Review Article

Management of Chronic Pain in Long-Term Care: A Systematic Review and Meta-Analysis

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A B S T R A C T

Objectives: Pain, a complex subjective experience, is common in care home residents. Despite advances in pain management, optimal pain control remains a challenge. In this updated systematic review, we examined effectiveness of interventions for treating chronic pain in care home residents.

Methods: A Cochrane-style systematic review and meta-analysis using PRISMA guidelines.

Setting and Participants: Randomized and nonrandomized controlled trials and intervention studies included care home residents aged >60 years receiving interventions to reduce chronic pain.

Results: We included 42 trials in the meta-analysis and described 13 more studies narratively. Studies included 26 nondrug alternative treatments, 8 education interventions, 7 system modifications, 3 nonanalgesic drug treatments, 2 analgesic treatments, and 9 combined interventions. Pooled results at trial completion revealed that, except for nonanalgesic drugs and health system modifications, all interventions were at least moderately effective in reducing pain. Analgesic treatments (SMD = 0.80; 95% CI = 0.14 to 1.47; P = .02) showed the greatest treatment effect, followed by nonanalgesic alternative treatments (SMD = 0.40; 95% CI = 0.05 to 0.75; P < .001), combined interventions (SMD = 0.37; 95% CI = 0.06 to 0.69; P = .002), and education interventions (SMD = 0.38; 95% CI = 0.12 to 0.64; P < .001).

Conclusions and Implications: Our findings suggest that analgesic drugs and nondrug alternative pain management strategies are the most effective in reducing pain among care home residents. Clinicians should also consider implementing nondrug alternative therapies in care homes, rather than relying solely on analgesic drug options.

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Pain, a complex subjective experience, is felt by more than 60% of long-term care (LTC) home residents. Many residents experience high degrees of pain, with approximately 40% reporting moderate pain, and one-third reporting severe pain. Because of issues in pain identification and assessment, the prevalence of pain among LTC home residents is underestimated and often inadequately treated. For example, LTC home staff often report difficulties determining if a resident with dementia is in pain and the intensity of their pain. Higher rates of pain are most often attributable to painful chronic conditions (eg, arthritis) or acute conditions (eg, falls, surgical wounds). Care home residents may also have prolonged pain due to ineffective pain assessment and management. Pain has numerous consequences for them: behavioral changes, poor emotional and mental well-being, impaired physical and cognitive functioning, increased social isolation, and decreased quality of life.

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Many pain management interventions exist. Some manage pain from a pharmacological approach using analgesic (eg, paracetamol) or nonnalgesic (eg, cholecalciferol) drugs. Others use nonpharmacological approaches to reduce pain, including alternative therapies (eg, physical exercise), education interventions (eg, patient information sessions), and system modifications (eg, pain treatment protocols).

Selecting the right approach for care home residents remains challenging. The treatment of choice depends on type and severity of pain and resident-related factors, including personal preferences, comorbidities, and concurrent medications. Care home residents are usually frail, with multiple chronic conditions. Many with complex diseases and comorbidities are prescribed multiple preventive and curative medicines. Polypharmacy is common, with 6 to 10 medications prescribed per resident. Thus, managing pain using additional medications may not always be the best option. This reinforces the need to implement nonpharmacological approaches into care home practice.

To incorporate nonpharmacological approaches into practice or change existing pain management protocols, evidence synthesis is needed on effectiveness of different pain management interventions in care home residents. This review updates and widens the scope of our 2016 systematic review. Here we examine effectiveness of pain management interventions in care home residents with chronic pain (aged ≥60 years).

Methods

This review adhered to guidelines in the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) Statement (Supplementary Appendix 1) and the Cochrane Handbook for Systematic Reviews and Interventions. Our protocol was registered in PROSPERO (CRD42021262680).

Eligibility Criteria

Design
Randomized or nonrandomized controlled trials or intervention studies were eligible for inclusion. Studies without a comparison group, retrospective studies, and studies not implementing an intervention (eg, commentaries, letters to the editor) were excluded.

Population
Studies eligible for inclusion included participants aged ≥60 years, of either sex, with chronic pain, who reside permanently in any type of institutional home, including a nursing home or LTC or residential care home. To fit our criteria of being an institutional home, the residents needed to reside within the homes, and the homes needed to offer around-the-clock care.

