



Public Health
England

Protecting and improving the nation's health

An evidence summary of health inequalities in older populations in coastal and rural areas

Executive summary and main messages

About Public Health England

Public Health England exists to protect and improve the nation's health and wellbeing, and reduce health inequalities. We do this through world-leading science, knowledge and intelligence, advocacy, partnerships and the delivery of specialist public health services. We are an executive agency of the Department of Health and Social Care, and a distinct delivery organisation with operational autonomy. We provide government, local government, the NHS, Parliament, industry and the public with evidence-based professional, scientific and delivery expertise and support.

Public Health England
Wellington House
133-155 Waterloo Road
London SE1 8UG
Tel: 020 7654 8000
www.gov.uk/phe
Twitter: [@PHE_uk](https://twitter.com/PHE_uk)
Facebook: www.facebook.com/PublicHealthEngland



© Crown copyright 2019

You may re-use this information (excluding logos) free of charge in any format or medium, under the terms of the Open Government Licence v3.0. To view this licence, visit [OGL](https://www.ogilive.com/). Where we have identified any third party copyright information you will need to obtain permission from the copyright holders concerned.

Published August 2019
PHE publications
gateway number: GW-595

PHE supports the UN
Sustainable Development Goals



Executive summary

This review is intended for local authorities, clinical commissioning groups and other health and care organisations to inform strategic planning, service design and commissioning, as well as the development of local community infrastructure. It provides evidence on the health inequalities experienced by older populations in coastal and rural areas, together with a summary of considerations in taking an asset-based approach to reducing inequalities and promoting healthy ageing in these areas. The review comprises a rapid literature review supplemented with case studies, bringing together a range of information in one place with links to published research.

Findings

There is a paucity of literature focusing on those living in coastal areas, particularly coastal areas that were not also considered to be rural.

The majority of studies reported older people in rural areas experienced reduced rates of mortality compared to other areas, with some contradictory evidence. However, a number of studies found poorer physical health in rural and coastal populations, again with some contradictory evidence. There is some evidence of a slight increase in the prevalence of widespread musculoskeletal pain with greater rurality.

Evidence indicates that mental health problems are associated with living in a rural or coastal area, and that neurological problems are associated with living in a rural area. However, in both cases there is some contradictory evidence.

The main drivers of inequalities included social exclusion and isolation, access to and awareness of health and other community services, financial difficulties including fuel poverty and housing issues, a lack of transport and distance from services, low levels of physical activity, and mobility or existing poor health as the healthiest populations were those of working age moving out of rural areas.

The literature recognised issues in relation to the delivery of services, including workforce challenges facing health and care services, service providers moving out of rural areas, differences in types of treatment, and equitable outcomes costing more in rural areas for reasons relating to remoteness and limited economies of scale. There was also evidence that seasonality and weather affecting recreational activities and environmental conditions particular to coastal areas had an impact.

The main strengths, assets and sources of resilience identified were community networks and services, family support and informal care, environmental factors such as

less crime and more green space, access to a car or other transport, and certain health and care services such as home visits, and sitting or befriending services.

Only a small number of studies assessed the effectiveness of health and care interventions designed to reduce inequalities and promote healthy ageing in rural and coastal areas. They include village services which promote social inclusion, 'Mobile Me' a 10-week sport intervention which showed evidence of effectiveness, and a Liaison Psychiatrist Nurse which showed a trend towards improvement. A number of other interventions were identified in the literature but were not subject to formal assessment of effectiveness.

Four models of whole system approaches were identified.

1. Atterton's models which emphasise drawing on the positive benefits that those of pre and post retirement age bring to coastal areas
2. Corcoran's proposals for inclusive approaches to physical regeneration and community wealth building
3. Asthana's morbidity-based model which proposes using morbidity as a basis for allocating health resources
4. Countryside and Community Research Institute's community-centred approach.

Considerations

Based on the literature included as part of this review and taking into account the quality and number of studies available, the following considerations are relevant for the health and care system, as well as other sectors, in addressing health inequalities in older populations in rural and coastal areas.

