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## Rolling out remote care. Lessons from the UK

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EPSRC Imperial College London Loughborough University University of Reading University of Sheffield

### Overview

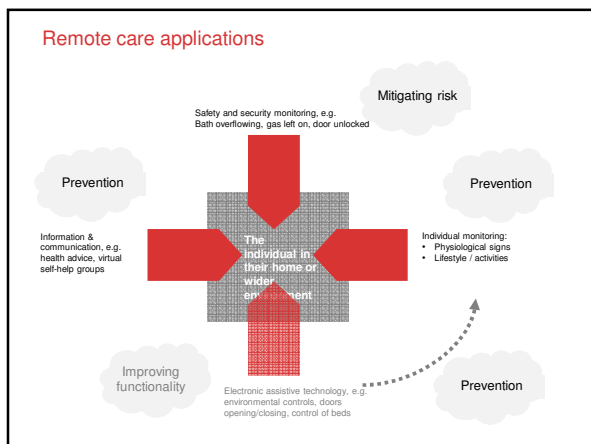
- Research background
- Remote care
- The future never quite arrives
- What we know from existing experience and research
- Solutions?
- Conclusions

### Research background

- Initial EPSRC funded projects on telecare planning and implementation, 2000-03 and 2003-2006
- Evaluation of Welsh telecare programme (continuing)
- EPSRC funded project on PTG implementation (2006-2008)
- Part of DH funded consortium evaluating the WSD programme and WSDAN (Imperial, King's Fund, UCL, Oxford, Manchester, LSE)
- James Barlow, Steffen Bayer, Jane Hendy, Theti Chrysanthaki

### Terminology

- 'Telecare'
- 'Telehealth'
- 'Telemonitoring'
- 'Telemedicine'
- 'Assistive technology'
- 'Smart homes'
- All are used interchangeably to describe the **remote delivery** of health and social care



### Policy drivers

- The UK has taken a strong lead. **Over 20 government reports** since 1998 have called for telecare
- **New finance** (£170m +) via Preventative Technology Grant, Whole System Demonstrators and other initiatives

## Remote care is not new ...



Russell.

Flying no-nonsense doctor

## Practice by Telephone

The Yankees are rapidly finding out the benefits of the telephone. A newly made grandmamma, we are told, was recently awakened by the bell at midnight, and told by her inexperienced daughter, "Baby has the croup. What shall I do with it?" Grandmamma replied she would call the family doctor, and would be there in a minute. Grandmamma woke the doctor, and told him the terrible news. He in turn asked to be put in telephonic communication with the anxious mamma. "Lift the child to the telephone, and let me hear it cough," he commands. The child is lifted, and it coughs. "That's not the croup," he declares, and declines to leave his house on such small matters. He advises grandmamma also to stay in bed: and, all anxiety quieted, the trio settle down happy for the night

The Lancet 29 Nov 1897, Page 819

With thanks to Nicholas Robinson

## ... its arrival has been heralded throughout the last decade



"The innovations we will encounter as we step beyond feasibility are dazzling in their potential"

R. Merrell, Yale University School of Medicine, 1995

"Over the next decade, the telemedicine industry will expand into new markets and service areas. Furthermore, its rapid rise will have a profound impact on the delivery and quality of medical care worldwide. In the United States alone, we expect telemedicine will represent at least 15 percent of all health care expenditures by 2010"

Telemedicine Industry Report 2000

"Telecare has arrived. This year's annual review reflects the transformation of our sector from social alarms to Telecare, and the repositioning of the Telecare service model from the periphery of housing, social care and health to centre stage"

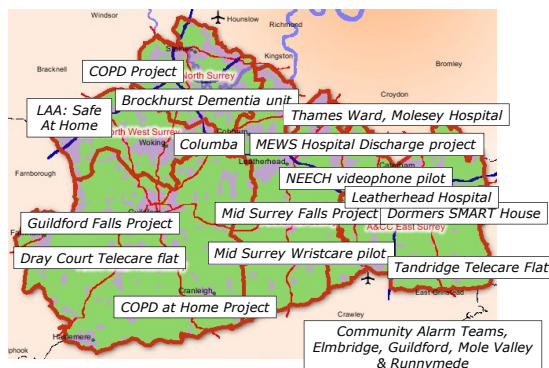
Association of Social Alarms providers, 2004

"2008: The year telecare grows up"

Health Insider, 2007

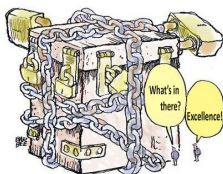
With thanks to ?What If!

## Diffusion of telecare in Surrey 1998-2005



— ... but despite thousands of **pilot or trial projects** remote care has not yet become a mainstream part of care delivery

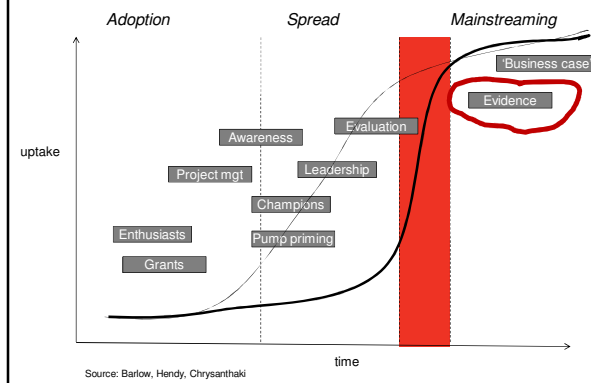
— Pockets of excellence don't spread and pilot projects are not sustained