Intervention and outcomes
Eligible studies evaluated effectiveness of pain intervention approaches: treatment-based (analgesic drugs, nonnalgesic drugs, alternative therapies) or education or system modification (quality improvement or feedback to improve the care delivery process). We also considered trials reporting combined interventions. Pain was measured as a primary or secondary outcome, using a quantitative standardized tool. Studies that only measured subjective opinions of pain, or examined other pain-related outcomes (eg, knowledge about pain, quality of life) were excluded.

Other considerations
Studies were included irrespective of country, date, and language of publication.

Information Sources

Search methods
We adhered to the PRISMA for Searching (PRISMA-S) extension and methodological guidance from the Cochrane Handbook for Systematic Reviews of Interventions.

Search concepts identified from our previous systematic review were expanded. We searched for trials from inception to April 2021 (Supplementary Appendix 2) in Medline (1946–present), Embase (1974–present), and PsycINFO (1806–present) via OVID; CINAHL (1936–present) via EBSCOhost; Scopus (1976–present) via Elsevier; and Cochrane Central Register of Controlled Trials (1993–present) via Cochrane Library.

The search strategy had 3 components: (1) older people or geriatrics; (2) care homes, skilled nursing homes, or assisted living homes; and (3) pain intervention or pain management including pharmacological and nonpharmacological interventions. Concepts were searched using a combination of controlled terms (subject headings) wherever available, such as MeSH, and free-text terms (keywords). Results were limited to randomized controlled trials by the validated Cochrane-recommended filter for Medline. A publication date filter of 2016 to April 2021 limited results to records added since our original review. For studies not located by electronic searches, we scanned reference lists of included studies, relevant systematic reviews, and gray literature.

Study Selection and Data Extraction

Records were managed using the systematic review software Covidence (Veeritas Health Innovation, https://www.covidence.org). Two reviewers (JR, TM) independently screened titles and abstracts and accessed the full text of articles with a priori inclusion criteria (Supplementary Appendix 3). Disagreements were resolved by reviewers reexamining and discussing the article.

JR extracted data with Cochrane’s data extraction checklist and TM assessed data for accuracy. Corresponding authors were contacted for data missing from included articles.

Risk of Bias in Included Studies

Using the Cochrane Risk-of-Bias Tool 2.0 template for randomized trials, methodological quality was independently assessed by 2 reviewers (JR, MN). This template’s 5 domains are as follows: randomization, deviations from intended interventions (eg, participant of study personnel blinding, analysis implemented), missing outcome data (attrition >20%), outcome measurement, and selection of reported results. Cluster trials were evaluated to assess recruitment. Crossover trials were evaluated for potential crossover effects. We classified overall risk of bias as low risk, some concerns, or high risk. A rating of high risk in a single domain classified a study as high overall risk of bias. Conflicts between reviewers were resolved through discussion.

Measuring Intervention Effect

Pain outcomes on continuous scales were expressed as standardized mean differences (SMDs), with a 95% CI. SMD (a summary statistic frequently used in meta-analyses) was appropriate because all included studies examined resident pain but assessed pain with different scales. Studies needed standardization for comparison. SMD of 0.2 represented a small effect, 0.5 a moderate effect, and 0.8 a large effect.

For studies that reported partial pain outcomes (eg, means without SDs), we calculated outcomes as needed. Studies reporting insufficient pain data or nonrandomized were not included in the meta-analysis,
## Table 1

### Design and Methodology of Included Studies

<table>
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but were described narratively. Heterogeneity between studies was examined using a $\chi^2$ test and the $I^2$ statistic. We interpreted $I^2$ according to the Cochrane Handbook: 0% to 40% likely not important, 30% to 60% moderate heterogeneity, 50% to 90% substantial heterogeneity, and 75% to 100% considerable heterogeneity.

**Data Synthesis**

Meta-analyses used Review Manager 5.4 (The Cochrane Collaboration, 2020). All analyses used a random-effect model, due to substantial differences in methodology, scales, and study goals within included studies, and levels of heterogeneity for most of our analyses. For each analysis, we produced forest plot graphs with the area left of the line divided by a $\chi^2$ test and the $I^2$ statistic. We interpreted $I^2$ according to the Cochrane Handbook: 0% to 40% likely not important, 30% to 60% moderate heterogeneity, 50% to 90% substantial heterogeneity, and 75% to 100% considerable heterogeneity.

