www.ebme.co.uk

BT Vision of Telehealth

Connected care from BT

Andy Jugg

What is your view of BT…?

BT: enabling our customers' success

BT is one of the world's leading communications services companies, serving the needs of customers in the UK and in more than 170 countries

BT Global Services is a managed networked IT services business that operates globally and delivers locally to help our customers succeed

BT is a long term Information and Communications Technology (ICT) partner for the health market

BT Health is successfully delivering transformational health IT programmes on a national scale

Our history of innovation

Hearing aids for all

Began delivering a national infrastructure for the NHS

Built a Virtual Private Network to connect the NHS

Bringing benefits of telehealth to patients with chronic conditions

Installation of first telephones in hospitals

Life pager service for organ recipients

Creation of one of world's biggest databases for the NHS

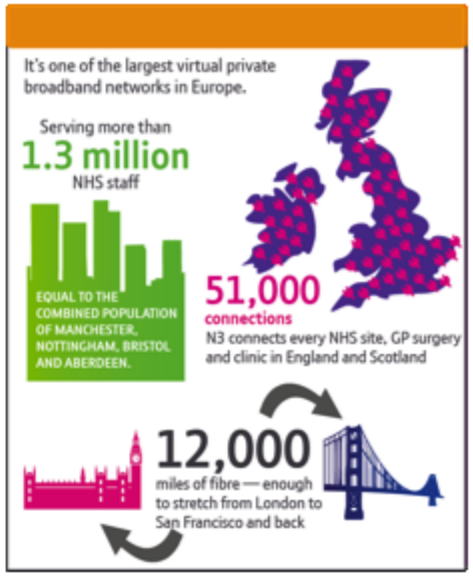
Patient information on the move

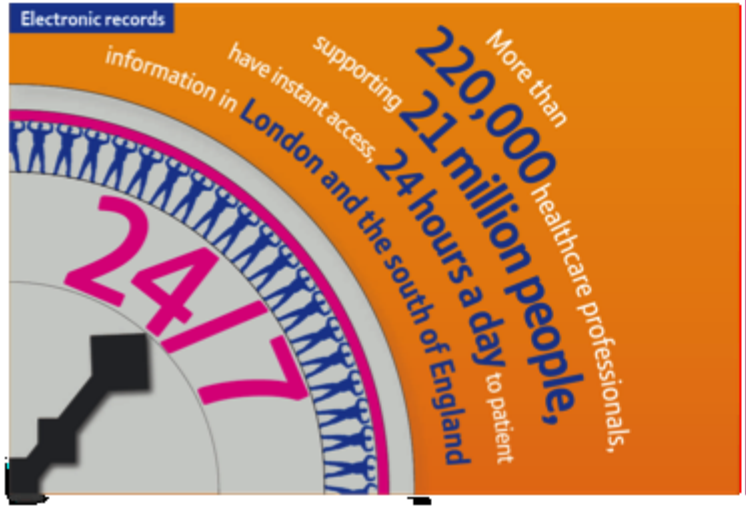
Offering digital hospital solutions to customers around the world

1880 | 1948 | 1985 | 2003 | 2005 | 2007 | 2010 | 2011 | 2013

£4b investment in global R&D in the past 5 years to help empower and support organisations with new technologies now and in the future.

Supporting the UK's NHS every day





Global mega trends

People are living longer but not healthier lives.

Over 60s are consuming **resources** with on average **2–3 long term conditions** each

Today's model with the hospital at the centre is outdated and unsustainable. The emphasis is on treating **critical illness,** rather than supporting **people to stay well**

80% of deaths from major diseases are due to lifestyle factors such as **smoking and obesity**

Global mega trends

The power of the individual and growth of patient expectations.

Instant globalisation is creating new opportunities.

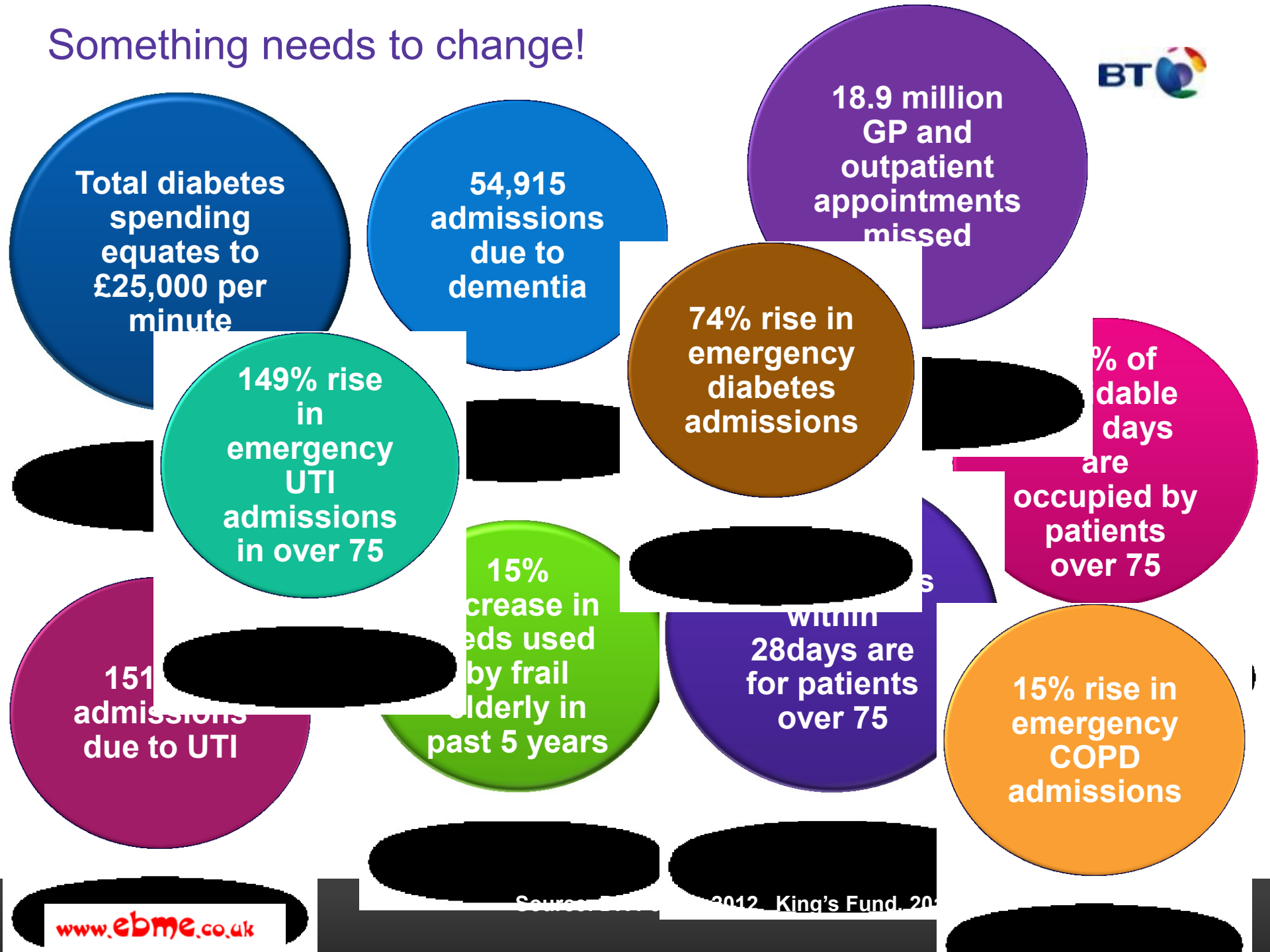
Possibility to deliver care remotely no matter where you and your patient are (with robotics and telemedicine)

