

# **Occupational therapy and physical activity interventions to promote the mental wellbeing of older people in primary care and residential care**

Evidence Update March 2015

A summary of selected new evidence relevant to NICE public health guidance 16 (2008)

**Evidence Update 75**



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# Introduction

**Evidence Updates are intended to increase awareness of new evidence – they do not replace current NICE guidance and do not provide formal practice recommendations.**

Evidence Updates reduce the need for individuals, managers and commissioners to search for new evidence. For contextual information, this Evidence Update should be read in conjunction with the relevant public health guidance.

This Evidence Update provides a summary of selected new evidence published since the literature search was last conducted for the following NICE guidance:

<sup>1</sup>  [Occupational therapy and physical activity interventions to promote the mental wellbeing of older people in primary care and residential care](#). NICE public health guidance 16 (2008)

A search was conducted for new evidence from 1 June 2011 to 28 July 2014. A total of 8973 pieces of evidence were initially identified. After removal of duplicates, a series of automated and manual sifts were conducted to produce a list of the most relevant references. The remaining 21 references underwent a rapid critical appraisal process and then were reviewed by an [Evidence Update Advisory Group](#), which advised on the final list of 6 items selected for the Evidence Update. See [Appendix A](#) for details of the evidence search and selection process.

Evidence selected for inclusion in this Evidence Update may highlight a potential impact on guidance: that is, a high-quality study, systematic review or meta-analysis with results that suggest a change in practice. Evidence that has no impact on guidance may be a key read, or may substantially strengthen the evidence base underpinning a recommendation in the NICE guidance.

The Evidence Update gives a preliminary assessment of changes in the evidence base, and a final decision on whether the guidance should be updated will be made by NICE according to its published processes and methods.

This Evidence Update was developed to help inform the review proposal on whether or not to update NICE public health guidance 16 ([NICE PH16](#)). The evidence identified, and feedback from the Evidence Update Advisory group, informed a decision about updating the guidance, which was subject to public consultation. For further information about the review decision see the [NICE PH16](#) webpage. The process of updating NICE guidance is separate from both the process of an Evidence Update and the review proposal.

See the [NICE public health guidance development process](#) for further information about updating public health guidelines.

## Other relevant NICE guidance

The focus of the Evidence Update is on the guidance stated above. However, overlap with other NICE guidance has been outlined as part of the Evidence Update process:

<sup>1</sup>  [Walking and cycling: local measures to promote walking and cycling as forms of travel or recreation](#). NICE public health guidance 41 (2012)

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<sup>1</sup> [NICE-accredited guidance](#)

## Other relevant NICE guidance

<sup>1</sup>  [Older people – independence and mental wellbeing](#). NICE public health guidance in development (expected publication date November 2015)

## NICE Pathways

NICE Pathways bring together all related NICE guidance and associated in a set of interactive topic-based diagrams. The following NICE Pathway covers advice and recommendations related to this Evidence Update:

- [Mental wellbeing and older people](#). NICE Pathway

## Quality standards

- [Mental wellbeing of older people in care homes](#). NICE quality standard 50

## Feedback

If you would like to comment on this Evidence Update, please email [contactus@evidence.nhs.uk](mailto:contactus@evidence.nhs.uk)

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<sup>1</sup> [NICE-accredited guidance](#)

## Key points

The following table summarises the key points for this Evidence Update and indicates whether the new evidence may have a potential impact on [NICE PH16](#). Please see the full commentaries for details of the evidence informing these key points.

The section headings used in the table below are taken from [NICE PH16](#).

**Evidence Updates do not replace current NICE guidance and do not provide formal practice recommendations.**

Key point	Potential impact on guidance	
	Yes	No
<b>Occupational therapy interventions</b> <ul style="list-style-type: none"> <li>• A lifestyle-based occupational therapy intervention delivered in groups and individually appears to improve mental wellbeing among ethnically diverse older people living in the community.</li> <li>• Limited evidence suggests that group and individual activities led by an occupational therapist appear to have no impact on overall levels of depression among older people in residential care homes, although they may be beneficial for individuals.</li> </ul>		 ✓  ✓
<b>Physical activity</b> <ul style="list-style-type: none"> <li>• A comprehensive mixed exercise programme of personalised age-appropriate fitness activities appears to improve physical and mental health in older people.</li> <li>• Providing tailored advice on physical activity in a non-face-to-face format, such as through telephone calls and internet programmes, appears to increase physical activity among older adults who live in the community.</li> </ul>		 ✓  ✓
<b>Walking schemes</b> <ul style="list-style-type: none"> <li>• Advice about physical activity based on either number of steps or activity time appears to provide long-term improvements in physical activity, quality of life and mental health in older people. Such advice can be provided face-to-face by primary care doctors and over the telephone by physical activity counsellors.</li> </ul>		 ✓

# 1 Commentary on new evidence

These commentaries focus on the 'key references' identified through the search process and prioritised by the EUAG for inclusion in the Evidence Update, which are shown in bold text. Supporting references provide context or additional information to the commentary. Section headings are taken from [NICE PH16](#).

