Remote Patient Monitoring in Residential Care Homes

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Introduction

- E-Vital

- July 2003 to December 2005
Agenda

• Context
• Project details
• Results
• Lessons learnt
• Conclusion
Socio-demographic pressures

Older ↑
- >80yrs - 3.9% in 1995 to 7-9% in 2015

Younger ↓
- <25 yrs - 31.1% in 1995 to 27% in 2015

Greater expectation
Watford and Three rivers PCT

162,000 people in 2004
174,500 people in 2020

- 7.7% increase
- 27% increase in >65 years (6,500 people)
- No change in the number of children < 5 years
Clinical pressure

Chronic diseases now largest cause of death worldwide
17 million deaths from heart attack and stroke
Solution inhibited by:
- Economic factors
- Orientation of health service systems towards acute care
Solutions

Higher priority for chronic diseases
Better control of risk factors
Disease management system that espouses a multi-professional and multi-sectorial approach

Yach D, Hawkes C, Linn Gould C, Hofman K; The Global Burden of Chronic Diseases, Overcoming Impediments to Prevention and Control: JAMA, Vol.291 No. 21, June 2\textsuperscript{nd}, 2004
Disease management programmes

All do something
Which is clinically effective?
Which is economically effective?

Problem: ageing population

- Higher prevalence of chronic disease
- Succumb to acute illness quickly
- Resource-intensive
e-Vital project

• Aim:
  Monitoring physiological measurements in an acute care environment (residential care home)

• Parameters:
  7-lead ECG, SpO₂ (HR), BP, temperature, respiration
e-Vital project cont.

- Not limited to one condition - for which conditions is monitoring useful?
- Conditions monitored:
  - hypertension, hypotension
  - COPD
  - CHF
  - chest infection, pneumonia
  - post OP
  - terminally ill
Equipment

- Altea Telemonitor/ RGB Medical Devices
e-Vital pathway of care

- Resident Enters Home
- Residential Nursing Home
  - Possible Emergency
  - Resident Registered
  - Clinical Services Given
- Local Surgery
- Telemonitor
  - Routine Monitor
  - Emergency
- Hospital
Sites

- Croxley House
- New Road Surgery
- Tenterden Home
- Sheepcot Medical Centre
- Watford General Hospital
- Data Server - Madrid
- Troutstream Hall
- Chorleywood Health Centre
Network Architecture

- Residential Nursing Home
- Local View Station
- Wireless Bridge
- ADSL
- Data Server - Madrid
- Public Internet
- Firewall
- NHS Net (Private)
- Local Surgery
- Watford General Hospital
Viewing the data
Results

Clinical benefits
- Routine monitoring and the early diagnosis of heart disease, allowing prompt intervention
- Peace of mind for patients and their families

Organisational benefits
- Increased collaboration between the residential care homes and GP’s
- More independence of the homes
Lessons learnt

- Clinical champions are vital for the success of a project
- Crucial role of management support
- Changes in working practices and relationships are required
- Technical problems should be resolved before going live
Conclusion

- Most effective in the population of a high dependency nursing home, less benefits in relatively well residents of a residential care home.

- RPM can be used most effectively for conditions which can deteriorate easily, and where a sufficient need for such a service exists.
Selected Publications

Larkworthy, A. Jones, R. Clarke, M. Bratan, T & Lloyd-Webb, M. Impact of telemonitoring in residential and nursing homes. *British Journal of General Practice*


Bratan, T. Clarke, M. Paul, R. Jones, R. Evaluation of practical feasibility and acceptability of home monitoring in a residential home setting (2005) *Journal of Telemedicine and Telecare, 11(S1) 29-31*

More information

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