

Remote patient monitoring and diagnostics – what can we do to achieve a breakthrough?

London Health 2010: innovation, quality, equity and excellence

3 November 2010

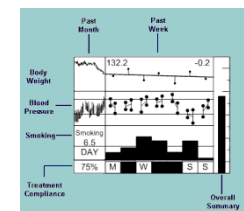
Business Design Centre

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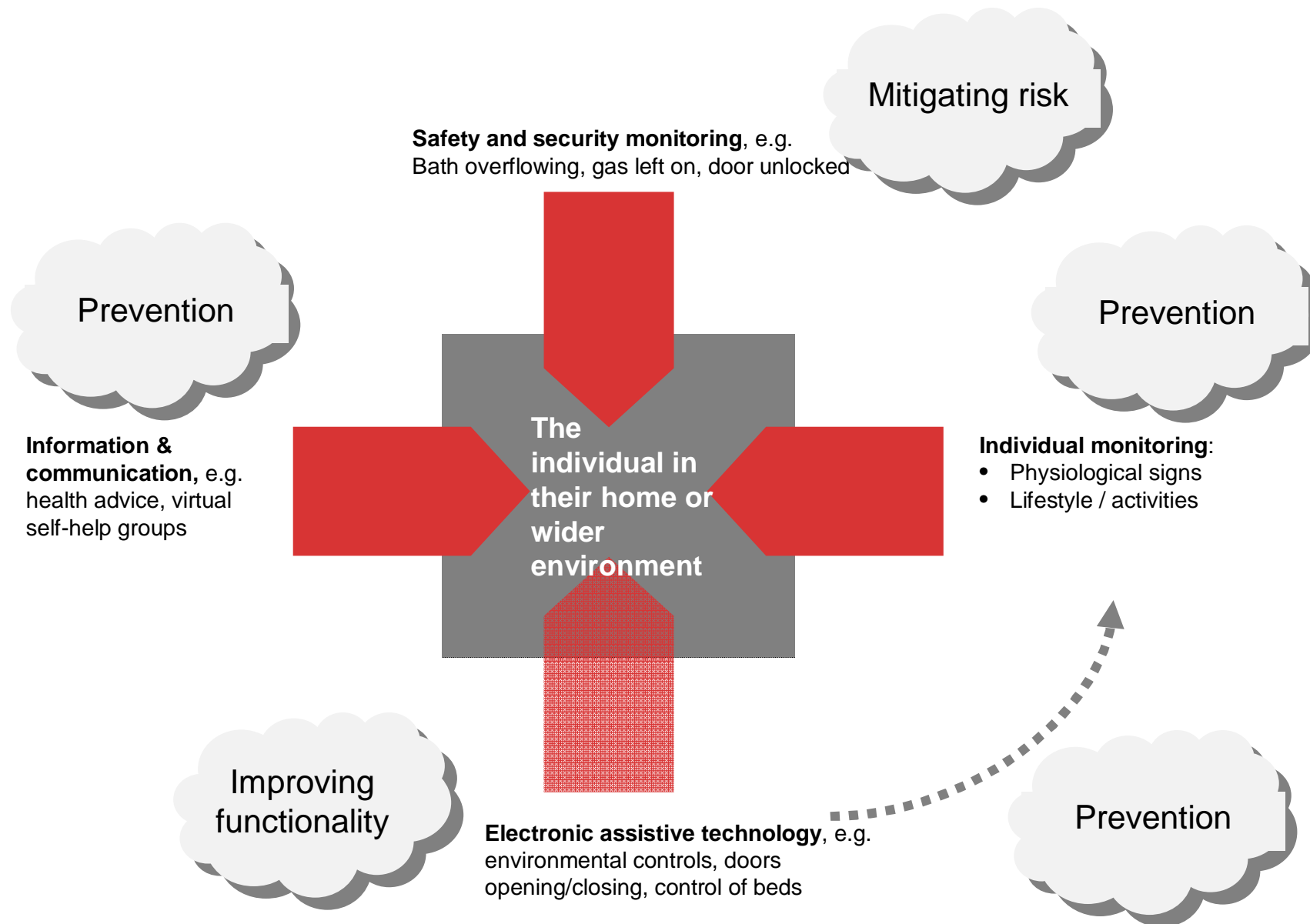
James Barlow

