

Personal Emergency Response Systems: Disaster Management

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Executive Summary

A Personal Emergency Response System (PERS) is a signalling device that summons help during an emergency. Although PERS vary greatly, there are three basic components: (1) electronic hardware in the home, (2) emergency response centre, and (3) dispatch of appropriate help. It has proven its effectiveness in delivering medical and emotional support in personal emergency situations. The question is asked as to whether these systems can be used to inform older adults of disaster / emergency situations and provide them with guidance and direction in the context of a large scale disaster.

Information was obtained about general uses of technology in a variety of emergency related settings, about the detailed capabilities of North American PERS, and about the potential for using existing PERS in disaster settings.

Some assumptions are presented about the types of communication needed in disaster settings, and these are used to assess the use of PERS, from technical and non-technical perspectives.

Our findings indicate that PERS and client devices are not designed to provide targeted messages to specific groups of clients. PERS coverage is fragmented and incomplete, limited to paying subscribers. Finally, there are competing channels accessible to most seniors, specifically broadcast television, and personal and caregiver contact. Given this, current PERS are not likely to play a significant role in system support for disaster management. Having said this, there are specific examples of a very few PERS being used in the eastern United States to alert users to impending natural disasters. However, this is dependent upon a two way interactive system. One example is drawn from the use of a PERS to inform older adults about an impending snowstorm and the strategies initiated to support this population.

Nevertheless, PERS have demonstrated that systems can be developed that have a high degree of acceptance by older adults and provide support in emergency situations. They give us confidence that a system can be designed and developed in order to provide both broadcast and personalized support for older adults and their families in during large scale disasters.

However, this is limited by the need to examine the financial , privacy, and legal implications if such redesign was undertaken.

Personal Emergency Response Systems: Disaster Management

Responsive to the Needs of Older Adults

1. Introduction

Aging service technologies can be broadly defined as technologies that can influence the aging process for older adults, including their quality of life, health outcomes, and satisfaction and / or the quality of care received. There is growing recognition that the care and support of older adults can be enhanced through technology. At the same time, the majority of Canada's older adult population requires some degree of informal and / or formal care due to loss of function as result of declining health. This change in the demographic and its potential consequence has prompted active research in technology solutions for monitoring and assistance. Modern sensor and communication technology, coupled with advances in data analysis, is causing a paradigm shift in remote management and monitoring of older adults.



One successful application is the Personal Emergency Response System (PERS)¹. A Personal Emergency Response System is a system which allows individuals, including older adults, to summon help during an emergency. Although PERS vary in specifications, the most common configuration has three components:

- (1) electronic hardware in the home that allows the client to request assistance,
- (2) a centralized emergency response centre receiving client calls, and
- (3) protocols and staff to assess and dispatch appropriate help.

Even though PERS are straightforward technically and organizationally, they provide medical and emotional support to the client and provide notification to caregivers, in the context of a personal emergency (Leung, Ma, & Ng, 2009). It is to be determined whether this infrastructure

¹ The term / abbreviation "Personal Response System / PRS" is to be avoided because of its increasing use within the educational literature in reference to the use of electronic keypads by students.

could play a role in providing support and guidance to seniors in the context of a large scale disaster.

2. Purpose of Report

The goal of this project is to assess the use of existing PERS infrastructures as an emergency preparedness / management tool, in providing support and guidance to seniors in the context of a large scale disaster. It provides a number of technical and non-technical criteria against which to perform this assessment.

3. Method

A three phase environmental scan was conducted:

- (1) A scan of the literature relating to the general uses of technology in personal and large scale emergency setting, to understand key technical and non-technical considerations and hence criteria for this assessment (Appendix 10.1),
- (2) A detailed survey of North American PERS providers, to understand product capabilities and variations in technologies, target clients, and patterns of communication (Appendix 10.4), and
- (3) Contact with PERS providers, to obtain where possible the companies' own assessments of the actual and potential benefits of their systems in disaster settings (Appendix 10.2).

4. Findings

4.1 Literature / Information Search

4.1.1 General Themes

Emerging from the literature specific to PERS was a typical user scenario (#1); however, the contextual reading provided two other possible scenarios, both of which are relevant to this report.

