

## Whole System Demonstrator Programme Executive Summary of Findings

### Background

In 2006, the Department of Health announced the establishment of three pilots, known as the 'Whole System Demonstrators', to test the benefits of integrated health and social care supported by assistive technologies like telecare and telehealth. It was the largest randomised control trial of its kind in the world, involving 6,191 patients and 238 GP practices across three sites, Newham, Kent and Cornwall.

Initial findings released in December 2011 gave positive results, with telehealth shown to substantially reduce mortality, reduce the need for admissions to hospital, lower the number of bed days spent in hospital and reduce the time spent in A&E. However, later papers were less favourable, particularly with regard to Quality-Adjusted Life Year (QALY) which measures quality of life and value for money.

An Executive Summary of Findings was published in November 2014 by Professor Stan Newman et al which summarises the findings of the programme and considers lessons learned. This document includes highlights of this summary report.

### Telecare (TC) – key points

#### WSD results

- Admission to hospital was 46.8% for TC participants compared to 49.2% of controls. However preventing hospital admissions is not a key outcome for TC, this is more often maintaining independence and reducing/delaying admission to residential care.
- The study found a very low proportion of control participants (3.2%) had been admitted to permanent residential and nursing care by twelve months, therefore benefits may only materialise over longer time periods than this trial
- Participants receiving falls detectors may have shown greater reductions in hospital admissions for falls than the entire sample. The study was not designed to address these questions
- Telecare as implemented in WSD did not lead to reductions in service use, at least in terms of results assessed over twelve months.
- Adjusted, costs of the intervention group were £1014 higher than those of the controls in the principle analyses.
- The regression results suggested that there was a very small QALY gain for the TC group (0.003). The cost of a QALY gained by the addition of TC to standard health and social care was £297,000.
- Of note is the lower levels of depressed mood in the TC group (mean=1.187) compared to the UC group (mean=1.326) which was close to significance

#### Perceptions

- TC was generally supported by all staff. They saw the devices as potentially enhancing the safety of the frail or vulnerable, promoting the maintenance of independent living and providing reassurance for family and informal carers.
- Carer outcomes over 12 months found no statistically significant effects on quality of life,
- Recipients of TC and especially their carers valued the sense of reassurance gained by presence of the various sensors and alarm systems.

#### Lessons learned and recommendations

- Many participants already had a lifeline and pendant prior to the trial, so were already benefitting from the reassurance this brings, effectively reducing the QoL impact
- The costs associated with TC varied considerably by site, reflecting the different project management, monitoring and response arrangements. This is important as it suggests that the organisational arrangements around TC requires review if TC is to become cost-effective
- It has become increasingly recognised that the introduction of remote care requires significant organisational change for it to be successful.



## Telehealth (TH) – key points

### WSD results

- Over the 12 month trial, patients allocated to receive the TH intervention had fewer emergency hospital admissions 0.54 per person v 0.68 for control patients).
- 4.6 per cent of TH patients died compared with 8.3 per cent of controls.
- These differences in emergency admissions and mortality were statistically significant, so were unlikely to have been caused by chance.
- Levels of self-care - there was no effect of TH on generalised self-efficacy, self-care self-efficacy or self-care behaviour over the 12-month trial period.
- Overall costs of hospital care (including emergency admissions, elective admissions and outpatient attendances) were £188 less per TH patient than those for controls. However, this cost difference was not statistically significant.
- The results of the net benefit analyses indicated that there was a small QALY gain for the intervention group (0.012), and that the extra cost of this gain was £92,000
- Total health and social care costs of the TH group were higher than those of the controls.

### Perceptions

- Overall, the professional perception of TH was positive. It was viewed as providing an effective, low risk form of patient care that would enhance patient health awareness, self-management and independence, as well as providing prompt and appropriate responses to patients with Long Term Conditions.
- Nurses were in general very supportive of TH as a systematic approach to patient care and felt they had the potential to enhance their work and careers.
- In contrast, GPs were found to have limited knowledge of TH in the WSD study. They expressed some scepticism about the usefulness of monitoring data and were concerned that it may affect their workload and cause patients unnecessary anxiety.
- The majority of patients who were recruited to the trial had a positive experience of TH as part of on-going service provision, especially when use was tailored to suit individual circumstances

### Lessons learned and recommendations

- TH should not be introduced to improve quality of life (QoL) but could be introduced to ensure no reduction in QoL.
- Following patients for longer than 12 months could result in improved QoL and health outcomes.
- In many TH interventions, TH was bolted onto existing services rather than being embedded into care. This variability of implementation needs to be considered in any evaluation. Future programmes should allow time to plan integration into services and gather support from stakeholders.
- Patient selection is key; in WSD only 10% of patients were at very high risk of hospitalisation. Over 50% were only moderate or low risk.
- No one removed the cost of alternative care services – in effect double counting the cost
- WSD was a Clinical Effectiveness study and was not optimised to study cost factors.
- QALY is used for drugs, not interventions like TH

"Telehealth and telecare have the potential to make a significant difference to people's lives and to healthcare delivery. In the current context of economic pressures and a desire to secure efficiency savings, there is significant interest in the potential for technology to reduce utilisation of health services in older people with long-term conditions and social care needs. Hopefully this large series of studies will shed greater light on the challenges and opportunities present in telemonitoring, enabling us to deliver more effective healthcare in the future." Stanton Newman, Professor of Health Psychology and Dean of the School of Health Sciences at City University London

The full Executive Summary can be found here:

[http://www.city.ac.uk/data/assets/pdf/file/0003/243066/WSD\\_Exec\\_Sum\\_28th\\_20Aug.PDF](http://www.city.ac.uk/data/assets/pdf/file/0003/243066/WSD_Exec_Sum_28th_20Aug.PDF)

