https://coronavirus.jhu.edu/map-faq.html
Number of Cases: 1,289
Number of deaths: 24
Arizona Community Risk: Increasing with some area of heightened risk

COVID-19 Cases by Week:
- Jan 26: 1
- Feb 9: 21
- Feb 23: 91
- Mar 8: 5
- Mar 22: 440
- Apr 5: 788

COVID-19 Cases by Age Group:
- Less than 5 years: 1
- 5 - 19 years: 33
- 20 - 44 years: 471
- 45 - 64 years: 249
- 65 - 64 years: 229
- 65 years and older: 301

COVID-19 Cases by Gender:
- Male: 51%
- Female: 49%

COVID-19 Cases by Laboratory Type:
- ASPHL: 61

Date Updated: 3/31/2020
COVID-19 Testing at Private Laboratories and Arizona State Public Health Laboratory

**Total COVID-19 Testing**
19,371

**COVID-19 Testing by Week**
This represents a running total by week.

**COVID-19 Testing by Age Group**

**COVID-19 Testing by Results**

*Result: Not Detected*

%: 94%

*Number of Cases: 18,209*

Date Updated: 3/31/2020

ARIZONA
March 30th: Governor Ducey announced in a press conference that he has signed an executive order instituting a "stay home, stay healthy, stay connected" policy that took effect at 5pm last night.

Individuals are instructed to limit their time away from their place of residence except to participate in "essential activities", work, volunteer, or participate in "essential functions", or utilize services or products provided by "essential businesses". It also makes an exception for individuals who are sole proprietors of businesses not currently open to the public. What constitutes an "essential business" was laid out in last week's executive order on essential services.

"Essential activities" include obtaining necessary supplies for family and pets, seeking medical care, caring for family and pets in another household, engaging in outdoor activities, and participating in constitutionally protected activities.
March 30th: Governor Doug Ducey and Superintendent of Public Instruction Kathy Hoffman today announced the extension of Arizona school closures through the end of the school year.

The extension follows updated guidance from the Centers for Disease Control and Prevention (CDC) and an announcement from the White House extending physical distancing guidelines until April 30, 2020.
ASBP is requesting a waiver from the Governors office

DEA issued a guidance letter clarifying when oral Schedule II prescriptions are permitted and provides temporary exceptions to this regulation during this Public Health Emergency declared by the Secretary of Health and Human Services.

21 CFR 1306.11(d)(1)-(4). Temporary Exceptions:

1. DEA recognizes that it may not be feasible for a practitioner to deliver, in response to an emergency oral prescription, the follow-up paper prescription to the pharmacy within 7 days therefore the DEA hereby grants practitioners 15 days within which to provide that prescription to the pharmacy. This exception is granted from March 16, 2020, through the duration of the Public Health Emergency.

2. DEA recognizes there may be times when providing the pharmacy with a paper prescription as a follow up to an emergency oral prescription may prove very challenging or impossible. Thus, for the duration of the Public Health Emergency, DEA hereby allows the practitioner to send the follow-up prescription to the pharmacy via facsimile, or to take a photograph or scan of this follow-up prescription and send the photograph or scan to the pharmacy in place of the paper prescription. It is the responsibility of the practitioner to ensure that, whichever method the practitioner uses, the prescription contains all of the required information outlined in 21 CFR 1306.05 and 1306.11(d), including the statement that the prescription is “Authorization for Emergency Dispensing.” As a condition of this exception, the practitioners who choose to send this specific type of prescription to the pharmacy via facsimile, photograph, or scan must maintain the original paper prescription in the patient file.

NOTE: Regardless of any exceptions that DEA has made in response to COVID-19, pharmacists continue to have a corresponding responsibility to ensure that any controlled substance prescription for they fill was issued for a legitimate medical purpose by a practitioner acting in the usual course of his/her professional practice. 21 CFR 1306.04(a).
Pharmacies are being inundated with companies promoting potentially fraudulent materials related to COVID-19 testing, including marketing FDA certification. The FDA is still in the process of reviewing many of these authorizations and have shared with us a few key points to help discern whether a company is legitimate.

