Coronavirus Contact Investigation
Sunday, March 29, 2020
11 am to 2 pm
<table>
<thead>
<tr>
<th>Time</th>
<th>Topic</th>
<th>Presenter</th>
</tr>
</thead>
<tbody>
<tr>
<td>11:00 –</td>
<td>Welcome &amp; Agenda Review</td>
<td>D’Arcy Richardson. RN, MSN Contractor, Sonoma County HSD</td>
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<td>11:10</td>
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<tr>
<td>11:10 –</td>
<td>Welcome &amp; County Update</td>
<td>Dr. Sundari Mase Sonoma County Health Officer</td>
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<td>11:20</td>
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<tr>
<td>11:20 –</td>
<td>COVID-19 Background &amp; Epidemiology</td>
<td>Lucinda Gardner Epidemiologist</td>
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<td>11:40</td>
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<tr>
<td>11:40 –</td>
<td>Lab Testing Update</td>
<td>Rachel Rees, Dr. PH Director of Laboratory Services</td>
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<td>11:55</td>
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<tr>
<td>11:55 –</td>
<td>Introduction to COVID-19 Case Interviewing &amp;</td>
<td>D’Arcy Richardson &amp; Communicable Disease Team</td>
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<tr>
<td>1:00</td>
<td>Contact Tracing</td>
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<tr>
<td>1:00 –</td>
<td>Demonstration: Interviewing Best Practices</td>
<td>Miranda Patrick &amp; Mark O’Niel, Communicable Disease Team</td>
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<tr>
<td>1:30</td>
<td>Collecting Information &amp; Data Management: The PUI Form</td>
<td>Lucinda Gardner</td>
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<tr>
<td>1:30 –</td>
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<tr>
<td>2:00</td>
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For those in the medical profession, this presentation will provide an overview of the Coronavirus pandemic, background information, latest surveillance data, public health response and strategies, specimen collection and laboratory testing followed by an in depth review of the contact investigation process.

To volunteer your services, contact PHnurse@sonoma-county.org.
Background

• Novel coronavirus identified in December 2019 in Wuhan City, Hubei Province, China

• Initially detected as a cluster of pneumonia cases with exposure to a local open-air market
About Coronaviruses

- Enveloped, single-strand RNA virus infecting both animals and humans
- The four most common strains circulate worldwide
  - 229E
  - OC43
  - NL63
  - HKU1
- Significant contributor to the “common cold”
MERS-CoV and SARS-CoV-1

Coronaviruses have also caused epidemics in humans:

- **Severe Acute Respiratory Syndrome (SARS)**
  - 2002-2004 caused 8,093 cases with 774 deaths (9.5% CFR)
  - Cases identified in China, Hong Kong, Taiwan and Toronto, Canada
  - 8 cases identified in US residents, all with travel exposure
  - Bats identified as reservoir, likely transmitted via civets

- **Middle East Respiratory Syndrome (MERS)**
  - 2012-present caused 2,494 cases with 858 deaths (34% CFR)
  - Majority of cases in Saudi Arabia
  - 2 cases identified in US residents with travel to Saudi Arabia
  - Bats identified as reservoir, likely transmitted via camels
COVID-19 and SARS-CoV-2

