What is Contact Tracing and how does it work?

By

Capt. Paul A Jones DDS, MS

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Diseases for which contact tracing is commonly performed for include

⬧ Tuberculosis,

⬧ Vaccine-preventable infections like measles,

⬧ Sexually transmitted infections (including HIV),

⬧ Blood-borne infections, ebola, some serious bacterial infections, and novel infections (e.G. Sars-cov, H1N1, and COVID-19).

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The goals of contact tracing are:

◈ To interrupt ongoing transmission and reduce the spread of an infection

◈ To alert contacts to the possibility of infection and offer preventive services or prophylactic care

◈ To offer diagnosis, counseling and treatment to already infected individuals

◈ If the infection is treatable, to help prevent reinfection of the originally infected patient

◈ To learn about the epidemiology of a disease in a particular population

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What is Contact Tracing?

01

CALL PEOPLE WHO HAVE TESTED POSITIVE FOR COVID-19

02

DETERMINE WHEN THEY COULD INFECT OTHERS

03

CONTACT ANYONE WHOM THEY MIGHT HAVE INFECTED

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What else do you do?

⬦ Encourage those with Covid-19 to remain isolated until they are no longer infectious.

⬦ Offer support and guidance to help them while isolated.

⬦ Continue to follow them during their illness to be sure they are recovering.

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What else do you do?

⬦ Try to contact every person who might have been infected

⬦ Encourage them to quarantine for 14 days after they might have been infected

⬦ Offer them support and guidance to help them quarantine.

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Timeline of Infection: Infectious Period

CALENDAR DAYS

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

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

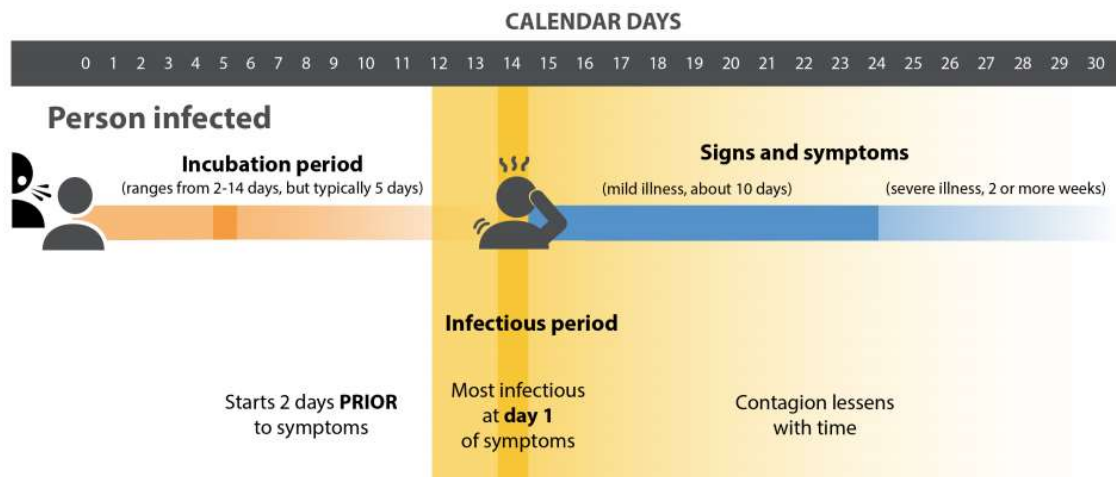Contagion lessens with time

Image source: Center for Teaching and Learning, Johns Hopkins Bloomberg School of Public Health.   14

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The Infectious Period for Patients with Symptoms

- Infectious period starts: **48 hours prior to the first symptom.**
- Infectious period ends:
  - ◇when it's been at least 10 days after the first symptom,
  - ◇they have no fever for at least 72 hours without medications
  - ◇their other symptoms have improved.

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Problems with this system

◈Some people are infectious but never develop symptoms

◈Some people refused to answer the phone or cooperate with the tracer

◈In some areas it may take up to two weeks to get the results of the test

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Fitting the Steps Together

▶ **Steps 1–4: Calling the case**
  ▶ Step 1: Introductions
  ▶ Step 2: Inquire about infectious period
  ▶ Step 3: Identify contacts
  ▶ Step 4: Instruct on how to isolate

▶ **Step 5: Call contact(s)**
  ▶ Inform about exposure, ask about symptoms, instruct on quarantine

