

The Costs and Benefits of Preventative Support Services for Older People

Nicholas Pleace

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The Centre for Housing Policy
www.york.ac.uk/chp/

THE UNIVERSITY *of York*



Introduction

1. This paper is a brief *overview* commissioned by Scottish Government Communities Analytical Services. This paper reviews the evidence on the cost effectiveness of preventative support services that assist older people with care and support needs to remain in their own homes. The costs of these preventative support services are contrasted with the costs of specialist housing options, such as sheltered and extra care housing and also with the costs of health services, as part of reviewing the value for money of preventative support services (henceforth PSS).
2. The paper begins by briefly discussing the context in which PSS operate and the relationship between PSS and older peoples' expressed preferences for housing and living arrangements. The following sections each look at a form of PSS in turn and include:
 - Handyperson schemes
 - Adaptations
 - Alarm systems and telecare models
 - Floating housing support services
3. This paper concludes by contrasting the costs of PSS with the costs of alternative sources of care and support.

The roles of preventative support services

4. There is evidence that many older people living in Scotland wish to remain independent and living in their own homes as long as possible (Richards *et al*, 2006; King and Farmer, 2009). Long term hospitalisation, residential and nursing care are not used to the same extent that they once were in Scotland and there is much more emphasis on using community delivered health and social work services that enable older people to remain living at home. Alongside tangible benefits in promoting well-being, linked to choice and control and other aspects of maximising independent living for older people, a lessening reliance on institutional forms of service provision has also reduced costs (Sutherland, 2008).
5. Preventative support services have specific roles in supporting the choice of older people to live independently in their own homes. These roles can be summarised as follows:

- Creating a home environment that minimises *risks* to health and well-being, for example by removing trip hazards to reduce risks of falling, ensuring that heating and insulation are adequate and improving physical security for their home.
 - Providing low level support that enables an older person to live independently, for example by providing advice and support in relation to maintaining or improving an older person's social support, or by helping with practical matters like money management, and/or benefits advice.
 - Installing telecare and alarm system technologies that allow monitoring of the safety and well-being of older people and which can summon help.
 - Helping to adapt an older person's home to suit needs that have arisen due to illness or disability, this can involve both minor and major physical alterations to housing.
6. The PSS that can promote and enable independence, choice, control and help improve the quality of life of older people are described in Table 1. The specific operation of individual PSS can vary to some degree, in that some will provide some aspects of support that others may not. Services of the same broad type will nevertheless provide the same 'core' forms of support.
7. The evidence base on costs of preventative support services in Scotland and in comparable countries is limited in some respects, although some data are available¹. Quite a lot of existing research tends to focus on the well-being and perceptions of older people using services and often does not review costs in detail. Providers of PSS may also not have developed management information systems that allow detailed and systematic assessment of costs (Beale *et al*, 2009). Recent work has identified a need to improve the evidence base on the cost effectiveness of housing related PSS in Scotland, citing a lack of quantitative measures of impact. The same work also noted that most research looks at 'avoided costs' which are also known as cost offsets (e.g. savings to health services resulting from use of PSS) and does not consider the potential benefits of gains in well-being that might arise from receiving PSS (Tribal Consulting, 2007).
8. As is made clear in Table 1, PSS can be concerned with a considerable range of housing and housing related issues. The functions of PSS are essentially to enable independence and to seek to maximise quality of life (within

¹ See for example: <http://www.scotland.gov.uk/Publications/2007/12/14141444/0>

inevitable resource constraints). This role can encompass everything from adaptations to ensuring that older people have enough money to live on and are not socially isolated.

9. All of these issues are important in maximising independence, PSS can make the difference between a reasonable quality of independent life and finding it a struggle to continue to live in one's own home. Improving heating can mean that an older person ceases to be in a situation in which they face dilemmas as to whether or not they should 'heat or eat' (Wright, 2004) while services like floating housing support services can help prevent isolation for older people who may still be independent, but whose lack of social contact means they have little quality of life. Without PSS service intervention, older people in such circumstances may need social work and NHS Scotland services more quickly and for longer than they would if these basic needs were met (Day, 2008). Preventative support services can maximise income, orchestrate and install home improvements, reduce heating costs and also help to address social isolation.
10. Preventative support services have a role within wider developments in health and social work care within Scotland. Specifically, PSS can be employed to 'shift the balance of care' (SBC) as part of the national agenda to increase 'anticipatory' (preventative) care while also providing more care and more support in people's own homes². The Integrated Resource Framework (IRF) for health and community care has clearly shown that unplanned admissions to hospital are a major cost to NHS Scotland. If levels of unplanned admissions can be reduced, which is something in which PSS can play a role, the potential for savings to health and social work budgets is considerable. Preventative support services can generate savings across the health and welfare system by helping reduce the need for more expensive services by offering preventative and low level support³.

² <http://www.shiftingthebalance.scot.nhs.uk/>

³ See <http://www.irf.org.uk/publications/low-intensity-support-services-systematic-literature-review> and http://wwwFOUNDATIONS.uk.com/files/resources/future_hia_booklets/connecting_with_health_and_care/london/Low-level_housing-related_interventions_and_the_DH_agenda_Clar_Skidmore_Housing_LIN.pdf

Table 1: Overview of the roles of preventative support services

Aspects of independent living at home supported by service	Handyperson services	Telecare and alarm services	Adaptations	Floating housing support services
Ensuring housing conditions do not undermine health and well-being	Can improve heating, insulation and make repairs to unfit housing.	Can reduce worry and anxiety through creating a sense help can be summoned.	No direct role in respect of housing conditions.	Can advocate or liaise with other services on behalf of or alongside an older person and if necessary help with move.
Minimising risks within an older person's home	Can remove trip hazards. Fit smoke and carbon monoxide detectors.	Telecare can remotely summon emergency response. Mobile wardens respond directly.	Adaptations can be installed to reduce risks e.g. trip hazards.	Can advocate or liaise with other services on behalf of or alongside an older person. Can if necessary assist with move.
Enabling independent living within an older person's home	General improvements in housing conditions can improve health and thereby independence.	Can allow independent living because risks are reduced to acceptable level.	Main role of is to create a space that does not needlessly disable an older person.	Can directly enable independence through low intensity support, e.g. helping with running a home.
Promoting physical Safety	Can fit alarms and enhance physical security.	Can be combined with security systems, smoke and carbon monoxide detectors.	Can have a role e.g. fitting automatic lighting to a blind person's home to enhance security.	Can advocate or liaise with other services on behalf of or alongside an older person.
Monitoring health and well being	No direct role.	More advanced telecare systems are primarily designed to monitor and well being remotely. Key function of mobile warden services.	No direct role.	Often primarily designed as a service to prevent avoidable loss of independence or facilitate return to independence.
Assistance in responding to emergency	No direct role.	Operators can remotely trigger alarms in some systems. Mobile wardens respond directly.	No direct role.	Some services may have a direct emergency response role.
Combatting social isolation and socialisation	No direct role.	Unlikely to have significant role, but may provide very low level support as part of checks on well-being	No direct role.	Can facilitate social support, e.g. leisure activities and may provide low-level social support role.
Addressing financial needs	Can arrange access to grants and financial support to enable improvements	Unlikely to have direct role	Can arrange access to grants and financial support	Can provide advice and support with debt management and welfare rights support
Access to health and social work services		Can liaise with other services		Liaison with other services and advocacy