Rate of change.....

it’s accelerating…….

The healthcare challenges of the past will grow exponentially in the future

Something needs to change!



Technology as an ENABLER

"A hospital-centred delivery system made sense for the diseases of the 20th century, but today patients could be providing much more of their own care, facilitated by technology, and supported by a range of professionals including clinicians, dieticians, pharmacists and lifestyle coaches. They also need close coordination amongst these different professionals"

(NHSE: The NHS belongs to the people: a call to action, 2013)

Our vision for a new world of care

Together we can transform the patient's experience, their health and their quality of life by:

Organising services around patients needs by joining them up – Interoperability.

Empowering patients to stay well and self-manage more effectively – Telehealth and telecare.

Freeing up clinicians to see more patients whilst helping them be more productive and efficient in what they do and how they do it – Mobility.

Transforming how care is delivered – IT Outsourcing to bring all these technologies together.

Gathering deep insight into how patients and staff interact to optimise care services – Analytics.

Providing higher quality care at lower cost and building a more sustainable future.

How can you care for patients at home and keep them out of hospital?

Telehealth and telecare allows patients to be monitored remotely and cared for in the home.

Clinicians can be alerted when readings stray out of their normal range and proactively respond to issues.

Elderly and disabled can be given more independence through sensors in the home detecting falls, doors left open or changes in normal activity.

Early intervention lessens the need for hospital visits, prevents crises.

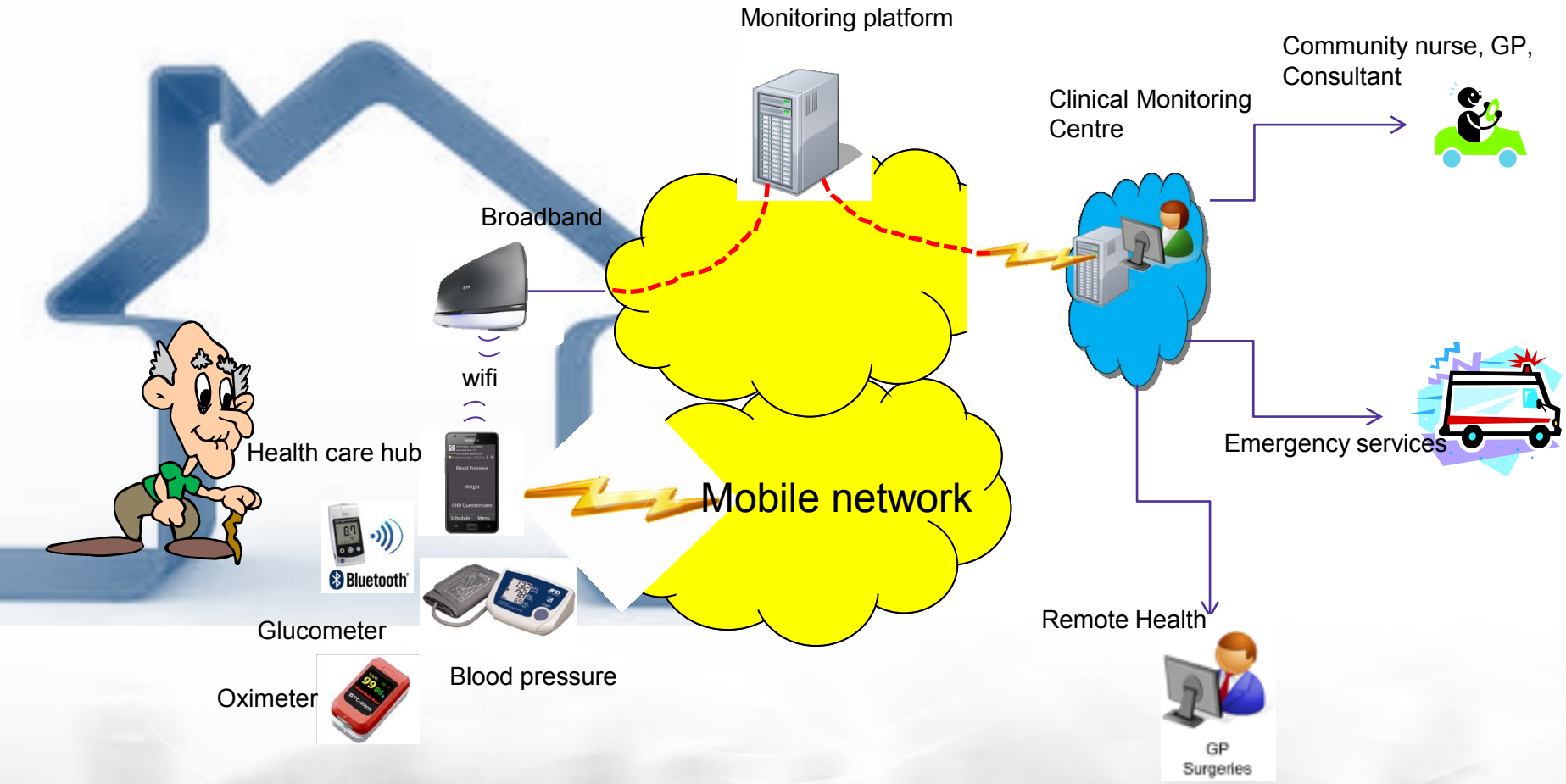
Care can be administered remotely – no more traveling to appointments and waiting rooms.