— Lack of progress in UK (and elsewhere) is largely due to:

- **organisational problems** (esp. integration within and between care providers)
- a lack of obvious **business models**
- ... and limited benefits **evidence** is also playing a part

## What's needed to stimulate remote care?



## The existing evidence base

Focus of study	Evidence on:	
	Individual outcomes, i.e. clinical or QOL improvement	Systemic outcomes, i.e. economic impact or impact on processes
Specific application, e.g. aimed at patients with diabetes	Relatively good, growing – numerous individual studies on which to build systematic reviews	Limited, problematic – poor specification of assumptions, lack of robust data
General application, e.g. aimed at a general population (e.g. 'frail older people')	Largely anecdotal, growing – not yet peer reviewed	Virtually unresearched – based on simulation modelling with limited data

Barlow et al. (JTT 2007)

## A lack of evidence isn't always a barrier to government policy initiatives ...



## ... but it is now becoming important for remote care implementation because ...

- Remote care now embracing new stakeholders across the care system – move from social to health care
- Financial investment beyond the pilot stage needs to be made
- More robust evidence needed to build business cases for all parties – provider, commissioner, technology supply chain
- Evidence increases stakeholder receptiveness

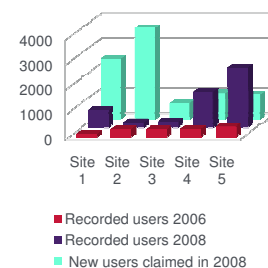
... for social care organisations, research, ... we're very practical, ... to have (evidence), that fits more with health

... you need the evidence, ... when you get the evidence you get true buy-in

- But we actually know very little!

## We don't even know how many remote care users there are

- Poor data due to inconsistent definitions
- Example from 5 leading LAs ...



Source: Hendy & Barlow

- And despite the reported benefits in terms of admissions avoidance, speedier discharges etc, this is largely based on **anecdote** or **poorly designed** studies

### Summary of current position

- Growing evidence of **clinical** effectiveness of some specific telecare applications
- Very little no **cost-benefit** evidence
- Little published on **remote care** that meets orthodox quality standards for healthcare evaluation

- Solutions 1?

### Whole System Demonstrator programme

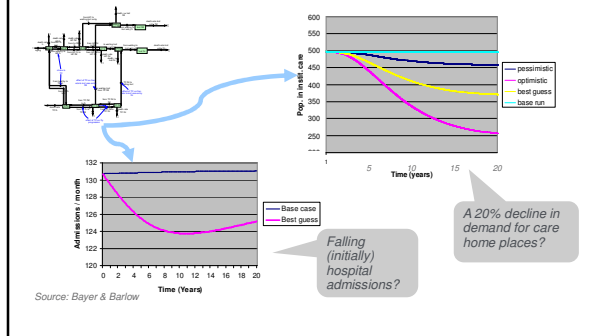
- DH White Paper, *Whole System Long Term Conditions Demonstrators* (2006):
  - 'Whole system demonstrators that **test the benefit** of wholesale redesign of services for those with long term conditions'
  - 'The key challenge ... is to provide **credible evidence** that comprehensive integrated care approaches combined with the use of advanced assistive technologies ... benefit individuals and deliver gains in cost effectiveness of care.'

- Solutions 2?

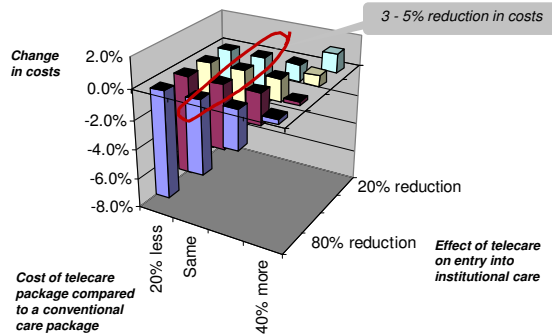
### Exploring the potential impact on healthcare

- **Simulation modelling** experiments can help us think about how remote care might change services
- ... the figures aren't important in these examples

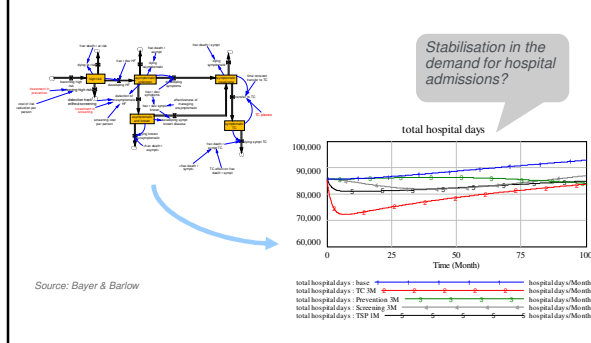
## Frail elderly care



## Effect of telecare on care costs in year 20



## Chronic heart failure



## Conclusions

- Remote care has **potential** in managing LTCs and coping with aging population
- There is support for remote care at the individual level – the hurdles are at a **system level**
- 'Evidence' for costs / benefits becoming more important as pilots move towards mainstream investment decisions
- ... but **stories** are still crucial for convincing sceptics
- WSD may help, but we need more resources to support gathering local data on consistent basis

## Thank you

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