COVID-19
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OVERVIEW

• What is it
• Updates on the outbreak
• How is it transmitted
• Symptoms
• Treatment
• Prevention
• **Coronaviruses** are a large family of viruses that cause illness ranging from the common cold to more severe diseases
  • 4 types cause 20-30% of ‘common cold’ infections each year in adults
  • Common in many animals; can be transmitted between animals and humans
  • SARS, MERS
WHAT IS IT?

• **SARS-CoV-2** is the virus
  - Identified as cause of outbreak in Wuhan City, China 12/2019
  - Not previously identified in humans
  - Natural host suspected to be bats
  - 1st cases in China linked with an animal market

• **COVID-19** is the name of the human illness caused by this virus
As of 5/6/2020:

• **1,193,813 total cases**
• **70,802 total deaths**

ALASKA CASES

As of 5/6/2020:

- 372 total cases in AK
  - Anchorage Muni: 190
  - MatSu: 21
  - Interior: 86
- Number of cases recovered: 284
- Number of cases hospitalized to date: 38
- Number of deaths: 10

HOW IS COVID-19 SPREAD?

Figure 1. Transmission routes: droplet, airborne, direct contact, and indirect contact. (Indirect contact: routes involving a combination of hand and surface.) Definitions of ‘droplet’ and ‘droplet nuclei’ are from Atkinson et al.\(^5\)

* Transmission routes involving a combination of hand & surface = indirect contact.

https://www.journalofhospitalinfection.com/article/S0195-6701(15)00367-9/abstract
Other symptoms may include:
- Chills/Shaking
- Muscle pain
- Headache
- Sore throat
- New loss of taste or smell
- Diarrhea

Possible complications:
- Pneumonia
- Respiratory failure
- Heart failure
- Kidney failure
• CDC has a COVID Self-Checker tool on their website
• https://www.cdc.gov/coronavirus/2019-ncov/symptoms-testing
CLINICAL FEATURES

• Incubation period: **2-14 days** (mean = 4 days)

• Transmissibility \((R_0)\): each infected person infects an average of **2.5** other people*
  - Compare with measles (>12), chickenpox (>7), SARS (3), seasonal flu (1.2)

• Case fatality rate: **2%**
  - Compare with MERS (35%), SARS (10%), 1918 flu (2.5%), measles (1-2%), seasonal flu (<1%)

*Note: all of these are current estimates and subject to change as knowledge evolves*
RISK FACTORS FOR COVID-19

• Risk factors for more severe illness:
  • Age 65 and older
  • People who reside in nursing homes or long-term care facilities
  • People of all ages with underlying medical conditions
    • Chronic lung disease/asthma
    • Serious heart conditions
    • Immunocompromise
    • Severe obesity
    • Diabetes
    • Severe kidney disease
    • Liver disease
• There is a test for the virus
• It detects genetic material of the virus
• Done by taking a sample from the patient’s nose
• Test must be ordered by a medical provider
• In general, testing of asymptomatic people is only recommended in certain scenarios
**TREATMENT**

- Supportive care
- Studies are currently being done to find a medication to treat this virus and a vaccine to prevent it
  - Antivirals (remdesivir)
  - Antimicrobials (chloroquine/azithromycin)
PUBLIC HEALTH RESPONSE

• Case and contact identification and tracking
• Containment measures
  • Isolation/quarantine of sick or exposed
• Community mitigation strategies
  • Travel
  • Social distancing
  • School/business closures
We can do this, Alaska! Social distancing saves lives

Keeping a safe distance from others (at least six feet) can play a critical role in controlling the spread of pandemics. Here’s the math to show you why. Scientists measure the intensity of an infectious disease by its reproduction number ($R_0$). This modeling assumes a median incubation period of five days—meaning that if someone gets sick, it typically happens about five days after exposure.

$R_0$ is the average number of people a sick person will infect:

For COVID-19, this has been estimated at 2.5.

Here’s what it looks like if Alaskans reduce their social exposure by 75%:

<table>
<thead>
<tr>
<th>DAY 1</th>
<th>DAY 5</th>
<th>DAY 10</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Person</td>
<td>0.625 People Infected</td>
<td>2.5 People Infected</td>
</tr>
</tbody>
</table>

Here’s what it looks like if Alaskans can reduce social exposure by 50%:

<table>
<thead>
<tr>
<th>DAY 1</th>
<th>DAY 5</th>
<th>DAY 10</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Person</td>
<td>1.25 People Infected</td>
<td>15 People Infected</td>
</tr>
</tbody>
</table>

Here’s what it looks like if there is no reduction in social exposure (if no one follows Alaska’s social distancing mandate):

<table>
<thead>
<tr>
<th>DAY 1</th>
<th>DAY 5</th>
<th>DAY 10</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Person</td>
<td>2.5 People Infected</td>
<td>406 People Infected</td>
</tr>
</tbody>
</table>

It’s simple math: Staying home saves lives. Learn more at coronavirus.alaska.gov.
COVID-19 AND DOMESTIC VIOLENCE

- Abusive partners may withhold necessary items, such as hand sanitizer or disinfectants.
- Abusive partners may share misinformation about the pandemic to control or frighten survivors, or to prevent them from seeking appropriate medical attention if they have symptoms.
- Abusive partners may withhold insurance cards, threaten to cancel insurance, or prevent survivors from seeking medical attention if they need it.
- Programs that serve survivors may be significantly impacted — shelters may be full or may even stop intakes altogether. Survivors may also fear entering shelter because of being in close quarters with groups of people.
- Survivors who are older or have chronic heart or lung conditions may be at increased risk in public places where they would typically get support, like shelters, counseling centers, or courthouses.
- Travel restrictions may impact a survivor’s escape or safety plan – it may not be safe for them to use public transportation or to fly.
- An abusive partner may feel more justified and escalate their isolation tactics.

From National Domestic Violence Hotline, “Staying Safe During COVID-19”
PERSONAL PREVENTION MEASURES

- Optimize your health!
  - Quit smoking
  - Minimize alcohol
  - Healthy diet
  - Get adequate sleep
  - Regular physical activity
  - Safe socialization
  - Manage chronic conditions
RESOURCES

• Online
  • CDC.gov/coronavirus
    • Coronavirus self-checker
    • Congregate Housing Guidance
  • Alaska DHSS COVID-19 page
    • http://dhss.alaska.gov/dph/Epi/id/Pages/COVID-19/general.aspx
  • Anchorage Municipality COVID-19 page
    • https://covid-response-moa-muniorg.hub.arcgis.com/#Local

• Community
  • Alaska 2-1-1
    • https://alaska211.org/