Community-based complex interventions to sustain independence in older people, stratified by frailty:
a systematic review and network meta-analysis (NIHR128862; CRD42019162195)
Supplementary material 10. Risk of bias judgements and supporting statements

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For all tables:

+ (light green shading): low risk of bias; - (yellow shading): some concerns; x (red shading): high risk of bias / serious concerns; xx (dark red shading): very serious concerns (overall risk of bias only).

a. Domain 1: risk of bias arising from the randomisation process (individual); or, for cluster trials, Domain 1a: risk of bias arising from the randomisation process / Domain 1b: risk of bias arising from the identification or recruitment of participants into clusters.

b. Domain 2: risk of bias due to deviations from the intended interventions (effect of assignment to the intervention).

c. Domain 3: risk of bias due to missing outcome data.

d. Domain 4: risk of bias in measurement of the outcome.

e. Domain 5: risk of bias in selection of the reported result.

Intervention and control group abbreviations are a combination of the following:- ac: available care; ADL: activities of daily living training; aids: provision of aids and adaptions; cgn: cognitive training; comm: technology for communication and engagement; educ: health education; eng: engagement in meaningful activities; exrc: physical exercise; hmcr: formal homecare; hmnt: alternative medicine; med: medication review; mfa: multifactorial action; mfar: multifactorial action and follow-on routine review; mntr-mfa: monitoring, which may trigger multifactorial action; ntr: nutritional support; psyc: psychological therapy; rsk-mfa: risk screening, which may trigger multifactorial action; sst: social skills training; vchr: care voucher provision; wlfr: welfare rights advice; w/med: with medication review; w/slfm: with self-management.

Table 1. Living at home: short-term timeframe

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
Challis 2004[1]	mfar(w/med)	mfar	Living at home (pts)	-	-	+	+	+	Some concerns: Lack of information about the randomization and allocation. Deviations from intended interventions due to trial context are not described and it is not clear whether contacts between specialists and care managers could have changed the case managers usual practice in some way.	-
Fernandez-Barres 2017[2]	hmcr & ntr	hmcr	Living at home (calculated, from losses to follow up)	+	-	-	+	-	Some concerns: Insufficient information to rule out any deviations from the intended interventions due to trial context. The classification of losses to follow-up is not provided. 10/173 missing.	-
Imhof 2012[3]	mfar	ac	Living at home (calculated, from losses to follow up)	-	-	+	+	-	Some concerns: The method of allocation concealment is unclear. Insufficient information provided about any deviations from the intended interventions due to trial context. The analysis plan and classification of reasons for losses to follow-up are unavailable.	-
King 2012[4]	hmcr & ADL & mfar(w/slfm)	hmcr	Living at home (calculated, from losses to follow up)	+/+	-	+	+	-	Some concerns: It is unclear whether there were any changes in usual care due to the trial context. It is unclear how losses to follow-up were attributed.	-
Kukkonen-Harjula 2017[5]	ADL & ntr & exrc	ac	Living at home (calculated, from losses to follow up)	+	-	+	+	-	Some concerns: It is unclear if there were any deviations due to the trial context. It is unclear how competing losses to follow-up were allocated.	-
Liddle 1996[6]	aids & mfar	ac	Living at home (calculated, from losses to follow up)	-	x	+	+	-	Very serious concerns: The authors describe significant contamination in both groups, whereby the interventions were sought and implemented to levels in excess of that provided in trial to the intervention group. Some concerns: Lack of information regarding the procedures to conceal the allocation sequence. Classification of reasons for losses to follow-up is not provided.	xx
Metzelthin 2013[7]	educ & mfar(w/med+slfm)	ac	Living at home (calculated, from losses to follow up)	-/-	-	+	+	-	Some concerns: It appears the allocation was random and concealed, although it appears the authors intended to bias the allocation with a more urban intervention arm and more rural control arm but they were unsuccessful in implementing this approach. Participants were recruited after clusters were allocated and it is unclear if this was affected by knowledge of the allocation. It is unclear if there were deviations in care due to the trial context. It is unclear how participants were assigned their lost to follow-up status.	-
Parsons M 2017[8]	hmcr & ADL & mfar(w/slfm)	hmcr & mfa-	Care home and mortality (inverse of living at home)	-	-	x	+	+	Serious concern: Reasons for missingness were unclear. Some concerns: Computer-mediated minimisation used; concealment not mentioned. Participants and personnel were not blinded to assignments, and the authors suggested that the Hawthorne effect and experimenter effects were limitations, although it was impossible to determine the extent.	x
Parsons M 2017[8]	hmcr & ADL & mfar(w/slfm)	hmcr & mfa-	Living at home (pts)	-	-	x	+	+	Serious concern: Reasons for missingness were unclear. Some concerns: Computer-mediated minimisation used; concealment not mentioned. Participants and personnel were not blinded to assignments, and the authors suggested that the Hawthorne effect and experimenter effects were limitations, although it was impossible to determine the extent.	x

