The economic value of older people's community based preventative services

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1. Summary and key findings

Following eight years' of operation, Dorset Partnership for Older People Projects (POPP) has commissioned some research to consider the economic value of their community led preventative approach to working with older people. As well as improving the quality of life of older people in Dorset, Dorset POPP projects also aim to save public costs by preventing use of health services, hospital use and residential care.

Reviewing the evidence

A review of the research which has looked at the economic value of comparable preventative projects and services in the UK was conducted. Because of the scarcity of evidence on economic value, a broad approach to economic evaluation was adopted and studies which have undertaken cost-effectiveness, cost-benefit analysis and Social Return on Investment (SROI) analysis have all been included. Although the evidence in general is relatively limited, overall it suggests that:

- The approaches that Dorset POPP takes - partnership working, signposting, multi-agency referral and low-level community interventions - provide economic value in terms of efficiency and the prevention of health and social care costs.
- Community programmes to encourage physical exercise for older people provide economic value through preventing the costs of treating physical health problems, and are cost-effective compared to other interventions.
- Community led approaches to falls prevention can provide economic value through preventing hospital admissions and other health and social care costs. As well as providing economic value, preventing falls provides important social value in terms of improving quality of life.
- Community initiatives which provide practical adaptations and repairs represent economic value by enabling older to people remain in their homes and avoiding or delaying the need for residential care and hospital admissions. The evidence suggests that this type of initiative is cost-effective.
- Although there is some evidence to suggest that community led initiatives to prevent social isolation may reduce public costs by preventing the need for treatment for mental health issues, there is a need for more research in this area.

Although some of the evidence is mixed or inconclusive, the overall picture is that community based preventative services for older people are cost-effective and provide a cost-benefit in terms of every £1 invested preventing health or social care costs.

Dorset POPP costs and benefits

The approaches taken by the more robust studies reviewed were applied to contact monitoring and costs data from some of the Dorset POPP projects - the Wayfinder Programme, the Community Initiatives Commissioning Fund (CICF), Safe And Independent Living (SAIL) multi-agency referral scheme and the 'Sloppy Slipper' falls prevention scheme. Based on the figures available it is estimated that:

If Wayfinders' interventions prevented…

- …at least 82 of the 11,373 contacts made in the outcome area of addressing social isolation (0.72% of these contacts) needing GP treatment for mental health problems, the investment would represent value for money.
- …at least 4 of the 11,373 contacts made in the outcome area of addressing social isolation (0.04% of these contacts) going into residential care for 12 months, the investment would represent value for money.
- …at least 2 of the 6,204 contacts made in the outcome area of good health and mind (0.03% of these contacts) avoiding a fall resulting in hip fracture, the investment would represent value for money.
- …at least 18 of the 6,204 contacts made in the outcome area of good health and mind (0.29% of these contacts) needing treatment for diabetes for a year, the investment would represent value for money.
- …at least 2 of the 5,514 contacts made in the area of having housing suitable for needs (0.04% of these contacts) going into residential care for 12 months, the investment would represent value for money.

If attending a CICF group prevented…

- …at least 1 person who attended a group aimed at reducing social isolation (0.27% of those attending) going into residential care for 6 months the investment would represent value for money.
- …at least 2 people who attended a group aimed at promoting physical exercise (1.16% of those attending) needing treatment for diabetes for a year, the investment would represent value for money.

- For every £1 spent by the CICF on groups to prevent social isolation, an estimated £1.19 in health care costs is prevented. If quality of life is included, every £1 spent by the CICF on groups to prevent social isolation provides a total social value of £13.82.

£8000 investment in SAIL could prevent…

- …£25,267 in additional referral costs for partner organisations over a year. For every £1 invested in SAIL a further £3.15 may be saved in further referral costs.

If the 'sloppy slipper' events prevent…

- …at least 1 person (0.03% of the 3,000 people who received slippers) falling and fracturing their hip, the intervention represents value for money.

Conclusions and implications for Dorset POPP

Both sections of this report suggest that the community based preventative approaches that Dorset POPP takes provide economic value in preventing health and social care costs. However, it also emerged that there is a lack of evidence in this area and a need for further research. It should be highlighted that as public spending cuts continue to take effect organisations such as Dorset POPP are likely to find increasing demands on them to demonstrate their economic value. As such, the need to collect the data to be able to demonstrate economic value, as well as value in terms of improving the lives of older people, is likely to become increasingly important.

2. Introduction and background

Following eight years' of operation, Dorset Partnership for Older People Projects (POPP) has commissioned some research to consider the economic value of their work. While very thorough evaluation work over the last eight years has clearly demonstrated the value of Dorset POPP in terms of improving the lives of older people, there is an increasing need to demonstrate evidence of economic value. Part of the rationale behind the national POPP pilot scheme was to promote independence and prevent or delay the need for higher intensity or institutional care; as well as improving the quality of life of older people in Dorset, Dorset POPP projects also aim to save costs by preventing use of health services, hospital use and residential care.

This report contains two sections which start to address the need for evidence of the economic value of Dorset POPP. The first section reviews the evidence of research which has looked at the economic value of comparable preventative projects and services in the UK, in order to gauge the evidence base for the broad approaches taken by Dorset POPP. The second section draws on some cost-benefit and cost-effectiveness approaches taken in the existing research and applies it to contact monitoring and cost data from Dorset POPP to consider the economic value of Dorset POPP's community led preventative approach. Both sections were carried out between October and December 2013.

Dorset POPP background

The Partnership for Older People Projects were established by the Department of Health in 2005, with the aim of encouraging local councils to work in partnership with the NHS and voluntary, community and independent organisations to improve the health, wellbeing and independence of older people. Dorset POPP was one of the 29 national pilots which started in 2006 and is now funded by Dorset County Council and NHS Dorset Clinical Commissioning Group. Dorset POPP is a partnership between Dorset County Council, NHS Dorset, the third sector, and older people. It is described as being 'community facing' and is a complex and ambitious person centred programme, led by the needs, desires, and aspirations of Dorset's older people.

