Investing to Save:

Assessing the Cost-Effectiveness of Telecare

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Executive Summary

This report describes the findings of a collaborative project evaluating the potential cost savings arising from the use of telecare. The research involved FACE assessors and researchers at the British Psychological Society's Centre for Outcomes, Research and Effectiveness at University College London and was supported by an educational grant from Tunstall.

What Was Done

- Evaluation was made of the suitability of telecare for 50 clients for whom FACE Overview Assessments had been completed.

- Where telecare appeared suitable, the social care costs of meeting the client's needs before and after provision of telecare were estimated using the FACE RAS.

- The broader potential savings to social care resulting from Telecare were estimated based on national data and data produced by the FACE RAS programme.

- The project team developed novel methods of estimating savings and evaluating the cost-effectiveness of telecare implementations.

Key Findings

- The results further confirmed previous studies showing that very substantial savings are achievable through the widespread targeted use of telecare.

- Potential savings lie in the range of £3m - £7.8m for a typical council, or 7.4%-19.4% of total older people's social care budget.

Recommendations

- Councils should actively promote the provision of telecare as a 'mainstream' activity rather than as an 'add-on'.

- Councils should make local estimates of savings realisable through telecare using methods similar to those developed in this study.

- Consideration of suitability of telecare should be a routine part of the social care assessment process.

- Councils should include standard methods of assessment and training in the applicability of telecare within their re-ablement and personalisation processes.

- Councils should consider the introduction of a routine outcomes monitoring system to ensure that savings are realised in the most cost-efficient manner.

1   Introduction

The use of telecare and assistive technology throughout health and social settings can provide many benefits to those needing support and protection. However, whilst many local authorities across the UK now do consider telecare for clients as a key component to adult social care provision, there is limited evidence of the potential cost saving achievable through routine deployment. The emphasis remains strongly on either homecare provision, or the use of direct payments to employ a friend/relative to provide support.

From a council's perspective two types of evidence are required to shift the balance towards routine telecare provision. First, there is a need for formal evidence that telecare can in fact produce substantial savings. Secondly, there is a need for an evaluation methodology which can be used routinely to allow councils to build the business case for adoption of telecare based upon local demonstration of cost-effectiveness. The present study included the development of such a methodology.

The project involved personnel from FACE Recording & Measurement Systems Ltd. and statistical input from researchers at the British Psychological Society's Centre for Outcomes, Research and Effectiveness at University College London.

FACE assessment tools are nationally-accredited by the Department of Health and used throughout the UK & Ireland by NHS, social care and independent sector organisations. Over 50% of councils in England use FACE assessments for community care assessment. FACE is also the leading supplier of resource allocation systems in England: the FACE RAS provides indicative budgets to over 20% of the population served by English councils and to date over £0.5bn has been allocated using FACE's computerised system. Councils have reported that use of the FACE RAS has enabled them to make significant cost savings.

2   Aims and Scope of the Study

The aims of this study were:

- To assess the suitability of telecare solutions for a random sample of social care clients.
- To estimate the potential cost saving to be made.
- To develop a methodology that will support routine evaluation and comparison of the cost-effectiveness of local telecare implementations.

Social care clients are categorised into four care groups by most social care organisations. These are Older People (OP), Physical Disability (PD), Learning Disability (LD) and Mental Health (MH). This initial study focused solely on the needs of the Older People care group living in their own home. Older people are one of the client groups that has typically been found to benefit most from telecare. However, other care groups and accommodation settings could be explored at a later date.

The focus of this study was on potential cost savings since in the current financial climate the pressing concern of most councils is how to make most cost-effective use of

their limited resources. However, the benefits of telecare to the client and their family are the improved quality of life experienced by both as a consequence of the availability of telecare. These are well-established: Scottish study referred to below found that clients felt safer and believed that their families worried less; whilst carers reported feeling less stressed and having more peace of mind.

2.1   Reviewing the evidence base

Whilst the timescales of the project did not permit thorough review of the literature, appraisal was made of two relevant studies undertaken in the UK: Evaluation of the Telecare Development Programme: Final Report, produced by the York Health Economics Consortium in January 2009[1]; and North Yorkshire County Council's report on their telecare implementation[2].

Both studies report substantial savings arising from deployment of telecare.

The York report describes the initial results of Scotland's telecare development programme and identified three main areas of savings: reduced use of care homes (30.7% of total savings made), reduced use of sleepover care (5% of total savings made) and reduced use of home check visits (16.1% of total savings made).

In the first year of the North Yorkshire telecare programme the council reported savings of over £1m that would otherwise have been spent on residential or domiciliary services. The net average efficiency per client in receipt of telecare was £3,600 per person; a 38% reduction in costs. As in the Scottish study, this was based upon an evaluation in which care managers identified what the traditional care package would have been without telecare for 131 of a cohort of 338 clients then receiving telecare. This was compared with the cost of actual telecare enhanced packages and the results from the sample of 131 used to estimate savings across the whole cohort.

One statistic not reported in either study was the proportion of clients for whom telecare was considered appropriate. This would be useful in enabling estimation of the potential total saving in the adult social care budget achievable through full-scale roll-out of telecare.

