BoundaryCare™
Keeping Care Close

BoundaryCare
User Manual

General Operation

Troubleshooting

There are many applications for BoundaryCare, and in different contexts, different terms may be used for the person wearing the watch and the person or persons caring for that individual. In this manual, the person wearing the watch is called **the loved one.** A person who cares for the loved one — whether a family member or a professional — is referred to as **the caregiver.**

BoundaryCare is available as both a downloadable app and a kit with pre-configured equipment. In some cases, this results in different behavior or settings between the two versions. We signal the difference below when that is the case.

GENERAL OPERATIONS

1. How does BoundaryCare work?

Apple Watch®   Real-time Alerts   Web portal   Trend Analysis

BoundaryCare delivers clear and actionable data to caregivers. It starts with an Apple Watch, worn by the loved one, which gathers information (location, heart rate, etc.) passively while a loved one wears it. Information then goes to our server, which parses it and determines where and how to send it. If a threshold has been crossed (a loved one has left a safe zone, had a fall, experienced an irregular heart rhythm, etc.), an alert will be triggered. Information updates and alerts are sent to caregivers on a handheld device, as well as to the web portal. In some cases — as in reminders — information can also be sent back to the watch.

The watch is also a phone. Calls may be placed to and from the watch.

2. What are BoundaryCare's features?

BoundaryCare features generally fall in the categories of Safety, Health, Wellness, General Usage. Safety, Health, and Wellness features can be turned on or off, depending on the needs of the loved one.

Safety:

Fall Detection & alerts (with location info)

If the Apple Watch detects a hard fall, an alert can be sent. (The fall is recorded and a BoundaryCare alert is sent even if the user indicates that he/she is all right.) If location permissions are enabled, BoundaryCare will record the location of the user at the time of the fall (to the extent that location information is available.)

Location tracking, with geofencing & alerts (15 minute intervals)

Detect and transmit location of the Apple Watch (accuracy depending on cellular, wifi, and Bluetooth networks). Send alerts if user exits or enters a personalized geofence area.

Live location updates (emergency tracking)

Detect and transmit location, updating every 30-60 seconds, for bursts of up to 30 minutes.

Phone calling, configurable

Phone calls can be placed from the Apple Watch and received by the Apple Watch. In certain configurations, a pre-loaded number can be called from the watch with a single tap. The Apple Watch can also automatically answer calls, so no taps are required by the user for the call to be connected.

The Apple Watch can call 911 automatically after a fall is detected. Also, caregivers can call the watch directly via its own phone number. (Kits delivered with their own cell plan limit calls to one hour per month.)

Health:

Heart rate monitoring & alerts

Monitor heart rate passively (no user-interaction needed), and send alerts if the rate crosses a high or low threshold.

Heart rhythm monitoring & alerts

Monitor heart rhythms passively (no user-interaction needed), and send alerts if the Apple Watch detects an irregular rhythm that might be suggestive of atrial fibrillation (AFib).

Oxygen saturation monitoring

Monitor blood oxygen levels passively (no user-interaction needed), and send alerts if the rate crosses a low threshold. An on-demand blood oxygen level can be taken at any time, although this involves user interaction. **Note:** oxygen saturation monitoring requires Apple Watch Series 6 or above; not available with Apple Watch SE. Apple makes no claims for the clinical accuracy of blood oxygen measurements. Oxygen saturation levels are sampled infrequently.

Wellness/fitness:

Step counting
Measure how many steps are taken (with daily totals), and estimate distance traveled. A step goal may be set.

Daily energy burn
Measure how many calories are burned, distinguishing between "active" (in motion) and "passive" (at rest) calorie burn.

Cardio fitness/VO2
Provides a cardio fitness estimate by measuring how hard user's heart is working during an outdoor walk, run, or hike. (cardio fitness level is a strong indicator of one's overall physical health and a predictor of one's long-term health.)

Sleep analysis
Detect total duration of sleep session, including the succession of stages (waking, REM, Core, Deep Sleep) and the duration of each.

General Usage:

Customizable reminders (medication, etc.)
Send bulk or personalized reminders to the user, such as nudges for medication, drinking water, eating, bedtime, etc. Can also be used to distribute health tips or appointment reminders.

Usage monitoring & alerts
Detect whether the Apple Watch is being worn when it is not on the charger, and alert Direct Support Professionals if it is not.