Eight desired outcomes have been created to enable Dorset POPP to achieve the vision 'to build supportive communities to enable older people to remain living in their own homes

for as long as they wish'. The eight desired outcomes of Dorset POPP are that older people in communities…

…have housing suitable for individual needs
…are socially integrated and not isolated
…are making a positive contribution and experiencing fulfilment as a result
…feel secure and safe
…feel free from discrimination
…feel financially secure
…are in good health in mind and body
…have dignity, choice and control throughout their life, especially towards the end

The focus in this report is on projects which deliver direct services or provision for older people. In particular, the following elements of Dorset POPP's work are referred to:

- **Wayfinder Programme** – 66 paid part time staff work to provide signposting and support relating to any service that affects older people. The Wayfinders provide information on: welfare benefits and pensions, social activities, exercise opportunities, transport, toe nail cutting, telecare, carers' issues, lunch clubs and coffee mornings. Wayfinders are accessible in GP practices, libraries, shopping centres and forum meetings.
- **The Community Initiatives Commissioning Fund (CICF)** – The fund is available to 'seed fund' local initiatives that have been identified by older people. To date over 350 new initiatives have been funded. Funded projects include: lunch clubs, table tennis clubs, computer classes, Dial a Ride, Neighbour Care, First Responders, exercise equipment, exercise classes, memory cafés, and carers support activities.
- **Safe And Independent Living (SAIL)** – SAIL provides access to information, services, and support which ensure preventative measures, and promote health and well-being. SAIL provides a multi-agency referral approach to enabling access to signposting, support, and services. SAIL partner agencies complete a short referral form with clients that they encounter identifying which services, support or information clients would like to access. The referral form is sent into the hub organisation (Age UK Dorchester) who generate referrals to each partner agency required to carry out an action. Dorset POPP is the lead for, and part funds the SAIL service.

The meaning of effectiveness and economic evaluation

Knapp et al (2012) highlight that while the overarching intention of a social care system is *effectiveness* (for example to improve well-being) the aim of *cost-effectiveness* (to achieve

better outcomes from given resources) runs alongside it (Knapp et al, 2012). While in depth evaluation of Dorset POPP work over the past eight years, including over a thousand 'outcome stories', has produced clear evidence of effectiveness in improving the well-being and quality of life of older people, there is an increasing need to also demonstrate economic value. The purpose of this report therefore is to focus on *economic* value and effectiveness as opposed to value and effectiveness in general.

Cost-effectiveness analysis and cost-benefit analysis are two distinct forms of economic evaluation used in social care (Sefton, 2000). 'The Green Book' which is HM Treasury's guidance for public sector bodies on committing public funds defines **cost-effectiveness analysis** as:

> "Analysis that compares the costs of alternative ways of producing the same or similar outputs" (HM Treasury, 2003, p101)

In the evaluations outlined in this report, cost-effectiveness studies usually measure how cost-effective the project or service is compared to 'usual care' or provision.

'The Green Book' defines **cost-benefit analysis** as:

> "Analysis which quantifies in monetary terms as many of the costs and benefits of a proposal as feasible, including items for which the market does not provide a satisfactory measure of economic value" (HM Treasury, 2003, p101)

Although cost-benefit analysis can be used to make comparisons to other services or provision, in the evaluations outlined in this report it is generally adopted to demonstrate the potential savings of preventative work in comparison to the amount invested in the preventative work. For example, every £1 invested, saves £2 in health or social care costs.

Social Return on Investment (SROI) is a type of cost-benefit analysis developed with the support of the Cabinet Office and the Scottish Government to measure social, economic and environmental value of an organisation's activities. SROI places a monetary value on outcomes including social outcomes, so that they can be compared with the investment made. As with cost-benefit analysis this results in a ratio of total benefits to total investments (Nicholls et al, 2012). SROI follows an in-depth six stage framework for measuring value which requires a vast amount of detailed information, and consultation with stakeholders of the organisation. While some of the studies included in this review apply a monetary value to social value (such as quality of life), only a few strictly apply the SROI framework.

3. Reviewing the evidence

The aim of this section is to provide an overview of the existing research and evidence of the economic value of community led preventative work comparable to the kind of work carried out by the Wayfinders programme, SAIL and projects funded by the CICF.

Scope

This review was desk-based and utilised online literature search engines (primarily National Database for Ageing Research and Google Scholar), a University bibliographic database and website searches. This report includes both peer reviewed academic publications and grey literature, and includes original research and reviews of evidence. The search was restricted to the evidence within the following criteria:

- Studies which focus on economic value, in particular cost prevention
- Community led approaches (as opposed to clinical or social care interventions)
- Services or programmes for older people aged 50 and over
- Research or reviews undertaken in the last 10 years
- UK based studies (though some evidence reviews refer to evidence beyond the UK)

The first part of this section looks at the economic value of projects, services or programmes which operate in a broadly comparable way to Dorset POPP or elements of Dorset POPP. The second part of this section focuses on the economic value of projects which address three of the eight desired outcomes that most of Dorset POPP's work addresses[1]:

- that older people in communities are socially integrated and not isolated
- that older people in communities are in good health in mind and body
- that older people in communities have housing suitable for individual needs

While there is a considerable amount of research on the *effectiveness* of comparable projects on well-being, quality of life and prevention, this scoping review has revealed that there is relatively little evidence of *economic value*. Reviews of evidence highlight the

[1] Based on monitoring of the outcomes from more complex Wayfinders interventions

scarcity of evidence of cost-effectiveness, and studies which have attempted to measure economic value have stressed the great difficulties in quantifying the impact of preventative work. Because of the scarcity of evidence on economic value, a broad approach to economic evaluation has been adopted and studies which have undertaken cost-effectiveness, cost-benefit analysis and SROI economic evaluations have all been included.

i. Comparable programmes or approaches

This section reviews the research on broadly comparable community led preventative interventions including signposting, multi-agency referrals and low-level community based interventions.