Scenarios:

Scenario	Process
#1 –Personal Medical Emergency (current PERS use) Mrs. Scotting falls within her own home;	<ul style="list-style-type: none">• Mrs. Scotting initiated the call to PERS• PERS agent calls back to attempt to contact Mrs. Scotting

she activates the alert device in her PERS.	<ul style="list-style-type: none"> Agent will follow a protocol based on client; requirements and assessment of the current situation to notify keyholder or medical services
<p>#2 – Pre-disaster response scenario</p> <p>A forest fire is coming close to a small community and authorities have advised residents to leave.</p>	<ul style="list-style-type: none"> PERS broadcasts a call to its subscribers in the community; could be automated or person
<p>#3 – Post disaster response scenario</p> <p>A large chemical spill has just occurred on a major highway; local authorities have advised removal of some residents from their homes.</p>	<ul style="list-style-type: none"> PERS broadcasts a call to its subscribers in the community

Supported by the general literature survey, we established a number of criteria for the assessment:

4.1.1.1 Technical

Technical criteria include type of communications network used, primary directions of communication, level of automation vs. human involvement, ability to mass broadcast to client, ability to integrate with systems from local authorities, etc.

4.1.1.2 Non-technical

Non-technical criteria include geographic coverage of PERS providers, availability of alternate channels, etc.

4.1.2 The Product “PERS”

4.1.2.1 Target Users

Most PERS follow the structure of a client notifying a call centre, which assesses the situation and dispatches appropriate medical or other assistance. These are designed with older adults in mind, although some providers indicate that their products can be used with other high-risk groups such as those at risk of heart attacks or with physical disabilities.

4.1.2.2 Components

There are four components to a PERS:

1. Participants

- The older adult (client): a PERS requires a client to use and benefit from the system. The majority of PERS clients are older adults. The PERS products take into account that the client may have limited mobility, dexterity, hearing and/or vision. A profile is needed for each older adult subscribing the PERS. This details the personal data of the older adult, including possible health problems and medications); a protocol is also needed for whom to contact in an emergency. This raises the need to address privacy and confidentiality (see later comments).
- Support-centre staff: staff communicate with older adults via telephone base units. Not all PERS have front-line staff; a few fully automate the notification of contacts.
- Keyholders: some PERS require the older adult to identify one or more keyholders. The individuals are the first to be contacted by the service-centre in the event of an alert. The most common key holders are family members or neighbours.

2. Information Technology:

- Alerting Devices: a wide variety of PERS devices are available. Most of these are worn on-person, for example as a necklace. They are designed to be easy to understand and use, and in many cases consist of a large help button to initiate an alert. A few function as a personal cordless phone, allowing two-way voice interaction if the client is unable to reach the main telephone. The majority are wirelessly connected to a telephone base unit. The devices usually require an independent power source (e.g. battery).
- Base telephone unit: receives signals from the alerting device within the house and initiates a call to the support-centre.
- Call centre software and communications infrastructure: routes incoming calls to an agent, and makes available the client profile and contact protocol from the call centre database.

3. Operational units

- Support centres, which may or may not be located close to where the client is located. Coverage areas range from national to regional.
- Support services, initial response agencies e.g. fire station.

4. Supportive elements

- Power: individual PERS devices typically have a battery installed while base telephone units are connected to a main electricity supply and also have an internal backup battery in case of power failure.
- Telecommunications: links the PERS components together. Communications within a PERS is usually via a public telephone system, mostly landlines but occasionally using the cellular network. Landlines and cellular networks differ in their costs and coverage, and have different vulnerabilities in the event of major catastrophes. Some systems designed for providing response within a facility use a private wireless local area network.
- Emergency response service.
- Care / social services: professional care and social services are a necessary integral part of a PERS.

4.1.2.3 Requirements

There are both functional and non-functional requirements for PERS to operate:

Functional requirements are what a PERS needs to do in order to be effective. Specifically:

- The system must be available 24 hrs/day, 7 days/week;
- The client must be able to initiate an alert reliably from anywhere in their environment;
- The system must store information about the client to make effective decision making; and
- The system must provide fast end-to-end assessment and response.