11. There are some uncertainties over the nature of the older population for whom preventative support services will need to be provided. In 2004, the Audit Commission reported that there were three main theses about the nature of need for adaptations and equipment. These were:
 - The ‘compression of morbidity thesis’ which would mean people lived longer, healthier lives and only had short periods of need for support towards the end of life.
 - The ‘equilibrium of morbidity thesis’ which suggested that life span would tend to generally increase although morbidity patterns would not alter, i.e. while there would be more older people overall there would not be significantly more older people with care and support needs.
 - The ‘expansion of morbidity thesis’, in which total rates of limiting illness and disability rise as more people live into their eighties and beyond (Audit Commission, 2004a).
12. If the first scenario were accurate, the role of PSS, health and social work services would be more focused on the final years of life and this might mean that services were typically not used for very long. Overall, costs would probably be set to fall over time. In the second scenario, the costs of care, adaptations and support would level off and then remain fairly constant. In the third scenario, costs would rise because the overall number of dependent and frail older people would be increasing.
13. The nature of the older population varies by region and by socioeconomic group. Long term trends in morbidity will be important in determining the extent to which PSS are needed and the importance of the role those services may have in offsetting costs that would otherwise be borne by NHS Health Scotland and social work services.

Handyperson services

Definitions

14. Handyperson services offer a range of services and some agencies offer a more comprehensive and extensive range than others. These services can provide low level repairs to homes, i.e. literally provide or arrange a ‘handyperson’ but can have a wider role that includes more significant repairs and improvement to older people’s housing. This can include addressing issues such as damp, poor insulation or inadequate heating. These services can be called “Handyperson services”, “Care and Repair” services or “Staying

Put schemes". Some services are within local authorities while others are sector agencies (not for profit and social enterprise). In Scotland, many services are provided to older people living in their own homes or the private rented sector, which contrasts with the situation in England where services can be tenure neutral and in some instances confined to the stock managed by a single social landlord (Care and Repair, 2006; Heywood, 2004; Scott et al, 2009; Lawson and Croucher, 2010).