National POPP evaluation

Although each of the 29 POPP pilot sites operated different programmes and services, they shared the same objective to promote independence and prevent or delay the need for higher intensity or institutional care, and the same broad approach to community led preventative work. A national evaluation was conducted to look at the impact on costs over all of the 29 pilot sites (Windle et al, 2009). A sample of POPP service users' use of health and social care services was measured before and after their involvement in the POPP programme. It found that overall, hospital overnight stays reduced by 47 per cent and use of Accident & Emergency Departments reduced by 29 per cent. There was an average cost reduction for physiotherapy, occupational therapy and clinic or outpatient appointments of £2,166 per person using POPP services over six months. Comparing the use of hospital emergency beds in POPP pilot areas to non-POPP pilot areas, the national evaluation found that for every extra £1 spent on the POPP services, there was approximately a £1.20 additional benefit in savings on emergency bed days (Windle et al, 2009). However, these particular findings should be treated with caution as a more in depth examination of eight interventions that formed part of the POPP initiative found that when compared to matched control patients, there was no evidence of a reduction in emergency hospital admissions associated with any of the interventions (Steventon et al, 2011). The cost-effectiveness evaluation of POPP projects as a whole across all project categories found that there was an 86 per cent probability that they were cost-effective compared with 'usual care' (Windle et al, 2009).

Signposting and multi-agency referral

A significant proportion of Dorset POPP's work (through Wayfinders and SAIL) involves signposting and multi-agency referrals. LinkAge Plus was a £10 million scheme funded by

the Department for Work and Pensions to promote the well-being of older people and tackle social exclusion. It is broadly comparable to POPP programmes in its emphasis on preventative services and its focus on encouraging statutory and voluntary organisations to work together, joining up services, improving referrals and facilitating services (such as falls prevention). A business case review of LinkAge Plus looked at the potential for delivering benefits to the individual and to the taxpayer (Watt and Blair, 2009). Based on a multi-agency referral service in Nottingham, they estimated that the overall holistic approach to service delivery generated a saving to the taxpayer of £1.80 per £1 invested over five years as a result of reducing the need for additional referrals. Combining the costs and benefits of a multi-agency referral service with the costs and benefits of some of the services facilitated by LinkAge Plus (a fire prevention service, an exercise class, a crime reduction scheme and a falls prevention service) increases the net value to £2.65 benefit to the taxpayer per £1 invested. In addition to taxpayer savings, benefits to older people were monetised at £1.40 per £1 invested. Overall they conclude that the net value for society per £1 spent was just over £4.

Low-level community intervention

While much of the Wayfinders' work involves signposting, a proportion of their work involves interventions of a more complex nature which often requires a home visit. A study by Knapp et al (2012) reviews the estimated costs and consequences of community navigator initiatives which provide sign-posting and low-level support in relation to debt and housing problems. Although the initiatives they review were not specifically targeted at older people they are broadly comparable to some of the more complex work carried out by the Wayfinders. The cost of low-level debt and housing interventions were measured against reduction to public costs, and a net economic benefit was found in both types of intervention. When quality of life for the service user valued in monetary terms was included the economic benefit increased further. Although the nature of the interventions, in particular the housing interventions, are likely to be different for older people, this research highlights the potential for similar community capacity-building initiatives to produce economic benefits "Our findings suggest that there could be savings to the public purse when investing in relatively low-cost community capacity-building initiatives. Each initiative we looked at generated net economic benefits in quite short time periods."(Knapp et al, 2012, p327). An assessment of the value of preventative support provided by the British Red Cross to older people through home visits, practical help and linking in to other services estimated a minimum return on investment of over three and a half times the cost of the service. In case studies of five service users they estimated that the support delivered savings in terms of preventing health and social care costs of between £700 and £10,430 per person, against costs of between £90 and £330 (British Red Cross, 2012).

Summary

Overall the evidence suggests that the approaches that Dorset POPP takes - partnership working, signposting, multi-agency referral and low-level community interventions - provide economic value in terms of preventing health and social care costs.

ii. Desired outcomes

This section looks at the evidence for particular initiatives which target the three main desired outcomes that Dorset POPP's work addresses.

Desired outcome: older people in communities are socially integrated and not isolated

33% of the more complex interventions that the Wayfinders undertake come under the outcome area of addressing social isolation which includes linking in to befriending services and social activities. A high proportion of the CICF is allocated to fund lunch clubs and social clubs. This section reviews the evidence of projects which are focused on promoting social integration and addressing social isolation.

Social isolation

Several reviews have highlighted the very limited evidence of the economic value of reducing social isolation. Windle et al (2011) looked at peer reviewed papers reporting effectiveness and cost effectiveness of services aimed at preventing social isolation and loneliness since 2000. They searched for papers on one-to-one interventions (including befriending, mentoring, gatekeeping), group services (including day centres, lunch clubs, social groups) and wider community engagement (which support individuals to access existing services). They found that none of the studies included an analysis of cost-effectiveness. Limited cost data were provided in two papers but only one was UK based. Windle et al conclude that where the evidence exists one-to-one interventions such as befriending and Community Navigators appear to be cost-effective when compared with 'usual care' but they conclude "There is an urgent need for more longitudinal, randomised controlled trails that incorporate standardised quality-of-life and cost measures." (p1). Similarly, Watt and Blair (2009) found no studies that monetised the benefits of reducing isolation.

However, research on the outcome of some individual projects suggests that social isolation projects may prevent health or social care costs. The national evaluation of POPP pilots found there was a decrease of £30.16 per person in GP and outpatient costs for those who used well-being, emotional or social isolation projects (Windle et al, 2009). One report suggests that community based projects aimed at addressing social isolation, comparable to those funded by the CICF, offer a cost-effective alternative to traditional social care services (Centre for Policy on Ageing, 2011). An example given was the Reaching the Isolated and Elderly (RISE) project which tackles isolation and social exclusion amongst older people by providing activities including art, bingo, music for all, chair-based exercises, quizzes, films, outings to places of interest, and pub lunches. In 2010 the local authority paid £58.26 for 40 people a day to attend the Specialist Day Service compared to just £10.45 a day for 40 people to attend RISE, potentially saving the local authority £198,889 a year (Centre for Policy on Ageing, 2011). Although the project was not specifically for older people, an SROI analysis carried out by the University of York on the East Riding Coastal Health Improvement Programme which aimed to reduce social isolation and improve lifestyle estimated a SROI of £27.66 to £1 invested. Total costs of £1,400 (for room hire) were compared to estimated impact of the interventions of £38,724 (in avoided outpatient clinics for mental health, reduction in obesity and avoided cost of GP appointments) (Hex and Tatlock, 2011).

