Technology Enabled Health and Social Care in Rural Areas

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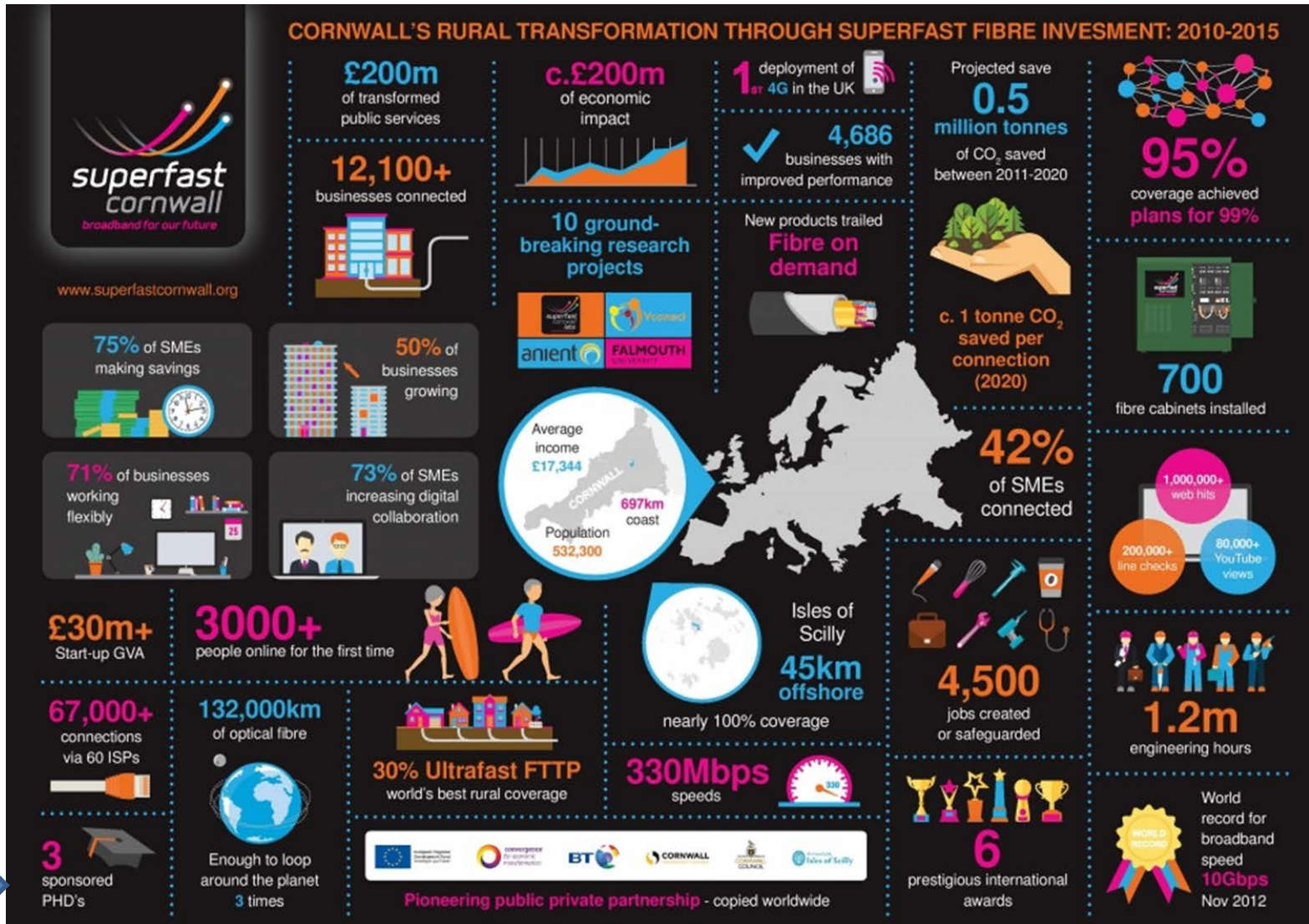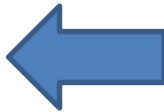Plymouth University

Google Scholar

Researchgate

Synopsis

- A word about infrastructure

- Applauding and building on Cumbria and Airedale
  - (Cumbria)>> stakeholder engagement online + F2F
  - Students as the future and another 'workforce'
  - (Airedale)>> video & other upcoming technologies

- E-health: rural just like urban, but ..
  - More advantages of online over distance
  - More barriers from lack of provision