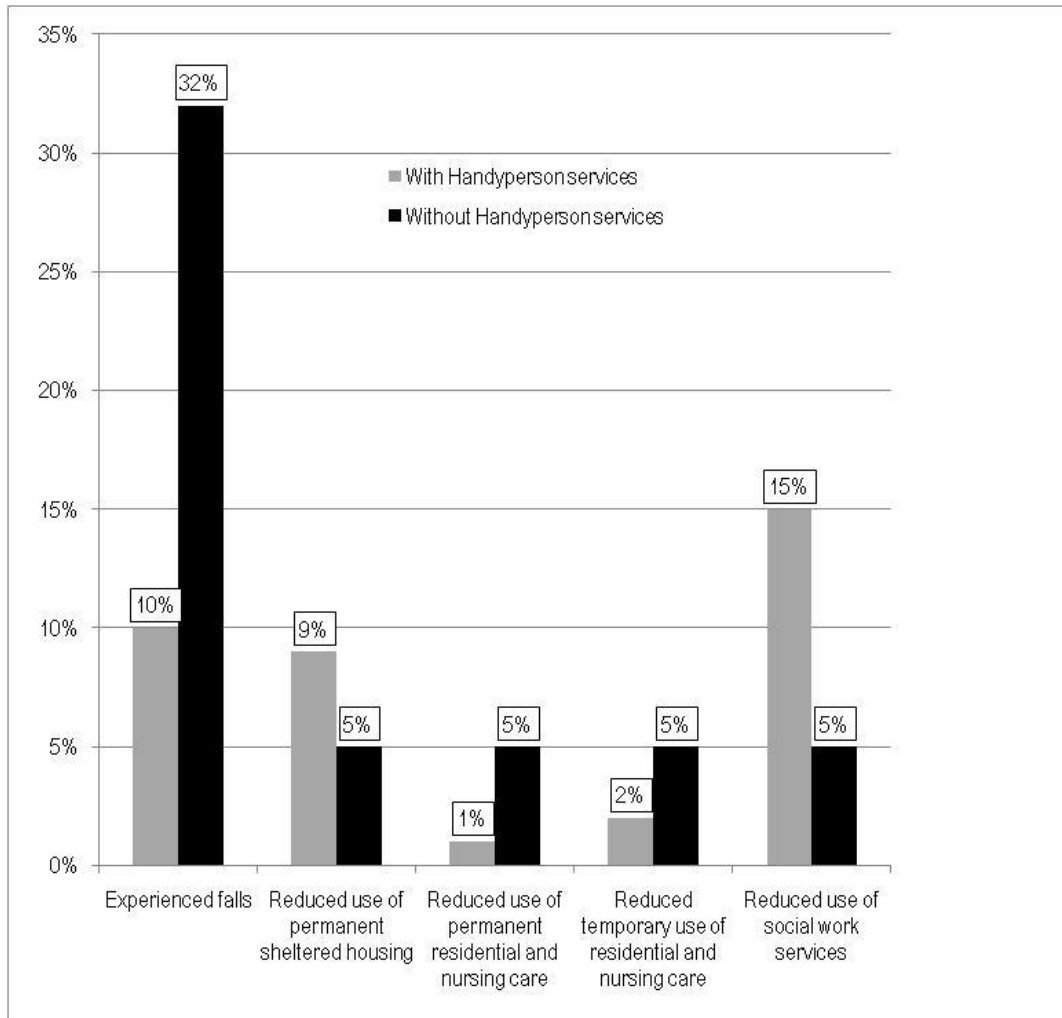
Data on cost effectiveness

15. Foundations⁴ produced a cost effectiveness analysis for England which ascribed a cost and benefit to each service that handyman services and related models provided (O'Leary *et al*, 2010). Figure 1 shows the estimated reduction in the annual use of sheltered housing, hospital admissions and social work interventions resulting from the presence of a Handyman service. This work has applicability to Scotland, but it is important to note that Scottish handyman services do not necessarily have the same role as some equivalent services in England. In particular, some English services which are usually called 'Home Improvement Agencies' arrange adaptations alongside repairs and improvements. Some caveats should be noted, in that this evidence was produced by agencies in the sector and makes projections of cost offsets (i.e. reductions in NHS, supported housing and residential and nursing care costs) rather than projecting overall cost benefits (which would for example include gains in the quality of life of older people).
16. The most notable effect is in the number of falls experienced by older people. O'Leary *et al* estimate that 32 per cent of older people whose housing has been not been improved or adapted are at risk of a fall during the course of one year, which could result in hospital admission, community health service use and/or a need for social work department funded support. By contrast, the estimated annual rate of falls among those older people whose housing has been improved or adapted by care and repair/HIA services was 10 per cent (O'Leary *et al*, 2010).
17. O'Leary *et al* also estimate that 9 per cent of older people whose housing had not been improved or adapted would need to make a move to sheltered housing during the course of one year. This compared to a rate of 5 per cent of those whose housing had been improved or adapted by care and repair services. Reductions in the temporary and permanent use of residential and

⁴ Foundations is the national body for home improvement agencies in England see <http://www.foundations.uk.com/home>

nursing care were estimated as being small. O’Leary *et al* also estimated a 10 per cent reduction in the number of older people requiring personal care funded by social services (i.e. social work service funded care).

Figure 1: Estimated reductions in annual use of health services, residential and nursing care and sheltered housing among older people receiving care and repair services (percentages)



18. These figures are based on a number of assumptions. To those unfamiliar with the prevalence of falls among older people, the 32 per cent figure may seem high. However, both research in the UK and major studies in the USA have indicated that some one in three adults aged over 65 experience falls each year (RCN, 2004; CDC, 2010).
19. Increasing the energy efficiency of older people’s housing to enable them to remain warm and dry at a much lower cost has important benefits to health and well-being and can in itself sustain independence (Wright, 2004; Age Concern Scotland, 2010). Some early assessments of the benefits of sheltered housing suggested that the better housing conditions in sheltered schemes (warm, dry housing) had more tangible impacts on the well-being of

older people than the presence of an on-site warden (Sinclair and Williams, 1990).

20. In 2009, the Scottish Government commissioned a review of handyman services (Scott *et al*, 2009). This research found that costs varied depending on where a project was located, the nature of the population of older people it served and how it was administered (for example local authority run services had lower overheads than third sector services). The total costs ranged from the equivalent of under £2 per older person in some areas, such as Falkirk and Stirling, but rose as equivalent to £40 in areas of the Highlands and Islands.
21. The annual revenue attracted by Scottish handyman services depended on where the service was located and the size of the population it served; one small service had attracted under £40,000 in grants while the largest had a budget of some £540,000. Services were heavily reliant on local authority funding although it was not their sole source of grant income. Some services levy a charge for different aspects of the support they provide, but the amounts charged and the conditions under which charges are levied vary (Scott *et al*, 2009).
22. Cost savings are net of the costs of a repair, improvement or adaptation. For example the saving from someone not moving into sheltered housing (estimated by O'Leary *et al*, 2010 for England) is some £46,000⁵. A relatively low cost improvement, for example upgrading insulation and heating with a few minor adaptations, might only run to a few thousand pounds and prevent any need to move to sheltered housing on a long term basis. More expensive work might be needed to enable someone who would otherwise need residential care or extra care housing to continue live independently.
23. It is problematic to ascribe a 'typical' net cost to an intervention by these services. This is partially an issue of data but also because some costs will be borne by some older people who are ineligible for grants. In addition, the cost of the work undertaken will be subject to considerable variation (Scott *et al*, 2009).
24. Some services will arrange and oversee repairs and improvements that are extensive, but they will also be undertaking minor tasks, such as installing smoke alarms or improving door locks and also arranging for improvements to insulation and heating. Repairs and improvements may also only form part of a package of support that enables someone to continue living independently

⁵ This is the total cost of the entire period of residence in sheltered housing. Weekly costs, estimated by PSSRU in 2010 (Curtis, 2010) are some £169, or £8,788 per year for an RSL run scheme and slightly less, at some £163 for a local authority run scheme).

in their own home. An older person may still need community health services, personal care funded by social work departments and perhaps floating housing support services to remain independent in their own home, even if that home has been improved and/or adapted. Reliance on PSS and clinical and social work funded personal care will be less if informal care is provided by a partner, children, other relatives or friends (Tinker *et al*, 2001).

Telecare, alarm and mobile warden services

Definitions

25. There is a continuum of services that begins with basic dispersed alarm systems and extends into telecare. Basic alarms have their origins in the first forms of sheltered housing, but are now often dispersed systems, covering ordinary housing across a wide area, which are linked to a control centre⁶. When an older person triggers an alarm it summons a relative (or friend or carer) and/or an ambulance. These basic alarms can range from pull cords in rooms through to devices that older people wear around their necks.
26. Telecare builds upon these basic technologies and includes remote monitoring of older people's well-being. This can be an emergency alarm that includes a telephone based system that is used by operators located some distance away to regularly call an older person and check on their status. Computerised systems can also remotely and automatically monitor whether or not an older person has experienced a fall, whether there is smoke, a carbon monoxide leak or if the temperature in someone's home has dropped sufficiently to constitute a risk to their health (Age Concern Scotland, 2010). Telecare can also be used to enhance home security⁷. Telecare has been promoted by the Scottish Government since 2006 and Scottish authorities have developed telecare strategies (Bowes and McColgan, 2006; Sergent, 2008; JIT, 2010).
27. The Joint Improvement Team (JIT) is designed to support to partnerships across Scotland to deliver better health, housing and social care services. JIT promotes the use of these services nationally and defines telecare in the following terms:

⁶ Some dispersed systems cover both sheltered housing and the ordinary housing in the surrounding area. Systems can be very large, covering hundreds of dwellings across a wide area. They are sometimes referred to as 'social alarms'.

⁷ For a full description of services see the Telecare Services Association <http://www.telecare.org.uk/>

Telecare is the remote or enhanced delivery of care services to people in their own home or in a community setting by means of telecommunications and computerised services. Telecare usually refers to sensors and alerts which provide continuous, automatic and remote monitoring of care needs, emergencies and lifestyle changes, using information and communication technology (ICT) to trigger human responses, or shut down equipment to prevent hazards⁸.