The terminology

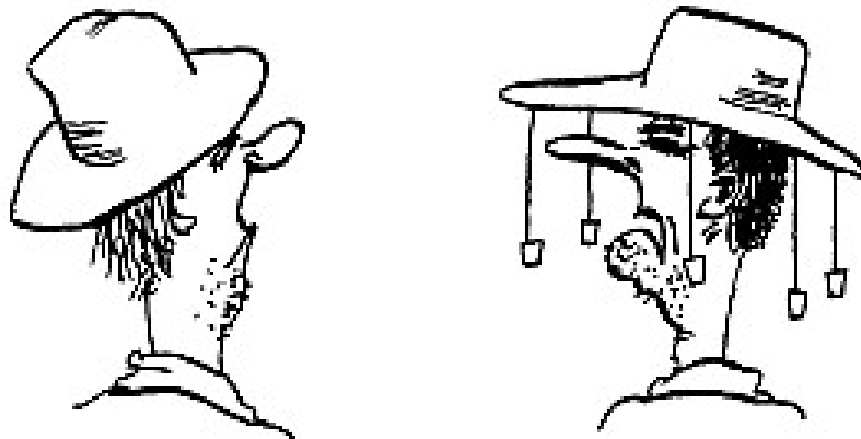
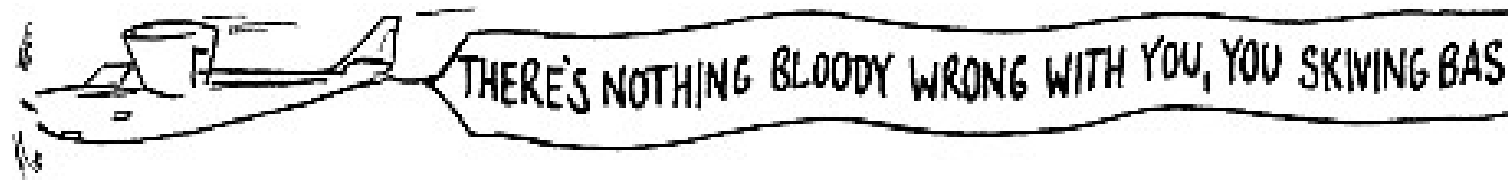
- ‘Telecare’
 - ‘Telehealth’
 - ‘Telemonitoring’
 - ‘Telemedicine’
 - ‘Assistive technology’
 - ‘Smart homes’
- All are used interchangeably to describe the **remote delivery** of health and social care



Remote care (i.e. 'telecare') applications



Remote care is not new ...



Russett.

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 1879, 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!

There is a policy imperative for remote care

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



So what's the reality in the UK?

We don't know how much remote care is out there

'1.75 m people rely on a telecare service in the UK' (TSA website)

'1.5 m service users benefit from telecare in the UK' (TSA website)

639,000 users in 2009 (CQC)

