

Exploring the Cost Implications of Telecare Service Provision



February 2010

Executive Summary

Evaluation of telecare in Scotland has found that it can deliver considerable gross financial benefits to service providers. However, little is known regarding what it costs 'in the round' to provide care packages that include a telecare component. This report presents the results of financial modelling work undertaken to fill this information gap.

In two areas (Falkirk and Forth Valley and West Dunbartonshire) the care partnerships were asked to identify a number of typical telecare service users, and to specify the key elements of the overall care service packages being provided to them. They were also asked to specify appropriate alternative care arrangements not involving telecare. Finally, the partnerships were asked to provide unit cost information for the elements of the various care packages specified.

Both care partnerships identified 6 'typical' service users receiving telecare services. These typical service users proved to be very different across the two partnership areas.

Financial modelling based on the information provided by the care partnerships shows that:

- The total annual cost of 'typical' care packages specified for the case study areas varies from £4,000 to £109,000
- In most instances the bulk of the financial responsibility for these packages falls on social care budgets rather than health care budgets
- In very few instances is it more expensive, either in total, specifically for the NHS, or specifically for a local authority, to provide a telecare inclusive care package. In most situations it is considerably less expensive to do so
- For the most part, the big savings from the telecare inclusive packages are enjoyed by social care rather than health care service providers

On this last point however, it is important to stress that the reported results are based on comparison of packages of planned health and social care. The comparisons do not include unplanned or emergency service costs. However, effective planned care packages involving telecare have been shown to reduce the probability of unplanned admission to a hospital, and to reduce the length of stay for those who are admitted, reinforcing the conclusion that a telecare inclusive care package is a highly cost effective solution for social and healthcare providers in most if not all cases.

The care partnerships found assembling the unit cost information required for financial modelling a very challenging task. The results of the progress that has been made in this regard should help to inform the Integrated Resources Framework initiative, which, in its turn, will help to give all care partnerships in Scotland a broader cost information base on which to build in due course.

1 Introduction

The national Telecare Development Programme (TDP) for Scotland was launched in August 2006. Approximately £16 million has been made available under the programme to March 2010.

Gross financial benefits accruing from TDP expenditure to end March 2008 were estimated by the York Health Economics Consortium (YHEC) and concluded to exceed TDP funding costs (YHEC, 2009a, 2009b). This finding was subsequently confirmed using information to end March 2009 (Newhaven Research, 2009).

However, TDP capital funding also generates revenue costs (for example arising from providing a response service to telecare service users) and there are other costs to consider where further services are provided without which telecare equipment would be ineffective.

This report investigates these broader financial implications, using an approach similar to that used by Lansley et al (2004).

Specifically, the costs of providing a number of care packages 'in the round' have been calculated, where these packages include telecare as a core component. These costs have then been compared with those associated with a suitable alternative care package that does not involve telecare.

2 Study method

Financial analysis of care service provision is challenging, not least because the nature of services required is unique to each individual needing care. In any given local area, the range of care packages being provided to individuals can therefore be extensive. Moreover, there is nearly always more than one way to meet a given care need.

To make the task tractable, two case study areas were chosen for investigation. These were the Falkirk and Forth Valley, and the West Dunbartonshire local care partnerships. In each area, a local group of health and care service and finance managers was established.

It was agreed with both groups that attention would centre on calculating the financial costs of care packages being provided to meet the needs of a small number of telecare service users that could be considered as 'typical' within each area.

No preset number of typical service users was specified, but in the end both areas settled on providing profiles for six typical service users.

The groups were asked to identify the major components of the overall care packages being received by each of their typical service users, as well as to establish what would be considered acceptable locally as a realistic alternative package of care. The alternative package had to exclude telecare.

Discussions were then held with the two groups to determine suitable unit cost data for each component of each typical/alternative care package.

The partnership groups were encouraged to generate financial information internally wherever possible, but both were also provided with a copy of the most recent data on unit costs of health and social care published by the Personal Social Services Research Unit (PSSRU) at the University of Kent (Curtis, 2008), either to use for cross checking purposes, or to draw upon as an alternative data source if it was felt to be suitable and necessary.

Using the information provided by the partnerships, a spreadsheet model was built for each that calculates an annual cost for the care packages for each typical service user. The model also records whether the cost of providing component elements of each package falls to a social or a health care provider.

These calculations were discussed with the case study area groups and subsequently amended on the basis of feedback received.

3 Results

Falkirk and Forth Valley

Defining Typical Service Users in the Falkirk and Forth Valley Area

The Falkirk and Forth Valley care partnership supports around 6,000 service users. The requirements of the majority of these are fully met by means of a basic community alarm service. The partnership identified 'typical' telecare service users from those that have equipment installed in excess of this.

The local group identified three 'typical' service users amongst people who have internal alert systems, who receive passive alarm support for coping with dementia, who have epilepsy, who are at risk of falling, or who experience a combination of these problems. Collectively such service users account for around 5% of the total (or about 300 people).

The other three service users identified by the Falkirk and Forth Valley group are representative of a numerically small group of people with profound and complex care needs that have been targeted locally by the health end of the partnership with a care package that encompasses a telecare component.

Cost data

The key components of the care packages being provided to these typical service users and of suitable alternative packages were then identified and costed locally¹.

The following table summarises unit cost data for Falkirk and Forth Valley.

¹ In a very small number of instances, equipment prices were sourced directly from commercial sources and confirmed with the local partnership groups.

Service Element	Measurement Unit	Cost per unit
Home care visits (weekday) (personal care)	Hour	£16.00
Home care visits (weekday) (shopping/housework/laundry/help with mail etc)	Hour	£16.00
Home care visits (evening)	Hour	£19.00
Home care visits (weekend)	Hour	£28.00
Home care visits (carer support)	Hour	£16.00
Home care visits (augmented – catheter care)	Hour	£28.00
District nurse/CPN visits	Hour	£68.00
GP support	Week	£7.20
Rapid Response Health Team assessment and review (Community Nurse)	Hour	£68.00
Physiotherapy assessment	Hour	£44.00
Physiotherapy visits	Hour	£44.00
Rehabilitation support worker visits	Hour	£68.00
Occupational Therapy assessment and review	Hour	£44.00
Occupational Therapy visits (equipment and installation)	Hour	£44.00
Needs assessment + updates (social worker)	Review	£690.00
Carer assessment + updates (social worker)	Review	£690.00
Health falls team assessment (Community Nurse)	Hour	£68.00
Incontinence assessment and review (Community Nurse)	Hour	£68.00
Incontinence supplies	Week	£30.00
Day care	Day	£105.00
Specialist day care for Learning Disabilities	Hour	£14.00
Specialist care for Learning Disabilities sleepovers	Night	£37.70
Funded educational course	Day	£75.00
Telecare Equipment:		
Smoke detector	1	£55.00
Gas Detector	1	£98.00
Door open alert	1	£40.00
Internal alert system	1	£846.00
Environmental Control Equipment 1	1	£8,572.00
Environmental Control Equipment 2	1	£2,776.00
Cognitive Support device (PDA + bespoke software)	1	£869.00
Telecare equipment maintenance installation and removal	Annual	£700.00
Non Telecare Equipment*:		
Kitchen trolley	1	£100.00
Bath seat	1	£75.00
Grab rails (internal)	1	£12.00
Grab rails (external)	1	£12.00
Raised toilet frame	1	£93.50
Profiling bed	1	£500.00
Recliner chair	1	£990.00
Keysafe	1	£25.00
Electric wheelchair	1	£2,500.00
Equipment installation, removal and maintenance	Per Item	£38.03
Community alarm service (includes telecare responder service)	Year (all costs)	£195.00

