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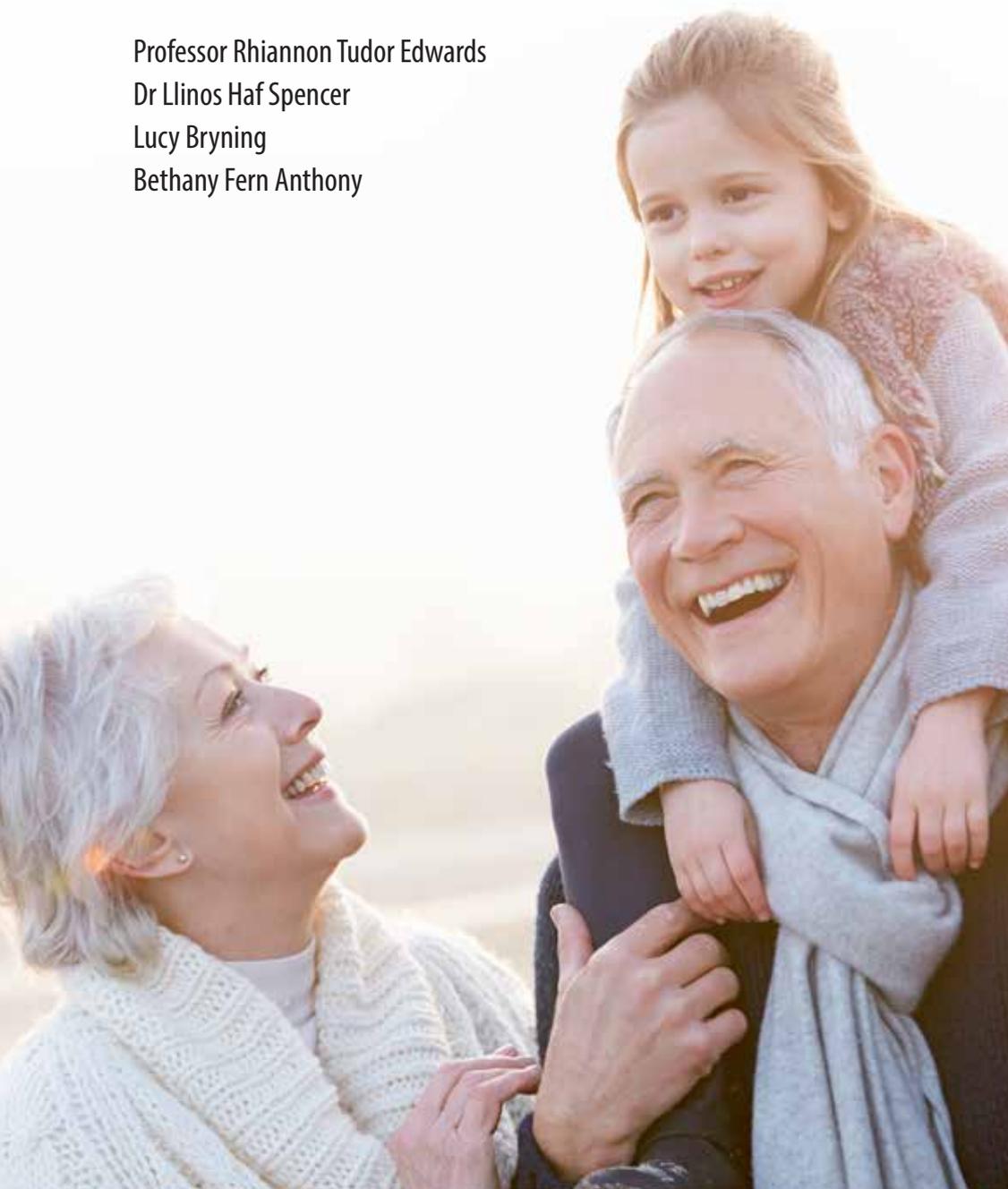
Living well for longer: The economic argument for investing in the health and wellbeing of older people in Wales

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About this report and the approach we have taken

This is the second in a series of reports making the economic argument for investing in prevention at different stages of the life course. In our last report we presented the economic argument for investing in Early Years across Wales, in this report we turn to older people. In the final report in this series we will explore the economic argument for investing in work and health in Wales.

This independent report was commissioned by Public Health Wales to explore the economic evidence relevant to investment in older people living in Wales. As health economists, we focus on evidence of the costs to the public sector and wider society of economic issues, and evidence of the cost-effectiveness or return on investment [see glossary] of evidence-based interventions to address them. This report brings together robust international and UK evidence on the relative cost-effectiveness and return on investment of devoting public sector resources to programmes and practices supporting older people. Where possible, we have translated evidence of potential savings from these interventions to a current Wales context through currency conversion, inflation and scaling of figures (see rapid review methodology and analysis section below). Our intended audience includes Public Health bodies and other agencies in Wales, England, Scotland and Northern Ireland; the seven Health Boards across Wales; Welsh local government and the third sector, who currently and potentially have a role in supporting and benefiting from older people living across Wales.

Scope of report

The choice of topics covered in this report came from consultation with our multi-disciplinary advisory board, Public Health Wales colleagues, academics working in the field of health and social care relating to older people and our review of policies and practice relevant to older people in Wales. This includes National Institute for Health and Care Excellence [NICE] guidance; Social Care Institute for Excellence [SCIE] resources, and national programmes active in Wales. We consulted with members of Age Alliance Wales and the Cymru Older People's Alliance (COPA) [see glossary] to identify relevant sources of Wales based economic evaluations of services and action for older people. We have been further informed by the views of older people through the consultation of older people living in Wales as part of the Welsh Government review of the Older Peoples Strategy for Wales. We hope this report reflects our social rather than medical view of health and wellbeing in older age.

Ageing Well in Wales highlight five priority areas to improve the health and wellbeing of older people in Wales (age friendly communities; dementia supportive communities; falls prevention; loneliness and isolation; and opportunities for learning and employment)¹. In this report we explore the economic case for investing in older people as assets, through appraising the available economic evidence relating to older people (spanning interventions, policies and practice relevant to Wales).

Rapid review methodology and analysis

Rapid reviews are an efficient method of producing information in a timely manner and are often used by decision makers in health and social care settings². Rapid reviews can produce more timely evidence for policy and decision makers compared with traditional systematic reviews.

We identified three main areas to focus our searches and synthesis of the economic literature relevant to older people in Wales (loneliness and social isolation; caring for older carers; and preventing falls). We undertook robust rapid reviews of the literature 2006 – 2017, published in the English language worldwide. The rapid reviews broadly followed the design, methods and processes of the Cochrane Effective Practice and Organisation of Care Group and the Campbell

and Cochrane Economics Methods Group (CCEMG)³. Our full search strategies are available in our electronic technical appendix (cheme.bangor.ac.uk). Primary and secondary questions were formed for each review and PubMed, DARE, HTA, Cochrane, and NHS EED databases were searched. Titles, abstracts and full papers were screened separately by two researchers and data was extracted from selected papers. Grey literature was found through hand searching and use of the internet. We included grey literature studies which we felt to be relevant to this report.

In order to illustrate the current value of potential investment we have inflated figures throughout the report to reflect the market rates in 2016. Great British Pounds (GBP) from the original data year (pre 2016) have been inflated to 2016 Bank of England rates (<http://www.bankofengland.co.uk/education/Pages/resources/inflationtools/calculator/default.aspx>) and are marked with a †. Other currencies which are both inflated to 2016 values in local currency and then converted to GBP are marked with ††. The following local currency inflation calculators were used:

- Australian Dollars - <http://www.rba.gov.au/calculator/>
- Canadian Dollars - <http://www.bankofcanada.ca/rates/related/inflation-calculator/>
- US Dollars - <http://www.usinflationcalculator.com/>
- Euros - <http://www.in2013dollars.com/Euro-inflation>

The exchange rate on 31/03/2016 was used for converting Australian dollars, Canadian dollars, US dollars, and Euros into GBP (<http://www.bankofengland.co.uk/boeapps/iadb/Rates.asp?TD=31&TM=Mar&TY=2016&into=GBP&rateview=D>).

UK wide figures were scaled (pro-rated [**see glossary**]) based on the population for Wales being a 4.7% share of the UK population according to the Office for National Statistics (ONS) population statistics (<https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationestimates>). Prorated figures are marked with *. Older people make up a slightly higher proportion of the population in Wales compared with the UK as a whole. Prorated estimates may therefore underrepresent the actual savings and benefits to Wales and are included for illustrative purposes only.

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Foreword

Despite the significant contribution that older people make to Wales – through volunteering, providing care and support, working and paying taxes – a pejorative narrative has crystallised in recent years that portrays older people as a burden on society, particularly in terms of the costs of providing health and social care services. This is not true, of course: even after health and social care costs are accounted for, older people are still net contributors to the Welsh economy and their contribution continues to grow significantly. As Older People’s Commissioner, I have worked hard, as have many others, to challenge this narrative and ensure that older people are recognised for what they truly are: a vital asset to Wales who enrich our lives in so many ways. A key part of this work has also been making clear how the right support, delivered in the right way at the right time – an approach at the heart of the growing and essential prevention agenda – not only helps older people to continue to make the significant contribution they do, but also has the potential to reduce the high costs to the public purse of taking action when a crisis occurs and more extensive health and social care support is needed.

I welcome the publication of this report, which provides much-needed evidence for policy and decision makers about why taking both an asset-based and preventative approach to supporting older people, delivered as part of a more joined-up system, will be essential to provide a range of benefits to our communities and our economy and, perhaps most importantly, will help older people to live well for longer.

Sarah Rochira, Older People’s Commissioner for Wales

Preface

In Wales we are living and working longer. This means that in older age we are both contributing more to society through the value of what we produce, taxes we pay on our earnings, and the value of what we spend, but also through the volunteering activities we do and the unpaid caring we do for partners, older family members and grandchildren. However, living longer means that we are likely to make more demands upon health and care services. Welsh Government and public bodies need evidence on what are the most cost-effective ways of spending budgets to enable older people to live well into older age and manage the demands upon health and care services. Health economics is the study of how we in society use scarce, or limited, resources to meet our health and care needs. In this report, written by health economists living and working in Wales, we consider evidence which we hope will be useful to contribute to evidence-based decision making by NHS Health Boards, local authority social services, other local authority services, Welsh Government and the voluntary sector. We have very much written this report mindful of the principles of prudent health care 2014⁴, the Wellbeing of Future Generations Act 2015⁵ and the Prosperity for All national strategy 2017⁶. We hope you enjoy reading this report.

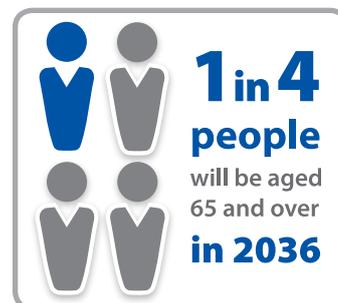
Professor Rhiannon Tudor Edwards, Bangor University



Executive Summary

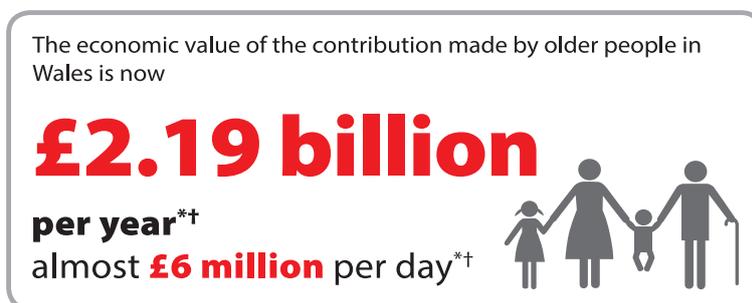
Background

Older people are the largest and fastest growing demographic section of the population in Wales. It is therefore imperative to create an age friendly Wales. Older people are an enormous asset to the economy, culture and social structure of Wales. At a time of financial constraint for health and social care services, this asset needs to be unlocked through the commissioning of cost-effective public sector services, in co-production with voluntary and private sector resources^{7,8}.



Key Messages

People over the age of 65 years have a substantial role to play within the development of a sustainable circular economy in Wales, through acknowledgement of the opportunities for efficient use of resources from birth through to supporting the next generation (cradle to cradle philosophy). Creating champions and facilitating co-production with older people as active members of society can generate between £0.79 - £112.42 in social value for every £1 investment⁹. A Social Return on Investment (SROI) [see glossary] approach considers the triple bottom line of social, economic and environmental returns. An example could be a win-win policy with investment that protects older people from environmental change whilst contributing to wider sustainability of the environment, such as improving home insulation^{10,11}.



The value of childcare contributions that grandparents (50+) make equates to £325 million*† in Wales¹².

Older people make a significant contribution in Wales as volunteers¹³, worth £483 million†* per year to the Welsh economy, a figure expected to grow to £705 million* per year by 2020¹⁴.

Raising the rate of employment for older people (aged 55+) to match Swedish levels could boost UK Gross Domestic Product (GDP) [see glossary] by 4.2%, representing a value of £84.43 billion††, £3.97 billion* pro-rated per year to Wales¹⁵. The workforce in Wales aged 65 or over contributed £1.94 billion, equating to over 4% of total Gross Value Added (GVA) [see glossary] in 2012¹².

In Wales the 'grey pound' (spending power of those aged 65 years+) can be valued at around £4.18 billion†*, a figure set to rise to £5.97* billion by 2030¹⁴.

Housing and independent living

The Welsh Government spends around £50 million per year on adapting the homes of older and disabled people, helping them to live safely and independently¹⁶. For every £1 invested in Care & Repair there is £7.50 savings to the taxpayer¹⁷. It is cost-effective to improve housing by providing heating and insulation for high risk groups of over 65s¹⁸.

Preventing loneliness and social isolation

Maintaining mental wellbeing and independence has been cited as a best buy for public health¹⁹. In Wales, 17% of older people are lonely, rising to 63% of those aged 80 and over²⁰. The impact of loneliness has been compared to other well-known risk factors to health such as obesity, and has a similar negative influence to that of smoking 15 cigarettes a day²¹.

