



Mainstream telecare – the need
for a high quality evidence base

SPARC workshop on The Business Case for Ageing
Research

Unilever, Bedford

15 November 2005

James Barlow

Overview

- What is telecare?
- A benign context for telecare
- Embedding and diffusing telecare:
the need for benefits evidence
- Conclusions

Loose terminology

- ‘Telecare’
- ‘Telehealth’
- ‘Telemonitoring’
- ‘Telemedicine’
- ‘Smart homes’
- ‘Assistive technology’
- **Telemedicine** aimed at diagnosis or referral, usually focusing on specific applications (B2B)
- **Telecare** brings care directly to the end-user generally in non-institutional home environments (B2C)
- *It is more complex and inherently harder to implement*

Safety and security monitoring, e.g.
Bath overflowing, gas left on,
door unlocked

Mitigating risk

Prevention

Prevention

Information & communication, e.g.
health advice,
virtual self-help
groups

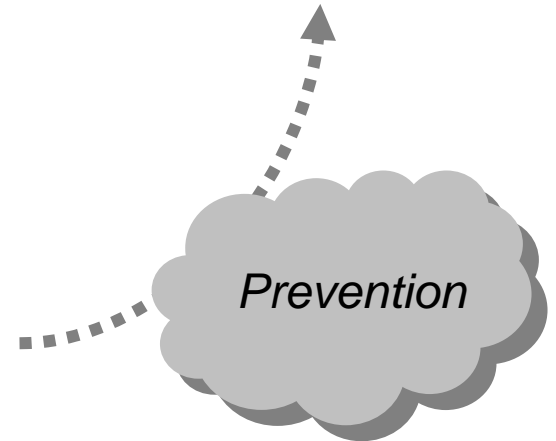
*The individual
in their home
or wider
environment*

Personal monitoring:
•Physiological signs
•Activities of daily
living

*Improving
functionality*

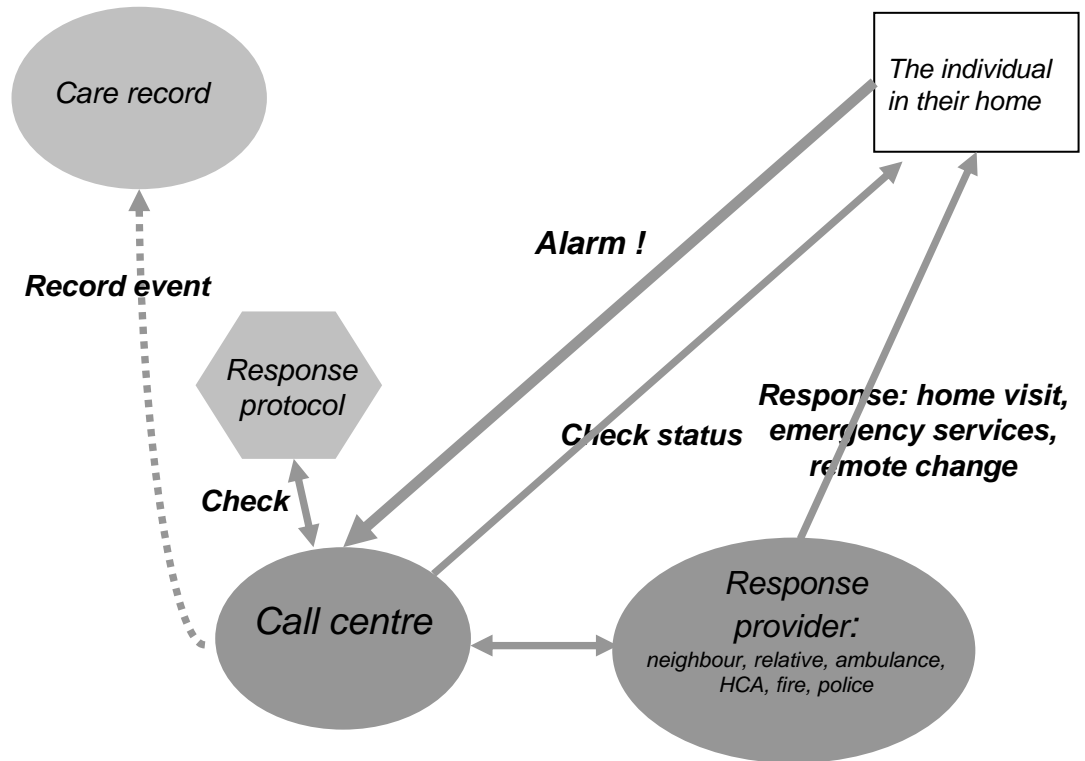
**Electronic assistive
technology, e.g.**
environmental controls, doors
opening/closing, control of
beds