28. Telecare systems can extend into biometric monitoring which includes continual monitoring of vital signs, such as blood pressure, with live data being fed back to a control centre which will trigger an alarm and summon clinical services if an older person shows certain warning signs. This kind of remote biometric monitoring is sometimes referred to as a 'telehealth' system.
29. Retention of independence during the onset of dementia can be extended through the use of telecare and associated 'smart home' technologies. Risk management can also be enhanced through the use of the surveillance capacities of telecare, for example by remotely monitoring if an older person with dementia leaves home unexpectedly (Barlow et al, 2005).
30. Mobile warden services or floating housing support services can be attached to telecare services. These services vary, though their role is broadly comparable to a 'floating' version of the original model of the sheltered housing warden, i.e. workers who responds to alarms and also periodically checks on the well-being of older people. These services can be organised via a central call centre that can cover a quite large area.
31. Some older people can view telecare as creating unwelcome sense of surveillance (Tinker and Lansley, 2005; Hanson *et al*, 2007). However, other evidence suggests older people with higher needs are reassured by the presence of telecare services (McCreadie and Tinker, 2005; Percival *et al*, 2008). There is also evidence that people who are the primary carers for older people can experience tangible benefits to their well-being and their relationship with the older person they care for. Telecare can in some instances provide a carer and an older person with enough sense of security to mean that a carer need no longer be present on a full time basis and can make a return to paid work (Jarrold and Yeandle, 2009).

Data on costs

32. Although telecare has been widely researched, the quality of the research and particularly the strength of data on costs has been questioned. Writing in

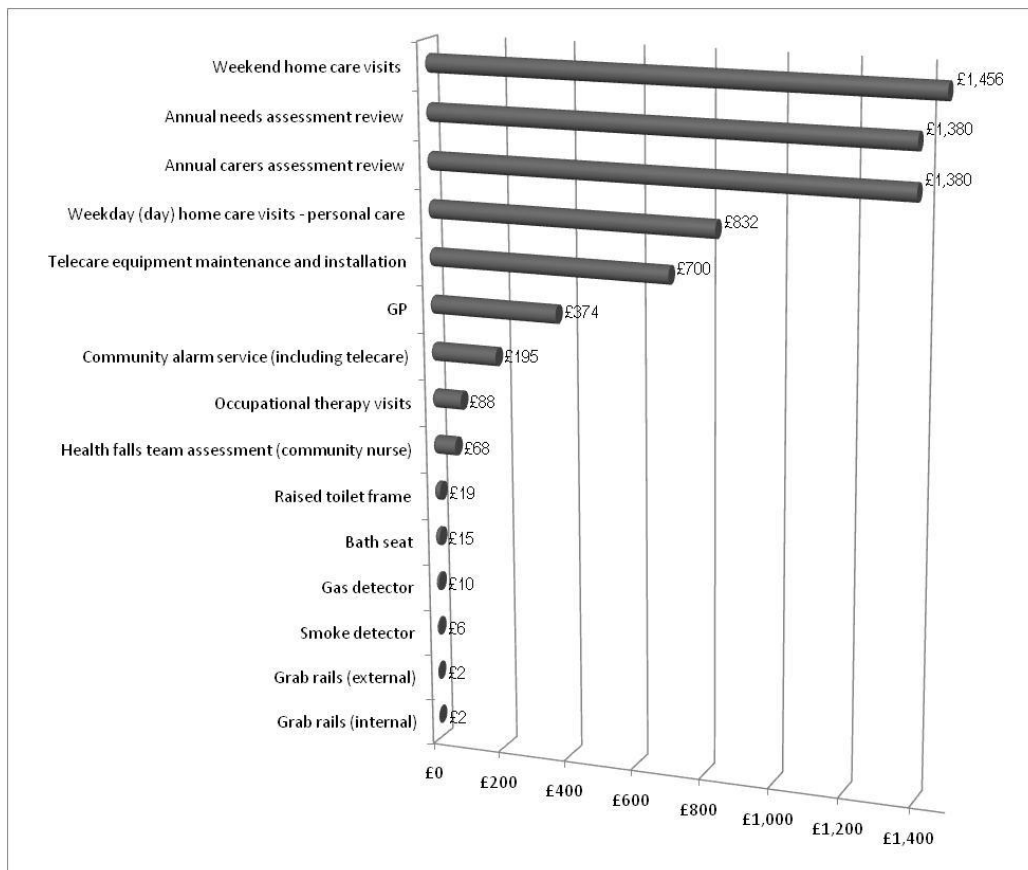
⁸ <http://www.jitscotland.org.uk/action-areas/telecare-in-scotland/>

2009, Barlow and Hendy noted that (p.8): “Almost 9,000 studies reporting on telecare trials and pilot projects have been published in scientific journals, yet within this wealth of information very little strong conclusive evidence has emerged”.

33. The costs of telecare and alarm systems vary according to the sophistication of the systems employed. For example, a service that conducts remote checks on someone’s well-being on a daily basis and which uses a mobile warden service will be more expensive than an emergency only, community alarm system (Barlow *et al*, 2005). In Scotland, some of the more elaborate models of telecare have been piloted, but have not been used more widely, in part for cost reasons (JIT, 2010).
34. Many community alarm services in Scotland are charged for, the amount usually being a few pounds a week, though the conditions under which older people are charged will vary. An older person entirely dependent on benefits may often not be charged, while someone on an occupational pension in their own occupied home might pay a few pounds a week (JIT, 2010). Costs for basic alarm provision are quite low for an individual household, as a mass produced unit can be relatively simply connected to a telephone line.
35. In 2010, an attempt was made to cost the provision of telecare in Scotland (Newhaven Research, 2010). This review of costs reported that it was difficult to talk about ‘typical’ costs and net costs for telecare services for older people for three reasons:
 - The range of telecare and alarm services that might be provided was variable and had different cost implications.
 - Telecare and alarm services would not be used in isolation once need reached a certain level. While telecare and alarms might reduce costs, when they were used for older people with higher needs (i.e. who might otherwise need to be in extra care housing or in residential or nursing care), it was usually in combination with community personal care, health and/or PSS.
 - Illustrative vignettes could be used to show the mix and extent of costs because of the variation in needs and the varied telecare and alarm service responses that might be used to meet those needs, but it was difficult to move beyond this.
36. Taking the hypothetical example of an man in his late 80s experiencing the onset of dementia and physical health problems, Newhaven Research estimated an annual saving of some £26,000 compared to the cost of residential care for this man (the cost of the package including telecare was £6,500 compared to a cost of £32,500 for the total estimated time he would

have to spend in residential care). Their assumptions about the cost of a package that employs a mix of telecare and other support services are shown in Figure 2. As can be seen, telecare is clearly just **one component** of a response to an older person with high support needs and while telecare may *reduce* the level of interventions by health and social work funded services it does not remove the need for them. Note also that the example used in Figure 2 includes a figure for weekly costs of minor adaptations that might be provided by a care and repair or HIA service.