## 1.1 [Occupational therapy interventions](#)

[NICE PH16](#) recommends that older people (those aged 65 and over) in community or residential settings should be offered regular group and/or individual occupational therapy sessions to encourage them to identify, construct, rehearse and carry out daily routines and activities that help to maintain or improve their health and wellbeing. Sessions should:

- involve older people as experts and partners in maintaining or improving their quality of life
- pay particular attention to communication, physical access, length of session and informality to encourage the exchange of ideas and foster peer support
- take place in a setting and style that best meet the needs of the older person or group
- provide practical solutions to problem areas.

Occupational therapy interventions should be provided by therapists or other professionals who provide support and care services for older people in community or residential settings and who have been trained to apply the principles and methods of occupational therapy.

### **Occupational therapy for older people living in the community**

A randomised controlled trial by [Clark et al. \(2012\)](#) investigated the effectiveness of a lifestyle-based occupational therapy intervention in promoting wellbeing among older people living in the community. The Well Elderly 2 study recruited ethnically diverse people aged 60–95 years from 21 sites in Los Angeles, California, including senior activity centres, senior housing residences and a graduated care retirement community. People with signs of psychosis or dementia were excluded. Participants were randomly assigned to a lifestyle-based occupational therapy intervention or no treatment.

The intervention comprised 6 months of small group (6–8 people) and individual sessions led by a trained occupational therapist. The key elements of the intervention were:

- identification and implementation of feasible and sustainable activity-relevant changes
- developing plans to overcome obstacles to participating in activities (for example, pain or lack of transport)
- participation in selected activities, and rehearsal and repetition of changes to everyday routine.

The efficacy of this intervention was previously demonstrated in a 9-month randomised controlled trial among older people in sheltered living (Well Elderly 1; [Clark et al. 1997](#)).

The outcomes measured were perceived physical and mental health (measured by 10 domains in the 36-Item Short-Form Health Survey; SF-36), depression (Center for Epidemiologic Studies Depression Scale), life satisfaction (Life Satisfaction Index-Z), and cognition (word list procedure developed by the Consortium to Establish a Registry of Alzheimer's Disease).

A total of 460 older people were recruited to the study (37% white, 32% African-American, 20% Hispanic or Latino, 4% Asian and 6% 'other'), and 360 (78%) completed the outcome measures after the 6-month intervention period. People who received the intervention (n=187) had significantly greater improvements than those in the control group (n=173) in 5 domains

of SF-36: bodily pain ( $p<0.02$ ), vitality ( $p<0.03$ ), social function ( $p<0.04$ ), mental health ( $p<0.03$ ) and a composite of mental domains ( $p<0.03$ ). People in the intervention group also had an improvement in life satisfaction at the end of the study period, whereas life satisfaction decreased marginally in the control group ( $p<0.03$ ). Depression decreased significantly more in the intervention group than in the control group ( $p<0.03$ ). No difference was seen between groups in any of the 5 cognition outcomes measured.

Limitations of this evidence include that the effect sizes were smaller than those in the previous analysis of this intervention (Well Elderly 1 study). The authors suggest that the smaller changes in this study might be the result of the diverse sample, the varying support and investment at the study sites, and the shorter intervention period (6 months versus 9 months). Follow-up was not continued after the intervention finished, so it is not clear whether the beneficial effects of the intervention were sustained. In addition, the ethnically diverse urban US population studied may not reflect the UK population of older people.

This evidence shows that a lifestyle-based occupational therapy intervention delivered in groups and individually appears to improve mental wellbeing among ethnically diverse older people living in the community. [NICE PH16](#) recommends that older people in community settings should be offered regular group and/or individual occupational therapy sessions to encourage them to identify, construct, rehearse and carry out daily routines and activities. This evidence is therefore consistent with [NICE PH16](#) and confirms the efficacy of group sessions in a wide selection of community settings.

Additional information about the study by Clark et al. (2012) is available from an independent [critical appraisal report](#) produced for the Centre for Reviews and Dissemination's NHS Economic Evaluation Database.

#### **Key reference**

Clark F, Jackson J, Carlson M et al. (2012) [Effectiveness of a lifestyle intervention in promoting the well-being of independently living older people: results of the Well Elderly 2 randomised controlled trial](#). *Journal of Epidemiology & Community Health* 66: 782–90

#### **Supporting reference**

Clark F, Azen SP, Zemke R et al. (1997) [Occupational therapy for independent-living older adults. A randomized controlled trial](#). *JAMA* 278: 1321–6

### **Occupational therapy for older people in residential care**

[Mozley et al. \(2007\)](#) conducted a feasibility study to test the effects of occupational therapy on depression among older people living in care homes. This cluster randomised controlled trial recruited 8 residential care homes in the north of England and randomly allocated them to the intervention or the control arm. Each of the 4 care homes in the intervention arm was assigned a full-time occupational therapist for 12 months. The occupational therapists devised tailored group and individual creative activities to target residents' occupational tasks, such as self-care, productivity and leisure. Depression was measured at baseline and at the end of the 12-month study period using the Geriatric Mental State – Depression Scale.

