

6-18-2020

## **Covid-19 Clinical Update 6/18/2020**

George Washington University

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1. EPIDEMIOLOGY

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3. TREATMENT

4. GW UPDATES

# COVID-19 UPDATE

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6/18/2020

HEALTH

## Pangolin, animal linked to coronavirus, removed from China's list of traditional medicines

Adrianna Rodriguez USA TODAY

Published 9:27 a.m. ET Jun. 15, 2020 | Updated 9:30 a.m. ET Jun. 15, 2020



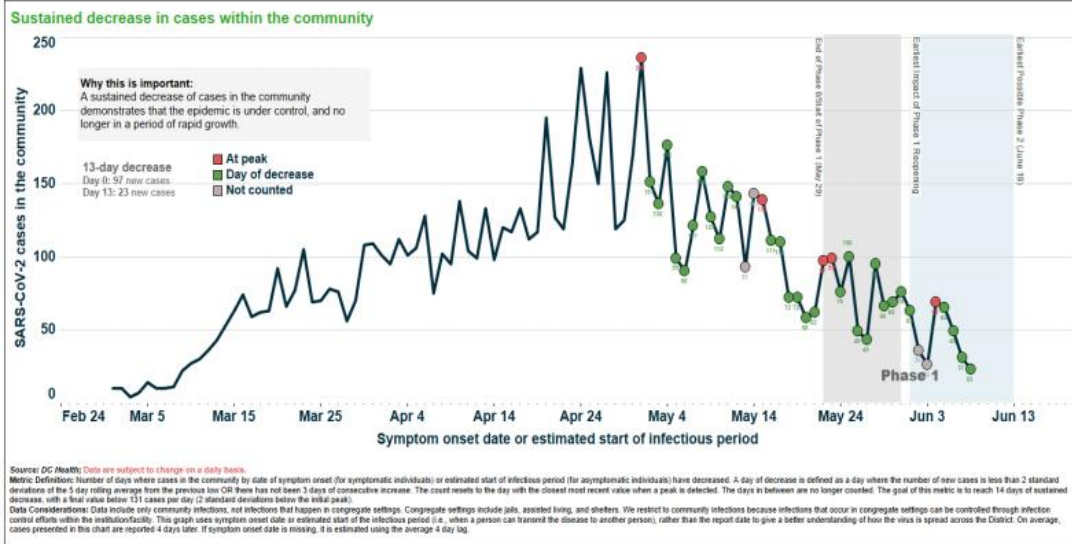
**Coronavirus: New study shows the pangolin may be linked to the illness**

This animal, the heavily trafficked pangolin, may be the key in how the new coronavirus spread from animals to humans.  
USA TODAY

# Disclosures

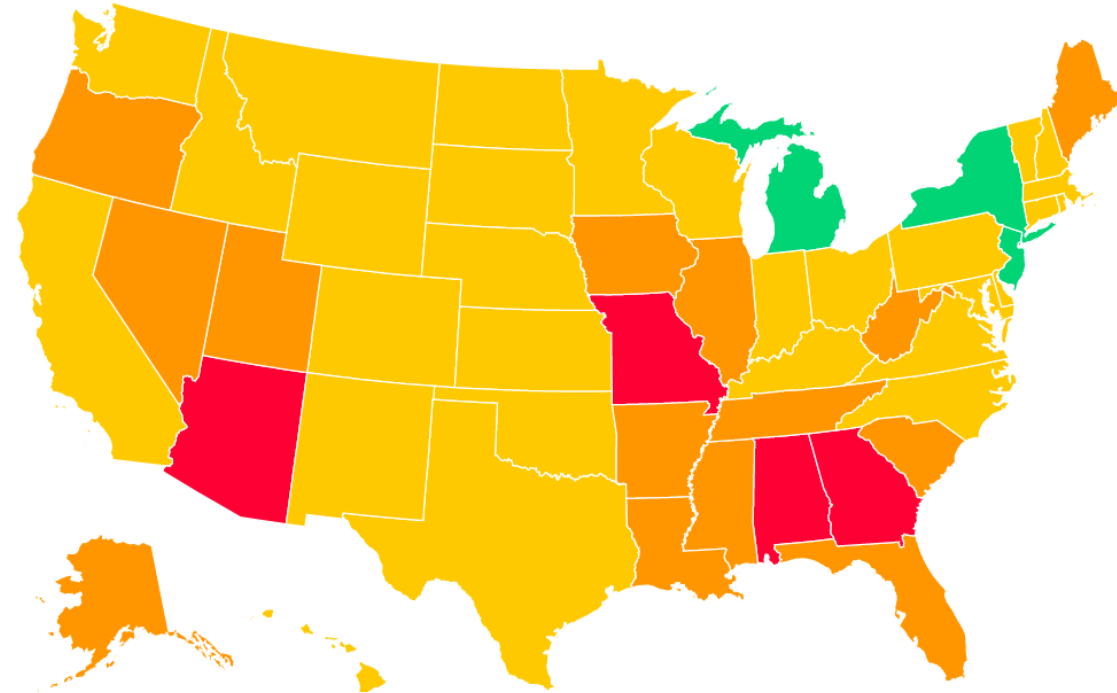
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- “Publishing by headline” and pre-publication data
- No financial COI