The current situation of high rates of loneliness in Wales is unaffordable for the NHS and social care services^{22,23}. Prevention is key to addressing this problem and requires joint pro-active efforts by all the agencies and public sector organisations concerned with the wellbeing of older people. The costs and benefits of loneliness prevention fall across multiple sectors and society, therefore a private and public sector multi-agency **[see glossary]** response is required²⁴.

A lack of transport can contribute to higher levels of social isolation in older people²⁵. Community transport provides a positive return on investment of £3 return for every £1 invested^{26,27}.

Programmes which bring together generations can have bi-directional benefits in the sense that older people can gain enjoyment from interaction with children, while children can gain confidence, language skills and an appreciation for older adults²⁸⁻³⁰. International evidence of intergenerational programmes indicates that opportunities for older people to support the learning of children through social education could be cost-effective and even cost-saving³¹.

The evidence of the impact of new technologies on loneliness prevention is mixed, but training on how to use the internet, social media and other modern communication tools may be a cost-effective way to support older people and enable them to maintain good social links, particularly for older people living in very rural communities and a long way from grown up children and friends^{32,33}.

Arts and craft activity based programmes such as Craft Café and the Men in Sheds programmes can generate high rates of social value of between £8.27³⁴ and £10³⁵ returned for every £1 invested.

There is an economic case for community driven interventions to combat loneliness and build community capacity, whilst also developing good communication links between agencies and vulnerable older people³⁶⁻³⁸. Community based interventions can offer a positive return on investment of between £1.11 and £4 in benefits associated with wellbeing improvements, wider social benefit and NHS savings.

Older people who are lonely, compared to people who are not lonely are on average:



3.5 times more likely to enter local authority-funded residential care.



3.4 times more likely to suffer depression



1.8 times more likely to visit their GP



1.6 times more likely to visit A&E



1.3 times more likely to have emergency admissions



14% increased likelihood of coronary heart disease



8% increased likelihood of a stroke



7% increased likelihood of diabetes

Caring for older carers

Wales has the highest percentage of unpaid older carers compared with any other part of the UK³⁹.

There is a large variation in the estimates of the economic contribution of all carers in the UK, from a saving of £91 billion† every year in potential care costs⁴⁰ to an economic value of the contribution made by carers of £139† billion per year⁴¹. In Wales, unpaid older carers save the Welsh economy an estimated £1.88 billion†* in care costs, and this figure is predicted to rise to £2.44 billion* by 2030¹⁴. Other estimates indicate that the value of total carers contributions in Wales could in fact be considerably higher at an estimated £8.15 billion† per year⁴¹.

Carers can be the key factor that can keep someone living at home or prevent admission to hospital or residential care in Wales⁴², however caregivers' own use of health care services increases as their caregiving load increases⁴³. The cost of not caring for carers is extremely high.

There are benefits of flexible provision and a range of available carers programmes which take account of variation in circumstances of carers and care recipient characteristics⁴⁴. Examples of cost-effective interventions to support carers include psychosocial education (educating and informing the caregiver) and support for carers of people with dementia which can be cost-effective at an estimated cost of £100.08†† per family caregiver⁴⁵. Tailored Activity Programmes (TAP) delivered by occupational therapists are a cost-effective intervention which can provide family carers of people with dementia with valuable time off from caregiving⁴⁶. Caregivers saved one extra hour per day 'doing things' at a cost of £1.65†† a day and one extra hour per day 'being on duty', at a cost of £0.86††⁴⁶.

Dementia is estimated to cost the Welsh economy £1.47 billion† per year⁴⁷. In terms of health care costs, £206.13 million† is spent each year and in terms of social care costs £562.65 million† is spent annually (publicly and privately funded). In Wales, £654.15 million† is contributed by the work of unpaid carers of people with dementia per annum and £6.31 million† is spent on other costs, including police costs of missing person enquiries, advocacy services and research⁴⁷.

Peer support for people with dementia and carers has been shown to give a positive return on investment with groups creating social value, ranging from £1.17 to £5.18 for every £1 invested⁴⁸.

People in middle age are encouraged to be more physically active, socially active and mentally stimulated to reduce dementia risk in older age by relieving stress, improving mood and reducing the risk of loneliness and depression⁴⁹.

Preventing falls

Falls are estimated to cost the NHS in the UK more than £2.3 billion per year⁵⁰. Prevention is key to addressing the cost of falls and requires joint pro-active efforts to ageing well. Preventative strategies are cost-effective in both the short and longer term⁵¹. It is estimated that preventative action such as physiotherapy for older people could reduce falls in Wales by 9,396 each year, a potential saving to the NHS of more than £15.87 million per year⁵². There is a return on investment of over £4 when £1 is invested in physiotherapy for falls prevention⁵².

As people get older, maintaining muscle strength and the ability to balance are crucial to reducing the risk of falling. T'ai chi ch'üan is a cost-effective exercise intervention for older adults living in the community, the incremental cost per fall avoided is around £1,816.88††⁵³ and there is strong evidence that moving for better balance can give a return on investment of £5.09 for every £1 invested⁵⁴.



There is strong evidence that avoiding hospital admissions through well-designed community-based interventions that target falls prevention among older people are highly cost-effective⁵⁵⁻⁵⁷.

Conclusions – Key investment areas

Wales needs to focus attention and investment on the following key areas:

- Fully integrated health and care services;
- Maintaining physical and mental well being in older age, with a focus on reducing social isolation and loneliness;
- Maintaining services to promote prevention (particularly falls prevention), rehabilitation and reablement;
- Investment in sustainable homes, transport and communities, and
- Support for informal carers.

The development of a genuinely whole systems approach to monitoring care quality, costs and trends in expenditure in health and care services should be an important government priority as integrated care approaches are further developed⁵⁸.

Enabling working for longer, facilitating volunteering and supporting working parents through care of grandchildren brings many economic returns in terms of improving wellbeing; reducing loneliness, and supporting formal and wider community services. Co-production enables older people to remain active in the community, with bi-directional benefits within the community and public sector services.

Programmes that promote exercise and improve balance can be cost-effective in terms of improving physical and psychological wellbeing in older age, reducing falls and associated need for hospital and community care. Local transport systems that can support active travel, including walking and cycling, provide wider economic benefits. For example, if there are sufficient transport links in place grandparents can actively take part in the care of dispersed grandchildren.

Maintaining funding across prevention, rehabilitation and reablement, including for Care & Repair Cymru's Rapid Response Adaptation Programme (RRAP) to adapt the homes of older people ensuring warm and safe homes, can provide economic benefits by promoting independent living; reducing the need for hospital admissions; facilitating earlier discharge from hospital, and reducing demands on health and social care services.

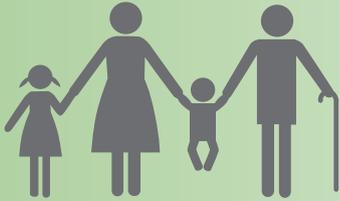
Many older people are themselves informal carers. There are costs of providing care to older carers who are in need of social, medical and psychological support. Carers, including carers of people with dementia, can be the key factor that can keep someone at home or prevent admission to hospital or residential care. There is an economic case for making support for older carers a priority in Wales as there are more unpaid older carers in Wales than in any other part of the UK.

The full report and the technical appendix are available on the CHEME website.

Please visit <http://cheme.bangor.ac.uk>.



Living well for longer: The economic argument for investing in the health and wellbeing of older people in Wales



- For every **£1** invested in older people up to **£112** can be generated in social capital.
- Grandparents provide **£325** million worth of unpaid childcare in Wales per year.

The impact of loneliness has a similar negative influence to that of smoking 15 cigarettes a day.



Postponing entry into residential care by just one year through adapting homes e.g. adapted toilets, showers, lifting equipment and new heating systems saves over **£30k** per person.



The workforce in Wales aged 65 or over contributed **£2 billion** equating to over **4%** of total Gross Value Added (GVA) in 2012.



Preventing a fall leading to hip fracture saves on average over **£32k**.

The 'grey pound' (spending power of those aged 65+) can be valued at around **£4.18 billion** per year in Wales



1. Background



1. Background

Why we are making the economic case for investing in older people in Wales

This report is about older people, defined here as people aged over 65 years. People age differently therefore, the health, views and life experiences of those aged over 65 years will vary substantially. Older people in Wales today have seen great social change in their lifetime. They grew up at a time when churches and chapels, manufacturing, mining, farming, the Welsh language and close family networks were at the centre of Welsh culture. For older people living in both urban and rural parts of Wales, financial austerity over the last decade in particular, has led to cuts in services. The Older People's Commissioner for Wales has highlighted the importance of services such as community transport, public toilets, libraries, leisure facilities and day centres to older people⁸. This is combined with constraints on the NHS and social care provision⁵⁹. These all contribute to making older people potentially vulnerable to poor health and social isolation. In turn, these vulnerabilities place enormous and growing demands upon health care and social services. Older people over the traditional retirement age of 65 years old make a significant contribution to the economy in Wales, but ongoing financial austerity and social change mean that we may not yet have seen the full economic consequences of changes in work, retirement and volunteering patterns⁶⁰.

We set the scene by acknowledging the economic contribution of older people (section 2); highlighting the impact of continuing employment into older age (section 3), and recognising the importance of housing and enabling independence

in later life within an age friendly Wales (section 4). We provide evidence of the cost-effectiveness or return on investment on preventing loneliness and social isolation (section 5); caring for older carers (section 6), and preventing falls and reducing hospital stays (section 7). These topics were chosen based on the types of studies found in our literature review searches. Our report emphasises that public sector and third sector services available to older people in Wales need to be cost-effective and provide good value for money to society.

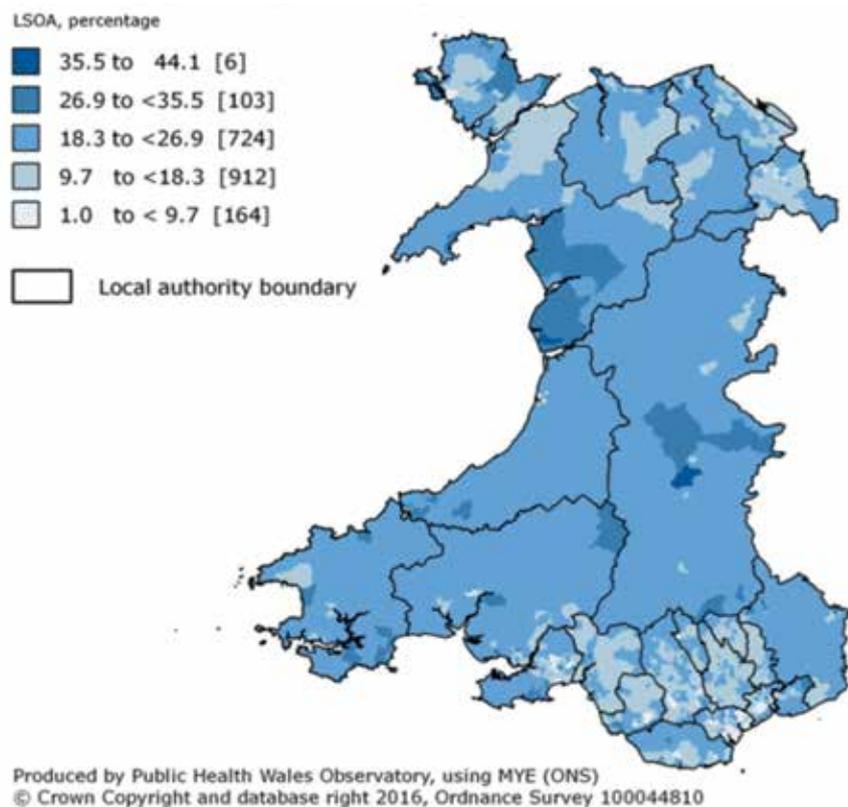


Figure 1.1 Estimated population aged 65-84 years in Wales, 2014⁶¹

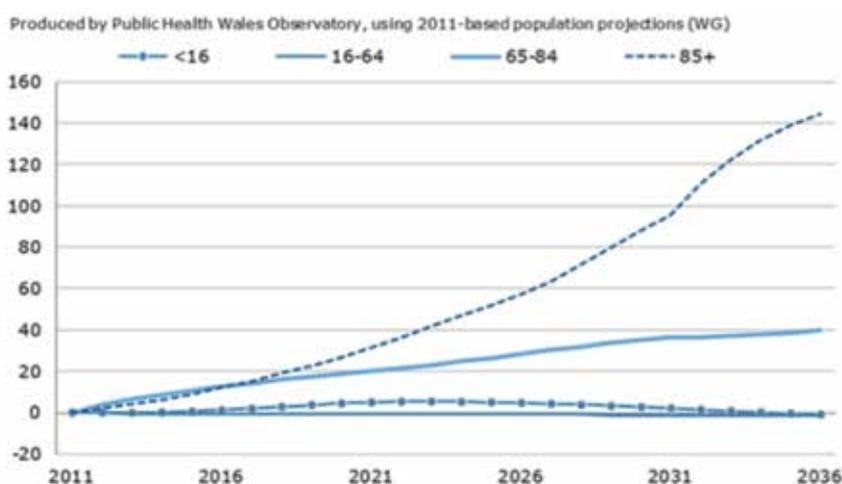
Older people and the population of Wales

This report is about the economic argument for investing in older people in Wales to support people to live longer in good health in older age. Wales is a nation with a significant proportion of older people.

Figure 1.1 shows the map of Wales with the concentration of people aged 65 – 84 years⁶¹. It shows that in some mainly coastal and rural communities (such as south Gwynedd, parts of Anglesey and mid Powys) up to 44.1% of the population are 65-84 years old. This trend is set to continue if middle aged people remain in their current homes, based on statistics showing that 54% of people living in rural areas are over 45 years of age, compared to 42% in large towns³⁹.

Out of the whole population, the 65 to 84 and 85+ age groups are projected to increase the most by 2036, when 1 in 4 people will be aged 65 and over (see Figure 1.2).