Befriending

One review looks specifically at the evidence of the effects of befriending on depressive symptoms (Mead et al, 2010). Reviewing studies in all languages between 1980 and 2008 it found that of the 24 studies identified only three reported on cost-effectiveness and only one study (which was on older people in the Netherlands) suggested that befriending had a reasonable chance of being cost-effective. Knapp et al's (2012) study referred to above also looked at the economic case for a befriender service. The average (mean) cost of providing the befriending intervention was £90, compared to an estimated reduction in public sector cost (based on reduction in service use when symptoms of depression are reduced) was £38. It was only when quality of life improvements as well as potential savings to the NHS are considered that there was a net economic benefit.

Summary

Although there is some evidence to suggest that community led initiatives to prevent social isolation may reduce public costs by preventing the need for treatment for mental health issues, there is a need for more research in this area.

Desired outcome: older people in communities are in good health in mind and body

18% of the more complex interventions that the Wayfinders undertake come under the outcome area of good health in mind and body which includes physical exercise and falls prevention. A proportion of the Community Initiatives Fund is allocated to projects or initiatives which encourage physical exercise. This section reviews the evidence of similar services.

Well-being

A systematic review on the data on the costs and cost-effectiveness of public health interventions to promote mental well-being in older people highlights the limited cost-effectiveness analysis which has been conducted (Windle et al, 2007). A systematic search of 21 data bases and 11 websites to identify evidence, published between January 1993 and February 2007, of the effectiveness or cost-effectiveness of interventions to promote mental well-being in later life (including exercise, health promotion, psychological intervention, computer use, gardening interventions, support groups and volunteering interventions) found just two studies which looked at cost-effectiveness. Only one (on exercise) was UK based (see Munro et al, 2004 below). Another systematic review was conducted to determine the extent to which an economic case has been made in high income countries for investment in interventions to promote mental health and well-being, including those for older people. The measures targeted at older people included exercise, singing, befriending, social activity, group activity and visiting services. 7 of the 10 studies which looked at programmes for older people found the programmes to be cost-effective (McDaid and Park, 2011). The only UK study for older people which was found to be cost-effective was again Munro et al's (2004) study.

Physical health and exercise

Munro et al's (2004) study was a randomised trial of free twice weekly exercise classes for older people. The evaluation found that the programme was more cost effective than many existing medical interventions, and would be practical for primary care commissioning agencies to implement (Munro et al, 2004). The authors conclude "Such a programme would be a practical, affordable, and popular investment for local healthcare commissions." (p1008). The cost-effectiveness element of the POPP pilot national evaluation found that there was 99 per cent probability that physical health and well-being projects (e.g. exercise at home course, Tai Chi classes) were cost-effective compared with 'usual care'. The national evaluation of POPP pilots also found that for people using physical health and well-being projects there was a £126.33 decrease in outpatients cost

per person (Windle et al, 2009).

A review of the evidence of the cost-effectiveness of older people lay-led community health programmes (including physical activity and walking programmes, blood-pressure, weight loss and cardiovascular programmes, and falls prevention programmes) identified just one cost-benefit study (Woodall et al, 2012). The study referred to by Woodall et al is a review of the Altogether Better project - a five year project which started in 2008 with an aim to empower communities to improve their health and well-being. SROI analysis of 15 case studies were undertaken, two of which were older people's projects (Hex and Tatlock, 2011). 'Bradford Seniors Show the Way' encourages and empowers older people to become involved in a range of well-being activities. The cost of the project was £483 and the estimated impact of the interventions (calculated by avoided cost of diabetes, obesity and cardiovascular disease) was £54,291. They calculated that for every £1 invested £112.42 of social value would be generated. 'Older and Active in Leeds' empowers members of the city's older generation to live healthier, more active lives – including through dancing, walking, static exercise, dietary and cooking groups. The cost of the project was £941. The estimated impact of the interventions was £7,938 (calculated by avoided cost of obesity, cardiovascular disease and diabetes). They calculated that for every £1 invested £8.43 of social value would be generated (Hex and Tatlock, 2011).

Summary

The evidence that exists suggests that community programmes to encourage physical exercise for older people provide economic value through preventing the costs of treating physical health problems, and are cost-effective compared to other interventions.

Falls prevention

A randomised controlled trial compared a community falls prevention service with usual care from NHS and personal social services for those who had called an emergency ambulance after a fall (Sach et al, 2012). The study found that those referred to a community falls prevention service experienced 5.34 fewer falls over 12 months. The community falls prevention service was found to be cost-effective - both saving cost and reducing falls. The national evaluation of POPP found that there was a 99 per cent probability specialist falls programmes were cost-effective compared with 'usual care' (Windle et al, 2009). However, the national evaluation also found that while there was a reduction in physiotherapy appointments at a saving of £25.45 per person for people using

specialist falls programmes, there was also an increase in visits to practice nurses which meant that there was an overall £4.98 increase in costs.

The business case evaluation of LinkAge Plus carried out a cost-benefit analysis of falls prevention services through Tai Chi classes and adaptations. Based on evidence which suggests that 15 weeks of balance classes such as Tai Chi reduces the likelihood of falling by around 50 per cent, they calculated that every £1 spent on balance classes yields health and social care savings of £1.35 to the taxpayer and an additional £0.90 from improved longevity and quality of life for the participant. Based on evidence which suggests a reduction in falls of between 55 and 60 per cent through the provision of adaptive equipment and minor home safety modifications, they calculated that an average net cost of adaptation of £67 could yield expected benefits to the taxpayer of £74 from reduced healthcare spending, and £40 to participants in terms of quality of life (Watt and Blair, 2009). A report on how local authorities with less money can support better outcomes for older people looks at examples of how low-level interventions that support health, well-being, social engagement and independence of older people can reduce public spending costs. One of the interventions reviewed was a Tai Chi class in Rochdale as a falls prevention strategy. The total cost of health and social care services used by the group (11 people) reduced by £1,535.60 over three months from a total cost of £4,029.20 to a total cost of £2,493.60, with a mean cost per person of £226.69. The bulk of this was accounted for by reduced A&E visits including calling an emergency ambulance with paramedic unit (Centre for Policy on Ageing, 2011). In reviewing the evidence of the cost implications of investment in housing adaptations, improvements and equipment Heywood and Turner (2007) calculate that the average cost to the State of a fractured hip (£28,665) is 4.7 times the average cost of a major housing adaptation and 100 times the cost of fitting hand and grab rails to prevent falls.