- **CLICK HERE:** [FDA list of all current authorized tests, updated daily](#)

- **As of March 29, 2020:**
  - There is no “Home Test” authorized for SARS-CoV-2 (COVID-19).
  - There are emergency use authorized (EUA) point of care (POC) tests, but these tests are not CLIA waived.

- Concerns regarding fraudulent products, including tests, should be sent to: [FDA-COVID-19-Fraudulent-Products@fda.hhs.gov](mailto:FDA-COVID-19-Fraudulent-Products@fda.hhs.gov)
**Novel Coronavirus 2019 (COVID-19) Outbreak: Guidance for Quarantine for Household Contacts**

If you live in the same home as someone with respiratory symptoms (cough or shortness of breath) OR someone with COVID-19, you should stay at home and quarantine:

- Separate yourself from the ill person (people) in the home.
- Stay at home for 14 days after separating yourself from the ill person, except to get essential medical care, prescriptions, and food. Do not go to work, school, or public areas (e.g., shopping centers, movie theaters, stadiums, etc.). Do not use public transportation, including rideshares and taxis. Do not go on long-distance travel.
- Call ahead before visiting your doctor and reschedule all non-essential medical appointments.
- Cover your coughs and sneezes.
- Wash your hands and avoid touching your eyes, nose, and mouth.
- Avoid sharing household items like dishes, cups, eating utensils, and bedding.
- Monitor your temperature & symptoms for 14 days after separating yourself from the ill person (people) in the home.
  - Temperature monitoring: Please take and record your temperature daily.
  - Symptom monitoring: The following symptoms could be associated with COVID-19: fever, cough, sore throat, difficulty breathing or shortness of breath, muscle aches, headache, abdominal discomfort, vomiting, or diarrhea.

If you develop fever or any of the symptoms listed:
- Stay home away from others until 72 hours after your fever and symptoms of acute infection are gone.

Should you elect to seek healthcare please call ahead before going to see your medical appointment, be sure to tell your healthcare provider about your close contact with someone who has respiratory symptoms or is confirmed to have COVID-19.

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**Infectious Period**

**Novel Coronavirus 2019 (COVID-19) Outbreak: Guidance for Home Isolation**

If you have tested positive for COVID-19, you should:

- Stay at home, except to get essential medical care. Including:
  - Work, school, or public areas
  - Public transportation, rideshare, or taxis

- Separate yourself from others in the home, as much as possible. Stay in a separate room and use a separate bathroom, if possible.
- Cover your coughs and sneezes with a tissue or your elbow.
- Wash your hands often with soap and warm water for at least 20 seconds.
- Avoid touching your eyes, nose, and mouth.
- Do not share household items like dishes, cups, eating utensils, and bedding.
- Cancel all non-essential medical appointments and call ahead to your provider before you attend essential medical appointments.
- Monitor your symptoms and seek medical care if your illness is worsening.
  - Before going to your medical appointment, call the healthcare provider and tell them that you have, or are being evaluated for, COVID-19.

**You will be asked to stay in home isolation:**

1) If you have tested positive for COVID-19, you should:
   - Remain in home isolation for 7 days after your COVID-19 testing if your fever and symptoms of acute infection are gone OR until 72 hours after your fever and symptoms of acute infection are gone, whichever is longer.
2) If you have a fever and respiratory symptoms and have not tested positive for COVID-19, you should:
   - Stay home away from others until 72 hours after your fever and symptoms of acute infection are gone.

For more information, please visit the CDC website: [https://www.cdc.gov/coronavirus/2019-ncov/](https://www.cdc.gov/coronavirus/2019-ncov/)

**Current as of 3/20/20. Recommendations are subject to change as the situation evolves.**

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COVID-19 testing
Testing for COVID-19 is available at:
- Arizona State Public Health Laboratory (ASPHL) for patients who meet the Persons Under Investigation (PUI) criteria below and
- At commercial laboratories (LabCorp, Quest Diagnostics, and others) and drive-through testing sites for patients who do not meet PUI criteria and healthcare providers would like to test. Do not call Public Health to obtain this testing.