Figure 1.2 Population projections by age group, percentage change since 2011, Wales, 2011-2036⁶¹



Ageing and health considerations

In Wales, men and women aged 65 years today could expect to live to their 83rd and 85th birthday respectively⁶². The likelihood of being treated for a range of illnesses increases with age including high blood pressure, heart conditions, arthritis, diabetes, eyesight and hearing difficulties⁶³. Across the UK there has been an increase in Healthy Life Expectancy⁶⁴ [see glossary]. The likelihood of having a disability increases with age and at age 65 years, older people in Wales can expect to spend less than half of their remaining years disability free⁶⁴ (see Box 1.1).

The Department of Health in England calculates that 70% of the total health and social care spend in England is for the treatment and care of people with long-term conditions such as diabetes and heart disease. Yet many lifestyle choices, such as smoking, poor diet leading to obesity, alcohol abuse and sedentary lifestyles with insufficient exercise, contribute towards developing these conditions in later life, and are avoidable^{65,66}. Although rates of binge drinking in Wales decrease with age⁶³, generally older people are reported to make up half of all alcohol-related hospital admissions⁶⁷. The proportion of people who report being overweight or obese increases with age, especially between the ages of 60 and 69, then decreases for people over 70 years old⁶³.

There is strong evidence that as age increases, so does the number of chronic conditions⁶⁸. Older people and particularly those who are chronically ill often take multiple medications⁶⁹. To be clinically effective and cost-effective, medication requires a level of patient adherence; however, convincing evidence has shown that up to half of all older people are reported to not adequately adhere to recommended treatments⁶⁹. Initiatives including those which apply newer communication technologies to health care, e.g. mobile phones ('m-Health') to improve medication adherence, are becoming more routinely applied worldwide; however, there is mixed evidence of whether they are likely to lead to large improvements in adherence or clinical outcomes, and in turn have any impact on health and social care spending^{70,71}. Medication reviews are helpful in aiding older people to maintain their independence and prevent falls⁷². Medicines optimisation and appropriate polypharmacy (for people taking more than four medications) can help ensure safe and effective use of medicines for older people^{73,74}. Drug treatments to keep older people active and well are also reviewed regularly as good prescribing practice by pharmacies in Wales as many medicines in common use can cause problems⁷⁵. Adverse reactions to medicines are implicated in around 7% of adult hospital admissions, with around two thirds of these considered to have been preventable⁷⁶. Frail older people are particularly vulnerable and more likely to experience adverse reactions^{77,78}. "The impact on costs could also be substantial, given the levels of drug wastage and the high numbers of preventable drug-related emergency hospital admissions"⁷⁸.

Box 1.1 Ageing, comorbidities and a spotlight on cost-effective medical management

2. Investing in older people as assets



2. Investing in older people as assets

As people are living longer in Wales, they also contribute more to the Welsh economy in terms of being part of the workforce and their contribution to the caring and voluntary sectors. Older adults may feel a need to contribute to the next generation and in doing so can gain feelings of accomplishment or success as they age⁷⁹. Older people are assets as they provide assistance with childcare, community groups and with looking after other elderly relatives or friends.

The economic contribution of older people in Wales

Contrary to negative public perceptions of older people as a drain on the health service⁸⁰, there is overwhelming evidence that older people make a net positive contribution to the economy¹⁴. After taking account of all the costs associated with an ageing population (especially health and social care, and pensions) and considering the positive financial contributions that older people make (particularly through spending, tax, volunteering and caring responsibilities) older people make an annual net positive contribution of £2.19billion*† to the Welsh economy (almost £6million a day*†). It is predicted that the net financial contribution to Welsh economy of older people will increase to £3.52 billion* by 2030. The ratio of contributions to costs is expected to rise from 1.29 to 1 to 1.35 to 1, representing an 89% increase in net benefits¹⁴. Three factors explain this projected increase in net contribution of older people to society: demographic change, abolition of the formal retirement age and an increase in Healthy Life Expectancy, all resulting in an overall increased capacity for older people continuing to work and volunteer⁸¹. This saves the taxpayer millions of pounds⁷.

Childcare

In England, 62% of over 50s have one or more grandchildren⁸². In the UK, grandparents provide a considerable amount of childcare, with, 1 in 3 families depending on grandparents for childcare; however, there is very little Wales specific research about the role that grandparents play⁸³. Around 65% of grandparents provide some form of childcare, with the median number of hours of care per week at 11.3⁸². The value of childcare contributions that grandparents (50+) make has been estimated to be £6.94 billion† in the UK, equating to £325 million*† in Wales¹² per annum.

Volunteering

Older people make a significant contribution in Wales as volunteers¹³, worth £483 million†* per year to the Welsh economy and expected to grow to £705 million* per year by 2020¹⁴. More than half of all older people (and over two thirds of older adults aged 55-64) report that they do some informal volunteering, with activities including keeping in touch with a housebound person and providing transport¹³. One in three older people report volunteering formally with organisations and formal groups, including volunteering in children's activities within and outside school, sports and exercise, health and social care, community groups, faith based groups and working in charity shops^{13,14}.

Spending power (the 'grey pound')

The older consumer market is large and it is growing. Older people (aged 50+) hold 60% of the UK's savings and their spending power accounts for around 40% of all consumer spending^{84,85}. The older market is forecast to grow by 81% from 2005 to 2030, a striking contrast to the expected 7% growth by the rest of the UK consumer⁸⁵. Older people aged 65+ are predicted to account for 25% of the UK consumer population (16+) by 2030, collectively spending an estimated £127 billion annually¹⁴. In Wales the 'grey pound' (spending power of 65+) can be valued at around £4.18 billion†*, a figure set to rise to £5.97* billion by 2030¹⁴.

Carers (see also section 7: Caring for older carers)

In Wales, nearly 1 in 3 people over 50 years old are informal carers³⁹. Wales has the highest percentage of unpaid older carers compared with any other part of the UK³⁹. The amount of care provided by unpaid older carers annually saves the Welsh economy an estimated £1.88 billion†*and is predicted to rise to £2.44 billion*by 2030¹⁴.

Older people within a sustainable circular economy

Recognition of the contribution that older people make to the economy, particularly through working and volunteering into older age, fits with the ethos of the circular economy. A circular economy is an alternative to a traditional linear economy (make, use, dispose) in which we keep resources in use for as long as possible. In a circular economy, we extract the maximum value from products whilst in use, then recover and regenerate products and materials at the end of each service life⁸⁶.

Internationally, the World Health Organisation has recognised that focusing on health alone without the context of economic, social and environmental sustainability is not enough. Sustainable development goals will influence health, because they all address the determinants of health. The 2030 Agenda for sustainable development, with 17 goals (spanning poverty, equality, environment, education and health) will link different dimensions of development (including health) to the environment, to prosperity and to all actions and policies that affect human wellbeing⁸⁷. The Wellbeing of Future Generations (Wales) Act highlights three key areas as wellbeing indicators for Wales: social, environmental, and economic priorities.

Figure 2.1 shows the principle of a sustainable circular economy from the cradle to the cradle, rather than cradle to grave. The cradle to cradle philosophy is a holistic economic, industrial and social framework that seeks to create systems that are not only efficient but also essentially waste free⁷⁷. This model is not limited to industrial design and manufacturing; it can be applied to human civilisation such as urban environments, buildings, economics and social systems. The role for example that grandparents play in looking after grandchildren and enabling parents to go to work would fit into such a model, or the co-location of preschool and elderly daycare facilities (see later).

Social contributions of older people

In addition to the substantial economic contributions outlined above, older people also benefit the places they live by being active members of their communities. The work which older people do is sometimes referred to as 'social glue', which cannot readily be quantified in monetary terms. Older people are more likely than younger people to volunteer, be involved with community-based organisations, participate in democratic institutions and vote¹⁴.

Older people and the environment

Older people are particularly susceptible to environmental hazards and may be physically, financially and emotionally less able to cope with the effects of a changing climate including events such as flooding and rapid temperature changes¹⁰. A Social Return on Investment (SROI) approach considers the triple bottom line of social, economic and environmental returns. An example could be a win-win policy and investment that protects older people from environmental change whilst contributing to wider sustainability of the environment, such as improving home insulation^{10,11}. Older people have a wealth of skills and knowledge which can be drawn upon and as a large (and growing) proportion of the population they also have a great opportunity to reduce overall environmental footprints¹⁰.



Figure 2.1 Sustainable circular economy: from the cradle to the cradle

Opportunities to enable older people - removing barriers

Throughout this report we highlight potential investments that can facilitate and remove barriers to older people making a full positive contribution to society. In Wales, the concept of co-production is a key part of prudent health **[see glossary]** and social care as a means of enabling older people and breaking down barriers to community engagement. The Social Care Institute for Excellence (SCIE) offers resources to promote co-production, including for older people, so that older people can inform service delivery and develop measures for effective participation⁸⁹. We focus here on two examples relevant to Wales, embracing co-production and removing barriers.

Creating champions and fostering participation

Older people in a volunteering capacity can act as champions, making use of their lifetime experiences in such roles. A Big Lottery Funded programme called Altogether Better based in Yorkshire and Humberside found that putting older people into community lay public health roles improved their own personal health (particularly mental and social aspects of health) and had the potential to positively influence the health of others in the community⁷⁹. The study supports the use of existing older peoples' networks as a means of recruiting champions to lay public health roles, highlighting the support they may need in such roles as an addition to rather than substitute for formal health and social care services⁹¹. A SROI analysis indicates that every £1 invested generates between £0.79 - £112.42 in social value⁹. This experience from England should be considered for implementation and evaluation in Wales.

Working alongside professional health and social care workers in a variety of settings, including GP Practices and Emergency Departments, Community Health Champions have an opportunity to support people to better manage health conditions and make positive lifestyle choices, bringing about significant cost-savings^{9,90}.



The role of transport as a potential barrier and facilitator to older people making a positive contribution

There are major opportunities for achieving large health gains, and reducing financial demands on health and social care, for the population of Wales by increasing levels of routine physical activity in the adult population. The promotion of active travel, including walking and cycling has additional advantages over and above increasing physical activity, in terms of decreasing air and noise pollution and improving the quality of urban and rural life. Enabling older people to gain these advantages requires effective inter-sectoral collaboration across health, transport, land-use and environment sectors, embracing co-production⁹².

Maintaining mobility in older age enables independence, reduces social isolation and supports continued physical activity²⁰. A lack of transport can contribute to higher levels of social isolation in older people²⁵. There is a growing body of evidence²⁵ that using public transport is associated with a decrease in obesity as using buses and trains often involves walking or cycling to interchanges such as bus stops⁹³. While some older people may view not being able to drive any longer as a loss in terms of independence⁹⁴, bus use is associated with a number of important benefits such as increased interaction with family and friends⁹⁵ and maintaining physical activity levels¹⁶.

Both formal employment and volunteering activities involve older people being able to access private or public transport. The economic contribution to society of older people is dependent on their ability to travel. In the UK, enhancing older people's ability to travel to undertake formal employment or volunteering activities could enable them to contribute 10% more than at present, equivalent to an additional £19.3 billion† per annum in the UK⁹⁶ equating to £907 million* to Wales.

Particularly relevant to rural areas of Wales, the Welsh Government Strategy for Older People 2013-2023 estimates that community transport can provide a £3 return for every £1 invested²⁶. Evidence from the North East of Aberdeenshire, Buchan Dial-a-Community Bus (DACB), a social enterprise with an aim of reducing social exclusion through the provision of community transport delivery and support services, indicates that £1 invested provides a social value return of £3.03²⁷.

Funding of travel initiatives through taxpayer compensation schemes has been reviewed in England, and a need for more accessible and affordable flexible transport options was highlighted as potentially helping enable employment and volunteering into older age⁹⁷. Alternatives to the free bus pass for older people in England include means-testing the bus pass, however this is likely to incur administrative costs and may negatively affect those most at risk of social and transport exclusion. Despite pressure on public spending, concessionary bus travel for older people has the potential to have large impacts on health and wellbeing and further research into the cost effectiveness of such schemes is needed⁹⁸. In Wales, particularly in rural areas, mobility for older people is an important issue and uptake of benefits such as free bus travel for people aged over 60 years should be assessed alongside cost-effectiveness of various transport schemes, including preserving or increasing local bus services, local authority or third sector support to community transport schemes, availability of taxis and lifts from friends and neighbours.

3. Continuing employment in later years



3. Continuing employment in later years

Employment

For this section on employment and older people, grey literature was consulted, including moderate (n=8) and strong evidence (n=8) (see technical appendix) indicating that increasing the length of working life can have a large impact on the overall potential economic contribution of older people. There is strong evidence to suggest that the UK has a lower employment rate of older people than other OECD countries, for example, in the UK 63.4% of people aged 55 – 64 years are in employment compared with 75.5% in Sweden (the best performing EU country in the Golden Age Index)¹⁵. In Wales, 66.5% of 50-64 year olds are in employment¹⁵. Raising the rate of employment for older people (aged 55+) to match Swedish levels could boost UK Gross Domestic Product (GDP) by 4.2%, representing a value of £84.43 billion††, £3.97 billion* prorated to Wales¹⁵. The workforce in Wales aged 65 or over contributed £1.94 billion equating to over 4% of total Gross Value Added (GVA) in 2012¹². Strategies to support older people work up to and beyond retirement are needed, particularly creating employment opportunities and environments that are appropriate for an older workforce. Supporting older people to stay in the workforce for longer can also generate productivity gains through retaining large amounts of experience and skills in the workplace⁹⁸. Three quarters of older people believe that the UK does not make good use of the skills and abilities of older people^{100,101}.

Though more older people working longer might reduce the number of older people available to volunteer, the Royal Voluntary Service (RVS, formally Women's Royal Voluntary Service [WRVS]) estimates that an increase in healthy life expectancy means that they will be able to volunteer for longer¹⁴.

As the default retirement age no longer exists in the UK¹⁰², an increasing number of older people are working later in life. The proportion of the population aged 65-74 who were economically active in 2011 (16%) was almost double the proportion in 2001 (9%) in England and Wales¹⁰³. In Wales, 66.5% of older people aged 50-64 years are in employment¹⁵.