Patients are empowered to manage their own conditions at home.

Lower cost care delivered in the community.

Connected care - Telehealth service

A service that uses various point-of-care technologies to monitor a patients physiological status and health condition. Readings and question responses are automatically transmitted to a clinician who can monitor results for signs of deterioration.



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Telehealth Equipment Matrix

	Blood pressure monitor	Glucometer	Pulse oximeter	Thermometer	Scales	Peak flow meter	Urinalysis Meter	ECG	Symptom questions
COPD	●		●	◌		◌			●
CHF	●		●		●			◌	●
DIABETES	◌	●					◌		●
CVD	●				◌			◌	●
UTI				◌			●		●

◌ **Optional –** typically for those with more severe disease / symptomology, e.g. a thermometer would be indicated for a patient with a history of upper UTI infection.

● **Core –** equipment that is required to effectively monitor condition.

Areas where costs could be avoided by proactive approach

From “Unit costs of Health and Social Care 2013”, Personal Social Services Research Unit, University of Kent

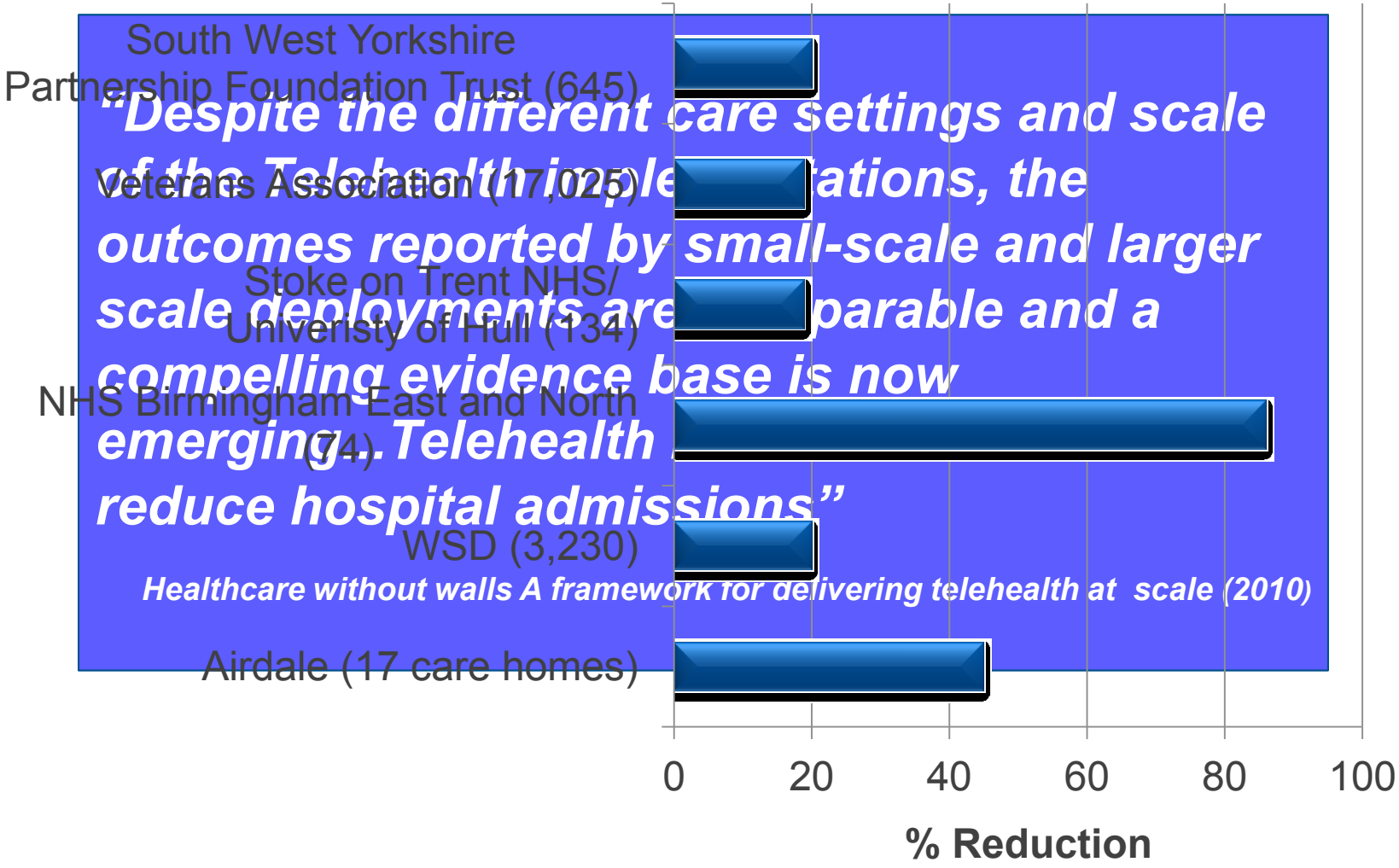
NHS Reference costs for hospital services (page 107)
Includes direct costs, indirect cost and overheads

	National Average
Elective inpatient stay	£3283
Non-elective inpatient stay (long stay)	£2581
Non-elective inpatient stay (short stay)	£598
Day cases	£697
Outpatient procedure	£135
Ambulance Service – Hear, Treat, Refer	£45
Ambulance Service – See, Treat, Refer	£177
Ambulance Service – See, Treat, Convey	£235

