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Introduction

Sustaining independence is important for older people, but there is insufficient guidance about which community services to implement.

Methods

Systematic review and network meta-analysis (NMA) to synthesise effectiveness evidence from randomised or cluster-randomised controlled trials of community-based complex interventions to sustain independence for older people (mean age 65+) living at home, grouped according to their intervention components. Main outcomes: Living at home, activities of daily living (ADL), care-home placement, and service/economic outcomes at one year.

We searched five databases and two registries, and scanned reference lists.

A random-effects NMA was used. We assessed risk of bias, inconsistency, and certainty of evidence.

PROSPERO registration: CRD42019162195

Results

We included 129 studies (74,946 participants). Nineteen intervention components, including ‘multifactorial-action’ (individualised care planning), were identified in 63 combinations.

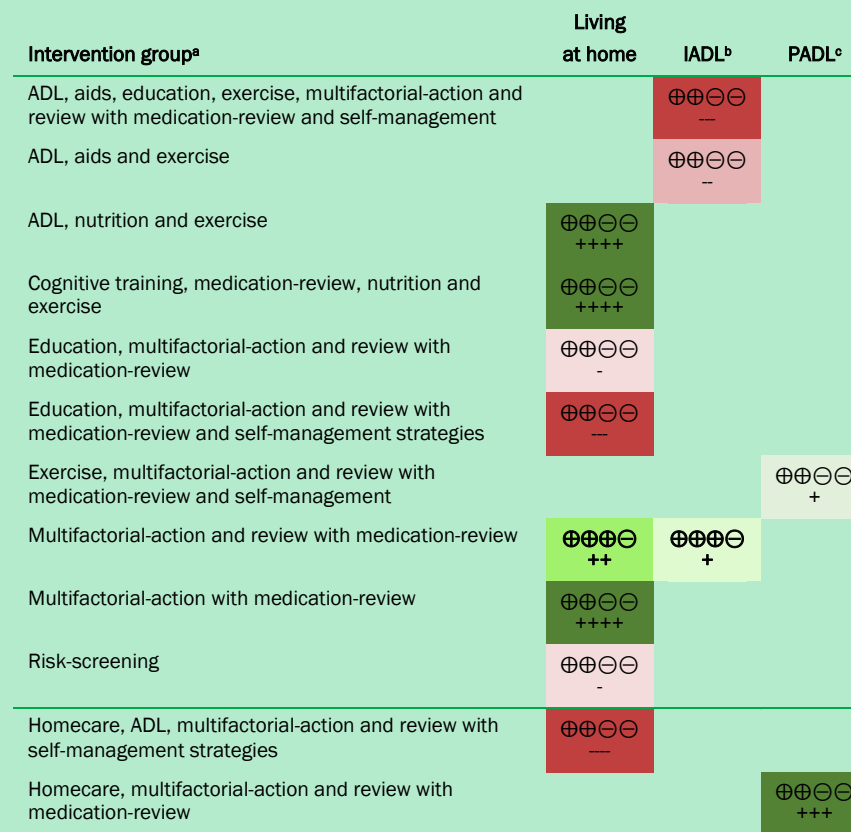
Few studies contributed to each comparison. High risk of bias and imprecision meant results were very low certainty (not reported) or low certainty (unless otherwise stated). Findings may not apply to all contexts.

For living at home, evidence favoured ‘multifactorial-action and review with medication-review’ (odds ratio (OR) 1.22, 95% CI 0.93 to 1.59; moderate certainty), and three other interventions: ‘multifactorial-action with medication-review’; ‘cognitive training, medication-review, nutrition and exercise’; and, ‘ADL, nutrition and exercise’. Four interventions may reduce odds of remaining at home.

For instrumental ADL (IADL), evidence favoured ‘multifactorial-action and review with medication-review’ (standardised mean difference (SMD) 0.11, 95% CI 0.00 to 0.21; moderate certainty). Two interventions may reduce IADL.

For personal ADL, evidence favoured ‘exercise, multifactorial-action and review with medication-review and self-management’ (SMD 0.16, 95% CI -0.51 to 0.82). Among homecare recipients, evidence favoured addition of multifactorial-action and review with medication-review (SMD 0.60, 95% CI 0.32 to 0.88).

Other findings were inconclusive.



a: compared to available care or homecare (last two), b: instrumental ADL, c: personal ADL. Green indicates increased independence, red reduced. GRADE certainty and scale of effect indicated with saturation, darkness and symbols.

Conclusions

The intervention combinations most likely to sustain independence include multifactorial-action, medication-review and ongoing review of patients. Unexpectedly, some combinations may reduce independence.