Across the UK, employment rates since 1985 for people aged 50 to 64 have grown considerably from 55% to 70%¹⁰². For women aged between 50 and 64, 64% were in work in 2015, compared with 42% in 1985¹⁰². The employment rate for people over the age of 65 has doubled from 5% to 10%¹⁰². The proportion of those in work aged 70 to 74 has also risen from 6% to 10%¹⁰². There is strong evidence to suggest that continued employment means that older people will earn more money and also be able to spend more money and pay more tax to the UK government⁸¹.

There is strong evidence to suggest that paid employment has benefits for older people both in terms of experience and sharing expertise¹⁰⁴ and in terms of maintaining wellness¹⁰⁵. Healthy older people who are able to work are in a better position than older people who cannot work due to ill-health, or who have other demands on their time and attention. Some older people who are unwell may not be able to work¹⁰⁶ and in Wales, there is strong evidence to suggest that increasing numbers of older people are unable to afford retirement at state pension age^{107,108}. There is also strong evidence to suggest that worklessness may have detrimental effects on the wellbeing of an older person because of missing social connections, mental stimulation, confidence, being valued and making a positive contribution to society¹⁰⁹.

Older people living in the UK are affected by recent changes to UK government policy on extending working life, such as policies aimed at moving people off benefits and into paid work, changes to the age at which people can receive state pension and benefits income, and removal of barriers to working longer¹⁰⁸. NICE guidance on workplace health and the economic evidence informing their recommendations are outlined in Box 3.1.



3. Continuing employment in later years

NICE guidance on workplace health highlights that “demographic changes, and changes to the state pension age, mean the proportion of older employees in the workforce is likely to continue to increase. Productivity depends on the workforce being in good health, and a person’s health will affect their ability to stay in work and continue earning an income. However, older employees may wish to remain in work for a variety of reasons other than financial. Continuing to work can have both social and health benefits for older people. So there is a need to further understand what can help to maintain and improve outcomes in this group from a health and wellbeing perspective.”

Addressing the needs of older employees and improving their health through improved workplace practices and interventions may help to support the retention and productivity of staff and reduce absenteeism. NICE highlight economic modelling tools available to decision makers wishing to determine if a work place health intervention for older workers is cost-effective in their organisation.

NICE recommends cost-effective interventions to support older workers particularly in terms of:

1. Maintaining and improving their health and wellbeing at work;
2. Remaining in work for longer or re-entering work;
3. Planning and preparing for retirement;
4. Challenging stereotypes in the workplace around attitudes towards older workers.

Box 3.1 Workplace health: management practices and economic evidence (NICE, 2015, updated in 2016) [NG13, 2015, updated 2016]¹¹⁰

Older workers should have the same access to training, progression, mentoring or leadership as workers of other ages. This includes wellbeing support and appropriate physical adjustments, equipment and flexible working arrangements, and all forms of adaptation that are usual in the workplace¹⁰⁴.

Flexible working arrangements, reduced hours or ability to adjust the time and place of work are fundamental to making paid work more age-friendly for those over 50 who may also have caring responsibilities for family or friends. In 2017, over 1.9 million people aged over 50 work for themselves¹⁰⁰. Self-employment has benefits for the elderly as they can work flexibly.

Unhealthy behaviours in midlife are associated with transitions out of employment into old age. There is strong evidence to suggest that promoting healthy behaviours at midlife may help to support current policy initiatives aimed at extending working life¹¹¹.

4. Housing and independent living in an age-friendly Wales



4. Housing and independent living in an age-friendly Wales

For this section on housing and independent living, grey literature (mostly from Wales) and more international literature found in the rapid review are reported. Some of this evidence is weak in the sense that they are reports and not empirical research (n=14), some are of moderate quality in terms of evidence (n=21) and some are stronger in terms of quality of evidence, and these are particularly the articles reported in peer-reviewed journals (n=10).

Ensuring safe independent living in older people is high on the Welsh government agenda¹¹². Since the Wanless report in 2007¹¹³, new policies and guidelines have been developed in Wales that emphasise integrated approaches to service delivery, with the goal of helping people live independent and well lives, for example the Social Services and Well-Being (Wales) Act (2014) built upon the Welsh Government's Strategy for Older People in Wales²⁶, as well as the commitments of the Ageing Well in Wales 2012 Programme²⁶. The policies and models include integrating a range of health and social care services across Wales particularly around avoiding delayed transfers of care from hospital to the community. Whilst approaches vary, all are guided by common principles including the need to start with citizen and service requirements and design approaches to service delivery that are most likely to meet them. These often feature multi-disciplinary and multi-organisational responses⁵⁸.

Integrated systems of health and social care are viewed as being both effective and more cost-effective (and therefore sustainable); however, it is generally acknowledged that the ability to track financial data and savings across different parts of the system is currently extremely limited. The development of a genuinely whole systems approach to monitoring care quality, costs and trends in expenditure in health and care services should be an important government priority as integrated care approaches are further developed⁵⁸. There are a number of different types of care and potential points for intervention relevant to older people in Wales (see figure 4.1). Access to appropriate levels of support is key to preventing deterioration and promoting rehabilitation in order to support older people to live in the community. Very often, that support may be complex and will require careful coordination, especially when many older people have multiple long-term conditions.



Figure 4.1 Types of health and social care interventions for older people and people with complex needs¹¹⁴

Improving social care for older people with multiple long-term conditions that helps enable them to stay in the community may avoid the need for high-intensity home care or residential care in the future, this may provide cost savings to local authorities. NICE guidance on social needs is outlined in Box 4.1.

Determining the cost-effectiveness in social care requires a different approach to that of economic evaluation in health care. As a measure of health-related quality of life, the QALY [see glossary] is considered to not reflect the outcomes of importance in social care and is therefore not the agreed-upon outcome on which to base decisions about cost-effectiveness. In further contrast to health care economic evaluations, where it is generally considered that interventions are cost-effective at a threshold between £20,000 and £30,000 per QALY, there is no agreed-upon threshold in economic evaluations of social care¹¹⁵. Recently the ASCOT measure has been designed to capture information about an individual's social care related quality of life (SCRQoL), over eight domains for users and seven domains for carers. The domains for carers are Control over daily life; Personal cleanliness and comfort; Food and drink; Personal safety; Social participation and involvement; Occupation; Accommodation; Cleanliness and comfort; and Dignity.

Box 4.1 Older people with social care needs and multiple long-term conditions: economic evaluation considerations [NG22]¹¹⁵ and social care related quality of life measure (ASCOT)¹¹⁶

Age friendly environments

Age friendly environments are important as investment in environmental features may postpone or avoid the point where declining individual competences lead to the need for relocation or increase the need for formal care¹¹⁷. The WHO age-friendly cities guide¹¹⁷ highlights eight domains that cities and communities can address to better adapt their structures and services to the needs of older people. These cover the built environment, transport, housing, social participation, respect and social inclusion, civic participation and employment, communication, and community support and health services¹¹⁷. Town planning modifications can include the location of bus stops, transport fares and scheduling, disabled parking, pedestrian infrastructure and proximity to shops and services including toilets¹¹⁸. In terms of access to public spaces, the Public Health (Wales) Bill 2016 highlighted the importance of public toilets. Continence conditions often experienced by older people limit the amount of time individuals can be away from home, and in some cases, may stop them from leaving home altogether. Help the Aged found that 80% of respondents did not find it easy to locate a public toilet, 78% found public toilets not open when they needed them and over half (52%) agreed that a lack of provision prevented them from going out as often as they liked¹¹⁹. A consultation with Age Cymru in 2011¹²⁰ emphasised the fact that lack of public toilets can limit the social activities of older people and lead to a reduction in quality of life. The World Health Organisation has cited provision of access to plentiful and clean public toilets as a major factor in their Age Friendly Cities Guide¹¹⁷. There are considerable costs of installing and maintaining public toilets, however local authorities have been encouraged to further evaluate the full costs and benefits of public toilet provision in a UK context¹²¹.

Housing and age-friendly homes

Housing is an important aspect of tackling isolation and loneliness and provides the foundation to enable older people to live fulfilling and independent lives¹²². As a group, older people are vulnerable to accidents within and around their home¹²³ as they become less able and need more in terms of care and equipment within their home¹²⁴. Wales follows an 'ageing in place' approach to housing older people, with older people encouraged to live independently in their

4. Housing and independent living in an age-friendly Wales

own homes until residential relocation becomes necessary⁶⁵. Older people can choose between 'staying put' with care or 'moving through choice' and are supported to make the right choice¹²². Housing options range from general needs housing with or without some degree of support (e.g. adaptations, telecare) to sheltered housing, extra care housing and nursing and residential care homes, with some limited development in co-operative and co-housing models⁶⁵.

Sheltered housing is one of the supported housing options, where older people can live in bungalows or flats, with all external maintenance taken care of, usually with a careline to call in emergencies and with a warden living on or off site¹²⁵ (see Box 4.2).

A social model of disability¹²⁶ has been adopted by the Welsh Government since 2002, alongside a greater awareness of the role that inclusive housing can have in enabling older people (many living with frailty, chronic disease and disability) to live independently in the community. It has been recommended by an expert group in housing that the Welsh government "explore ways of developing market housing for rent or sale that are designed to meet the housing needs of an ageing population, ensuring that the contribution of this sector is maximised"¹²². Actions such as this will lead to a greater supply of housing that is suitable and provide a broader choice of accommodation and lifestyle options to meet the diverse needs of the ageing population of Wales. The Welsh Government spends around £50 million per year on adapting the homes of older and disabled people, helping them to live safely and independently¹⁶. Minor adaptations to the home can prevent the need for hospital admission or allow those who are in hospital to be discharged earlier. Research conducted on behalf of the Office for Disability Issues in Wales, has noted that "delivery of Independent Living support to disabled people is more cost effective, or at least no more expensive, than traditional care provision"¹²⁷.

Providing home care for people with low to moderate needs may avoid the need for more intense (and more expensive) home care, residential or hospital care in the future. If appropriate care is offered in the home there are opportunities for cost savings for health care achieved through a reduction in hospital care resource use (e.g. reduced A&E attendances, reduced admissions and length of hospital stays). There is a potential cost saving for local authorities who successfully enable older people to remain in the community compared with a stay in a residential setting. Older people using home care are more likely to have higher psychological wellbeing scores at a relatively low cost per unit increase¹²⁸. However, there is very little economic evidence relating to the UK home care context¹²⁹. NICE highlight the need for further economic evidence, particularly in the areas of evaluating home care intensity packages in the UK; telecare delivered as part of home care and specialist dementia support in a home setting.

Box 4.2 Home care: delivering personal care and practical support to older people living in their own homes [NG21, 2015]¹²⁸

Postponing entry into residential care by just one year through adapting homes saves £34,381.85† per person¹³⁰. Home modifications can include adapted toilets, showers, lifting equipment and new heating systems. The Welsh Government supports 'Care & Repair Cymru' which is a national charitable body that supports older people to live in homes and communities that are suitable for their needs²⁶. Care & Repair Cymru's Rapid Response Adaptation Programme (RRAP) allows for a quick turnaround in housing adaptations for older people to decrease hospital admissions and to support efficient discharges from hospital. For every £1 invested in Care & Repair there are £7.50 of savings to the taxpayer¹⁷. In a survey of recipients, 4,472 (14%) of clients said they would have been unable to stay in their own homes without the assistance of Care & Repair, and 6,191 stated their independence had been improved by Care & Repair. Over 64% of Care & Repair services were provided for clients over 75, and 26% of total clients helped were over 85¹⁷.

Buildings specially designed for older people may include features such as a glass panel beside each front door and a colour-coded strip to aid visual orientation and enable people with dementia to recognise their own homes, letter-cages to catch the post from the floor, spy holes in the doors, corridors within the flats big enough to accommodate scooters, and charging-points. Such new buildings may also have central storage points for equipment; however, the cost of apartments may be high and cost-effectiveness needs to be considered¹³¹.

In Wales, despite the risk of older people being in poverty decreasing over the last 15 years, there are still an estimated 84,000 older people living in poverty, with 50,000 of those in 'severe' poverty¹³². This means a weekly income of £188.53† or less¹³³. Rising fuel prices, poor energy efficiency in many homes, complexity of switching between energy suppliers and low income result in an estimated 140,000 older households are living in fuel poverty, affecting some 360,000 older people²⁶. Particularly in rural parts of Wales, older people living in homes with solid rather than cavity walls, and not on mains gas supply, are more vulnerable to fuel poverty, due to living on fixed incomes and the cost of heating homes through oil and solid fuels^{132,134}.

Ability to pay for energy bills has been reported to be the greatest concern to older people, with more than a third of retired households reducing expenditure on food, heating and social activities as a result¹³². There is some strong evidence that deterioration in health is associated with worsening housing conditions¹³⁵. Risks of accidents and potential disability are reduced when homes are adapted appropriately²⁶. Excess winter deaths are defined as winter deaths minus average non-winter deaths. There were 24,300 'excess winter deaths' in England and Wales in 2015/16. Most of these deaths occurred in people aged 85 and over^{133,136}. The economic case for improving housing for high-risk groups of over 65s is outlined in NICE guidance on excess winter deaths (see Box 4.3).

According to Age UK in 2012, it was estimated that the cost of people living in homes that were too cold was around £1.36 billion per year in terms of demand for healthcare (primary and secondary care) and social care services. Age UK believe that implementing the NICE guidance¹⁸ on health risks associated with cold homes would reduce this demand and cost.

It is cost-effective to improve housing by providing heating and insulation for high-risk groups of over 65s (i.e. older people with chronic obstructive pulmonary disease or heart disease) from the perspective of the health sector (for this assumes that the health sector does not bear the full costs of the physical changes to the building fabric). The economic modelling also indicates that "in some cases, the full cost of the intervention could potentially be justified on the basis of the health benefits alone."¹⁸ The economic modelling which informed this guidance indicates that a specific targeted approach to investment (focusing on programmes targeting low energy efficiency homes where people were at risk of ill health) is more cost-effective than a broader approach to intervention (with programmes aimed at all homes where people were at risk of ill health).

The guidance further highlights that "fuel subsidies are less cost-effective than home energy efficiency measures, but the former may be more suitable over shorter time frames. That's because they avoid a large capital investment cost for people who may have a comparatively short life expectancy, or who expect to move home in a comparatively short period.