Summary

Most of the evidence suggests that community led approaches to falls prevention can provide economic value through preventing hospital admissions and other health and social care costs. As well as providing economic value, preventing falls provides important social value in terms of improving quality of life.

Desired outcome: older people in communities having housing suitable for individual needs

16% of the more complex interventions that the Wayfinders undertake come under the outcome area of housing which includes referrals to services which provide practical adaptations, assistive technologies and home and garden maintenance and improvements. This section reviews the evidence of similar services.

Practical adaptations and repairs

A paper by Lansley et al (2004) draws on a three year study into the costs and outcomes of adapting the existing homes of older people and introducing assistive technologies. It includes looking at the cost of adaptations and the extent to which these could substitute for and supplement formal care in terms of cost. Seven 'typical' user profiles were created representing users with a range of disabilities and needs. For all user types except one who had the most severe disabilities, and all combinations of informal care alongside the adaptations and assistive technologies (AT), savings of between £10,000 and £27,000 over ten years were made. They conclude:

"Except for extreme cases, the provision of adaptations and AT combined with formal care to older people in their own homes is much less costly than residential care, and for many other reasons distinctly preferable." (p481)

Care & Repair Cymru offers support to older people to help them to carry out home improvements including home renovation and adaptations, managing building work and advice on reputable contractors. Based on a conservative assumption of preventing 2.5 per cent of the 48,492 Care & Repair clients going into residential care, they estimate an annual saving of £26.37 million in residential care costs. Care & Repair's Rapid Response Adaptations Programme (RRAP) provides minor improvements that are needed to allow people to return home after hospital or to prevent future admissions. Based on a conservative assumption that 10 per cent of the 15,473 RRAP cases directly lead to quicker discharge or admission prevention, they estimate it could make a total cost saving to the health and social care sector of £15 million. This equates to £7.50 saving for every £1 invested (Care & Repair Cymru, undated). The cost-effectiveness analysis of the national evaluation of POPP pilots found that there is a 99 per cent probability that practical well-being projects (e.g. 'handyperson' services, home security, volunteer driver scheme, gardening service) are cost-effective compared with 'usual care' (Windle et al, 2009).

The Food Train is a grocery shopping, befriending and household support service for older people in Dumfries and Galloway. Part of its preventative services aim to address the

difficulty older people face staying in their homes through its 'EXTRA' service for odd jobs around the home. The review highlights potential costs saved through prevention and concludes:

"Its economic value in delaying the onset of higher-cost care packages is highly significant, and is in line with current Government policy on meeting the challenge of an ageing population which is living longer though unhealthier lives." (p4) (Lacey, undated).

Summary

Overall the evidence suggests that community initiatives which provide practical adaptations and repairs represent economic value by enabling older to people remain in their homes and avoiding or delaying the need for residential care and hospital admissions. The evidence suggests that this type of initiative is cost-effective.

Conclusion

Although the amount of evidence is relatively limited, the overall picture is that most of the evidence that exists suggests that multi-agency referrals, signposting, and low-level community based interventions are a cost-effective way of operating or provide a cost-benefit in terms of every £1 invested preventing health or social care costs. Similarly the evidence that exists broadly indicates that community based projects addressing social isolation, housing need and good health – including social clubs and groups, exercise classes, home repairs and adaptations and falls prevention - are cost-effective, or provide a cost-benefit in terms of every £1 invested preventing health or social care costs.

While the quality of these studies is varied, the more robust of the studies included in this report (e.g. Knapp et al, 2012, Hex and Tatlock, 2011, Watt and Blair, 2009) have used conservative estimates and therefore may underestimate the true economic value. Furthermore most studies only quantify certain outcomes of the intervention - for example the cost-benefit analysis of Tai Chi classes in the Centre for Ageing review only measured the cost benefit of preventing falls - but they may also improve health and fitness, and reduce social isolation, preventing additional costs of treating health and mental health issues. It is possible therefore, that these studies may underestimate both the extent and the scope of the economic value of preventative community led approaches.

4. Dorset POPP costs and benefits

The evidence review has shown that overall the evidence which exists suggests that community led preventative approaches similar to those taken by Dorset POPP represent economic value in preventing health and social care costs. This section builds on some of the approaches taken by the more robust studies reviewed and applies them to contact monitoring and costs data from Dorset POPP to consider the economic value of Dorset POPP's work. While an in-depth cost-benefit analysis such a full SROI analysis would be valuable, it requires significant amount of time, resources and data to undertake effectively. In the absence of such resources this section combines simple cost-benefit analyses where the data allows, with an approach which considers how many (e.g. falls, episodes of physical or mental ill health) would need to be prevented by the Dorset POPP intervention for the investment to represent value for money. The prevented cost figures included in this section have been based on costing carried out by the more robust studies reviewed and an explanation for them can be found in the appendix. As the Dorset POPP costs and monitoring data have primarily been available in summarised or overall figures some assumptions have been made about how these may be broken down into the different outcome areas. As a result the calculations in this section should be treated as estimates of the potential economic value.

i. Wayfinders

This section considers the potential costs prevented as a result of the Wayfinders' interventions. It should be highlighted that the majority of the contacts that the Wayfinders make are signposting to other organisations and services, and that these services and organisations themselves have costs. It should also be recognised that some of the people would have found the service without the help of the Wayfinders. However, in the absence of the Wayfinders' interventions many individuals would not have accessed services and programmes which prevent health and social care costs. The approach therefore in this section is to consider how many (e.g. falls, episodes of physical or mental ill health) would need to be prevented by the intervention of the Wayfinders for it to represent value for money.

Between 1st June 2012 and 31st May 2013 the Wayfinders made 34,465 contacts at a total cost of £295,200. This represents a cost per contact of £8.57 (£295,200/34,465=£8.57).