3   Method

A guiding principle behind the selection of methods was recognition that as the York study puts it: 'it is one thing to demonstrate that savings could in principle be achievable and quite another to demonstrate that savings are actually being achieved in any particular case.' The latter requires a methodology that can be used routinely at local level and this is what the project set out to achieve.

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[1] Available at http://www.tunstall.co.uk/assets/Literature/Reports/scottish_evaluation_report.pdf

[2] Available at http://www.northyorks.gov.uk/CHttpHandler.ashx?id=3453&p=0

3.1 Outline procedure

The study was undertaken in January and February 2012. The procedure was:

- To identify a sample of older people for whom a fully-completed FACE Overview Assessment was available

- To confirm correct scoring of needs

- To evaluate whether telecare offered a suitable approach to addressing any of the client's needs

- Where telecare appeared suitable, to estimate the social care costs of meeting the client's needs before and after provision of telecare

- To estimate potential savings resulting from the deployment of telecare

- To estimate total cost savings for social care were the cost savings identified in the sample to be replicated across the full population of older people served

The method used for each of the above steps and the rationale for each is described below.

Step 1: Sample selection

A sample of 50 FACE Overview assessments of older people was identified. The assessments came from eight councils involved in the FACE RAS programme and were supplied to FACE for quality assurance purposes in the course of development of the councils' resource allocation system. The assessments were fully anonymised and all met the following criteria:

- They were fully scored

- They included a thorough free text description of the client's needs and situation

- The free text description was broadly consistent with the scores allocated

The first 50 assessments that met the criteria above were selected. Additionally, attempts were made to ensure that there was a reasonable spread across overall levels of need. Residential cases were not included in the sample as in such cases needs would normally be met by support staff rather than telecare. Sheltered housing cases were also excluded because in many schemes items such as pendants and emergency cords are in place by default.

Step 2: Scoring of needs

The Overview Assessment includes a range of scored measures of need/dependency. These scores are assigned *relative to the environment in which the client is living*. So, for example, a client who cannot climb stairs unaided will be scored as needing the support of one person to climb stairs if they do not have a chairlift installed. However, they will be rated as being able to climb stairs independently if a stairlift is installed (and they can use it unaided). This approach to scoring means that changes in the environment – such as the deployment of telecare or other equipment – may result in corresponding changes in scores on the assessment.

Based upon their assessment, each client was also assigned an overall level of need using the FACE Quality of Life Scale. This six-point scale measures the overall impact on a person's quality of life and functioning of needs arising from disability. The scale has been shown to have high inter-rater reliability (weighted kappa=0.95) and to correlate highly with resources allocated by social care to meet needs identified (Pearson's correlation = 0.91). It is therefore highly suitable as a means of generating a single resource-relevant banding. For purposes of this study the six-point banding was collapsed into a three-point 'High', Moderate' and 'Low' banding, with scores 1-2=Low, 3-4=Moderate and 5-6=High need.

The original intention was to include clients falling within each of the three overall needs bands referred to. However, initial sampling found few cases that fell into bands 1 and 2 for whom telecare appeared suitable. Whether this is generally the case or merely an incidental feature of the data available is difficult to say. In any event, in light of this, it was decided to focus only on cases that fell in the 'medium' or 'high' bandings of overall level of need, as rated on the FACE Quality of Life scale.

 The final sample therefore comprised 34 cases falling into the 'Moderate' level of need category and 16 cases falling into the 'High' level of need category.

Step 3: Identification of suitability of telecare

FACE and Tunstall assessors/engineers spent two days reviewing the 50 assessments. Tunstall engineers suggested appropriate telecare solutions.

Where Telecare was recommended, FACE assessors[3] undertook a further independent review of the assessment's content and scoring. If scoring was incorrect or inconsistent with the free text information provided, the scores were amended by FACE. The purpose of this step was to ensure that telecare recommendations truly reflected the case described.

Finally, those data items in the assessment that might reasonably be expected to change were telecare to be provided (for example, the extent to which the client could be left alone safely for an extended period of time were re-scored by FACE Project Managers based upon the assumption that telecare had been suitably deployed.[4]

Step 4: Estimating weekly support costs before and after deployment of telecare

Based upon the initial quality assured assessment and the re-scored assessment, an indicative budget was calculated for each client 'before' and 'after' telecare deployment

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[3] FACE RAS assessors have received intensive training in assessment scoring methods and have reviewed several thousand scored cases for quality assurance purposes. Testing has shown them to be highly consistent in assignment of scores.

[4] This approach differs from the two studies reviewed in not relying on the subjective assessment of what the care package 'would have been' without telecare. Rather, it relies on identifying changes in need resulting from telecare; and the saving resulting from this change in need is calculated objectively using the FACE RAS.

by passing the scores on each assessment through the FACE National RAS Model for Older People.

The national model is an optimised RAS model based upon data on over 2000 cases supplied by over 20 councils. The model uses a standardised assessment of need and average standard unit costs. The multi-step algorithm used produces indicative budgets that have an average correlation of 0.94 with actual costs amongst all councils using the FACE RAS. The model therefore has a high level of generalisability. It is highly robust and known to generate very few outlier cases where costs are strongly at variance from those predicted.