To obtain approval for testing at ASPHL:
The patient must meet the PUI criteria below and the provider must contact Maricopa County Department of Public Health. Testing can be ordered by healthcare providers through commercial laboratories without Public Health approval. Healthcare providers should follow their facility’s protocol for ordering send-out commercial laboratory tests.

Criteria to Guide Evaluation of Persons Under Investigation (PUI)

<table>
<thead>
<tr>
<th>Clinical Features</th>
<th>Plus</th>
<th>Epidemiologic Risk</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fever 1 OR signs/symptoms of lower respiratory illness (e.g., cough or shortness of breath) NOT requiring hospitalization</td>
<td>AND</td>
<td>Any person, including health care workers, who has had close contact with a laboratory-confirmed COVID-19 patient within 14 days of symptom onset</td>
</tr>
<tr>
<td>Fever 2 AND signs/symptoms of a lower respiratory illness (e.g., cough or shortness of breath) NOT requiring hospitalization in a person with a critical/high-risk infrastructure occupation OR who lives in a congregate setting</td>
<td>AND</td>
<td>No source of exposure has been identified</td>
</tr>
<tr>
<td>Fever 2 AND severe acute lower respiratory illness (e.g., pneumonia, ARDS) requiring hospitalization, radiographic confirmation of pneumonia of unknown etiology</td>
<td>AND</td>
<td>No source of exposure has been identified</td>
</tr>
</tbody>
</table>

1Fever may be subjective or confirmed.
2For healthcare personnel, testing may be considered if there has been exposure to a person with suspected COVID-19 without laboratory confirmation.
3Close contact is defined at the CDC website: https://www.cdc.gov/coronavirus/2019-ncov/hcp/clinical-criteria.html
4Documentation of laboratory-confirmation of COVID-19 may not be possible for travelers or persons caring for patients in other countries.
5Consider obtaining testing for influenza and/or a viral respiratory panel.
6Critical and high-risk infrastructure sectors include: School personnel, Childcare Workers, Jail/Prison personnel, Energy, Water Systems, Healthcare, First Responders, Nuclear Reactors, Materials, and Waste. If a job is not listed, please see Arizona’s List of “Essential Services”.
7Jail/prison, long-term care facility or nursing home, university housing, or other similar setting

Contact your local county health department for patients who meet the PUI criteria.

Non-PUI & HCP testing:
- Providers call: 1-844-542-8201
- Public call: 211
WORKFORCE NEEDS?

DO YOU HAVE NEEDS FOR ADDITIONAL PHARMACISTS, TECHNICIANS?

WORKING TO FIND WAYS TO PUT THOSE INTERESTED IN TOUCH WITH EMPLOYERS?
ASHP

Open Access to Critical Care Pharmacy Specialty Review
ASHP is committed to supporting all healthcare providers from around the world during the COVID-19 pandemic. We have opened access to ASHP’s Critical Care Pharmacy Specialty Review Course, Practice Exam, and Core Therapeutic Modules package, making it available to all pharmacists at no cost through May 31.

Please use discount COVID-19 at checkout.

ASCP

Five-Star Antibiotic Stewardship for Older Adults
In an effort to support our senior care pharmacists during the fight against COVID-19, we are opening access to our elite workshop recording worth 4.0 continuing pharmacy education (CPE) credits.