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
Rooijackers 2021[9]	hmcr & ADL & mfar(w/slfm)	hmcr	Living at home (calculated, from losses to follow up)	+/-	-	+	+	-	Some concerns: Participants were identified by the nurses who seemed to be aware of the intervention assignment. Insufficient information to rule out any deviations due to the trial context though blinding was in place. The classification of reasons of loss to follow-up is not provided.	-
Suijker 2016[10]	mfar(w/med)	ac	Living at home (calculated, from losses to follow up)	+/-	-	-	+	-	Some concerns: Lack of information about whether GPs who selected eligible participants were aware of cluster allocation when doing so. Lack of information about possible deviations from the intended intervention. There was some missingness although balanced between arms. The circumstances under which a person is classified as "Nursing home" as a reason of loss to follow-up are unclear.	-
Szanton 2011[11]	ADL&aids&educ&exrc&mfar(w/med+slfm)	ac	Living at home (calculated, from losses to follow up)	-	-	+	+	-	Some concerns: The methods of randomisation and allocation concealment are unclear. Insufficient information provided to judge any deviations from the intended interventions due to trial context. Choices may have been made about which reasons to provide for loss to follow-up.	-
Wong 2019[12]	mfar(w/slfm)	ac	Living at home (calculated, from losses to follow up)	x	-	-	+	-	Serious concern: Allocation was likely predictable. Some concerns: Unsure of any intervention deviation from the intended interventions due to trial context. Approximately 7% missing data. The classification of losses to follow-up is not reported.	x

Table 2. Living at home: medium-term timeframe

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
Blom 2016[13]	mfa-(w/med+slfm)	ac	Living at home (calculated, from losses to follow up)	x/+	-	x	+	-	Very serious concerns: Unsure of the randomisation and allocation of clusters, and there is a large imbalance of cluster size. 45/288 (15.6%) and 229/1091 (21.0%) missing. There is a substantial imbalance in missingness between arms. Some concerns: Insufficient information to rule out any deviations due to trial context. Unclear of the analysis used.	xx
Dalby 2000[14]	mfar(w/med)	ac	Care home and mortality (inverse of living at home)	-	-	+	+	-	Some concerns: The method of allocation concealment is unclear. Insufficient information provided about any deviations from the intended intervention due to trial context. The pre-specified analysis plan is unavailable.	-
Dalby 2000[14]	mfar(w/med)	ac	Living at home (calculated, from losses to follow up)	-	-	+	+	+	Some concerns: The method of allocation concealment is unclear. Insufficient information provided about any deviations from the intended intervention due to trial context.	-
Fabacher 1994[15]	mfar(w/med)	ac	Living at home (calculated, from losses to follow up)	-	-	x	+	+	Serious concerns: 25 participants' data were missing, with some imbalance in missingness. Some concerns: Unclear randomisation and allocation concealment method. The trial personnel and participants were unblinded, and unclear of any deviations from interventions due to trial context.	x