Care home (standard)	Week	£446.00
Care home (dementia care)	Week	£598.00
Care home (high dependency)	Week	£1,388.00
Housing adaptations		
Front door replacement	1	£620.00
External light fitting	1	£116.13
Extender plugs	1	£14.00
Ramp replacement	1	£373.75
Sliding door installation	1	£214.00
Environmental Control System related adaptations	1	£338.00
Toilet access adaptation	1	£425.00
Hall widening	1	£640.00
Internal door removal	1	£120.00
Ceiling hoist installation	1	£2,070.00
Commode cradle installation	1	£48.00
Padded footplate installation	1	£96.00
Recliner shower chair installation	1	£1,319.00

Analysis

Service User A

Service user A is a 25 year old male who suffered a brain injury in 2007. He lives with his father, who works full time, and his older disabled brother.

A is physically independent, but has major problems with memory, concentration, sequencing and planning. He also has some behavioural problems.

A has a cognitive support PDA and software that helps him to plan his day and other events, sequence tasks and find his way.

A receives 12 hours of social care per week. Before he started using the PDA, he was receiving 40 hours per week.

A also attends specialist courses provided by a not-for-profit organisation twice a week for people with brain injury, to help with his behavioural issues.

The following table summarises the total annual costs of the care package being provided for service user A in Falkirk and Forth Valley².

In this and all subsequent tables, costs met directly by the local authority are shaded yellow, and those met by the NHS are shaded blue. Jointly met costs are shaded green. Total costs are shaded red.

Care Package Costs Service User A	Annual Value
Weekday (day) home care visits - housework etc	£9,984.00

² The spreadsheet models that this and subsequent tables are available on request

Cognitive support device ³	£173.80
Annual needs assessment review	£690.00
Annual carers assessment review	£690.00
Behavioural training course ⁴	£7,200.00
Total cost to Local Authority	£18,737.80
GP support	£374.40
Rehabilitation support	£272.00
Total cost to NHS	£646.40
Total Annual Cost of Specified Service Package	£19,384.20

The overall cost of the current care package specified for service user A is roughly £19,400, of which roughly £650 falls to the NHS to meet. The remainder, approximately £18,700, falls to the local authority care budget.

Alternative Care Package Costs Service User A	Annual Value
Weekday (day) home care visits - housework etc	£33,280.00
Annual needs assessment review	£690.00
Annual carers assessment review	£690.00
Total cost to Local Authority	£34,660.00
GP support	£374.40
Rehabilitation support	£272.00
Total cost to NHS	£646.40
Total Annual Cost of Alternative Service Package	£35,306.40

The alternate care package specified for this service user is nearly £16,000 more expensive. Comparing the alternative arrangements shows that the availability of a cognitive support PDA is facilitating a significant reduction in home care support as well as attendance at a specialist course. The alternative involves no PDA or course attendance, but a significant enhancement of home care visits.

Comparing the distribution of costs between local authority social care and NHS budgets, it can be seen that the reduction benefits the local authority only, with NHS costs unchanged.

Service User B

Service user B is a 31 year old male who experienced a spinal injury in 2008.

B lives in level access disabled housing with his partner, who works full time. He is immobile and uses an electric wheelchair; he has no function in his left hand and limited use of his right hand.

B has environmental controls that allow him to operate:

- All home entertainment and switch on his computer.

³ It was assumed that the cognitive support PDA used by this service user has a 5 year life span. The annual cost was therefore estimated as 20% of capital cost. Similar adjustments were made for the price of other capital expenditure items.

⁴ The course was assumed to run for 48 weeks.

- Lights and lamps
- A door intercom/door release
- A profiling bed
- A door opener giving him independent access in and out of his house, which is also linked to a community alarm unit

B has carer support 4 times a day (2 each time) to assist with washing and dressing, food preparation, toileting and transfers. A District Nurse attends twice a week to help with his bowel regime and to monitor his catheter.

The following table summarises the total annual costs of the care package being provided for service user B in Falkirk and Forth Valley

Care Package Costs Service User B	Annual Value
Weekday (day) home care visits - personal care	£8,320.00
Weekday(evening) home care visits	£9,880.00
Weekend home care visits	£5,824.00
Annual needs assessment review	£1,380.00
Annual carers assessment review	£1,380.00
Community alarm service	£195.00
Environmental control system ⁵	£1,714.40
Telecare equipment maintenance, installation and removal	£700.00
Profiling bed ⁶	£50.00
Recliner chair ⁷	£99.00
Total cost to Local Authority	£29,542.40
District nurse visits	£8,840.00
GP support	£374.40
Physiotherapy assessment	£88.00
Rehabilitation support	£272.00
Electric wheelchair ⁸	£500.00
Total cost to NHS	£10,074.40
Total Annual Cost of Specified Service Package	£39,616.80

The total annual cost of care provision for B is just under £40,000, with around £30,000 met by the local authority and £10,000 by the NHS. If service user B was not being supported in the community, the alternative care package would be centred on admission to a high dependency care home, the cost of which would be met on a 50/50 basis by the local authority and the NHS. Such a residency would increase the overall cost of the care package being provided to almost £75,000. In this instance, and on the basis of care home residency cost sharing, both the local authority and the NHS would face significant increases in service provision costs. The local authority total cost would increase to almost £37,500, and the NHS total cost to over £37,000.

Alternative Care Package Costs Service User B	Annual Value
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⁵ The environmental control system was assumed to have a 5 year lifespan.