Other useful unit costs

	Unit Cost	Source
Hospital A&E visit (admitted)	£230 per visit	2013 Unit Costs Page 145
Bed Day - older patients	£158 per day	2010 Unit Costs Page 31
Bed Day - mental health patients	£267 per day	2010 Unit Costs Page 119
Bed Day - local rehab	£416 per day	2013 Unit Costs Page 118
Bed Day - specialist rehab	£530 per day	2013 Unit Costs Page 117
Paramedic – cost per incident	£220 per day	2011 National Audit Office report, Page 25 http://www.nao.org.uk/wp-content/uploads/2011/06/n10121086.pdf
Community Nurse visit	£39 per visit	2013 Unit Costs Page 145
Nurse contact at GP Surgery	£13 for 15 minutes	2013 Unit Costs Page 188
GP Patient contact	£57 for 15 minutes £3.80 per minute	2013 Unit Costs Page 191
GP Visit out of Surgery	£114 per visit £4.90 per minute	2013 Unit Costs Page 191

Reduction in Hospital Admissions



"Despite the different care settings and scale of the Telehealth implementations, the outcomes reported by small-scale and larger scale deployments are comparable and a compelling evidence base is now emerging. Telehealth can reduce hospital admissions"

Healthcare without walls A framework for delivering telehealth at scale (2010)

Case Study 1 - George

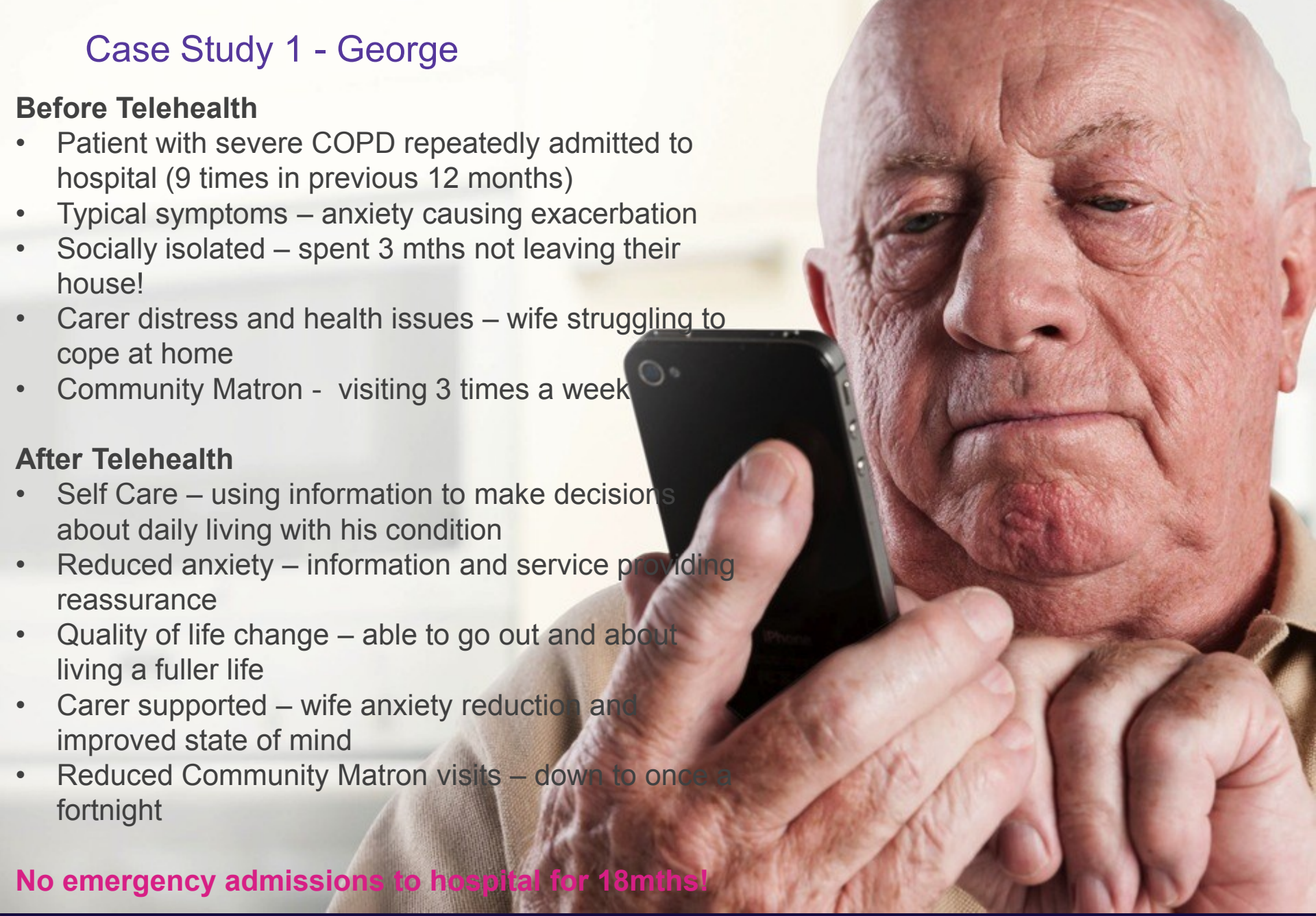
Before Telehealth

- Patient with severe COPD repeatedly admitted to hospital (9 times in previous 12 months)
- Typical symptoms – anxiety causing exacerbation
- Socially isolated – spent 3 mths not leaving their house!
- Carer distress and health issues – wife struggling to cope at home
- Community Matron - visiting 3 times a week

After Telehealth

- Self Care – using information to make decisions about daily living with his condition
- Reduced anxiety – information and service providing reassurance
- Quality of life change – able to go out and about living a fuller life
- Carer supported – wife anxiety reduction and improved state of mind
- Reduced Community Matron visits – down to once a fortnight