Recently, the Centers for Medicare & Medicaid Services (CMS) has released guidance and fact sheets around their prioritization of survey activities during this time of enhanced and focused inspections. To ensure you are prepared to prevent the spread of COVID-19, utilize this extraordinary member resource at no cost!
RESOURCES
KAM GANDHI

Executive Director
AZ Board of Pharmacy
FAQ’S

Board of Pharmacy Task Force Updates

If you have concerns/questions for the Board of Pharmacy to consider:

CLICK HERE
COVID-19
RAASi and NSAIDs

LINDSAY E. DAVIS, PHARM.D., BCPS, ASH-CHC, TTS, FAZPA
ASSOCIATE PROFESSOR MIDWESTERN UNIVERSITY COLLEGE OF PHARMACY - GLENDALE
Renin-Angiotensin-Aldosterone System (RAAS)
RAASi in COVID-19

SITUATION

- Does RAASi therapy with ACEi/ARB:
  - increase risk of COVID-19 transmission?
  - increase severity of COVID-19 infection?
RAASi in COVID-19

BACKGROUND

- Epidemiologic studies from China
  - revealed most frequent coexisting condition was HTN
  - in largest case series (n=1099), prevalence HTN ~15%
  - found association with diagnosis of HTN + COVID-19 with ARDS + COVID-19 mortality
  - concern raised that use of ACEi/ARB may have contributed to adverse health outcomes
  - noted that HTN is common in advancing age which is emerging as the strongest predictor of COVID-19-related death

- Concern of safety of RAASi use during COVID-19 pandemic raised
  - amongst researchers
  - social media
  - healthcare providers
RAASi in COVID-19

Assessment

- More information is needed
  - the data in humans are too limited to support or refute hypotheses and concerns
  - unclear if RAASi impact (upregulate/downregulate) ACE2 expression/activity in humans
  - unclear if alternate hypothesis of ACE2 being beneficial (rather than harmful) in patients with lung injury
  - Studies are now in progress; follow at www.clinicaltrials.gov

- Withholding ACEi/ARB therapy in patients with CV disease could cause harm by worsening control of these conditions
  - Heart failure
  - Ischemic heart disease
  - Hypertension
RAASi in COVID-19

RECOMMENDATION
- Continue RAASi therapy
- If a patient on ACEi/ARB is diagnosed with COVID-19, decisions should be individualized based on hemodynamic status and clinical presentation
- Specialty position statements or communications supporting the maintenance of RAASi in clinically stable patients with COVID-19, include:
  
  **HYPERTENSION**
  - International Society of Hypertension
  - European Society of Hypertension
  - Hypertension Canada

  **Cardiovascular**
  - American Heart Association, American College of Cardiology, Heart Failure Society of America
  - Canadian Cardiovascular Society
  - European Society of Cardiology
  - British Society for Heart Failure, British Cardiovascular Society

  **Nephrology**
  - The Renal Association, United Kingdom

  **General Medicine**
  - American College of Physicians

RAAS antagonist therapy in patients with COVID-19

**Situation**

Concern for increased risk of COVID-19 transmission and infection severity due to background RAAS antagonist therapy (ACEi/ARB) has been raised within the public (e.g., social media) and healthcare sectors.

**Background**

Initial epidemiologic studies from China found an association with hypertension and both acute respiratory distress syndrome and death from COVID-19. This has led to a growing concern that this association may be due to use of specific antihypertensives, namely ACEi/ARBs.

The theory behind this is complex. Simply put, the RAAS system manages blood pressure through impacting systemic vascular resistance, including both vessel diameter and blood volume. This involves multiple enzymes and receptors, including ACE2. ACE2 has been shown to be a co-receptor for viral entry of coronaviruses. Use of ACEi/ARB therapy is known to increase the expression of ACE2.

**Assessment**

The relationship (if any) between COVID-19 transmission and/or severity of infection and ACEi/ARB use requires further investigation. It will take time to get this information. We will need to continue to follow the data and expert advice as more information becomes available.

Withholding ACEi/ARB therapy in patients with CV disease (especially heart failure, ischemic heart disease, hypertension) could cause harm by worsening the control of these conditions.

Currently, there is no experimental or clinical data demonstrating benefits or adverse outcomes with use of ACEi/ARBs or other RAAS antagonists (e.g., ARNI, MRA) in COVID-19 patients.