COVID-19

– ‘CO’ stands for ‘corona,’ ‘VI’ for ‘virus,’ and ‘D’ for disease

SARS-CoV-2

– The virus itself
# COVID-19 Time line

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dec 8, 2019</td>
<td>Severe Respiratory cases in Wuhan China</td>
</tr>
<tr>
<td>Dec 31, 2019</td>
<td>China reports to WHO severe pneumonia outbreak of unknown etiology</td>
</tr>
<tr>
<td><strong>Jan 7, 2020</strong></td>
<td>China identify <strong>novel CoV</strong> (2019-nCoV), virus sequenced/published</td>
</tr>
<tr>
<td>Jan 11, 2020</td>
<td>1&lt;sup&gt;st&lt;/sup&gt; fatality in China (61 YO male)</td>
</tr>
<tr>
<td><strong>Jan 20, 2020</strong></td>
<td>NIH working on <strong>vaccine</strong> from a previous SARS-vaccine platform</td>
</tr>
<tr>
<td>Jan 21, 2020</td>
<td>1&lt;sup&gt;st&lt;/sup&gt; case USA, CDC activates Emergency Operation Center (EOC)</td>
</tr>
<tr>
<td>Jan 22, 2020</td>
<td>China closes all public transportation Wuhan/Hubei providence</td>
</tr>
<tr>
<td>Jan 24, 2020</td>
<td>SHEMS incident command activated</td>
</tr>
<tr>
<td>Jan 30, 2020</td>
<td>WHO declares Public Health Emergency of International Concern (PHEIC)</td>
</tr>
<tr>
<td>Jan 31, 2020</td>
<td>Trump administration deny entry foreign nationals travel from China 14d</td>
</tr>
<tr>
<td>Feb 3, 2020</td>
<td>SBMF Ambulatory Incident Command activated</td>
</tr>
<tr>
<td>Feb 7, 2020</td>
<td>Li Wenliang, MD (ophthalmologist) target by China police, dies of COVID-19</td>
</tr>
<tr>
<td>Feb 11, 2020</td>
<td>WHO names virus <strong>COVID-19</strong> (China names it SARS-CoV-2)</td>
</tr>
<tr>
<td><strong>Feb 25, 2020</strong></td>
<td>NIH announces clinical trial with <strong>Remdesivir</strong></td>
</tr>
<tr>
<td>Feb 26, 2020</td>
<td>VP Mike Pence announced to be in charge of US Govt response to CoV</td>
</tr>
</tbody>
</table>
The Epidemiological Characteristics of an Outbreak of 2019 Novel Coronavirus Diseases (COVID-19) — China, 2020

December 31, 2019
A 14 counties in 1 province

January 10, 2020
B 113 counties in 20 provinces

January 20, 2020
C 627 counties in 30 provinces

January 31, 2020
D 1,310 counties in 31 provinces

February 11, 2020
E 1,386 counties in 31 provinces

No. of confirmed cases
- < 50
- ~100
- ~500
- > 1,000
- No data

Submitted: February 14, 2020; Accepted: February 14, 2020
Confirmed cases only

- By date of onset (n = 44,672)
- By date of diagnosis (n = 44,672)

4 Unusual cases of pneumonia (3 in the same family) noticed by Jixian Zhang, MD, in HICWM Hospital.

Dr. Zhang reported unusual pneumonia cases to the local CDC.

3 More cases of pneumonia found in HICWM Hospital (for a total of 7).


COVID-19 a Class B notifiable disease.
Characteristics of and Important Lessons From the Coronavirus Disease 2019 (COVID-19) Outbreak in China

Summary of a Report of 72,314 Cases From the Chinese Center for Disease Control and Prevention

Zunyou Wu, MD, PhD; Jennifer M. McGoogan, PhD

Author Affiliations | Article Information

JAMA. Published online February 24, 2020. doi:10.1001/jama.2020.2648

Case-fatality rate
• 2.3% (1023 of 44,672 confirmed cases)
• 14.8% in patients aged ≥80 years (208 of 1408)
• 8.0% in patients aged 70-79 years (312 of 3918)
• 49.0% in critical cases (1023 of 2087)

72,314 Cases (as of February 11, 2020)
• Confirmed cases: 44,672 (62%)
• Suspected cases: 16,186 (22%)
• Diagnosed cases: 10,567 (15%)
• Asymptomatic cases: 889 (1%)

Age distribution (N = 44,672)
• ≥80 years: 3% (1408 cases)
• 70-79 years: 87% (38,680 cases)
• 20-29 years: 8% (3619 cases)
• 10-19 years: 1% (549 cases)
• <10 years: 1% (416 cases)

Spectrum of disease (N = 44,415)
• Mild: 81% (36,160 cases)
• Severe: 14% (6168 cases)
• Critical: 5% (2087 cases)
COVID-19 mortality rate by age

Source: Chinese Center for Disease Control and Prevention
Global Update

3.29.2020 8:00 AM

Globally 701,525 confirmed 33,174 deaths

Source: CDC, WHO, Accessed 3.29.2020
National Update

3.29.2020 8:00 AM

- First case reported in a returning traveler in Snohomish County, WA on **January 21, 2020**
- First case of suspected community transmission reported in Solano County, CA on **February 26, 2020**
- First death reported in King County, WA on **February 29, 2020**
- As of March 29, 2020 there are 131,366 cases, 2,328 deaths