The precise budget calculated by the RAS model depends upon the standard unit costs driving the calculation. In the model employed in this study the standard costs used were as follows:

- Home care day £13.58 per hour

- Residential care £421 per week

- Residential care (Dementia) £451 per week

- Home care night £13.77 per hour

Finally, the weekly cost of each telecare item or a combination of telecare items was calculated using telecare economic calculations provided by Tunstall based upon a sample of over 150 Local Authority clients. This was then added to the weekly indicative budget for each case to enable a more precise comparison between the original indicative budget (without telecare) and the revised costs including telecare. The Tunstall economic calculations permit selection of a set of telecare solutions. It then automatically factors in an average cost of weekly monitoring, response, replacement batteries, maintenance costs etc. to arrive at a weekly cost.[5]

Step 5: Estimation of savings arising from the deployment of telecare

Whilst the FACE RAS can reasonably be used to calculate direct savings in weekly budget before and after telecare deployment, reduction in weekly budget is not the only potential source of savings for a council. An equally important source of savings might derive from the extent to which the deployment of telecare results in a client being able to either:

- Continue living in their own home with the current level of informal support rather than such support having to be provided by the council or

- Continue living in their own home for longer rather than having to move to more expensive supported or residential provision

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[5] The Tunstall economic calculations spread capital costs over five years.

In order to estimate the effect of achieving these outcomes, use was made of scores describing both the levels of support provided by family and informal carers and the impact of providing such support on family and informal carers' quality of life. The latter scale is shown below:

Impact of caring upon carer's independence	
0= None	Carer able to live daily life as prefers with no or minimal restrictions on activity.
1= Mild	Usually has time to do things alone but caring role results in minor restrictions on activity (e.g. worried about leaving person for long period).
2 = Moderate	Carer often has time to do things alone but also experiences some significant restrictions in activity.
3 = Severe	Sometimes has time to do things alone but more often has to remain with person; has dropped many activities due to caring role.
4= V severe	Rarely or never has time to do things alone. Independence severely restricted by caring role.

It is reasonable to assume that deployment of telecare can reduce the impact on informal carers and thereby increase the length of time that they can continue providing their current level of support, thereby increasing the length of time that the client will be able to remain in their own home or reducing the quantity of formal support that has to be provided by the council, e.g. a property exit sensor and lifeline pendant would mean the carer feels able to leave the person alone for longer in the knowledge they would be made aware of any incident occurring.

The scale of saving will differ in the two eventualities. In determining which of these to apply, the following rule was used:

Saving in provision of residential care. If deployment of telecare resulted in a reduction of impact upon informal carer from 'Very severe' to 'Severe' then this was treated as a saving in residential care provision, since a 'Very severe' impact would not be sustainable and therefore it would not remain practical for the client to remain at home. In making the calculation of savings the minimum standard cost of residential care was used.

Saving in community-based social care support. If deployment of telecare resulted in a reduction of impact upon informal carer from 'Severe' to 'Moderate' then this was treated as a saving in community-based support provision. 'Severe impact' was therefore taken to mean that without deployment of telecare the current level of informal support could not be sustained without supplement or replacement by social care provision. In calculating savings it was assumed that without telecare, informal carers would have to reduce their input by 50% and the replacement costs of this support would have to be picked up by social care.[6]

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[6] Replacement costs could in principle result in a social care package that is more costly than residential provision. In such cases the saving was calculated with reference to the basic rate for residential provision.

Additionally, it was assumed that in the event of impact upon carer being 'moderate' then social care would typically put in place some additional support to the carer to reduce the impact to 'Mild'. This was assumed to be 25% of the reduction in social care costs attributable to the carer and is therefore a further saving that telecare may attract. (The FACE RAS calculates the reduction in current care package attributable to informal support so these figures were straightforward to arrive at.)

Step 6: Estimation of total savings achievable by the deployment of telecare

In order to calculate the possible total savings the study used both national data (pink rows) and data supplied to the FACE RAS programme by councils (green rows).

Basis for estimation of total savings achievable using telecare	
Number of people over 65 in UK	10m (15.4%)
Average number of older people in a council serving 250,000 people	38,500
Average social care expenditure per older person p.a. in catchment area	£105
Estimated older people's social care budget in council serving 250,000 people (i.e. £105 X 38,500)	£40.4m
Older people's social care budget spent on residential care	£14.4m (35%)
Older people's social care budget spent on 'low needs' (below 80th %ile in average weekly expenditure)	£0.25m (0.6%)
Older people's social care budget spent on 'moderate needs' (20th – 80th %ile in average weekly expenditure)	£15.1m (37.2%)
Older people's social care budget spent on 'high needs' (0-20th %ile in average weekly expenditure)	£25.1m (62.2%)
Budget available for cost savings related to telecare (moderate and high needs only minus current costs of residential care)	£25.8m (54%)

The estimated % of social care budget spent on residential care probably underestimates the current proportion of expenditure (Dept of Health target in 2009 was no more than 40% should be spent on residential and nursing home care). However, understating it for purposes of calculation has the effect of making a greater pool of the total budget available for potential savings. Since it is precisely this percentage which could be expected to drop as a result of telecare, this approach effectively allocates an extra proportion of this budget as a candidate for savings arising from telecare - a reflection of the true situation.

