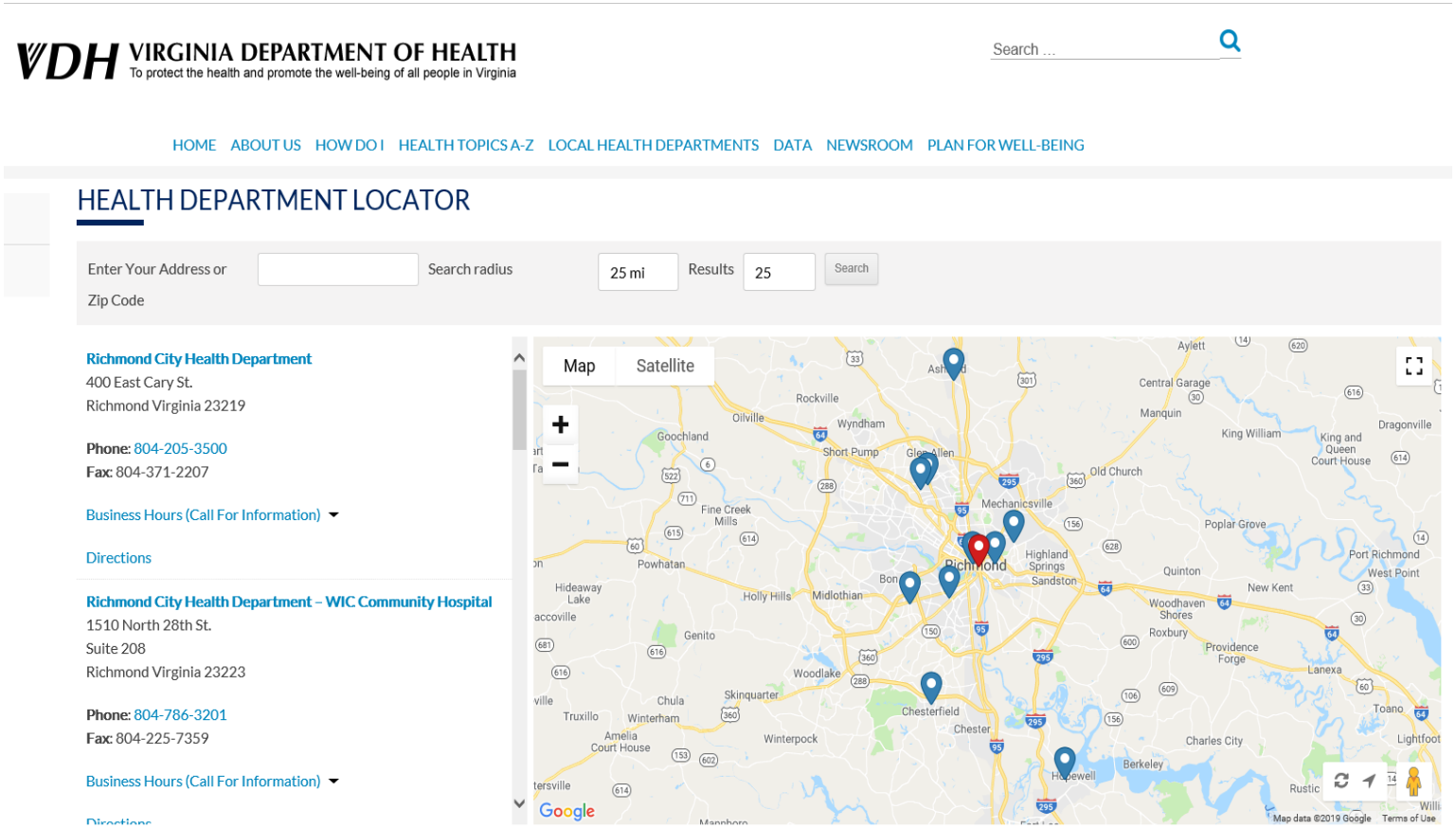
- DCLS Influenza testing will detect Influenza A, A-H3, A-2009 H1N1, and Influenza B
- Current DCLS RVP testing will detect:
  - Influenza A, A-H1, A-H3, A-2009 H1N1, and Influenza B
  - RSV-A and RSV-B
  - Parainfluenza 1, 2 and 3
  - Adenovirus B/E and Adenovirus C
  - Human Metapneumovirus
  - Human Rhinovirus
- Turnaround time for Influenza and RVP test results is 1 day after receipt of specimens (testing will be performed on weekends when needed)

Testing Kits and Shipping

- DCLS has provided all VA sentinel laboratories with one 2019-nCoV specimen collection and shipping kit. Kit send outs to all 35 health districts is in progress
  - Kit contents will allow collection and shipping of:
    - 1 NP swab with VTM
    - 1 OP swab with VTM
    - 1-NP swab/1-OP swab combined in single tube of VTM
    - 1 serum specimen
    - 1 lower respiratory specimen
- Shipping of specimens to CDC will occur via UPS (Monday-Friday). Weekend shipping will be coordinated through the CDC's Emergency Operations Center (EOC).
- 2019-nCoV specimens can be shipped as Category B

DGS DEPARTMENT OF GENERAL SERVICES

Notify Infection Control Staff and Local Health Department



http://www.vdh.virginia.gov/health-department-locator/

Interim VDH Guidance for Monitoring of Healthcare Contacts

- Healthcare or Laboratory Personnel Exposed to PUI
  - Self-monitoring until lab results received
- Healthcare or Laboratory Personnel Exposed to Confirmed Case
  - High Risk (did not use appropriate precautions)
    - Active monitoring for 14 days after last exposure
    - Case by case decision for restriction of activity
  - Some Risk (used appropriate precautions)
    - Self-monitoring for 14 days after last exposure

Interim VDH Guidance for Monitoring of Healthcare Contacts

Steps to Take Now:

- Prepare for facility occupational health to conduct monitoring in coordination with local health department
- Review policies for sick leave

Considerations for EMS Providers

- **Obtain a travel history from patients with fever and acute respiratory illness**
- **Infection Control Considerations**
  - For PUIs, place a mask on the patient as soon as possible
  - Utilize standard precautions, contact precautions, airborne precautions
  - Use eye protection (goggles or face shield) when treating and transporting
- **Transport Considerations**
  - Transport to closest appropriate facility
  - When possible, should have an appropriate isolation room
- **Decontamination**
  - Use any EPA-registered hospital disinfectant on work surfaces and equipment
  - Follow manufacturer's recommendations for use-dilution (i.e., concentration), contact time, and care in handling

Take Home Messages

- Rapidly evolving situation
  - Case counts will grow in the coming days and weeks
  - Interim guidance will change
- Vigilance, frequent communication, and coordination across healthcare and public health are critical
- More to learn about transmission factors and risks
- Promote flu and respiratory infection prevention
- Updates will be communicated via www.vdh.virginia.gov/coronavirus as more information is available

Resources

- VDH www.vdh.virginia.gov/coronavirus
- CDC www.cdc.gov/coronavirus/2019-nCoV
- WHO www.who.int/emergencies/diseases/novel-coronavirus-2019

Thank you!

Please send questions to:

respiratory@vdh.virginia.gov

VDH VIRGINIA DEPARTMENT OF HEALTH

To protect the health and promote the well-being of all people in Virginia.