**Results**

Of 2277 records retrieved, we removed 607 duplicates (Supplementary Figure 1). Of the 1670 records screened for title and abstract, we removed 1517. We examined the remaining 153 full-text articles and included 115. From our original systematic review, we screened 24 studies and excluded 7. Thus, 55 articles met inclusion criteria. Thirteen were not included in our meta-analysis due to design concerns, including 2 that were staff education interventions, 31,34,61,68,73 and 1 resident education intervention. Six studies used education interventions: 5 combining nondrug alternative and education, 40,50,74,78,82 2 combining system modifications and education, 49,60 1 combining analgesic and system modification, 39 and 1 combining analgesic drugs, nondrug alternative therapies, and system modification.

**Interventions**

Most intervention groups (26) used nondrug alternative interventions, 13,29,30,35,36,40,43,45,47,52,55,57,62,63,65,70,72,75 with exercise the most common, 36,40,55,67,72,74,78,79,82 followed by acupuncture, 42,47,70,75. Eight studies used education interventions, 31,34,61,68,73 of which 7 were staff education interventions, 31,34,61,68,73 and 1 resident education intervention. Seven used system modifications, 37,38,48,54,55,66,71 including 2 that implemented new specialized care teams, 18,48 and 5 that introduced new methods of assessing or treating pain. 37,54,55,66,71 For pharmacological interventions, 3 studies used a nonanalgesic drug intervention, 41,44,46 and 2 studies an analgesic intervention, 39,51. Nine studies used combined interventions: 5 combining nondrug alternative and education, 40,50,74,78,82 2 combining system modifications and education, 49,60 1 combining analgesic and system modification, 39 and 1 combining analgesic drugs, nondrug alternative therapies, and system modification.

**Outcomes**

Timing of outcome measurements varied. All studies included outcomes at baseline. 5 studies at 2 weeks, 44,52,57,59,63 4 studies at 3 weeks, 35,47,52,53 12 studies at 1 month, 44,52,55,57,59,62–65,69,70,75 5 studies at 6 weeks, 45,47,52,83 14 studies at 2 months, 48,51,58,59,66,69,70,76–82 8 studies at 3 months, 50,56,59,70,71,73,74,81 3 studies at 4 months, 54,66,70 and 6 studies at 6 months. 46,54,61,64,67,74 Three studies measured pain postintervention but did not specify intervention duration. 41,42,46 One study measured outcomes only at 3 months postintervention.

**Quality Assessment: Risk of Bias in Included Studies**

Most included studies had significant risk of bias (Supplementary Figure 2), 39 with 42 assessed as high risk, 29–31,33–36,40,41,43,45–48,50–56,58,59,62,66–69,71,73–83 11 with some concerns, 32,42,44,49,57,63–65,70,72 and 2 with low risk. 39,61 The domain most commonly judged to be high risk was the risk of bias due to deviations from the intended interventions, whereas the domain regarding bias due to missing outcome data had the least risk among included studies.

**Intervention Effects: Meta-Analysis**

Meta-analyses included data from 42 studies, with 5401 participants at baseline and 5083 at study completion. Studies were grouped...
by timing of outcome assessment and intervention type (analgesic drugs, nonanalgesic drugs, nondrug alternative therapies, system modifications, education, combined interventions). Analyses at different time points were only examined if 3 or more studies reported outcomes at that specific time point.

Pooled effect of interventions at different time points
We pooled the data from the 42 studies based on outcome timing and found no statistically significant group differences (P = .13) (Supplementary Figure 3). We found a small treatment effect as early as week 2 (SMD = 0.20; 95% CI = 0.35 to 0.06; P = .007), a significant moderate to large treatment effect at week 4 (SMD = 0.73; 95% CI = 1.11 to 0.35; P < .001), a significant large treatment effect at week 6 (SMD = 1.30; 95% CI = 2.25 to 0.34; P = .008), and a significant moderate to large treatment effect at month 2 (SMD = 0.79; 95% CI = 1.06 to 0.52; P < .001). Week 3 was insignificant (P = .16), as were 3 months (P = .07), 4 months (P = .13), and 6 months (P = .67). At study completion, treatment effect was significant moderate (SMD = 0.48; 95% CI = 0.68 to −0.31; P < .001).