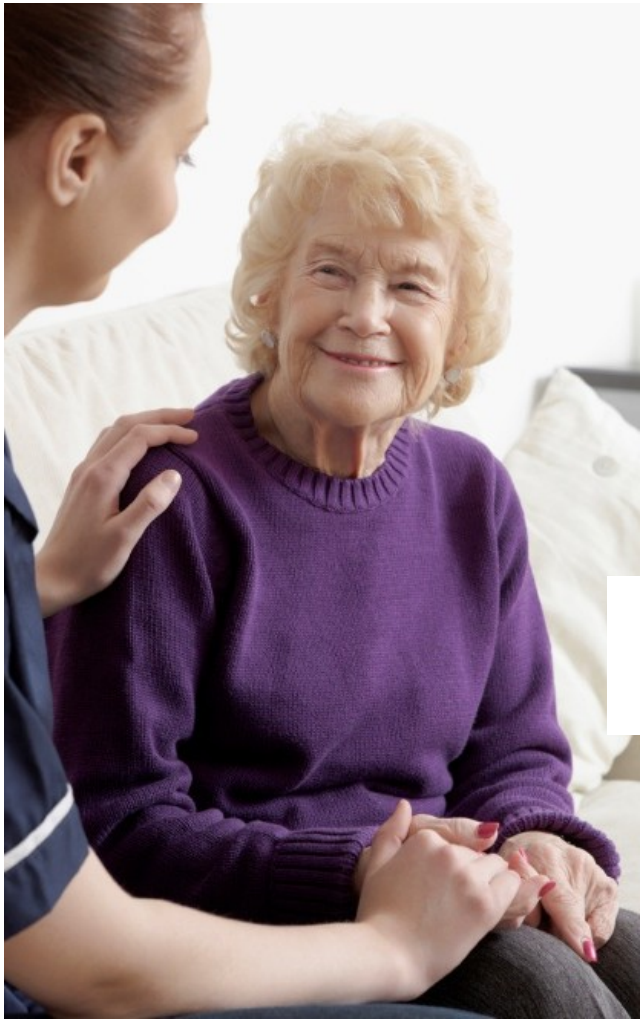
No emergency admissions to hospital for 18mths!



The new world of care: the patient experience transformed

- George is empowered, monitored, and helped to stay well.
- And when he falls ill, care services proactively intervene.
- George is given control over his care and his life.
- All of the organisations involved can use the data from George's experience to understand and improve their services and provide them more efficiently.

Case Study 2 – Mary



Before Telehealth

- Patient with dementia supported at home by her husband
- Regular UTI's proving difficult to detect due to nature of dementia
- Frequent emergency admissions
- Distress to both patient and carer

After Telehealth

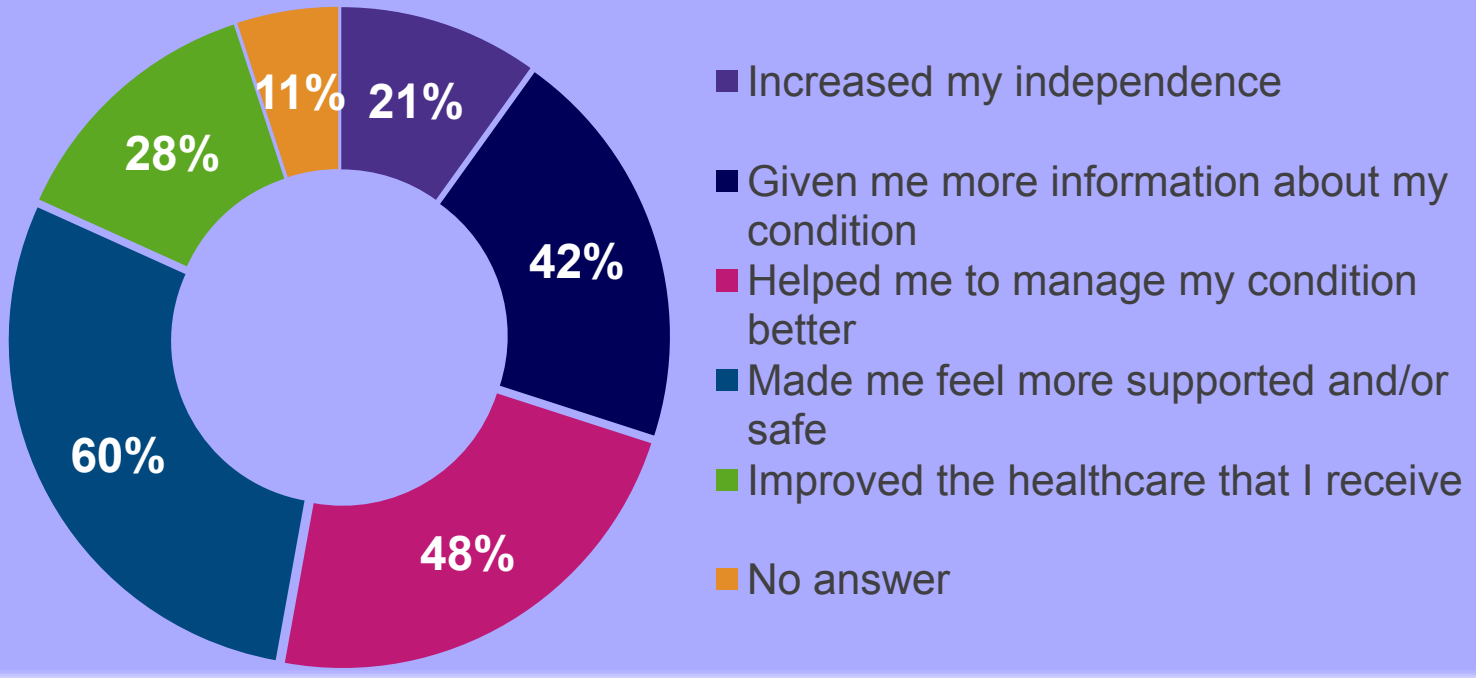
- Self Care – daily personalised question response on symptoms
- Early intervention – questions prompt in home urine testing and medication commencement
- Quality of life change – reduced distress and able to remain at home
- Carer supported – husband anxiety reduction and feeling of support

What are people saying about telehealth in Cornwall?