Infrastructure

Superfast Cornwall
Story according to BT 2010-15

Phil Abbott-Garner
(Superfast PhD studentship Plymouth University: just about to submit)

Cluster factorial randomised controlled trial

Legend
- H Hospitals
- • Cornwall GPs
- ○ Selected Sample (Centre)
- ▧ Enabled Postcodes (18/03/2013)
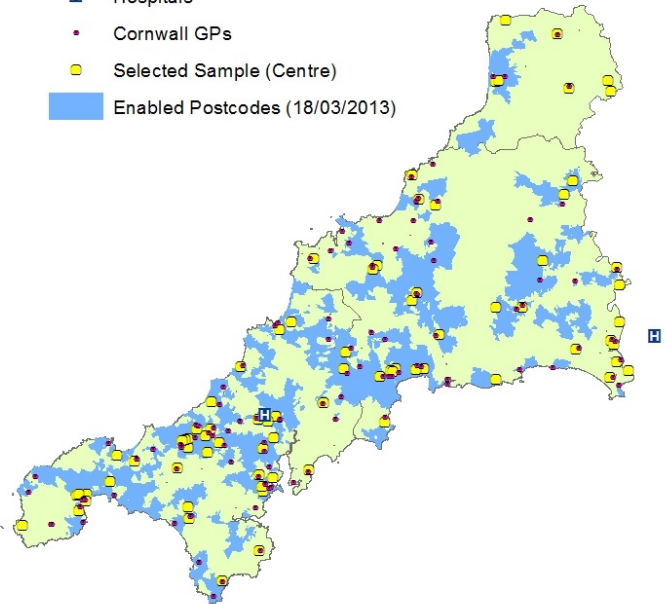
- Do superfast broadband and tailored interventions improve use of e-health and reduce health related travel?.

- Maybe.

What can typical rural broadband users expect?

Superfast Cornwall?

Average Speed Mbps	UK	Cornwall	Cumbria
Down	19	12	7
Up	3	2	1

Reinforcing the Cumbria experience

- Need for stakeholder involvement, reviewing evidence, understanding barriers, etc

- Voluntary sector also students

Need for engagement

E-health has potential but has often failed and so needs

- Shared view among users of its purpose & their 'buy-in'
- Collective action to re-design health care tasks
- Upskilling to ensure confidence in innovation

(Rural) context is important in interpreting and implementing the results of any research and particularly for e-health with rapid technological change, legacy systems, and organisational memories of recent successes and failures.

THE

Max 12C, min -6C   Thursday December 8 2011 | thetimes.co.uk | No 70437

Exclusive NHS computer fiasco

● Patient database was axed in autumn but runs up £2bn bill ● Risk-tak

Dominic Kennedy, Chris Smyth
Laura Pitel

because it had "let down" the health
service.

London Ambulance System

New Software "Put Lives At Risk!"

■ Main Findings of investigation
  – Inexperienced procurement team
  – Staff mistrust and opposition

e-Government

NHS risks £20bn white elephant, say auditors

John Carvel, social affairs

The government's £20bn investment in new IT systems for the NHS in Englar
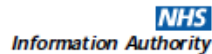
Need for engagement

BUT...

We can use online engagement in addition to F2F

- East Devon to West Cornwall is 140 miles

- Some stakeholders more comfortable online, other F2F

Online discussions between public, patients, professionals

Overview of one line of research: 1998-continuing

NHS Information Authority

Patient-Led Learning
For The Clinical
Professions:

Fulfilling the Information
Needs of Patients

Final Report submitted to the
NHS Information Authority's
National Education, Training and
Development Programme

- 1998 Patient-led learning
- 2009 Sharptalk
- 2011 Stakeholders Online
- 2014 @PUNC

Sharptalk

Anonymous discussion forums for young people who self-harm and health professionals
(Collaboration Exeter, Plymouth Universities, Devon Partnership Trust)

77 Young people who self-harm
Liked the relatively small and supportive community
Used it extensively to support each other and interacted with the research team
Anonymity was very important for them

18 Health professionals
Despite registering to take part did not actively participate in the forums.
Reported barriers included lack of confidence and concerns relating to
workload, private–professional boundaries, role clarity, duty of care
and accountability.

Stakeholders Online
One week 'course'
(webinar-forum-webinar)

Research article

Open access

Developing an online learning community for mental health professionals and service users: a discursive analysis
Janet Smithson, Ray B Jones and **Emily Ashurst**

For all author emails, please log on.