**States Reporting Cases of COVID-19 to CDC**

**Reported Cases**

(last updated March 26, 2020)

- None
- 6 to 50
- 51 to 100
- 101 to 500
- 501 to 1000
- 1001 to 5000
- 5001 or more

Sources: CDC, Washington State DOH, Solano County DPH, Accessed 3.28.2020
COVID-19 cases in the United States by date of illness onset, January 12, 2020, to March 26, 2020, at 4pm ET (n=17,849)*

[Graph showing COVID-19 cases by date of illness onset from January 12 to March 26, 2020]
California Update

- **4,643 cases**
- 120 travel-related
- 165 person-to-person
- 474 community acquired
- 950 under investigation
- **101 deaths**

**Age distribution**
- 0-17 years – 25 cases
- 18-64 years – 837 cases
- 65+ years – 442 cases
- Unknown age – 14 cases

**Sources:** CDPH, Accessed 3.29.2020
Fifty-eight diagnosed among Sonoma County residents
  - 1 case in Diamond Princess traveler excluded – non resident

12 cases associated with travel (2 Grand Princess, 2 other)
11 associated with community transmission
10 cases associated with contact to confirmed case
25 under investigation

NEW – Sonoma County Case Dashboard
- http://sonomacounty.ca.gov/Novel-Coronavirus-Storymap/
Sonoma County Cases – Epi

- 22% have been hospitalized (13/58)
- 50% men, 50% women

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-17</td>
<td>0</td>
</tr>
<tr>
<td>18-49</td>
<td>28</td>
</tr>
<tr>
<td>50-64</td>
<td>20</td>
</tr>
<tr>
<td>65+</td>
<td>10</td>
</tr>
<tr>
<td>TOTAL</td>
<td>58</td>
</tr>
</tbody>
</table>
What is a Pandemic?

The WHO defines a pandemic as “an epidemic occurring worldwide, or over a very wide area, crossing international boundaries and usually affecting a large number of people.”

WHO declared COVID-19 a pandemic on March 12, 2020
Why is a pandemic different from other disasters?

• Every community will experience the pandemic as a local event

• Can happen in many places at the same time.

• A pandemic can continue to spread illnesses in waves that can last for a year or more.

• There will be limited assistance from Federal, state and other sources of mutual aid.

• The entire community will need to work together to respond effectively
Containment vs. Mitigation

**Containment**
- Restrictions on movement
- Travel monitoring
- Isolation and quarantine
- Intensive case investigation

**Mitigation**
- Pharmaceutical Measures
- Non-pharmaceutical Interventions
  - Social distancing
  - Restrict public gatherings
  - School Closures
Current Containment and Mitigation Strategies in Sonoma County

• Containment
  – Ongoing surveillance for COVID-19
  – Active case follow-up and recommendations for those exposed to known cases
  – Quarantine and isolation

• Mitigation
  – Individual: hand and respiratory hygiene, self-shielding
  – Community: social distancing, restrict public gatherings
Community-based Interventions

1. Delay outbreak peak
2. Decompress peak burden on hospitals/infrastructure
3. Diminish overall cases and health impacts

Adapted from CDC / The Economist
Introduction to COVID-19 Case Interviewing and Contact Tracing

M. D’Arcy Richardson, RN, PHN, CNS, MSN
TB Specialist/Public Health Consultant
Contractor, Sonoma County Department of Health
3/29/2020
Learning Objectives

After this training, participants will be able to…

1. Explain the importance of case interviewing and contact tracing to flatten the COVID-19 curve
2. Describe core concepts and skills that are required to conduct an effective case interview and contact tracing
3. Explain the key elements of effective case interviews and contact tracing
4. Explain the structure and process of case interviews and contact tracing for Sonoma County
Our GOAL:

• Break transmission chains to reduce morbidity and mortality
How South Korea Flattened the Curve

The country showed that it is possible to contain the coronavirus without shutting down the economy, but experts are unsure whether its lessons can work abroad.