A total of 259 care home residents were eligible for recruitment. On average, intervention homes had 27 residents with a mean age of 87 years, whereas control homes had 26 residents with a mean age of 85 years. Complete baseline and follow-up data were available for 143 (55%) people: 78 residents in intervention homes and 65 residents in control homes. Depression severity did not differ significantly between the 2 groups at the end of the 12-month study period. In a regression analysis, around half (47%) of the variance in follow-up depression scores among intervention residents was down to age and baseline depression, functional ability and cognitive function. Qualitative interviews conducted in intervention homes about half way through the study period suggested that residents, relatives, friends and care home staff valued the intervention.

The authors cautioned that their pilot trial was a feasibility study designed to provide an effect size to support power and sample size calculations for a full trial. The sample size used may have meant that the study was not powered to detect a significant effect (type II error). The study used only 1 scale to measure depressive symptoms and did not control for other factors that may have affected depression, such as medication. In addition, the intervention homes varied considerably in the skill level of the occupational therapists, the range of activities offered, and the amount of time residents spent on group and individual activities.

Limited evidence suggests that group and individual activities led by an occupational therapist appear to have no impact on overall levels of depression among older people in residential care homes, although they may be beneficial for individuals. [NICE PH16](#) recommends that older people in residential settings should be offered regular group and/or individual occupational therapy provided by occupational therapists or other professionals who provide support and care services for older people residential settings and who have been trained to apply the principles and methods of occupational therapy. Given the limitations of this feasibility study and that depression is just one measure of wellbeing, this evidence is unlikely to have an impact on [NICE PH16](#).

#### **Key reference**

[Mozley CG, Schneider J, Cordingley L et al. \(2007\) \*The Care Home Activity Project: does introducing an occupational therapy programme reduce depression in care homes?\* \*Aging & Mental Health\* 11: 99–107](#)

## **1.2 [Physical activity](#)**

[NICE PH16](#) recommends that older people should be offered tailored exercise and physical activity programmes in the community, focusing on:

- a range of mixed exercise programmes of moderate intensity (for example, dancing, walking, swimming)
- strength and resistance exercise, especially for frail older people
- toning and stretching exercise.

Older people should be encouraged to attend sessions at least once or twice a week.

[NICE PH16](#) adds that older people and their carers should be advised how to exercise safely for 30 minutes a day (which can be broken down into 10-minute bursts) on 5 days each week or more. Examples should be provided of activities in daily life that would help achieve this (for example, shopping, housework, gardening, cycling).

In addition, [UK physical activity guidelines](#) from the Chief Medical Officer recommend that adults aged 65 years or older should aim to be active every day. Over a week, activity should add up to at least 150 minutes of moderate intensity activity in bouts of 10 minutes or more; for example, as 30 minutes on at least 5 days a week.

Physiotherapists, registered exercise professionals and fitness instructors and other health, social care, leisure services and voluntary sector staff who have the qualifications, skills and experience should all be involved in offering exercise and physical activity programmes for older people.

### **Mixed exercise programmes**

[Hamar et al. \(2013\)](#) conducted a retrospective cohort study to examine the effects of a comprehensive mixed exercise programme on the physical and mental health of older people. This US study looked at older people who were beneficiaries of Medicare and enrolled in the insurance programme's 'SilverSneakers' initiative. SilverSneakers is membership programme that provides older adults with fitness centre membership and personalised age-appropriate fitness activities that focus on flexibility, strength, balance and endurance. Members also have

access to an experienced advisor and online member support programmes that assist with lifestyle changes such as weight loss.

The treatment group in this analysis comprised SilverSneakers members who were continually enrolled in the programme between 2007 and 2010 and who completed a health survey each year during this period (n=5586). This group was compared with a matched sample of Medicare beneficiaries who completed the 2007 and 2009 Medicare Health Outcomes Survey (n=22,344). Most participants were aged 65–74 years (64%), with about a third older than 75 years (35%) and a few (1%) younger than 65 years.

The treatment group reported significantly better physical and emotional health than the control group, both in 2007 and 2009 ( $p<0.0001$ ). Health status, functioning (climbing stairs) and participation in social activities improved significantly more over the study period in the treatment group than in the control group ( $p<0.001$  for all). The treatment group also reported significantly fewer days of 'not good' mental health in the month before the 2009 survey ( $p<0.0001$ ), and their mental health improved significantly more over the 3 years than those in the control group ( $p<0.05$ ).

Limitations of this study include that older people self-selected to join the SilverSneakers programme, and all participants self-reported their activity level and their health and wellbeing. In addition, participants were largely white (96% in each group) and educated to a high school graduate level or above (95% in each group), so these results may not be generalisable to other populations.