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
Fernandez-Barres 2017[2]	hmcr & ntr	hmcr	Living at home (calculated, from losses to follow up)	+	-	x	+	-	Serious concern: 17/173 (10%) withdrew, there was an imbalance in the proportion of withdrawals IG 5.0% vs CG 16.7%. Some concerns: Insufficient information to rule out any deviations from the intended interventions due to trial context. The classification of losses to follow-up is not provided.	x
Hall 1992[16]	hmcr & mfar(w/slfm)	hmcr & mfar	Living at home (pts)	-	-	+	+	+	Some concerns: Insufficient details about the allocation concealment method. Insufficient information provided to assess any deviations from the intended interventions due to trial context.	-
Harari 2008[17]	mfar(w/med)	ac	Living at home (calculated, from losses to follow up)	+	x	+	+	-	Serious concerns: Possibly contamination in usual care. Some concerns: The classification of missing data is not reported clearly.	x
Hay 1998[18]	ac	ac	Living at home (calculated, from losses to follow up)	-	-	x	+	-	Serious concerns: The number of missing data (72= CG2 62 + CG1 10) is 21% of the number of events (323), and the proportions is imbalanced between groups. Some concerns: Insufficient information provided about the methods used to generate the sequence and allocation concealment. Insufficient information provided for judging any deviations from the intended interventions due to trial context. The calculation is based on the losses to follow-up data, and choices may have been made about which reasons to provide for loss to follow-up.	x
Hay 1998[18]	mfa-	ac	Living at home (calculated, from losses to follow up)	-	-	x	+	-	Serious concerns: The number of missing data (72= IG3 62 + CG1 10) is 21% of the number of events (333), and the proportions is imbalanced between groups. Some concerns: Insufficient information provided about the methods used to generate the sequence and allocation concealment. Insufficient information provided for judging any deviations from the intended interventions due to trial context. The calculation is based on the losses to follow-up data, and choices may have been made about which reasons to provide for loss to follow-up.	x
Hebert 2001[19]	mfar(w/med)	ac	Living at home (calculated, from losses to follow up)	-	-	+	+	-	Some concerns: No information provided about the randomisation and allocation methods. Insufficient information about any other potential deviations from the intended interventions due to trial context. The number of missing data (9) is 30% of the known events (30). The reason for missing data is fairly balanced between groups. This calculation is based on the care placement and death data. The data were reported as loss to follow-up reasons. Choices may have been made about which reasons to provide for loss to follow-up.	-
Henderson 2005[20]	mfar	ac	Living at home (calculated, from losses to follow up)	+/x	+	x	+	-	Very serious concerns: The recruitment method seemed consistent across the clusters; however, the researchers already knew the cluster allocations and informed the participants about the intervention details of the cluster they belonged to. The missingness was imbalanced. Some concerns: The data were reported as a reason of withdrawal, but the approach to classifying withdrawals was not specified.	xx
Kerse 2014[21]	rsk-mfa-	ac	Living at home (calculated, from losses to follow up)	+/+	-	+	+	-	Some concerns: It is unclear whether the trial context led to changes in usual care. Process of classifying losses to follow-up is unclear.	-