As global deaths from the virus surge past 15,000, officials and experts worldwide are scrutinizing South Korea for lessons. And those lessons, while hardly easy, appear relatively straightforward and affordable: swift action, widespread testing and contact tracing, and critical support from citizens.
1. Identify, isolate, and treat people with confirmed COVID-19

2. Find and evaluate people who have been in contact with COVID-19 cases and provide appropriate guidance on isolation, monitor symptoms, and test and treat as needed

3. Use targeted testing strategies for high-risk/high-exposure groups to identify cases and potential transmission routes early

4. Identify settings at high risk for transmission of COVID-19 and apply effective infection control measures
Core Concepts and Skills Required for Conducting COVID-19 Case Interviews and Contact Tracing
What Core Concepts and Skills are Required to Conduct Contact Tracing?

- Knowledge of COVID-19 transmission
- Knowledge of symptoms and disease progression
  - Effective interviewing and patient education skills
  - Data management and analysis skills
Definitions
Who are Contacts?

- Any person who lives with, works with, has had direct contact with, traveled with, or has been at the same locations as the case during the time they have been infectious.
What is the Infectious Period?

The time period during which a COVID+ patient can transmit the disease to others

<table>
<thead>
<tr>
<th>Infectious period</th>
</tr>
</thead>
<tbody>
<tr>
<td>3-6 days before</td>
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</table>
Importance of Symptom Onset & the Infectious Period

- Focuses investigation on contacts most at risk for exposure
  - Especially important if the investigation involves congregate settings or vulnerable populations

- Sets the timeframe for contact follow up
  - 14 days after last known contact with an infectious case
What is Contact Tracing?

A systematic process to:

- Identify persons (contacts) with likely exposure to COVID-19
- Assess contacts for symptoms and refer for testing when indicated
- Provide guidance to all contacts on quarantine and self-monitoring
- Provide information and reassurance
- Follow-up for recommended period (14 days)
When is Contact Tracing Most Feasible and Effective?

- Early epidemic
- Lower number of cases
- Sufficient staff
- Sufficient testing

Contact tracing for every case
Prioritized contact tracing
Essential contact tracing

Early epidemic | Early acceleration | Peaking epidemic

Containment Mitigation
Sonoma County’s COVID-19 Curve
Prioritizing Contact Tracing

- When faced with multiple COVID-19 cases, health departments will have to decide which cases should be a higher priority for contact tracing.
- Highest priorities if resources are limited:
  - Potential exposures of vulnerable groups (e.g., elderly, immunocompromised) and people in congregate settings (e.g., prisons and jails, homeless shelters, day care providers).
  - First responders and health care workers.
  - Closest contacts and vulnerable contacts of all cases.
Prioritizing Contacts

• Once a list of contacts is obtained, prioritize them to determine who should be immediately contacted and assessed for disease or infection

• The priority assigned to individual contacts should be based on:
  — Likelihood of transmission from the case (e.g., the most contact)
  — Contact’s risk for development of disease
## Steps in the Process

<table>
<thead>
<tr>
<th>Step</th>
<th>Purpose and process</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Case interview</td>
<td>• Establish relationship with patient</td>
</tr>
<tr>
<td></td>
<td>• Provide reassurance and education</td>
</tr>
<tr>
<td></td>
<td>• Collect information needed for reporting</td>
</tr>
<tr>
<td></td>
<td>• Determine date of onset of symptoms</td>
</tr>
<tr>
<td></td>
<td>• Identify contacts and get contact information</td>
</tr>
<tr>
<td></td>
<td>• Identify locations visited and activities while symptomatic</td>
</tr>
<tr>
<td></td>
<td>• Explain the isolation process</td>
</tr>
<tr>
<td></td>
<td>• Assess patient needs and plan to meet needs</td>
</tr>
<tr>
<td></td>
<td>• Provide your contact information if they have questions</td>
</tr>
<tr>
<td></td>
<td>• Set up a follow up schedule as needed</td>
</tr>
<tr>
<td></td>
<td>• Verify address, phone, email/other means of communication</td>
</tr>
<tr>
<td></td>
<td>• Email or mail COVID-19 information to patient</td>
</tr>
</tbody>
</table>

Case interviews may take more than one phone call to complete!
How Do You Identify Contacts?

