Remote Monitoring of Patients Suffering From Early Symptoms of Dementia
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Outline
• Introduction
• Telecare Pilot
• Body sensors
• Conclusions

Introduction
• Government green paper “Independence, Well-being and Choice” (March 2005)
• Key proposals include “harnessing technology to deliver the right outcomes for adult social care”
• Recognises telecare as having huge potential to support individuals to live at home and to complement traditional care
• Direct reference of the Liverpool telecare trial
• Case study...

Background
• Dementia – a state of progressive mental deterioration
• A dysfunction which restricts an individual’s ability to live independently in their own home
• Most common form – Alzheimer’s Disease (AD)
• Increasing risk with age
  – 5% age over 60
  – 20% age over 80
• Early symptoms may include mild forgetfulness

Statistics from www.alzheimers.org.uk
Telecare Pilot

- Use of ICT to promote and enable independent care in the community and home settings.
- Provision by Liverpool Direct Limited (LDL) to Liverpool City Council (LCC)
- Situations of concern - raise alarms
- 21 elderly Liverpool residents
- Two DTI “Care in the Community” Centre clients
  - Enhanced sensor set
  - Activities of daily living (ADLs)
  - Additional information for care professionals

End-to-end service

Monitored residence
Carer Voice call (PSTN)
Liverpool Direct call centre Alert messaging Broadband Encrypted Voice call (PSTN) Monitoring data Internet Back office Management interface Data server Telecare platform

Firewall Messaging server Voice server Monitored residence RMU Automated Voice Call (PSTN) Broadband Encrypted

Additional benefit

Compiled from carer comments:
- Convenient daily behaviour charts
- Check status of his wandering
- Consider wandering triggers
- Peace of mind (safe)
- Reassurance for client
- Optimised care routine
- Maintain client freedom and independence

- Example showing typical activity
- Client in bed between 11pm and 8:30am
- Example of cause for concern
- Client leaves dwelling at 10pm and does not return till 3am
BSN ideas...

- Limitations to ambient sensors
- Wearable communication
- Location/context
- Physiological - possible triggers for wandering
  - Stress
  - Depression
  - Anxiety

“... it should not be taken for granted that his or her need to wander is simply a matter of pathology that requires management rather than understanding.”


Conclusions

- Integration of ambient and body sensors – potential to provide an enhanced level of care
- Provided an example based on deployed system
- Suggested contributions body sensors could offer
- More information/discussion – exhibition/paper

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- Telecare pilot clients and carers