Analgesic interventions
Three studies (526 participants) used an analgesic intervention51,59,63. 2 with combined interventions (analgesics plus system modifications29; analgesic drugs, nonanalgesic drugs, nondrug alternative therapies, and system modifications29) (Figure 1). Of these, 1 study used acetaminophen and either oxycodeine or codeine41; 1 involved a stepwise approach with paracetamol, oral morphine, a buprenorphine transdermal patch, and pregabalin50; and 1 used an unspecified analgesic medication.63 At baseline, the sample was homogeneous (I² = 0%; P = .92), with no significant differences between treatment and control groups (P = .52). Pain scores had statistically significant improvements at all time points and by study completion, with a large treatment effect favoring the treatment group (SMD = 0.80; 95% CI = 1.47 to −0.12; P = .02).

Nonanalgesic drug treatment interventions
Three studies (345 participants) used a nonanalgesic drug intervention: 2 exclusively nonanalgesic drug interventions (melilotus officinalis oil, vitamin D44,46 and 1 combining analgesic drug, nonanalgesic drug, nondrug alternative therapies, and system modification (Supplementary Figure 4).63 At baseline, this sample was homogeneous (I² = 0%; P = .36) and had no significant differences between groups (P = .36). By study completion, groups did not differ significantly, although a small to moderate treatment effect favored the treatment group (SMD = 0.32; 95% CI = −0.92 to 0.28; P = .30).

Nondrug interventions/alternative therapies
Twenty-seven studies (2516 participants) used a nondrug intervention (Figure 2).13,42,43,45,47,50,52,53,55,57,58,62,63,65,67,69,70,72,74−82 Four trials combined nondrug and education approaches,50,74,78,82 and 1 combined analgesic drugs, nonanalgesic drugs, nondrug, and system modification (Supplementary Figure 4).63 Exercise was the most common intervention (7 studies5,55,67,72,74,78,79,82 then acupressure 4 studies82,42,47,70,75) and humor therapy (3 studies45,65,71). At baseline, moderate heterogeneity was found (I² = 62%; P < .001) with no significant differences between groups (P = .20). Differences were not significant at 2 weeks (SMD = 0.18; 95% CI = 0.39 to 0.04; P = .11) and 3 weeks (SMD = 0.52; 95% CI = 1.25 to 0.21; P = .16). Significant differences with large treatment effects were apparent at 4 weeks (SMD = −0.95; 95% CI = −1.46 to −0.44; P < .001), 6 weeks (SMD = −1.26; 95% CI = −2.48 to −0.05; P = .04), and 8 weeks (SMD = −0.90; 95% CI = −1.28 to −0.51; P < .001). However, differences were insignificant at 3 months (SMD = 1.23; 95% CI = 2.62 to 0.15; P = .08). At study completion, groups differed significantly with moderate to large treatment effects (SMD = −0.70; 95% CI = −0.95 to −0.45; P < .001).

System modifications
Nine studies (1690 participants) used a system modification approach (Supplementary Figure 5).34,36,39,42,45,50,59,60,69,73 Four of these trials combined interventions: 2 combining education and system modification49,59 1 combining analgesic and system modification,60 and 1 using analgesic drugs, nonanalgesic drugs, nondrug alternative therapies, and system modifications.53 Baseline results indicated moderate heterogeneity (P = 52%; P = .03), but no significant group differences (P = .09). Group differences were significant at 2 months with a small to moderate treatment effect (SMD = −0.44; 95% CI = −0.67 to −0.22; P < .001), but were insignificant at 3 months (P = .51) and at study completion (SMD = −0.12; 95% CI = −0.41 to 0.18; P = .44).

Education interventions
Ten studies (2055 participants) used education interventions, with 4 focused solely on education (Supplementary Figure 6).61,64,68,73 Another 6 combined interventions: 4 using a nondrug and education intervention,50,74,78,82 and 2 using education and system modification49,60 Baseline results indicated substantial heterogeneity (P = 76%; P < .001), with nonsignificant differences at baseline (P = .78) and 3 months (P = .16). Group differences were significant with a small to moderate treatment effect at 6 months (SMD = −0.34; 95% CI = −0.51 to −0.17; P < .001) and at study completion (SMD = −0.31; 95% CI = −0.48 to −0.15; P < .001).