Ask the case about the following during the time they have had symptoms and a few days prior to that:

- Places WHERE they spent time
- Persons with WHOM they spent time
- Participation in activities and events (WHAT and WHEN)
## Steps in the Process

<table>
<thead>
<tr>
<th>Step</th>
<th>Purpose and process</th>
</tr>
</thead>
</table>
| 2. Contact tracing        | • Establish relationship with each contact  
|                           | • Verify address, phone, email and other means of communication  
|                           | • Explain the role of the health department  
|                           | • Provide reassurance and education  
|                           | • Assess each contact for the presence of any symptoms  
|                           | • Refer person as needed for testing  
|                           | • Explain the quarantine process and requirements  
|                           | • Assess ability of contact to quarantine at home  
|                           | • Provide guidance on self-monitoring and care  
|                           | • Assess contact needs during quarantine  
|                           | • Establish schedule for follow-up  
|                           | • Provide your contact information for questions and concerns |
Other Important Considerations

• If a case is found among the contacts of a COVID-19 case, this second case needs their own contact tracing effort.

• CONFIDENTIALITY:
  – All information is only shared on a need-to-know basis
  – Any paperwork with personal identifiers needs to be kept in locked storage with access limited to those who need to know
  – Case information should NOT be shared with contacts
Specific Guidance for Cases and Contacts on Isolation and Quarantine
What does it mean to be isolated?

- **Isolation** refers to a person who is currently ill and contagious and needs to stay away from other people to prevent the spread of disease.

- People in isolation must:
  - Stay at home except to get essential medical care
    - Call the medical provider ahead of time so they can arrange proper infection control precautions
    - If it is necessary to seek emergency care, call the emergency room ahead of time or alert the 911 dispatcher to the COVID-19 diagnosis
    - Arrange to have groceries or other essential household items delivered
    - Let Public Health know if they need help procuring essential items during isolation period
What does it mean to be isolated? (cont)

- Separate themselves from other people in the home
  - Sleep in a separate room and use a separate bathroom, if possible
  - Wear a facemask if it is necessary to be in shared areas of the house
  - Avoid sharing personal household items
- Practice good hygiene and respiratory etiquette
  - Cough or sneeze into a sleeved elbow or tissue (and perform hand hygiene immediately after)
  - Wash hands often with soap and water or use a 60% alcohol-based hand sanitizer
  - Clean high-touch surfaces such as doorknobs, countertops, toilet handles, faucets
How long should someone with COVID-19 be isolated?

• The time a person needs to stay isolated depends on how long they will be contagious after symptoms develops

• Non-healthcare workers and/or people who do not work with elderly populations who have COVID-19 should stay isolated for:
  – A minimum of 7 days since symptom onset, AND
  – At least 3 days of no fever (without use of antipyretics) and improvement of symptoms
How long should someone with COVID-19 be isolated (cont’d)?

• Healthcare workers with COVID-19 should stay isolated for:
  – At least 7 days since onset of symptoms, AND
  – At least 3 days with no fever (without the use of antipyretics) and improvement of symptoms, AND
  – If they return to work sooner than 14 days since their symptom onset, they should wear a surgical mask and avoid working with immunocompromised patients until it has been 14 days since symptom onset

• People who work with elderly populations (e.g. in a skilled nursing facility/assisted living facility):
  – All of the above criteria, AND
  – Two consecutive negative COVID-19 tests done at least 24 hours apart
What does it mean to be quarantined?

- **Quarantine** refers to a person who has been exposed to a communicable disease and is **at risk of becoming ill** and spreading the disease to others.

- People identified as close contacts to someone with COVID-19 may need to be quarantined.
What does it mean to be quarantined (cont’d)?

- People who are in quarantine following an exposure to COVID-19 must:
  - Stay home except for essential medical care
    - Call ahead of time and let the provider know of the exposure to COVID-19
    - If seeking emergency care, call the emergency department ahead of time or alert the 911 dispatcher of the exposure to COVID-19
    - Make arrangements to have groceries and other essential household items delivered. Let Public Health know assistance is needed
  - Monitor for symptoms daily
    - Take temperature with a thermometer and assess for symptoms of COVID-19
    - Report symptoms to Public Health
What does it mean to be quarantined (cont’d)?