Watch charging reminders
Send reminders to user and/or caregiver that the Apple Watch is low on battery, or that it's time for its scheduled charging.

Unlimited caregivers (via iPhone, Android, or Web)
Send standard information for each user to one or more caregivers, and more.

3. How often does BoundaryCare sample data?

Data about safety, health, and wellness is sampled at regular intervals, but the intervals vary for different metrics. Some of these you can control via the **settings** of the app. You can set location

updates to be "continuous" (every couple of minutes), or for "5-10" minutes or "15-20" minutes. When location is refreshed, other available metrics are also refreshed. Because heart rate monitoring is a particular drain on the battery, that setting can be separated, also in settings:
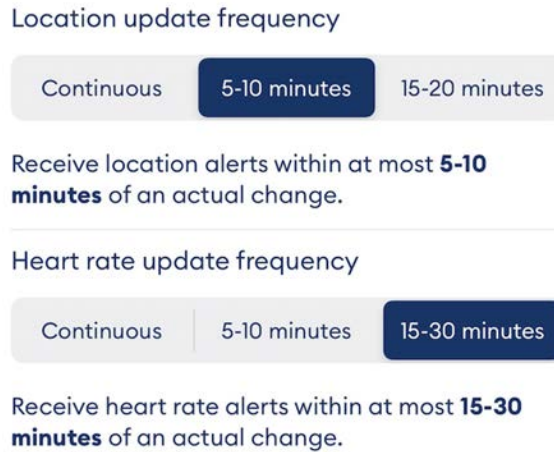
Update frequency settings in the iPhone App

Other updates depend on the metric. If a fall, irregular heart rhythm, or dangerously low oxygen reading is detected, an alert is sent immediately. For other metrics, such as sleep or steps, information is collected and displayed in the web portal, but no alerts are sounded. Oxygen saturation (blood oxygen) is a special case, for the Apple Watch monitors patterns, and it sets its own schedule for checking oxygen passively, which is often every hour or two if no problems have been detected. In any case, blood oxygen level measurements can be done manually at any time. See Apple's instructions for this.

4. How do I set up BoundaryCare and create my account?

Users who have a pre-configured kit will receive login information (username and password) at the time of their purchase, and setup will already be completed. These users need only launch the BoundaryCare app or go to the web portal in order to sign in.

Other users will need to set up Boundary and create an account. The steps are simple:

- You must have an iPhone and an Apple Watch already paired to the phone. The phone may belong to the loved one or to a caregiver. (The watch will have the same phone number as the phone to which it is paired, so there is some advantage to pairing it with the loved one's phone.)
- Download BoundaryCare onto the paired iPhone via the iPhone App Store.
- Launch BoundaryCare and follow the instructions for creating an account.
- If you are creating an account associated with a health plan or provider organization, be sure to check the box confirming this.

- Follow the setup prompts. The embedded videos will guide you.
- Once setup is complete, you'll need to sign up for the free 30-day trial to have access to BoundaryCare's features.

All users should make sure that BoundaryCare is connected to the wifi network at home: that will increase accuracy and augment the battery life.

Any trouble? Write to info@boundarycare.com to request phone support. We can talk you through the setup.

5. How can I sign in from another device?

Signing up from another device is simple. Use the username and password from your "master" device. The same username and password works for the web portal. For the web portal, most customers will use the public portal, at https://app.boundarycare.com/login

Accounts associated with a health plan or a provider organization must login at the secure link, at https://app.secure.boundarycare.com/login

6. How do I read the dashboard?

There are two principle dashboards: the application dashboard (typically on an iPhone or iPad), and the web portal. Generally, the application dashboard is designed for lighter use and real-time data. The web portal has more capabilities, but is less convenient on a handheld device.

Application Dashboard

The application dashboard provides a status-at-a-glance, and is typically used by real-time caregivers. Salient features (depending on options you have activated) are: **1)** current location; **2)** photo and name of the loved one; **3)** status of the watch, in this order: connected (green) or unconnected (red); **in** a safe zone (green checkmark) or **outside** (red X); battery charge level (green is good; red is low); **4)** "Refresh now" to force an update of the data (typically takes 2 minutes); **5)** health metrics, in this order: heart rate & rhythm; fall history; oxygen saturation. Tap on any icon for details; **6)** One-touch calling of the loved one (enter the phone number via the Account menu); **7)** emergency tracking, to launch real-time location updates if a person has gone missing; **8)** Additional features, such as generating

codes for additional caregivers, creating/editing safe zones, checking location history, adjusting settings; **9)** at top left, the application menu.

