



Appendices

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A. Equipment Examples - UK







The following equipment¹ is available from Kent County Council in England.








Telecare equipment falls into two categories:



- 1) "Manual Triggers" - equipment that needs to be manually activated by you
- 2) "Environmental Triggers" - equipment that monitors environmental aspects, such as smoke and temperature, and will activate themselves.

All the sensors work remotely through radio wave signals. This means that they do not need wires to connect to the lifeline base unit, and are therefore unobtrusive.

Type of Equipment	Example
Manual Triggers	
<p>Lifeline home unit Supplied as standard with a personal trigger (pendant), it monitors a wide range of events around the home. An alarm can be raised by simply pressing the trigger or the large illuminated button on the unit. A call is received at the dedicated 24 hour call centre where the appropriate action is taken.</p>	
<p>Personal pendants Can be worn around the neck or as a wrist band. A press of the button will put you in touch with a trained operator in seconds. They will be aware of your circumstances and can call for help whilst communicating using the two-way speech function.</p>	
<p>Safety pull cord Activated by a single pull, the pull cord sends an alarm through the lifeline unit to the call centre. An essential requirement for the times when a personal trigger is not worn such as in the bath or shower or if removed in bed.</p>	
<p>Big button telephone This telephone has larger buttons for those users who have limited use of their hands and sight.</p>	

<p>Bogus caller button Placed by the door, enabling you to summon help if you are worried by unwanted callers. The two-way speech function on the lifeline unit will enable help to be summoned if necessary</p>	
<p>Fall detector The falls detector is an essential safeguard for those prone to strokes, blackouts or fainting. Though an alarm can be activated manually, in some cases fallers may not be able to press their lifeline button. In such cases, this device, worn around the waist, will detect a change of angle or sudden jolt and will automatically raise an alarm.</p>	
<p>Environmental Triggers / Home Locations</p>	
<p>Smoke detector (Kitchen/Living room/Bedroom) Whilst all homes should have a smoke detector, this device is part of the life line system and will automatically raise an alarm at the call centre in the case of a fire. The trained operator will call the emergency services enabling you to concentrate on vacating your property as quickly as possible - reducing the risk of injury.</p>	
<p>Flood detector (Kitchen/Bathroom) An unobtrusive sensor provides an early warning of potential flood situations and raises an alarm. Reassuring for any homeowner who is likely to be at risk from leaving taps running. It safeguards against costly and potentially dangerous accidents.</p>	
<p>Sounder beacon (Any visible place) This device is used as an addition to a first detector and is triggered when the first detector is activated, a smoke detector for example. Placed in a bedroom or favorite area, it will flash continuously and trill very loudly to ensure you are aware that there may be a problem.</p>	
<p>PIR movement detector (Every room) Monitors you within your home and can be set to detect if you have risen from your bed. No movement for an excessive period could raise an alarm at the call centre where the operator will check and see if you are safe and well. If they fail to speak with you, help would be called from a carer, relative, or one of the back-up response services, to visit and confirm that you are safe.</p>	