Consideration could be given to interventions for those who might be at risk of social isolation or exclusion. This includes encouraging social connections particularly for those in marginalised groups as well as developing ways to engage with older men who may be less likely to participate in community activities.

Protecting and promoting the assets of rural and coastal communities may enhance outcomes. This includes support for community cooperatives, provision of village services, nurturing local markets, and promoting public or community transport.

Consideration could be given to greater provision of interventions which increase physical activity in older people in rural and coastal areas. There may be potential for areas to use their natural assets to promote activity or reduce isolation.

Positive health outcomes may be promoted by ensuring accessibility in design and delivery of health and care services, and considering accessibility before any decision to move or remove current services.

The value of services that reach people in their homes should be recognised, including volunteer and outreach programmes, home visits from health and care professionals which may enhance outcomes and provide social connection, and sitting or befriending services which improve the mental health of older carers.

Implementing community asset-based approaches, comprising progressive and proactive strategies viewing older people in rural and coastal areas as a resource may help to maximise the benefits of population ageing.

Consideration could be given to adopting a community based, whole system approach which gives communities and authorities the wherewithal to tailor their services to local circumstances through a broad base of action.

While there is potential for technology to assist with diagnosis and decision making, minimise travel and improve training options, infrastructure and broadband coverage at present limits the solutions available, and there is evidence that some older adults may be reluctant to engage with technology. A balance where digital interaction could enhance rather than replace face-to-face care may be most appropriate.

More research into inequalities in healthy ageing in coastal areas, particularly coastal towns is required, with a focus on strengths, assets and resilience.

Main messages

Due to a large reduction in mortality at younger ages and from infectious diseases, people can now expect to live longer. Older people comprise a large and growing segment of the population of rural and coastal areas. Health inequalities identified in research have highlighted the impact that geographical location can have on the lives of older people.

The aim of this publication is to provide an evidence summary of the health inequalities experienced by older populations in coastal and rural areas, together with a summary of considerations in taking an asset-based approach in reducing inequalities and promoting productive healthy ageing in these areas. Asset-based approaches involve recognising and utilising human, social and physical capital. This includes identifying and mobilising the assets of individuals, communities and organisations to enhance individual and community capabilities and address health inequalities.

This publication comprises a rapid evidence review supplemented with case studies. The review has been undertaken to:

- build knowledge and an evidence base within the health and care system – including local authorities and other system partners – of the main health inequality issues for older populations in rural and coastal areas
- support and promote the implementation of considerations to address health inequalities experienced by older people in rural and coastal areas.

The review considers both rural and coastal areas, encompassing:

- rural areas: defined as such if they fall outside settlements with more than 10,000 resident population.
- coastal areas: defined as any coastal settlement within a local authority area whose boundaries include UK foreshore, including local authorities whose boundaries only include estuarine foreshore – coastal settlements include seaside towns, ports and other areas which have a clear connection to the coastal economy. Coastal cities were not in scope of the review.

Older people are defined as men and women aged 50 years or older. The review used this definition to be as inclusive as possible, to incorporate the breadth of relevant studies which are relevant to ageing and later life.

Main findings – UK and Ireland

The review found 92 studies based in the UK and Ireland, generally of good quality (scoring 70% or more in quality assessment) although there was a small number of poorer quality studies (n=14) and studies where quality could not be assessed (n=15) (grey literature, with no published study design). The majority of studies took place in England although there was a good spread throughout the UK and Ireland. Most studies compared and contrasted rural with urban living for older adults however there was a paucity of literature focussing on those living in coastal areas – particularly coastal areas that were not also considered to be rural. All included studies reported important findings based on age.

Nature of inequalities

Eleven studies, all of good quality, examined rates of mortality or length of life between those living in rural compared to urban environments with 1 study also including coastal environments. The majority of studies reported older people in rural areas experienced reduced rates of mortality although there was some contradictory evidence suggesting a potential lack of statistical information on outcomes in rural and coastal areas. Within rural areas, those living in town and fringe settlement types had higher mortality rates than those living in village and dispersed areas.