**Recommendation**

The Heart Failure Society of America, American College of Cardiology, and American Heart Association has advised the following:

“The HFSA, ACC, and AHA recommend continuation of RAAS antagonists for those patients who are currently prescribed such agents for indications for which these agents are known to be beneficial, such as heart failure, hypertension, or ischemic heart disease. In the event patients with cardiovascular disease are diagnosed with COVID-19, individualized treatment decisions should be made according to each patient’s hemodynamic status and clinical presentation. Therefore, be advised not to add or remove any RAAS-related treatments, beyond actions based on standard clinical practice.”

HFSACACC statement re: using RAAS antagonists in COVID-19


NEJM Special Report on RAASi in patients with COVID – published 03/30/2020


Specialty position statements or communications supporting the maintenance of RAASi in clinically stable patients with COVID-19, include:

**HYPERTENSION**
- International Society of Hypertension
- European Society of Hypertension
- Hypertension Canada

**Cardiovascular**
- American Heart Association, American College of Cardiology, Heart Failure Society of America
- Canadian Cardiovascular Society
- European Society of Cardiology
- British Society for Heart Failure, British Cardiovascular Society

**Nephrology**
- The Renal Association, United Kingdom

**General Medicine**
- American College of Physicians


JAMA Viewpoint on ACEi/ARB therapy in COVID-19 – published 03/24/2020

https://jamanetwork.com/journals/jama/fullarticle/2763803
NSAIDs in COVID-19

SITUATION
- Does NSAID therapy increase severity of COVID-19 infection?

BACKGROUND
- Warning seems to have originated out of France
- Further concern promoted by letter published in Lancet Respiratory Medicine on March 11, 2020
  - Link with COVID-19 based on research finding increased ACE2 expression with NSAID use

ASSESSMENT
- FDA and WHO have commented on this topic → both are investigating further
- Neither organization aware of any evidence showing negative effects of NSAIDs with worsening COVID-19 symptoms
  - Note: NSAIDs (as well as ASA + APAP) reduce fever → could diminish diagnostic signs in detecting infections

RECOMMENDATION
- Continue to use NSAIDs when clinically indicated
- Follow FDA recommendations as more information becomes available
# NSAID use in patients with COVID-19

## Situation
Concern for worsening COVID-19 symptoms due to NSAID use (in particular ibuprofen) has been raised within the public (e.g., social media) and healthcare sectors.

## Background
This warning seems to have originated out of France and further spurred by a letter published in Lancet Respiratory Medicine on March 11, 2020.

The French Health Minister advised the public to avoid NSAIDs (recommending acetaminophen instead) in a Twitter warning earlier this month based on reports of some French COVID-19 patients experiencing significant adverse effects.

The link between COVID-19 and NSAID use is based on evidence showing that ibuprofen (as well as ACEi, ARB, thiazolidinediones) increases the number of ACE2 receptors in the body. ACE2 has been shown to be a co-receptor for viral entry of coronaviruses.

Lancet Respiratory Medicine article
https://www.thelancet.com/action/showPdf?pii=S2213-2600%2820%2930116-8

NPR article
https://www.npr.org/sections/health-shots/2020/03/18/818026613/advice-from-france-to-avoid-ibuprofen-for-covid-19-leaves-experts-baffled

## Assessment
The FDA and World Health Organization (WHO) have commented on this topic. Neither organization is aware of any evidence showcasing negative effects of NSAIDs (including ibuprofen) with worsening COVID-19 symptoms.

Please note: NSAIDs, aspirin, and acetaminophen reduce fever and therefore could diminish diagnostic signs in detecting infections.

## Recommendation
Continue to use NSAIDs when clinically indicated.

Reminder: NSAIDs should be avoided in patients with ischemic heart disease, heart failure, hypertension, and chronic kidney disease. NSAID use is associated with recurrent ASCVD events (MI/stroke), HF exacerbation, sodium/fluid retention, and renal injury.

FDA is investigating this issue and will provide updates when more information is available.

FDA comment on NSAIDS for COVID-19

WHO has not recommended avoidance of ibuprofen use

WHO Twitter update on 03/18/2020
https://twitter.com/who/status/1240409217997189128
QUESTIONS?

We want to thank all of you for being on the front lines of this pandemic.