Cornwall patient survey results – 1007 patients, 579 responses (57.5% response rate)

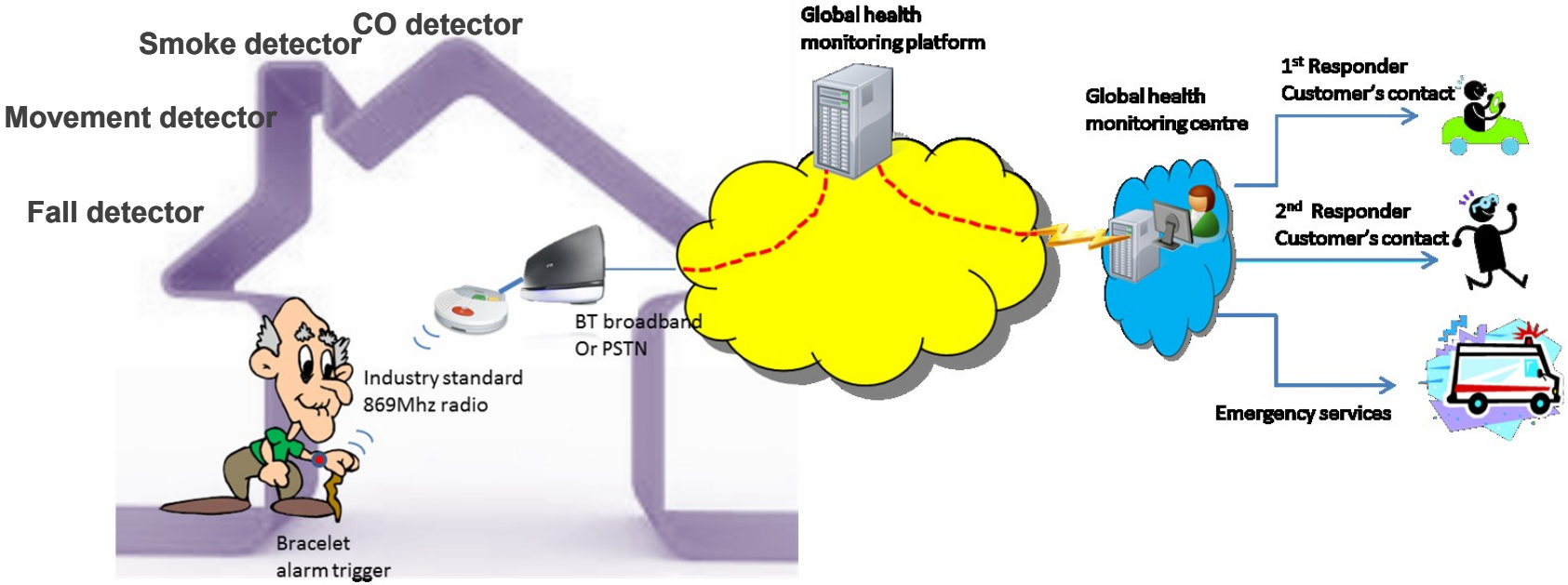
- 90% of people believed that they benefited from their Telehealth service
- 62% of people received 2 or more benefits from Telehealth
- 53% felt it prevented them from going into hospital
- 69% felt it reduced their visits to their GP or made them more appropriate

What effects have the Telehealth service and support had on you?



Connected care - Telecare

A service that enables people, especially older and more vulnerable individuals, to live independently and securely in their own home. It uses technology in the home to provide an alert when someone gets in difficulty to a service team who can quickly deploy someone to help them



>7.3m over 70s across UK

Social care budgets squeezed

Keep people in own homes not residential care

We provide:

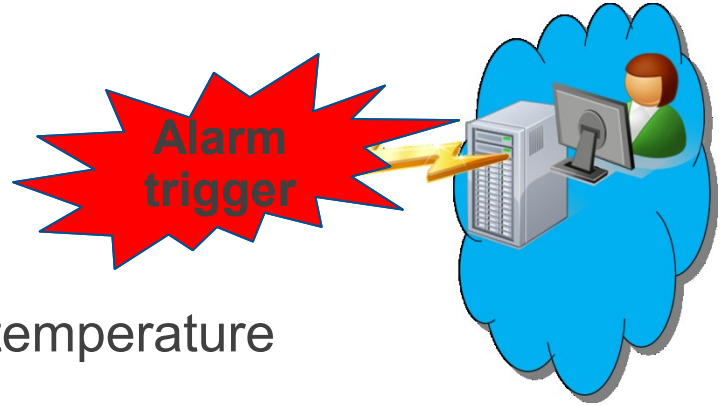
End to end managed service

Install, de-install, maintain, sensor equipment, monitoring platform & monitoring centre

