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Assistive Technology: Outcomes and Efficiency

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Assistive Technology: Outcomes and Efficiency

Introduction

Assistive Technology is one of the key areas the Government is investigating as it takes forward its thinking about the NHS and social care. We published a Special Report on this topic in June of last year. That introductory report looked at some of our general attitudes to the increasing use of technology in everyday life, and at the emotional reactions that can affect our willingness to accept it when it becomes a care necessity – rather than an active personal choice.

The report also provided a brief description of current and developing technology types – with an annex highlighting a selection of recent resources; and went on to discuss some of the key policies and on-going research affecting the use of assistive technology; and the wider challenges that confront its further positive development as a tool to improve care, support and independence.

This special report takes the issue into much more practice-focussed territory and discusses the evidence – and the challenges – emerging from a series of evaluations that have attempted to identify, and quantify, the results of real, local investment in telecare services.

Written by Mike Beazley and Kim Conner*, the report includes debate on the outcomes impact of telecare and its possible contribution to efficiency savings. The report concludes with practice recommendations, based on the programme of evaluations that Mike and Kim believe can help to improve the quality of life for people who use services and their carers, and which may also help them, and funding organisations, achieve better value for money.

Background

The term, Assistive Technology (AT), is used in this article to describe both telecare and telehealth services. An excellent plain English description of telecare and telehealth is produced by Counsel and Care in association with Tunstall Ltd, and can be found on CareKnowledge here.

Telecare is a major part of today's assistive technology and among the most promising developments in personalised care for the future. It can be effective in improving safety and making independent living more sustainable. As council charges for personal care at home continue to rise above inflation, it is also increasingly cost effective for people who use services and for their carers. For councils too, it has potential to achieve significant efficiencies. The careful choice of equipment and the right balance with other services are both critical in supporting better outcomes and in keeping costs reasonable.

This article looks at the results of a series of evaluations carried out over 2 years using a method designed to demonstrate the service outcomes and costs associated with telecare use.

It is not known accurately how many people currently use telecare and telehealth in England. The most recent estimate in 2010, suggested that about 1.7m people had one or more items of telecare equipment, (perhaps as many as 300,000 of these are simple personal alarms or smoke alarms linked to a call centre): with perhaps 5000 using telehealth equipment of different kinds. [1]

How do Telehealth and Telecare make a difference?

Telehealth

The main evidence on telehealth effectiveness in the UK is flowing from the Dept of Health's sponsored research in three "Whole System Demonstrator Sites" where randomised control trials have been taking place since 2008. The early headline findings published by the Department of Health are:

"…if used correctly telehealth can deliver a 15% reduction in A&E visits, a 20% reduction in emergency admissions, a 14% reduction in elective admissions, a 14% reduction in bed days and an 8% reduction in tariff costs. More strikingly, they also demonstrate a 45% reduction in mortality rates." [2]

The mortality improvements are the most remarkable, and bring long-awaited evidence to commissioners and clinicians. The Government says that three million people with Long Term Conditions (diabetes, congestive heart failure, chronic obstructive pulmonary disease) and/or social care needs could benefit from using telehealth and telecare. The headlines emphasise the potential to avoid hospitalisation wherever possible. .

Telecare

The evidence for telecare is less firmly established in formal research but the results of our own work since 2009 with teams in 50 council areas across England suggests that telecare is also effective, especially with older people, and in particular in:

- improving safety at home and supporting independent living
- delaying or avoiding admissions to care homes
- reducing the escalation of care needs at home (e.g. stepping up the level of home care support)
- reducing the number of emergency admissions to hospital
- reducing the number of days spent in hospital

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[1] Clark M & Goodwin N (2010) *Sustaining Innovation in Telehealth and Telecare*. *WSD Action Network*. London: King's Fund.

[2] Department of Health (2011) Whole System Demonstrator Programme: Headline findings. London

Why evaluate telecare?

Typically, little routine information about the performance, outcomes or costs of telecare or telehealth is available, locally, or nationally. In general, local commissioning teams are interested in questions such as:

- Are we getting telecare to the right people?
- How effective is it in sustaining independent living?
- Is it cost-effective when compared with alternative services?
- Is it worth investing in an expansion of the service?
- How can we monitor the performance of the service?

Across the 50+ council areas we visited in 2009-2011, none had any significant telecare performance measures in their normal performance reports in spite of significant financial investment. There are no national indicators in this field, and local arrangements still tend to mirror national reporting requirements, in spite of their different purposes.

Evaluating service outcomes and costs

The method we have used in our work with local authorities, takes a representative sample of service users who were using the telecare service on a specific past date – normally about one year previously – so that outcomes can be demonstrated. Detailed service histories are collated and costed. Case reviews build a picture of key events and services over the evaluation period. Crucially, the review determines what would have been the most likely alternative service outcome if telecare had not been available: and how much would that alternative have cost?

The evaluation report shows what is currently being achieved, but also indicates the potential for further changes to service outcomes. It can be used to help model the financial impact of telecare expansion over several years.