*While not a current requirement, it should be noted that an ideal system must accommodate its clients' age-related limitations (e.g. hearing decline).

Non-functional requirements:

- Legal requirements – a PERS must comply with relevant legislation within its operating jurisdiction. These include in some jurisdictions: privacy of personal data and protection of medical information;
- Regulatory requirements - consideration needs to be given to the accreditation of such PERS and this is beyond the scope of this report; and
- Service Levels – service targets need to be set for functions such as speed of notification to older adults of disasters / emergencies.

4.1.2.4 Product Use

Drawn from the literature and related information search are some noteworthy points. Roush et al. (1995) studied the use of health care after PERS enrolment. “Users and their caregivers reported heightened feelings of security in knowing that they were electronically tethered to a nearby emergency response centre” (p. 922). However, Roush neither cited data supporting that conclusion nor explained their method.

The PERS is a technological device and some older adults are likely to feel anxious about or intimidated by this type of equipment. Porter (2003) reported that older frail widows’ experience of having a personal emergency response system, “Being certain that I can get help here (to her own home) quickly” is one value of the use of a PERS (p. 1311). In other words, confidence in the system being able to respond quickly when it is needed is important to older users. By extension, a PERS should be able to initiate disaster preparation but also identify that a responder will be forthcoming. This has been substantiated by other researchers (De San Miguel & Lewin, 2008; Fallis et al. 2007).

4.2 Company Surveys

The specific use of the PERS as identified in the literature was consistent with that reported by the providers (companies). While several commented that the two way interactive nature of their systems offered the potential for responding to large scale disasters, it was not part of their current business plans.

It is important to note there was some initial reluctance of PERS providers to communicate with the research assistant hired for this study. When the caller identified herself as a researcher and asked for the marketing manager, she was told that she would receive a call back. This was not often done. Further dialogue with providers indicated clear roles and responsibilities associated with telephone support workers; the need for direct communication with marketing staff, and in some cases perhaps an uneasiness with how the information might be used.



Email communication sent to the identified web contact usually was not replied to other than with a standard response; however, no further communication was received. In each instance a

minimum of two phone calls was made to Canadian suppliers. Contact numbers listed for United States providers of PERS were usually 1-800-XXXX and were not accessible outside of that jurisdiction. Directory assistance was of limited benefit in most of these cases as they offered the same 1-800-XXXX.

The number of customers was not provided when requested from suppliers as this information was considered to be confidential. When asked about what type of information was collected when a contract for a PERS was signed, it was evident that while similar demographic information is collected by providers; it is not identical data.

All companies indicated that the keyholder was identified by the individual who signed the PERS contract. Often at least three people were identified per user; however, not all were family members. In some cases, the initial keyholder was not a family member. In other cases, there was no family member identified as a keyholder. However, some companies indicated that the relationship of the user to the identified keyholder was not always obtained. In one discussion with a company representative, the comment was made that there was no legal requirement to contact any family member since keyholders were identified by the user. Another comment was made that sometimes the name of the keyholder indicated a possible relationship to the user.

Some companies cited that challenges existed in maintaining a current keyholder contact list. In addition, the company may not be notified if the older adult was hospitalized or perhaps out of town. The system would need to be turned off during such situations and this is not always done.

While there was interest in working with others e.g. government, local agencies to address large scale disaster management, there were immediately expressed concerns of cost. As one company representative stated, “costs would have to be passed to the user”.

5. Discussion of Findings

5.1 Assumptions

We assume that PERS system support in disasters settings would have the following minimum capabilities

- Would allow broadcast of specific messages to a targeted set of individuals,
- Would be able to reach all the targeted individuals,

- Would allow local authorities to provide messages for distribution.

In fact, within the United States, a PERS has been used in disaster situations, e.g. a huge snowstorm. The provider initiated calls to individuals informing them of the situation.