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Kono 2004[22]	mfar	ac	Living at home (calculated, from losses to follow up)	-	-	+	+	-	Some concerns: Unclear allocation concealment method. Lack information about any deviations from the intended interventions due to trial context. Reported as reasons of loss to follow-up and the losses of follow-up classification is not provided.	-
Kono 2016[23]	mfar(w/med)	Mfar	Living at home (pts)	+	-	-	+	+	Some concerns: Insufficient information to determine material contamination of interventions due to trial context. 13.1% of missing data, reasons are "moved away" and "declined".	-
Kukkonen-Harjula 2017[5]	ADL & ntr & exrc	ac	Living at home (calculated, from losses to follow up)	+	-	+	+	-	Some concerns: It is unclear if there were any deviations due to the trial context. It is unclear how competing losses to follow-up were allocated.	-
Lewin 2013[24]	hmcr & educ & mfar	hmcr	Living at home (calculated, from losses to follow up)	x	x	+	+	-	Very serious concerns: There are imbalances in the baseline characteristics, possibly due to the subverted randomisation and the reassignment of IG participants who did not participate in the programme. Insufficient information provided about how many IG participants were reassigned due to non-participation. If participants were reassigned, they were not analysed according to their initial assignment. Some concerns: This calculation is based on the death and care placement data which are reported as losses to follow-up; choices may have been made about which reasons to report for losses to follow-up.	xx
Metzelthin 2013[7]	educ & mfar(w/med+slfm)	ac	Living at home (calculated, from losses to follow up)	-/-	-	-	+	-	Main concern: There was more missingness than events with some imbalance in missingness between the arms. Some concerns: It appears the allocation was random and concealed, although it appears the authors intended to bias the allocation with a more urban intervention arm and more rural control arm but they were unsuccessful in implementing this approach. Participants were recruited after clusters were allocated and it is unclear if this was affected by knowledge of the allocation. It is unclear if there were deviations in care due to the trial context. There was some missingness and some imbalance in missingness between arms but this was small overall. It is unclear how participants were assigned their lost to follow-up status.	-
Monteserin Nadal 2008[25]	educ & rsk-mfa-	ac	Living at home (calculated, from losses to follow up)	-	-	x	+	+	Serious concerns: There were 104 withdrawals and living at home data were not available for these participants. Withdrawal may be linked to mortality. No reasons for voluntary withdrawal were provided. Some concerns: Unclear of allocation concealment method. Insufficient information to rule out deviations from the intended interventions due to trial context.	x
Newbury 2001[26]	mfa-(w/med)	ac	Living at home (pts)	-	-	+	+	-	Some concerns: Unclear whether allocation was adequate. Unclear of any deviations from the intended interventions due to trial context. Unclear whether the participants were aware of the differences in assignments when self-assessing. Unclear of how people's living status were classified for the analysis.	-

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
Newcomer 2004[27]	educ & mfar(w/med)	ac	Living at home (calculated, from losses to follow up)	-	-	+	+	-	Some concerns: Unclear about how the sequence was generated and the allocation method. Insufficient information available to judge whether there were any deviations from the intended intervention due to trial context in each arm. This calculation is based on the death and care placement data, which were reported as attrition reasons. Choices may have been made about which reasons to provide for loss to follow-up.	-
Parsons M 2017[8]	hmcr & ADL & mfar(w/slfm)	hmcr & mfa-	Care home and mortality (inverse of living at home)	-	-	x	+	+	Serious concern: Missingness was half the number of events. Reasons for missingness were unclear. Some concerns: Computer-mediated minimisation used; concealment not mentioned. Participants and personnel were not blinded to assignments, and the authors suggested that the Hawthorne effect and experimenter effects were limitations, although it was impossible to determine the extent.	x
Parsons M 2017[8]	hmcr & ADL & mfar(w/slfm)	hmcr & mfa-	Living at home (pts)	-	-	x	+	+	Serious concern: Missingness was half the number of events. Reasons for missingness were unclear. Some concerns: Computer-mediated minimisation used; concealment not mentioned. Participants and personnel were not blinded to assignments, and the authors suggested that the Hawthorne effect and experimenter effects were limitations, although it was impossible to determine the extent.	x
Ploeg 2010[28]	educ & mfar(w/med)	ac	Living at home (calculated, from losses to follow up)	+	-	x	+	-	Serious concern: Some imbalance in missingness and reasons not provided. Some concerns: Insufficient information provided to make judgement about any deviations from the intended interventions due to trial context. Unclear of how losses to follow-up were classified.	x
Rockwood 2000[29]	mfa-(w/med)	ac	Institution-free survival (mean days over 12 months)	-	-	+	+	-	Some concerns: No description of randomisation procedures. Some control participants may have sought additional care because of the trial context although this is unlikely to have been a substantial number due to the nature of the intervention. Pre-specified analysis plan and measurement unclear.	-
Romera-Liebana 2018[30]	cgn & med & ntr & exrc	ac	Living at home (calculated, from losses to follow up)	+	-	+	+	-	Some concerns: Any deviations from the intended interventions due to trial contact are not known. The process for classifying people as losses to follow-up is not specified.	-
Rooijackers 2021[9]	hmcr & ADL & mfar(w/slfm)	hmcr	Living at home (calculated, from losses to follow up)	+/-	-	+	+	-	Some concerns: Participants were identified by the nurses who seemed to be aware of the intervention assignment. Insufficient information to rule out any deviations due to the trial context though blinding was in place. The classification of reasons of loss to follow-up is not provided.	-
Shapiro 2002[31]	hmcr & mfar	ac	Living at home (calculated, from losses to follow up)	-	x	x	+	-	(Very high risk) Very serious concerns: High amount of attrition (at least 45.3%) and was imbalanced between groups. Intention to treat principle was not followed when excluded non-participants from IG before starting the intervention. Some concerns: Unclear allocation concealment method. The classification of losses to follow-up is not specified.	xx