Separate themselves from others in the household who were *not* exposed to COVID-19

- Sleep in a separate room and use a separate bathroom, if possible
- Avoid sharing personal household items
- Avoid spending time in common areas of the house
- “Contacts to contacts” do not need to be quarantined unless the primary contact develops symptoms of COVID-19

Practice good hygiene and respiratory etiquette

- Cough/sneeze into sleeved elbow or tissue and perform hand hygiene immediately after
- Wash hands frequently with soap and water or a 60% alcohol-based hand sanitizer
- Clean high-touch surfaces such as doorknobs, counters, toilet handles, and faucets
How long should contacts to COVID-19 be quarantined?

• At least 14 days since their last exposure to the person with COVID-19
  – For household members, this begins when the person with COVID-19 begins isolating themselves from others

• For healthcare workers/emergency medical services (paramedics, EMTs, etc):
  – Check with employee health policy; may be able to return to work sooner than 14 days

• First responders (police/fire fighters/etc), childcare workers, essential workers (such as grocery store clerks):
  – 14 days since last exposure

• People who work with elderly populations:
  – 14 days since last exposure
The Interview
Effective Interviewing

• Elicits critical information from cases and their contacts

• Interview skills can be learned

• Interview skills improve with practice

NEXT STEPS

• Demonstration

• Shadowing experienced interviewer
Tools & Resources

- Interview form for cases and contacts
- CD Team and Nursing Directors
- Dr. Mase
- D’Arcy Richardson
# COVID-19 Case Interview Form

Please complete this form for each confirmed case of COVID-19.

**Interviewer Name:** ____________________  **Date:** ____________  **CalREDIE Case #:** ____________

## Patient Information

<table>
<thead>
<tr>
<th>First Name</th>
<th>Last Name</th>
<th>DOB</th>
<th>Phone</th>
<th>Email</th>
<th>Address</th>
<th>Health Care Provider: Linked to CR#:</th>
</tr>
</thead>
</table>

What do you do for work? Describe setting (if applicable):

Who else is in your household?:

<table>
<thead>
<tr>
<th>Name</th>
<th>DOB</th>
<th>Relationship</th>
<th>Occupation Contact #</th>
<th>Sex</th>
</tr>
</thead>
</table>

## If Household People Have Symptoms Start New Interview Form for Them

Are you a healthcare worker who provides direct patient care?

Do you work or volunteer with any sensitive populations?

(e.g., the homeless, persons in congregate care settings, prisons, jails, daycare)

If YES: Occupation Setting Name: ___________________________________

Last Day of Work: __/__/____

Worked after symptom started? = YES = NO

Details on any Healthcare or Sensitive Population exposure:

i.e., person works with disabled children 3 days a week, etc.

## Clinical Information

<table>
<thead>
<tr>
<th>Pre-existing medical conditions?</th>
<th>□ Yes</th>
<th>□ No</th>
<th>□ Unk</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chronic Lung Disease (asthma/chronic obstructive pulmonary disease)</td>
<td>□ Yes</td>
<td>□ No</td>
<td>□ Unk</td>
</tr>
<tr>
<td>Diabetes Mellitus</td>
<td>□ Yes</td>
<td>□ No</td>
<td>□ Unk</td>
</tr>
<tr>
<td>Cardiovascular disease</td>
<td>□ Yes</td>
<td>□ No</td>
<td>□ Unk</td>
</tr>
<tr>
<td>Chronic Renal Disease</td>
<td>□ Yes</td>
<td>□ No</td>
<td>□ Unk</td>
</tr>
<tr>
<td>Chronic Liver Disease</td>
<td>□ Yes</td>
<td>□ No</td>
<td>□ Unk</td>
</tr>
<tr>
<td>Immunocompromised Condition</td>
<td>□ Yes</td>
<td>□ No</td>
<td>□ Unk</td>
</tr>
<tr>
<td>Neurologic/neurodevelopmental/intellectual disability</td>
<td>□ Yes</td>
<td>□ No</td>
<td>□ Unk (if YES, specify): __________________________________</td>
</tr>
<tr>
<td>Other chronic diseases</td>
<td>□ Yes</td>
<td>□ No</td>
<td>□ Unk (if YES, specify): __________________________________</td>
</tr>
<tr>
<td>If female, currently pregnant</td>
<td>□ Yes</td>
<td>□ No</td>
<td>□ Unk</td>
</tr>
<tr>
<td>Current smoker</td>
<td>□ Yes</td>
<td>□ No</td>
<td>□ Unk</td>
</tr>
<tr>
<td>Former smoker</td>
<td>□ Yes</td>
<td>□ No</td>
<td>□ Unk</td>
</tr>
<tr>
<td>Former smoker: □ Yes</td>
<td>□ No</td>
<td>□ Unk</td>
<td></td>
</tr>
<tr>
<td>Other:</td>
<td>□ Yes</td>
<td>□ No</td>
<td>□ Unk</td>
</tr>
</tbody>
</table>