<p>Bed occupancy sensor (Bedroom) A pressure pad placed under the mattress, which is unobtrusive and undetectable. If you have to get out of bed during the night and fail to return after a given time, an alarm would be raised. It helps to manage the risks associated with independent living. The sensor can be set to switch on a bedside light that activates when the person gets out of bed.</p>	
<p>Chair occupancy sensor (Living room) This is a pressure pad that is placed under a chair cushion in a chair that you may sit. Working in the same way a bed sensor would, it detects if you have got out of the chair and failed to return in a given time. If the user fails to return to the chair then an alarm would be raised.</p>	
<p>Pressure mat (Bedroom) This device is placed under a mat or a carpet by a doorway for example, and can be used to indicate if that area has been walked on. The device works on the pressure of a person and may stay hidden and undetected whilst keeping you safe in the home.</p>	
<p>Epilepsy sensor (Bedroom) This device is for night time use and lies flat underneath the bed sheets at shoulder level. It is operated when the sensor detects sudden movement and an increase in pulse. The alert will be raised at the 24 hour call centre and the appropriate action can be taken.</p>	
<p>Property exit sensor (Hallway) Designed as a safeguard for people who have memory loss or confusion and who may be prone to leave their homes for extended periods at inappropriate times. A PIR movement detector works in conjunction with a door contact sensor and will detect if a person has walked out of the door and not returned. An alarm can be raised after a preset period.</p>	
<p>Carbon monoxide detector (Kitchen) Detects dangerous levels of carbon monoxide and raises an alarm call to a warden or 24 hour response centre. Carbon monoxide is a potentially lethal gas emitted by faulty gas and solid fuel appliances such as boilers or fires and is odourless, colourless and tasteless, which makes it very difficult to detect.</p>	
<p>Temperature extremes sensor (Kitchen/Outside wall) It detects a rapid rise or fall in temperature such as an unattended boiling saucepan, which without creating smoke is unlikely to be detected by the smoke alarm. Nevertheless these situations can still result in a fire. It also detects a rapid drop in temperature such as a central heating failure. It is an aid to safety and promotes independent living.</p>	

<p>Natural gas detector (Kitchen) This device provides an early warning of dangerous levels of gas in the atmosphere. It will detect if a gas tap has been left on, a jet has been blown out or if there is a gas leak.</p>	
<p>Pillow alert (Bedroom) This device is used as an addition to a first detector and is triggered when the first detector is activated, a smoke detector for example. Placed under a pillow for night time use, it will vibrate continuously to ensure user is aware that there may be a problem.</p>	
<p>New and enhanced products are part of the Telecare development programme. A user pager alert (which alerts a relative or carer direct rather than routing through a call centre) and medicine/pill reminder are amongst the next range of products likely to be available to Telecare service users.</p>	<p>N/A</p>

B. Interview List

The following list demonstrates the scope of the interviews completed for the project. A subset of 30 professionals was interviewed using the standard questionnaire described in Chapter 3 and form the data set for the analysis on the importance of various issues confronted by Alberta seniors and their families. These interviews confirmed the primary findings from literature reviews and global review.

The other interviewees contributed valuable contextual information for our global, local and technology analysis. We acknowledge those individuals on this list that gave freely of their time and added valuable insights to the contents of the Roadmap.

In some cases we sought information from individuals, but were unsuccessful in arranging the planned interviews.

Interviewee	Organization	Interview Date	Interviewer
Barb Cameron <i>Director – Seniors Health (South) - Medicine Hat</i>	AHS Seniors Health	Sep 3/09	KM
Barb Proudfoot <i>Director of Integrated RAI Initiatives, RAI-HC, Clinical Compliance, Seniors Health</i>	AHS - Lethbridge	Oct 10/009	KM
Barry Rivelis <i>CIO</i>	BC Provincial Health Services Authority Technology	Aug 18/09	DB, SK
Belle Gowrluk <i>Dir. Int Supportive Living and LTC</i>	AHS CC – Seniors Health	Oct 5 /09	KM
Beth Gorchynski <i>Integration Lead Seniors Health (Dementia); Family Care Giver Resource Center Former Manager</i>	AHS Home Care - Dementia	Aug 31/09	KM
Betty McNaught <i>Home Care Manager-Northern Zone AHS – Grande Prairie</i>	AHS Home Care	Aug 14/09	KM
Camille Poulin <i>Exec Dir, Seniors Health North Zone</i>	AHS Seniors	Cancelled	KM
Carla Gregor <i>Good Samaritan Society President</i>	Good Samaritan Society	Aug 15/09	DB
Bill Chestnut <i>Good Samaritan Society VP IM/CIO</i>			
Truman Severson <i>Good Samaritan Society VP Service</i>			