This evidence shows that a comprehensive mixed exercise programme of personalised age-appropriate fitness activities appears to improve physical and mental health in older people. [NICE PH16](#) recommends that older people should be offered tailored exercise and physical activity programmes that focus on a range of mixed exercise programmes of moderate intensity, strength and resistance exercise, and toning and stretching exercise. This large study is therefore consistent with [NICE PH16](#).

#### **Key reference**

Hamar B, Coberley CR, Pope JE et al. (2013) [Impact of a senior fitness program on measures of physical and emotional health and functioning](#). *Population Health Management* 16: 364–72

#### **Supporting reference**

Department of Health (2011) [UK physical activity guidelines](#)

#### **Non-face-to-face advice on physical activity**

[Müller and Khoo \(2014\)](#) conducted a systematic review of whether interventions that are not delivered face-to-face increase physical activity in older adults. A systematic literature search was conducted for studies of non-face to-face interventions designed to initiate, increase or maintain physical activity, exercise or walking in healthy, community-dwelling adults aged 50 years or older.

A total of 17 articles describing 16 studies were identified (n=9183). All the studies took place in developed countries (USA, Australia, New Zealand and the Netherlands), and 13 (81.3%) had study populations that were more than 60% female. Most studies assessed interventions delivered by print or telephone (11 studies, n=8012), whereas 3 assessed internet interventions (n=671) and 2 assessed interventions delivered by other methods (personal digital assistant and media promotion, n=500). All interventions incorporated either Social Cognitive Theory (10 studies) or the Transtheoretical Model of Behavioral Change (6 studies) to encourage participants to do physical activity, and all but one (15 studies, n=8720) tailored the intervention. Intervention periods ranged from 1 week to 24 months, and all the studies were rated as having a high or unclear risk of bias.

Of the 16 studies, 14 (87.5%) reported a significant improvement in physical activity among older people in the intervention group. Nine studies followed up participants after the end of the intervention period: 8 (88.9%) reported that physical activity levels were maintained. Among the 6 studies that considered intervention compliance, the proportion of people who completed the intervention ranged from 4% to 98%.

Limitations of this analysis included the heterogeneity of interventions studied and that the included studies all used self-reported measures of physical activity. Meta-analysis was not conducted on the included studies, and the authors did not report on whether any of the interventions affected mental wellbeing. All but 2 of the 16 studies reported positive intervention effects, which could suggest that studies with negative or neutral findings had not been published or might be published in the grey literature (not searched for this analysis).

This evidence shows that providing tailored advice on physical activity in a non-face-to-face format, such as through telephone calls and internet programmes, appears to increase physical activity among older adults who live in the community. [NICE PH16](#) recommends advising older people how to exercise safely and providing useful examples of activities in daily life that would help achieve this (for example, shopping, housework, gardening, cycling). It also recommends offering older people tailored exercise and physical activity programmes in the community. This evidence supports the recommendations on physical activity in [NICE PH16](#) and indicates new potential routes of administering advice on physical activity to older people. However, given the lack of information on mental wellbeing in this analysis, this evidence is unlikely to have an impact on [NICE PH16](#).

#### Key reference

Müller AM, Khoo S (2014) [Non-face-to-face physical activity interventions in older adults: a systematic review](#). *International Journal of Behavioral Nutrition & Physical Activity* 11: 35

### 1.3 [Walking schemes](#)

[NICE PH16](#) recommends that older people and their carers should be offered a range of walking schemes of low to moderate intensity with a choice of local routes to suit different abilities. Regular participation in local walking schemes should be promoted to older people and their carers as a way to improve mental wellbeing. In addition, health advice and information on the benefits of walking should be provided. GPs, community nurses, and public health and health promotion specialists, as well as other people involved in promoting older people's mental wellbeing, should promote local walking schemes.

NICE public health guidance on 'Walking and cycling' ([NICE PH41](#)) adds that individual support should be available for anyone who is walking on their own, walking informally with others in a group, or participating in local walking programmes. This includes helping to assess their activity levels and to set goals that build on this. Pedometers should only be used as part of a package that includes support to set realistic goals (whereby the number of steps taken is gradually increased), monitoring and feedback.

#### Promoting participation in walking schemes

A randomised controlled trial ([Kolt et al. 2012](#)) and associated substudy ([Patel et al. 2013](#)) have assessed how promoting walking through pedometer-based goals compares with advice focused on time-based goals in improving physical and mental health in older people.

The '[Healthy Steps](#)' study involved primary care doctors providing physical activity advice to inactive community-dwelling people aged 65 years or older in New Zealand. The advice was followed by 3 telephone sessions with physical activity counsellors over 3 months.