Figure 2: Estimated annual costs of a package of support including telecare to an older person with high personal care and health care needs



37. There are some questions around the sustainability of the example Newhaven Research use, i.e. that risks around managing dementia at home might eventually be judged to be unacceptable, leading to a residential and nursing care place. There is evidence that even more intensive forms of specialist housing, such as extra care, are sometimes unable to cope with the end stages of dementia and there can be a need for residential care or hospital admission (Croucher *et al*, 2003). However, packages of support including telecare can nevertheless significantly *delay* the point at which these residential care and hospitalisation are needed which means costs can be significantly reduced. Risk management is always a potential issue, it can be a matter of judgement between the degree to which telecare can provide

38. A University of York review, commissioned by the Scottish Government in 2009, reported evidence that the National Telecare Development Programme had reduced unplanned hospital admissions and reduced the need for residential care. However, the review also reported that data collection was in need of development and that there was an “absence of a strong data collection, reporting and evaluation culture within most Partnerships” which had meant that collection of robust data had been problematic (Beale *et al*, 2009). This research estimated that the programme had reduced care home admissions by 518 and unplanned hospital admissions by 1,220, reducing expenditure by some £6.8 million. A survey of telecare users also found that 70 per cent felt more independent and that 21 per cent reported that their health had improved since they received telecare services.
39. Another more recent piece of work reviewed the national Telecare Development Programme (TDP) for Scotland. This estimated that during the period 2006-2010 a very significant gross financial benefit of some £48 million had resulted from an investment in telecare of some £12.6 million nationally (including match funding). The collective impacts of telecare were estimated as having included, among other estimated benefits (Newhaven Research, 2010a)⁹:
- Avoidance of some 6,600 unplanned hospital admissions
 - Avoidance of some 2,650 residential care and nursing home admissions
 - Avoidance of some 411,000 home check visits to monitor the well-being of older people and other groups.

Equipment and Adaptations

⁹ http://www.jitscotland.org.uk/downloads/1295965164-Development_of_Telecare1.pdf

Definition

40. An adaptation is a modification to a dwelling that removes or reduces a disabling effect that that dwelling has on an older person. For example, if someone ceases to be able to climb the stairs in their home, then they are within a living environment that is disabling to them as an individual. The installation of a stair lift or modifications to the downstairs of their home can reduce or remove this disabling effect. Adaptations can range from the addition of a grab rail through to the provision of ramps, stair lifts, specially adapted bathrooms and kitchens. Equipment refers to small specially adapted household equipment that can enhance independence and can also refer to items that enable mobility around the home. Age UK ¹⁰ lists the following areas as those in which adaptations can enable independence among older people:
- Access to the home (including systems that enable an older person to remotely answer the door or control who enters their home).
 - Access to the home (physical access, e.g. grab rails or ramps).
 - Moving around the home (stair lifts, grab rails and internal ramps, wheelchair access to rooms).
 - Getting up and getting dressed (hoists and other assistive technology to get in and out of bed independently).
 - Washing, bathing and using the toilet (adaptations to bathrooms including level access showers, toilets suitable for people with limited mobility, adapted baths).
 - Cooking and using the kitchen (repositioning of cookers, cabinets and the provision of kitchen equipment that is specially adapted)
41. Adaptations can be generic, i.e. generally suitable for older people with a given range of long term limiting illness and/or disabilities, but they may also need to be specific to an individual. This means that a house that has been adapted can sometimes only function as a general resource to a limited extent (Nocon and Pleace, 1998; Heywood and Turner, 2007).
42. The extent to which ordinary housing can be adapted is variable. Some older and some smaller dwellings cannot receive some adaptations without major works (Lansley *et al*, 2003). The Joseph Rowntree Foundation has long

¹⁰ <http://www.ageuk.org.uk/>

campaigned for standards in new house building, referred to as 'lifetime homes' standards, that facilitate the installation of adaptations¹¹.

43. There is something of a blurred line between telecare and assistive technologies that might be used in 'smart home' provision for people with dementia or for older people who have sensory impairment. There are also developments in enhancing access to communication technologies, particularly the Internet, for older people¹². The provision of adaptations will increasingly involve the installation of ICTs (information and communications technologies) alongside the provision of physical alterations to someone's home.
44. The Scottish Government issued new guidance on the provision of equipment and adaptations in 2009. This guidance details the service models that should be used and the broad approach that should be taken and includes a 'self-evaluation' tool by which care and repair and other services can assess their own performance (JIT, 2010a).

Data on costs

45. A research review by Heywood and Turner (2007) reported that there is evidence that adaptations can produce significant savings in the following areas:
 - Prevention of falls;
 - Reduction in the need for home care services (funded by social work departments);
 - Reductions in the use of residential care (including nursing care);
 - Enhancements in the quality of life of people in receipt of adaptations, improving well-being and contributing to the sustainability and extent of their independent living.
 - Improvements in the health and well-being of carers, whose health can be improved because the people they are caring for are able to live more independent lives.
46. As Heywood and Turner note, understanding the cost savings that, potentially, can be generated by adaptations is not uncomplicated. Some estimation is necessary, for example, because if adaptations are designed to prevent falls, trying to determine the rate at which falls would have occurred without those adaptations must rely on wider prevalence data to estimate the