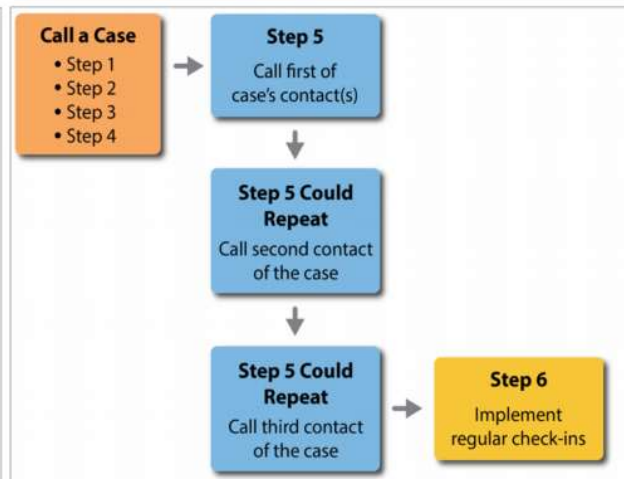▶ **Step 6: Implement regular check-ins with the case and contact(s)**

Call a Case
• Step 1
• Step 2
• Step 3
• Step 4

→ **Step 5**
Call first of case's contact(s)

↓

Step 5 Could Repeat
Call second contact of the case

↓

Step 5 Could Repeat
Call third contact of the case

→ **Step 6**
Implement regular check-ins

Image source: Center for Teaching and Learning, Johns Hopkins Bloomberg School of Public Health.   5

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Checklist of Steps for Each Case

 Step 1: Introductions

 Identify your organization.

 Confirm the case's identity.

 Check whether the case has received their COVID-19 test result (if not, deliver result).

 Describe the importance of the call.

 Confirm that the call is confidential.

 Check in about length and safety of call.

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Step 2: Inquire about Infectious Period

✔	Ask if they had common symptoms	When did symptom begin?	When did symptom end?
-	Fever (temperature over 100.4°F/38°C)	-	-
-	Tiredness (fatigue)	-	-
-	Muscle pain (myalgia)	-	-
-	Cough	-	-
-	Loss of taste or smell	-	-
-	Difficulty breathing	-	-
-	Headache	-	-
-	Sore throat	-	-

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Step 3: Identify Contact(s) Based on Infectious Period

Contacts include but are not limited to people who had the following types of interactions with the case during the case's infectious period; that is, anyone who:

◈ ▯ Lives with the case.

◈▯ Was face-to-face and within 6 feet (1.8 meters) of the contact for 15+ minutes.

◈ ▯ Had direct physical contact with a case, such as kissing.

◈ ▯ Had direct physical contact with a case's secretions, such as touching the case's used tissues.

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Step 4: Instruct How to Isolate

Explain isolation in simple terms:

◈ Isolation means that you should try to not have contact with other people, except if you need to see a doctor.

◈ If you live with other people, you might try to find another place to stay.

◈ Or you might use your own bedroom and bathroom.

◈ If you can't avoid being around other people, you should wear a mask at all times.

◈ The mask should completely cover your nose and mouth.

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Step 4: Instruct How to Isolate

◈ Isolation keeps sick people (restricted to home or hotel or a separate place in a hospital) separate from healthy people for the duration of infectiousness, which is two days before onset and at least 10 days after onset of illness.

◈ Isolation can end when symptoms are improving, and the sick person has not had fever within the past three days without using fever-reducing medication.

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Step 4: Instruct How to Isolate

 Help them make a plan to isolate.

 Identify challenges that may stop the case from following your isolation instructions.

 Offer resources to improve the case's chances of following your isolation instructions.

 Answer the case's questions.

 Make a plan to follow up.

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Step 5: Initiate Contact Tracing

- See Checklist of Steps for Each Contact.

Step 6: Implement Regular Check-Ins

 Have the case's symptoms improved or worsened?

 Has the case had new contacts?

 Support the case in continuing to isolate (see Step 4).

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Symptoms Requiring Immediate Emergency Care

- ⬥ • Bluish lips or face.
- ⬥ • Faster breathing.
- ⬥ • Trouble breathing.
- ⬥ • Persistent pain or pressure in the chest.
- ⬥ • New confusion or difficulty waking up.

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Why is Contract Tracing Important?