Participants were randomly assigned to pedometer-based walking advice focused on setting goals for number of steps per day (pedometer group), or time-based advice focused on setting goals related to time spent doing specific physical activities (time group). A total of

330 people eligible to participate in the trial were recruited from 17 primary care doctors at 10 general practices. Participants were randomly assigned to the pedometer group or the time group (n=165 in each); 140 people in the pedometer group and 130 in the time group completed the 3-month intervention period and the 12-month follow-up.

[Kolt et al. \(2012\)](#) reported the effects of these 2 interventions on physical activity (measured with the Auckland Heart Study Physical Activity Questionnaire) and health-related quality of life (measured with the SF-36 questionnaire) at baseline, 3 months (end of the intervention) and 12 months (follow-up). People in both the pedometer group and the time group had increased their total leisure physical activity and total walking activity by the end of intervention period and at 12 months ( $p < 0.001$  for all). However, the pedometer group increased their walking leisure activity significantly more than the time group over the 12 months ( $p = 0.03$ ). Both groups also reported improvements in the 4 quality of life areas analysed (physical functioning, general health, vitality and mental health;  $p < 0.001$  for all), but these improvements did not differ significantly between the 2 groups.

[Patel et al. \(2013\)](#) conducted a substudy of participants in the Healthy Steps study to assess the effects of the 2 interventions on depressive symptoms and mental health. All participants completed the 15-item Geriatric Depression Scale at each of the 3 assessment points, as well as the physical activity and quality of life questionnaires. The first 225 participants who completed the Healthy Steps study (116 in the pedometer group and 109 in the time group) were included in this analysis.

Both the pedometer group and the time group reported a significant decrease in symptoms of depression at the end of the intervention period and at 12 months compared with baseline ( $p < 0.05$  for all). General mental health functioning also improved in both groups over the 12-month period ( $p < 0.05$  for all). However, no significant differences were seen between groups in improvement in either depression or mental health. As was the case in Kolt et al. (2012), total leisure physical activity and walking activity increased significantly in both groups ( $p < 0.05$  for all).

Limitations of these studies include that participants self-reported their physical activity levels and mental health. In addition, a total of 1739 people were invited to take part in this study and only 986 (57%) agreed to be assessed for eligibility. Nearly all patients were of New Zealand–European family origin, and more than half had a qualification beyond high school.

This evidence suggests that advice about physical activity based on either number of steps or activity time appears to provide long-term improvements in physical activity, quality of life and mental health in older people. Such advice can be provided face-to-face by primary care doctors and over the telephone by physical activity counsellors.

[NICE PH16](#) recommends walking schemes of low to moderate intensity for older people and states that GPs, public health specialists and health promotion specialists all have a role in promoting regular participation in local walking schemes. The evidence is therefore consistent with [NICE PH16](#) and supports the recommendation that primary care doctors should have a role in encouraging walking in older adults.

#### **Key reference**

Kolt GS, Schofield GM, Kerse N et al. (2012) [Healthy Steps trial: pedometer-based advice and physical activity for low-active older adults](#). *Annals of Family Medicine* 10: 206–12

Patel A, Keogh JW, Kolt GS et al. (2013) [The long-term effects of a primary care physical activity intervention on mental health in low-active, community-dwelling older adults](#). *Aging & Mental Health* 17: 766–72

### **Supporting reference**

Kolt GS, Schofield GM, Kerse N et al. (2009) [The Healthy Steps study: a randomized controlled trial of a pedometer-based green prescription for older adults. Trial protocol.](#) BMC Public Health 9: 404

## **1.4 [Training](#)**

No new key evidence for this section was selected for inclusion in this Evidence Update.

## 2 New evidence uncertainties

During the development of the Evidence Update, the following evidence uncertainties were identified for the UK Database of Uncertainties about the Effects of Treatments (UK DUETs).

### Physical activity

- [Non-face-to-face physical activity interventions in older adults living in residential care or supported accommodation](#)

Further evidence uncertainties for occupational therapy and physical activity interventions to promote the mental wellbeing of older people in primary care and residential care can be found in the [UK DUETs database](#) and in the [NICE research recommendations database](#).

UK DUETs was established to publish uncertainties about the effects of treatments that cannot currently be answered by referring to reliable up-to-date systematic reviews of existing research evidence.

# Appendix A: Methodology

## Scope

The scope of this Evidence Update is taken from the scope of the reference guidance:

- [Occupational therapy and physical activity interventions to promote the mental wellbeing of older people in primary care and residential care](#). NICE public health guidance 16 (2008)

Non-analytical studies (case reports and case series) were excluded from the scope of this Evidence Update. Evidence Updates focus on new 'key references'; that is, high-quality studies that suggest a change in practice, 'key reads', or studies that may substantially strengthen the evidence base underpinning a recommendation in the NICE guidance. Non-analytical studies were excluded because they are not likely to meet these 3 criteria.

## Searches

NICE public health guidance 16 ([NICE PH16](#)) was first published in October 2008 and first reviewed in October 2011. Although no formal search was carried out in 2011, the [proposal](#) was made to stakeholders that the guidance should not be updated at that time. This was because no additional areas had been identified that were not covered in the original guidance scope or would indicate a significant change in practice. No new evidence was identified that would invalidate or change the direction of the current recommendations.