# Covid Act Now

COVID Risk: ● Active or imminent outbreak ● At risk ● Controlled disease growth ● On track to contain COVID



Metric	Phase 2	Where we are today (data as of 6/15/20)
<b>Community Spread</b>		
Sustained decrease in community spread	14 days	13 days
Low transmission rate (Rt)	$R_t < 1$ for 5 days	$R_t = .85$ (<1 for over 5 days)
<b>Testing Capacity</b>		
Low positivity rate	<15% for 7 days	5.2% (over 7 days <15%)
<b>Health Care System Capacity</b>		
Sufficient health care capacity without surge	<80% for 14 days	74.9% occupancy (less than 80% for 14 days)
<b>Contact Tracing Capacity</b>		
Make first contact attempt for new positive cases within 1 day of notification	over 90%	15.5% (cases reported 6/14)
Make first contact attempt for close contacts of new positive cases within 2 days of identification	over 90%	N/A




# Masks



# MMWR: Co-Morbidities in USA

**Hospitalizations were 6 times higher and deaths 12 times higher for COVID-19 patients with reported underlying conditions\***

**MOST FREQUENTLY REPORTED UNDERLYING CONDITIONS**

<b>CARDIOVASCULAR DISEASE</b> 	<b>DIABETES</b> 	<b>CHRONIC LUNG DISEASE</b> 
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\*compared to those with no reported underlying health conditions

CDC.GOV [bit.ly/MMWR61520](https://bit.ly/MMWR61520) MMWR

Centers for Disease Control and Prevention

# MMWR

Morbidity and Mortality Weekly Report

Early Release / Vol. 69

June 15, 2020

## Coronavirus Disease 2019 Case Surveillance — United States, January 22–May 30, 2020

Erin K. Stokes, MPH<sup>1,\*</sup>; Laura D. Zambrano, PhD<sup>1,\*</sup>; Kayla N. Anderson, PhD<sup>1</sup>; Elynn P. Marder, DrPH<sup>1</sup>; Kala M. Raz, MPH<sup>1</sup>; Suad El Burai Felix, MPH<sup>1</sup>; Yunfeng Tie, PhD<sup>1</sup>; Kathleen E. Fullerton, MPH<sup>1</sup>

The coronavirus disease 2019 (COVID-19) pandemic resulted in 5,817,385 reported cases and 362,705 deaths worldwide through May 30, 2020,<sup>†</sup> including 1,761,503 aggregated reported cases and 103,700 deaths in the United States.<sup>§</sup> Previous analyses during February–early April 2020 indicated that age  $\geq 65$  years and underlying health conditions were associated with a higher risk for severe outcomes, which were less common among children aged  $< 18$  years (1–3). This report describes demographic characteristics, underlying health conditions, symptoms, and outcomes among 1,320,488 laboratory-confirmed COVID-19 cases individually reported to CDC during January 22–May 30, 2020. Cumulative incidence, 403.6 cases per 100,000 persons,<sup>¶</sup> was similar among males (401.1) and females (406.0) and highest among persons aged  $\geq 80$  years (902.0). Among 599,636 (45%) cases with known information, 33% of persons were Hispanic or Latino of any race (Hispanic), 22% were non-Hispanic

black (black), and 1.3% were non-Hispanic American Indian or Alaska Native (AI/AN). Among 287,320 (22%) cases with sufficient data on underlying health conditions, the most common were cardiovascular disease (32%), diabetes (30%), and chronic lung disease (18%). Overall, 184,673 (14%) patients were hospitalized, 29,837 (2%) were admitted to an intensive care unit (ICU), and 71,116 (5%) died. Hospitalizations were six times higher among patients with a reported underlying condition (45.4%) than those without reported underlying conditions (7.6%). Deaths were 12 times higher among patients with reported underlying conditions (19.5%) compared with those without reported underlying conditions (1.6%). The COVID-19 pandemic continues to be severe, particularly in certain population groups. These preliminary findings underscore the need to build on current efforts to collect and analyze case data, especially among those with underlying health conditions. These data are used to monitor trends in COVID-19 illness, identify and respond to localized incidence increase, and inform policies and practices designed to reduce transmission in the United States.