Combined interventions
Eight studies combined intervention types: 4 used nondrug and education interventions50,74,78,82; 2 used system modification and education49,60; 1 used analgesic and system modification29; and 1 combined analgesic drugs, nonanalgesic drugs, nondrug, and system modification (Supplementary Figure 7).63 Heterogeneity was substantial at baseline (I² = 69%; P = .002), with no significant differences between groups (P = .22). Group differences were significant at 2 months with a moderate to large treatment effect (SMD = −0.58; 95% CI = −0.95 to −0.21; P = .002) and at 3 months with a small treatment effect (SMD = −0.22; 95% CI = −0.43 to −0.02; P = .03). At study completion, groups differed significantly with a small to moderate treatment effect (SMD = −0.37; 95% CI = −0.60 to −0.13; P = .002).

Intervention Effects: Narrative Synthesis of Studies Not Included in Meta-Analyses
Thirteen studies with incomplete or missing pain outcomes data were not included in meta-analyses. Four of these used a nondrug intervention29,30,35,36 In one, aromatherapy hand massage and massage-only groups reported significantly less pain than the nurse presence group (P = .036).29 A mindfulness intervention found no significant differences between groups at study completion.30 Groups receiving electro-acupuncture and transcutaneous electrical nerve stimulation both reported significantly less pain postintervention than at baseline (P < .01) with no pain decrease for the control group.35 although differences among the 3 groups were not significant at any study time points. A physical exercise intervention was significantly beneficial at 8 weeks (P = .013).35

Four studies used education interventions: 3 providing training and education to relevant care home staff11−13 and 1 certifying nurses as pain nurses or pain care assistants.14 One study reported no changes in moderate or severe pain, but significant decreases in overall pain.13 Another reported no intervention effect on pain intensity for residents with severe cognitive impairment (P = .724) but found significantly increased pain among intervention group residents with no to moderate cognitive impairment (P = .006).14 One
education intervention reported no significant intervention effect ($P = .49$) and 1 did not describe pain outcomes.  
Two studies used a system modification intervention.  
One implemented a new stepwise pain protocol, which resulted in significantly less observed pain among the intervention group ($P = .020$), but not estimated pain ($P = .42$).  
The other implemented multidisciplinary care teams and reported no significant changes in wound pain ($P = .42$).  
One study used an analgesic drug intervention, in which the intervention group took paracetamol, but found no significant differences in pain between intervention and control groups ($P = .605$).  
One study examined a nonanalgesic drug intervention by comparing hot fomentation with Epsom salt to common salt, and found significantly decreased pain for both Epsom salt ($P < .001$) and common salt ($P < .001$) groups.  
One trial combined exercise and education programs with the intervention group reporting significantly greater decreases in arthritis pain than the control group ($P = .05$).

**Discussion**

This updated systematic review included 55 studies investigating effectiveness of pain management interventions for care home residents with chronic pain (aged $\geq 60$ years). Most interventions led to significantly improved pain ratings at study completion, although nonanalgesic drugs and system modifications had limited effects.  
Analgesic drug interventions had the largest treatment effects: 1 trial reported a large effect, 1 a moderate to large effect, and 1 a small effect. However, trials showed variation that should be considered before applying interventions. For example, using oxycodone/acetaminophen decreased pain compared with the control group. Overall, analgesic drug interventions were effective at reducing pain at study completion. Our results indicate that clinicians may choose an analgesic drug intervention based on care home residents’ needs.  
Nondrug alternative therapy interventions had moderate to large treatment effects and were the second-most effective interventions. At study completion, some of these interventions were particularly effective at reducing pain. Of the 5 most effective trials at study completion, from all 42 studies in our meta-analysis, 4 used a nondrug alternative therapy intervention: 3 used acupressure and 1 used humor therapy. Our results suggest that clinicians may choose a nondrug approach rather than relying only on pharmacological options. This may also reduce polypharmacy risk for care home residents.  
Analgesic drugs and nondrug alternative therapy interventions had higher treatment effects at study completion, ranging from moderate to large, than treatment effect of all trials pooled. Education, system modification, and nonanalgesic drug interventions had the least effect, with insignificant differences for the latter 2. System modification, education, and nonanalgesic drug interventions may be beneficial for certain populations, but they should not be considered first-line or used alone.

