COVID–19 Prevention
COVID-19 (SAR-CoV-2)

- SARS-CoV-2 originated in bats
- Special coronaviruses have jumped species and can be transmitted between people
- This is the third coronavirus to have done so since 2002:
  - *Severe Acute Respiratory Syndrome (SARS)* CoV emerged in Guangdong, China, in 2002
  - *Middle Eastern Respiratory Syndrome (MERS)* CoV emerged in the Middle East in 2012
  - *SARS-CoV-2* emerged in Wuhan, China, in 2019
Fever (temperature >100.4°F)
Tiredness (fatigue)
Chills
Muscle pain
Cough
Loss of taste or smell
Difficulty breathing
Headache
Sore throat

What is MIS-C?
Multisystem inflammatory syndrome in children (MIS-C) is a condition where different body parts can become inflamed, including the heart, lungs, kidneys, brain, skin, eyes, or gastrointestinal organs. We do not yet know what causes MIS-C. However, many children with MIS-C had the virus that causes COVID-19, or had been around someone with COVID-19.
Unique to New Mexico

12% of New Mexico cases are children
Vs.
5% of US cases are children
Unique to New Mexico

64,130 (12.7%) children under 18 live in homes where head of household are grandparents or other relatives.
Transmission
Prevention Starts with Education
Transmission is More Likely With Close Contact

Close Contact
(within 6 feet for 15 minutes or more)

Physical Contact

Sharing Food and bathrooms

Shared environment
(for example, offices and restaurants)

Sharing bed
Incubation Period

- The **incubation period** is the time from when someone is infected until symptoms develop.

- The SARS-CoV-2 incubation period ranges from 2 to 14 days.

- 50% of people will become ill by 5 days after they are infected.
The time during which someone infected with SARS-CoV-2 can transmit the virus to other people.

- The infectious period begins 2 days before the start of signs and symptoms of disease.
- The end of the infectious period is defined as when:
  - It is at least 10 days after the onset of illness
  - AND symptoms are improving
  - AND there has been no fever within the past 3 days
- People who are asymptomatic can also be infectious. For these people, the infectious period is more difficult to define.
Whoa! That's a big number, aren't you proud?

Person infected

Incubation period
(ranges from 2-14 days, but typically 5 days)

Signs and symptoms
(mild illness, about 10 days)
(severe illness, 2 or more weeks)

Infectious period

Starts 2 days PRIOR to symptoms

Most infectious at day 1 of symptoms

Contagion lessens with time

Image source: Center for Teaching and Learning, Johns Hopkins Bloomberg School of Public Health.
Types of Tests

01 Diagnostic Tests
Identify virus in the body (who has it?)

- These are polymerase chain reaction (PCR) tests (also called molecular tests)
- These tests give a sign that the virus is reproducing in your cells

02 Antibody Tests
Identify antibodies to the virus, usually in the blood (Who had it?) 10-14 days after infection

- Antibodies are made by your immune system to fight off viruses or bacteria
- Some antibodies (IgG) begin to develop when you are sick and can be identified after you recover
- Remember that no tests are perfect
Contact Tracing - Cases and Contacts

**Case**
- Someone who has COVID-19
- Usually has a positive laboratory test
- Suspect or probable case
- Someone exposed to a case who develops symptoms, even if they have not had a test yet

**Contacts**
(Here is our opportunity to prevent exposure and quickly notify those who have been exposed)
- Someone who had contact with a case while they were infectious
  - During their illness
  - 2 days before their illness began
- Three kinds of contact
  - Physical Contact
  - Close Contact: within 6 feet for 15+ minutes (10 or 30)
  - Proximate contact: more than 6 feet but in the same room for an extended period
## Scenario

<table>
<thead>
<tr>
<th>Student A</th>
<th>Teacher B</th>
<th>Student C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elementary School</td>
<td>Middle School</td>
<td>Cheerleader</td>
</tr>
<tr>
<td>Tests positive, second day of school</td>
<td>Spouse tests positive</td>
<td>Exhibiting Symptoms</td>
</tr>
<tr>
<td>Isolation</td>
<td>Quarantine</td>
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</tr>
<tr>
<td><strong>(Sick People) Keeps Sick people separate from healthy people</strong></td>
<td><strong>(Healthy People) Restricts movement and contact of healthy people who have been exposed</strong></td>
<td></td>
</tr>
<tr>
<td>▶ Restricted to home or hotel</td>
<td>▶ For 14 days since the last contact with the person who is infected</td>
<td></td>
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<tr>
<td>▶ Separate space in hospital to limit contact</td>
<td></td>
<td></td>
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<tr>
<td>▶ For duration of infectiousness</td>
<td></td>
<td></td>
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<tr>
<td>▶ 2 days before onset</td>
<td></td>
<td></td>
</tr>
<tr>
<td>▶ At least 10 days after onset of illness; symptoms must be improving and no fever within the past 3 days</td>
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</tbody>
</table>
Reproductive Number

The number of people one infectious person will infect if everyone that person has contact with is susceptible

- This is a good way to measure how fast a disease can spread
- The higher the reproductive number, the more people will be infected
SARS-CoV-2d (R₀=2 to 3)

R₀ = 2

What happens if we stop each case from infecting just one person?
Although we had no control over what has happened or the requirements now placed on us, we continue to value education, now more than ever and we miss our students. Through safe practices, we look forward to bringing our students back and moving forward with Resilience.