State and territorial health departments report daily aggregate counts of COVID-19 cases and deaths to CDC; these were tabulated according to date of report to examine reporting trends during January 22–May 30. In addition to aggregate counts, individual COVID-19 case reports were submitted via a CDC COVID-19 case report form\*\* and the National Notifiable Diseases Surveillance System (NNDSS).<sup>††</sup>

\* These authors contributed equally to this report.

<sup>†</sup> <https://www.who.int/emergencies/diseases/novel-coronavirus-2019/situation-reports>.

<sup>§</sup> CDC official counts of cases and deaths, released daily on <https://www.cdc.gov/coronavirus/2019-ncov/cases-updates/cases-in-us.html>, are aggregate counts from reporting jurisdictions. Throughout the COVID-19 pandemic, CDC has been tracking both aggregate and individual (i.e., line-list) counts of cases and deaths. For aggregate counts, from January 22 to March 2, 2020, CDC provided laboratory confirmation for all U.S. confirmed cases. Starting March 3, jurisdiction partners validated aggregate counts each night for report out at 12 p.m. the following day by CDC. For individual counts, jurisdiction partners electronically submit standardized information for individual cases of

# Treatment Updates: Headlines

FDA NEWS RELEASE

## Coronavirus (COVID-19) Update: FDA Revokes Emergency Use Authorization for Chloroquine and Hydroxychloroquine

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For Immediate Release: June 15, 2020

MEDICINE

## Common Steroid Could Be Cheap and Effective Treatment for Severe COVID-19

The results of a trial that found dexamethasone reduced the risk of death in extremely ill coronavirus patients have yet to be published, but some doctors are already embracing them

By Tanya Lewis on June 17, 2020

REUTERS Business Markets World Politics TV More

HEALTH NEWS JUNE 17, 2020 / 4:54 PM / UPDATED 4 HOURS AGO

### Roche rheumatoid arthritis drug fails to help COVID-19 patients in Italian study

Emilio Parodi, Carl O'Donnell

3 MIN READ

[Twitter](#) [Facebook](#)

(Reuters) - Roche's rheumatoid arthritis drug Actemra failed to help patients with early-stage COVID-19 pneumonia in an Italian study, the latest instance in which an anti-inflammatory drug has fallen through in a coronavirus trial.

REUTERS Business Markets World Politics TV More

WORLD NEWS JUNE 17, 2020 / 1:20 AM / UPDATED 5 HOURS AGO

### Steroid should be kept for serious coronavirus cases, WHO says

Kate Kelland, Emma Farge

5 MIN READ

[Twitter](#) [Facebook](#)

LONDON/GENEVA (Reuters) - A cheap steroid that can help save the lives of patients

# MGH TREATMENT GUIDE FOR CRITICALLY ILL PATIENTS WITH COVID-19

## PRESENTATION

### NOTABLE SX

- ~65-80% Cough
- ~45% Febrile initially
- ~15% URI Sx
- ~10% GI Sx
- Acute worsening after early mild sx

### HIGH RISK FOR SEVERE DZ

- Age >55
- Comorbid diseases:
  - Pulm, cardiac, renal
  - Diabetes, HTN
  - Immunocompromise

### LABS INDICATING SEVERE DZ

- D-dimer >1000
- CPK >2x ULN
- CRP >100, LDH >245
- Troponin elevated/uptrending
- Abs lymphocyte count <0.8
- Ferritin >300

## DIAGNOSTICS

### DAILY LABS

- CBC with diff (trend lymphocyte ct)
- CMP
- CPK

### RISK STRAT Q2-3 DAY PRN

- D-dimer
- Ferritin/CRP/ESR
- LDH
- EKG

### ONE TIME TEST FOR ALL PTS

- HBV, HCV, HIV testing
- Influenza A/B, RSV
- Additional resp virus per ID guide
- Tracheal aspirate if intubated
- SARS-CoV2 (if not already sent)

## RESPIRATORY FAILURE

### CONSIDER EARLY INTUBATION IN ICU

**\*\*AVOID USING HFNC or NIPPV\*\***

**WARNING SIGNS: INC FiO2, DEC SaO2, CXR WORSE**

### LUNG PROTECTIVE VENTILATION

- Vt 4-6 ml/kg predicted body weight
- Plateau pressure <30
- Driving pressure (Pplat-PEEP) <15
- Target SaO2 90-96%, PaO2 >60
- Starting PEEP 8-10 cmH2O

### CONSERVATIVE FLUID STRATEGY

- Diuresis as tolerated by hemodynamics/Creat
- NO maintenance fluids

### PEEP TITRATION

Best PEEP by tidal compliance or ARDSnet low PEEP table

### PRONE

Early consideration if cont. hypoxemia or elevated airway pressures

### ADDITIONAL THERAPIES

- Paralytics for vent dysynchrony, not routine
- Inhaled NO: up to 80 ppm (no epoprostenol)