⁶ The profiling bed was assumed to have a 10 year lifespan.

⁷ The recliner chair was assumed to have a 10 year lifespan.

⁸ The electric wheelchair was assumed to have a 5 year lifespan.

High dependency care home placement	£72,176.00
Annual needs assessment review	£1,380.00
Total cost to Local Authority	£37,468.00
GP support	£374.40
Physiotherapy assessment	£88.00
Rehabilitation support	£272.00
Electric wheelchair	£500.00
Total cost to NHS	£37,322.40
Total Annual Cost of Alternative Service Package	£74,790.40

Service User C

Service User C is a 59 year old male, who has multiple sclerosis. He lives alone in a property adapted with a ramp, level access shower, and tracking hoist.

C is immobile and uses an electric wheelchair. He has environmental controls which allow him to operate;

- All home entertainment
- Lights and lamps
- Curtains
- Hands free telephone
- Door intercom/door release
- A door opener, which is also linked to a community alarm unit

C has carer support 4 times a day (2 each time) to aid with washing, dressing, toileting, transferring, food preparation and housework. He has a catheter and a District Nurse attends at least once every 6 weeks to change this. He also has incontinence pads on his bed.

The table below summarises the total annual costs of the care package being provided for service user B in Falkirk and Forth Valley

The cost of providing the specified care package annually is approximately £42,400, with some £31,000 of the costs falling to the local authority, and £11,400 to the NHS.

Again, if service user C was not being supported in the community, the alternative care package would be centred on admission to a high dependency care home, the cost of which would be met on a 50/50 basis by the local authority and the NHS. This would raise overall care provision costs to over £72,000 and both health and social care partners would be paying significantly more. The local authority share of the annual cost would be around £37,500, and the NHS share around £38,700.

Care Package Costs Service User C	Annual Value
Weekday (day) home care visits - personal care	£8,320.00

Weekday (day) home care visits - housework etc	£3,328.00
Weekday(evening) home care visits	£9,880.00
Weekend home care visits	£5,824.00
Annual needs assessment review	£1,380.00
Community alarm service (including telecare)	£195.00
Environmental control system ⁹	£555.20
Telecare equipment maintenance, installation and removal	£700.00
Smoke detector ¹⁰	£5.50
Gas detector ¹¹	£9.80
Profiling bed ¹²	£50.00
Recliner chair ¹³	£99.00
Front door replacement ¹⁴	£62.00
External light fitting	£11.61
Extender plugs	£1.40
Ramp replacement	£37.38
Sliding door installation	£21.40
Environmental Control System related adaptations	£33.80
Toilet access adaptation	£42.50
Hall widening	£64.00
Internal door removal	£12.00
Ceiling hoist installation	£207.00
Commode cradle installation	£4.80
Padded footplate installation	£9.60
Recliner shower chair installation	£131.90
Total cost to Local Authority	£30,985.89
District nurse visits	£8,840.00
GP support	£374.40
Incontinence assessment and review	£136.00
Incontinence supplies	£1,560.00
Electric wheelchair	£500.00
Total cost to NHS	£11,410.40
Total Annual Cost of Specified Service Package	£42,396.29

Alternative Care Package Costs Service User C	Annual Value
High dependency care home placement	£72,176.00
Annual needs assessment review	£1,380.00
Total cost to Local Authority	£37,468.00
GP support	£374.40
Incontinence assessment and review	£136.00

⁹ The environmental control system was assumed to have a 5 year lifespan.

¹⁰ The smoke detector was assumed to have a 10 year lifespan.

¹¹ The gas detector was assumed to have a 10 year lifespan.

¹² The profiling bed was assumed to have a 10 year lifespan.

¹³ The recliner chair was assumed to have a 10 year lifespan.

¹⁴ All housing adaptations were assumed to have a 10 year lifespan

Incontinence supplies	£1,560.00
Electric wheelchair	£500.00
Total cost to NHS	£38,658.40
Total Annual Cost of Alternative Service Package	£76,126.40

Service User D

Service user D is an 18 year old female who lives in a Key Housing scheme for people with learning disabilities. She has complex care needs as a result of a combination of autism, epilepsy, Pica and Prader Willi Syndrome.

D presents with challenging behaviour and requires 1:1 support in the daytime. She attends a day care centre three days a week with her carer as she also has balance, continence and weight management issues.

An internal alert system has been fitted to permit a sleeping overnight service to be put in place for D, as opposed to a waking overnight shift by a carer, which was originally proposed.

This service user has the most extensive care needs of all the profiles generated for this study. As specified, the following table shows that the principal care package costs over £109,000 per annum to provide.

The key difference between the principal package and the alternative costed in the subsequent table is that the preferred arrangement includes an internal alert system, which permits a sleeping overnight service to be put in place. This removes the need for a waking overnight shift to be provided, reducing the cost to the local authority by nearly £16,000 annually.

Care Package Costs Service User D	Annual Value
Specialist care for learning disabilities	£76,440.00
Specialist care for learning disabilities (sleepovers)	£13,722.80
Day care	£16,380.00
Annual needs assessment review	£1,380.00
Internal alert system ¹⁵	£846.00
Total cost to Local Authority	£108,768.8
GP support	£374.40
Total cost to NHS	£374.40
Total Annual Cost of Specified Service Package	£109,143.20

Alternative Care Package Costs Service User D	Annual Value
Specialist care for learning disabilities	£122,304.00
Annual needs assessment review	£1,380.00
Total cost to Local Authority	£123,684.00
GP support (weekly cost)	£374.40

¹⁵ The internal alert system is assumed to have a 10 year life span.

Total cost to NHS	£374.40
Total Annual Cost of Alternative Service Package	£124,058.40

Service User E

Service user E is an 89 year old male who lives with his elderly wife. He has a deep vein thrombosis and osteoarthritis, and has had several falls in the past.

E has recently been diagnosed with dementia and has exited his home at night on occasions in an inappropriate state of dress. His wife is also unsteady on her feet, has diabetes and has a brain shunt in place.

Smoke and gas alarms have been installed and his wife calls for assistance using her pendant if E should fall or wander. Mobile wardens respond to all calls from installed equipment. A minimal home care input and a range of occupational therapy equipment has been provided.