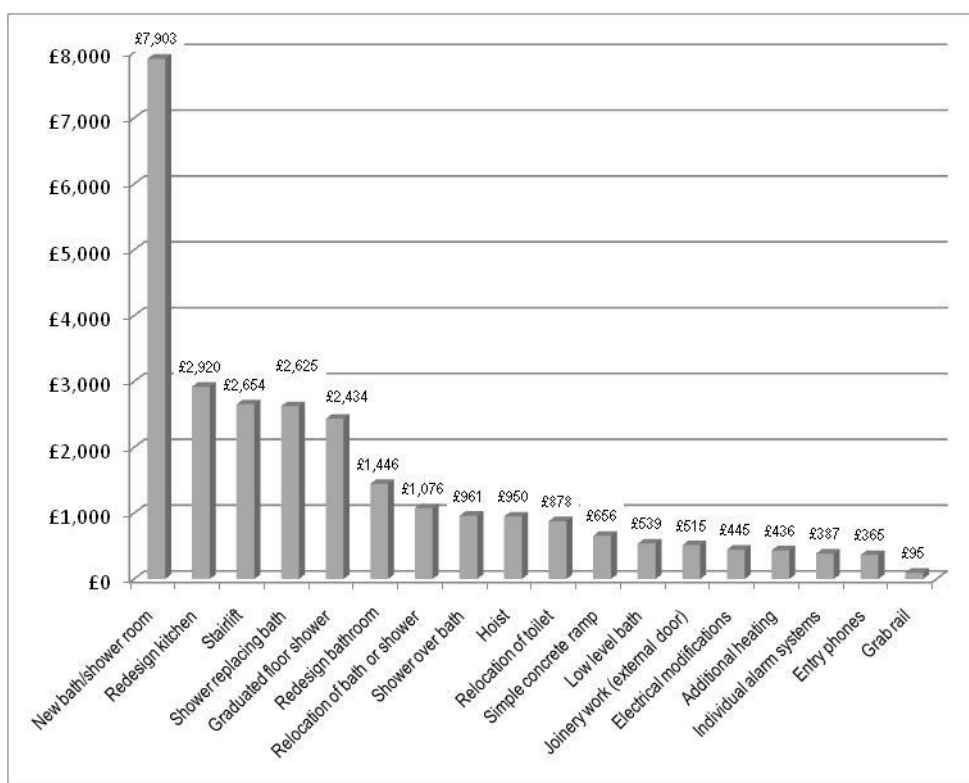
¹¹ <http://www.lifetimehomes.org.uk/>

¹² <http://sus-it-plone.lboro.ac.uk/events/bcs-hci-2010-workshop>

extent to which falls have been prevented. There will be some older people who have been saved from a hospital admission and perhaps serious and debilitating injury because a fall has been prevented from happening by an adaptation. Equally, there will be a few older people whose homes have been adapted to prevent falls who would not have fallen. The consequences of a fall are also not entirely predictable, some falls will have far more serious effects than others (Heywood and Turner, 2007).

47. Higher levels of disability may require extensive and expensive work. In other cases, a relatively simple, single adaptation may be all that is required (Heywood and Turner, 2007). There are other variables as well, builders may typically charge more in some areas than in others. There may be higher logistical costs installing adaptations in some of the most rural areas (Bevan and Croucher, 2008).
48. The Personal Social Services Research Unit (PSSRU) produce annual estimates of the cost of local authority equipment and adaptations (Curtis, 2010). These unit costs are UK wide and may not closely reflect the typical costs in a particular Scottish authority (Figure 3).

Figure 3: Estimated average cost of adaptations (Source: PSSRU)



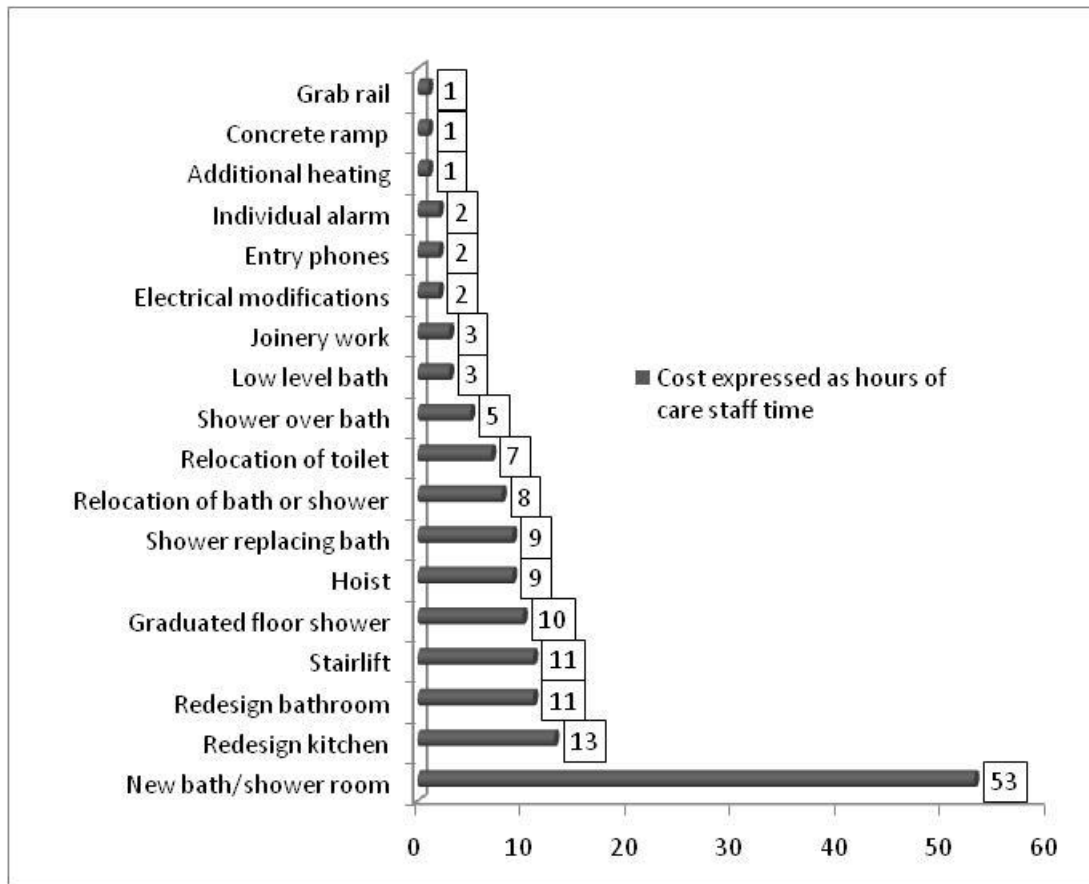
49. The estimated range of costs for some adaptations is quite wide. For example the average cost of a new bath/shower room estimated by PSSRU is £7,903 (see Figure 3), but the lowest reported cost is £3,890 and the highest cost is £35,008. It is difficult therefore to talk about a 'typical' cost for some types of

adaptation, as the nature of the work needed and local costs can be highly variable.