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
Suijker 2016[10]	mfar(w/med)	ac	Living at home (calculated, from losses to follow up)	+/-	-	-	+	-	Some concerns: Lack of information about whether GPs who selected eligible participants were aware of cluster allocation when doing so. Lack of information about possible deviations from the intended intervention. There was some missingness although balanced between arms. The circumstances under which a person is classified as "Nursing home" as a reason of loss to follow-up are unclear.	-
van Hout 2010[32]	mfar(w/med)	ac	Living at home (calculated, from losses to follow up)	+	-	x	+	-	Serious concerns: 157 missing data (37% of the 424 events); the proportions of missing data due to "other reason" and "reason unknown" are imbalanced between groups. Some concerns: Insufficient information provided about any deviations from the interventions due to trial context. This calculation is based on the death and care-home placement results which were reported as reasons of loss to follow-up; and choices may have been made about which reasons to report for losses to follow-up.	x
Wolter 2013[33]	hmcr & mfar(w/med)	hmcr	Living at home (calculated, from losses to follow up)	+/-	-	x	+	-	Serious concerns: Some clusters (more in CG) withdrew after knowing the assignments in the first randomisation which are missing data. Clusters who withdrew at baseline and during the trial were not included, (89 other reasons +99 from 7 IG withdrew clusters)/920 missing data. Some concerns: Participants were likely recruited after randomisation. Pre-specified analysis plan is unavailable. There is a possibility of some deviations from the intended interventions but this should not have considerably affected the results.	x

Table 3. Living at home: long-term timeframe

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
Carpenter 1990[34]	rsk-mfa-	ac	Living at home (calculated, from losses to follow up)	-	-	-	+	-	Some concerns: The allocation concealment method is unclear. Insufficient information provided about any deviations from the intended interventions due to trial context. The number of missing data (24) is 6% of number of events (392), the reasons and proportions are fairly balanced. The results are based on reported reasons of loss to follow-up; choices may have been made about which reason to report for losses to follow-up.	-
Fischer 2009[35]	eng & mfa-(w/slfm)	ac	Care home and mortality (inverse of living at home)	+	-	-	+	+	Some concerns: Some concerns: Insufficient information about any deviations from the intended interventions due to trial context. 59/4224 (1.4%) participants not included dues to moving home, that is 10.5% of the events (59/562).	-
Fischer 2009[35]	eng & mfa-(w/slfm)	ac	Remaining at home/ community time (days)	+	-	+	+	-	Some concerns: Insufficient information about any deviations from the intended interventions due to trial context. The pre-specified analysis plan is unavailable.	-
Ford 1971[36]	mfar(w/med)	ac	Living at home (pts)	+	-	+	+	+	Some Concerns: Unclear of any deviations from the intended interventions due to trial context.	-