Interviewee	Organization	Interview Date	Interviewer
<i>Development</i>			
Caroline Clark <i>Exec Director, Seniors Health Edmonton Zone AHS</i>	AHS Seniors Health	Sep 10/09	DB
Cheryl Knight <i>Executive Director, Continuing Care Integrated Services Rural, Seniors Health, AHS – Lethbridge:</i> <i>Alberta Gerontology Nurses Association (AGNA)</i>	AHS Seniors Health	Sep 4/09	KM
Ciel <i>Family Support Coordinator</i>	Alzheimer's Society of Calgary	Oct 12/09	KM
Coleene Ireland <i>Seniors South Team Manager – Home Care & DAL</i>	AHS Home Care & DAL	Aug 22/09	KM
Colin Zeiber <i>Dir. Palliative Care</i>	AHS Palliative Care	Not available	KM
Colleen Shepherd Manager – Community Care Access	AHS Community Care	Aug 11/09	DB
Corrine Truman <i>Senior Policy Manager (Continuing Care), Senior's Health Branch, Health System Dev Division</i>	AHW Continuing Care Policy	Aug 11/09	KM, DB
Cory Banack <i>Geriatric Clinical Nurse Specialist</i>	AHS Geriatrics	Sep 2/09	KM
Dan Huffman <i>Director, AHS Simulation - North</i>	AHS	Sept. 8/09	DB
Debbie Hycka <i>Dir. Int Supportive Living</i>	AHS CC – Seniors Health	Cancelled	KM
Debbie Lee <i>Seniors Specialist</i>	AHS Home Care	Aug 20/09	KM
Deborah Clark <i>Education Resource Center for Continuing Care</i>	AHS Continuing Care	Sep 4/09	KM
Deborah Katz <i>Director – Evaluation Seniors Health</i>	AHS Evaluation	Sept- Oct 2009	KM
Dianna Capon <i>Seniors Community Outreach Nurse (Dementia) - Drumheller</i>	AHS Home Care - Dementia	Aug 28/09	KM
Don Giong <i>Executive Director, Customer Support & Info Mgmt, Procurement</i>	AHS Procurement	Aug 20/09	KM
Dr David Hogan <i>Geriatrician</i>	AHS & U of C Geriatrics	Cancelled	KM

Interviewee	Organization	Interview Date	Interviewer
Dr James Silvius <i>Senior Medical Director</i>	AHS Seniors Health	Cancelled	KM
Dr. Andrew Sixsmith <i>Director, Gerontology Research Centre</i>	Simon Fraser University Gerontology	Aug 18/09	SK, DB
Dr. Bill Crouse <i>Senior Director, Worldwide Health, Microsoft</i>	Microsoft Industry/Vendor	Aug 17/08	DB, SK
Dr. Heidi Schmaltz <i>Geriatrician – AHS & University of Calgary</i>	AHS & University of Calgary Geriatrics	Sep 3/09	KM
Dr. James Fozard <i>Courtesy Full Professor</i>	School of Aging Studies, University of South Florida, Tampa, FL	Sep 6/09	SK
Dr. Jeffery Soar <i>Convener</i>	Queensland Smart Home Initiative	Sept 9/09	DB
Dr. Karim Qayumi <i>Director, Centre of Excellence for Surgical Education and Innovation</i>	UBC / Vancouver General Hospital	Aug 18/09	DB, SK
Dr. Martin Ferguson-Pell <i>Dean of Fac. of Rehab Med</i>	U of A Rehab Med / Academic	Not Available	DB, SK
George Margelis MD, Industry Dev. Mgr.	Intel Australia Industry/Vendor	Not Available	DB
Heather Vint <i>Mgr, IT Clinical Design</i>	AHS IS	Not Available	DB, SK
Jim Raso <i>Mgr Research and Tech. Dev</i>	Glenrose Rehab Hosp / AHS Healthcare Provider	Sep 8/09	DB, SK
Joan de Bruyn <i>Dir. Integrated Home Care</i>	AHS Home Care	Aug 13/09	KM, DB
Joan Meiller <i>Dir. Int Supportive Living</i>	AHS CC – Seniors Health	Cancelled	KM
Judy Hughes <i>Seniors Resource Nurse</i>	AHS Home Care	Sep 3/09	KM
Kathy Harbidge <i>Seniors Clinic & Falls Prevention Clinic Coordinator</i>	AHS Falls Prevention	Sep 2/09	KM
Kimberly Fraser <i>WeCare Edmonton - Owner</i>	WeCare Edmonton	Sep 10/09	DB
Lili Lui <i>Professor, Chair Dept of Occupational Therapy</i>	U of A	Sep 10/09	DB
Lisa Stebbins	City of Calgary – Family	Oct 23 2009	KM

