BREAKING NEWS

- **Learn more about NAA's Big Red Safety Box program. Click for details.**

TRACKING TECHNOLOGY

There are several types of technology designed to prevent wandering incidents and to locate individuals who have become lost. We encourage caregivers to thoroughly research personal locating devices before deciding which technology may be best for their loved one. No technology is fail-proof. Never allow yourself to develop a false sense of security based on a locating device.

When researching a personal locating device, consider the following:

- Does the system involve trained emergency response personnel?
- Battery Life – does the unit have to be charged? If so, how often? Is your loved one unprotected during the charging process?
- Water Resistance – can the unit be worn when bathing, showering, swimming?
- Can the unit transmit a signal while under water?
- Is the unit removable by the wearer?
- Is geofencing/perimeter notification available?
- What are the costs involved, are there monthly fees?
- Will the unit work in the area of your home, school, etc?

Pricing, coverage, efficacy, battery life and other features vary greatly between locating devices. Please feel free to contact us with specific questions.

If you would like to advocate for your local first responders to implement a tracking technology program, click here for a document outlining the process.

Global Positioning System (GPS) Many location management services rely on GPS technology. GPS depends on satellites to provide positioning and navigation information. The device communicates with satellites and figures out the distance to each and then uses this information to deduce its own location. In order for GPS to work, there must be a clear line of sight between the device and the satellites. **Advantages:** GPS is not dependent on the availability of a network and can provide very precise, worldwide outdoor positioning information at any time of day. Users can set up Geofencing and receive notifications when their loved one steps outside of a designated perimeter. **Limitations:** Natural barriers, such as mountains, thick foliage or clouds, and artificial obstructions, such as large buildings and dense communities, can hinder satellite signals. For this reason, GPS tracking inside buildings is seldom possible. Also, GPS tracking in large cities is not always reliable. Like a cell phone, these units require frequent charging, leaving the user unprotected during those times. GPS units are not waterproof.

Network Assisted GPS (A-GPS) A-GPS technology works in conjunction with GPS by using cell towers to triangulate locations. **Advantages:** A-GPS can provide indoor positioning information with greater accuracy and is usually faster than unassisted GPS. Users can set up Geofencing and receive notifications when their loved one steps outside of a designated perimeter. **Limitations:** A drawback to A-GPS is the availability and reach of the cellular network it gets its boost from. If you travel out of the network's reach, your device won't be able to pick up the signals. Before choosing a device, find out if the network the device depends upon is reliable where the person with Autism lives and in the areas he or she is likely to travel. Like a cell phone, these units require

frequent charging, leaving the user unprotected during those times. A-GPS units are not waterproof.

Radio Frequency (RF) RF works through the transmission of radio waves between a transponder, an antenna and a receiver. The RF chip transmits a signal to the receiver through the antenna and provides data on a person's location. **Advantages:** The device does not have to be removed for charging. RF transmitters typically use small watch batteries. Batteries are replaced once per month. RF transmitters do not need to be removed when bathing or swimming. **Limitations:** Key limitations of RF are the need for multiple pieces of equipment and a limited signal range. Additionally, most systems using RF technology offer the service through local law enforcement so it is necessary to determine whether your community supports a RF location system. RF technology does not allow the option of perimeter notifications or Geofencing.

Uplink Time Difference of Arrival (U-TDOA) U-TDOA is a position-location technology for mobile phone networks. It uses advanced triangulation techniques to determine the precise location of a mobile phone. U-TDOA has been widely embraced by major U.S. GSM carriers to meet the government's E-911 requirements. **Advantages:** A small, single-purpose wireless device that upon remote activation dials 9-1-1 and reports its location directly to emergency responders. **Limitations:** Must call 911 and open missing person's case before system can be activated and signal given to emergency response personnel.

SAMPLING OF AVAILABLE PERSONAL LOCATING EQUIPMENT

	Project Lifesaver	LoJack SafetyNet	Various GPS Units
Technology	RF	RF	A-GPS
Direct to Consumer	No	No	Yes
Battery Life	30 days	6 months	Avg 2-3 days
Waterproof	Yes	Yes	No
Wearable	Yes – wristband	Yes – wristband	Depends on unit
Remove to Charge	No	No	Yes
Geofencing/Perimeter	No	No	Yes

Notifications			
SOS Button	No	No	Depends on unit
Caregiver Monitoring/Live Tracking Online	No	No	Yes
Police Involvement Necessary	Yes	Yes	No
Set Up Fee	$300	$99	$69.95 – $300.00
Monthly Fee	None for first year. Agencies may charge small fee for battery and wristband replacements.	$30	$20 – $40

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Click here for a ***policy statement*** *from the National Autism Association regarding the endorsement of personal tracking products.*