For this Evidence Update, the literature was searched to identify studies and reviews relevant to the scope of [NICE PH16](#). Searches were conducted of the following databases, covering the dates 1 June 2011 (the end of the search period for the [latest review of the need to update NICE PH16](#)) to 28 July 2014:

- AMED (Allied and Complementary Medicine Database)
- ASSIA (Applied Social Sciences Index and Abstracts)
- CDSR (Cochrane Database of Systematic Reviews)
- CENTRAL (Cochrane Central Register of Controlled Trials)
- CINAHL (Cumulative Index to Nursing and Allied Health Literature)
- DARE (Database of Abstracts of Reviews of Effects)
- HMIC (Health Management Information Consortium) database
- HTA (Health Technology Assessment) database
- MEDLINE (Medical Literature Analysis and Retrieval System Online)
- MEDLINE In-Process
- NHS EED (Economic Evaluation Database)
- PsycINFO
- PubMed
- Social Care Online
- Social Policy and Practice
- Sociological Abstracts

A total of 11 sources that were searched for the original guidance were excluded from the searches for this Evidence Update. These sources were excluded because they were unlikely to provide unique, high-quality evidence; these include, for example, websites that do not publish peer-reviewed journal articles.

The Evidence Update search strategy replicated the strategy used by [NICE PH16](#) (for key words, index terms and combining concepts) as far as possible. Where necessary, the

strategy was adapted to take account of changes in search platforms and updated indexing language.

The literature search for this Evidence Update was supplemented by a search for systematic reviews published between 2007 (the cut-off date for the original guideline search) and 2011. In addition, a citation search was undertaken on 2 papers that were included in the original guidance and for the 2 lead authors of the papers, F Clark and G Mountain (as suggested by NICE Centre for Public Health):

- Clark F, Azen SP, Zemke R et al. (1997) [Occupational therapy for independent-living older adults: a randomized controlled trial](#). JAMA 278: 1321–6
- Mountain G, Mozley C, Craig C et al. (2008) [Occupational therapy led health promotion for older people: feasibility of the Lifestyle Matters programme](#). British Journal of Occupational Therapy 71: 406–413

Search terms relating to several equality and diversity terms were removed from the search for this Evidence Update. These terms identified specific population groups but did not include all key equality and diversity groups. These groups were covered by the general population terms, and any papers relating to these groups were highlighted during the sifting stage.

Table 1 provides details of the MEDLINE search strategy used, which was adapted to search the other databases listed above. The search strategy was used in conjunction with English language and date filters.

Figure 1 provides details of the evidence selection process. The list of evidence excluded after review by the Chair of the EUAG, and the full search strategies, are available on request from [contactus@evidence.nhs.uk](mailto:contactus@evidence.nhs.uk)

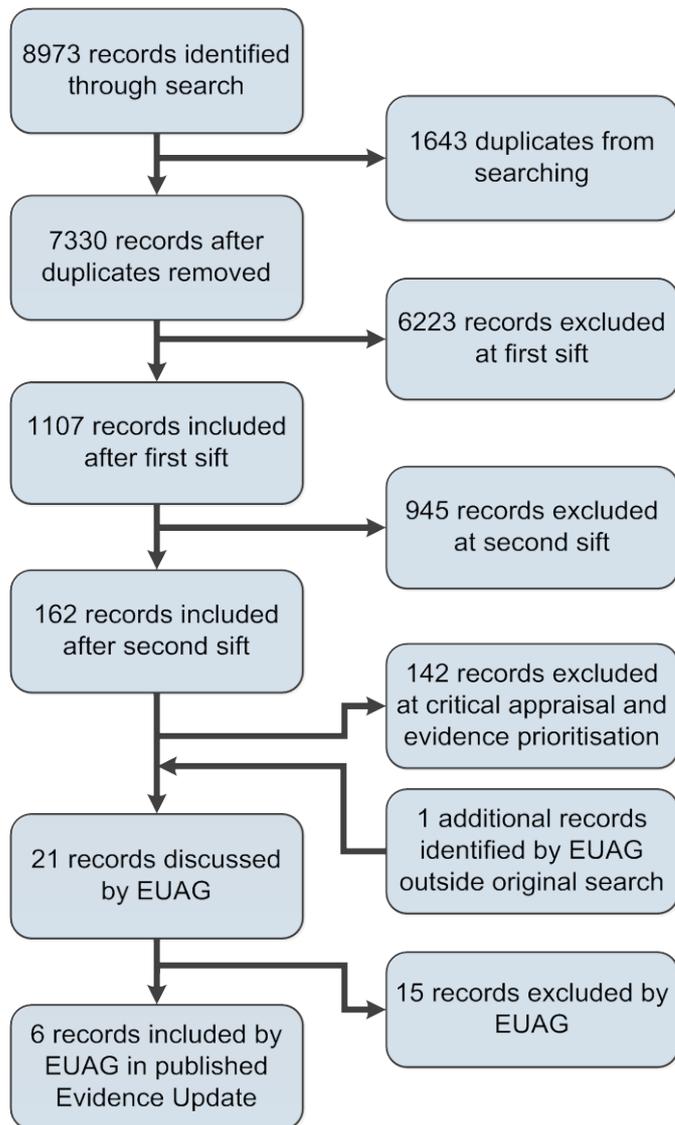
See the [NICE newsletters and alerts page](#) for a list of all published Evidence Updates.