In addition the Wayfinders undertook 6167 bits of work of a more complex nature that often required a home visit. These more complex contacts are monitored based on which of the eight desired outcomes they fulfil, and are distributed in the following way:

- Social integration – 2049 contacts (33% of the complex contacts)
- Good health and mind – 1117 (18% of the complex contacts)
- Housing – 967 (16% of the complex contacts)
- Dignity, choice and control – 956 (16% of the complex contacts)
- Financially secure – 679 (11% of the complex contacts)
- Free from discrimination – 255 (8% of the complex contacts)
- Feeling safe – 84 (1% of the complex contacts)
- Positive contribution – 60 (1% of the complex contacts)

If the distribution of contacts in general can be assumed to roughly reflect the proportion of more complex contacts, then we can estimate that:

- 11,373 contacts were in the outcome area of social integration (34,465x33%=11,373) at a cost of £97,416 (£295,200x33%=£97,416)
- 6,204 contacts were in the outcome area of good health and mind (34,465x18%=6,204) at a cost of £53,316 (£295,200x18%=£53,316)
- 5,514 contacts were in the outcome area of housing (34,465x16%=5,514) at a cost of £47,232 (£295,200x16%=£47,232)

Desired outcome: older people in communities are socially integrated and not isolated

Based on the assumptions made above, an estimated 11,373 Wayfinder contacts were made in the outcome area of addressing social isolation at a cost of £97,416.

Social isolation can lead to increased depressive symptoms. It costs an estimated £452 in additional GP costs per year to treat people with mental health issues and a course of Cognitive Behaviour Therapy (CBT) costs £750 (see appendix 1). The combined costs of additional GP time and a CBT course is £1202.

£97,416/£1202=81.04

Therefore if Wayfinders' interventions prevented at least 82 of the 11,373 contacts made in the outcome area of addressing social isolation (0.72% of these contacts) needing additional GP appointments and a CBT course due to mental health issues, the investment would represent value for money.

Lonely and socially isolated individuals are more likely to have early admission to residential or nursing care (Windle et al, 2011). The average cost of residential care is £522 per week (see appendix 2) and £27,144 a year (£522x52=£27,144).

£97,416/£27,144=3.59

Therefore if Wayfinders' interventions prevented 4 of the 11,373 contacts made in the outcome area of addressing social isolation (0.04% of these contacts) going into residential care for 12 months, the investment would represent value for money.

Desired outcome: older people in communities are in good health in mind and body

Based on the assumptions made above, an estimated 6,204 Wayfinder contacts were made in the outcome area of good health and mind at a cost of £53,316. Contacts under this desired outcome include those relating to falls prevention and exercise.

Falls prevention

It has been estimated that the hospital, ambulance, social care, GP, and outpatient costs of a hip fracture amount to £28,665 (see appendix 3).

£53,316/£28,665=1.86

Therefore if Wayfinders' interventions prevented 2 of the 6,204 contacts made in the outcome area of good health and mind (0.03% of these contacts) avoiding a fall resulting in hip fracture, the investment would represent value for money.

It has also been calculated that living without a fracture in terms of quality of life is valued at £13,830 (see appendix 3). If the social value is included, the total value for an intervention which prevents a person falling and fracturing their hip, can be monetised at £42,495 (£28,665+£13,830), increasing the value of Wayfinders further.

Exercise

The cost of treating diabetes has been estimated to be £3000 per year (see appendix 4)

£53,316/£3000=17.77

Therefore if Wayfinders' interventions prevented 18 of the 6,204 contacts made in the outcome area of good health and mind (0.29% of these contacts) needing treatment for diabetes for a year, the investment would represent value for money.

The cost of obesity to the NHS has been estimated to be £113 and the cost of treating cardiovascular disease has been estimated to be £250, per year (see appendix 4). The combined cost would be £363.

£53,316/£363=146.88

Therefore if Wayfinders' interventions prevented 147 of the 6,204 contacts made in the outcome area of good health and mind (2.37% of these contacts) needing treatment for obesity and cardiovascular disease, the investment represents value for

Desired outcome: older people in communities having housing suitable for individual needs

Based on the assumptions made above, an estimated 5,514 Wayfinder contacts were made in the outcome area of housing suitable for individual needs at a cost of £47,232. Contacts under this desired outcome include adaptations, alarms, assisted technologies, home and garden maintenance and improvements.

Many of these interventions are aimed at enabling people to stay in their own homes rather than go into residential care. The average cost of residential care is £522 per week (see appendix 2), and £27,144 per year (£522x52=£27,144).

£47,232/£27,144 = 1.74

Therefore if Wayfinders' intervention prevented at least 2 of the 5,514 contacts made in the area of having housing suitable for needs (0.04% of these contacts) going into residential care for 12 months, the investment represents value for money.

ii. Community Initiatives Commissioning Fund

Between April 2012 and March 2013 the CICF supported groups, projects and initiatives at a total cost of £29,137. In April 2012-March 2013, 907 people attended projects funded by CICF. Based on these figures the estimated average cost per person is £32.12 per person (£29,137/907=£32.12).

Desired outcome: older people in communities are socially integrated and not isolated

In 2012-13 thirteen groups with the broad aim of preventing social isolation were funded by the CICF including three film and activities clubs, a craft club, six lunch clubs, a choir and two wellbeing clubs. They received funding of between £250 and £1916 each. The total funding for these groups in 2012-13 was £11,894. This represents 41% of the total £29,137 spend of the CICF. An estimated 372 people will attend the groups funded in 2012-13 with the broad aim of preventing social isolation[2].

It has been estimated that interventions to reduce social isolation have a value of £38 per person in reduced health care costs and £404 per person in improved quality of life for each person (see appendix 5).

372 x £38 = £14,136

£14,136/£11,894 = 1.19

[2] It should be stressed that this is an estimate as the numbers attending the projects funded during 2012-13 is yet to be recorded (because there is a lag between a fund being awarded and the sessions occurring and being counted). Therefore three assumptions have been made to estimate these figures (i) that the total numbers attending sessions funded in 2012-13 will be similar to those attended in 2012-13 (ii) that attendance numbers are approximately proportional to the funding allocated (iii) that similar numbers of people attend all types of groups

Therefore for every £1 spent by the CICF on groups to prevent social isolation, an estimated £1.19 in health care costs is prevented.