Based upon the above figures it is straightforward to take the average % saving per client in each of the 'Moderate' and 'High' bands of overall need as found in the study and use this as the basis for calculation of total saving available. This makes the additional assumption that the 'High' and 'Moderate' overall level of need bands as defined by the 'Impact upon quality of life' scale equate roughly to the 'High' and

'Moderate' bands as defined by %ile expenditure in the table above. The average cost per week of clients is £316 per week at the 20th %ile, and £155 per week at the 80th %ile. Thus 'High need' is equated to a budget of over £316 per week, 'Moderate need' to a budget ranging from £155-£316 per week and 'Low need' as being a budget below £155. These figures would seem reasonable as the basis for estimation.

4   Results

The main aggregates results are described in this section.

4.1   Sample characteristics

Of the 50 cases, 36 were female and 14 male. The majority of cases had more than one condition or disability. 16 fell into the 'high needs' category and 34 into the 'moderate' needs category, based upon the rating of overall impact upon quality of life.

The sample included an unusually high proportion of cases in which the cost of a community support package was far greater than that of the basic level of residential care that the client would receive (6, 12%). Although most councils do make such very high payments in some cases they would not do so in nearly 30% of their high needs cases. Over-inclusion of such cases would distort the likely impact of telecare (e.g. it could overstate the average savings likely if the client remained at home), so the decision was made to cap 5 of the 6 cases at the relevant residential rate and only include one such case at their actual budget level. All the following analyses were therefore made on this basis.

4.2   Overall impact of telecare

33 cases were identified as potentially benefitting from telecare, 66% of the sample.
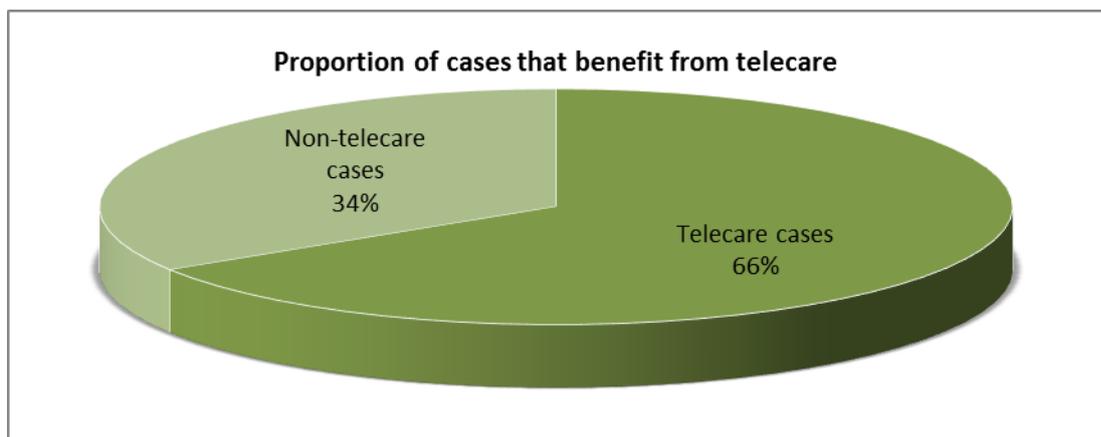
In the remaining 17 cases, there were two cases in which telecare was thought unsuitable and 15 cases where there were no clear benefits. In the cases where telecare was not considered suitable, needs were judged to be so high that a physical presence was needed rather than a telecare solution.

4.3 Costs of telecare

The weekly costs of telecare were calculated for each client based upon the telecare recommendations of Tunstall assessors, using the economic calculations provided by Tunstall. As can be seen the costs are modest relative to the average weekly budget of clients in the study and did not vary between high and medium needs cases.

Overall cost impact of telecare (n=50)	
Average weekly cost of telecare where recommended	£6.25
Average weekly cost of telecare where recommended (high needs cases)	£6.08
Average weekly cost of telecare where recommended (moderate needs cases)	£6.32
Average weekly care package cost for sample (pre-telecare)	£167

4.4 Overall impact upon costs in the sample

As described in 4.3, in order to calculate the impact on weekly costs the sample assessments were run through the FACE RAS calculator in relation to both 'before telecare' and 'after telecare' scenarios. In calculating 'after telecare' costs two different support scenarios were considered:

Short-term scenario. In this scenario it was assumed that cases for whom residential provision might ultimately be required would not move straight from home to a residential setting but that in the first instance a social care package that replaced 50% of the support being provided by informal carers would be put in place. This is a more realistic assumption than assuming that clients would go straight from having no social care support into residential provision.

Medium-term scenario. This calculation assumed that residential provision would ultimately be provided for those cases where impact upon informal carers was 'Very severe'.

The table below shows the proportion of clients for whom costs would either increase or decrease as a result of deployment of telecare.