Nine studies investigated the effect of rural or urban living on incidence of physical health conditions while 3 further studies examined the association between physical health and coastal areas. All but one of these studies was good quality. Six studies reported poorer physical health in rural and coastal populations. Several of the studies reporting poorer health in urban areas focused on respiratory health. There is some evidence of a slight increase in prevalence of widespread musculoskeletal pain with greater rurality.

Four good quality studies indicated that mental health problems were associated with living in a rural or coastal area, although 2 other good quality studies indicated poorer mental health among older people in urban areas.

Four studies, mainly of good quality also indicated that neurological problems were associated with living in a rural area, although 2 good quality studies contradicted this finding. There was a paucity of evidence in relation to coastal areas.

Determinants and drivers of inequalities

Thirty-six studies examined the determinants and drivers of health inequalities experienced by older populations in rural and coastal areas.

Determinants and drivers of health inequalities experienced by older populations include:

- mobility, as the healthiest populations were those of working age moving out of rural areas and those of retirement age moving into rural areas
- exclusion, marginalisation and lack of social connections felt by certain groups such as LGBT+ or those who are divorced or living alone
- being socially isolated
- lack of access to health and other community-based services which, in turn, can also contribute to becoming socially isolated
- equitable outcomes costing more in rural areas for a variety of reasons relating to remoteness and limited economies of scale
- financial difficulties experienced by older people themselves in rural areas including fuel poverty and housing issues
- different types of treatment and treatment modalities (but not delays in treatment) provided in rural areas
- more emergency and elective hospital treatment in rural areas, identified in the literature as possibly a result of risk averse behaviour by GPs
- workforce challenges facing the NHS and social care in rural areas such as recruitment, retention and development
- service providers moving out of rural areas
- lack of transport and distance from services which again can contribute to feeling isolated
- lack of awareness of certain health conditions or services for example older rural residents were unaware of the role of pharmacists in the review of medicines;
- existing poor health
- a lack of community support for some residents
- seasonality and weather which could affect some recreational activities
- certain environmental conditions (for example, asbestos linked to the shipbuilding industry) which are particular to coastal areas
- lack of physical activity

No differences were found in fruit and vegetable consumption between rural and urban older people.

Strengths, assets and resilience

Fifteen studies examined strengths, assets and sources of resilience in ageing populations in rural areas. One study examined strengths, assets and sources of resilience in ageing populations in coastal areas.

The strengths, assets and sources of resilience in ageing populations in rural areas were:

- community based social networks and a sense of community
- community services, both publicly funded and self-funded
- family support by living as part of 2 or 3 generation households

- neighbours providing informal care or support that may impact on the finding that older rural dwellers were less likely to enter care homes
- home-grown fruit and vegetables
- access to a car or other form of transport as rural–urban health and mental health differences were found to be mediated by access to a car
- environmental factors such as less crime, more green space and better quality street level conditions
- certain health and social care services such as home visits, sitting or befriending services
- trained and experienced palliative care nurses

There was a paucity of evidence relating to strengths, assets and sources of resilience in coastal areas.

Health and care interventions

There were only 3 studies which assessed the effectiveness of a health and social care intervention designed to reduce inequalities and promote productive health ageing in rural and coastal areas. Examples include:

- Mobile Me: a 10 week sport intervention, which showed evidence of effectiveness.
- village services: six community-based services and activities provided to help meet the needs of older rural residents, namely lunch clubs, welfare rights information and advice services, befriending schemes and community warden support – these were found to promote social inclusion by enhancing older rural residents' access to the resources, rights, goods and services that encourage social interaction and meaningful participation in community life – although older men were often reluctant to engage
- a liaison psychiatric nurse: which showed a trend towards improvement.

One trial is currently underway of a new community service provided by the Royal Mail to help tackle loneliness in a coastal town.

Other interventions which were identified in the literature but were not subjected to a formal assessment of effectiveness included Active Norfolk's Dance to Health, Rural Wheels, Personal Budgets, village 'agents', Dementia Friendly Communities and a number of other initiatives including those run by Age UK.

Whole system approaches

Whole system approaches involve co-ordinated policies and actions across individual, environmental and societal levels and across multiple sectors. They seek to empower communities by working across partnerships and sectors to maximise impact and remove system barriers.