## Symptoms

<table>
<thead>
<tr>
<th>Date of Symptom Onset:</th>
<th><strong>/</strong>/____</th>
</tr>
</thead>
</table>

During this illness, did the patient experience any of the following symptoms?

- [ ] Fever ≥100.6°F (38°C)
- [ ] Muscle aches
- [ ] New loss of taste or smell
- [ ] Shortness of breath
- [ ] Pneumonia
- [ ] Abdominal pain
- Other, specify: __________________________________

## Exposure History

In the 14 days before symptom onset, did the patient:

- [ ] Travel?
  - Dates: Location: Notes: = YES = NO

- [ ] Attend any appointments for medical or personal care?
  - Dates: Location: Notes: = YES = NO

- [ ] Attend any group gatherings including work, sports, parties, other?
  - Dates: Location: Notes: = YES = NO

- [ ] Other events or group settings (church, gym, public transit, etc.)?
  - Dates: Location: Notes: = YES = NO

## Notes

- If yes, specify: ____________________________________
Breakdown of each section of the COVID-19 Case Interview Form

**COVID-19 Case Interview Form**

Please complete this form for each confirmed case of COVID-19.

Interviewer Name: ____________________________ Date: ________________ CalREDIE Case #: __________________

<table>
<thead>
<tr>
<th>PATIENT INFORMATION</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Last Name</td>
<td>First Name</td>
<td>DOB <strong>/</strong>/____</td>
<td></td>
</tr>
<tr>
<td>Phone ______________</td>
<td>Email: ________________</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Address: __________________</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Health Care Provider</td>
<td></td>
<td>Linked to CR#:</td>
<td></td>
</tr>
</tbody>
</table>
What do you do for work? Describe setting (If applicable):

Who else is in your household?:
Name:  
DOB:  
Relationship?:  
Occupation Contact #:  
Symptoms?

IF HOUSEHOLD PEOPLE HAVE SYMPTOMS START NEW INTERVIEW FORM FOR THEM
Are you a healthcare worker who provides direct patient care?
Do you work or volunteer with any sensitive populations?
  (e.g. the homeless, persons in congregate care settings, prisons, jails, daycare)
  If YES: Occupation Setting Name ________________________________
    Last Day of Work ____/____/______
    Worked after symptom started?

□ YES □ NO
□ YES □ NO
□ YES □ NO

**Details on any Healthcare or Sensitive Population exposure:**
i.e. person works with disabled children 3 days a week, etc.
<table>
<thead>
<tr>
<th>Clinical Information</th>
<th>Yes</th>
<th>No</th>
<th>Unk</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-existing medical conditions?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Chronic Lung Disease (asthma/emphysema/COPD)</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Diabetes Mellitus</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Cardiovascular disease</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Chronic Renal disease</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Chronic Liver disease</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Immunocompromised Condition</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Neurologic/neurodevelopmental/intellectual disability</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Other chronic diseases</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>If female, currently pregnant</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td><strong>Current smoker</strong></td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td><strong>Former smoker</strong></td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td><strong>Other:</strong></td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>