Web Portal
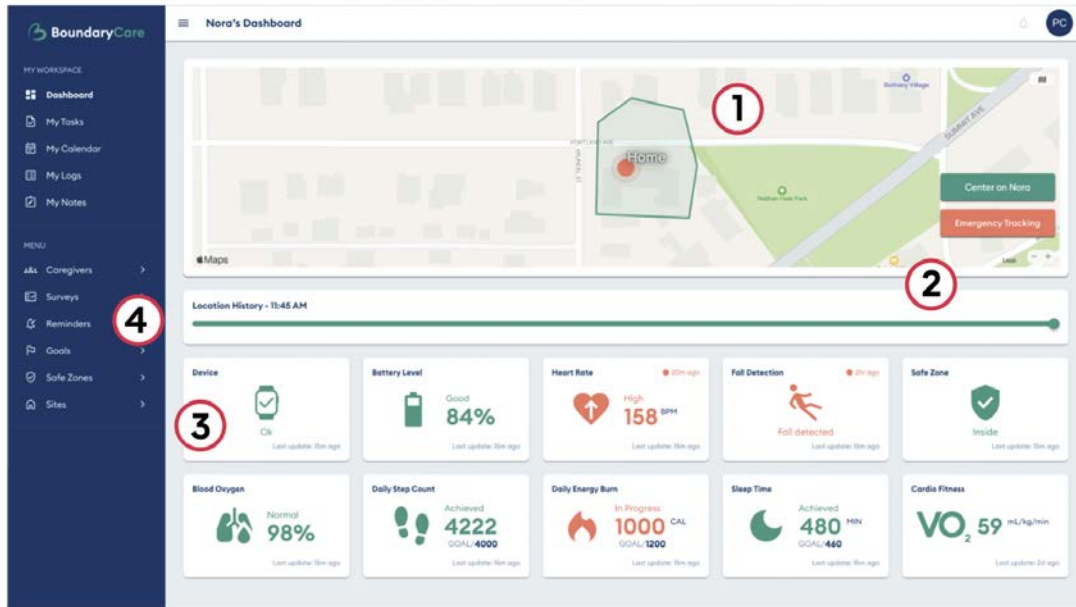
1) Location & Emergency tracking; **2)** Location history (last 12 hours); **3)** all available usage, safety, and health information; **4)** additional menu items for creating alerts, reminders, goals, safe zones, and more. Furthermore, within the web portal, click on any health metric to view the history of that metric, and to run additional histories. This allows you to view trendlines and see possible correlations:
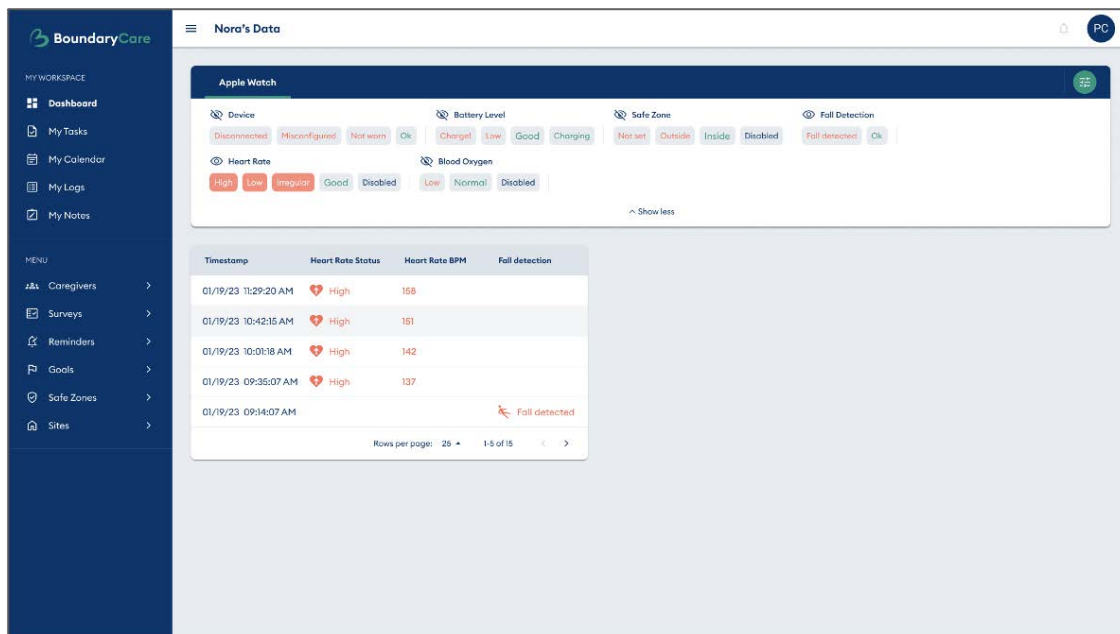
7. How do I add/remove/change loved ones on my dashboard?