Overall cost impact of telecare (n=50)				
	N=	%	Average change (short-term)	Average change £ (medium-term)
Cases which would result in cost saving to the council were telecare to be deployed.	18	36%	-£42.68	-£117.80
Cases which would result in increase in costs to the council were telecare to be deployed.	15	30%	+£4.70	+£5.64

The scale of cost reduction in the group where there were savings far outweighed the cost increase in the group for whom costs went up. On the short-term scenario *weekly savings* totalled £859 per week and on the medium-term scenario *weekly savings* totalled £2,148 per week. For those for whom costs went up, on the short-term scenario costs increased by only £85 per week and on the medium-term scenario costs increased by £217 per week.

One of the cases that would result in an increase in costs is the case referred to in 5.2 above for whom the community package was £600 per week pre-telecare. The effect of telecare was to enable the client to remain at home, rather than having to move to residential care at a cost of £456 per week, a substantial increase in costs compared to the non-telecare situation. The difference in costs in the short-term and medium-term scenarios amongst those for whom costs went up is entirely accounted for by this single unusual case.

4.5 Change in costs resulting from telecare in the whole sample

Previous studies tend to have focused on the average savings for those who receive telecare, rather than the average savings within a broader sample. The latter gives a better indication of savings achievable in overall budget and so analyses was first undertaken on the full sample, prior to focusing just on those who were thought likely to benefit from telecare (see 4.7 below).

The table below shows the average projected weekly cost of the full sample with and without telecare on both scenarios:

Average weekly support costs before and after telecare (n=50)			
	With telecare	**No telecare (Short term)**	**No telecare (medium-term)**
All cases	£166	£166	£181
All high needs cases, (n=16)	£294	£323	£333
All moderate needs cases, (n=34)	£109	£115	£144

It can be seen that under the short-term scenario the savings in relation to moderate needs cases is relatively modest. This is because in 13 of the 34 moderate needs cases there was a small increase in cost. In contrast, in the high needs cases only two incurred a slight increase in the short-term scenario.

The % savings for each telecare scenario are shown below.

Overall percentage savings (all cases)		
Group	**Short-term**	**Medium-term**
All Cases	8.5%	18.9%
All high needs cases (n=16)	10.8%	13.6%
All moderate cases (n=34)	5.6%	24.7%

The overall saving of 18.9% on the medium-term scenario represents a very substantial potential saving on the overall older people's social care budget. However, it is interesting to note the big difference in level of savings for moderate needs cases on the two different scenarios. In the short-term savings are more modest because of the number of cases experiencing an increase in costs; whilst medium-term savings are much more substantial as the savings relative to potential residential care feed through.

4.6 Characteristics of cases in which costs were reduced by telecare

A number of more detailed analyses were undertaken of those cases where telecare suggested a reduction in overall costs of support. As shown below, more male cases than female cases were judged to result in a cost saving were telecare to be deployed.

| Gender	N=	Telecare suitable	Costs reduced	% with cost saving
Female	36	22	11	31%
Male	14	11	8	57%

The key conditions/disabilities in the 19 cases resulting in a saving are shown below. Previous studies have shown that savings can be made in cases of dementia. In the present study it is interesting to note the prevalence of arthritis, diabetes and stroke, as well as dementia cases.

Condition / disability	Short- term saving	Medium- term saving
Arthritis	8	3
Asthma	1	0
Cardiac condition	2	1
Dementia (inc. Alzheimer's)	2	4
Diabetes	4	1
Hearing impairment	1	0
Neurological condition	1	0
Respiratory condition	2	0

Sensory impairment	2	0
Stroke	1	2
Other physical illness	2	2

4.7 Impact upon costs in those for whom telecare was considered suitable

The analyses shown above were repeated including only those cases for whom telecare was considered suitable. The chart below illustrates how the scale of savings increases sharply on the medium-term scenario.
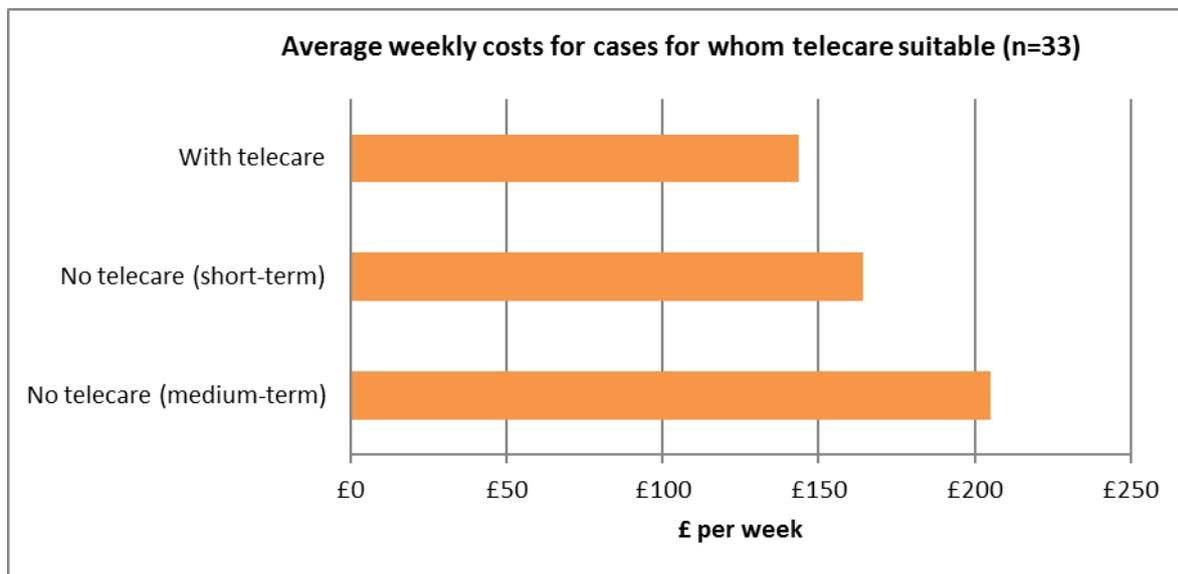
The table below shows that savings are high in both 'high needs' and 'medium needs' groups.