**Comparison With Previous Review**

This review differs from our original systematic review in several ways. First, we expanded inclusion criteria from $>65$ years to $\geq 60$ years to include more studies. Second, we included only studies focused on pain management, not related issues such as quality of life. Third, we evaluated additional intervention categories. We separated nonanalgesic drugs into nonanalgesic drugs and nondrug alternative therapy interventions, and added combined interventions.  
Results differ slightly with additional trials in this updated review. The original review found analgesic drug interventions to be most effective (moderate to large effect) at reducing pain, with non-analgesic interventions having nonsignificant changes. That non-analgesic group included pharmacologic, nonpharmacologic, and alternative treatments. The original review found small to moderate treatment effects for system modification and education interventions. Both our reviews found that analgesic drug and education interventions have large and small to moderate effects, respectively, and analgesic drug interventions were most effective. However, this review indicates that nondrug alternative therapy interventions (moderate to large effect) were second-most effective, then combined interventions (small to moderate effect). Education interventions were second-most effective in the previous review, but this review indicates lower effectiveness. Both nonanalgesic drugs and system modification interventions had no significant effect in this review.
Fig. 2. Forest plot of studies reporting nondrug interventions/alternative therapies for pain treatment. Horizontal lines: 95% CIs of each study; green squares: SMDs of each study (size represents the weight given to the study in meta-analysis); diamond, summary estimate; solid vertical line: null value. SMDs less than zero indicate a treatment benefit. IV, inverse variance.
Differences in the results between these reviews is outlined in Supplementary Table 2.

A key strength of this systematic review is our comprehensive search for eligible trials. We examined 6 databases, gray literature, and reference lists of related systematic reviews. Our original systematic review included 24 studies, whereas this one included 55 studies and analyzed 42 quantitatively, increasing reliability of our results.

Certainty of Evidence

We have confidence in the validity of our results. Overall, the confidence in our results is supported by the high number of included studies and by the consensus of findings compared with previous literature. However, many of our included studies were evaluated to be of high risk of bias.

Although our review included only 3 analgesic drug interventions and our meta-analysis had a wide confidence interval for this intervention category, we are confident that analgesic drug pain interventions are effective due to the large effect size and previous research on their effectiveness. Thus, analgesic drugs should be used to reduce pain, with consideration of potential drug interactions and comorbidities.

Our confidence in effectiveness of nondrug interventions is strengthened by the number of included nondrug intervention
studies, moderate to large effect size, and narrow confidence interval. We recommend a patient-centered approach and implementing nondrug interventions to augment analgesic drug interventions. Nondrug interventions have benefits beyond pain management and can improve residents’ quality of life.

Combined interventions in our review had small to moderate effect size and a narrow confidence interval. Effectiveness of combined interventions was likely limited by the specific combination of interventions implemented, with most combining nondrug alternative therapy with education. We advocate for implementing interventions combining analgesic drugs and alternative therapies for care home residents.

Education interventions in our review had small to moderate effect size and a narrow confidence interval. They may not be ideal as a sole intervention, but may still support pain management.

Neither nonanalgesic drug nor system modification interventions showed significant differences between groups. We have confidence in these results, which are confirmed by our previous systematic review. We recommend nonanalgesic drugs or system modifications to reduce pain only when paired with a more effective intervention.

Limitations of the Evidence

A notable limitation of this systematic review is risk of bias in included studies. No study was excluded based on quality. Three-quarters of studies were assessed as high risk, and only 2 studies as low risk. Some estimates of effect may be artificially elevated through lack of methodological rigor. To improve the risk of bias in future studies, researchers should strive to implement blinding among participants and study personnel when possible and assign participants to study groups randomly.

External validity of these results is limited. We focused solely on care home residents with chronic pain (aged ≥60 years). Generalizing our results to people in hospital settings, short-term care, or the community should be done cautiously. We did not adjust for confounding factors or stratify populations, because of insufficient data.

Conclusions and Implications

Our results indicate that multiple types of pain interventions are viable and effective for care home residents. Analgesic drug interventions had greatest treatment effect, followed by nondrug alternative therapies, combined interventions, and education interventions. Nonanalgesic drugs and system modification interventions were least effective. Clinicians may consider implementing nondrug interventions in care home settings, rather than relying solely on analgesic drug options.

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