50. The savings, i.e. cost offsets to other services, produced by adaptations can be extensive and enduring. In 2009, the Home Adaptations Consortium estimated that 20 level access showers installed in the London Borough of Newham at a cost of some £110,000 had produced a five year saving of £1.86 million¹³ (Home Adaptations Consortium, 2009).
51. While much work reports the cost benefits arising from adaptations in terms of offsets to health and social work services, it also needs to be borne in mind that there are other benefits. Adaptations can significantly enhance independence and increase quality of life. In addition to the benefits for older people with disabilities or long term limiting illness, adaptations can also deliver tangible benefits to relatives who are acting as full time carers. Adaptations can lessen the demands on carers' time and reduce the levels of stress that they are exposed to.
52. In a 2004 review of assistive technologies the Audit Commission expressed the costs of adaptations and equipment in terms of what they would buy in care staff hours (see Figure 4). For example, the (median) cost of installing a new assistive bath was (at 2004 prices) £10,470. If it was assumed that a bath would last ten years, the annual equivalent cost would be have been around £1,291, a figure that in 2004 would have bought 50 hours of care in a calendar year. In other words, the cost of a new bath was equivalent to 50 hours of care per year for 10 years, less than an hour a week, which might be rather less than would be required for a care worker to bathe an older person.
53. The cost of hoists, floor showers, modifications to kitchens and bathrooms were all only the equivalent of a few hours of care a week (see Figure 4). When expressed in these terms the capital costs of adaptations look low, though there is a need for caution. The £10,470 replacement bath makes sense if it improves the life of an older person. However it may only make strictly *economic* sense if it is used for five or ten years, otherwise the costs of installation may exceed those of providing a care worker to bathe the older person.

¹³ Based on a five-year estimated cost of providing assistance with bathing at home via personal care services of £1.97 million, if these older people had not had their bathrooms adapted.

Figure 4: Estimated annual equivalent costs of adaptations and assistive technologies expressed as annual hours of care staff time



54. As noted above, an adaptation may be one part of a larger package of care and support. As the health care and support needs of an older person increase, the likelihood that any adaptation will only be *one part* of a package of services also increases. This is potentially important because it means that any costs saved by reducing admissions to hospital, lessening the risk of falls or reducing use of residential care may need to be calculated on the basis of a net difference between a *package* of care and support and the alternative of, for example, residential care (Audit Commission, 2004). Research conducted on telecare in Scotland has attempted this 'whole system' approach to costing and was discussed earlier in this report.

Floating housing support services

Definition

55. These services provide low-level support that can facilitate an early return to independence after being in hospital and can also facilitate independence more generally and reduce and/or delay the need for hospital admission. Sometimes these services can complement health and social work services that facilitate an early return from hospital. Floating housing support services for older people can provide:
- Temporary support that enables older people to stay at home during shorter term periods of ill health when their independence might otherwise be threatened (this may be as part of a package of support also involving health and social work services).
 - Preventative support to reduce potential risks to an older person's capacity to live independently (sometimes in conjunction with health and social work services).
 - Medium term or ongoing support to enable an older person to remain in their own home and live as independently as possible (again this may be in conjunction with health and social work services).
56. Workers provide floating housing support services on a cross-tenure basis to older people in any housing setting. The support that may be provided, includes:
- Advice and information about housing and related matters;
 - Help in managing finances;
 - Help with benefit claims;
 - Help with accessing other services including health and social work services;
 - Help in learning, re-learning or maintaining daily living skills (how to run a home, cook for oneself and so forth);
 - Supervision and monitoring of health and well-being;
 - Supervision/monitoring of medication;
 - Low intensity support for people with dementia;
 - Help in establishing social contacts and activities;
 - Peer support and befriending;

- Specialist housing related support for particular groups (e.g. for specific ethnic groups or cultural minorities).
57. Services can be based on floating housing support services that have replaced and/or supplemented the on-site provision of a warden service in sheltered or extra-care housing. In this model, a travelling warden-like service (which may or may not provide an emergency response) is provided to both older people living in sheltered housing and those in the surrounding area. Examples include the 'housing support service' run by the Bield Housing Association in Glasgow¹⁴. Some models of sheltered and extra care housing, particularly in rural areas, can function as a 'hub' for floating housing support services that are extended to people living in their own homes in the community. Some services are specific to a particular social landlord, but they can also be tenure neutral. There are examples of floating housing support services that function in the community and which are not linked to sheltered or extra care housing.
 58. Floating housing support services were operating under the Supporting People programme until the ringfence for that programme was removed in Scotland on 1st April 2008. The ringfence limited expenditure to housing and welfare related lower intensity support services. Within the removal of the ringfence, it has become possible to provide floating services that combine elements of housing related floating support with personal care and health services.
 59. The evidence base on floating housing support services for older people is limited. However, significant work has been conducted on the replacement of on-site warden services with visiting warden services in sheltered housing in Scotland and in comparable countries. This work suggests that the removal of an on-site warden and their replacement with a floating support service can sometimes be viewed negatively (Croucher *et al*, 2008; Hill *et al*, 2010). There is little research on how older people feel about floating housing support services that visit them in their own housing in the community.

Data on costs

60. The data available on the costs of floating housing support services for older people are limited. What data there are suggest that costs can be variable (Wood *et al*, 2007). Research conducted on Supporting People costs in Scotland conducted in 2007 compared two floating housing support services for older people run by Scottish councils. Both projects were small, one supported 10 older people and the other 20 older people, one offered both

¹⁴ http://www.bield.co.uk/what_we_do/Housing+Support+Services

care and low level support, the other offered only low level support (Wood *et al*, 2007).

61. One project had higher staffing costs than the other, the equivalent of £10.40 an hour at 2007 prices, while the other was delivering floating housing support at a cost of £7.30 an hour. This was explained in terms of differences in the wages that the two different providers of floating housing support services offered, the shift pattern the service followed (evenings and weekends tend to attract a premium) and also the level of skill and qualifications required of staff. There was also evidence of services that had costs in the region of £20 an hour in Scotland; usually these were managed by third sector providers (Wood *et al*, 2007).

Comparing costs of PSS

The need for caution in cost comparison

62. There will be instances when one low intensity service, such as telecare, an alarm or adaptation will be the sole intervention necessary. Sometimes this is because someone's needs are at a low level and only a small amount of help, adaptation or monitoring is required. The need for the public sector in Scotland to provide support will also be less when informal care is provided by a partner, child or other relatives or friends (Tinker *et al*, 2001). If needs are higher and a carer or carers are not present, the likelihood that significant support and health care needs can be managed *solely* through PSS decreases. At levels of need that theoretically require sheltered housing, extra care housing or residential care, keeping someone independent in their own home may require a package of support. A net financial saving from keeping someone with higher needs independent in their own home only occurs for the public sector in Scotland if the package of support they receive is less expensive than specialist housing or residential care.
63. The morbidity of old age varies in that poorer people in Scotland will tend to experience debilitating physical illness earlier on in their retirement than more affluent people and are likely to live shorter lives. However, all people *generally* experience an ongoing deterioration in physical health as they age, i.e. any group of people are likely to be less well at 75 than they were at 65. Costs are therefore unlikely to be static for older people as a group, i.e. one PSS intervention may quite often need to be followed by another. The mortality rate is also important, in that the longer someone lives, the extent and number of PSS interventions required might increase. Equally, many older

people also still die quite suddenly, without using care and support services, or at least not using them for very long (Audit Commission, 2004).