Prevention



The emerging technological and organisational infrastructure

- Assessment & referral
- Equipment
- Monitoring
- Response

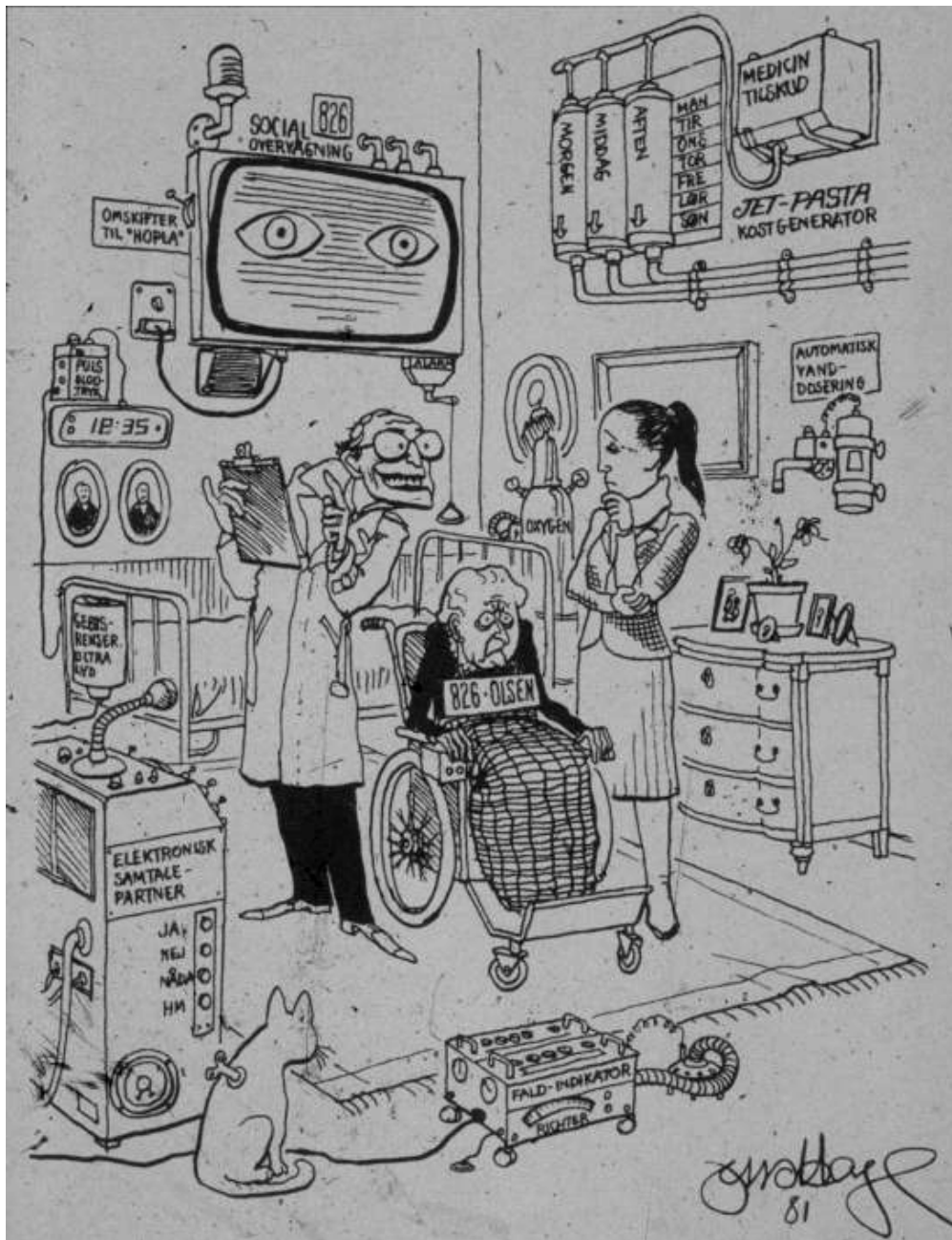


Overview

- What is telecare?
- **A benign context for telecare**
- Embedding and diffusing telecare:
the need for benefits evidence
- Conclusions

Telecare policy background

- At least 12 **major government reports** since 1998 have called for telecare
- **Targets** in *Delivering C21 NHS IT Support* (reiterated by ODPM in Nov 2005)
- £80m+ via **Preventative Technology Grant (PTG)**
- Additional support via **Partnerships for Older People Projects (POPP)**: 10/19 include some form of telecare
- Wider **policy agenda** provides impetus: focus on capacity, prevention and self care
- And there are significant demographic, political and economic **drivers ...**



Overcoming labour shortages is one driver ...