**Table 1 MEDLINE search strategy (adapted for individual databases)**

1	"Aged, 80 and over"/ or Aged/		
2	Frail Elderly/		or maximiz\$ or promot\$ or rais\$ or sustain\$).ti,ab.
3	((old\$ or elder\$) adj (people or person\$ or adult\$ or woman or man or women or men)).ti,ab.		((daily or personal or group\$ or art or arts or craft or crafts or exercise or social or physical or community or leisure or mental or living or learning or sport\$ or preventive or preventative or health or healthy or everyday or famil\$ or neighborhood or neighbourhood) adj3 (participat\$ or involv\$ or engage\$)).ti,ab.
4	(elders or geriatric).ti,ab.		
5	pensioner\$.ti,ab.		
6	(aged people or aged person\$).ti,ab.	24	peer support.ti,ab. or peer group/
7	seniors.ti,ab.	25	volunteering.ti,ab. or voluntary workers/
8	senior citizen\$.ti,ab.	26	((information or advice or advocacy) adj3 (service\$ or provid\$ or provision\$)).ti,ab.
9	(later-life or later life).ti,ab.	27	((spiritual\$ or religio\$ or faith) adj3 (interven\$ or benefit\$ or chang\$ or develop\$ or effect\$ or enhanc\$ or gain or improv\$ or increas\$ or maintain\$ or maximis\$ or maximiz\$ or promot\$ or rais\$ or sustain\$)).ti,ab.
10	old age.ti,ab.	28	((life skills or occupational therap\$) adj3 (interven\$ or benefit\$ or chang\$ or develop\$ or effect\$ or enhanc\$ or gain or improv\$ or increas\$ or maintain\$ or maximis\$ or maximiz\$ or promot\$ or rais\$ or sustain\$)).ti,ab.
11	third age.ti,ab.	29	((befriend\$ or intimacy or friendship) adj3 (interven\$ or benefit\$ or chang\$ or develop\$ or effect\$ or enhanc\$ or gain or improv\$ or increas\$ or maintain\$ or maximis\$ or maximiz\$ or promot\$ or rais\$ or sustain\$)).ti,ab.
12	or/1-11	30	social support/ or family relations/ or community networks/ or intergenerational relations/
13	health promotion/ or preventive health services/	31	counseling/ and (interven\$ or benefit\$ or chang\$ or develop\$ or effect\$ or enhanc\$ or gain or improv\$ or increas\$ or maintain\$ or maximis\$ or maximiz\$ or promot\$ or rais\$ or sustain\$).ti,ab.
14	health education/	32	((counselling or therapy or bereavement counsel\$) adj3 (interven\$ or benefit\$ or chang\$ or develop\$ or effect\$ or enhanc\$ or gain or improv\$ or increas\$ or maintain\$ or maximis\$ or maximiz\$ or promot\$ or rais\$ or sustain\$).ti,ab.
15	health behavior/	33	
16	health knowledge, attitudes, practice/	34	
17	exp communications media/		
18	(television or video or radio or internet or book\$ or booklet\$ or leaflet\$ or pamphlet\$ or newspaper\$ or magazine\$).ti,ab.		
19	(mental health adj3 (interven\$ or promot\$)).ti,ab.		
20	activities of daily living/ or occupational therapy/ or leisure activities/ or exercise therapy/ or exp exercise movement techniques/		
21	((daily or personal or group\$ or arts or art or craft or crafts or exercise or social or physical or community or leisure or mental or living or learning or sport\$ or preventive or preventative or health or healthy or everyday or famil\$ or neighborhood or neighbourhood) adj3 (activities or activity)).ti,ab.		
22	(interpersonal relation\$ adj3 (interven\$ or benefit\$ or chang\$ or develop\$ or effect\$ or enhanc\$ or gain or improv\$ or increas\$ or maintain\$ or maximis\$ or maximiz\$ or promot\$ or rais\$ or sustain\$)).ti,ab.		
23	(social inclusion adj3 (interven\$ or benefit\$ or chang\$ or develop\$ or effect\$ or enhanc\$ or gain or improv\$ or increas\$ or maintain\$ or maximis\$		