Four models were identified as relevant and appropriate for further consideration, comprising:

1. Atterton's pre-retirement and retirement industry models which emphasise drawing on the positive resource and benefits that those of pre and post retirement age bring to coastal areas.
2. Corcoran's proposals for inclusive approaches to physical regeneration and community wealth building, as well as influencing demographic change in coastal towns and longstanding issues of the quality and type of homes and accommodation.
3. Asthana's morbidity-based model which proposes there are strong grounds for using morbidity as a basis for allocating health resources.
4. Countryside and Community Research Institute's community-centred approach. Community-centred approaches seek to mobilise the assets within communities, promote equity and increase people's control over their health and lives.

One comprehensive example of whole system approaches in action was that of The Cornwall and Isles of Scilly Health Action Zone.

Digital technology

Only 4 studies examined the opportunities and risks of digital advances in rural and coastal areas.

There were mixed findings with 1 study reporting the potential of technology to enhance care and speed up treatment within a care home setting, while others noted barriers including broadband coverage and unfamiliarity and unwillingness of older people to use certain services in this way.

An evaluation of Scotland's NHS 24 identified an unfamiliarity among older people with this type of service or an unwillingness to use telephone advice lines.

In contrast Nurse led Technology Enabled Care (video conferencing) older adult psychiatry clinics which were introduced in 3 rural care homes in NHS Highland (Scotland) resulted in quicker assessment, treatment review and regular monitoring.

It was also suggested that older patients with chronic pain could have some of their needs met through eHealth applications where digital interaction could enhance rather than replace face-to-face care.

Finally, Scottish Territorial Health Board representatives pointed to the potential of information and communications technology (ICT) but felt it was limited in rural areas due to lack of broadband coverage.

Table 1: number of studies by geography and topic

Objective	Number of studies			
	Rural	Coastal (rural)	Coastal (rural and towns)	Coastal (towns)
Nature of Inequalities: mortality	11	0	1	0
Nature of inequalities: physical health	9	0	2	1
Nature of inequalities: mental health	4	0	1	1
Nature of inequalities: neurological health	6	0	0	0
Determinants and drivers of inequalities	34	1	3	0
Strengths, assets and sources of resilience	16	1	0	0
Health and social care system interventions	6	0	4	1
Whole system approaches	2	0	2	1
Digital technology	3	1	0	0

Note: studies may contribute to more than one objective.

Main findings – international

An international search was undertaken to incorporate learning from other countries on effective health and care interventions. In terms of the International literature, 19 studies were included from a range of countries including the USA, Brazil, Australia, Canada, Korea, China and Iran. The majority (n=14) were of good quality (scoring 70% or more on quality assessment) with 1 study which could not be quality assessed. All studies focused on rural rather than coastal settings.

Health and care interventions

Nine studies showed effectiveness of health and social care system interventions for older rural people including:

- home health parties for colorectal cancer knowledge and screening
- home-based nutrition and exercise intervention

- multi-component intervention
- volunteers in supporting people with dementia and chronic health conditions
- outreach programme on hearing health
- educational intervention for injury prevention
- culturally tailored lifestyle intervention, VivirMi Vida! (Live My Life!)
- modified behavioural activation treatment (MBAT) intervention

One study examined the role of dental hygienists in reducing oral health disparities in Canada for rural older people.

Digital technology

Six studies showed effectiveness of telehealth in older rural communities while 2 showed effectiveness of an internet-based intervention although 1 study reported variability in patient and provider receptiveness to telehealth.

One study reported the effectiveness of a wearable device-based walking programme for older adults.

Another study examined the role of digital technology for use by dental hygienists in reducing oral health disparities for rural older people.

Considerations

Based on the literature included as part of this review and taking into account the quality and number of studies available, the following considerations are relevant for the health and care system, as well as other sectors, in addressing inequalities in ageing in rural and coastal areas.

Strengths and assets

There was a paucity of evidence on the strengths and assets of non-rural coastal areas, therefore the considerations below are made particularly in relation to rural areas.

Consideration could be given to interventions which encourage social connections and contact particularly for those in marginalised groups such as LGBT+ and those who are divorced or living alone.

