Telemonitoring System for Elderly Care
5 Needs of Senior

- Mobility
- Transportation
- Personal Care
- Nutrition
- Medication
Innovations for Elderly Care

BeClose tracks an elderly loved one's daily routine. Caregivers are able to check on them at any time using a private, secure web page.

The Fitbit Ultra Wireless Activity Tracker displays real-time activity stats so it is easier to reach goals. It tracks steps taken, stairs climbed, distance travelled, calories burned, activity level and sleep quality.
The GrandCare System is connected to any dedicated Internet connection and communicates with “wireless” sensors throughout the residence. Designated caregivers can log into the GrandCare website to send communications to their loved one, view activity and tele-wellness sensor information and customize the automatic caregiver alerts.

GreatCall Responder, in conjunction with the 5Star Urgent Response Service, is a wireless, mobile PERS device that is an easy, convenient and affordable way to protect one’s self or one’s family members, at home or on the go.
**Independa** augments traditional caregiving by providing fully integrated, cloud-based solutions including a caregiver web application, a rich set of telephony-based solutions, comprehensive solutions for social engagement and health, environmental and activity monitoring.

**MobileHelp**, the Anywhere Help Button, is a GPS mobile personal emergency response system. It enables users to summon emergency help anytime, anywhere with a single button press.
The **TabSafe** medication management system reminds, dispenses, alerts and posts information on compliance, inventory and other health information that is accessible from any Internet capable device.

**CogniFit** is a scientifically validated brain fitness technology that lets you assess your cognitive skills and give you an efficient brain training.

**Telikin** is a simple and easy-to-use family computer that combines video chat, photo sharing, e-mail and other popular features into a sleek, touchscreen device.
**Telylabs**’ telyHD delivers high-definition (HD) Skype video calls directly to an HDMI-compatible TV.

The **GPS Shoe** responds to geo-fence perimeters established by caregivers and relays the location and alerts via Google maps to smartphones and computers.

**TV Ears** helps people with hearing loss hear the television clearly without turning up the volume.
## Innovations for Elderly Care

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1G Tele-Health
- Remote monitoring vital signs
- No persuasive loops
- No cyber-side data analysis
- Demanding on clinical side
- Prone to human errors
- Non-scalable & costly

2G Tele-Health
- Same as 1G systems but with better monitoring – sensing activities in addition to vitals.
- Better decision making hence more accurate than 1G.
- Suffers from same limitations of 1G

3G Tele-Health
- Much more powerful sensing: behaviors & activity, in addition to vital signs
- Adaptive persuasion loops
- Automatic cyber-side data analysis
- Less prone to human errors, effective, and scalable.

Legend:
- Blue: Cyber tele-health
- Yellow: Clinical
Telemonitoring

**Health monitoring**
- Vital Signs (สัญญาณชีพ)
- Oxygen (ออกซิเจน)
- Heart (ซีฟจาร)
- Temperature (อุณหภูมิ)
- Blood pressure (ความดันโลหิต)
- Rehabilitation (กายภาพบำบัด)
- Daily activities (การหายใจ)
- Activities of daily living (การบำบัดประจำวัน)

**Event monitoring**
- Fall (หกล้ม)
- Wandering (เดินไร้จุดหมาย)
- Activities (กิจกรรมประจำวัน)

(Activities of daily living)
Technologies for Elderly Care Service

Elderly Care Service

Telehealth Service
- Teleconsultation
- Telerehabilitation

Camera-based Monitoring System
- Camera-based Fall Detection
- Behavior Recognition

Sensor-based Monitoring System
- Wearable Sensor (wrist band/belt)
- Biosensors
- Sensor Mat

Personal Emergency Response/Gadget Devices
- Emergency Push Button
- Pill Dispenser / Alarm Gadget
ภาพรวมระบบ
งานที่ต้องจากนี้

- ระบบ Teleconference ที่เชื่อมต่อข้อมูลสุขภาพ
- ระบบดูแลและติดตามกิจกรรมของผู้สูงอายุ เพื่อตุเลกความปลอดภัย และ ภูมิทัศน์
ขอบคุณครับ

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