BMC Medical Education 2012, **12**:12   doi:10.1186/1472-6920-12-12
Published: 21 March 2012

Online anonymous discussion between service users and health professionals to ascertain stakeholder concerns in using e-health services in mental health

Searching for a sustainable process of service user and health professional online discussions to facilitate the implementation of e-health

Ray B Jones, Emily J Ashurst and Tessa Trappes-Lomax
Plymouth University, UK

Plymouth **U**niversity **N**ursing **C**ohorts
@punc14

We introduce Twitter to all nursing students in context of digital professionalism.

Students engage online with

- The wider nursing profession
- Other health and care professions
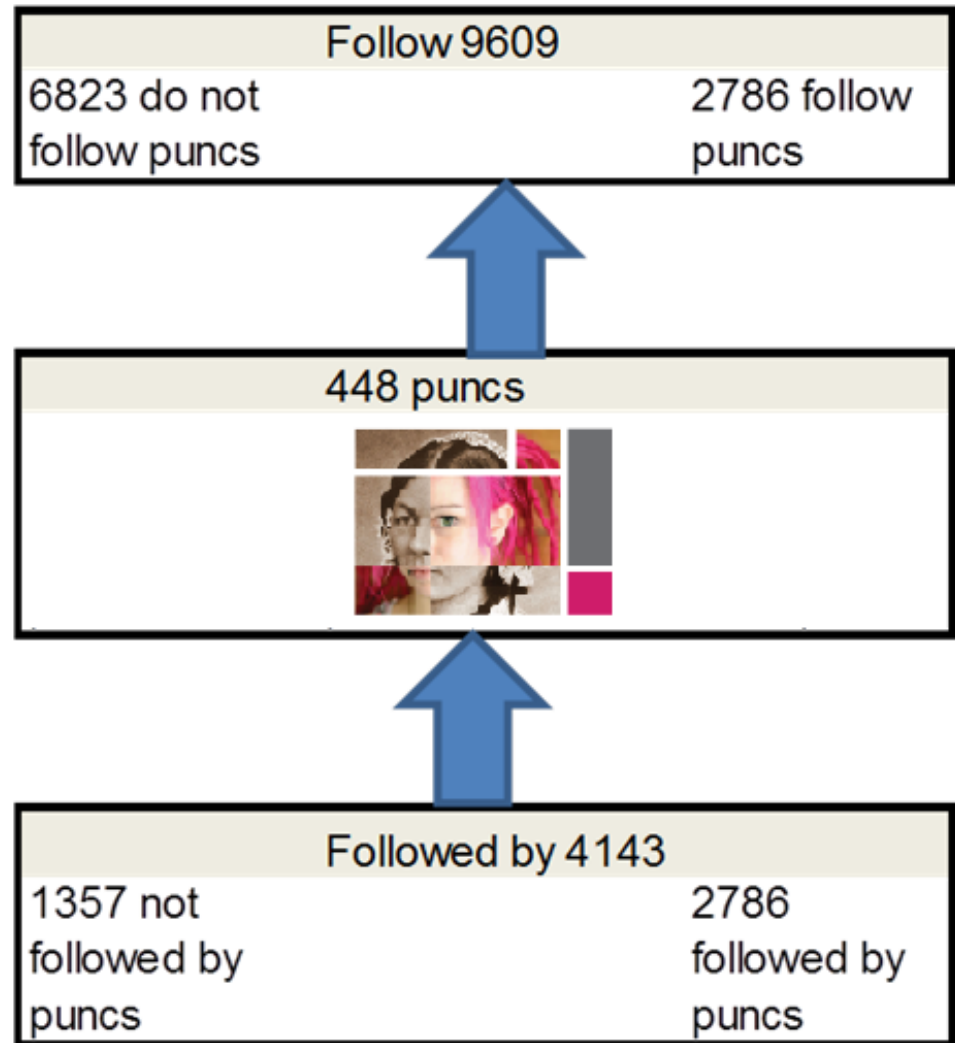- Patient groups, representatives, and patients

Students learn, but we also want them to influence and help the debate about health and technology.