Average weekly costs for cases for whom telecare suitable (n=33)			
	With telecare	No telecare (short-term)	No telecare (medium-term)
All cases for whom telecare suitable	£143.6	£164.3	£205.3
All high needs cases for whom telecare suitable (n=10)	£232	£280.1	£316.2
All moderate needs cases for whom telecare suitable (n=23)	£100.1	£109.3	£150.6

The % savings for each telecare scenario are shown below. Whilst medium-term savings are especially noteworthy, there are also substantial short-term savings, especially for the 'high needs' group.

Percentage savings for cases for whom telecare suitable		
Group	Short-term	Medium-term
All cases	12.6%	30%
All high needs cases (n=10)	17.2%	26.6%
All moderate needs cases (n=23)	7.7%	33%

4.8   Estimate of total savings achievable

In order to estimate total savings achievable by a 'typical' council serving a population of 250,000 people the figures referred to in the Methods section, Step 5 were used.

Based upon these and the results above it is straightforward to estimate the maximum savings achievable based upon either the short-term or medium-term scenarios. For this purpose, it was assumed that all current residential provision relates to high needs cases. Assuming that older people currently in residential provision would not be moved away from such provision then the total 'high needs' budget available for savings is £25.1m - £14.4m= £10.7m. The total savings potentially achievable are therefore shown in the table below.

If the short-term and medium-term scenarios are regarded as minimum and maximum estimates of potential savings then potential savings lie in the range of £3m - £7.8m for a typical council, or 7.4%-19.4% of total current spend.

Maximum savings achievable for typical council based upon study sample		
Group	**Short-term**	**Medium-term**
High needs	£1.84m (£10.7 m@17.2%)	£2.85m (£10.7m @26.6%)
Moderate needs	£1.16m (£15.1 m@7.7%)	£4.98m (£15.1m @33%)
All	£3m	£7.83
% saving of total older people's social care budget[7]	7.4%	19.4%

4.9   The role of informal carers

Although not a focus of the study, the methods used involved calculation of the financial impact on clients' personal budget of the involvement of informal carers. The table below

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[7] This figure disregards client contributions which would have a varying impact depending upon council's charging policies.

shows the average reduction in personal budget attributable to the presence of informal carers.

Average reduction in personal budget resulting from informal carer involvement		
Group	£ reduction	% reduction
All	£95.8	36.4%
High needs	£32.6	25.8%
Moderate needs	£63.16	46.2%
All for whom telecare recommended	£104.3	41.7%
High needs for whom telecare recommended	£111.9	31.7%
Moderate needs for whom telecare recommended	£96.8	49.1%

The presence of informal carers reduces the average personal budget by between 25% and 49% depending upon the sub-group, with an average reduction across the whole sample of 36.4%. The average reduction in cases with medium needs was noticeably higher than in those with high needs. This will be partly a natural function of the nature of the needs, e.g. if a client needs the support of two to undertake many activities then a single carer is obviously limited in the proportion of support they can provide compared to someone who needs the support of a single person.

5   Discussion of results

There are three key questions arising from this study which will be discussed in this section. First, whether the methodology employed provides the basis for development of an outcomes monitoring system that could be used routinely by councils to ensure effective targeting of telecare. Secondly, whether the study provides a realistic estimate of the level of savings achievable by councils; and thirdly, how can councils best proceed practically in order to realise those savings? Additionally, it is worth considering the interaction between telecare and the role of informal support.

Before moving on to these questions, it is important to review the methodology employed.

5.1   Strengths and limitations of the study

The approach used here included a number of methodological innovations.

First, the study included standard assessments and measures of need such as might actually be available to care managers in determining the need for telecare. The study used the FACE Overview Assessment, a very detailed assessment, in order to make available to it the richness of descriptive data necessary to make accurate determinations. The quality assurance of the assessments by highly-trained FACE

assessors and the re-scoring based upon Tunstall staff's telecare recommendations introduced a level of rigour into the scoring that is not always present in everyday practice. In practice in most cases it was very clear which score would change and what the score would change to, depending upon which telecare solutions were recommended.