5.2 Benefits of current PERS systems for disaster situations

- PERS have databases of client information, including medical information and chains of contacts, both caregivers or family; in principle, this could be extended to the entire caregiver network;
- PERS technology has been designed to accommodate the capabilities of older adults; generally and those with special needs (e.g. large buttons, lights or audio accessories for the hard-of-hearing);
- PERS technology is accessible to and accepted by older adults; and
- Communications and systems infrastructure is in place.

5.3 Disadvantages of current PERS for disaster situations

- PERS communications systems are not generally designed for mass broadcast;
- PERS on-person Alerting Devices are not usually designed for incoming notifications;
- Geographic coverage is fragmented; a particular region may be covered by multiple PERS providers; as a result it will be difficult for a local authority to provide messages for distribution;
- Demographic coverage is limited to subscribers;
- There are no existing channels for local authorities to communicate with PERS providers; and
- There are existing competing channels (radio, TV, institutional staff, families and friends, police service phone-out campaigns) that can provide the same information.



5.4 The Response Network

The concept of a stakeholder network encompasses all those who may be engaged in delivering care to older adults. The network includes professional health care staff, family members, and care service providers. Within the current PERS, this network includes PERS

providers (companies), call centre and support staff, and emergency response services. While there has been some initial communication, noticeable in the Eastern United States, about the integration and use of PERS in large scale disasters, this does not appear to be extensive.

There is a fundamental question that needs to be addressed, and that is the question of what happens after an initial notification. If the PERS has the capacity to inform the older adult(s) living in the home of an actual or potential disaster then what co-ordination needs to be in place? For example.

- How will the older adult inform family members of the need to evacuate?
- How will the call centre maintain its health records to ensure that current health care information and requirements are available for first responders?

The answer to these questions is more complicated in a large scale disaster scenario than in a personal medical emergency. In a personal medical emergency scenario, the rules of interaction and the participants are pre-determined, and the entire interaction takes place within a short period of time. In a disaster setting, the participants and their roles are not known in advance. For example, the military may be involved in an evacuation, or a keyholder may be concerned with personal safety. In addition, the situation is one that can unfold over a period of time.

5.5 Special Needs

Older adults are not a homogenous group. Currently PERS are used by a specific segment of this large population group, specifically those who require medical or monitoring services. The use of PERS in a large scale disaster situation would need to accommodate this group of individuals. In addition, there are normal aging changes that would have to be supported. For example, accommodation for those who are deaf: Statistics on the number of older Canadians deaf and hard of hearing population are available, but provide a range of estimates that make it difficult to suggest how common this disability is. There are a variety of handsets, amplifiers, and other devices to make the telephone system usable by the hard of hearing. There are telephone based technologies for the completely deaf, but very inconvenient to use. Some PERS systems are modified to respond to normal aging and mobility changes, but not all.

It is important to realize that during a disaster, communications can take place via established formal modalities or via other technologies not originally designed for this purpose.

5.6 Privacy and Confidentiality

The growing numbers of older adults who use PERS are vulnerable to violations of privacy and security, particularly when medical, family, and caregiver information is provided. Professionals in the aging community, especially those who are interested in developing and promoting disaster management services to help meet the needs of older people, must address these issues.

5.7 PERS in the Context of Overall Disaster Management

Clearly, PERS can play only a limited role in an overall co-ordinated strategy, not least because these systems have limited range and cannot provide any communication with the client if they are evacuated out of their home setting.

However, PERS could potentially play some broader roles in a co-ordinated disaster management strategy:

- As discussed, alert an older adult to an actual or impending large scale disaster
- Provide demographic information to authorities that there are citizens within a locale who are infirm, hard of hearing, diabetic, etc. so that evacuation plans can be initiated.
- Provide information to authorities that a client has acknowledged the alert and is still in her home.

Recognizing that PERS do have the potential for alerting an older adult to an actual or impending large scale disaster, the “so what” question must be asked. There needs to be a response strategy in place to inform the older adult how he or she is to be assisted in this disaster, e.g. are they to stay located within their own homes or are they to evacuate and if so, to where?

Some of the challenges associated with aging, e.g. declining mobility and functional skills may necessitate refinements to a usual evacuation plan.