‘Thanks to the smarter home, a home help is only required once a year to adjust the clock’

... reducing pressure on the acute sector is another driver



"Age? You mean now or when we first sat down?"

... and there is a need to 'unblock' hospital beds

NURSE 'TRIED TO KILL PATIENTS'

'She gave overdoses to elderly in ruthless attempt to free beds'

By **Valentine Low**

A HOSPITAL nurse was so obsessed with "ruthless efficiency" she tried to kill four elderly patients to free their beds, a court heard today.

Barbara Salisbury was even heard urging one patient, "Give in, it's time to go", as she administered an overdose, the jury was told.

Determined to get patients off her ward quickly — alive or dead — she "overstepped the line between humane nursing and callous dispatch", prosecuting barrister Robin Spencer QC said, taking it upon herself to hasten the death of four very ill patients at Leighton Hospital, Crewe.

Salisbury, 47, from north Wales, denies attempting to murder Reuben Thompson, 81, Frank Owen, 92, James Byrne, 76, and Frances May Taylor, 88. The alleged offences took place between 1999 and 2002.

Mr Spencer said Salisbury, who was working as a ward sister, tried to kill Mr Byrne and Mrs Taylor by "unnecessary and inappropriate" administration of diamorphine.

Chester Crown Court heard she was seen repeatedly pressing the booster button on the device delivering the drug to Mr

Evening Standard, 29 April 2004

Current position

- Lots of pilots
- Most die
- Some struggle on
- Some mutate into new projects
- All have provided valuable lessons for project design and implementation ...



It's not the technology!

Overview

- What is telecare?
- A benign context for telecare
- **Embedding and diffusing telecare:
the need for benefits evidence**
- Conclusions

A lack of evidence hasn't always been a barrier to new policies and ideas ...



... but a concern with evidence based policy is growing

Medium term diffusion challenges?

- Moving towards more mainstream telecare services will require acceptance by a wider range of **stakeholders** than hitherto
- Adoption and diffusion of health service innovation influenced by **boundaries** between professional groups involved
- Boundaries are especially important with **complex service innovations**, e.g. telecare

The importance of benefits evidence

- More robust (and more) evidence may be needed at two levels:
 - **Operational:** clinicians and other healthcare professionals require evidence on care outcomes
 - **Strategic planning:** significant telecare investment decisions need a business case

