Telehealth and Telerehabilitation

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What is it?

• Definition

• What it has included – high end, bespoke equipment, expensive videoconferencing suites

• What it can include……..
Repatriation General Hospital

Make fitness a lifestyle with Flex. This stylish device is with you all the time. During the day, it tracks steps, distance, and calories burned; at night, it tracks your sleep quality. It wakes you up in the morning and checks out the lights to see how you stand up against your personal goal. It's the motivation you need to get out and be more active.

What can grandCARE do for you?

**Wellness**
Wireless health devices, interactive assessments, and medication management tools at your fingertips.

**Activity**
Wireless activity sensors monitor daily activities without impeding on a resident's independence or privacy.

**Socialization**
Residents can instantly access video chat, photos, letters, and calendar events from family and caregivers.

**Anytime... Anywhere**
Access the Care Portal from ANY Internet connected device.
- Customize system rules and alerts
- Check daily activities
- Add communications to the touchscreen
- Access health and wellness data
Drivers

• Ageing / health service pressures
• Equity of access
• Transforming health
• Cheap available mobile technologies
• Public Expectation

"Okay your father managed to get a mouse. Now how do we use it?"
Evidence

• Whole Systems Demonstrator trial

• Economic Evaluation of WSD

• CarePoint project
• CSIRO NBN project
• Limited RCTs for rehabilitation
Telehealth In the Home – Rehab Intervention

- 8 week rehab programme for:
  - 72 community patients, average age 73 (51-92)
  - 60% post stroke
- provided with “off the shelf” equipment
- Trialled NBN (25%)
- Switched to 3G
- Who was suitable?
“Well, I used to walk anyhow and I used to have a dog before I broke my hip, so I was used to walking every day, but I got into the habit with wearing the Fitbit and I wanted to see how much I’d done. So these days, I set myself a target of 2500 steps a day.”
Document camera

Straightforward, Intuitive Operation
Zigg-HD features the same versatility that makes the original Zigg such a hit with educators and businesspeople. This includes a multi-jointed stand so you can position the camera just where you need it, and a swivel head so you can get the right orientation. If you haven’t used Zigg, you’ll be amazed at just how easy it is to capture what you want.

- 360° of swiveling head for right orientation
- AUTO / MANUAL switch (AUTO / MANUAL)
- 8.5x or 16x (Focal Distance Value)
- Focus button
- 3.0 Megapixel lens
- Built in microphone
- Multi-jointed stand to position the camera
Interactive Whiteboard
Desktop Screen Recorder

Repatriation General Hospital
T-Rex – Exercise App

Thumb flexion - putty

- Repetitions: 0
- Sets: 0
- Frequency: daily

Exercise instructions:
Wrap fingers around the foam block. Push the tip of the thumb down into the top of the block.

Thumb extension - putty

Knee Bend 1

- Repetitions: 5
- Sets: 4
- Frequency: 2xweekly

Exercise instructions:
Stand up tall with feet comfortably apart. Hold on to support if necessary. Bend knee, bringing foot up towards bottom.

Heel Raise 2
Technology Familiarity – How often do you?

**Search for Information on the Internet**

- Never
- Rarely or more than once a year
- More than once a month
- More than once a week
- More than once a day

**Send and Receive Emails**

- Never
- Rarely or more than once a year
- More than once a month
- More than once a week
- More than once a day
Correlation between Technology Familiarity and number of V/C

- Technology Familiarity Score vs. Number of video-conferences

- Correlation coefficient: $r = 0.351$
- Significance level: $p = 0.012$
System Usability Scale

I think that I would like to use this system frequently

I felt very confident using the system

Other Results

• Acceptance through exposure

• 50% Reduction in travel

• Increase in therapy dose

• Access for country

Currently

- Integration into usual practice
- Staff training (MD team) and familiarity
- 398 patients admitted 2014/15
- 185 (46.5%) patients received TR
- 978 videoconferences
- 24 patients had TR only (country)
- Nursing interventions
- What happens after Dec 31?
Key Points about Tele-Rehab

- It is feasible
- It is not difficult
- It is not expensive
- It is not a panacea
- It is not about the technology
- Being old is not an excuse
- We need more research
Acknowledgements

> Tele-Health in the Home Project Team

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