The same level of accuracy would be easier to achieve routinely using the FACE Needs Profile, a much briefer tool, which includes all the data items necessary to support the FACE RAS and which also supports determinations of suitability for telecare. The tool would benefit in this regard from enhancement of the guidance associated with the assessment tool to include telecare-specific guidance. This and other implementation issues are discussed in 6.4 below.

Secondly, the project included a method of estimating total savings. The method of estimation involved matching of macro financial data on distribution of costs of care packages supplied by a group of councils with the individual client-based measures of need incorporated in the assessment tool and global rating of impact upon quality of life. Whilst there are some difficulties with this approach – for example some clients with high levels of absolute need will receive small care packages because of the level of informal support they receive – any method of estimating global savings is likely to require some assumptions and in general terms those made here seem reasonable and conservative.

Thirdly, the study did not rely on the subjective assessment by practitioners of what the care package 'would have been' without telecare. Rather it relied on projected changes in *need* resulting from the availability of telecare. The saving resulting from this change in need was then calculated objectively using the cost model incorporated in the FACE RAS. This approach avoids the risk of enthusiastic practitioners over-stating what the traditional package 'would have been'. Methodologically, it represents a significant advance in a number of ways. It is needs-based rather than service-based and so is more in line with personalisation. Most importantly, it would be easy to translate into routine practice: an initial assessment could be conducted at the commencement of re-ablement; this would be followed by deployment of telecare where appropriate; and the assessment would then be updated in order to establish the required personal budget post-re-ablement. The updating of the assessment would need to be undertaken in any case for purposes of resource allocation.

More broadly, the method as a whole was designed to be reproducible at local level, rather than being designed purely for research purposes. This opens up the possibility of councils being able to establish the cost-effectiveness of their use of telecare as a routine by-product of everyday practice. This would represent a great advance in efficiency and would also enable direct comparison and benchmarking of effectiveness across councils. For example, it would be possible to identify whether different councils were achieving different levels of savings with clients with similar patterns of need.

The study's limitations derive primarily from its relatively small scale. However, whilst it is possible that sampling error resulted in either over- or under-estimation of savings achievable, the classification of cases into bands of need using a rigorous banding system should largely counteract this.

The decision was made to treat cases where there was insufficient data to justify telecare deployment as cases where it was not needed. This conservative approach helps ensure that estimates of possible savings are not over-optimistic.

Clients with low levels of need were not included in this study for the reason that it proved difficult to identify clients with low levels of need who would benefit from telecare. Whilst this may be considered a limitation, the York study reported that 'Some telecare initiatives are likely to generate low financial savings across many users with relatively low level needs, whilst others have the potential to generate significant financial savings for a small number of beneficiaries.' The fact that we were unable to find clients with low levels of need who would benefit from telecare to include in the study provides informal confirmation of the York consortium's finding and emphasises the importance of effectively targeting telecare provision. However, whilst the financial impact is unclear, there may still be preventive benefits in potential risks being managed by telecare in such cases. In any event, since councils typically spend a very small proportion of their overall budget on older people with low needs the total saving achievable with this group will be modest.

Finally, the study was based upon a prospective snapshot of needs and projected savings underpinned by a set of assumptions about the benefits arising from telecare. Whilst the assumptions are reasonable and concordant with the approach of previous studies, projecting savings is not the same as observing them. However, the methods used would also support a longitudinal approach, as discussed below.

5.2 Savings achievable

A typical council spends about:

- 20% of its social care budget on the most expensive 5% clients

- 50% of its social care budget on the most expensive 20% clients

- 80% of its social care budget on the most expensive 50% clients

Thus if financial efficiencies are to be made it is at the higher levels of need that these will have to occur: a 5% saving in the 50% least expensive clients will only result in a net saving of 1% compared to a saving of 4% for the most expensive.

Nationally, about 55% of social care expenditure is on older people. Thus older people with high needs are one of the major groups of clients where there is high potential for *total* savings. The other client groups for whom substantial savings may also be realisable are learning disability clients in supported living situations.

The study shows that very substantial savings are achievable through the widespread targeted use of telecare. Obviously, the actual savings made in any one year will depend upon practicalities such as speed of rollout, the time of year telecare is actually deployed in any specific case etc. The calculation of savings also slightly overestimates immediate savings in that whilst it may be reasonable to assume that a carer impact of 'Very severe' is not sustainable in the medium-term it may well be sustainable for a while more, so the actual short-term saving would be lower.

It is also likely that once telecare is available it will be deployed in a certain proportion of cases where informal support would be sustained (albeit with difficulty) were telecare not to be available, so there is a marginal additional cost to councils arising from the mere fact of telecare's availability (in such cases there would still be quality of life benefits however).

5.3   Realising savings

The study demonstrates that substantial savings are achievable through the use of telecare, in addition to the obvious quality of life benefits to clients and carers. However, as the York consortium point out 'even where financial savings can be identified, it may not always be possible…to realise these savings' (p.100). What then are the factors that will best enable councils to realise the savings available?