Care Package Costs Service User E¹⁶	Annual Value
Weekday (day) home care visits - personal care	£832.00
Weekend home care visits	£1,456.00
Annual needs assessment review	£1,380.00
Annual carers assessment review	£1,380.00
Bath seat	£15.00
Grab rails (internal)	£2.40
Grab rails (external)	£2.40
Raised toilet frame	£18.70
Community alarm service (including telecare)	£195.00
Telecare equipment maintenance installation and removal	£700.00
Smoke detector	£5.50
Gas Detector	£9.80
Total cost to Local Authority	£5,996.80
Occupational therapy visits	£88.00
GP support	£374.40
Health falls team assessment (Community Nurse)	£68.00
Total cost to NHS	£530.40
Total Annual Cost of Specified Service Package	£6,527.20

The table above summarises the total annual costs of the care package being provided for service user E in Falkirk and Forth Valley

The principal care package for service user E costs in the region of £6,500 in total, with around £500 of this met by the NHS. The local care group advised that an appropriate alternative would involve admission to a care home specialising in dementia care, which would raise the cost of the care package being provided to almost £33,000. This would involve a very significant increase in costs for the local authority to meet, although the NHS cost would fall a little, as falls assessment would no longer be required.

¹⁶ All telecare equipment is assumed to have a 10 year lifespan. All other equipment is assumed to have a 5 year lifespan.

Alternative Care Package Costs Service User E	Annual Value
Care home (dementia care)	£31,096.00
Annual needs assessment review	£1,380.00
Total cost to Local Authority	£32,476.00
GP support	£374.40
Total cost to NHS	£374.40
Total Annual Cost of Alternative Service Package	£32,850.40

Service User F

Service user F is a 91 year old female who has dementia, and other long standing health problems including asthma and angina. She has a predisposition towards falls.

F lives with a partner, having returned home from a nursing home placement in which she did not settle. She has smoke, gas and wandering alerts fitted in her home and mobile wardens respond to all calls.

She is in receipt of home care services several times daily for meals, bathing and medication reminders. A bath lift has been installed to make bathing easier.

A Community Psychiatric Nurse also visits regularly.

The table below summarises the total annual costs of the care package being provided for service user F in Falkirk and Forth Valley.

The principal care package involves support within the community at an overall cost of around £11,000. Around £8,700 of this is met by the local authority, with the remaining £2,200 met by the NHS.

As with typical service user E, the appropriate alternative care package for typical service user F would involve admission to a care home specialising in dementia care, and once again on the basis of local costs for such care, overall costs would rise to nearly £33,000. Nearly all of this would be met by the local authority. In this instance, the NHS share of costs would actually fall, to something a little under £400 on an annual basis.

Care Package Costs Service User F ¹⁷	Annual Value
Weekday (day) home care visits - personal care	£2,080.00
Weekday(evening) home care visits	£1,482.00
Weekend home care visits	£1,456.00
Annual needs assessment review	£1,380.00
Annual carers assessment review	£1,380.00
Kitchen trolley	£10.00
Keysafe	£2.50
Community alarm service (including telecare)	£195.00

¹⁷ All equipment assumed to have a 10 year lifespan.

Telecare equipment maintenance installation and removal	£700.00
Smoke detector	£5.50
Gas Detector	£9.80
Door open alert	£4.00
Total cost to Local Authority	£8,704.80
District nurse visits	£1,768.00
Occupational therapy assessment and review	£44.00
Occupational therapy visits	£44.00
GP support	£374.40
Total cost to NHS	£2,230.40
Total Annual Cost of Specified Service Package	£10,935.20

Alternative Care Package Costs Service User F	Annual Value
Care home (dementia care)	£31,096.00
Annual needs assessment review	£1,380.00
Total cost to Local Authority	£32,476.00
GP support	£374.40
Total cost to NHS	£374.40
Total Annual Cost of Alternative Service Package	£32,850.40

West Dunbartonshire

Defining Typical Service Users in the West Dunbartonshire Area

The West Dunbartonshire partnership provides home care services for around 1,900 home care clients, though not all of them receive telecare support.

West Dunbartonshire typical telecare service user profiles are very different from those define by the Falkirk and Forth Valley local care group. Typical telecare service users in West Dunbartonshire are older people that are dealing with a less extensive range of conditions than is the case in the Falkirk and Forth Valley area. One consequence of this is that for all the typical service user profiles identified the West Dunbartonshire local group advised that a care home admission would provide the basis for a suitable alternative care package.

Cost data

Service Element	Measurement Unit	Cost per unit
Home care visits (daytime)	Hour	£14.70
Home care visits (evening)	Hour	£16.17
Home care visits (weekend)	Hour	£14.70
Home care visits (augmented)	Hour	£16.51
Home care visits (augmented evening)	Hour	£18.16
Bathing assistant (Home Carer)	Hour	£16.51
District nurse	Hour	£76.69
GP support	Visit	£60.93

Rapid Response Health Team assessment and review (Community Nurse)	Hour	£76.69
Physiotherapist	Hour	£49.38
Health worker (rehabilitation support)	Hour	£24.16
Health worker (rapid response service)	Hour	£24.16
Occupational Therapist	Hour	£44.13
Needs assessment + updates (social worker)	Hour	£145.00
Carer assessment + updates (social worker)	Hour	£145.00
Health falls team assessment (Community Nurse)	Hour	£76.69
Incontinence assessment and review (Community Nurse)	Hour	£76.69
Sheltered housing warden (dayshift)	Hour	£16.51
Sheltered housing warden (backshift)	Hour	£18.16
Sheltered housing warden (nightshift)	Hour	£22.01
Sheltered housing warden per tenant per week	Week	£116.00
Care worker (carer short break cover)	Hour	£15.54
Incontinence supplies*	Week	£30.00
Day care	Day	£51.80
Respite care	Hour	£3.84
Meal delivery	Meal	£3.11
Lunch club	Meal	£3.01
Community alarm equipment (box, pendant and peripherals)	Package	£140.00
Community alarm/telecare equipment maintenance	Year	£28.86
Sensory Equipment (includes installation and removal)	Package	£168.38
Other Equipment (includes installation and removal)	Package	£259.21
Telecare Equipment	Package	£338.83
Mobile attendant (response) - dayshift	Hour	£16.51
Mobile attendant (response) - backshift	Hour	£18.16
Mobile attendant (response) - nightshift	Hour	£22.01
Community alarm/telecare service**	Year	£222.04
Carer short break cover	Hour	£15.54

* Estimated by using the figure supplied by Forth and Falkirk CHP

**Includes equipment installation and removal

Again, the key components of the care packages being provided to typical service users in West Dunbartonshire, and of suitable alternative packages for these users, were identified and costed locally.

The table above summarises the unit cost data for West Dunbartonshire.