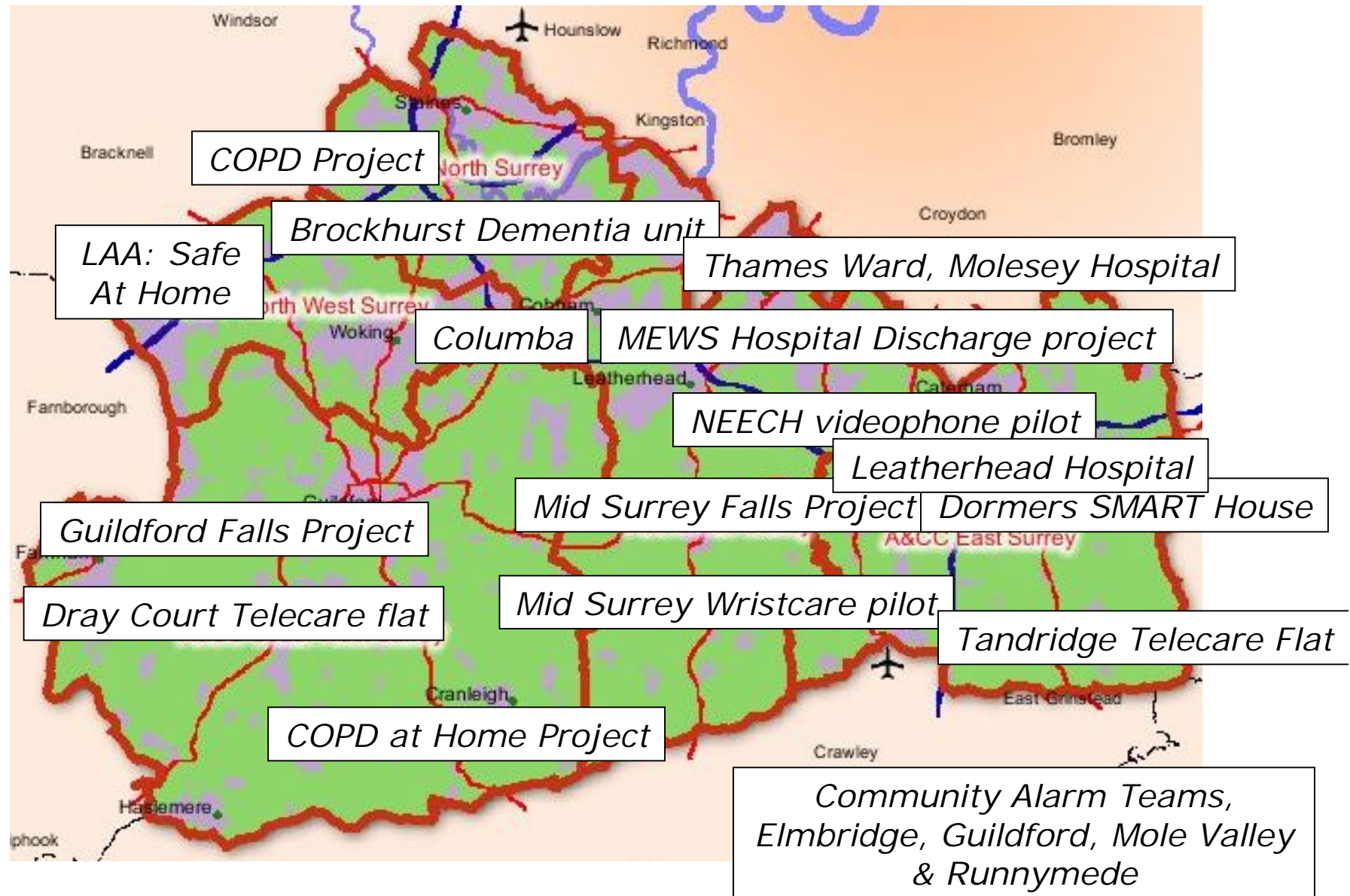
'Existing numbers indicate that out of a possible treatable 450,000 patients only about 0.05% is being served today by a (telehealth) solution' (i.e. 22,500 users)

(Minutes of the Strategic Intelligence Monitor on Personal Health Systems [SIMPHS] meeting, Brussels, 17-18 November 2009)

143,908: 'Number of new service users aged 65 and over provided / to be provided with one or more items of telecare equipment in their own homes' (DH PTG returns – planned for 2009/10)

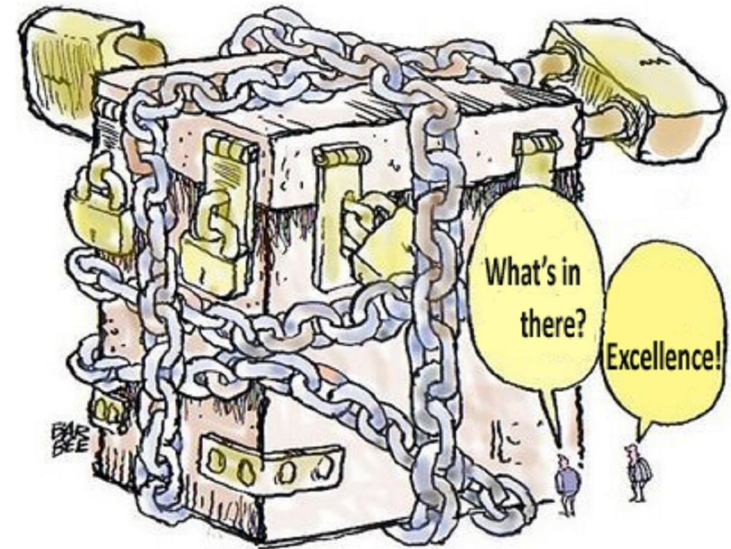
There have been thousands of
trials ...

Diffusion of telecare in Surrey 1998-2005



The UK is more advanced than most countries

- ... but despite the many **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



So why the lack of progress?



The challenge is not the technology!