372 x (£38+£404) = £164,424

£164,424/£11,894 = £13.82

If quality of life is included, every £1 spent by the CICF on groups to prevent social isolation provides a total social value of £13.82.

Another way to look at the value of groups to address social isolation is to consider how much treatment would need to be prevented for an intervention to be worthwhile in terms of costs prevented.

Social isolation can lead to increased depressive symptoms. It costs an estimated £452 in additional GP costs per year to treat people with mental health issues and a course of CBT costs £750 (see appendix 1). The combined costs of additional GP time and a CBT course is £1202.

£11,894/£1202=9.89

Therefore if through attending groups aimed at reducing social isolation 10 people (2.69% of those attending) are prevented from needing additional GP time and a course of CBT due to mental health problems, the investment represents value for

Lonely and socially isolated individuals are more likely to have early admission to residential or nursing care (Windle et al, 2011). The average cost of residential care is £522 per week or £13,572 for six months (see appendix 2).

£11,894/£13,572 = 0.88

Therefore if attendance at groups aimed at reducing social isolation delays 1 person (0.27% of those attending) going into residential care for 6 months the investment represents value for money.

It should also be noted that these calculations only take into account prevented health and social care costs and don't take into account the additional social benefits of the improvement of quality of life for the individuals who participate.

Desired outcome: older people in communities are in good health in mind and body

In 2012-13 three groups with the broad aim of promoting physical exercise were funded by the CICF including two rowing clubs and an allotment society. They received funding of between £1712 and £2000 each. The total funding for these groups was £5,597 in 2012-13. This represents 19% of the total of £29,137 spend of the CICF. An estimated 172 people will attend groups funded in 2012-13 with the broad aim of improving health[3].

The cost of treating diabetes has been estimated to be £3000 per year (see appendix 4)

£5597/£3000=1.87

Therefore if through attending groups aimed at promoting physical exercise 2 people (1.16% of those attending) are prevented from needing treatment for diabetes for a year, the investment represents value for money.

The cost of obesity to the NHS has been estimated to be £113 and the cost of treating cardiovascular disease has been estimated to be £250, per year (see appendix 4). The combined cost is £363.

£5597/£363=15.42

[3] See footnote 2 for explanation of assumptions made to make this estimate

Therefore if through attending groups aimed at promoting physical exercise 16 people (9.30% of those attending) are prevented from needing treatment for obesity and cardiovascular disease, the investment represents value for money.

It should also be highlighted that attending these groups has the additional benefits of preventing or reducing isolation and the costs that can be prevented through this as demonstrated above. Furthermore this only takes into account prevented health care costs and doesn't take into account the additional social benefits of the improvement of quality of life.

iii. Safe And Independent Living (SAIL)

In 2012-13 SAIL received 329 referrals in from partner organisations and made 1131 referrals out to organisations and services. On average for every referral in, a further 3.4 referrals out are made (1131/329=3.4).

The SAIL project costs £8000 per year (£2000 of which is funded by Dorset POPP). It has been estimated that it costs £32 to complete a multi-agency referral checklist (see appendix 6). If by making one referral to SAIL the partner organisations avoid having to make an additional 2.4 separate referrals they could save an estimated £76.80 (£32x2.4=£76.80) per referral in.

£76.80 x 329 referrals in = £25,267

Therefore £8000 investment in SAIL could prevent £25,267 in additional referral costs for partner organisations over the year.

£25,267/£8000=£3.15.

For every £1 invested in SAIL a further £3.15 may be saved in further referral costs.

As partner organisations are primarily local or central government funded (e.g. Dorset Fire and Rescue Service, the police, Dorset County Council, CAB, the Pension Service), this

represents a potential saving to public costs.

It should be noted that this calculation is based purely on efficiency savings in referral costs. It does not take into account the multitude of additional benefits for individuals in terms of quicker and more appropriate services and support which they may not otherwise have received.

iv. 'Sloppy slipper' falls prevention scheme

Dorset POPP has recently funded 16 'sloppy slipper' events where 3,000 pairs of slippers were fitted as a falls prevention strategy. The total cost of the project was £20,000. This includes £15,000 for the slippers, plus £5000 for venue hire, mileage costs, and refreshments.

It has been estimated that the hospital, ambulance, social care, GP, and outpatient costs of a hip fracture amount to £28,665 (see appendix 3).

£20,000/£28,665=0.70

Therefore if the 'sloppy slipper' events prevent just one person (0.03% of the 3,000 people who received slippers) falling and fracturing their hip, the intervention represents value for money.

It has also been calculated that living without a fracture in terms of quality of life is valued at £13,830 (see appendix 3). If the social value is included therefore, the total value for an intervention which prevents a person falling and fracturing their hip, can be monetised at £42,495 (£28,665+£13,830).

Conclusion

By using some of the calculations applied in the more robust studies reviewed and applying them to contact monitoring and costs data from Dorset POPP, an estimate of the economic value of some of the work carried out by Dorset POPP has been produced. Simple cost-benefit analyses where the data allows suggest that for every £1 spent, more than £1 of health or social care costs are prevented. The approach has been to consider

how many (e.g. falls, episodes of physical or mental ill health) would need to be prevented by the Dorset POPP intervention for the investment to represent value for money. This highlights that for all of the interventions included in this analysis, just a very small percentage (often less than one per cent of interventions) need to prevent further health or social care costs for the intervention to represent value for money. Furthermore, the conservative and simplified approach used in this analysis means that it may underestimate the full extent of the impact of the interventions.

5. Implications for Dorset POPP

The purpose of this work commissioned by Dorset POPP was to consider the economic value of the community based preventative approach taken by Dorset POPP in its work with older people. Overall the review of the evidence of programmes, projects and services operating broadly comparable interventions suggests the approaches taken by Dorset POPP provide economic value in terms of preventing health and social care costs. However, the review also highlighted that while there appears to be a greater volume of research into the effectiveness of community based preventative work in general, research which specifically looks at economic value – cost-effectiveness or cost-benefit - is particularly limited. Despite increased competition for limited resources and a resulting demand for organisations to demonstrate their economic value, there is a lack of evidence in this area. Many of the sources referred to in the review stressed the need for further research.