(Paper in press Journal Advanced Nursing)

Note the scale...
(Oct 2014)

448 students in first cohort had follow/follower contact with 10966 (non punc) people

Follow 9609

6823 do not follow puncs

2786 follow puncs

448 puncs

Followed by 4143

1357 not followed by puncs

2786 followed by puncs

Who followed Oct 2014 cohort?
Other Twitter Users: survey (n=702)
out of 4143 followers

Occupation	%
Not a health professional or a student	44
Health professional, academic, students	66
Total	100

Potential of Universities to influence health information and debate of their region

- Nursing
- Medicine
- Dentistry
- All allied health professions (physio, diet, optometry, podiatry etc) except radiography
- Design, computing, robotics
- Etc

Plymouth University Nursing Students

500 students in each of 3 years

= 1500 students

Potentially influential body of people in rural areas

Supporting and following Airedale

- Video calls could be 'game changer'

- Discussions about security of systems to be picked up in panel discussion?

- What education needed to make use of Skype and other commercially available video calls?

Workshops to identify learning needs of clinicians in using video calls at End of Life

- 5 X F2F workshops with carers and many professions, followed by..

- Online workshop

- Told participants about Goldline

- Also acknowledged new technologies coming in

- Mainly discussed in context of Skype or Facetime
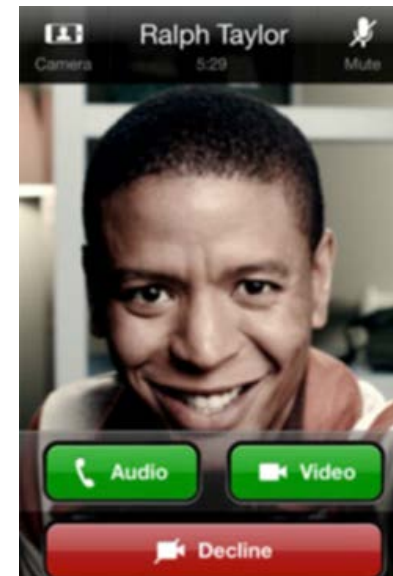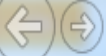
Robots to help people with dementia in Western Isles

🕐 5 July 2013 | Highlands & Islands

NHS Western Isles is putting robots into the homes of people with dementia as part of a pilot scheme to help them to continue to live independently.

A relative or carer - potentially hundreds of miles away - can drive the machine around the house to check that everything is all right.

The pair can also have a chat through a two-way video call system.

The Giraff robots are 1.5m (4ft 11in) tall

Kubi – robotic iPad desktop holder ~£450

Workshops to identify learning needs of clinicians in using video calls at End of Life

Learning Needs for Healthcare Professionals

Seven groups (total of 59 learning objectives). In priority order:

1. Confidence & technical ability in using video calls e.g. lighting, image & sound quality.
2. Being aware of how video calls fit into clinical practice e.g. when to use in preference to a telephone call or face-to-face visit. Be aware of any NHS or Trust guidelines. Know how to document a video call.
3. Managing video calls e.g. who else is in the room. Know how to interpret & use the 'background' visuals.
4. Communication skills on 'camera' e.g. non-verbal communication skills.
5. Good understanding of how patients & families may be affected by use of video calls.
6. Presenting video calls as an option to patients and families and assess their readiness.
7. 'Normal' professional skills that become essential for effective video calls e.g. consent, confidentiality.

Family connections

Skype over TV

- BT-led project Cornwall with Coastline Housing and Age UK Cornwall

- Alfi Connect

- Feasibility of using Skype over TV for isolated people in own homes

Skype on Wheels:
PhD study Plymouth University

Making video calls accessible to care home residents (family to resident)

Care Homes

Rural areas have proportionately more care homes than urban areas

	Care Homes	Population
Cornwall	152	545,000
Cumbria	133	500,000
Birmingham	167	1,100,000