First, staff training is critical. Frontline staff need to be made more aware of the specific benefits of different telecare solutions. This includes guidance on both which telecare solutions are appropriate to particular needs; and on the needs profiles of the types of clients who will typically benefit most from telecare.

Secondly, there needs to be a standard approach to assessment which triggers identification of needs for telecare and to monitor the impact of deployment at the individual level. Consideration of the suitability of telecare should be a routine part of the assessment process, both by care managers and during re-ablement. This requires both investment in staff training and modification of assessment tools to ensure that the relevant questions, triggers and guidance are included.

Thirdly, there is a need for an outcomes monitoring system that can be used routinely to check that savings are being made and to identify areas where performance is poorer than expected. The ability to compare outcomes locally is useful but would be greatly enhanced by the ability to make comparisons with the performance of other councils on a national basis. The reality is that at present both the availability of telecare and the outcomes of telecare implementations are somewhat of a postcode lottery. The introduction of a standard approach to outcomes measurement would introduce greater equity as well as drive improvements in performance.

In sum, the provision of telecare needs to be perceived as a mainstream activity, not an add-on. Telecare is about giving clients greater control of their lives and enabling them to make the choices they wish to make. It is therefore highly concordant with the aims of both re-ablement and personalisation. Consideration of the potential benefits of telecare therefore needs to become an integral part of re-ablement and personalisation practice, and not perceived as a separate initiative.

5.4   The role of informal carers

The presence of informal carers has a substantial impact on personal budgets. However, caution should be exercised in using the present study to project total reductions in expenditure across the older adult social care attributable to the presence of informal carers. First, there is no reason to believe that the study sample can be construed as in any way representative of 'typical' levels of informal support – there was nothing in the sampling procedure which would enable estimation of whether this is the case or not.

Secondly, the fact that a client's budget would be much higher were the informal carer not to provide support does not mean that it is appropriate to interpret the relevant sum as a 'saving' to the council resulting from informal input. This is because a significant proportion of the reduction in cost derives from the nature of ordinary human relationships. For example, by virtue of living with a partner a carer is in a position to check their basic safety with a high level of regularity e.g. at night, and probably at least a couple of times a day. This derives from the simple fact of being physically present and being someone's partner. So the fact that were the partner not there the council would have to fund e.g. night-time support, does not mean that it would be appropriate to construe the carer as 'saving' the council that sum of money.

Leaving such complexities aside, it is evident that carers make a substantial contribution. Telecare has the effect of enhancing the sustainability of carers' input and therefore is a 'win-win' intervention: both reducing costs and improving quality of life.

5.5 Further research

The study suggests a number of lines for further research. First, it would be beneficial to repeat the study with a larger sample of cases, ideally a representative sample of real cases whose outcomes can be tracked over time. This would enable greater precision in estimation of savings and projection of outcomes, both overall and with specific groups of clients. Such research should also take into account the greater variation in living options now being made available, such as Extracare and other forms of sheltered or supported living. The choice between 'home' and 'residential' is now less stark as a more attractive range of supported housing schemes becomes available and the local availability of these will impact the level of savings realisable. Additionally, telecare may substantially reduce the cost of implementing such schemes themselves and councils need to be able to factor this into their planning.

Secondly, it would be desirable to repeat the study with groups of clients representing other care groups served by social care. Moreover, as health and social care become more integrated the focus should be broadened to include people with long-term conditions and mental health problems, regardless of whether they are in receipt of or in contact with social care.

Finally, there is a need for further development of financial and population projection methods. This study did not take account of broader factors such as demographic trends, social deprivation and mortality rates. More accurate projection is likely to be achievable were such factors to be taken into account at local level.

6 Conclusions

The main conclusions of the study are:

- The study confirms previous studies suggesting that widespread deployment of telecare can achieve significant financial savings in the provision of social care to older people.

- The scale of savings achievable in the event of full-scale implementation is likely to be in the range of 7-20% of total budget.

- The %age savings achievable are limited by the legacy of residential provision. As this legacy reduces % savings achievable will rise.

- Consideration of suitability of telecare should be a routine part of the assessment process.

- The use of standard assessments and the methods developed provide the basis for a routine system of outcomes monitoring for councils wishing to maximise savings through telecare.

- The methods developed in this study provide the basis for councils to undertake local estimates of financial savings realisable through the introduction of telecare.

- The study confirms the substantial role of informal carers in providing support to older people in receipt of social care.

- Further research is needed on samples of clients belonging to other care groups.

7   Recommendations

- Councils should actively promote the provision of telecare as a 'mainstream' activity rather than as an 'add-on'.

- Councils should make local estimates of savings realisable through telecare using the methods developed in this study.

- Councils should include standard methods of assessment and training in the applicability of telecare within their re-ablement and personalisation processes.

- Councils should consider the introduction of a routine outcomes monitoring system to ensure that savings are realised in the most cost-efficient manner.

8   Working in partnership

The project was supported by an educational grant from Tunstall. Tunstall is the world's leading supplier of telehealthcare solutions, operating in more than 30 countries and supporting 2.5 million people around the world. Tunstall has developed telecare solutions for a range of accommodation settings, e.g. people living in their own home or grouped housing schemes.