Quantification of the risks and benefits associated with home energy efficiency and fuel subsidy interventions is based on a model involving a complex chain of assumed causal links. For some of those links, the evidence base is limited and the results should, therefore, be interpreted as indicative only."¹⁸

Box 4.3 Excess winter deaths and illness and the health risks associated with cold homes: the economic evidence [NG6, 2015]¹⁸

Reablement

Reablement has been defined as “services for people with poor physical or mental health to help them accommodate their illness by learning or re-learning the skills necessary for daily living” pg. 8¹¹⁴. Reablement is an example of an ‘upstream’ preventative service which may potentially provide ‘downstream’ savings¹³⁷. The economic case for reablement is described further in Box 4.4.

Reablement has been found to be a cost-effective way to reduce service costs through improving people’s outcomes and reducing, delaying or preventing the need for health and social care¹³⁷. In Wales, reablement services are either funded through local authority spending or through Health Board budgets (and through joint working and joint funding in some instances), dependent on local authority and Health Board priorities¹³⁸.

Box 4.4 SCIE Research briefing 36: Reablement: a cost-effective route to better outcomes¹³⁷

The ‘British Red Cross Support at Home Service’ delivered in some parts of Wales involves activities such as assisting someone to return home after a hospital stay, ensuring they take their medication and more generally supporting people by re-building their confidence and independence¹³⁹. The programme can deliver cost savings of £880 per person, due to a reduction in care and support needs¹⁴⁰.

For older blind and partially sighted people, rehabilitation intervention is considered a key reablement service. It offers cost savings in terms of preventing loss of independence and reliance on other services by supporting people who need to learn a new set of skills such as washing, dressing, preparing meals, moving round the home safely, and taking responsibility for belongings¹⁴¹.

In a survey of Health Boards across Wales, reablement services were found to focus mainly on improving physical health and mobility, with comparatively little focus on the benefits of social interventions. Reablement offers long-term economic benefits for short-term interventions but requires adequate investment in order for appropriate and effective services to be developed¹³⁸. It is worth noting that different Health Boards across Wales use the terms reablement, intermediate care and enablement interchangeably¹³⁸.

Telehealth

Technology enabled care is a part of the Welsh Government’s strategy on health and social care^{4,142}. Telehealth, telemedicine and telecare through telephone or video conferencing activities are taking place across Wales¹⁴³. However, in terms of video conferencing, there are a lack of dedicated video conferencing suites access in some Health Boards, such as Hywel Dda, Powys and Betsi Cadwaladr in North Wales, and this is seen as a barrier for the reablement teams. There is a greater scope to develop telehealth in Wales in order to minimise the need to travel to hospital by providing more home-based or local care in the community. This could reduce the cost for patients and carers. However, there are barriers to the potential cost-effectiveness of video conferencing, including set-up costs with administration; internet connectivity in the patient’s home, and digital competency of the older person, who might prefer face to face contact. Telecare can provide a range of support including dementia support, falls prevention and securing home environments. Telecare is reasonably inexpensive (at an estimated £43 per person per week) and can be scaled-up¹⁴⁴. There are potential cost savings of up to £400 per person, per week when using telecare in the home environment compared to the cost of residential care¹⁴⁴.

Economic evaluations to explore the impact of investing in telecare and telehealth, particularly in a UK setting, are limited in number and quality^{145–147}. There is some strong evidence that telecare may be cost-effective for certain groups of adults with chronic conditions (e.g. cardiovascular disease)¹⁴⁸ and as a strategy to support people recently discharged from hospital following heart failure¹⁴⁹. However, the most comprehensive economic evidence of telecare in a UK setting highlights that it is not likely to be cost-effective compared with usual care alone¹⁵⁰.

5. Preventing loneliness and social isolation



5. Preventing loneliness and social isolation

In the UK many older people live in social isolation, with those over the age of 65 twice as likely as other age groups to spend over 21 hours of the day alone¹⁵¹. In Wales it is estimated that 17% of older people are lonely, and across the UK these figures rise considerably with age, with 63% of those aged 80 and over reporting loneliness²⁰. Social isolation and loneliness are strongly correlated with poor mental and physical health outcomes¹⁵² (see boxes 5.1 -5.3 below) and are more likely to require additional health and care support, for example, older people who are lonely are 3.5 times more likely to have early admission to residential care¹⁵³. Loneliness has a considerable impact on public sector resources, with significantly higher rates of GP visits, hospital admissions and accident and emergency visits compared to older people who self-describe as never lonely^{56,153,154}.

Loneliness and mental health

Older people who experience loneliness are more likely to experience depression^{155,156}. Loneliness and limited social interaction is also associated with an increased risk of suicide in older age¹⁵⁷.

Loneliness and cognitive decline

There is strong evidence that older people who experience loneliness are at greater risk of cognitive decline^{158,159} and are 64% more likely to develop clinical dementia¹⁶⁰.

Loneliness and poor physical health

Loneliness increases the likelihood of early death by 26%^{161,162}. The impact of loneliness on physical health is comparable to the impact of well-known risk factors such as obesity, and there is strong evidence to suggest that it has a similar influence as cigarette smoking²¹. There is convincing evidence that loneliness is associated with an increased risk of developing chronic physical conditions such as diabetes, coronary heart disease and stroke^{163,164}.

Boxes 5.1–5.3: Impact of loneliness on mental, cognitive and physical health

Poor health can also be an indirect cause of loneliness, particularly when poor health leads to a reduction in social interaction and participation, factors which are strongly correlated with loneliness in older age¹⁶⁵. Strong social networks have been shown to be key factors in protecting psychological and cognitive resilience^{162,166-168} and there is substantial evidence that social networks can reduce the risk of premature death by 50%²¹. Policy makers are encouraging the delivery of preventative health promotion initiatives to older people with the aim of reducing morbidity, increasing quality of life and limiting dependence on costly health and social care services^{66,151,169-173}. Loneliness can also have a negative effect on the mental and physical health of carers and further lead to increased financial expenditure and loss of carers own social interactions^{38,174}.

Maintaining mental wellbeing and independence has been cited as a best buy for public health [see glossary]¹⁹. Loneliness and social isolation has been recognised as important public health concern by the Older People's Commissioner for Wales¹⁷⁵. Loneliness amongst older men in particular is a growing problem in Wales¹⁷⁶. Older men in Wales have been identified as the loneliest group across the whole of the UK and have the potential to benefit most from early intervention to prevent loneliness^{20,175}. The current situation of high rates of loneliness in Wales is unaffordable for the NHS and social care services^{22,23}. Prevention is key to addressing this problem and requires

joint pro-active efforts by all the agencies and public sectors concerned with the wellbeing of older people. The costs and benefits of loneliness prevention fall across multiple sectors and society, therefore, a private and public sector multi-agency [see glossary] response is required²⁴. This 'whole system' response to loneliness needs to also address the many social engagement barriers faced by older people such as issues around suitable accessibility and age-friendly environments, particularly considering very practical things such as transport and toilets³². (See Box 5.4).

Keeping older people independent and mentally well has been found to be beneficial and cost saving in terms of interventions to prevent loneliness and increase quality of life¹⁷⁷. Strong UK based evidence highlights that community based singing interventions can help maintain and enhance mental health related quality of life and are likely to be cost-effective (compared to usual activities) for people aged 60 years and above¹⁷⁸. In Wales, Tenovus Cancer Care 'Sing with Us' choirs have been set up in South, Mid and North Wales and bring together people of all ages including many older people who have been a patient, survivor, carer or someone who has been bereaved through cancer¹⁷⁹. While cost-effectiveness has not been evaluated to our knowledge, the 'Sing with Us' choirs provide an example of a shared funding model with weekly participant donations of £2 which can help offset the total costs of programme delivery.

Echoing the call from Social Care Institute for Excellence (SCIE) for greater inclusion of cost measures in future loneliness research¹⁸⁰, NICE highlights the need for further economic research in this area, particularly in:

- 1 Exploring the cost-effectiveness of UK interventions that aim to protect at-risk groups of older people where there is an increase chance of social isolation and decline in independence and mental wellbeing;
- 2 Identifying the key factors of the 'local coordination role' to ensure best value for money in promoting older peoples mental wellbeing and independence;
- 3 Exploring cost-effectiveness of preventative interventions for mid-life groups most at-risk of experiencing poor mental health in later life.

Providing activities for older people needs funding from existing sources. Additional costs may be offset by savings from reductions in the number of GP appointments associated with falls, diabetes, stroke and coronary heart disease, depression and dementia.

Box 5.4 NICE guidelines on 'Older people: independence and mental wellbeing' – the economic evidence [NG32, 2015]¹⁸¹



Effective and cost-effective interventions to prevent loneliness and social isolation

There are a wide range of interventions to address social isolation or loneliness, including one-to-one interventions, group based activities and wider community engagement¹⁸². The consensus on the most effective type of intervention or which sector should be responsible for its delivery remains uncertain^{170,180,182}. While there is extensive literature highlighting the opportunities for investment in social isolation and loneliness prevention initiatives, such as friendship programmes, the availability of economic evidence on relative cost-effectiveness is limited^{136,180}.

It is estimated that the delivery of effective interventions such as friendship programmes to prevent loneliness and reduce future use of public services could have modest life-time savings of up to £2,075.40†¹⁵³. Furthermore, interim reports on the decision analytic modelling of the long term cost of loneliness by the London School of Economics estimated that there are potential cost savings to society of approximately £7.2million† over ten years through averting loneliness¹⁸³.

Effective loneliness prevention interventions delivered with fidelity [**see glossary**] at scale have the potential to produce cost savings across public sectors^{32,153,183}. McDaid and colleagues modelled the effects of reducing loneliness and estimated a saving of £1,700 per person over a 10 year period, these savings were accrued through the avoidance of unplanned hospital admissions and avoidance of excess GP consultations. Further costs savings were estimated from averting the need for dementia services¹⁸³. In general terms, group based activities to reduce loneliness among older people can be more cost-effective than one-to-one health promotion interventions by definition (as they have a lower cost per person) and there is some evidence to suggest that they may be more successful as loneliness prevention initiatives compared to individual support¹⁸². Strong, trial based evidence from a Finnish study found that socially stimulating group activities can not only reduce isolation and loneliness in older people, but they can also improve wellbeing and cognitive function and were cost-effective¹⁸⁴. From reviewing the literature on the economic evidence of interventions to address loneliness amongst older age groups, the following interventions are explored below:

Friendship programmes

Befriending interventions may be highly cost-effective and have the potential to produce a net saving to society³³. They are commonly run by voluntary or community organisations, often involving one-to-one friendship activities³⁸. They can be delivered at a relatively low cost (approximately £105.90† per person per year) and result in quality of life improvements, reduced rates of depression and may result in savings in health and social care resource spending³⁸.

Telephone befriending can be effective at reducing social isolation in older people and can be delivered at a low cost^{37,185}. Teleconferencing has been proposed as a cost-effective strategy for reducing loneliness and increasing social interaction, especially in geographically isolated areas³⁷ however no economic evaluation was identified to assess this evidence further. More recent pilot trials of telephone befriending have highlighted barriers to recruiting and retaining volunteer call handlers, which may pose challenges to successful implementation¹⁸⁶.

Targeting at risk groups is likely to be more effective than interventions for all older people (e.g. older people discharged from hospital, people living alone, carers, recently bereaved)³² and may offer greater return on investment³⁸.

Friendship enrichment programmes for women can be effective at improving health and be cost-saving. These types of programme may not necessarily be delivered by the health service (to whom the benefits commonly fall) but instead by voluntary or community organisations. Delivered as a low cost intervention (£77 – £120 per person per year), there are estimated total savings to the

5. Preventing loneliness and social isolation

health service of £391 per individual and quality adjusted life years (QALYs) [see glossary] gained of 0.035 (equivalent to just under two weeks of additional full health related quality of life) for each individual¹⁸⁷. These estimated savings equate to a return of £5.10 for every £1 spent³³.

Programmes which bring together generations can have bi-directional benefits in the sense that older people can gain enjoyment from interaction with children, while children can gain confidence, language skills and an appreciation for older adults²⁸⁻³⁰. International evidence of intergenerational programmes indicates that opportunities for older people to support the learning of children through social education could be cost-effective and even cost-saving³¹. Sharing facilities and overheads through intergenerational programmes may prove an economically rational way of achieving bi-directional benefits, such as reducing loneliness in older people, and improving social skills of children⁷⁹.

Technology assisted programmes

Communication technologies such as email and video call tools such as Skype can make keeping in touch easier when grown up children live far apart or for older adults living in more rural settings²⁰, subject to broadband availability. Evidence of the potential value of new technologies on loneliness prevention is mixed but internet training may be a cost-effective way to support older people and enable them to maintain good social links, particularly for older people living in very rural communities^{32,33}. This is relevant to us in Wales. However relying on modern technology for communication may also have negative effects on the health and wellbeing of older people as they have fewer human interactions, and have fewer reasons to leave the house (if they are able to do so)¹⁸⁸.

Internet use can decrease loneliness and help older people retain social ties, particularly among adults in assisted and independent living communities¹⁸⁹. Group-based internet and computer training interventions may be cost-effective with an estimated cost per QALY of £16,238.99†³³, which is below the maximum threshold of £20,000 - £30,000 per QALY recommended by NICE¹⁹⁰. The Plymouth SeniorNet programme showed that older people value help with using the internet more than many other forms of practical help¹⁹¹. An annual value for being online might, therefore be £1,017.35† - £1,322.56†. Though not a full Social Return on Investment (SROI) [see glossary] study, it is interesting as it highlights the relative importance to older people of learning to use and maintaining access to the internet.

Arts and crafts based interventions

Arts based interventions may be effective at reducing loneliness and can offer a substantial return on investment^{32,34}. There is some support for the use of 'arts on prescription', one form of 'social prescribing' ¹⁹² "where GPs have referred patients to arts projects aware of the positive effect that these are likely to have on their morale and sense of enjoyment in life at very low cost" pg. 14¹⁹³. According to the King's Fund, social prescribing is an example of an innovative and growing movement, with the potential to reduce the financial pressure on primary care in the NHS¹⁹⁴. Connecting people to non-medical and community support services is sometimes referred to as 'social prescribing'.