Analysis

Service User A

Service User A is an older lady, who lives alone. Her care package involves:

- Day Care (2 days per week)
- Weekday Home Carer visits (3 visits per day, Monday to Friday, to undertake personal care such as washing, dressing, medication prompting, meal

preparation, laundry, shopping and housework. These visits equate to approximately 30 minutes each morning, 30 minutes each lunchtime, and 45 minutes at teatime. In addition, Home Carer visits provide help with housework and laundry (2 hours a week) and shopping (1.5 hours per week). In total, this adds up to 12.25 hours of Home Carer support on weekdays.

- Weekend Home Carer visits (1 visit each morning for personal care and breakfast provides a total of 1 hour support at weekends)
- A meal delivery service for Saturday and Sunday
- A community alarm system with a full Council run responder service
- A telecare service comprising smoke and temperature extremes sensors; the telecare service is fully supported by the Council responder service
- A needs assessment review every 12 months, although reviews may take place more often due to changes in circumstances
- Incontinence needs assessment
- Monthly incontinence pad delivery

The table below summarises the total annual costs of the care package being provided for service user A in West Dunbartonshire.

The overall annual cost of the community based care package is somewhere in the region of £13,500. About £11,800 of this is met by the local authority, with the other £1,700 met by the NHS.

If service user A were instead to be provided with a care home based alternative the total cost would increase to almost £25,000. All of the increase would have to be met by the local authority. The alternative care arrangements would not affect NHS contributions in the case of service user A.

Care Package Costs Service User A ¹⁸	Annual Value
Home care visits (daytime - personal care)	£6,688.50
Home care visits (daytime - shopping etc)	£2,675.40
Weekend home care visits	£764.40
Needs assessment/review	£725.00
Meal delivery service	£646.88
Community alarm package	£14.00
Telecare package	£33.88
Community alarm/telecare maintenance	£28.86
Community alarm/telecare responder service	£222.04
Total cost to Local Authority	£11,798.96
Incontinence assessment/review	£153.38
Incontinence supplies	£1,560.00

¹⁸ Community alarm and telecare equipment assumed to have a 10 year lifespan.

Total cost to NHS	£1,713.38
Total Annual Cost of Specified Service Package	£13,512.34

Alternative Care Package Costs Service User A	Annual Value
Care home	£23,192.00
Total cost to Local Authority	£23,192.00
Incontinence assessment/review	£153.38
Incontinence supplies	£1,560.00
Total cost to NHS	£1,713.38
Total Annual Cost of Alternative Service Package	£24,905.38

Service User B

Service user B is an older lady living alone, who was referred by her GP to the local Rapid Response Team to avoid hospital admission. The following care package is in place to sustain B at home:

- Day Care (1 day per week)
 - Weekday Home Carer visits (3 visits per day, Monday to Friday, to undertake personal care such as washing, dressing, medication prompting, meal preparation, laundry, shopping and housework. These visits equate to approximately 30 minutes each morning, 30 minutes each lunchtime, and 45 minutes at teatime. In addition, Home Carer visits provide help with housework and laundry (2 hours a week) and shopping (1.5 hours per week). In total, this adds up to 12.25 hours of Home Carer support on weekdays.
 - Weekend Home Carer visits (1 visit each morning for personal care and breakfast provides a total of 1 hour support at weekends)
 - A meal delivery service for Saturday and Sunday
 - A community alarm system with a full Council run responder service
 - A telecare service comprising smoke and temperature extremes sensors, a fall detector and a bed sensor; the telecare service is fully supported by the Council responder service
 - An initial assessment by the rapid response health team and a review visit at end of intervention
 - A visit weekly from a Physiotherapist for 8 weeks
 - A visit weekly from a Rehabilitation Support Worker for 8 weeks
 - An assessment visit from an occupational therapist, and a subsequent review visit, to check the appropriateness and use of the following equipment:

- Kitchen trolley
 - Bath seat
 - Internal grabrails
 - Perching stool
 - Raised toilet frame
- A needs assessment review every 12 months (could be more often if needed)

Care Package Costs Service User B ¹⁹	Annual Value
Home care visits (daytime - personal care)	£6,688.50
Home care visits (daytime - shopping etc)	£2,675.40
Weekend home care visits	£764.40
Needs assessment/review	£725.00
Occupational Therapy assessment and visits	£88.26
Other equipment package	£51.84
Meal delivery service	£646.88
Community alarm package	£14.00
Telecare package	£33.88
Community alarm/telecare maintenance	£28.86
Community alarm/telecare responder service	£222.04
Total cost to Local Authority	£11,939.07
Rapid Response Service assessment/review	£306.76
Physiotherapist assessment and visits	£395.04
Rehabilitation support worker visits	£193.28
Total cost to NHS	£895.08
Total Annual Cost of Specified Service Package	£12,834.15

The table above shows the annual total cost of this service package is around £13,000, with almost £12,000 met by the local authority and the remaining £900 by the NHS.

The alternative arrangements specified would cost a total of around £23,800. In this instance, NHS costs would actually fall to around £600, as the rapid response service would no longer be required; on the other hand, local authority costs would increase by over £10,000 annually

Alternative Care Package Costs Service User B	Annual Value
Care home	£23,192.00
Total cost to Local Authority	£23,192.00
Incontinence assessment/review	£395.04
Rehabilitation support worker visits	£193.28
Total cost to NHS	£588.32
Total Annual Cost of Alternative Service Package	£23,780.32

Service User C

¹⁹ Telecare and community alarm equipment assumed to have a 10 year lifespan; other equipment assumed to have a 5 year lifespan.

Service user C is an older man with dementia and diabetes. His wife is his main carer, but she also has some physical frailties. The following care package is in place.

- Day Care for C at a Dementia Unit (4 days per week)
- Respite care (8 weeks per year rolling respite)
- Carer short breaks for Mrs C (4 hours per week)
- Home Care Monday to Friday (1 hour each morning to assist with personal care)
- Home Care Saturday and Sunday (1 hour each morning to assist with personal care)
- Home Care for Mrs C to assist with shopping (2 hours per week)
- A twice weekly bathing service (1 hour per visit)
- A night time service to assist C to undress and prepare for bed
- A community alarm system with full responder backup
- Telecare sensors (smoke, heat and bed monitors, plus a door open alert with full responder backup)
- Incontinence assessment and review
- Incontinence pad delivery
- A daily visit from a District Nurse to administer eye drops
- A needs assessment review for C every 12 months (can be more often depending on changes in circumstances)
- A carer's assessment review for Mrs C every 12 months (can be more often depending on changes in circumstances)

The table below summarises the total annual costs of the care package being provided for service user C in West Dunbartonshire.