It's possible for each caregiver to have access to multiple loved ones, just as each loved one may have multiple caregivers. To add a loved one to your dashboard, you must be invited to be a caregiver by the administrative user governing a particular loved one. See the following items.

8. How do I add caregivers to a caregiver group?

The original, administrative caregiver can add additional caregivers to help him or her. To invite a new caregiver, the administrative caregiver should take the following steps:

- On the main iPhone that carries the subscription, choose "Caregivers, Safe Zones & More" on the dashboard, then Caregiver Group.
- Click to add a caregiver, enter your name (so they know who is inviting them), add their email address, and click send.
- The caregiver in question will receive an invitation with an invite code that is valid for 24 hours.
- You can then indicate whether the new caregiver should (or should not) have admin privileges. Administrators can change account settings and invite more caregivers.

9. How do I join a caregiver group?

Caregivers who need to join a caregiver group need an invitation from the administrative caregiver. (See above.) Once you have received an invitation with a caregiver code, download BoundaryCare onto your iPhone (from the App Store), launch the app, create your account. If you are joining an account associated with a health plan or provider organization, be sure to check the box confirming this. Type in your invite code. (The code is valid for 24 hours.)

Joining a caregiver group is free. There is an unlimited number of caregivers.

Caregivers can set up a schedule for caregiving, so all caregivers are not on duty at the same time. See below for alerts.

10. How do I create and edit safe zones?

Safe zones can be created in three different forms: simple circles, "custom" zones (polygons), or paths. They may be created via the iPhone app ("Caregivers, Safe Zones & More" → "Safe Zones") or on the Web Portal ("Safe Zones" in the navigation bar.)

Follow the instructions within the app to name your zone and draw a shape or path. Simple circles can be edited to be larger or small, or to

change the center. Custom zones and paths can be edited by dragging pins.
Users can return to zones to edit them later, or to turn on or off alerts for that zone.

11. How do alerts (SMS/text, in-app notifications, and email) work?

Alerts are set up through the "Settings & Notifications" button, accessed by tapping "Safe Zones, Caregivers & More" on the dashboard of the iPhone app. On the web portal, look at the navigation bar and select Alerts, etc.

Each caregiver can choose to receive alerts via SMS/text, push notifications, and/or email. Certain alerts can also be set as "critical alerts," which means that the alert will sound even if Do Not Disturb is turned off, or if the iPhone is in silent mode.

On the web portal, alerts can be configured in powerful ways. For example, alerts can be set for different thresholds with different metrics. The alerts can go to different recipients (or to none) depending on the schedule. And you can choose which caregivers should receive the alerts, and in what order. This allows one to configure alerts to conform to caregiver's schedules, depending on who is on duty.

Thanks to the alert "tree," alerts can "waterfall" from one person to the next until someone responds, making sure that no alert goes unheeded.

12. How do reminders work?

Reminders are created and scheduled only in the web portal. Choose "Reminders" in the navigation bar, and follow instructions.

13. How can I view health and safety metrics?

View health and safety metrics by looking at the **dashboards**. See above.

14. How can I view histories of health and safety metrics?

View health and safety metrics by looking at the **web portal**, and clicking on any metric. See above, under **dashboards.**

15. How do phone calls on the watch work?

The Apple Watch can receive and make phone calls. It may have its own number, or the number of the iPhone with which it is paired. (Users with pre-configured kits will have been supplied the phone

number with the kit. Other users know that the phone number is the same as the phone with which it is paired. Watches set up with Family Setup have a different phone number; however, Family Setup limits BoundaryCare's health features and is not a recommended setup for all uses.)