If the PERS provider is to initiate a large scale disaster alert then what are the legal implications, privacy concerns (see 5.6) that must be addressed. Some PERS providers could use postal codes as a locator code for evacuation; however, it must be noted that not all older adults need or use a PERS. Any response to a large scale disaster must be co-ordinated.

5.8 Where Next?

As they stand, PERS and client devices are not designed to provide targeted messages to specific groups of clients. PERS coverage is fragmented and incomplete, limited to paying subscribers. Finally, there are competing channels accessible to most seniors, specifically broadcast television, and personal and caregiver contact. Given this, current PERS are not likely to play a significant role in system support for disaster management.

Nevertheless, PERS have demonstrated that systems can be developed that have a high degree of acceptance by older adults and provide support in emergency situations. They give us confidence that systems can be designed and developed in order to provide both broadcast and personalized support for older adults and their families in disaster settings.

6. Recommendations

6.1 Elaborating the Roles of PERS in an overall Disaster Management Setting

Recommendation: Conduct a feasibility study of the possible use of PERS in an overall disaster management setting, covering demographic, technical and non-technical aspects.

Rationale:

- Demographic understanding: it is important to assess how much of the population of Canadian seniors uses PERS to provide response in personal medical emergencies, the coverage of PERS providers, and whether the next generation of seniors or their caregivers will be looking for PERS with enhanced capabilities such as wide area coverage, global positioning;
- Technical aspects: how can current technologies such as GPS, and cellular voice & data services be packaged into a simple and effective device that is easily usable by seniors with a variety of age-related limitations; what data flows would be needed between PERS and other agencies in order for PERS to participate as fully as possible in an overall disaster management setting;
- Non-technical aspects: what considerations of information security and privacy, regulation, etc. would have to be in place in order for private companies to play an extended role in overall disaster management?

6.2 Moving Ahead

Recommendation: Initiate Contact with key organizations for an enhanced picture of work being done in this area.

Rationale: There were a number of organizations, identified through the literature review and web that may have a more advanced knowledge of PERS in specific reference to disaster management and contact could be initiated with them; e.g. International Community on Information Systems for Crisis Response and Management.

http://www.iscram.org/index.php?option=com_frontpage&Itemid=1

7. Limitations

There were some limitations to this project that need to be articulated. The short time frame of it restricted the follow up to initial phone calls and emails to identify key contacts at individual PERS companies. It was important to communicate with the marketing personnel at each company and trying to initiate telephone conversations was a challenge. In addition, as stated earlier, United States PERS providers can not be contacted through 1-800-XXXX numbers. Directory assistance in the United States provided somewhat of a challenge as often provided the same 1-800-XXXX phone number.

8. Conclusion

Personal emergency response systems are essentially a network of networks. They provide system support for certain communication between older adults and their health care network in personal emergency situations. They have a high degree of user acceptance, and are successful in alerting medical care, providing comfort, and saving lives. The scenarios that PERS support are comparatively simple, repeatable, and high value to their clients, which is why there are so many PERS providers with similar offerings. The current PERS offerings do not extend well to disaster scenarios; however, their high degree of user acceptance and success indicates that they can provide practical and effective solutions for older adults covering a broad range of disaster scenarios.

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10. Appendices

Appendix 10.1: Located Documentation

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Appendix 10.2: Interview Questions

Please ensure that questions are focused on “seniors in disasters” and not on the effectiveness of PERS in general.

- How would you describe the personal emergency response system?
- What is your coverage range (e.g. Canada, U.S., North America) specific to your seniors specific client base?
- What would you perceive as the strengths of this personal emergency response system specific to the needs of seniors and emergency management?
- What would you perceive as the weaknesses of this personal emergency response system?
- Can the personal emergency response system be used if a disaster / emergency is declared?
- If so, how are these personal emergency response systems used if a disaster / emergency is declared locally or provincially?
- What might you perceive as the opportunities this personal emergency response system offers if a disaster / emergency is declared locally or provincially (modify if calling the US)?
- Are you linked in any way with local authorities involved with emergency preparedness / response?
- Can you give examples of how PERS was effective in responding to seniors' needs in past disasters (e.g. ice storm)?
- Can you provide any documentation that might be helpful to read specific to emergency preparedness / disasters and this personal emergency response system?