Evaluation Results

In this article we look briefly at the results of an evaluation carried out across a single English region in 2011, with a sample of 642 people living in 8 local authority areas.

How telecare helps to sustain independent living and who can benefit

The results showed that telecare was effective in all areas, but to varying degrees:

a) in prolonging independent living, by reducing the escalation of care service needs, most often when used as part of a wider support package. Numerically, the greatest beneficiaries were older people, particularly those who had dementia or who were frail and at risk from falls.

b) in reducing avoidable admissions to hospitals and supporting safe discharge home

c) in deferring or avoiding admissions to care homes

Table 1 shows how telecare helped to avoid the escalation of particular services. The key points of interest include the extent to which high cost services such as hospital admissions,

care homes and home care services were avoided. This suggests positive outcomes for people who use services and carers.

Table1: Service Escalation Deferred or Avoided

	Number	Percentage
Continuing Health Care	1	0.3
Day Care	7	2.4
Home Care	61	20.5
NHS provision	125	42.1
Nursing	10	3.4
Personal Assistant	2	0.7
Reablement	2	0.7
Residential	86	29.0
Respite	29	9.8
Sitting Service	2	0.7
Sleeping night	3	1.0
Supported Living	1	0.3

The most frequently occurring instances of service escalation deferred or avoided were hospital episodes – usually due to:

- the prevention of, or faster response to, falls amongst older people
- avoided or delayed admissions to residential care (especially for people with dementia), and reductions in home care provision
- the reduced use of reablement services, as a result of the reduction in hospital episodes

Who gets telecare and why

Table 2 shows the 'primary client categories' of people using telecare. A significant proportion of people – 38% of the sample – were allocated telecare for 'reassurance'. This may be desirable as an early step towards prevention, but is not necessarily an effective use of overall resources where those for people who have complex, intensive or unstable health are under severe pressure. Less than half of the people in the sample were allocated telecare in response to specific 'eligible' needs, such as dementia or severe disability.

Table 2: primary client group of telecare users

	Number	Percentage
All Telecare Users	642	
Reassurance	244	38.0

Prevention	101	15.7
Other Telecare Users	297	46.3
of which:		
Dementia	37	5.8
Frailty	89	13.9
Learning Disability	11	1.7
Mental Health	20	3.1
Physical Disability	131	20.4
Sensory Impairment	9	1.4

Efficiency savings

The evaluation showed variable efficiency savings. Where telecare was provided for 'prevention' or 'reassurance' purposes, telecare added extra cost, but where it was used to meet a more defined need, it was shown to produce efficiency savings, and these were substantial in some cases.

For the 642 people included in the evaluation, annual savings were achieved of between £449,512 and £499,458 for social care and from £137,224 to £152,471 for the NHS.

Table 4 shows the values of costs deferred or avoided (i.e. average per head, averaged across all councils) over a single year. The efficiencies are given in a range, to allow for the fact that the method is designed to produce results for management use, not for research purposes.

Note: The higher rate estimate results directly from the calculated comparisons of expenditure saved where telecare was used as a substitute service and 'avoided' other services. The lower estimate is offered as a conservative figure that can be used safely for financial planning, to reflect the degree of judgement involved in the calculations.

Table 3: Efficiency Savings Estimates

		Average Annual Saving			
	Sample size	Social Care		NHS	
		Lower estimate	Higher estimate	Lower estimate	Higher estimate
All Telecare Users	642	£700	£778	£214	£237
Reassurance	244	-£220	-£200	£0	£0
Prevention	101	-£132	-£120	£0	£0
Other Telecare Users	297	£1,689	£1,877	£463	£515
-Dementia	37	£2,337	£2,627	£467	£519
-Frailty	89	£628	£709	£532	£591
-Learning Disability	11	£20,860	£23,194	£491	£546
-Mental Health	20	£1,700	£1,941	£424	£472

-Physical Disability	131	£1,614	£1,794	£535	£594
-Sensory Impairment	9	£572	£708	£151	£237

Some key points to note are:

- The high social care efficiency savings were from costs avoided for people with learning disability and people with dementia, (but note the relatively small samples, suggesting the need to investigate in more detail)
- In many cases, telecare was very cost effective where it substituted for high cost care home placements, and where it reduced night staffing, safely, in group home settings or independent accommodation.
- The more frequently found savings from people with dementia: especially in deferring or avoiding care home admissions
- Significant efficiency gains for NHS services – typically not recognised by the NHS – mainly from avoided hospital admissions
- The costs associated with prevention and reassurance (but note that the long term preventative value of telecare use for these people cannot be easily assessed)

Conclusions

The results of this study, in one region, are similar to the wider experience across English council areas, and have helped to support a number of conclusions. We have shown these in the table below with practice recommendations that we believe can help to improve the quality of life for people who use services and carers, and also help them and funding organisations to achieve better value for money.