Organisational factors are very important

— Initial implementation stages

- Constant **reorganisation and staff turnover**, hindering learning and engagement
- Local government **rivalries** – who's responsible for what?
- **Cultural differences** across health and social care (e.g. conceptualisation of illness, care and evidence)

— Moves towards roll out

- **Lack of integration** within and between care providers from acute, primary and social care services
- Distribution of **costs and benefits**

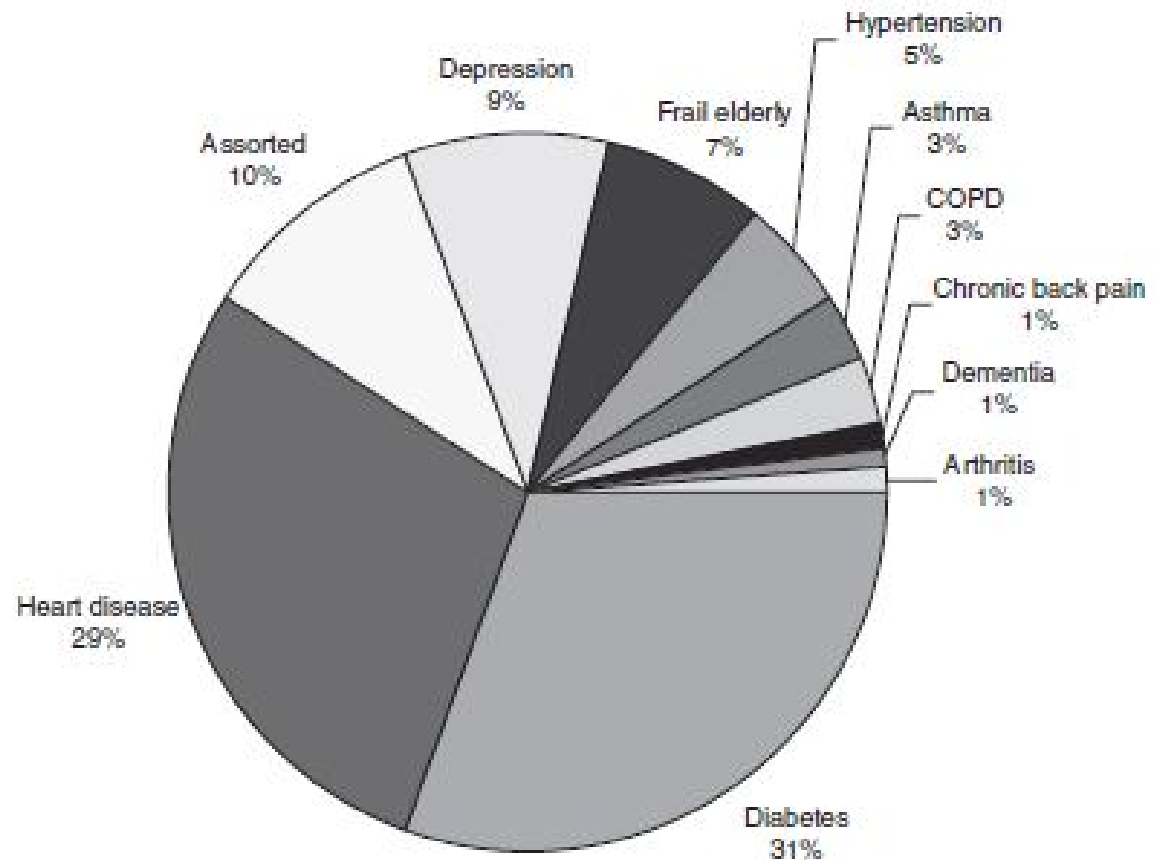
Evidence and a business case
for remote care

A lack of obvious **business models** and a **case for investing** limited resources in remote care may be now a more important barrier to mainstreaming

... and this is related to the evidence base

What does the remote care evidence base look like?

- Very large number of studies remote care projects around the world (c9000 published reports by 2006-07)
- Bulk are targeted at diabetes and heart disease



Most evidence is skewed towards certain conditions

Focus of study	Evidence on:	
	<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. 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 general population (e.g. ‘frail older people’)</i>	Largely anecdotal, growing – not yet peer reviewed	Virtually unresearched – based on simulation modelling with limited data

Does this matter?

Not so far, but ...

