CovidSafe
A Privacy-Protecting Contact Tracing Experience
PACT protocol and its reference implementation CovidSafe was created by a multidisciplinary group from the University of Washington, University of Pennsylvania, Boston Public Health Commission and volunteers from Microsoft.

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CovidSafe Team / **Who We Are**
Website: [https://covidsafe.cs.washington.edu](https://covidsafe.cs.washington.edu)
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Mission

CovidSafe empowers healthy individuals to be aware of Covid-19 risks and enables infected individuals to speed up the contact tracing process.
Protect Others
Do their part in society to flatten the curve
Protect those in their community by reducing risk-exposure with contact tracing

Protect Themselves
Get notified by public health officials about high-risk areas
Symptom tracking
Self-reporting (+) status (with verification)
Self-educate with self care tips

Help Contact Tracers
Collect symptom and contact information
Prepare information quickly for contact tracing interviews
Send relevant contact trace data directly to public health agencies
Design Principles

Rights based
We start from a foundation of privacy and control by the user so they are empowered to make better decisions from their data.

Inclusive
Design elements should account for wide range of abilities and backgrounds, including alternative languages. A website version is being developed for those without phones.

Community Driven
People can come together to donate data if they choose to do so. These actions are voluntary.

Data Minimization
Only data that is absolutely needed is to be collected and not held or used further than original intent.

Transparent
Users should be clearly informed about who is collecting their data, how it will be used and why.

Trust
Information can be overwhelming and have negative consequences if inaccurate. System needs to be secure and up to date to maintain user trust.
User Audience

**General Public**
- Healthy individuals without COVID-19
- Individuals with COVID-19
- Individuals who may have been exposed to SARS-CoV-2 and should be tested

**Health Care Professionals**
- Doctors, nurses and other staff
- Contact teams (may not always be a nurse)
User Journey
User Journey Stages

START

Onboarding

EVALUATE

Evaluating exposure risk

PREPARE

Prepare for contact tracing interview

TRACK

Keeping track of your symptoms
How does the user get started?
Download the App

- Explore app features
- Understand your data privacy
- Control your notification and data settings
Welcome to CovidSafe

CovidSafe notifies you if you may have been exposed to coronavirus and helps you monitor any symptoms you’re having.

Exposure Notifications

If you’ve recently visited a location with a known risk of COVID-19 exposure, you’ll get a notification letting you know.

Self-Care Tips

Get tips on managing your symptoms, connect with a healthcare professional if they worsen, and report locations you visited recently to protect others.
Start / Onboarding Flow

About your privacy
Your Privacy
Any health information you add is protected. Learn more on the Privacy page in Settings.

Get started
Let's slow the spread of COVID-19 together.
Start / Selecting Preferences

Preference settings

Select Your Preferences
Learn how your choices here can help protect you and others. Learn more

- **Notifications**
  Receive push notifications for exposure risks in your area.

- **Location Logging**
  Use location to filter notifications relevant to you. All location information is stored locally.

- **Bluetooth Tracing**
  Emit and detect random numbers to later discover exposure risks.

- **Import Location Data**
  Sync your location history directly from Google by importing your timeline data.

Data storage settings

Control Your Data Storage
Your privacy is important to us. We encourage you to let us retain your data for the benefit of the community to fight COVID-19 together.

You can always choose to delete your data from CovidSafe. This action cannot be undone.

- **Delete All Data**

Select preferences turned on

Select Your Preferences
Learn how your choices here can help protect you and others. Learn more

- **Notifications**
  Receive push notifications for exposure risks in your area.

- **Location Logging**
  Use location to filter notifications relevant to you. All location information is stored locally.

- **Bluetooth Tracing**
  Emit and detect random numbers to later discover exposure risks.

- **Import Location Data**
  Sync your location history directly from Google by importing your timeline data.
How does the user know when they have been exposed to risk?
Exposure Notification

- When Notifications are turned On
- App pulls CovidSafe server for possible exposures
- App will match exposures to where you’ve been
- Your location information could be misconstrued.
Evaluate / Evaluating Exposure Risk

From Lock Screen

Notification – Custom takeover

Home tab – Notification Module

Alert tab w/notifications list

CovidSafe

Public Park Closure

Volunteer Park is closed for 3 days starting April 15th for a public cleaning. Please visit other parks nearby.

- Volunteer Park
  1247 15th Ave E
  Seattle, WA 98112
- April 15-18, 2020
  Add to calendar

Recent Notifications

Symptom Tracker

Wednesday, April 15

Alerts

Public Park Closure

TODAY

1 min ago

Public Park Closure

Public Health

CovidSafe

Public Park Closure

Public Park Closure

Public Park Closure

Public Park Closure

Public Park Closure

Public Park Closure

Public Park Closure

Public Park Closure

Public Park Closure

Public Park Closure

Public Park Closure

Public Park Closure
What happens when you are positive and need to prepare for a contact tracing interview?
Contact Tracing Prep

- App helps you aggregate all the information you need for your contact tracing interview
- You can modify all the aggregated data
- You can opt-in to “submit” the questionnaire answers to your local public health agency if the app is connected to a case management tool
- For people just downloading the app for contact tracing preparation, the app can help them to retrospectively create their timeline
Prepare / Contact Tracing Preparation – Entry From Lock Screen

- Lock screen notification
- App launch
- Full screen interview message
- Get started
Prepare / Contact Tracing Preparation — Entry From Self-Report

From Diagnosis Screen

Health

Diagnosis Agreement
By reporting positive, I confirm that I have reviewed a positive diagnosis from an official healthcare agency.