Typical service user C has a more extensive set of care needs than B or A. In this case, the total care package costs just over £51,000 to provide, with the local authority meeting £35,400 of this, and the NHS £15,700.

The alternative, care home based package is in this instance considerably less expensive than the preferred package, at just under £25,000. If the care home solution was adopted, the cost to the local authority would be around £23,200, and

the cost to the NHS would be £1,700. Both main care providers would therefore face annual bills of well over £10,000 less than they currently do.

Care Package Costs Service User C ²⁰	Annual Value
Home care visits (daytime - personal care)	£3,822.00
Home care visits (daytime - shopping etc)	£1,528.80
Home care visits (evening)	£5,885.88
Home care visits (weekend)	£1,528.80
Bathing assistant	£1,717.04
Needs assessment/review	£725.00
Carer needs assessment/review	£725.00
Respite care	£5,160.96
Carer short breaks	£3,232.32
Day care	£10,774.40
Community alarm package	£14.00
Telecare package	£33.88
Community alarm/telecare maintenance	£28.86
Community alarm/telecare responder service	£222.04
Total cost to Local Authority	£35,398.98
District nurse	£13,957.58
Incontinence assessment/review	£153.38
Incontinence supplies	£1,560.00
Total cost to NHS	£15,670.96
Total Annual Cost of Specified Service Package	£51,069.94

Alternative Care Package Costs Service User C	Annual Value
Care home	£23,192.00
Total cost to Local Authority	£23,192.00
Incontinence assessment/review	£153.38
Incontinence supplies	£1,560.00
Total cost to NHS	£1,713.38
Total Annual Cost of Alternative Service Package	£24,905.38

Service User D

Service user D lives alone within a sheltered housing complex. D is registered blind and has diabetes. The following care package is in place:

- Day Care (1 day per week)
- Sheltered Housing Warden support (24 hours per day)
- Lunch club (3 days per week)

²⁰ Community alarm and telecare equipment assumed to have a 10 year lifespan

- Home Care (twice daily Monday to Friday to prepare meals, and also to assist with dealing with mail and paying bills etc. In total, this adds up to 6 hours of Home Carer support on weekdays)
- A meal delivery service (twice daily (Lunch and teatime) Saturday and Sunday)
- A needs assessment review every 12 months (can be more often if required)
- Sensory impairment aids (a talking clock, and an under pillow vibrating smoke alarm)
- A daily visit from a District Nurse to inject insulin and administer eye drops
- A telecare service (smoke and temperature sensors and a fall sensor) with full responder service backup

The table below summarises the total annual costs of the care package being provided for service user D in West Dunbartonshire.

The annual total annual cost of just under £35,000 is split such that the local authority share is approximately £21,000. The NHS pays the remaining £14,000.

The alternative care home based package has no cost implications for the NHS in this instance. However, the local authority cost would increase by around £2,200, as would the overall annual cost of care (to around £37,000 in total).

Care Package Costs Service User D ²¹	Annual Value
Home care visits (daytime - personal care)	£3,822.00
Home care visits (daytime - shopping etc)	£764.40
Needs assessment/review	£725.00
Meal delivery service	£646.88
Lunch club	£469.56
Day care	£2,693.60
Sheltered housing warden support	£5,516.85
Sheltered housing	£6,032.00
Community alarm package	£14.00
Sensory equipment package	£16.84
Telecare package	£33.88
Community alarm/telecare maintenance	£28.86
Community alarm/telecare responder service	£222.04
Total cost to Local Authority	£20,985.91
District nurse	£13,957.58
Total cost to NHS	£13,957.58
Total Annual Cost of Specified Service Package	£34,943.49

²¹ All equipment assumed to have a 10 year lifespan.

Alternative Care Package Costs Service User D	Annual Value
Care home	£23,192.00
Total cost to Local Authority	£23,192.00
District nurse	£13,957.58
Total cost to NHS	£13,957.58
Total Annual Cost of Alternative Service Package	£37,149.58

Service User E

Service user E is an older man with physical illness and physical frailty who lives alone. He is also catheterised. The following care package is in place:

- Day Care (2 days per week)
- Home Care (home carer visits Monday to Friday, to assist with personal care, washing and dressing, meal preparation, and laundry, shopping and housework. In total, this adds up to 10.5 hours of weekday Home Carer support).
- Home Care Saturday and Sunday (to assist with personal care, washing and dressing, breakfast preparation and lunch. This adds up to a total of 1.5 hours support at weekends)
- Augmented Home Care Visits (twice daily to assist with catheter care morning and evening; total time 2hrs 20 minutes per week)
- Home Care Evening Service (assistance with personal care, and getting ready for bed; total time 1hr 45 minutes per week)
- District Nurse visits every 8 weeks to change the catheter
- Non routine visits by a District Nurse as required to assist with catheter blockages etc
- A meal delivery service (Saturday and Sunday teatime)
- A community alarm system with a full responder service
- A telecare package (smoke and heat sensors and an enuresis sensor to detect any catheter leaks) with a full responder service
- A needs assessment review every 12 months (or as required)
- An assessment visit from an occupational therapist, and a subsequent review visit, to check the appropriateness and use of the following equipment:
 - Bath seat

- Internal and external grabrails
- Raised toilet frame
- Bathing Service (twice weekly, 2 hours in total)

The table below summarises the total annual costs of the care package being provided for service user E in West Dunbartonshire.

Of the total cost of roughly £22,000, the local authority meets just over £19,200. The NHS share of total cost is around £2,700

At about £23,800, the total cost of the care home package is in this instance fairly close to that of the community based package.

In this instance the NHS would enjoy an annual saving of around £2,100.

Local authority total annual costs would however increase by nearly £4,000

Care Package Costs Service User E ²²	Annual Value
Home care visits (daytime - personal care)	£5,733.00
Home care visits (daytime - shopping etc)	£2,293.20
Home care visits (evening)	£1,471.47
Home care visits (weekend)	£1,146.60
Bathing assistant	£1,717.04
Needs assessment/review	£725.00
Occupational Therapy	£88.26
Meal delivery service	£323.44
Day care	£5,387.20
Other equipment package	£51.84
Community alarm package	£14.00
Telecare package	£33.88
Community alarm/telecare maintenance	£28.86
Community alarm/telecare responder service	£222.04
Total cost to Local Authority	£19,235.84
Home care visits (augmented - morning)	£1,000.18
Home care visits (augmented - evening)	£1,100.13
District nurse	£498.49
District nurse	£76.69
Total cost to NHS	£2,675.48
Total Annual Cost of Specified Service Package	£21,911.32

²² Community alarm and telecare equipment is assumed to have a 10 year lifespan; other equipment to have a 5 year lifespan.