Low and high tech devices for care homes

There are various devices to help calm patients with dementia ranging from 'retro' radio, record players etc for reminiscence therapy through to Paro robotic seal (£4500).
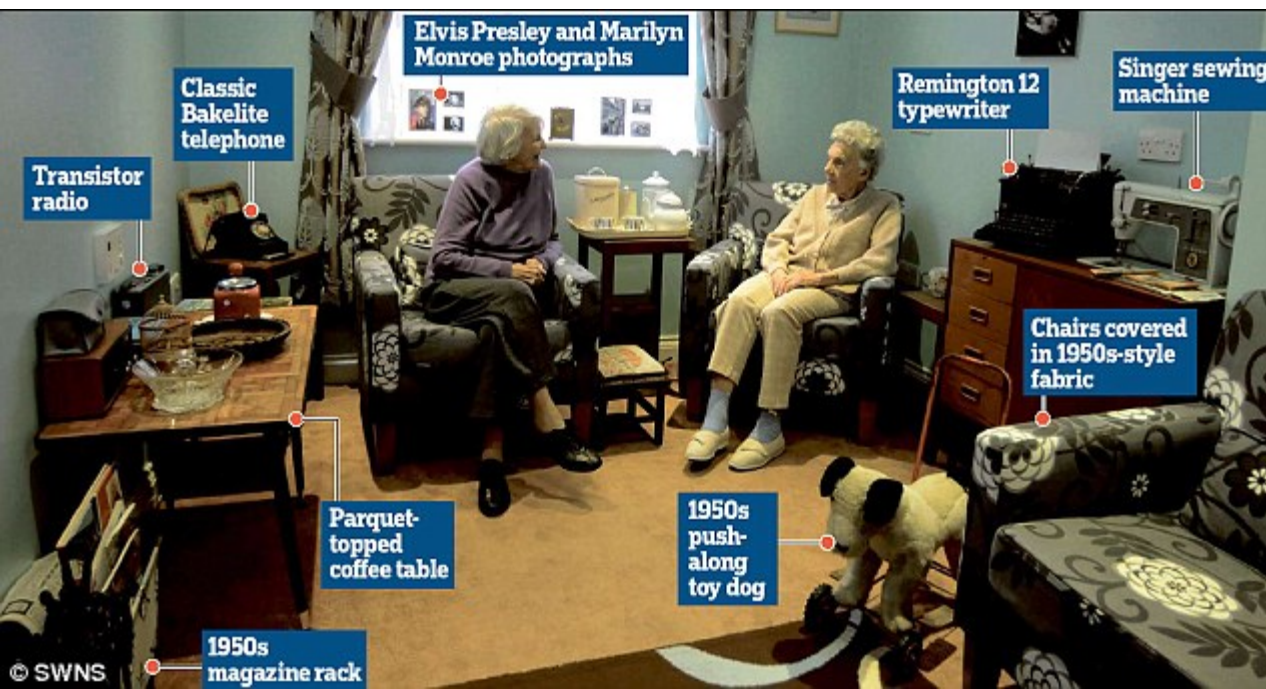
Paro Robot Seal

Takayanagi et al (2014). Comparison of verbal and emotional responses of elderly people with mild/moderate dementia and those with severe dementia in responses to seal robot, PARO

Sabanovic et al (2013). PARO robot affects diverse interaction modalities in group sensory therapy for older adults with dementia.

Moyle et al (2013). Exploring the Effect of Companion Robots on Emotional Expression in Older Adults with Dementia: A Pilot Randomized Controlled Trial
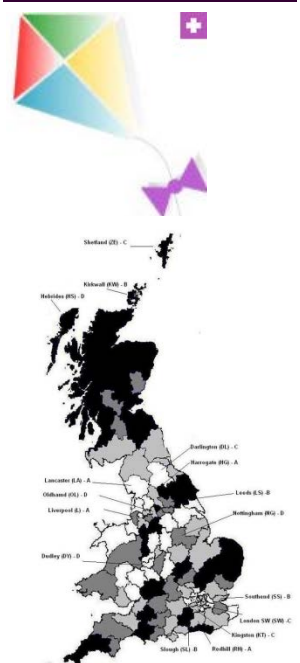
Heerink et al (2013) Exploring Requirements and Alternative Pet Robots for Robot Assisted Therapy with Older Adults with Dementia

Things we could do better
urban or rural

but benefits probably greater in
rural areas

Things we could do better: urban or rural Online support for behaviour change

- There are various online therapies, including CBT for anxiety, depression, weight loss, quit smoking, alcohol reduction sleep problems, etc

- There is evidence that they work, but work better with motivational support (best with human support).

- They have very variable uptake and there is scope for large increase in use with potential health benefits and reduction in GP workload.

Things we could do better: urban or rural Online support for behaviour change

We need to

- Raise awareness of what's available, what works (or at least does no harm), among clinicians and patients

- Find ways of offering person-person online support. Maybe..
  - Volunteers (peer-peer support)
  - Student placements
  - New paid online support roles