	or increas\$ or maintain\$ or maximis\$ or maximiz\$ or promot\$ or rais\$ or sustain\$).ti,ab.		((benefit\$ or chang\$ or develop\$ or effect\$ or enhanc\$ or gain or improv\$ or increas\$ or maintain\$ or maximis\$ or maximiz\$ or promot\$ or rais\$ or sustain\$) adj3 (personal growth or wellness or morale or positive outlook or positive mental)).ti,ab.
<b>35</b>	(home visit\$ or telecare).ti,ab. or house calls/ or day centre\$.ti,ab. or day center\$.ti,ab. or day care/	<b>50</b>	(benefit\$ or chang\$ or develop\$ or effect\$ or enhanc\$ or gain or improv\$ or increas\$ or maintain\$ or maximis\$ or maximiz\$ or promot\$ or rais\$ or sustain\$).ti,ab. and (self concept/ or affect/ or personal autonomy/ or personal satisfaction/ or life change events/ or socialization/)
<b>36</b>	hobbies/ or gardening/ or art therapy/ or aromatherapy/ or tai ji/ or tai chi.ti,ab. or walking/ or walking.ti,ab. or reminiscence.ti,ab	<b>51</b>	((prevent\$ or reduc\$ or minimis\$ or minimiz\$ or restrict\$ or limit\$) adj3 (dependence or discrimination or loneliness or exclusion or anxiety or distress or ageism)).ti,ab.
<b>37</b>	self care/ or self-help groups/ or self help.ti,ab. or independen\$ living.ti,ab. or functional ability.ti,ab.	<b>52</b>	(prevent\$ or reduc\$ or minimis\$ or minimiz\$ or restrict\$ or limit\$).ti,ab.
<b>38</b>	(companion animal\$ or (pet adj2 own\$) or pet dog\$ or pet cat\$).ti,ab. or animals,domestic/	<b>53</b>	social isolation/ or prejudice/ or social alienation/
<b>39</b>	self help devices/ or (assistive device\$ or assistive tech\$).ti,ab.	<b>54</b>	53 and 54
<b>40</b>	(transport or travel).ti,ab.	<b>55</b>	45 or 46 or 47 or 48 or 49 or 50 or 51 or 52 or 55
<b>41</b>	((hous\$ or home) adj3 adapt\$).ti,ab. or architectural accessibilty/ or housing for the elderly/ or telecare.ti,ab.	<b>56</b>	12 and 44 and 56
<b>42</b>	carer\$.ti,ab. or caregiver/ or domiciliary care.ti,ab. or home care services/	<b>57</b>	*Alzheimer Disease/
<b>43</b>	diet/ or alcohol drinking/	<b>58</b>	*Parkinson Disease/
<b>44</b>	or/13-43	<b>59</b>	*Dementia/
<b>45</b>	"Quality of Life"/	<b>60</b>	*Bipolar Disorder/
<b>46</b>	happiness/	<b>61</b>	*Psychotic Disorders/
<b>47</b>	(healthy aging or healthy ageing or positive aging or positive ageing).ti,ab.	<b>62</b>	*Obsessive-Compulsive Disorder/
<b>48</b>	((benefit\$ or chang\$ or develop\$ or effect\$ or enhanc\$ or gain or improv\$ or increas\$ or maintain\$ or maximis\$ or maximiz\$ or promot\$ or rais\$ or sustain\$) adj3 (wellbeing or well-being or well being)).ti,ab.	<b>63</b>	*Mental Disorders/
<b>49</b>	((benefit\$ or chang\$ or develop\$ or effect\$ or enhanc\$ or gain or improv\$ or increas\$ or maintain\$ or maximis\$ or maximiz\$ or promot\$ or rais\$ or sustain\$) adj3 (self esteem or life satisfaction or purpose in life or mastery or resilience or autonomy)).ti,ab.	<b>64</b>	*Palliative Care/
		<b>65</b>	or/58-65
		<b>66</b>	57 not 66
		<b>67</b>	exp adolescent/ or exp child/ or exp infant/
		<b>68</b>	67 not 68
		<b>69</b>	

**Figure 1 Flow chart of the evidence selection process**



EUAG – Evidence Update Advisory Group

# Appendix B: The Evidence Update Advisory Group and Evidence Update project team

## Evidence Update Advisory Group

The Evidence Update Advisory Group is a group of topic experts who reviewed the prioritised evidence from the literature search and advised on the development of the Evidence Update.

### **Professor Gail Mountain – Chair**

Professor of Health Services Research (Assisted Living Research), School of Health and Related Research, University of Sheffield

### **Dr June Crown**

Retired Director of Public Health

### **Dr Kirstin James**

Occupational therapist, Falls Co-ordinator and Researcher, NHS Lothian, Edinburgh and Glasgow Caledonian University, Glasgow

### **Ms Karin Tancock**

Professional Adviser for Older People and Long Term Conditions, College of Occupational Therapists, London

### **Dr Gill Windle**

Senior Research Fellow (Gerontology), Dementia Services Development Centre, School of Healthcare Sciences, Bangor University

## Evidence Update project team

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