Alternative Care Package Costs Service User E	Annual Value
Care home	£23,192.00
Total cost to Local Authority	£23,192.00
District nurse	£498.49
District nurse	£76.69
Total cost to NHS	£575.18
Total Annual Cost of Alternative Service Package	£23,767.18

Service User F

Service User F is an older lady who lives alone and is being maintained at home with a low level home care package. She is physically frail, and has experienced several falls. The following care package is in place:

- Home Care (twice a week to assist with laundry, heavier housework and shopping. In total, this adds up to 3 hours of weekday Home Carer support)
- A community alarm system with a full responder service
- A telecare package (smoke, heat and fall detectors) with a full responder service
- Assessment by Health Falls Team
- Physiotherapist assessment and a weekly visit for 12 weeks
- A needs review every 12 month (can be more often depending on changes in circumstances)

The table below summarises the total annual costs of the care package being provided for service user F in West Dunbartonshire.

In this instance the community based package offers a significant cost reduction over the care home based alternative, with the former costing around £4,000 and the latter over £23,000.

Under the community based arrangements, the local authority meets about £3,300 of the total annual cost, with the NHS meeting the remaining £650. NHS costs do not change under the care home based package, but the local authority cost increases to over £23,000.

Care Package Costs Service User F ²³	Annual Value
Home care visits (daytime - shopping etc)	£2,293.20
Needs assessment/review	£725.00
Falls assessment	£76.69
Community alarm package	£14.00
Telecare package	£33.88

²³ Community alarm and telecare equipment is assumed to have a 10 year lifespan.

Community alarm/telecare maintenance	£28.86
Community alarm/telecare responder service	£222.04
Total cost to Local Authority	£3,393.67
Physiotherapist	£641.94
Total cost to NHS	£641.94
Total Annual Cost of Specified Service Package	£4,035.61

Alternative Care Package Costs Service User F	Annual Value
Care home	£23,192.00
Total cost to Local Authority	£23,192.00
Physiotherapist	£641.94
Total cost to NHS	£641.94
Total Annual Cost of Alternative Service Package	£23,833.94

4 Discussion

The two tables below summarise the financial results presented above, first for Falkirk and Forth Valley and then for West Dunbartonshire.

In each table, the final three rows show the annual cost of the community/telecare inclusive care package minus the cost of the specified alternative, first in total terms, and then separately for the local authority and the NHS.

The same row shading as used above has been applied to these tables to help interpretation. However, wherever the cost of the alternative care package is greater than the cost of the community/telecare inclusive package, either in total or for one of the two funding bodies, the relevant cell has been left unshaded.

Annual Cost Comparison Summary Table: Falkirk and Forth Valley						
Service User	A	B	C	D	E	F
MAIN CARE PACKAGE						
Total Cost	£19,384	£39,617	£42,396	£109,143	£6,527	£10,935
Local Authority Cost	£18,738	£29,542	£30,986	£108,769	£5,997	£8,705
NHS Cost	£646	£10,074	£11,410	£374	£530	£2,230
ALTERNATIVE CARE PACKAGE						
Total Cost	£35,306	£74,790	£76,126	£124,058	£32,850	£32,850
Local Authority Cost	£34,660	£37,468	£37,468	£123,684	£32,476	£32,476
NHS Cost	£646	£37,322	£38,658	£374	£374	£374
COST OF MAIN PACKAGE LESS COST OF ALTERNATIVE PACKAGE						
Total Cost	-£15,922	-£35,173	-£33,730	-£14,915	-£26,323	-£21,915
Local Authority Cost	-£15,922	-£7,926	-£6,482	-£14,195	-£26,479	-£23,771
NHS Cost	£0	-£27,248	-£27,248	£0	£156	£1,856

Annual Cost Comparison Summary Table: West Dunbartonshire						
Service User	A	B	C	D	E	F
MAIN CARE PACKAGE						
Total Cost	£13,512	£12,834	£51,070	£34,943	£21,911	£4,036

Local Authority Cost	£11,799	£11,939	£35,399	£20,986	£19,236	£3,394
NHS Cost	£1,713	£895	£15,671	£13,958	£2,675	£642
ALTERNATIVE CARE PACKAGE						
Total Cost	£24,905	£23,780	£24,905	£37,150	£23,767	£23,834
Local Authority Cost	£23,192	£23,192	£23,192	£23,192	£23,192	£23,192
NHS Cost	£1,713	£588	£1,713	£13,958	£575	£642
COST OF MAIN PACKAGE LESS COST OF ALTERNATIVE PACKAGE						
Total Cost	-£11,393	-£10,946	£26,165	-£2,207	-£1,856	-£19,798
Local Authority Cost	-£11,393	-£11,253	£12,207	-£2,207	-£3,956	-£19,798
NHS Cost	£0	£307	£13,958	£0	£2,100	£0

Perhaps the most striking thing about the two tables is how few cells are unshaded. In other words, in very few instances is it more expensive, in total, specifically for the NHS, or specifically for a local authority to provide a community based/telecare inclusive care package. In most situations it is always considerably less expensive to do so.

For the Falkirk and Forth Valley partnership a community based care package is always less expensive for the local authority to provide, and always less expensive for the partnership as a whole, although in the case of service users E and F the annual costs are marginally higher for the NHS.

For the West Dunbartonshire partnership, only for service user C is it more expensive (both in total, and for both funding bodies) to provide a community based/telecare inclusive care package. For the other five service users the overall cost (and the local authority cost) is always lower, although for service users B and E the NHS is required to contribute more financially on an annual basis.

A number of wider conclusions can also be drawn from these tables:

- The total annual cost of 'typical' care packages as specified by the partnership groups varies from about £4,000 to over £109,000 – although there are small clusters at around £12,000, £20,000 and £40,000 or so
- In most instances the bulk of the financial responsibility for these packages falls on social care budgets rather than health care budgets
- For the most part, the big savings from the community based/telecare inclusive packages are enjoyed by social care rather than health care service providers

However, there are a number of wider issues to take into account.

5 Wider Issues

This section places the above findings in a wider context.

Planned and Unplanned Care

The reported results compare two packages of planned health and social care. They do not allow for unplanned or emergency care costs, including the costs to health and social care providers of managing transitions between episodes of planned and unplanned care.

However, the evaluation work conducted on telecare to date (YHEC, 2009; Newhaven, 2009) shows that effective community based care packages not only reduce the probability of entry into a care home environment for service users, but also reduce the probability of unplanned admission to a hospital, and reduce the length of stay for those who are admitted.