Interviewee	Organization	Interview Date	Interviewer
<i>Director Home Care</i>	Services Seniors Program		
Lynn Boucher Director, Strategic Implementation, Seniors Health- North Zone	AHS Seniors Health – North Zone Grande Prairie	Sep 4/ 09	KM
Lynn Mansel <i>Exec Dir Seniors Health - Clinical</i>	AHS Seniors	Emailed material	DB
Malachy Rice Consumer Healthcare	S3 – Ireland	Oct 22/09	DB
Margaret Wylie <i>Geriatric Clinical Nurse Specialist – Falls & Dementia</i>	AHS Geriatrics	Sep 2/09	KM
Marguerite Rowe <i>AET Project Manager</i>	AET	Jul 31/09	DB, SK, KM, BB
Marjory Sutherland <i>Executive Director, Seniors and Community Supports GOA</i>	GOA Seniors & Community Supports	Sep 10/09	DB
Mark Blatt MD <i>Director – Health Industry Solutions</i>	Intel Industry/Vendor	Sep 03/09	DB, SK
Mark Brisson <i>Exec Director, Information Strategic Services</i>	AHW Glenrose Rehab Hosp - IS	Sep 8/09	DB, SK
Marnie Pederson <i>Drumheller Lodge Supportive Living</i>	AHS Supportive Living	Cancelled	KM
Masako Miazaki <i>Professor</i>	U Of A Occupational Therapy	Oct 26/09	DB
Michelle Nimmock <i>Dir. Community Rehab</i>	AHS Public Health	Cancelled	KM
Niels Hansen Information & Support	Alzheimer’s Society of Alberta	Oct 11 09	KM
Pam Brown <i>Exec Dir. Seniors Health – Calgary</i>	AHS Seniors Health	Cancelled	KM
Patrick Kitt <i>Provincial Lead IT & General Supply, Procurement</i>	AHS Procurement	Aug 20/09	KM
Paul Brown <i>Program Manager</i>	AET ICT Prov Pilot Programs, Technology	Not available	KM
Queenie Choo <i>Executive Director, Continuing Care Integrated Services Urban, Seniors Health, Edmonton:</i> <i>Canadian Home Care Association</i>	AHS Seniors Health	Sep 2/09	KM

Interviewee	Organization	Interview Date	Interviewer
Rainer Iraschko VP Research	TRLabs	Aug 13/09	DB, SK
Randy Babcook CEO	Virtual Health Solutions	Aug 19/09	DB
Richard Medeiros	US VA	Not Available	DB
Rollie Dykstra Director – ICT Industries	AET Technology Commercialization Division	Sept 10/09	DB
Sandra Soresstad Lifeline Community Representative	Philips Home Healthcare Solutions	Oct 20 2009	KM
Sarah Price Director	Alzheimer’s Society of Calgary	Cancelled	KM
Thi-Loan Phan <i>Contract Category Lead, Procurement</i>	AHS Procurement	Aug 20/09	KM
Tom Ogaranko President	Red Engine Health	Sep 8/09	DB, SK
Virginia Meyer Integration Lead – Falls Prevention	AHS Home Care - Falls Prevention	Sep 2/09	KM
Vivien Lai Senior Mgr	AHW Strategic Issues and Continuing Care Branch	Sep 10/09	DB
Wendy Ahlefeld Coordinator Lifeline Community Program	Bethany Care Society Calgary	Oct 20/09	KM