Based on the principle of co-production, the Craft Café was established in the Glasgow area as a pilot aimed to encourage older people to prevent issues of loneliness and social exclusion themselves by reconnecting with their communities in a safe, supportive and creative environment and learning new craft skills. It has been successfully trialled in areas of multiple deprivation, targeting groups of older people at high risk of social isolation (e.g. older people living alone). A SROI analysis has estimated that there is £8.27 of social value generated for every pound of investment³⁴. Research led by Bangor University on the benefits of arts activities for people living with dementia and their carers, with centres in North Wales, North East England and Derbyshire, will help to establish the SROI^{195,196}.

Community based programmes

Older people living across Wales have a wide range of interests. For example, the University of the 3rd age (U3A) is an international organisation which is active across Wales, e.g. coordinating a coastline project, archaeology and anthropology projects, and holding community discussions about philosophy, politics and culture. These events are organised by, and are for older people in Wales. U3A in conjunction with Cymru Older Peoples Alliance (COPA), Learning and work institute, Men's Sheds Cymru, The Open University and Royal Voluntary Service organise learning and employability events including supporting digital inclusion. Such networks and collaborations need evaluation as they may provide a return on investment, which is as yet unknown.

There is evidence that group activities around interests can be cost-effective. These can facilitate the building of potential friendships and the empowerment of older people. Group activities include arts, writing groups, exercise and health discussion groups, swimming, strength training and dancing¹⁷³. Psychosocial programmes to promote such activities had resulted in mean net reduction in health care costs of £901.36†† per person per year¹⁷⁷, illustrating a saving of £59.26†† per person per year.

Men's Sheds, an initiative originally from Australia, has been shown to provide social support to older men at risk of social isolation and help build self-esteem through the development of friendship with other men³⁵. Older men who engage in the programme work as volunteers or engage in shed based craft activities, such as wood turning, which can also contribute back to the community. Economic analysis of the first Men's Shed implemented in Scotland indicates a SROI of £10 for every £1³⁵. There are an estimated 35 Men's Sheds across Wales¹⁹⁷.

Loneliness prevention interventions that help older people achieve and maintain a sense of community and belonging appear to support positive mental health and can be effective at preventing social isolation³². In Wales the Welsh language is a common interest of many community groups and 'Welsh societies' providing Welsh language lectures on different topics, coffee mornings and evening meals are common in many areas, e.g. Cymdeithas Gymraeg Dinbych (Denbigh Welsh Society). Membership groups such as these provide opportunities for Welsh speakers to get together, build and maintain friendships.

Community navigator services or 'gatekeeper' programmes can successfully identify and refer on socially isolated older people who have not routinely come to the attention of services^{36,37}. These programmes are likely to be cost-effective³⁷, essentially delivered as a social prescribing service they offer a range of potential economic benefits, including "a reduction in employment disruption (as a result of mental health problems, for example) or job loss, fewer GP visits (once an individual's health needs have been assessed and treated), better health and generally greater well-being" pg. 8³⁸. Modelling of the costs and potential benefits has identified a mean net saving, with programme costs of between £353.00- £564.80† per person per year, greatly outweighed by economic benefits of £1059.00† per person in the first year³⁸. Successful gatekeeper programmes tend to be community driven, develop good communication links with agencies and overall build community capacity³⁷. Community Navigators have been implemented in Wales as a Denbighshire County Council initiative facilitated by employees from the Red Cross and Age Connects¹³⁹.

Although there are no published Wales based evaluations of the social isolation reduction services, evidence from other areas of the UK including the Gloucestershire Village and Community Agents programme indicates an overall positive return on investment of £3.10 for every £1 spent, with potential benefits including savings from loneliness and social isolation interventions such as befriending services, social activities, transport and volunteering¹⁹⁸. Living Well Cornwall operates in a similar way to other community based navigator programmes with a trained Age UK co-ordinator that can conduct motivational interviews to support and empower older people to identify and access existing resources. The pilot phase return on investment analysis indicates that at a cost of

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approximately £406.94† per person during the time period they are involved in the Living Well Cornwall programme can result in a minimum 29% reduction in hospital admissions and between 20 – 23% improvement in wellbeing scores²⁴. It is estimated that for every £1 invested in the programme a £4 return will be achieved²⁴.

Local Area Coordination is a preventative approach that can help older people who may become isolated better navigate the social care and health system, build links within their communities and in general build community capacity. Local Area Coordinators have been successfully piloted and evaluated in socio-economically deprived areas of Wales¹⁹⁹. Local Area Coordinators generate a positive return on investment, with a return of between £2 and £4 for every £1 invested^{199,200}.

Community-based exercise programmes have been evaluated as effective interventions for older people living in the community²⁰¹. Although no financial proxies are provided for benefits, a budget impact of implementation analysis proposes a first year cost of approximately £147.09††.

Reports on the Rotherham Social Prescribing Scheme indicate a potential long-term return on investment of £3.38 (if benefits are sustained over a five year period) with programme benefits including a significant reduction in inpatient admission, A&E attendances and outpatient appointments²⁰². There is some variation in the potential positive return on investment of social prescribing, with estimates over a three year period equating to a slightly lower return of £1.98 per £1 investment for NHS savings and £1.11 per £1 invested for wider wellbeing benefits, indicating that a positive return on investment could be expected in the long term (three or more years)²⁰³.

LinkAge is a charity run within Bristol, operating with a core aim of reducing isolation and loneliness for people aged 55 and over²⁴. LinkAge functions based on the principles of co-production, with a local advisory group of older people involved at its core in the running and development of the programme. The programme has a number of community hubs which enable older people to find out what is available within their local community and access a range of activities including cooking, choirs, walking football and yoga. In addition to targeting loneliness and improving outcomes such as wellbeing, happiness and physical activity levels, the programme has an intergenerational element which aims to challenge age stereotypes and celebrate cultural diversity. The organisation relies heavily on volunteers and has developed internal sustainability through empowering older people who begin as service users to become volunteers themselves. A 2012 SROI analysis found that for every £1 invested, the programme would generate a minimum of £1.20 in social benefit²⁴.

There are a number of initiatives to address issues of isolation and loneliness being delivered across Wales¹³⁹; however, there are a limited number of economic evaluations that have been published. While the reports summarised within this section are indicative of potential savings or generated economic or social returns, the estimates are based on predictions from modelling exercises or return on investment analysis, the majority of which are published in grey literature which has not been subject to critical peer review. Particularly with return on investment estimates reported in organisation public facing reports, there are limited details of the methodology used available to enable critical appraisal of the evidence. Achieving the savings is dependent on the availability of effective and cost-effective interventions³⁸.

6. Caring for older carers



6. Caring for older carers

For this section on caring for older carers, grey literature (from Wales and worldwide) and more international literature found in the rapid review are reported. Some of this evidence is weak in the sense that they are reports and not empirical research (n=6), some are of moderate quality in terms of evidence (n=12), and some are stronger in terms of quality of evidence, and these are particularly the articles reported in peer-reviewed journals (n=37) (see technical appendix).

As people become older and less able to manage the activities of daily living, the need for others to provide care increases²⁰⁴. This is especially true for older people who have cancer or who have suffered strokes or have dementia. The terms 'informal carer' or 'caregiver' refer to an unpaid family member, friend, or neighbour who provides care to a person who needs assistance to manage tasks such as taking medications, feeding, bathing and dressing²⁰⁴.

Across the UK, over 1.4 million carers are caring for more than 50 hours per week²⁰⁵. This is equivalent to the work of 1.3 million NHS staff²⁰⁶. Carers can be the key factor that can keep someone living at home or prevent admission to hospital or residential care. In Wales⁴², 32% of the adult population over 50 years old are carers³⁹. It is estimated that three in every five people will at some point in their lives become a carer²⁰⁷. Of the carers in Wales, 58% are female and 42% are male³⁹. There is a large variation in the estimates of the economic contribution of all carers in the UK, from a saving of £91†billion every year in potential care costs⁴⁰ to an economic value of the contribution made by carers of £139†billion per year⁴¹. In Wales, unpaid older carers save the Welsh economy an estimated £1.88 billion†* in care costs, and this figure is predicted to rise to £2.44 billion* by 2030¹⁴. Other estimates indicate that the value of total carer contributions in Wales could in fact be considerably higher at an estimated £8.15 billion† per year⁴¹.

In the UK, the highest proportion of unpaid carers reside in Neath Port Talbot, South Wales, where 14.6% of the population provide unpaid care³⁹. Compared to the rest of the UK, Wales has a higher number of older carers who are often themselves in poor health⁴⁰. People who are frail and older may need more support than those who are younger and more able, and this can affect the quality of life of caregivers in terms of more stress, anxiety and depression, as well as general health problems such as strained backs associated with carrying and lifting²⁰⁸.

It has been widely reported that unpaid carers are effectively propping up the health and social care systems in Wales⁴⁰. There is interdependence between the health of patients and their informal caregivers and health care costs. There is strong evidence that caregivers' use of health care services increases as their caregiving load increases⁴³. In the USA, strong evidence suggests that spouses of people with dementia have higher monthly Medicare use than spouses of people without dementia²⁰⁹. There is strong evidence that spouse caregivers of people with dementia have greater cognitive decline compared to other spouse caregivers²¹⁰.

The cost of not caring for carers is very high. Six in ten carers report reaching breaking point at some point in time²⁰⁵. Recent reports have recommended that more funding should be provided for social care and that financial support should be provided for carers, including the right to paid care leave and policies that would enable carers to stay in work⁴¹.

Effective and cost-effective interventions to support older carers

Apart from the direct costs of caring for older people, there are also costs of providing care to older carers who are in need of social, medical and psychological support. There is strong evidence to suggest that interventions such as support groups have an impact on caregivers' psychological wellbeing, depression and social outcomes²¹¹. Interventions such as psychoeducational groups may have positive effects on wellbeing, and depression. Educational groups may provide useful information such as caregiving skills, adjusting to the role of carer, information on legal issues, role play and discussion, and facilitate caregivers finding available resources to reduce carer load. Strong evidence suggests that the extent of behavioural problems and the ability to undertake activities of daily living (ADL) are important drivers of resource use and costs²¹². Estimated costs and likely cost-effectiveness of providing care for carers vary considerably depending on the type of intervention.



Respite

Respite care can be provided in the home or in the community to provide relief to the caregiver from their caregiving responsibilities²⁰⁸. A high quality systematic review in 2007 regarding the effectiveness and cost-effectiveness of respite for caregivers of frail older people found mixed results²⁰⁸. The economic evaluations from five of the studies reviewed²¹³⁻²¹⁷ all focused on day care-based respite care, which tended to be associated with similar or higher costs than usual care²⁰⁸.

The cost of day care was statistically significantly higher than usual care when assessed on local and national unit costs²¹⁷. None of the studies included in the review²⁰⁸ included generic health-related quality of life measures, making cost-effectiveness comparisons with other health and social care programmes problematic. Economic evaluation of host-family respite was also missing from this evidence review.

There is strong evidence that day care respite is effective in reducing caregiver responsibilities^{213,214,216,217}, and depression amongst caregivers²¹⁸. A range of services supporting the care of the frail elderly is probably most appropriate⁴⁴. A flexible approach to respite provision would benefit carers as the care recipient's needs change over time⁴⁴. Therefore, whilst there is some evidence to support respite having a positive effect on carers, the economic evidence is still limited and there is a need for more robust, high-quality and larger trials that include economic evaluations⁴⁴.

Psychosocial interventions for carers of people with dementia

Psychosocial interventions in the form of befriending services and psychosocial education and support have been evaluated recently for carers of people with dementia with mixed results.

Strong evidence suggests that family meetings as an intervention to reduce carer load are unlikely to be a cost-effective intervention for caregivers and persons with dementia²¹⁹.

There is strong evidence to suggest that psychosocial education (educating and informing the caregiver) and support for carers of patients with dementia can be cost-effective at an estimated cost of £100.08†† per family caregiver⁴⁵.

Befriending interventions (access to a befriending facilitator) can improve the psychological wellbeing and quality of life of carers of people with dementia. Despite this, uptake of such services is not high²²⁰. The total cost from a societal point of view can be £2,407.36† per carer, but access to a befriender facilitator is neither an effective nor a cost-effective intervention in the support of carers of people with dementia²²⁰.

Tailored activity programmes for carers of people with dementia

Strong evidence from the USA highlights Tailored Activity Programmes (TAP) delivered by occupational therapists as a cost-effective intervention which can provide family carers of people with dementia with valuable time off from caregiving⁴⁶. Caregivers saved one extra hour per day 'doing things' at a cost of £1.65†† a day and one extra hour per day 'being on duty', at a cost of £0.86††⁴⁶.

There is strong evidence from economic analyses from a public sector perspective that joint person with dementia and caregiver reminiscence groups are unlikely to be cost-effective. There is mixed evidence with regard to the effectiveness of reminiscence therapy, which works with early memories, often intact in dementia, drawing on preserved abilities, rather than emphasising impairments. The REMCARE programme, developed and researched in Wales, had an average cost of £10,222.04† per programme of 19 sessions²²¹. While people with dementia experienced improved autobiographical memory, relationship quality and overall quality of life

following the REMCARE sessions, their carers reported negative outcomes following attendance at joint reminiscence groups, including an increase in anxiety and raised stress levels²²¹.

Dementia

Dementia is a significant public health issue in Wales. Ischemic heart disease has been replaced by Alzheimer's disease as the leading cause of death (11.6% of all deaths registered in 2015)²²². Approximately 42,000 people in Wales have dementia²²³. Dementia affects one in fourteen people over the age of 65 years old and one in six people over the age of 80 years old²²⁴. As life expectancy increases, there will be more older people living in Wales and so more people with dementia²²³.