To formally and comprehensively model these effects it would be necessary to establish the typical care path of the typical service users separately for the community based/telecare inclusive care packages and the specified alternatives, and this is not possible with available information.

However, the following tables convert the annual cost of the care packages considered above into a daily equivalent. These tables show that in both Falkirk and Forth Valley and West Dunbartonshire the daily cost of being a hospital inpatient is many times greater than the daily cost of being in a suitable care environment that reduces the chances of hospital admission. These figures reinforce the conclusion that a community based/telecare inclusive care package is a highly cost effective solution for social and healthcare providers in most if not all cases.

Daily Cost Comparison Summary Table: Falkirk and Forth Valley						
	A	B	C	D	E	F
MAIN CARE PACKAGE						
Total Cost	£53	£109	£116	£299	£18	£30
LA	£51	£81	£85	£298	£16	£24
NHS	£2	£28	£31	£1	£1	£6
ALTERNATIVE PACKAGE						
Total Cost	£97	£205	£209	£340	£90	£90
LA	£95	£103	£103	£339	£89	£89
NHS	£2	£102	£106	£1	£1	£1
COST OF BEING A HOSPITAL INPATIENT*						
	£413	£413	£413	£413	£413	£413

*Source: YHEC (2009) uprated for inflation

Daily Cost Comparison Summary Table: West Dunbartonshire						
	A	B	C	D	E	F
MAIN CARE PACKAGE						
Total Cost	£37	£35	£140	£96	£60	£11
LA	£32	£33	£97	£57	£53	£9
NHS	£5	£2	£43	£38	£7	£2
ALTERNATIVE PACKAGE						
Total Cost	£68	£65	£68	£102	£71	£65
LA	£64	£64	£64	£64	£64	£64
NHS	£5	£2	£5	£38	£2	£2

COST OF BEING A HOSPITAL INPATIENT*						
	£430	£430	£430	£430	£430	£430

*Source: YHEC (2009) updated for inflation

User Costs and Welfare Benefits

The figures reported in section 4 reflect the direct service input costs generated by the specified care packages. No allowance has been made for revenue streams that some of the case study partners would receive in the form of service user payments to cover care home 'hotel' costs, or the costs of personal and non-personal care that service users are obliged to self finance.

More generally the interplay between local authority contributions to personal care costs and eligibility for welfare benefit payments such as attendance allowance and the care component of disability living allowance has not been allowed for in the reported figures. To do so would have required broadening the notion of a 'typical care user profile' in a different direction, in particular it would require the establishment of 'typical' financial and family circumstances as well as typical care needs, which was well beyond the remit of this study.

Improving the Underlying Data

Both the Falkirk and Forth Valley and the West Dunbartonshire partnerships found it very challenging to provide the required unit cost information. The most important reason for this is that the current accounting and reporting frameworks used by health and social care providers do not typically require them to record information in this form.

Moreover, in calculating the cost of (say) a social worker's contribution to a given care package, it was necessary to determine not just the full cost of an hour of their time, but also how much time it is reasonable to attribute to the undertaking of specific tasks (for example how many hours it might take a social worker to conduct a needs assessment review).

Less fundamentally, it was necessary to make a number of assumptions on the useful lifespan of various pieces of equipment etc in order to establish an annual equivalent cost value.

Partnerships need to undertake strategic and operational business planning in order to deliver a longer term shift in the balance of care, and the availability of the sort of information used in this study will be crucial to the success of this activity.

Current work to develop an Integrated Resources Framework for health and social care providers should, in due course, give partnerships a broader cost information base on which to build.

6 Conclusions

The financial models in this report add to the mounting body of evidence that home based care packages in general, and packages that incorporate telecare in particular, are very cost effective.

Evaluation studies have demonstrated that considerable gross financial benefit can be secured from providing a telecare service. Much of this benefit arises in the form of avoiding admission to a care home, or of avoiding/minimising the time spent in a hospital on an unplanned basis.

This report shows that, in addition to generating such beneficial outcomes, care packages for typical service users where telecare has been included as an integral element of the package are almost always less expensive to provide than the next best alternative.

Financial modelling also shows that typical service users can vary a great deal from each other and from place to place. Accordingly, the annual cost of a care package calculated 'in the round' varies considerably from one type of service user to another.

For the typical service users identified in the case study areas, it turns out that most of the savings offered by community based/telecare inclusive care packages are enjoyed by social care rather than healthcare providers.

However, community based/telecare inclusive care packages do reduce planned care costs for the NHS for some types of service user and, as shown by the telecare evaluation studies, they reduce the need for more expensive unplanned care also.

To formally model planned and unplanned care in a fully integrated way would require the establishment of 'typical care pathways' in addition to typical care user profiles. Similarly, to comprehensively model all financial flows associated with care provision would require the establishment of 'typical financial and family circumstances' as well as typical care needs. To do so is beyond the remit of this study, would take considerable additional modelling effort, and it would be hard to find the empirical evidence needed to justify the stereotypes employed.

It would also be very unlikely indeed that these refinements would change the main conclusions drawn in this report.

The work conducted for the financial modelling reported required a considerable amount of unit cost information. This way of collecting and presenting financial information is not standard across health and social care providers in Scotland, and presented a major challenge to the partnership groups. The progress they have achieved points the way for further advances through the Integrated Resource Framework initiative.

References

Curtis, L (2008) Unit Costs of Health and Social Care 2008, Canterbury: Personal Social Services Research Unit <http://www.pssru.ac.uk/pdf/uc/uc2008/uc2008.pdf>

Lansley, P., McCreddie, C., and Tinker, A (2004) Can adapting the homes of older people and providing assistive technology pay its way? Age and Ageing Vol. 33 No. 6 pp 571-6

Newhaven Research (2009) Monitoring Telecare Progress, Edinburgh: JIT
<http://www.jitScotland.org.uk/action-areas/telecare-in-scotland/telecare-publications/>

York Health Economics Consortium (2009a) Evaluation of the Telecare Development Programme: Final Report, Edinburgh: Joint Improvement Team
<http://www.jitScotland.org.uk/action-areas/telecare-in-scotland/telecare-publications/>

York Health Economics Consortium (2009b) Evaluation of the Telecare Development Programme: Appendices, Edinburgh: Joint Improvement Team
<http://www.jitScotland.org.uk/action-areas/telecare-in-scotland/telecare-publications/>

York Health Economics Consortium (2009c) Report on Quarterly Return 4 (January – March 2008) (Unpublished)