Things we could do better urban or rural Group patient education and peer support for Long Term Conditions
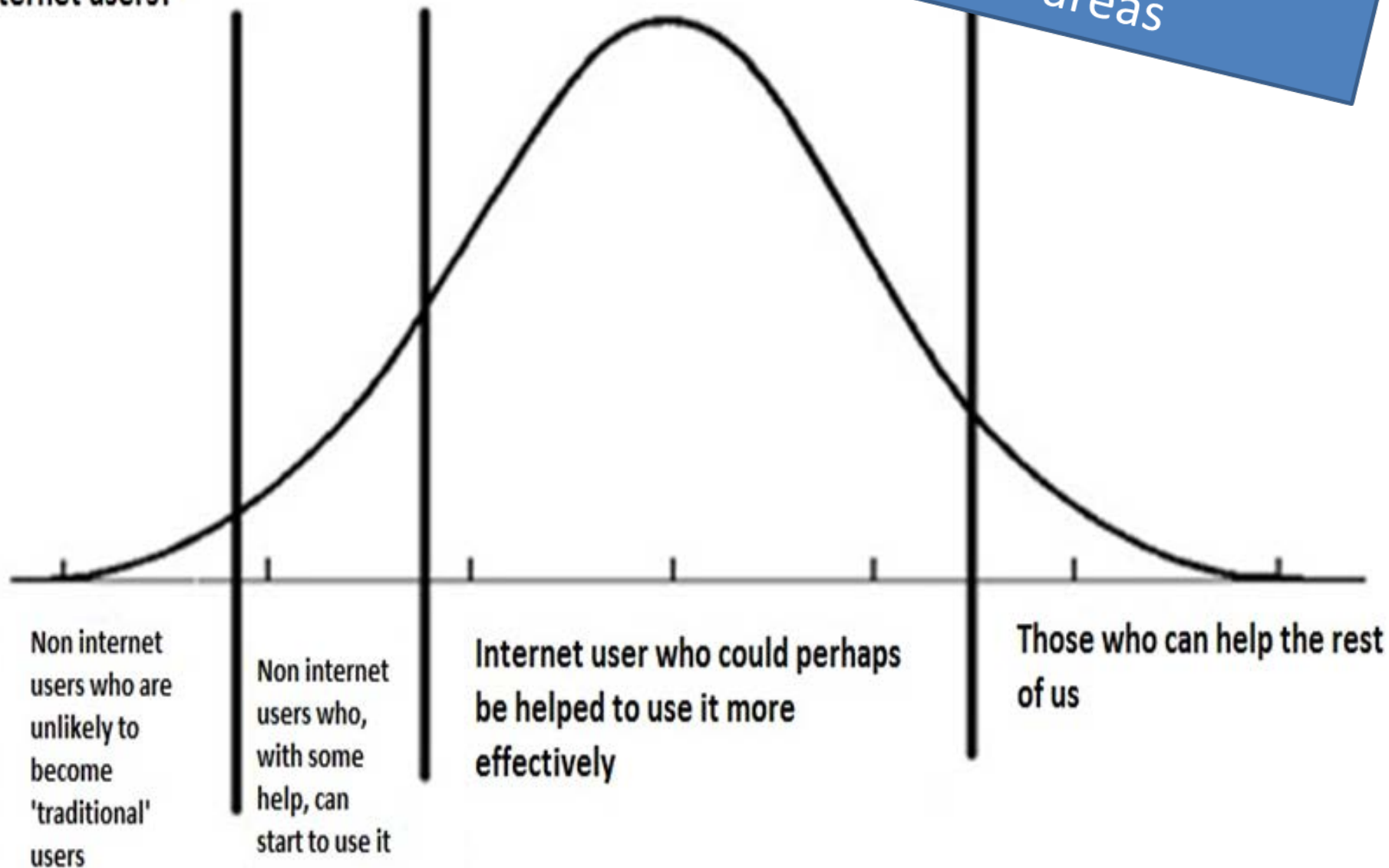
We need to

- Explore use of webinars for patient education (eg in diabetes)

- From webinars explore willingness and set up peer-support groups (online and in-person)

Can robots and telehealthcare help these non-Internet users?

E-health inequalities in rural areas

Non internet users who are unlikely to become 'traditional' users

Non internet users who, with some help, can start to use it

Internet user who could perhaps be helped to use it more effectively

Those who can help the rest of us

Addressing e-health inequalities (examples)

- Plymouth SeniorNet

- Skype on Wheels

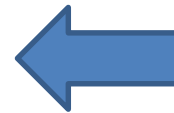**Some things to focus on in rural health and social care**

Supported online therapies
Telephone and video calls
Group education and peer support
Care home technologies

Need to engage and educate all stakeholders and be aware of evidence

Equity and inclusivity: variety of
Face to face and online
Known and anonymous
Synchronous & Asynchronous

Health Professionals

Health students

Patients

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Google me on: Plymouth University, Google Scholar, Researchgate