Several of the studies also highlighted the difficulty in collecting sufficient evidence in order to carry out an analysis, partly because of the difficulty in quantifying prevented costs or monetising outcomes, but also because of the lack of data held by organisations. As public spending cuts continue to take effect it is likely to become increasingly important for organisations such as Dorset POPP to ensure that they collect good quality, easily accessible, robust data in order to be able to demonstrate their economic value as well as their value in terms improving the lives of older people.

Appendix: Costing and sources

Appendix 1: Cost of mental health intervention

A report carried out by the York Health Economics Consortium, part of the University of York uses the following costs prevented in their SROI case studies of the Altogether Better programme:

£750 - cost of a course of cognitive behaviour therapy
£336 - cost of additional GP appointments. The average number of GP visits is 1.5 per year, but the average number per mental health patient is 12. Calculated at £32 per GP appointment, they calculate that the additional 10.5 appointments for mental health patients is £336 (£2x10.5).

Source: Hex, N. and Tatlock, S. (2011), Altogether Better Social Return on Investment Case Studies. York Health Economics Consortium: York

If Hex and Tatlock's figures are updated with the average cost of a GP appointment in 2012 GP of £43 (taken from the Personal and Social Research Unit's Unit cost of health and social care), then the cost of 10.5 additional appointments for mental health patients is £451.50 (£43x10.5).

Source: Curtis, L. (2012), Unit Costs of Health & Social Care 2012. Personal Social Services Research Unit: Kent

Appendix 2: Cost of residential care

The Personal Social Services Research Unit calculates that the average cost of a private sector residential care home for older people is £522.

Curtis, L. (2012), Unit Costs of Health & Social Care 2012. Personal Social Services Research Unit: Kent

Appendix 3: Cost of a fall

The cost of a fall has been based on a review of the evidence for health and social care budgets of investment in housing adaptations, improvements and equipment carried out by the University of Bristol for the Office for Disability Issues (Heywood and Turner, 2007). The authors refer to a paper commissioned by Health Promotion England on behalf of the Department of Trade and Industry undertaken by the University of York (Parrott, S. (2000), The Economic Cost of Hip Fracture in the UK. University of York: York – original not accessible). Taking into account hospital costs (average hospital stay 20 days), ambulance costs, social care-costs, GP costs, outpatient costs and travel costs to outpatients, Parrott calculated that the average cost of a single hip-fracture was £25,424. Heywood and Turner conclude that the assumptions and methods used in this study were transparent. Applying retail price index they calculate to calculate the 2005 cost would be £28,665 in 2005. As costs are likely to have increased since then, this is a conservative estimate.

Source: Heywood, F. and Turner, L. (2007), Better outcomes, lower costs. Office for Disability Issues, Department for Work and Pensions: London

In the assessment of the business case for LinkAge Plus carried out by the University of Warwick, for the Department for Work and Pensions, Watt and Blair (2009) also consider the benefit to the individual older person of not falling. One approach to measure the benefits to individuals is by the concept of a Quality Adjusted Life Year (QALY) – the effect of interventions may be quantified in terms of what fraction of a QALY they deliver per year. The value of such a life year can be monetised with reference to the work of the National Institute for Clinical Excellence (NICE) which uses a value of £30,000. QALYs are evaluated through surveys by which people are asked how much they are willing to pay for one additional year of survival in perfect health. Based on a study by Stockholm School of Economics, Watt and Blair estimate that a hip fracture might reduce an old person's QALY by 23 per cent, which equates to a cost of £6,900 per year in terms of reduced life quality. If the person is saved from dying, the benefit is taken to be £30,000 a year. These outcomes are weighted 70 per cent, 30 per cent based on evidence which suggests that 30 per cent of hip fractures end in mortality, to give a weighted average value of quality of life of preventing a hip fracture of £13,830.

Watt, P. and Blair, I. (2009), The Business Case for LinkAge Plus. Department of Work and Pensions: London

If an intervention prevents a person falling and fracturing their hip, this suggests the benefits of that outcome can be monetised at £42,495 if quality of life is included (£28,665+£13,830).

Appendix 4: Physical health care costs

A report carried out by the York Health Economics Consortium, part of the University of York uses the following costs prevented in their social return on investment case studies of the Altogether Better programme:
£3000 - cost of treating diabetes per person per year
£113 - cost of treating obesity per person per year
£250 - cost of treating cardiovascular disease per person per year

Source: Hex, N. and Tatlock, S. (2011), Altogether Better Social Return on Investment Case Studies. York Health Economics Consortium: York

Appendix 5: Economic value of decreased loneliness

Knapp et al conservatively assumed a decrease in loneliness (as a result of befriending intervention) of one unit on a scale which measures feelings of social isolation and loneliness, and translated this into reduced depressive symptoms measured on a Depression Scale. Reduction in public sector costs was based on evidence of greater service use by people with depression and a reduction when symptoms are alleviated. Based on these conservative assumptions Knapp et al estimate that a befriending intervention prevents £38 in health services cost. The quality of life improvement from a befriending scheme was based on a proportion of the value of one quality-adjusted life year (based on NICE guidelines as outlined above) which Knapp et al calculated to be £404. If quality of life as well as reduced health costs is included, the value of a befriending intervention is £442 per person. The calculations above are based on the assumption that other interventions which address social isolation have a similar impact on reduction in depressive symptoms and improvement in quality of life.

Source: Knapp, M., Bauer, A., Perkins, M. and Snell, T. (2012), Building Community Capital in Social Care: Is There an Economic Case? Community Development Journal Vol 48 (2),313-331

Appendix 6: Multi-agency referral cost

The cost of a multi-agency referral has been based on an assessment of the business case for LinkAge Plus carried out by the University of Warwick, for the Department for

Work and Pensions. The calculation is based on First Contact in Nottingham which operates on a similar basis to SAIL where an agent at one of the partner organisations meets a client and completes a simple 'needs checklist'. The average cost of completing a checklist has been calculated as £31.77. As some of the people in the partner agencies of First Contact completing the checklists were volunteers and the biggest referrer in for SAIL is Dorset Fire and Rescue Service (DFRS) this is likely to be a conservative estimate as the cost of DFRS time is greater than the cost of volunteers' time.

Source: Watt, P. and Blair, I. (2009), The Business Case for LinkAge Plus. Department of Work and Pensions: London

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