Telecare for Early Stage Dementia

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Founder & CEO

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Undeniable Ageing Problem

Now...

Around 400,000 people in residential care,
56% of whom are state-supported

Around 1.1 million people receiving care at home,
80% of whom are state-supported

Around 1.5 million people employed in the care and support workforce

...and the future

Three-quarters of people aged over 65 will need care and support in their later years.

19% of men and 34% of women will need residential care.

48% of men and 51% of women will need domiciliary care only.

33% of men and 15% of women will never need formal care.

Source: Redesigning Health and Social Care - Socitm Adass, Jan 2015

> 2.5 million over 75 living alone

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Granny’s True Story

Start: No heating

Warm Drinking Eating Mobile

Not enough drinks Ambulance called
The Cost of Dementia

- £26.3 billion total economic value
- £4.3 billion of healthcare costs
- £10.3 billion of social care of which:
  - £4.5 billion publicly-funded
  - £5.8 billion self-funded
- £11.6 billion of unpaid care (1.34 billion hours)
- £111 million on other dementia costs

www.alzheimers.org.uk
Dementia Stages

• Clinical Dementia Rating (CDR) for six areas of cognition and functioning:
  o orientation,
  o memory
  o judgment
  o home and hobbies
  o personal care
  o community

• Stage 1: CDR-0 or No Impairment
• Stage 2: CDR-0.5 or Questionable Impairment
• Stage 3: CDR-1 or Mild Impairment
• Stage 4: CDR-2 or Moderate Impairment
• Stage 5: CDR-3 or Severe Impairment
• www.healthline.com
Early Stage Dementia

Characterised by

• Subtle short-term memory loss
• Reduced power of reasoning
• Personality changes

Other Risks

• Hypothermia, Dehydration, Malnutrition, Unattended Falls
• Poor hygiene
• TIAs, Stroke
• Missed medication - diabetes
• Deteriorating health conditions
• Wandering - purposeful walking
• Loneliness

Recognised by Family and Clinicians - not by Dementia Sufferers
ADL Wellbeing Research

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Years: 1 2 3 4 5 6 7 8 9 10

Kemuri Zone

Research by Newcastle University Institute of Ageing, Gore, Johnson and Jagger, 2014.

ADL – Activities of Daily Living

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Telecare Options

Active

- Pendant alarms, Pull cords
- Several 100k installed
- Money wasted
- Smartphones & tablets
- Capacity reduces

Passive

- Door opening sensors
- Bed, chair and floor pressure sensors
- Motion sensors
- Power sensors
- CCTV

All good, but not for everybody
Stigma of growing old
• Rejection of wearable or intrusive telecare
• Lack of cooperation
KemuriSense Smart Power Socket

- Temperature
- Power usage
- Motion
- Power supply
- Phone signal

• Passive - nothing to forget
• No broadband - minutes to install

No change of lifestyle
KemuriSense: Raw Data

Ideal for Predictive Analytics
Daily Wellbeing

- Green hour is normal activity
- Amber hour is a change
- Green day is normal activity
- Amber day is some changes
- Blue day is many changes

Hourly Monitoring
Drill down to Detail

Yesterday had one change.

Motion - green line - all normal.

Kettle - probably a bit later than normal.

Temperature in range.

Not a problem – Avoid false alarms.
Value of Maintaining Wellbeing

Early intervention saves £1900 per year

No early intervention costs extra £15,500 per year

Research by Newcastle University Institute of Ageing, Gore, Johnson and Jagger, 2014.
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