Conclusions	Recommendations for Commissioning Organisations	Advice for people who use services and carers
1. Where Telecare forms part of a carefully planned package of support, it is effective in helping to prolong independent living and increase safety.	Make sure care managers and reviewers properly understand telecare's potential and limitations, and can get expert advice Strengthen skills and knowledge through quality training at induction, ongoing and PQ levels Check that business processes and guidance, include telecare so that it is a consistent part of integrated	Take action early to get a skilled and independent assessment and insist that telecare and /or telehealth options are included. Even if you don't qualify for financial support, independent advice will be helpful in making your own arrangements Reminder:carers are often entitled to an assessment of their own needs – telecare

	support planning for independent living.	may be very helpful
2. Older people are the main telecare users to benefit, followed by younger adults with physical or learning disabilities. There are few users from mental health services yet, and this is a potential area for cost effective growth.	Allocate telecare use on a consciously targeted basis, according to local population needs and gaps in support: include particular consideration of people with dementia and learning disabilities	Whatever your particular need, make sure that Assistive Technology is considered as a serious option in meeting some or all of your needs. It may be less intrusive and costly than the alternatives, and there may well be benefits for carers
3. Telecare can be effective in getting people back on their feet after illness or accident, or a stay in hospital especially where it can be provided quickly, and by skilled advisors. For example, it may substitute effectively for one or more home care visits within a multi-visit daily care plan:	Check that reablement/ intermediate care teams are aware and knowledgeable and ensure that rapid installation is available – on the same day if possible.	If you want to get home from hospital quickly but are unsure about being on your own, ask if telecare options are available to get help quickly or stay in touch with carers if you need help.
4. Telecare can be good value for money for people who use services, and help councils achieve efficiency gains	Establish benchmarks to review costs and efficiency on a periodic basis.	If you are eligible for financial support and using a direct payment, check the costs of telecare and ask a care manager about the value of this compared to the alternatives
5. The commissioning of telecare is often untargeted and even supplier-led in some areas. Where Telecare has been used without clear purposes for “reassurance” (usually as an add-on), it cannot be demonstrated as an effective use of resources.	Re-visit commissioning strategies to ensure that telecare is included as a component and consciously targeted, and costed element	N/A
6. It is not easy to	Review prevention strategies	If you are worried about

demonstrate evidence that telecare is effective in prevention: but this does not mean it's use should be discontinued. More often, prevention needs to improve, and telecare has an important role to play in reducing isolation and containing costs.	to include marketing of telecare to self-funding individuals	getting help in an emergency, ask for an assessment or advice from the council on telecare options – they might help bring peace of mind
7. Telecare is not widely embedded in most council's mainstream care systems – there are separate rules and processes for access, eligibility, charging, assessment, and review. This is probably wasteful and counter-productive.	Check that business processes for assessment, support planning and review and associated guidance all include telecare	N/A
8. Telecare is effective in reducing avoidable use of health services, especially unplanned hospital admissions and (to a lesser extent) delayed discharges. However, only one PCT currently invests in this service.	"Rapid response telecare" – i.e. same day installation is helpful in reablement and to enable prompt discharge from hospital.	N/A

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West Yorkshire 2011

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Kim is a founding partner of CaPP, and has over 15 years of experience in performance management across health and social care. In her former career with the Department of Health, she worked on NHS performance management systems and reports. Joining the Social Services Inspectorate in 1998, she was a key designer and manager of the national information and evidence system, PADI, and also developed systems for the Inspectorate's Victoria Climbié Audit.

After joining CaPP, she worked with the DH CSED team to develop a methodology and toolkit for evaluating and planning efficiency improvements through Telecare. She has led on analytical methods and publications for CSCI / CQC, developed quality analysis tools for ADASS and worked on transformation strategies with local councils.

* Mike Beazley

Mike has more than forty years experience in social care, as a care worker, manager, educator, inspector and consultant in England and Scotland. With a management background in the County of Avon, he joined the Social Services Inspectorate, and managed the team that set up the social care performance assessment system in England from 2000. He transferred to the CSCI in 2004 and left to set up an independent consultancy, Care Performance Partners, in 2006.

Since then, his work has included projects with DH (CSED), with CQC, with ADASS, (regionally and nationally) and with numerous councils with social care responsibilities. The focus of most of this work has been on performance and quality, management, and improvement strategies.

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- Section 58 of Children Act 2004 Review (Consultation).
  Consultation from the Department for Education and Skills on a review of the law pertaining to physical punishment of children by their parents. [15-Jun-2007]
- Working across children's and adults services: creating seamless services in the post ECM world.
  Speech by Beverley Hughes to an LGA conference in which she highlight the need for good joint working between services for children and adults. She looks at disabled children's transitions, young carers, safeguarding children, and whole family approaches. [14-Jun-2007]
- CareKnowledge Commentary : 3rd Quinquennial Report to the UN Committee on the Rights of the Child - United Kingdom.
  This CareKnowledge Commentary provides an overview of the lengthy submission to the UN Committee on the Rights of the Child, which provides an exhaustive coverage of developments over the past five years. [01-Jun-2007]
- Care Careers: the Work and Family Lives of Workers Caring for Vulnerable Children.
  Summary of research carried by the Thomas Coram Research Unit on behalf of the Department for Education and Skills. [31-May-2007]

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