SPH / RS

Appendix 10.3: SWOT Analysis Template

Personal Response Systems specific to Disaster management / older adults

criteria advantages? capabilities?	STRENGTHS	WEAKNESSES	criteria disadvantages? gaps in capabilities?
criteria scope?	OPPORTUNITIES	THREATS	criteria costs?

Appendix 10.4: PERS Providers

<ul style="list-style-type: none"> • <u>Alertcast</u> Subscription based emergency notification service that facilitates contingency planning, emergency preparedness, and disaster recovery. 	http://www.alertcast.com
<ul style="list-style-type: none"> • <u>AlertOne Services, Inc.</u> Offering medical alarms and emergency response systems for independent seniors, physically challenged persons, and homebound individuals. 	http://www.alert-1.com
<ul style="list-style-type: none"> • <u>Always Dependable Companion Medi-Alert Systems, Inc.</u> Help at a push of a button for seniors and physically challenged persons. 	http://www.medi-alert.com
<ul style="list-style-type: none"> • <u>American Medical Alert Corp.</u> Provider of personal emergency response systems. 	http://www.amacalert.com
<ul style="list-style-type: none"> • <u>American Senior Safety Agency</u> Offers medical alarms to the elderly. 	http://www.seniorsafety.com
<ul style="list-style-type: none"> • <u>Bethany Life line</u> 	http://www.bethanycare.com/housingcare/services/bethany-lifeline Calgary: 403-270-4357 Alberta: 1.800.338.1411
<ul style="list-style-type: none"> • <u>Connect America Medical Alarms</u> Medical alert alarm systems with two-way interactive monitoring. 	http://www.medicalalarm.com
<ul style="list-style-type: none"> • <u>Direct Alert</u> 	http://www.directalert.ca

This is a Canadian company and distributor.	1-877-4-911-SOS
<ul style="list-style-type: none"> • <u>HomeScape</u> Home monitoring system. 	http://www.homescapeimprovement.com/home-security/home-monitor.aspx
<ul style="list-style-type: none"> • <u>Home Technology Systems, Inc.</u> Nationwide provider of in-home medical alert systems and advanced telephone-based emergency response systems for senior living facilities. 	www.hometechsystems.com
<ul style="list-style-type: none"> • <u>Life Alert</u> Personal emergency response system. 	http://www.lifealert.com/
<ul style="list-style-type: none"> • <u>LifeCall</u> 	http://www.lifecall.ca/?gclid=CPCh6pDi4J8CFQgNDQodTQiCHg 1 800 661-5433
<ul style="list-style-type: none"> • <u>LifeCall Canada</u> Give seniors the ability to live independently and securely; they are also used in residential settings. This is a Canadian company. 	http://www.lifecall.ca/new/senior-panic-buttons.html
<ul style="list-style-type: none"> • <u>LifeFone Medical Alert & Alarm System</u> Offers personal response and support services for older adults by intervening in emergency situations. 	http://www.lifefone.com
<ul style="list-style-type: none"> • <u>LifeGuardian Medical</u> 	http://www.lifeguardianmedicalalarms.com/
<ul style="list-style-type: none"> • <u>LifeLink No Fee Medical Alert System</u> Personal alert system that calls for medical help at the press of a panic button, featuring no monthly fees, subscriptions, or contracts. 	http://www.callforassistance.com
<ul style="list-style-type: none"> • <u>Lifeline Systems Canada</u> This is a resident safety product. 	(800) 387-8120