***Adding a question on medication***
### Symptoms

**Date of Symptom Onset**

<table>
<thead>
<tr>
<th>Symptom</th>
<th>Symptom Present?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fever &gt;100.4°F (38°C)</td>
<td>Yes/No/Unk</td>
</tr>
<tr>
<td>Subjective fever (felt feverish)</td>
<td>Yes/No/Unk</td>
</tr>
<tr>
<td>Chills</td>
<td>Yes/No/Unk</td>
</tr>
<tr>
<td>Muscle aches (myalgia)</td>
<td>Yes/No/Unk</td>
</tr>
<tr>
<td>Runny nose (rhinorrhea)</td>
<td>Yes/No/Unk</td>
</tr>
<tr>
<td>Sore throat</td>
<td>Yes/No/Unk</td>
</tr>
<tr>
<td>Cough (new onset or worsening of chronic cough)</td>
<td>Yes/No/Unk</td>
</tr>
<tr>
<td>Shortness of breath (dyspnea)</td>
<td>Yes/No/Unk</td>
</tr>
<tr>
<td>Nausea or vomiting</td>
<td>Yes/No/Unk</td>
</tr>
<tr>
<td>Headache</td>
<td>Yes/No/Unk</td>
</tr>
<tr>
<td>Abdominal pain</td>
<td>Yes/No/Unk</td>
</tr>
<tr>
<td>Diarrhea (≥3 loose/looser than normal stools/24hr period)</td>
<td>Yes/No/Unk</td>
</tr>
<tr>
<td>Other, specify:</td>
<td></td>
</tr>
</tbody>
</table>
### EXPOSURE HISTORY

In the 14 days before symptom onset, did the patient:

<table>
<thead>
<tr>
<th>Travel?</th>
<th>□YES □ NO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dates:</td>
<td>Location:</td>
</tr>
<tr>
<td></td>
<td>Notes:</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Attend any appointments for medical or personal care?</th>
<th>□YES □ NO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dates:</td>
<td>Location:</td>
</tr>
<tr>
<td></td>
<td>Notes:</td>
</tr>
<tr>
<td><strong>Attend any group gatherings including work, sports, parties, other?</strong></td>
<td>□ YES □ NO</td>
</tr>
<tr>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>Dates:</td>
<td>Location:</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Other events or group settings (church, gym, public transit, etc)?</strong></th>
<th>□ YES □ NO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dates:</td>
<td>Location:</td>
</tr>
</tbody>
</table>
Has had close contact with a **lab-confirmed** case of COVID-19 while that case was ill? □ YES □ NO

If YES, please describe: i.e. <1 hour > 1 hour
<table>
<thead>
<tr>
<th>LABORATORY TESTING</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>□ YES □ NO</td>
<td>Has the patient been tested for influenza?</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Result</td>
</tr>
<tr>
<td></td>
<td>□ Positive</td>
</tr>
<tr>
<td></td>
<td>□ Negative</td>
</tr>
<tr>
<td></td>
<td>Test Type</td>
</tr>
<tr>
<td></td>
<td>□ Rapid Test</td>
</tr>
<tr>
<td></td>
<td>□ PCR</td>
</tr>
<tr>
<td>□ YES □ NO</td>
<td>Has the patient been tested for any other viral respiratory illness?</td>
</tr>
<tr>
<td></td>
<td>Results:</td>
</tr>
</tbody>
</table>
Structure for Sonoma County
Information Flow

- **Labs Providers CalRedie**
  - Identify positive test result and report case

- **Core Disease Control Team & Epi Team**
  - Receives report of positive case and assigns to CD Nurse
  - Enters information into database

- **Communicable Disease Nurse**
  - Receives case to follow up
  - Phones case to interview and identify contacts
  - Works with Epidemiologists to record data in database

- **Surge help**
  - Assigned contacts to follow up
  - Phones contacts to interview and follow up during 14-day quarantine
  - Communicates results back to CD Nurse
NOTE: This is NOT an organizational chart. This represents the stakeholder groups and their relationships for the purposes of COVID-19 case and contact tracing only.
Data can be used for:

- Case and contact follow-up and management
- Analysis of findings to help assess contact tracing strategy
  - Apparent clusters of cases that need further investigation
  - Number of contacts identified
  - Contacts evaluated who are COVID+
  - Contacts evaluated who are asymptomatic
Thank you!

Q&A
Online Resources

Other Resources

• Sonoma County Emergency and Preparedness Information
  — What you need to know about Coronavirus (COVID-19)
• County of Sonoma Department of Health Services
• California Department of Public Health
• Centers for Disease Control and Prevention (CDC)
• World Health Organization (WHO)