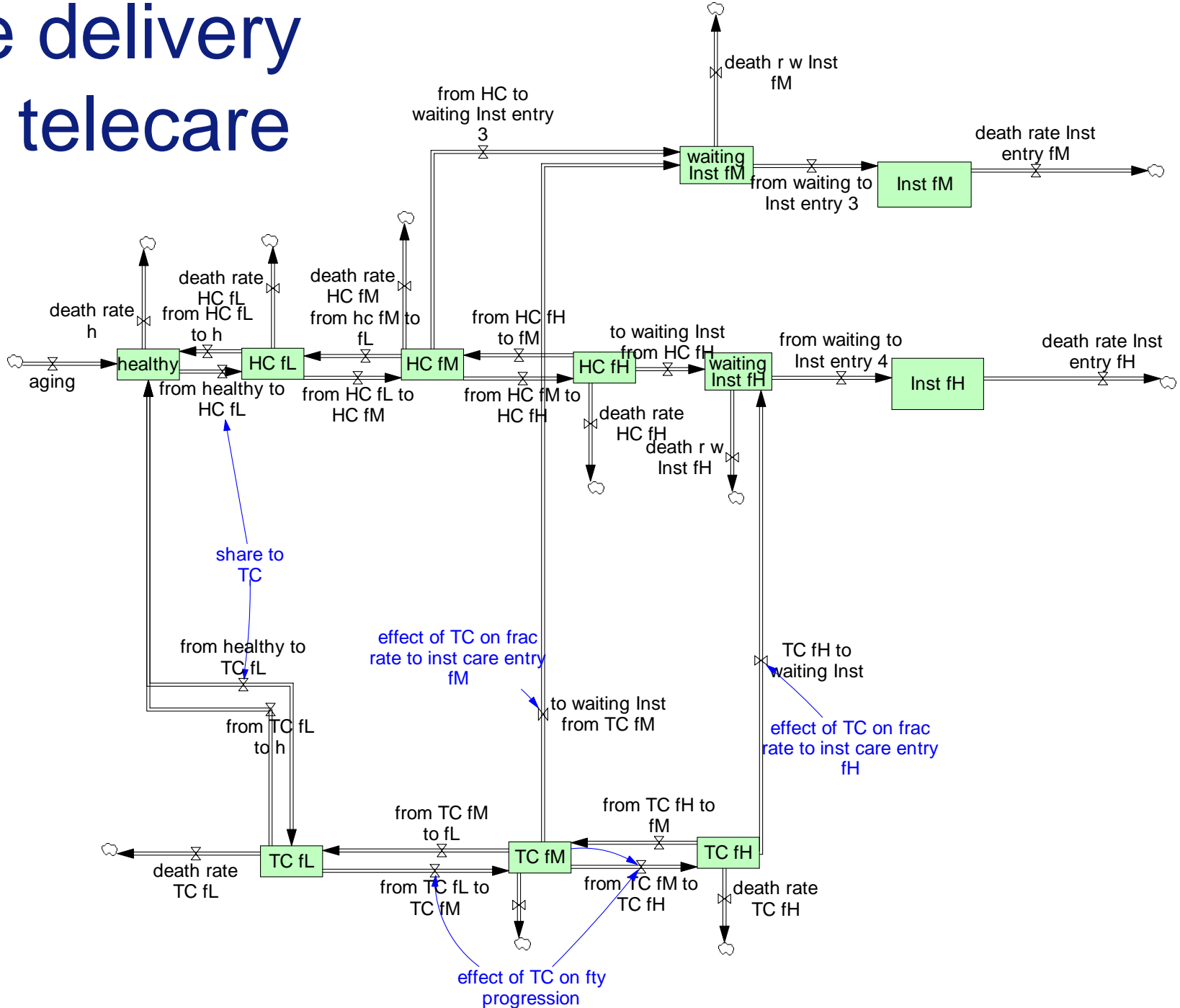
Existing research evidence

Focus of telecare scheme included in research:	Type of benefits evidence available:	
	<i>Individual outcomes, i.e. clinical or QOL improvement</i>	<i>Systemic outcomes, i.e. economic impact or impact on processes</i>
<i>Specific application, e.g. telecare aimed at patients with diabetes</i>	Relatively good, growing – numerous individual studies on which to build systematic reviews	Limited, problematic – poor specification of assumptions, lack of robust data
<i>General application, e.g. aimed at a heterogeneous population ('older people')</i>	Largely anecdotal, growing – not yet peer reviewed	Virtually unresearched – based on simulation modelling with limited data