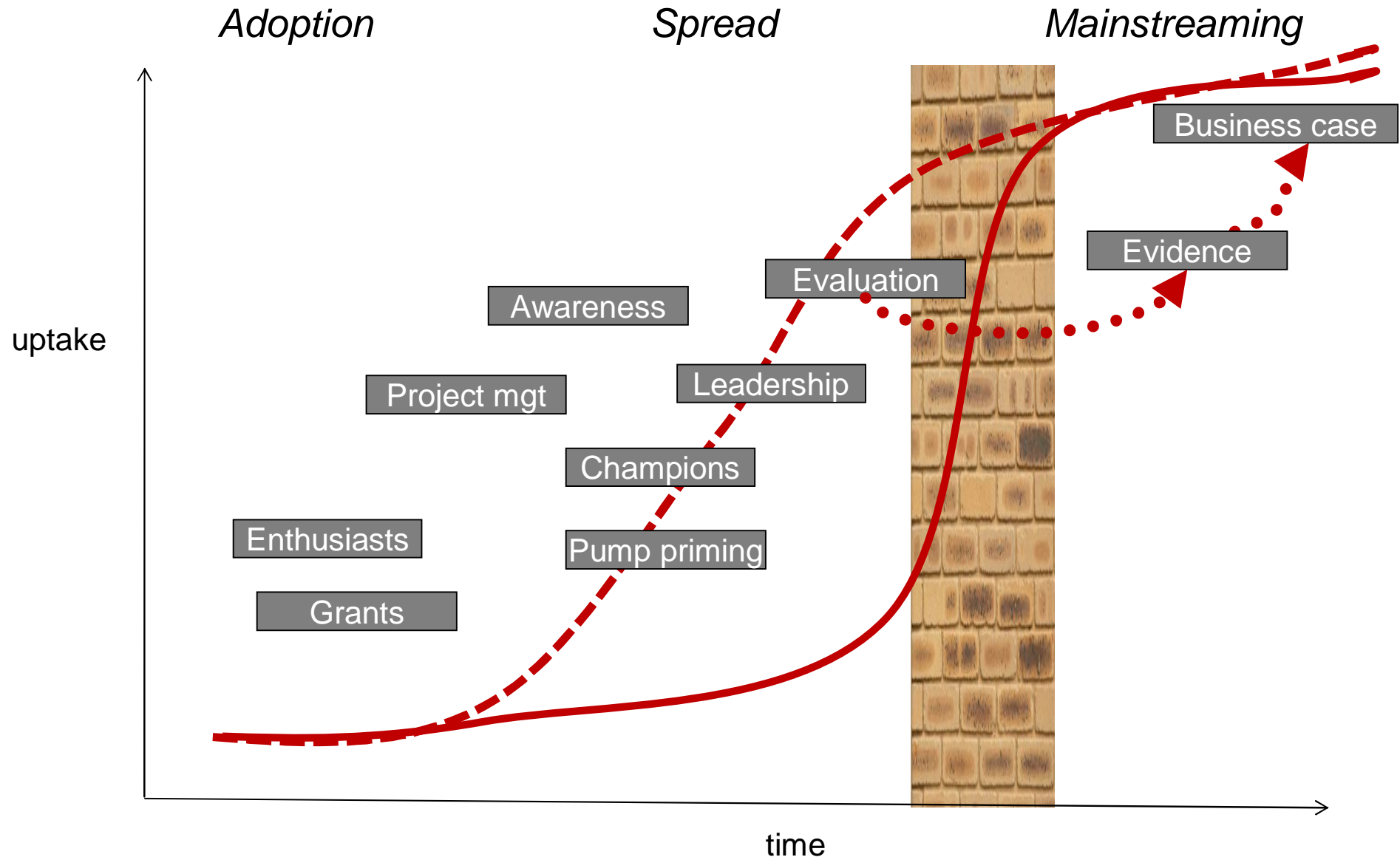
Evidence is becoming important for implementation because ...

- New stakeholders across the care system are becoming involved – move from social to health care
- Evidence increases stakeholder receptiveness
- Financial investment beyond the pilot stage needs to be made
- More robust evidence needed to build business cases for all stakeholders

... 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

We need better evidence to move to the next stage



Source: Barlow, Hendy, Chrysanthaki

Summary

- Remote care offers prospects for new service models to meet the health and social care challenges of the next decade
- There is evidence for its benefits at an individual level
- There is a lack of economic evidence for its benefits across the care system ...
- but current uncertainties over business cases shouldn't be used as an excuse for inaction

Thank you

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