In Wales, we are learning more about life in older age through the Cognitive Function and Ageing Study (CFAS Wales), funded by ESRC, following 5,000 older people living across Wales²²⁵. Between 15-20% of all older people aged 65 and over in Wales are bilingual in Welsh and English^{226,227}. There is strong evidence that bilingualism has cognitive benefits and may have particular benefits for older people, including the later onset of cognitive decline^{228,229}. There is strong evidence to suggest that native bilingual Welsh/English speakers with Alzheimer's disease may retain some benefits in inhibition and management of response conflict, compared with their monolingual English only speaking peers²³⁰. The underlying reasons and cost implications of later dementia diagnosis for Welsh speakers warrants further investigation and has been argued to be a factor of delayed diagnosis rather than delayed onset²³⁰. Timely diagnosis means treatment and care can begin sooner.

The cost of dementia in Wales

Dementia is estimated to cost the Welsh economy £1.47 billion† per year⁴⁷. In terms of health care costs, £206.13 million† is spent each year and in terms of social care costs £562.65 million† is spent annually (publicly and privately funded) in Wales. In Wales, £654.15 million† is contributed by the work of unpaid carers of people with dementia per annum and £6.31 million† is spent on other costs, including police costs of missing person enquiries, advocacy services and research.⁴⁷

Examples of cost-effective interventions for people with dementia

Between 15% and 60% of people with dementia wander and it can be problematic for carers. The individual with dementia may come to physical harm or experience emotional distress which may lead to early institutionalisation²³¹. In the USA the 'iWander' android application has been reported to be a cost-effective way to remotely monitor wandering individuals with dementia²¹³. Carers are alerted when the individual with dementia wanders to an abnormal location. The application guides the user back home and alerts the caregiver to the whereabouts of the individual with dementia.

Strong evidence suggests that psychosocial interventions can postpone nursing home placements. A psychosocial intervention for family carers in Sweden found that counselling sessions and conversation groups resulted in postponing nursing home placements for people with dementia, compared with standard care arrangements²³³.

Peer support for people with dementia and carers has been shown to give a positive return on investment. A study looked at three dementia peer support groups in South London and found that the groups created social value ranging from £1.17 to £5.18 for every pound invested. Benefits for people with dementia included mental stimulation and a reduction in loneliness and isolation. Wider benefits to carers included reduction in stress and demands of care. Volunteers helping with groups reported an increased knowledge of dementia⁴⁸.

NICE and Welsh Government guidelines on dementia are outlined in Box 6.1.

NICE guidelines suggest that taking action in midlife makes it possible to prevent or delay the onset of dementia, frailty and disability²³⁴. Recent public health guidance suggest the following to prevent avoidable problems in old age:

1. Maintaining a healthy weight
2. Eating healthily
3. Keeping active
4. Reducing alcohol consumption
5. Stopping smoking

There is strong evidence that being physically active is essential for good health and wellbeing²³⁵. In the UK physical activity has been estimated to have the greatest influence on the dementia risk factors studied²³⁶. Most recently a study from Japan has added to the evidence base that walking regularly through middle age is a protective factor against the development of dementia²³⁷. There is strong evidence to suggest that increasing physical activity can aid in the prevention of the onset of dementia. Physical activity can increase life expectancy and can result in decreased spending on health and social care. Therefore, if prevention is targeted at the physically inactive, savings in dementia-related costs may outweigh the additional spending in life years gained²³⁸.

People in middle age are also encouraged to be more socially active and mentally stimulated to reduce dementia risk by relieving stress, improving mood and reducing the risk of loneliness and depression⁴⁹.

Box 6.1 NICE guidelines [NG16], 2015²³⁴ and Welsh Government guidelines on dementia, disability and frailty in later life – mid-life approaches to delay or prevent onset

Behavioural interventions for carers of people with dementia

Strong evidence suggests that delivery of a manual based therapy intervention programme (delivered by psychology graduates without clinical qualifications in addition to usual treatment) in promoting the mental health of family carers of people with dementia was cost-effective compared with treatment as usual²³⁹. At a societal willingness to pay threshold of £500, the probability that this intervention would be cost-effective is 95%. At a £30,000 per QALY willingness-to-pay threshold there is a greater than 99% chance of the manual based coping strategy programme being cost-effective compared to usual treatment alone²⁴⁰.

Strong evidence from the US suggests that behavioural interventions can help carers of people with dementia manage their time more effectively. At the end of six months, there was a significant difference between intervention caregivers and control caregivers in hours providing care. The caregivers in the intervention group had more time to do something non-caregiving. For the six months the total cost for each intervention caregiver was £1,072.62††, and the total cost for each control caregiver was £47.71††. The ICER [**see glossary**] showed that, for an additional hour of non-caregiving time per day, intervention costs were £4.38†† per day per caregiver (£789.00†† in total over 6 months)²⁴¹. Behavioural interventions are a viable mechanism to support caregivers of people with dementia²⁴². An average annual saving of £3,374.78†† was estimated for a specific behavioural intervention for veterans with dementia with no extra financial costs to the carer.

7. Preventing falls and reducing hospital stays



7. Preventing falls and reducing hospital stays

Older people can be at risk of falling due to balance problems, muscle weakness, poor vision, and long-term health conditions, such as heart disease, dementia or low blood pressure (hypotension), which can lead to dizziness and a brief loss of consciousness²⁴³. This is exacerbated in people over 65 years if they take little or no exercise⁵².

Falls are a major cause of disability and death in older people in Wales, with falls the most common cause of injury in people aged 65 years and older⁵⁰. Following a fall, 28% of older people die within a year⁵⁷, and for those who suffered a hip fracture, half 'never returned to their previous level of independence,' and approximately 20% entered a care home⁷².

Around 30% of adults who are over 65 years and living at home will experience at least one fall a year. This accounts for more than 4 million hospital bed days²⁴⁴. In Wales, it is estimated that between 230,000 and 460,000 people over the age of 60 fall every year and between 115,000 and 230,000 older people fall more than once per year⁵⁰. Most falls result in no serious injury, but annually approximately 5% of older people living in the community who fall experience a fracture or need hospitalisation⁷² mainly due to arm, leg or shoulder injuries. According to the literature, in Wales, between 11,500 to 45,900 people suffer a fracture, head injury or serious cuts from falling, this equates to between 32 and 126 serious injury falls per day in Wales²⁴⁵.

As people get older, maintaining muscle strength and the ability to balance are crucial to reducing the risk of falling. Strength and balance are also key to helping people to live independently for longer. Preventing falls in older people continues to be a key issue in the health promotion of older people in Wales^{1,50}. Falls are a source of harm to older people, and research into the prevention of falls is especially important considering the frequency of strokes and bone-related conditions²⁴⁶. Falls are the third major cause of disablement for older people according to the World Health Organisation²⁴⁷.

The risk of death or serious injury arising from a fall increases with age. This level of risk may be due to physical, sensory, and cognitive changes associated with ageing, in combination with environments that are not adapted for an ageing population²⁴⁷.

Falls have an impact on the quality of life of individuals, their family and society²⁴⁸. Even 'minor' falls can be very debilitating. Individuals can lose confidence and become nervous about falling again. This means they may become unwilling to move about, and as a result become more isolated and more dependent on others. This leads to greater concerns for carers, and an increased likelihood that an individual will need residential care⁵⁷.

There are a number of strategies to address the issue of falls in Wales, ranging from prevention through to treatment. Falls prevention initiatives can reduce the number of falls by 15-30% and well organised services, based on national standards and evidence-based guidelines, can prevent falls and reduce death and disability from fractures⁵⁰. Generic guidelines and implementation guidelines are available from the European ProFouND falls prevention network²⁴⁹. These guidelines encompass multifactorial interventions; exercise interventions; medication reviews and medical interventions; home and environment interventions; feet and footwear interventions; vision and vision aids; and falls detection and prevention technologies. Falls prevention strategies should emphasise education, training, creating safer environments, prioritising fall-related research and establishing effective policies to reduce risk²⁴⁷.

Effective and cost-effective interventions to prevent falls

Prevention is key to addressing the cost of falls and requires joint pro-active efforts to ageing well. Preventative strategies are cost-effective in both the short and longer term⁵¹. Reducing the risk of stroke through smoking cessation and healthy eating are examples of primary care level interventions to reduce the risk of falls, but other more intense interventions can be more closely linked to falls prevention in terms of potential cost savings. Tertiary interventions, such as exercise programmes²⁵⁰, can be low cost compared to multiagency complex interventions²⁵¹ which involve primary, secondary and tertiary care. NICE guidelines on preventing falls are outlined in Box 7.1.

Prevention of falls is a high priority for the NHS as averted costs of care can be significant⁵⁰. Many people who were living independently before their fall and fracture lose their independence afterwards²⁵². It also has an impact on loneliness as older people become less inclined to take risks and become more withdrawn from society⁵⁷. The impact of falls is wide, as it not only affects the individual, but also puts more demands on carers and health and social services in Wales.

By reducing the risk of falls, and therefore hospital attendances, the Welsh government can save money in terms of reducing spending on NHS resources in Wales and keeping older people out of residential care homes. Falls are estimated to cost the NHS in the UK more than £2.3 billion per year⁵⁰. It is estimated that preventative action such as physiotherapy for older people could reduce falls in Wales by 9,396 each year, a saving to the NHS of more than £15.87million per year⁵².

Avoiding hospital admissions through well-designed community-based interventions targeting falls prevention among older people are highly cost-effective⁵⁵⁻⁵⁷. Most recently in Wales, in line with principles of prudent health care, Aging Well in Wales brings together various initiatives including the 'Steady on Stay Safe' campaign.

Modelling can be used to explore falls prevention strategies on a population-wide basis and such economic models have shown that population-wide fall prevention programmes can avoid costs to individuals and the health service²⁵³⁻²⁵⁵. Trial results can be tested through modelling in order to clarify which elements of a project are driving the cost-effectiveness²⁵⁶. Real-life situations, such as history of fall events, are considered within Markov models to ensure the accuracy of modelling estimates²⁵⁷.

According to the NICE guidance on falls in older people, "preventing falls and fractures could reduce hospital costs. For example, avoiding a hip fracture might save hospital admission costs averaging £5744 per patient."^{72,258}

Providing prevention of falls initiatives may be cost-effective in reducing the risk of falls among older people. However, NICE highlight a scarcity of UK-based cost-effectiveness studies of falls prevention interventions and recommend future research is conducted in this area. In addition, further research to explore the most effective and cost-effective environmental adaptations aimed at reducing the risk of falling in older inpatients is recommended. Carried over from the 2004 guidance, research identifying cost-effective components of multifactorial programmes for particular groups of older people in different settings is recommended as a key priority. Guidelines for incorporating economic evaluations in falls prevention trials have been published²⁵⁹.

Box 7.1 NICE clinical guidance on 'falls in older people assessing risk and prevention', the economic evidence base^{72,258} [CG161, 2013]

7. Preventing falls and reducing hospital stays

There are potential cost savings from delivering falls prevention interventions to particular subgroups of older people at high risk of falling²⁶⁰. The Chartered Society of Physiotherapy have estimated that without greater investment in falls prevention in Wales, there will be 18.2% more care home admissions due to falls by 2020⁵². From reviewing the literature on the economic evidence of interventions to prevent falls amongst older age groups, the following interventions are explored below:

Evidence on interventions to prevent falls is mixed.

A cost-effectiveness and cost-utility analysis study in the Netherlands found that a multidisciplinary intervention programme to prevent falls was not cost-effective compared with usual care. Although the intervention programme was cost-neutral, it did not prevent falls or functional decline and did not improve quality of life²⁵¹. Another cost-effectiveness study to investigate the multifactorial falls prevention programme for community-dwelling older adults was conducted in Canada²⁶¹. The mean fall-related health service cost was £80.98†† for the intervention group and £79.83†† for usual care. The overall incremental cost-effectiveness ratio (ICER) was estimated to be £70,134.04†† per fall prevented. The lack of cost-effectiveness observed was driven by the lack of effectiveness of the intervention in reducing falls. However, cost-effectiveness was shown in a five year community-based safety promotion programme for older people in Sweden where the community-based intervention was as cost-effective as osteoporosis pharmaceuticals²⁶².

A multi-factorial falls programme in England also found that the falls rate was lower, and the estimated ICER was £3906.52† per fall averted following the leaflet and day hospital educational intervention²⁶³. Other initiatives such as a multimedia patient education programme provided with trained health professional have been found to be cost-effective in reducing the wider associated cost of falls²⁶⁴. The cost of preventing one older person becoming a faller was £333.69††²⁶⁴.

In Australia, a hip fracture service including co-admission under an orthopaedic and a geriatric team decreased the length of hospital stay after a hip fracture from 26 to 22 days on average, saving an estimated £575,350.34†† as patients could be discharged to a rehabilitation centre or to their homes sooner²⁶⁵.

A Markov based simulation model was conducted to establish the effectiveness of a multifactorial falls prevention programme. Compared to no prevention, such a programme for residents of nursing homes would result in a cost-effectiveness ratio of £17,014.57†† per QALY²⁵⁴.

There is emerging evidence that multicomponent cognitive behaviour group interventions are cost-effective to reduce fear of falling. In a study from the Netherlands, the fear of falls intervention group cost of £3924.35†† (cost of running a group over a 14 month period) was not significantly higher than the control group cost of £4,857.40††. In addition, beneficial effects of the programme were observed for fear of falling and activity avoidance²⁶⁶.

Exercise interventions

Physical inactivity is a major cause of reduced quality of life, as well as many common diseases and even premature death. Physical inactivity influences the burden of disease and increases societal costs²⁶⁷. Exercise is commonly acknowledged as a best buy for public health²⁶⁸. Evaluations of the National Exercise Referral Scheme in Wales have shown more generally that exercise is cost-effective (compared to usual care) for older people over 60 at risk of coronary heart disease with an ICER of £16,061.58†²⁶⁹.

Systematic reviews on falls prevention strategies for older people have found that falls can be prevented by certain exercise programmes for certain groups²⁷⁰. For example, exercises which target balance can prevent up to 40% of falls²⁷¹. There is some strong evidence to suggest that some community-based falls prevention exercise programmes are relatively inexpensive (at around

£127.94-£236.26†† per programme completer) and programme longevity is important in achieving lower long-term average costs²⁷².