Interviewers: Karen McCulloch (KM), Steven Knudsen (SK), David Bocking (DB), Bernie Borkenhagen (BB)

Focus Groups			
DATE	TARGET AUDIENCE	LOCATION	NUMBER OF PARTICIPANTS
13/10/09	Frontline Home Care Professionals AHS Calgary – Seniors South Team	South Calgary Health Center	8 per session
21/10/09	Rural Seniors	Three Hills, Alberta	4 per session
22/10/09	Province wide group of seniors, care givers and volunteer community visitors.	Bethany Care Corporate Office	22 per session

C. Technology Vendors

There are many hundreds of technology vendors with products in one or more of the three main Telecare technology domains and Smart Homes. It is not possible to list and review all of them here. Instead, a few vendors with products in one or more of the main Telecare and Smart Home categories are provided in Table 1. The reader is referred to web sites that have aggregated Telecare technology provider information, such as:

- ❖ Center for Aging Services Technologies (CAST); www.agingtech.org
- ❖ At Dementia, www.atdementia.org.uk
- ❖ Technology for Long Term Care, www.techforltc.org
- ❖ FAST UK, www.fastuk.org
- ❖ TeleHealth Online Buyers Guide, www.telehealthonlinebuyersguide.com

Table 1 Some vendors with products in the main Telecare and Smart Home categories.

Vendor Name	Web Site	Technology Category				Technologies
		Safety	Health & Wellness	Social Connectedness	Smart Homes	
AMD Telehealth	www.amdtelehealth.com	x	x			Monitoring
American TeleCare Inc	www.americantelecare.com		x			Monitoring
Athena Software	www.athenasoftware.net					Case management / counseling software
Biocomfort Inc	www.biocomfort.de		x			Monitoring

Vendor Name	Web Site	Technology Category				Technologies
		Safety	Health & Wellness	Social Connectedness	Smart Homes	
BL Healthcare Inc	www.blhealthcare.com	x	x			Monitoring; uses Home TV plus wireless remote setup
CaraVita Senior Care	www.caravita.com	x	x		x	Care planning
Caregiver Technology	www.caregivertech.com	x	x	x		Monitoring, communications, reminding, cueing
Carematix Inc.	www.carematix.com	x	x			Monitoring
Chester Creek Technologies	www.chestercreek.com		x	x		Computer aids
Chubb Community Care	www.chubbcommunitycare.co.uk	x	x	x	x	Comprehensive provider of Telecare technologies
Cirrus Communication Systems	www.cirruscom.co.uk	x				PERS
Dakim Brain Fitness	www.dakim.com		x			Cognitive decline prevention
Docobo	www.docobo.co.uk	x	x			Monitoring
ElderLuxe	www.elderluxe.com		x	x	x	High-end assistive technologies
e-Pill LLC	www.e-pill.com	x	x			medication
Exco InTouch	www.excointouch.com	x	x			assessment, reminders, compliance tracking
Expandore Electronics Ptd Ltd	www.expandore.com				x	Smart home components
FitSense Technology	www.fitsense.com		x			Monitoring
Fold Telecare	www.foldgroup.co.uk	x	x			Monitoring, information provider
GE Healthcare	www.gehealthcare.com	x	x			IT, workflow, monitoring