- ◈ People are infectious about two days before they become ill and during their illness
- ◈ Some never get sick but can still infect others
- ◈ They can infect other people through their respiratory droplets
- ◈ Without any intervention, each person will infect 2 to 3 others
- ◈ We can dramatically reduce the number of cases if we can prevent transmission

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Infectiousness: SARS-CoV-2 Versus Influenza

SARS-CoV-2 (R0 = 2 to 3) and influenza (R0 = 2 to 3)

COVID-19

Influenza

Infected person

Close contacts

Disease spread
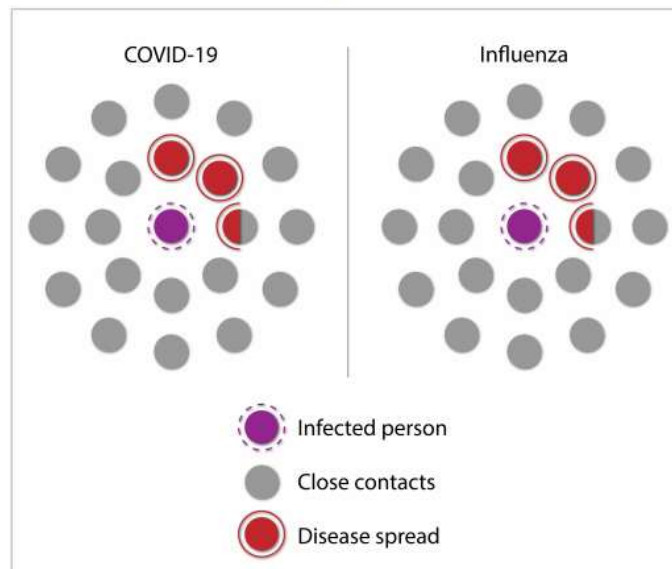
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Even Small Reproductive Numbers Create Large Outbreaks

▶ If each infected person infects just two people, the size of the outbreak doubles quickly

R0 = 2

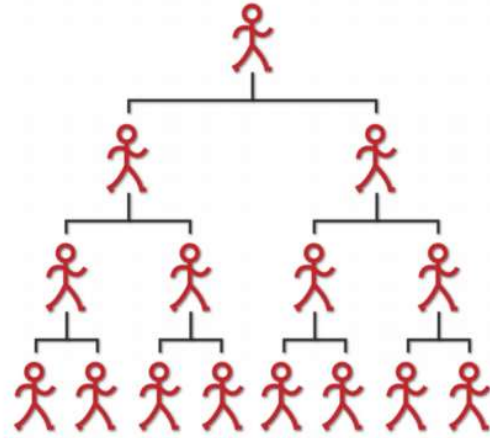Image source: Johns Hopkins University.
Source: Eisenberg, J. (2020 March 17). R0: How scientists quantify the intensity of an outbreak like coronavirus and predict the pandemic's spread. The Conversation US. Accessed May 4, 2020.
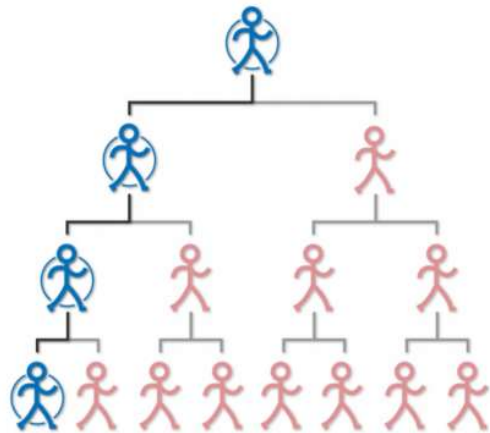
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Impact of Preventing Just One Infection

▶ If each infected person infects just two people, the size of the outbreak doubles quickly

▶ Preventing just one infection now can lead to big reductions of cases over time

What happens if we stop each case from infecting just one person?

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How can I become a Contact Tracer?

◈Search for COVID-19 Contact Tracing Classes

◈www.coursera.org Johns Hopkins

◈https://learn.astho.org/p/ContactTracer The Community College of
Allegheny County.

Contact tracers may be able to work remotely and conduct contact tracing via phone or using
other technologies, but some may need to go to people's homes to follow up on contacts and
conduct interviews, the college said in a statement.

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Coursera COVID-19 Contact Tracing

Offered By

Online Free

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More information

https://www.cdc.gov/coronavirus/2019-ncov/faq.html#Contact-Tracing

What is contact tracing?

What happens during contact tracing?

Who is considered a close contact to someone with COVID-19?

What can a person diagnosed with COVID-19 expect to happen during contact tracing?

What can close contacts expect to happen during contact tracing?

Am I considered a close contact if I was wearing a cloth face covering?

What will happen with my personal information during contact tracing?

What if I have been around someone who was identified as a close contact?

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Where do I get a job as a Contact Tracer?

◈ Different cities, counties, states, and countries have different plans and processes for hiring contact tracers.

◈ Consult your public health department to learn about its requirements.

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Summary

Why Contact Tracing?

◇Learn about COVID-19

◇Consider taking an online class to become a contact tracer

◇Encourage someone you know to do the same

◇Help slow down the pandemic and save lives

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Questions?

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Capt Paul A Jones DDS MS

www.stuartsailing.com

pajdds@gmail.com

913-645-8206

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