Allow
Cancel

Full screen confirmation message

You've Reported a Positive Diagnosis for COVID-19

Help others by submitting your data
When you submit your data, people you've been in contact with, or those who've visited the same locations as you within the last 14 days will be notified that they might have been exposed.
Your personal identity and information will be kept private.

Submit Data

Thanks for helping others

Submit your data
Prepare / Contact Tracing Preparation — Entry From Self-Report — Next Steps

After diagnosis

Module “

Get started
Please review and save this list for reference during your interview.

Please review the information below and save your list. Don't worry, you can always come back to edit this list later.

Summary

**SYMPTOMS**

**Cough**
Onset Date: 4/13
Duration (days): 2
Severity: Mild

**Difficulty breathing**

Save

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Store On Device?
When you save a report, this information is encrypted on your phone. Your data always stays on your phone, unless you decide to share it.

Type "I confirm" to continue:

I confirm

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Send To Public Health Department
Prepare / Contact Tracing Preparation — Retrieve List For Interview

Interview module – Retrieve & Send

User initiates list retrieval

EXAMPLE Bio Authentication
Prepare / Contact Tracing Preparation — Retrieve List For Interview

**List Summary**
- Created April 15, 2020 | 9:41 PM

Use the below list as a reference during your interview. You can also send this information to your Public Health Department in advance.

**SYMPTOMS**
- **Cough**
  - Onset Date: 4/13
  - Duration (days): 2
  - Severity: Mild

- **Difficulty breathing**
  - Onset Date: 4/13
  - Duration (days): 11

- **Fever**
  - Onset Date: 4/6
  - Highest temp: 104.1F

**User control options**
- **Edit list**
- **Add note**

Retrieved list view

**List Summary**
- Created April 15, 2020 | 9:41 PM

Use the below list as a reference during your interview. You can also send this information to your Public Health Department in advance.

**SYMPTOMS**
- **Cough**
  - Onset Date: 4/13
  - Duration (days): 2
  - Severity: Mild

- **Difficulty breathing**
  - Onset Date: 4/13
  - Duration (days): 11

- **Fever**
  - Onset Date: 4/6
  - Highest temp: 104.1F

User initiates send to PHD
HIPAA consent

Consent granted

Confirm read sections
Prepare / Contact Tracing Preparation — Authentication with PII

SAMPLE PII Authentication

Identification
Please confirm your identity to continue. This information will only be shared with your public health department.
Items marked with (*) are required.

- First name*
- Last name*
- Date of birth*
- Phone

CANCEL CONFIRM

SAMPLE PII filled In

Identification
Please confirm your identity to continue. This information will only be shared with your public health department.
Items marked with (*) are required.

- Calvin
- Nguyen
- 11/23/81
- (206) 555-0105

CANCEL CONFIRM
How do you track symptoms if you test positive or are symptomatic?
Track Your Symptoms

- Daily logs to help you track key symptom indicators
- You can opt-in to “submit” your symptoms to your local health agency if the app is connected to a case management tool
Sample Health section – Symptoms tab

Current week’s entries by day

CDC self-care guidance

CDC emergency info + disclaimer
Self-care tips, aka “What to do if you are sick”. Information is pulled from the CDC site.

Medical emergency content
Information is pulled from the CDC, including (*) disclaimer.

When to Seek Emergency Medical Attention
The CDC recommends looking for emergency warning signs* for COVID-19. If someone is showing any of these signs, seek emergency medical care immediately:
- Trouble breathing
- Persistent pain or pressure in the chest
- New confusion
- Inability to wake or stay awake
- Bluish lips or face

*This list is not all possible symptoms. Please call your local health department for any other symptoms that are severe or concerning to you.

Disclaimer
Medical information provided throughout CovidSafe is not a substitute for professional medical testing or advice.
Prepare / Symptom Logging

Localized symptoms

- Fever
- Cough
- Shortness of breath or difficulty breathing
- Repeated shaking with chills
- Muscle pain
- Headache
- Sore throat
- Loss of taste or smell
- Trouble breathing

Symptom details

- Fever
  - Today's temperature: 102.1°F
  - Date symptom began: 4/13/2020

Symptom description

- Fever: A temperature over 100 degrees F. You feel hot to the touch on your chest or back.

Detail examples

- Cough
  - Date symptom began: 4/13/2020
  - Symptom severity: Severe

Prepare / Symptom Logging

Sample

Detail examples

Confirmation

AM - PM logged
Thanks!

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