Vendor Name	Web Site	Technology Category				Technologies
		Safety	Health & Wellness	Social Connectedness	Smart Homes	
GeckoSystems Intl. Corp.	www.geckosystems.com	x		x	x	CareBot robot
Geemarc Telecom SA	www.geemarc.com			x		specialty phones
Grandcare	www.grandcare.com	x	x			Monitoring; sensor-based
HealingHome LLC	www.healinghomes.com	x	x		x	comprehensive smart homes
Healthsense	www.healthsense.com	x				WiFi PERS,
Help the Aged	www.helptheagedshop.co.uk	x		x		two-way speakerphone for entrances
HITEC Group	www.hitec.com	x		x	x	Hearing loss; amplified telephones, emergency contact telephones, portable phone amplifiers, personal listening systems, wireless TV headsets, alarm clocks, and wireless accessories such as neck loops for cell phone users.
HomeFree Inc.	www.homefreesys.com	x	x			wireless monitoring
HomeSeer Technologies LLC	www.homeseer.com				x	Smart home components
Honeywell HomMed LLC	www.hommed.com	x	x			Monitoring
iMetrikus Inc	www.imetrikus.com		x			Monitoring hub
Inclusive Technology Ltd	www.inclusive.co.uk		x	x	x	software and computer access, cognitive, communication aids
Intelligent Designs Group LLC	www.totalcontrolapp.com		x	x	x	Monitoring, connectedness
Invicta Telecare	www.invictatelecare.co.uk	x	x			Monitoring, worker assistance
Just Checking	www.justchecking.co.uk	x	x			assessment and monitoring

Vendor Name	Web Site	Technology Category				Technologies
		Safety	Health & Wellness	Social Connectedness	Smart Homes	
Kanata Health Solutions Inc.	www.redenginehealth.com		x			Monitoring
LifeLink Monitoring	www.llmi.com	x	x			Monitoring
Matobmobile	www.easytousemobiles.com			x		specialty cell phones
MiniSun LLC	www.minisun.com		x			Monitoring, gait assessment
Parsons ADL	www.parsonsadl.com	x	x		x	accessories for daily living; OEM and distributor only.
Philips	www.philipsseniorliving.com	x				Monitoring (LifeLine, IntelliVue)
Philips Medical	www.healthcare.philips.com/main/products/telehealth/products/motiva.wpd		x			Monitoring, information
Possum	www.possum.co.uk	x	x	x	x	Comprehensive provider of Telecare technologies
presentcaer	www.presentcare.com	x	x			medication
Quietcare	www.quietcaresystems.com	x	x			Monitoring
Rest Assured LLC	www.restassuredsystem.com	x	x			Monitoring
RSL Steeper	www.rslsteeper.com	x	x	x		Comprehensive provider of Telecare technologies
Senior Care Solutions Online LLC	www.seniorcaresolutionsonline.com	x	x			GPS-based wander management
Senior Creative Products LLC	www.kindreminder.com		x			Dementia alleviation
SeniorLink Eldercare LLP	www.seniorlinkeldercare.com	x				PERS
senticare	www.senticare.com	x	x			medication
SHL Telemedicine	www.shl-telemedicine.com		x			Monitoring, assessment
Smarthome	www.smarthome.com				x	Online provider of smart home components

Vendor Name	Web Site	Technology Category				Technologies
		Safety	Health & Wellness	Social Connectedness	Smart Homes	
Innovations						
Talking Rx Inc.	www.talkingrx.com	x	x			medication
TBS GB	www.tbsgb.com	x	x			Monitoring, alerts
Tunstall Healthcare UK	www.tunstall.co.uk	x	x	x	x	Comprehensive provider of Telecare technologies
Vigil Health Solutions Inc.	www.vigil.com	x	x			Monitoring, dementia management, PERS
Virtual Health Care Solutions Inc.	www.virtualhealthcaresolutions.com	x	x			Monitoring, medication, PERS, automatic stove shutoff
Vivatec	www.vivatec.co.uk	x	x			Monitoring
Vivatec Ltd.	www.vivatec.co.uk	x	x			Wireless wrist band and monitoring station
Wealden and Eastbourne Lifeline	www.welbeing.org.uk	x	x	x		Comprehensive provider of Telecare technologies
Zoomback	www.zoomback.com	x	x			GPS-based wander management

¹ www.kent.gov.uk/SocialCare/health-and-wellbeing/telecare/