Local community services (such as pubs, post offices, libraries) are important assets and where these are in danger of closure, consideration could be made to allow these to be run by local community cooperatives. This may also nurture a sense of community and neighbourliness. A resident-run local shop with café facilities is a strategy which could increase errand-related and social trips in rural areas.

Outcomes may be strengthened in rural areas through the provision of village services, such as lunch clubs, welfare rights information and advice services, befriending schemes, community warden support, and village agents to signpost older residents with unmet needs to services and community resources.

Consideration could be given to new and innovative ways of engaging with older men in rural and coastal areas to prevent social isolation. An example of a service targeting men in rural and coastal areas is Men's Sheds.

Evidence suggests that nurturing and promoting fruit and vegetable sellers and local markets can support healthy eating.

Protecting and promoting public and community transport in rural and coastal areas may enhance outcomes. In particular, awareness of community schemes and options could be improved, especially in areas where public transport does not operate.

Interventions which encourage mobility are recommended. The healthiest populations were those of working age moving out of rural areas and those of retirement age moving into rural areas. Flexible working patterns should be encouraged so that working age individuals can work from rural areas for example via the internet.

Health and care interventions

The following considerations are relevant to both rural and coastal areas.

Consideration could be given to greater provision of interventions which increase physical activity in older people in rural and coastal areas. Examples of effective or potentially effective interventions include the 10-week sport intervention, Mobile Me, and Dance to Health, a falls prevention programme combining physiotherapy with dance. There may also be potential for areas to use their natural assets to promote physical activity and / or reduce social isolation, for example through volunteer-led walking groups.

Evidence suggests that promoting the role of community pharmacists, particularly for medicine review, may have a positive impact on access to certain health services.

Positive health outcomes may be promoted by ensuring accessibility in design and delivery of health and care services, and considering accessibility before any decision to move or remove current services.

Evidence suggests that provision of home visits from health and social care professionals for older people may enhance outcomes as they provide access to important services as well as a vital source of social connection.

Consideration could be given to provision of sitting or befriending services in order to improve the mental health of older carers in rural and coastal areas.

Evidence suggests that home based, volunteer and outreach programmes may improve outcomes for rural adults.

Whole system approaches

The following considerations are relevant to both rural and coastal areas.

Consideration could be given to adopting a community based, whole system approach which gives communities and authorities the wherewithal to tailor their services to local circumstances through a broad base of action. This approach has some merit as a method to use common local assets by a number of services in the same areas and sustain local pubs, shops and libraries offering a number of benefits.

Implementing an asset-based approach, comprising progressive and pro-active strategies viewing older people in rural and coastal areas as an important resource as employees, volunteers and community advocates may help to maximise the benefits of the population ageing.

Digital technology

The following considerations are relevant to both rural and coastal areas. Evidence suggests that:

- technology (such as video conferencing) for use in care home environments can improve older people's access to health care specialists
- telehealth and internet-based interventions can improve the health of older rural patients
- internet-based interventions hold the potential for reducing isolation for caregivers
- wearable device-based walking programmes for older adults can improve physical activity in rural older adults

Consideration could be given to expanding the use of technology for easier access to training and development of health and social care staff working in rural and coastal areas.

While there is potential for technology to assist with diagnosis and decision making, minimise patient and staff travel and improve training and continuing professional development options for staff, infrastructure and broadband coverage at present limits the potential solutions available, and there is evidence that some older patients may be reluctant to engage with technology. A balance where digital interaction could enhance rather than replace face-to-face care may be most appropriate.

Further research

More research into inequalities in healthy ageing in coastal areas, particularly coastal towns is required, with a focus on strengths, assets and sources of resilience.

Further research on the effectiveness and cost-effectiveness of health and social care and technology enabled interventions to reduce inequalities in both rural and coastal areas would be beneficial. Research utilising high quality methods such as randomised controlled trials are essential.

More research is also needed into inequalities in healthy ageing felt by particular groups such as the gypsy and traveller community, prisoners, veterans, ethnic minorities and the homeless population in rural and coastal areas.

There is potential to further explore options to improve detailed statistical information on health outcomes in rural and coastal areas, as national statistics often do not reveal differences within small areas and can mask inequalities.