IF WORSENING ↓

### ECMO CONSULT

if continued hypoxemia or elevated airway pressures

### DAILY QUALITY BUNDLE

- Daily SAT/SBT when appropriate
- ABCDE bundle

## HEMODYNAMICS

- Norepinephrine first choice pressor
- IF WORSENING:
  - Consider myocarditis/cardiogenic shock
  - Obtain POCUS echo, EKG, trop, CVO2 (formal TTE if high concern)

## CHANGE TO USUAL CARE

- **NO ROUTINE DAILY CXR**
- MINIMIZE staff contact in room
- HIGH THRESHOLD for bronchoscopy
- HIGH THRESHOLD to travel
- BUNDLE bedside procedures
- Appropriate guideline-based isolation for aerosol generating procedures:
  - Bronchoscopy
  - Intubation/extubation
  - AVOID nebs, prefer MDIs

## THERAPEUTICS

### ALL ICU ADMISSIONS

- Low threshold for empiric abx
- WITH ID GUIDANCE:
  - Consider hydroxychloroquine and statin
  - Remdesivir through clinical trial

### IMMUNE MODULATION

- Immunomodulatory therapies only in consultation with ID and critical care attending
- **NO STEROIDS** for resp failure, consider only in s/o additional indication including potentially septic shock

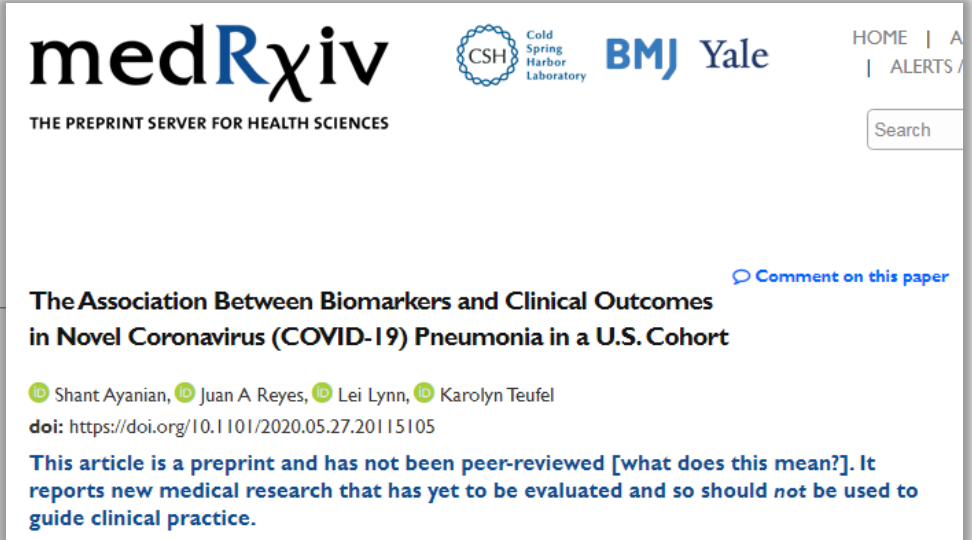
+ Anticoagulation

March 2020



# GW COVID-19 News

- ID Research Coordinators screening patients for trials
- GW medical students calling patients for follow-up study
- GW Hospitalists research on biomarkers in COVID-19:
  - First report of its kind in US patients
  - 299 patients; 69 required transfer to ICU, 39 required intubation, 71 died.
  - HTN/CVA/CAD/CKD associated with increased odds of death
  - Biomarkers of inflammation and coagulopathy (LDH, D-DIMER, IL6, CRP, FERRITIN) all had independent increased risk for each of the 3 major outcomes (ICU transfer, intubation, death). These were statistically significant and independent of the co-morbidities.
  - Can help identify patients at risk of decompensation
  - It remains unclear whether these inflammatory indices are biologic markers of disease or mediators of cytokine storm



The screenshot shows the top portion of a medRxiv preprint page. At the top left is the medRxiv logo with the tagline 'THE PREPRINT SERVER FOR HEALTH SCIENCES'. To the right are logos for CSH Cold Spring Harbor Laboratory, BMJ, and Yale. In the top right corner, there are navigation links for 'HOME | A' and 'ALERTS /', and a search box. The main title of the article is 'The Association Between Biomarkers and Clinical Outcomes in Novel Coronavirus (COVID-19) Pneumonia in a U.S. Cohort', with a 'Comment on this paper' link. Below the title, the authors are listed: Shant Ayanian, Juan A Reyes, Lei Lynn, and Karolyn Teufel, each with an ORCID icon. The DOI is provided as 'https://doi.org/10.1101/2020.05.27.20115105'. A prominent warning message states: 'This article is a preprint and has not been peer-reviewed [what does this mean?]. It reports new medical research that has yet to be evaluated and so should not be used to guide clinical practice.'