There is a return on investment of over £4 when £1 is invested in physiotherapy for falls prevention⁵². Some exercise programmes have been found to benefit some specific groups of older people²⁷³. Group-based exercise programs aimed at falls prevention in older community dwelling population are more likely to provide value for money when targeted at women only due to their higher likelihood of fall-related injury²⁷⁴. Community falls based interventions for older people have been found to provide positive net benefits. For example, the tai chi: Moving for Better Balance intervention had a net benefit of £373.55†† and a ROI of £5.09 for every £1 invested⁵⁴. There is evidence from economic modelling that tai chi is also a cost-effective exercise intervention for older adults living in the community, the incremental cost per fall avoided is around £1,816.88††⁵³.

People living with Parkinson's disease can benefit from an exercise intervention, however a study conducted in England found no statistically significant differences between the exercise intervention group and the control group in total health care combined health and social care costs²⁷³. A t'ai chi ch'üan (t'ai chi) exercise programme represented a cost-effective strategy for optimizing spending to prevent falls and maximize health gains in people with Parkinson's disease²⁵⁰. There is strong evidence that exercise interventions for those with Parkinson's disease may be more cost-effective for individuals with an early diagnosis of Parkinson's disease, in the low disease severity group compared with those with more severe or complex needs²⁷⁵.

The application of these findings to a Wales context needs careful consideration, for example the cost per fall avoided presented in some studies do not take into account the training of t'ai chi exercise instructors.



Medication, supplements and medical interventions

Medication reviews should be considered as a part of a multifactorial assessment in patients at risk of falling⁷². Many older people use sedatives to treat their insomnia, but falls are one negative side effect of sedative hypnotics, therefore evidence is emerging that Cognitive Behaviour Therapy (CBT) may be the most cost-effective strategy for treating insomnia after falls and related consequences have been accounted for²⁷⁶. Psychotropic drugs such as antidepressants also need to be medically managed to avoid people falling²⁷⁷.

Providing vitamin D supplements could be a cost-effective way to help prevent falls and fractures in older adults^{277,278}. Targeting populations who are lower in vitamin D levels before treatment may reduce the incidence and risk of falls²⁶⁰. An economic model showed that for women, population screening was slightly more cost-effective than universal supplementation of vitamin D, with an incremental net monetary benefit of £160.48†† compared to £135.41††²⁷⁸ over a period of 36 months. In addition, for the oldest old (over 80 years old) and male population, population screening may also be more cost-effective than universal supplementation of vitamin D²⁷⁸.

NICE guidance on mental wellbeing in over 65s is outlined in Box 7.2.

There are few rigorous assessments of the effectiveness and cost-effectiveness of occupational therapy and physical activity interventions to promote mental wellbeing in people aged 65 and older that have taken place in the UK. This Public Health guidance draws upon the results of a study by Munro et al. (2004) who found that the incremental average QALY gain of 0.011 per person (equivalent to just under four days of additional full health related quality of life) in the community-based exercise programme resulted in an incremental cost per QALY ratio of £16,415††²⁷⁹. NICE highlight a number of economic evidence gaps identified during the development of this guidance, particularly that there is a lack of long-term evidence for the cost-effectiveness of interventions to promote older people's mental wellbeing. In addition there is a need for greater attention to be paid to methodological considerations relating to standardised measures used to assess QALYs and emotional/social wellbeing.

Box 7.2 NICE Public Health guidance on 'mental wellbeing in over 65s: occupational therapy and physical activity interventions', the economic evidence base¹⁷⁰ [PH16, 2008]

Home and environment interventions

Care & Repair Cymru programmes are provided throughout Wales and help to prevent falls through modifications to the home environment of older people living independently. Environmental modification to homes has also been found to avert medical costs of falling at around £620.15†† of modification cost, and averted cost of falling of £1,339.53††²⁸⁰. Modifications to homes can include handrails in the garden, grab rails by the front door or grab rails to help older people get into and out of the bath safely. Preventing a fall leading to hip fracture saves on average £32,060.43†, while the average saving per person of postponing the need for residential care by a year has been estimated to be around £31,406.14†¹²⁴.

Small building repairs also have a benefit to Health and Social Services through reducing the risk of falls²⁸¹. This benefit may come from the removal of trip hazards or preventing injuries by negating the need for older people to attempt small building work themselves. Another benefit of small building work is to keep older people living in their own homes so that they do not move into residential care earlier than necessary, saving an annual residential care cost of £57,700.23† per programme¹⁹⁸. Wet-rooms, showers instead of baths, and stair-lifts are all modifications that accrue

benefits for Health and Social Care Services. For example stair-lifts can give older people greater independence and confidence in their ability to cope, as well as minimising the risks of falling down the stairs. Benefits of stair-lifts can amount to £116,602.55† per Village and Community Agents programme¹⁹⁸.

There is some strong evidence to support that environmental adaptations to hospital wards such as installing shock-absorbing flooring can reduce the cost of falling to £913.51† per patient²⁸².

Feet and footwear interventions

Foot problems and foot pain commonly occur in older populations and can impact on an individual's ability to maintain usual functioning²⁸³ and have also been associated with an increased risk of falling²⁸⁴. Podiatry interventions to reduce falls have been evaluated^{285,286} and preliminary evidence indicates that they may be cost-effective with ICERs ranging between £19,494 and £20,593 per additional QALY²⁸⁵. The biggest costs are in training podiatrists or care home staff, on-going delivery costs can be embedded within usual care routines and overall incur minimal extra costs for the health services²⁸⁶.

Vision and vision aids

Vision screening is recommended for all people who have a fall²⁸⁷. The number of adults in Wales with a visual impairment is not known, estimates vary from 42,000 to 115,000 people with a severe sight impairment, although in 2011 only 16,253 of the adult population in Wales had a registered sight impairment²⁸⁸. The Welsh Health Survey indicated that 7% of people aged 45 and over in Wales have difficulty with eyesight²⁸⁹. Some barriers for older people accessing eye tests include cost issues, especially the cost of purchasing new frames and lenses, transport problems, fear of appearing frail or foolish, and not fully understanding their own risk of eye disease¹⁴¹.

The incidence of falls for older people with sight loss is 1.7 times that of people without eye problems²⁹⁰. In the UK, the medical cost of falls among people with sight loss amounts to an estimated £427 million† per year, and falls that are directly related to having sight loss at £203 million† per year²⁹¹. Failure to identify sight loss can lead to a higher level of falls²⁹⁰. Schemes which encourage older people (aged 60 years) to take up regular eye examinations can be cost-effective at £29,631† per Disability Adjusted Life Year gained [see glossary]²⁹². Despite new glasses reducing the risk of older people falling in the long term, it has also been suggested that in the short term there is more risk of older people falling after they have had a new prescription, which may be significantly different from their old glasses prescription²⁹³.

Although not cost-effective in the short term, cataract surgery can be cost-effective over a lifetime with regard to cost prevention²⁹⁴. Cataracts can affect both eyes; however, whether the benefits of second-eye cataract surgery outweigh the costs has been debated^{295,296}. Cost-utility modelling of the benefits associated with second-eye cataracts surgery indicates that it can be highly cost-effective compared to other medical procedures and only slightly less cost-effective than the correction of cataracts in the first eye^{295,297}. Second-eye surgery generated 0.68 additional QALYs (equivalent to an additional 8 months in full health-related quality of life) and resulted in an ICER of £1,998† per QALY gained²⁹⁷, significantly lower than commonly accepted thresholds in the UK.

Sight loss advisers can be beneficial in terms of reducing the fear of falling. A SROI analysis has estimated that there are £10.57 of benefits to health and social care for each £1 investment^{298,299}.

Falls detection and prevention technologies

As older people live longer, the number of older people who fall has increased and so have the number of systems aimed at detecting falls. Falls detection and prevention technologies include such things as 'fall watch alarm technologies' or 'user-activated alarms and pendants'. Although such

7. Preventing falls and reducing hospital stays

alarms are often low-cost and simple to use, they are only effective if the older person remembers to wear them and activate them³⁰⁰.

There is an assumption that telehealth and remote health care can be more cost-effective to face-to-face medical care³⁰¹. For example, remote monitoring technologies can be cost saving compared to patient sitters, with an ICER of £5217†† per avoided fall³⁰². More economic evaluations however are needed as technologies develop³⁰¹, particularly taking into account wider impacts such as any loss of socialisation and patient satisfaction that may come with replacing human contact with remote devices³⁰². Utilising existing communication technologies, such as smart phones, may provide a low-cost alternative to more expensive monitoring technology³⁰¹.



8. Discussion



8. Discussion

In this report we have explored the economic case for investing in older people as assets, through appraising the available economic evidence relating to older people (spanning interventions, policies and practice relevant to Wales). The choice of topics covered came from consultation with our multi-disciplinary advisory board, Public Health Wales colleagues, academics working in the field of health and social care relating to older people and our review of policies and practice relevant to older people in Wales. We consulted with members of Age Alliance Wales and the Cymru Older People's Alliance (COPA) to identify relevant sources of Wales based economic evaluations of services and action for older people. We have been further informed by the views of older people through the consultation of older people living in Wales as part of the Welsh Government review of the Older Peoples Strategy for Wales.

We identified three key areas to focus our synthesis of the economic literature relevant to older people in Wales (Loneliness and social isolation; Caring for older carers; and Preventing falls). We undertook robust rapid reviews of the literature, 2006 – 2017, published in the English language worldwide. We set out to add to the body of economic evidence relevant to us in Wales, complementing work already done by National Institute of Health and Care Excellence [NICE], Social Care Institute for Excellence [SCIE], Age Alliance Wales and the Cymru Older People's Alliance (COPA).

Our rapid review identified studies with a wide range of outcome measures, across which it is hard to make direct comparisons. We found that programmes that promote independent living and community engagement can reduce loneliness and provide wider economic benefits for example from volunteering and informal caring. Environments and services that promote exercise and active travel can support working for longer and independent living and a healthier old age. We recognise the synergy and interplay between the economic circumstances, physical environment in which older people are living, and access to health and social care services.

Conclusions

Wales needs to focus attention and investment on the following key areas:

- Fully integrated health and care services;
- Maintaining physical and mental well being in older age, with a focus on reducing social isolation and loneliness;
- Maintaining services to promote prevention (particularly falls prevention), rehabilitation and reablement;
- Investment in sustainable homes, transport and communities, and
- Support for informal carers.

Investment could focus on:

1. Enabling working for longer, facilitating volunteering and supporting working parents through care of grandchildren brings many economic returns in terms of improving wellbeing; reducing loneliness, and supporting formal and wider community services. Co-production enables older people to remain active in the community, with bi-directional benefits within the community and public sector services.
2. Programmes that promote exercise and improved balance can be cost-effective in terms of improving physical and psychological wellbeing in older age, reducing falls and associated need for hospital and community care. Local transport systems that can support active travel, including walking and cycling, provide wider economic benefits.
3. Maintaining funding across prevention, rehabilitation and reablement can generate economic benefits by promoting independent living; reducing the need for hospital admissions; facilitating earlier discharge from hospital, and reducing demands on health and social care services.
4. Many older people are themselves informal carers. There are costs of providing care to older carers who are in need of social, medical and psychological support. Carers, including carers of people with dementia, can be the key factor that can keep someone living at home or prevent admission to hospital or residential care. There is an economic case for making support for older carers a priority in Wales as there are more unpaid older carers in Wales than in any other part of the UK.
5. There is a need for economic evaluation of new models of care, for example, bringing together generations. Models that place preschool centres within care homes for older people, and organised programmes of activities to integrate these bookend generations are being introduced in US, Australia, Germany, England and Wales. Sharing facilities and overheads through intergenerational programmes may prove an economically rational way of achieving bi-directional benefits such as reducing loneliness in older people, and improving social skills of children.



Glossary

Cymru Older People Alliance (COPA) - Cymru Older People's Alliance is an organisation of volunteers working for the betterment of older people living in Wales.

Disability Adjusted Life Year (DALY) - A measure of overall disease burden, expressed as the number of years lost due to ill-health, disability or early death.

Fidelity - This refers to how faithful the running of the intervention, when it is rolled out, is to the original design of the intervention.

Gross Value Added (GVA): Gross Value Added is the total value of all that is produced in an economy in a given time period, usually a year.

Gross Domestic Product (GDP): Gross Domestic Product is GVA plus taxes on products less subsidies on products.

Healthy Life Expectancy—Expected number of years of life lived in good health. The measure combines age-specific mortality with morbidity or health status.

Incremental cost-effectiveness ratio (ICER) - Summary measure representing the economic value of an intervention, compared to an alternative.

Multi-agency (or multi-sector) - This perspective of economic analysis includes the NHS, Social Care, the voluntary sector, judicial system and local authorities.

Pro-rate (or pro-rated) - In this report we often pro-rate figures from the UK or England scaled so they are relevant for Wales. This is done on the basis of population size only and no account is taken of the level of need unless otherwise stated.

Prudent health and social care –Care that fits the needs and circumstances of patients and actively avoids wasteful care that is not to the patient's benefit.

Public Health (or Population Health) - In this report we use the term public health although we fully acknowledge in wider terms that we are talking about population health. Population health has been defined as "the health outcomes of a group of individuals, including the distribution of such outcomes within the group"³⁰³ p. 380. A public health intervention is a programme that is aimed at improving a public health problem. For example, a smoking cessation programme will aim to reduce the prevalence of smoking in a given population.

Quality Adjusted Life Year (QALY) - This is defined as a year of life adjusted for its quality of life. Patients may gain added years of life from a treatment or intervention. This time is adjusted by the quality of life during that period.

Return on Investment (ROI) - This is the net economic return for each pound invested in a public health intervention. It is expressed as either a percentage, or it can be stated that each £1 invested will generate e.g. £7.10 in economic returns. The £7.10 does not include the original £1 invested.

Social Return on Investment (SROI) - This approach considers the triple bottom line of social, economic and environmental returns. It is calculated as the present value of benefits in financial terms divided by the total inputs into the project. It is expressed as either a ratio e.g. 1:7.10, or it can be stated that each £1 invested will generate e.g. £7.10 in social value.

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