Telecare Equipment

Bed sensor

Extreme temperature



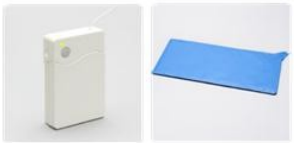
Mat sensor

Flood detector

Enuresis detector

Fall sensor

Pill dispenser



Chair sensor

Property exit sensor

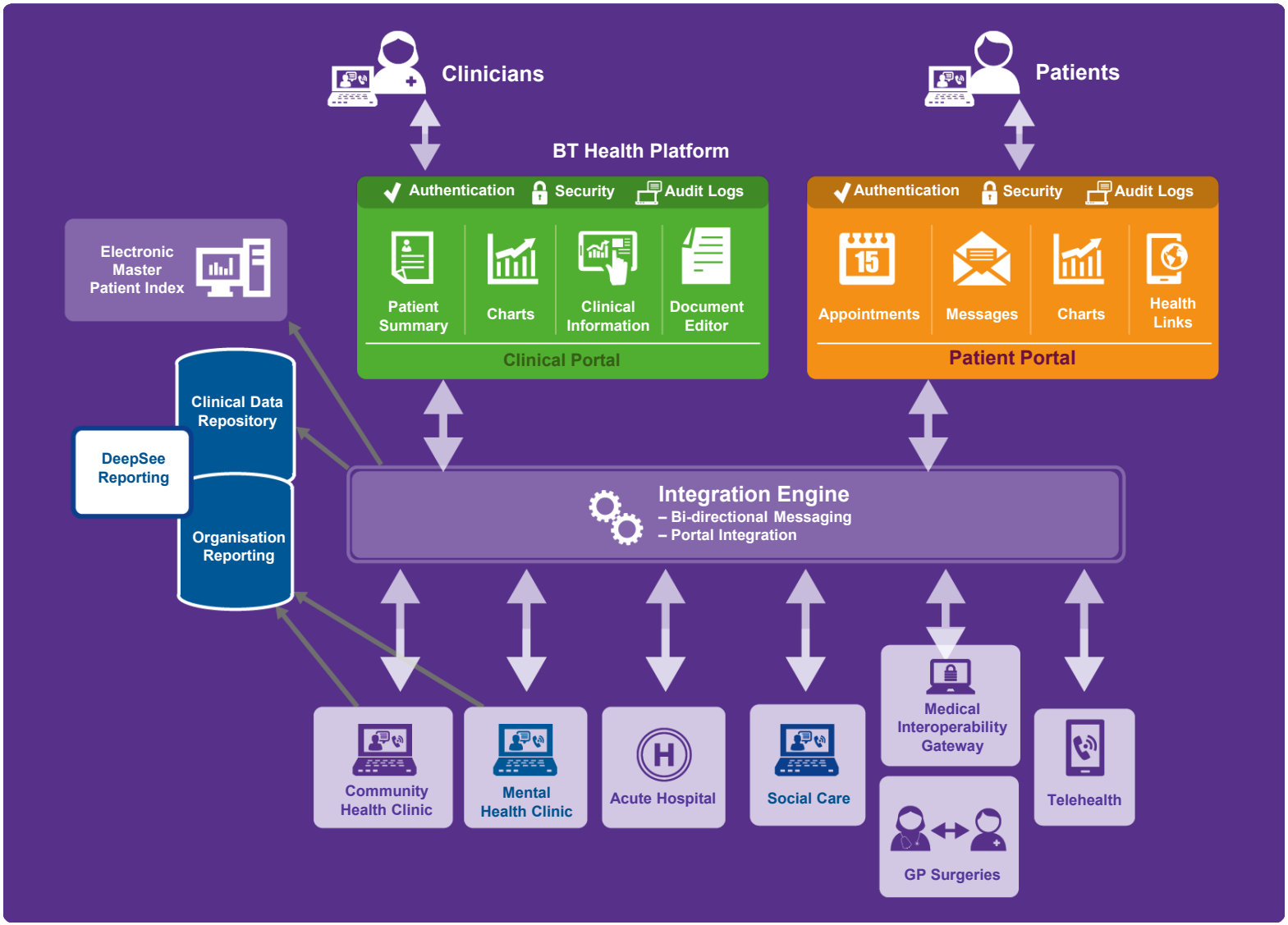
Movement detector

Key safe

smoke detector

Carbon monoxide detector

The solution joining up a new world of care

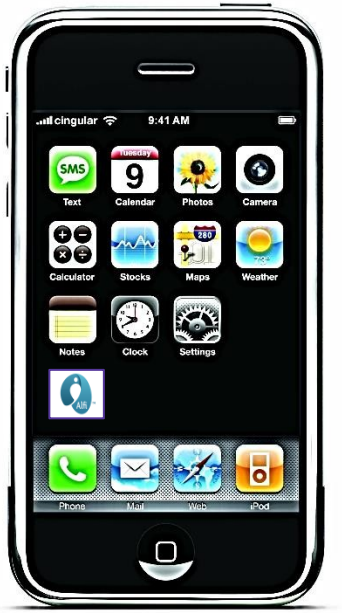


Innovation and cost reduction - the future is robots?

Joking of course…….