64. Table 2 provides some comparative estimates of the costs of supporting older people with different levels of support need in different settings. To allow comparison of the costs that the public sector in Scotland could potentially be bearing, this table assumes that the older people in these examples have limited independent income, i.e. their savings are limited and they rely on the State pension and on other benefits. Older people with significant income can of course opt to buy in whatever care and support they may want, subject to what they can afford.
65. In addition, Table 2 assumes that these older people have no source of reliable unpaid care, i.e. they are without a carer. If older people have carers, the costs for the public sector in Scotland will be lower (Tinker *et al*, 2001). This applies to older people in their own homes and also to older people in ordinary sheltered housing. This is because ordinary sheltered housing residents without carers who have higher needs may require external support services, such as social work department funded home care. Costs for extra care housing and for residential care would remain constant, regardless of the presence of carers, as these services are often designed to be much more comprehensive.
66. As noted at various points in the discussion above, Table 2 assumes that PSS will not always function in isolation, particularly as support needs become more significant. Services like floating support and telecare can function in isolation, but personal care and clinical services will increasingly be required if someone's health deteriorates. This links to a general point which has often been made about the provision of care and support to an older person at home, which is that once a high enough level of need is reached, costs can match - or indeed exceed – those for specialist housing or residential care services (Curtis, 2010). Note that while services like extra care housing and residential care are designed to be comprehensive, they will still have some external service inputs, e.g. GP visits.
67. Costs for hospital services are not included in Table 2. This is because these are no longer valid as a directly comparable cost in the way that was the case 20-25 years ago. Long stay hospitals, the former 'geriatric' wards, were replaced by alternatives for older people with high levels of physical health problems and disability under Community Care. Use of long stay wards for older people with dementia does still occur but is reserved for the most chronic cases. Most older people with dementia in Scotland are monitored and supported in the community by social work services, housing support services, GPs and by carers. Costs for hospital beds are very high, a median

cost of £422 per *day* (£2,954 per week) according to PSSRU estimates for 2010, with a higher rate for specialist services like dementia wards or units.

Table 2: Model examples of approximate comparative **weekly** average costs based on estimates for an older person living on state pension and benefit

Level of need	Support in own home	Sheltered housing	Extra care housing	Residential care
Some help to enhance independence and monitoring required but no care needs	Telecare (monitoring) – two grab rails and shower installed over bath	Sheltered housing services	May be <u>ineligible</u> unless condition set to deteriorate	Likely to be <u>ineligible</u>
Estimated costs	£14 - £22 (£36)	£169	£360	£475
Disability or long term limiting illness requiring some assistance with mobility	Telecare (monitoring) -floating support service (1 hour) – stair lift	Sheltered housing services	May be <u>ineligible</u> unless condition set to deteriorate	Likely to be ineligible
Estimated costs	£14 - £10 - £51 (£75)	£169	£360	£475
Physically frail person with personal care needs and limited mobility	Telecare (monitoring) – floating housing support services (1 hour) –adapted bathroom and stair lift – home care (3 hours)	Sheltered housing services plus floating support (1 hours) and home care (3 hours)	Extra care able to manage level of physical need that previously required residential care	Residential care service. Able to manage most pronounced physical needs.
Estimated costs	£14 - £10 - £203 - £64 (£291)	£169 - £10 -£64 (£243)	£360	£475²
Intensive support needs including poor physical health, limited mobility and dementia	Telecare (monitoring) – floating housing support services (3 hours) –adapted bathroom and stair lift - home care (10 hours) – weekly visit from community nurse	Sheltered housing services (monitoring) plus visits from home care (10 hours) and weekly visit from community nurse	Extra care housing services providing monitoring, support and care.	Specialist residential care for older people with dementia. Able to manage and support people with highest levels of need, which <i>may</i> not be practical in other settings.
Estimated costs	£14 - £30 - £203- £214 - £27 (£488)	£169 - £214 - £27 (£410)	£360¹	£845

(Sources: Bäumker *et al*, 2008; Curtis, 2010; Newhaven Research, 2010) ¹ Based on costs to the public sector of an older person eligible for Housing Benefit entering extra care according to Bäumker *et al*, 2008 ² Based on average costs for voluntary sector run care home (Curtis, 2010). The table assumes presents total cost of adaptations per week over one calendar year, whereas duration of use may be greater than one year, reducing this weekly cost. Please note that the costs in the table relate to the costs of each separate element in the cell above with the total cost being shown in **bold**.

Conclusions

- Data on the costs of low-level support services are often limited in respect of Scotland and also in respect of comparable countries.
- It is problematic to ascribe 'typical' costs to preventative support services because those interventions can vary considerably in their nature and intensity.
- Low-level support services such as improvements to an older person's home, adaptations and telecare will often not be used in isolation. These preventative support services are often part of a package of health, social work and other preventative support services, especially for older people with higher needs who might be at heightened risk of hospital admission, a need for residential care or extra care housing. This means calculation of any net savings compared to institutional care or specialist housing must take account of the total cost of a package of support of which preventative support services are just one part.
- Cost data are often estimates based on assumptions about the situation if preventative support services were not provided. For example, costs are projected on the basis that a given proportion of older people would, if adaptations had not been installed, have experienced falls in their own homes and that a given proportion of those falls would have sustained debilitating effects.
- While data are limited, it appears to be the case that the potential cost savings that can result from employing PSS are centred on enabling independence among older people with low support needs. PSS can also prolong independent living among those with support needs who might otherwise require a move to specifically designed housing settings, such as sheltered housing. Cost benefits may be less pronounced when physical health and mobility deteriorate to a point at which extra care housing or residential care might be employed as PSS are likely to be one part of a package of care and support. When an older person develops dementia, PSS are also likely to be one part of a package of services to enable someone to remain living at home. When health and support needs become very pronounced, the cost of supporting an older person in their own home may in some instances exceed the costs of residential care or extra-care housing.
- Evidence on the cost effectiveness is stronger in some areas of activity, i.e. telecare, adaptations and Handyperson services than it is

for floating housing support services. Some reviews and studies have noted that the general evidence base for all these services is in some need of improvement. Bearing this caveat in mind, the evidence suggests that a number of benefits can be associated with PSS services. These include cost offsets producing tangible savings to health and social work budgets and enhancements to quality of life of older people. Alongside this, PSS can also improve the quality of life of partners and children who act as carers for older people.

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