

LOCATION MANAGEMENT DEVICES

A QUICK GUIDE FOR FAMILIES & CARE PARTNERS



www.kcesar.org

Location management devices (often called trackers) can help families and caregivers locate a loved one who may wander or become disoriented. These tools can be useful for safety and peace of mind, but it's important to understand their limitations and choose the right option for your situation.

Important Reminder (Disclaimer)

This overview is meant to provide a foundation to begin your research and critically analyze the options available. As technology progresses, you may find other potential options. The considerations below are good places to start when assessing any items.

*No device or system is **100% accurate in all situations**, and location management devices **should not be considered a substitute for in-person supervision or a 24-hour companion when needed.***

We are intentionally not recommending any specific brands due to the number of options available. Our goal is to equip caregivers to critically assess features and select a device that fits their needs.

In case of an emergency: Search no longer than 10 minutes before calling 911

HELPFUL TIPS BEFORE USING A DEVICE

- **Test the device** with family or friends in different environments before relying on it in an emergency.
- **Learn how it works**, including accuracy and limitations, ahead of time.
- **Save device details for law enforcement**, such as brand, model, passwords/ login information, and tracking method.
- **Talk with your loved one** early about why the device is being used and involve them in decisions when possible. If there are style, attachment, or textile options, offer them choices.

- **Contact customer service** to discuss your needs and understand the company's features and support.

DEVICE SELECTION CONSIDERATIONS. WHERE TO START?

- **Price**
 - How much does the initial device and securement method cost?
 - Are there any ongoing subscription or maintenance fees?
 - Is a replacement affordable if needed?
- **Battery Life**
 - How often does it need to be charged?
 - Is that charging requirement realistic? Is there support to remember to charge it?
 - Can it be frequently removed or does it need to be “out of sight, out of mind”?
- **Identify the Potential Area of Use**
 - Is there a strong cell signal in your area?
 - Does the tracker need to work both indoors and outdoors?
 - Is it a densely populated area or heavily wooded?
- **Desired ongoing usage**
 - What is the purpose of tracking? Is it for emergency only, ongoing location sharing, leaving a perimeter of safety notifications?
- **Technology support**
 - Is someone local able to assist with the maintenance and potential emergency usage of the tracker to collaborate with emergency response? Or do they live states away?

PERSONAL CONSIDERATIONS

- **A perfect device on paper can become a junk-drawer addition if there are barriers to implementation**
 - Is it comfortable to wear?
 - Is it waterproof or will it need to be removed for hygiene/ leisure?
 - How will it be used by the wearer? In a wallet, bracelet, watch, shoe?
 - Is it easy or difficult to remove?
 - Does it need to be disguisable or fashionable?

TYPICAL CHARACTERISTICS OF COMMON TECHNOLOGIES

Cellular

- **Cost:** Subscription + Initial Materials. Location may already be integrated if your loved one consistently carries a cell phone
- **Battery:** Hours-Days
- **Tracking:** Most accurate live tracking with mapped location, anywhere with cell signal indoors or outdoors.
- Uses cellular towers to triangulate locations
- May also incorporate GPS for outside of cellular range
- **Common significant barriers:** Highest subscription costs. Frequent charging increases risk of forgetting device or device abandonment
- **Common biggest benefits:** Most consistent live location, many products to choose from

GPS alone

- **Cost:** Subscription + initial materials
- **Battery:** Days
- **Tracking:** Outdoor places with a clear view of the sky, barriers can hinder functionality
- Uses satellites to gain location
- **Common significant barriers:** Unable to track indoors or in areas with dense vegetation/ covers. If direct sunlight might not break through, it may not give a location
- **Common biggest benefits:** Lower ongoing costs and charging requirements. May pick up signal in more remote areas

Radio Telemetry Tracking

- **Cost:** High initial setup, low ongoing subscription
- **Battery:** Months
- **Tracking:** Uses radio waves to communicate from transmitter to receiver
- Requires multiple pieces of equipment
- **Common significant barriers:** Highest initial setup cost, no live mapped location and no remote support
- **Common biggest benefits:** Independent of terrain/ structure limitations. Certain areas have pre-existing integration with emergency services

Bluetooth or WIFI

- **Cost:** Lowest initial setup, no ongoing subscription
- **Battery:** Months-Years
- **Tracking:** Sends “pings” at set intervals to nearby bystander phones that have Bluetooth enabled or pings to WIFI networks (depending on device features).

- Requires critical mass of bystander phones within range (may be as small as 30ft) or a WIFI presence to gain any location
- **Common significant barriers:** Needs to be near many cellphones or WIFI signals to work and then updates may only happen every few minutes or longer. In areas with few cellphones, it may not be able to show a location.
- **Common biggest benefits:** Lowest setup costs, longest battery life. Can often obtain several and disguise more easily into wallets, shoes, etc.

TYPICAL CHARACTERISTICS OF COMMON TECHNOLOGIES

	Cellular	GPS Alone	Radio Telemetry	Bluetooth or WIFI
Cost	Initial Setup and Subscription (high)	Initial setup and subscription (medium)	Initial setup (highest) and subscription (low)	Initial setup
Battery	Hours-days	Days	Months	Months-year
Tracking Technology	Uses cellular towers	Uses satellites	Uses radio waves in proximity to receiver (similar to game of hot/cold)	Uses Bluetooth from nearby phones or WiFi networks
Area of usage	Anywhere with cell coverage (outdoors and indoors)	Anywhere with open sky (e.g., can sunlight hit?)	Indoors and outdoors in proximity of mobile receiver	High phone concentration areas or WiFi indoors/ outdoors
Common barriers	Highest subscription costs. Frequent charging increases risk of forgetting device or device abandonment	Unable to track indoors or in areas with dense vegetation/ covers	High initial setup cost, no live mapped location and no remote support	Needs to be near many cellphones or WiFi signals to work, and then updates may only happen every few minutes or longer. In areas with few cellphones, it may not be able to show a location.
Common benefits	Most consistent live location, many products to choose from	Lower ongoing costs and charging requirements. May pick up signal in more remote areas	Independent of terrain/ structure limitations. Certain areas have pre-existing integration with emergency services	Lowest setup costs, longest battery life. Can often obtain several and disguise more easily into wallets, shoes, etc.