Real innovation

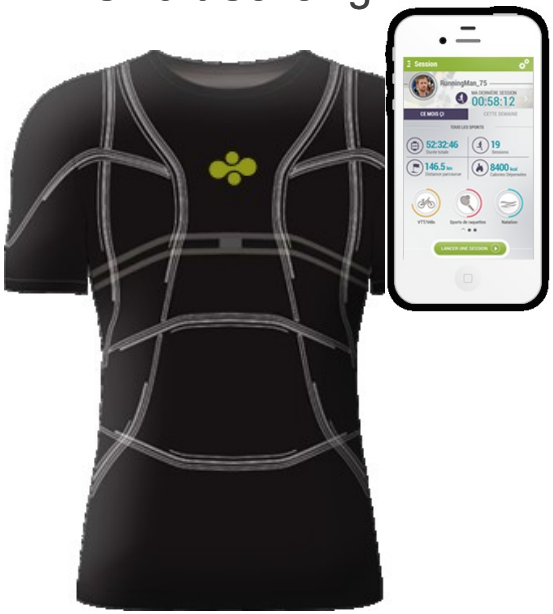
- Telehealth – single unit



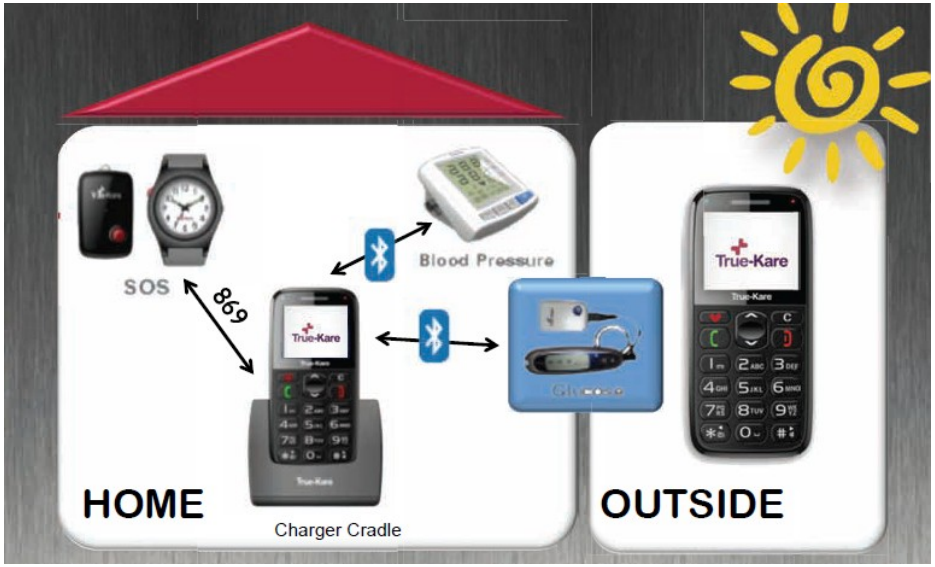
- Mobile App

- BT Companion

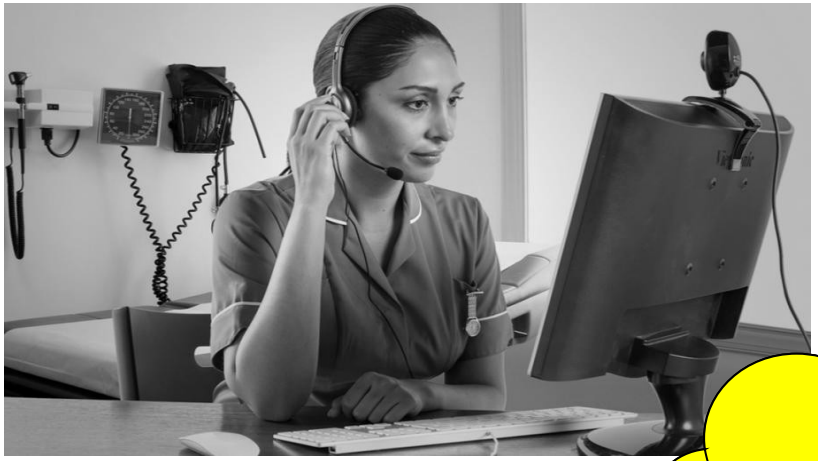
- Smart Sensing



- True-Kare



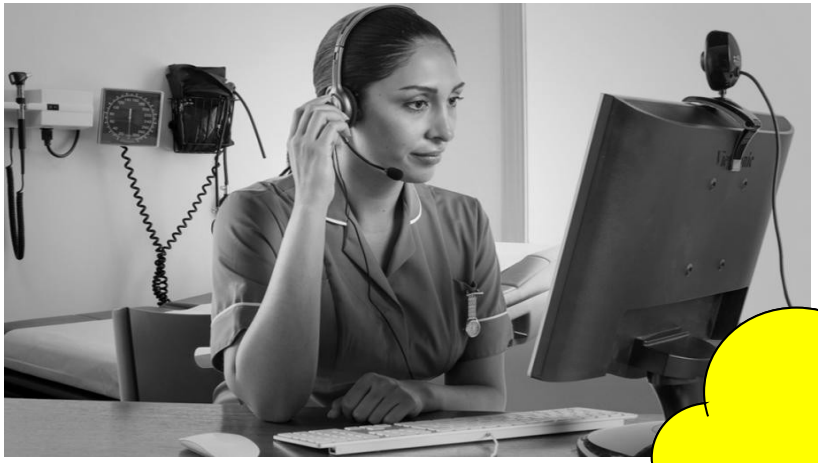
A world where you can see your clinician without leaving home



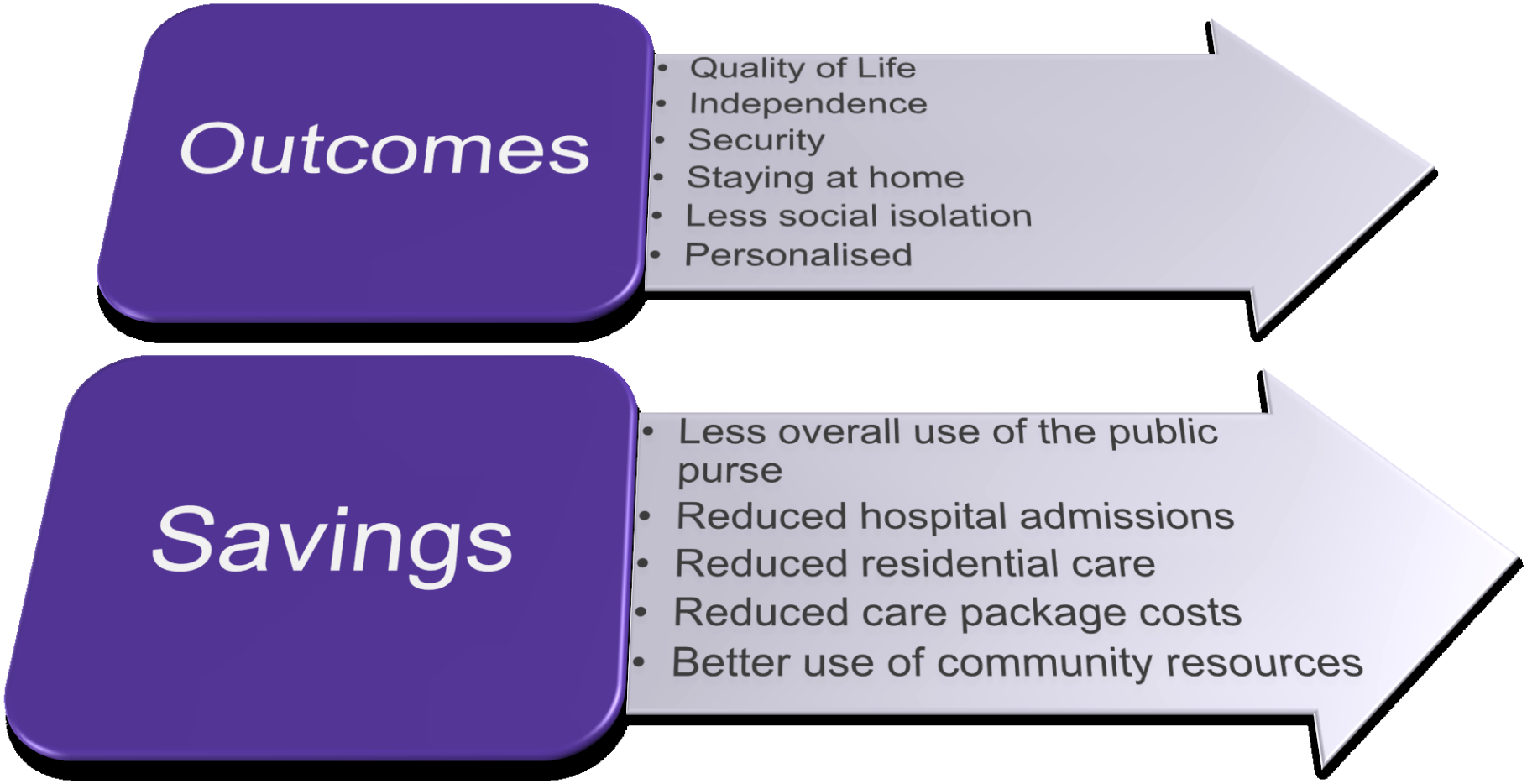
Virtual Meeting Room

VIRTUALLYTOGETHER

A world where you can be constantly monitored …….
……. by the shirt on your back



To summarise - BT Connected care



Bringing it all together

bt.com/health