Any caregiver can call the loved one via the Watch's phone number, and that number can be added during setup. "Call (Name)" is a button on the caregiver dashboard in the iPhone app. If the loved one's number is not configured during setup, users can tap on that button and see instructions for adding the phone number.

If "auto-answer" is enabled on the watch, the loved one does not need to push a button to pick up the call; after two seconds, it will pick up automatically, and both the caregiver and the loved one can speak. (See Apple's documentation for turning on auto-answer.)

A loved one can also make phone calls from the Apple Watch. The loved one needs to open up Contacts, choose a contact, and press to call.

16. How does emergency tracking work?

On the iPhone dashboard or the web portal, a caregiver can press the button to launch emergency tracking. (See **dashboards**, above).
Emergency tracking is a short term way for tracking a lost loved one in real time. Once it connects with the Apple Watch (usually within two minutes), it will update the location about every 30 seconds.

Emergency tracking uses a considerable amount of battery power, so it should be used in short bursts. By default, it will turn off after fifteen minutes.

If Emergency tracking cannot connect for any reason, the iPhone version will, after a few minutes, attempt to hand the user off to Find My, which is Apple's native device location service. If the caregiver has been authorized to view the loved one's location within iOS, Find My will attempt to share the location.

17. What settings can I modify?

There are many, many settings that caregivers can modify. Some govern what is tracked or sent to the loved one; some are specific to a given caregiver. For example, you can create and edit safe zones, change the thresholds for alerts for health metrics, determine who should receive alerts, how and when.

Many settings and alerts can be changed on the iPhone app, either through the dedicated button ("Safe Zones"), or through the "Settings & Notifications" button, accessed by tapping "Safe Zones, Caregivers

& More" on the dashboard. On the web portal, look at the navigation bar and select Safe Zones, Reminders, Alerts, etc.

18. What are the Terms of Use and the Privacy Policy?

See [Terms of Use](#) on our website. And see the [Privacy Policy](#) on our website.

TROUBLESHOOTING

19. I can't log in

If you can't log in on the iPhone app or the web dashboard, there are a few possible causes:

- If your username is not recognized, you may have created the account with a different email. Otherwise, you may be attempting to log in to the "public" version of the app / web portal, rather than the version we provide to health plans and other organizations. If the account you are connecting to was provided through a health plan or other organization, be sure to check the box about this on the login screen of the iphone. For the web portal, use the right address:
    - Public version: https://app.boundarycare.com/login
    - Health plans / other organizations: https://app.secure.boundarycare.com/login

- If your password is refused, you may have mis-entered your password. Try again, or click on the link to reset your password. Remember that passwords are case sensitive.

20. My password isn't recognized

If your password is refused, you may have mis-entered your password. Try again, or click on the link to reset your password. Remember that passwords are case sensitive.

## 21. I'm not receiving health/safety updates as often as I should

Several possible solutions:

1. Make sure you aren't using a passcode with the Apple Watch. A passcode makes it difficult for the watch to come to the foreground, which is necessary for its communication. To turn the passcode off, go to the Settings app on the Watch, then "passcode," then "turn off passcode"
2. For BoundaryCare to work properly, the icon needs to be present on the Watch Face at all times. To avoid accidentally changing the Watch Face to one that doesn't have the BoundaryCare icon,

we recommend deleting Watch Faces you don't use. Simply go to the current Watch Face, touch and hold the display, and swipe right or left to view other Watch Faces. To remove an unused Watch Face, swipe up, and tap remove. Press the Digital Crown to return to normal operation.

3. If you don't want a loved one fidgeting with the watch – perhaps changing its settings or accidentally turning off wifi, you can activate "Water Lock." (See item 22.)
4. In BoundaryCare settings, you can choose to receive more frequent updates — at the cost of shorter battery life. Go into settings and choose the frequency that bests suits you.