Gathering evidence to support investment in telecare

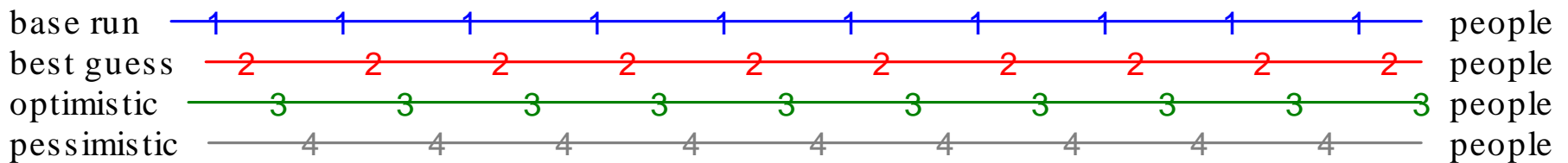
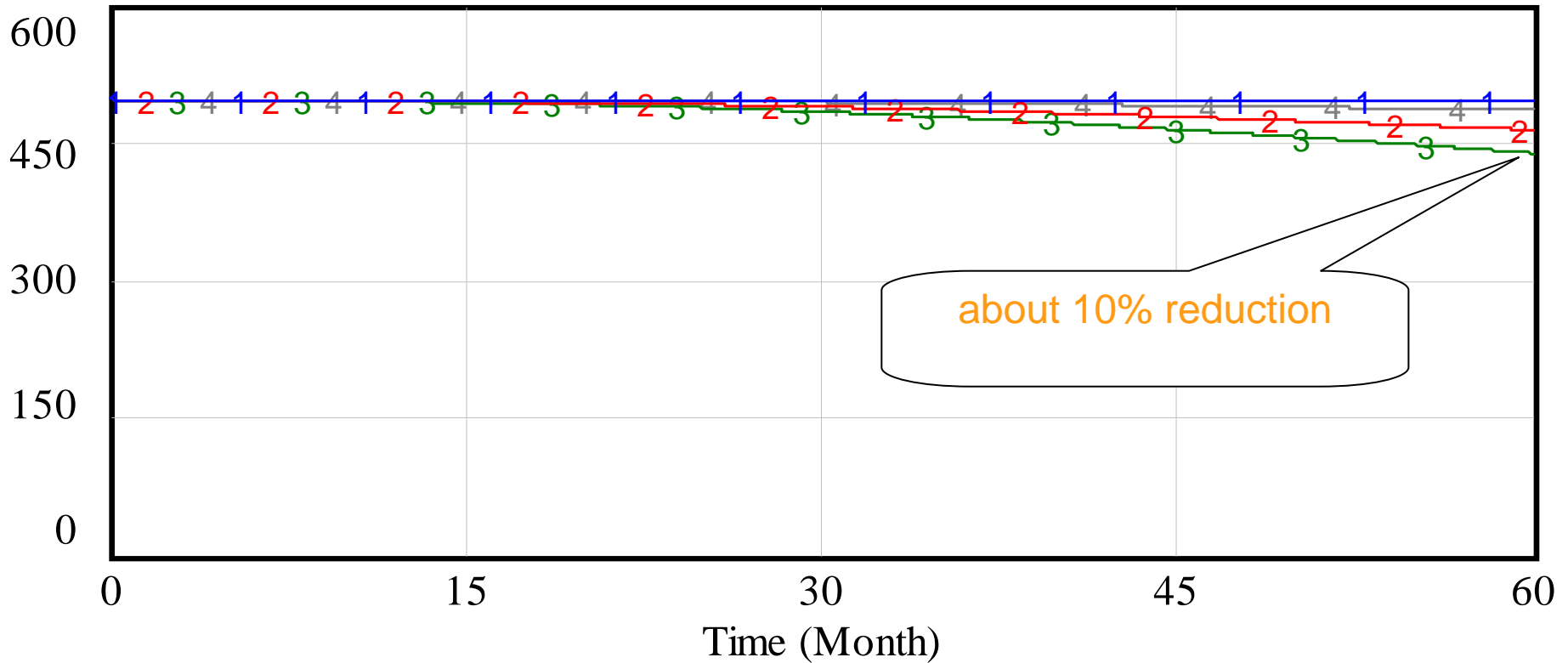
- Simulation models are useful where the available data is sparse and for helping for learning about new approaches
- Modelling suggests some received wisdom needs to be questioned:
 - Reduced cost of care provision
 - Prevention of institutionalisation
 - Impact on disease progression
 - Impact on hospital population

Care delivery with telecare



Telecare and entry to institutional care – short term

Clients in institutional care



Cost comparison over 5 years

Cost at 60 months relative to no telecare

(no effect on frailty progression, 20% reduction of entry from high frailty, excludes initial investment)

		Telecare costs as share of conventional care costs				
		0.6	0.8	1	1.2	1.4
Effect of telecare on frac rate to inst care entry fM	0.2	-5%	-3%	-1%	1%	3%
	0.4	-4%	-2%	-1%	1%	3%
	0.6	-4%	-2%	0%	1%	3%
	0.8	-4%	-2%	0%	2%	3%
	1.0	-4%	-2%	0%	2%	3%

Cost comparison – 20 years

Cost at 240 months relative to base case

(no effect on frailty progression, 20% reduction of entry from high frailty, excludes initial investment)

		Telecare costs as share of conventional care costs			
		0.8	1	1.2	1.4
Effect of telecare on frac rate to inst care entry fM	0.2	-7.2%	-4.9%	-2.6%	-0.3%
	0.4	-6.6%	-4.3%	-2.1%	0.2%
	0.6	-6.0%	-3.8%	-1.5%	0.7%
	0.8	-5.5%	-3.3%	-1.1%	1.2%

Overview

- What is telecare?
- A benign context for telecare
- Embedding and diffusing telecare:
the need for benefits evidence
- **Conclusions**

Telecare in the UK – the next phase

- PTG / POPP will stimulate new telecare projects
- Embedding and diffusing telecare as part of mainstream care services will be influenced by the **evidence** for its potential benefits
- Building the evidence base **both at the individual outcome** and **system-wide levels** is critical for convincing those making telecare investment decisions and those who will be using it
- Far more attention needs to be paid to **evaluation**

Thank you!

Further information:

j.barlow@imperial.ac.uk

With thanks to Steffen Bayer, Dick Curry and members of the EQUAL project consortium

Supported by the Engineering & Physical Science Research Council (EPSRC)