<p>Lifeline provides 24 hour around the clock monitoring from its Response Centres in Toronto and Montreal.</p>	
<ul style="list-style-type: none"> • <u>Life Response Medical Alarm</u> <p>Offering medical alert systems for seniors in the form of a necklace transmitter with a panic button giving an elderly person or disabled person access to medical assistance 24 hours a day. Site features product and company information, contact info, and online ordering.</p>	<p>http://www.liferesponseusa.com</p>
<ul style="list-style-type: none"> • <u>LifeStation</u> <p>Offers a waterproof personal security pendant which allows the wearer to summon help and speak live with a Lifestation system.</p>	<p>http://www.lifestation.com</p>
<ul style="list-style-type: none"> • <u>Medi-call Canada</u> <p>Press of the button activates base unit, which automatically calls response centre in Ottawa.</p>	<p>http://www.medi-call.ca/</p>
<ul style="list-style-type: none"> • <u>Medical Monitoring USA</u> <p>Medical Monitoring USA is a medical alarm company that provides medic alert services, medical alert bracelets, and monitoring to the elderly and handicapped.</p>	<p>http://www.mmusaalert.com</p>
<ul style="list-style-type: none"> • <u>Northwood Intouch</u> <p>Northwood Intouch is a province-wide personal response and support service offering seniors and other clients peace of mind in knowing that they can get the help they need when they need it. This is for Nova Scotia only.</p>	<p>http://northwoodintouch.com/index .</p>
<ul style="list-style-type: none"> • <u>Phillips Lifeline</u> <p>Provider of personal response services. The Philips Lifeline Systems features a personal help button</p>	<p>www.lifelinesys.com 1-866-832-5426</p>

that is worn around the neck or wrist	
<ul style="list-style-type: none"> • <u>Pioneer Emergency Medical Alarms</u> Sells a neck pendant which will send a radio signal to the command station when pressed, in case of an emergency. 	www.pioneeremergency.com/
<ul style="list-style-type: none"> • <u>Pioneer Medical Systems</u> Central station medical monitoring company specializing in emergency response and medication monitoring for in the home use. 	www.pioneermed.com www.clarityproducts.com 1-800-426-3738
<ul style="list-style-type: none"> • <u>ResponseLINK</u> Offers a personal alert system with push-button emergency response service. ResponseLINK provides seniors with independence and peace of mind through reliable equipment and 24-hour customer service. 	www.responselink.com
<ul style="list-style-type: none"> • <u>Safety Express</u> 	http://www.safetyexpress.com/
<ul style="list-style-type: none"> • <u>Safety Products Unlimited</u> Equipment, supplies, first aid kits, and personal emergency response systems. 	www.safetyproductsunlimited.com

Appendix 10.5: Product Specific Information

Technologies

Company	Target audience	Communication flow	Technology	Scenario
Alertcast	Any group that needs to be broadcast to; not senior specific	Originator creates message; broadcast to group	Originator: phone, web Group: phone	General broadcast notification
Alert-2	Seniors	Client or caregiver initiates; Two way call with service centre to assess; Dispatch emergency service or non-emergency contact; Notify additional contacts;	Personal devices or common area devices; Base units; Telephone system;	Personal emergency; Location emergency
Always Dependable Companion	Seniors; physically disabled	Client or caregiver initiates; Two way call with service centre to assess; Dispatch emergency service or non-emergency contact;	Personal devices or common area devices; Base units; Telephone system;	
American Medical Alert	Seniors;	“	“	
American Senior Safety Agency	Seniors	“	“	
Bethany LifeLine	Seniors	“	“	
Connect America Medical Alarm	Seniors	“	“	
Digital Angel	Military; personnel	Location-based services	RFID	
Direct Alert	Seniors	“	“	
Homescape	General alarm and monitoring		Not personal devices;	
Life Alert	Seniors	“	“ Cell phone	
Life Call	Seniors	“	“	
LifeFone	Seniors	“	“	
Life Guardian	Seniors	“	“ Detect other types of situation, e.g. Smoke, CO2, intrusion Braille buttons	
Life Link	Senior	Broadcast call to selected number of clients choice; no two-way interactive	Personal device; Calls from base station via landline in sequence;	

		service centre	recipient can answer and talk to calling station	
Life Response Medical Alarm	Seniors	“	“	
Life Station	Seniors	“	“	
Medi Call	Seniors	“	“ Detect other types of situation	Other target markets
	Senior	Nurse call	Pendant; local wireless network	
Medical Monitors USA	Senior, but mentions use for other at-risk groups, e.g. stroke, heart attack, high BP,	“	“	
Northwood In Touch	Senior	“	“ Fall detector	