22. The message "Hello (Name)!" keeps appearing on the Apple Watch
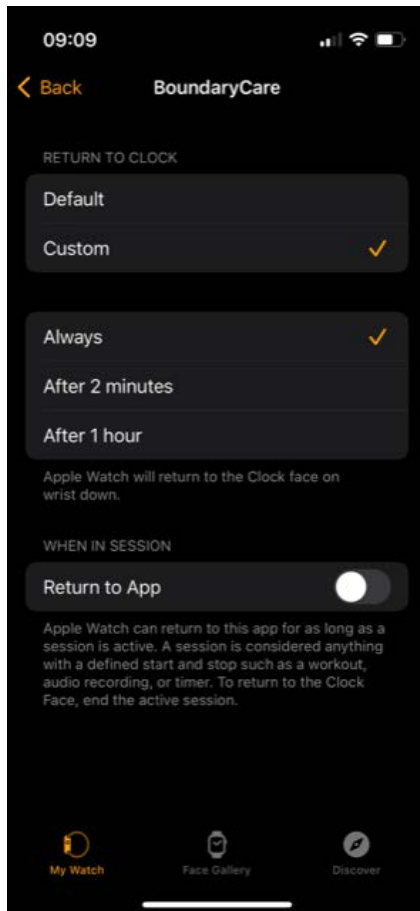
If the BoundaryCare screen appears frequently on the Watch, open the Watch App on the paired iPhone, go to General/Return to Clock, and choose "Always." Then scroll to the list of apps on that same screen and select "BoundaryCare. Make sure "Return to clock" is set to "Default" – or that the Custom setting for BoundaryCare is "Always." Finally, under "When in session," turn "Return to App" off.

The Watch will then automatically return to the Watch Face whenever an app is done. You may need to restart the Watch for this to take effect. (These settings can also be set on the Watch itself by going to Settings/General/Return to Clock.)

23. My loved one keeps changing the watch face (or making other changes)

If you don't want a loved one fidgeting with the watch – perhaps changing its settings or accidentally turning off wifi, you can activate "Water Lock."

● Touch and hold the bottom of the display when your watch face or an app is visible. Wait for Control Center to show, then swipe up. You can open Control Center from any screen.
● Tap the Water Lock button. The Water Lock icon appears at the top of the watch face. The Watch cannot be adjusted while Water Lock is on.

- To turn off Water Lock, press and hold the Digital Crown. (Or, if you have an older Apple Watch, rotate the Digital Crown.)
- For more info, see: https://support.apple.com/en-us/HT210931.

24. I'm not receiving alerts

If you are trying to receive alerts on your iPhone, and you are not receiving them, there are several things you can check:

- Your iPhone may be in silent mode, or in Do Not Disturb. Unless you have critical alerts turned one (see "Alerts," above), you'll need to change those settings.
- You may have push notifications turned off. On your phone, go to the dashboard, click on "Safe Zones, Caregivers & More," and then "Setting and Notifications." Make sure you have push notifications turned on.
- If you have turned on SMS or email notifications, go to the menu in the upper left of the dashboard, choose "Account," and check to make sure the phone number and email address are correct.
- If you are missing alerts at night, it may be that you are sleeping through them. Turn on critical alerts (which are loud). You can also create a special SMS alert associated with BoundaryCare by following these steps:
  - 1. Create a contact in your iPhone contacts app for BoundaryCare, with the phone number (612) 644-3769.
  - 2. In the BoundaryCare contact page that you just created, tap Edit (at the top), then tap Text Tone.
  - 3. Choose an option below Alert Tones.
  - 4. To allow alerts for messages sent by this contact even when Do Not Disturb is on, turn on Emergency Bypass.

25. The Watch battery runs down too fast

The Apple Watch can make it through a full day (17-18 hours) under normal conditions. However, many things affect battery life adversely:

- Relying on a cell connection (rather than wifi or bluetooth)
- Setting the Watch to update location and heart rate too frequently (see above).
- Being in an area with poor connectivity

Try addressing those factors. Make sure the watch is connected to wifi when at home. Adjust the update frequency (above) if needed.

The watch charges relatively quickly (about 1.5 hours), so a charge in the evening can also get you through the night if you are using it for night tracking.

The Apple Watch Ultra has much longer battery life and may be a solution.

26. How do I get support?

Go to https://www.boundarycare.com/support, or write us at info@boundarycare.com.

For subscribers, we offer phone support by scheduled call. Write us at info@boundarycare.com, providing us with your phone number, your time zone, and a few times you can be available.

www.boundarycare.com