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
Hall 1992[16]	hmcr & mfar(w/slfm)	hmcr & mfar	Living at home (pts)	-	-	+	+	+	Some concerns: Insufficient details about the allocation concealment method. Insufficient information provided to assess any deviations from the intended interventions due to trial context.	-
Hay 1998[18]	ac	ac	Living at home (calculated, from losses to follow up)	-	-	x	+	-	Serious concerns: The number of missing data (150= CG1 66+ CG1 84) is 63.8% of the number of events (235). The reasons of most of the missing data are lost to FU, refused, missed measurement, thus unclear whether the outcome depends on their true value. Some concerns: Insufficient information provided about the methods used to generate the sequence and allocation concealment. Insufficient information provided for judging any deviations from the intended interventions due to trial context. The calculation is based on the losses to follow-up data, and choices may have been made about which reasons to provide for loss to follow-up.	x
Hay 1998[18]	mfa-	ac	Living at home (calculated, from losses to follow up)	-	-	x	+	-	Serious concerns: The number of missing data (167= IG3 83 + CG2 84) is 73.6% of the number of events (227). The reasons of most of the missing data are lost to FU, refused, missed measurement, thus unclear whether the outcome depends on their true value. Some concerns: Insufficient information provided about the methods used to generate the sequence and allocation concealment. Insufficient information provided for judging any deviations from the intended interventions due to trial context. The calculation is based on the losses to follow-up data, and choices may have been made about which reasons to provide for loss to follow-up.	x
Kerse 2014[21]	rsk-mfa-	ac	Living at home (calculated, from losses to follow up)	+/+	-	-	+	-	Some concerns: It is unclear whether the trial context led to changes in usual care. There was some informative missingness but it was balanced between arms. Process of classifying losses to follow-up is unclear.	-
Kono 2012[37]	mfar	Mfar	Living at home (pts)	-	-	+	+	+	Some concerns: Unknown allocation concealment method. Insufficient information to rule out deviations from the intended interventions due to trial context in both groups.	-
Kono 2016[23]	mfar(w/med)	Mfar	Living at home (pts)	+	-	-	+	+	Some concerns: Insufficient information to determine material contamination of interventions due to trial context. 21.2% (58 missing/273 events) of missing data but balanced between arms.	-
Kukkonen-Harjula 2017[5]	ADL & ntr & exrc	ac	Living at home (pts)	+	-	+	+	+	Some concerns: It is unclear if there were any deviations due to the trial context.	-

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
Metzelthin 2013[7]	educ & mfar(w/med+slfm)	ac	Living at home (calculated, from losses to follow up)	-/-	-	x	+	-	Serious concern: There was substantial imbalance in missingness between the arms. Some concerns: It appears the allocation was random and concealed, although it appears the authors intended to bias the allocation with a more urban intervention arm and more rural control arm but they were unsuccessful in implementing this approach. Participants were recruited after clusters were allocated and it is unclear if this was affected by knowledge of the allocation. It is unclear if there were deviations in care due to the trial context. It is unclear how participants were assigned their lost to follow-up status.	x
Parsons M 2012[38]	hmcr & mfar	hmcr & mfa-	Care home and mortality (inverse of living at home)	+/-	-	x	+	-	Very serious concern: There were more missing data than events. Reasons for missingness were unclear. Some concerns: Unclear whether and when the personnel recruiting participants would be unblinded to the assignments. Participants and personnel were not blinded to assignments, and the authors suggested that the Hawthorne effect and experimenter effects were limitations, although it was impossible to determine the extent. It's unclear how people would be assigned when there might be multiple reasons for loss to follow-up.	xx
Parsons M 2012[38]	hmcr & mfar	hmcr & mfa-	Living at home (calculated, from losses to follow up)	+/-	-	x	+	-	Very serious concern: There were more missing data than living at home. Reasons for missingness were unclear. Some concerns: Unclear whether and when the personnel recruiting participants would be unblinded to the assignments. Participants and personnel were not blinded to assignments, and the authors suggested that the Hawthorne effect and experimenter effects were limitations, although it was impossible to determine the extent. It's unclear how people would be assigned when there might be multiple reasons for loss to follow-up.	xx
Parsons M 2017[8]	hmcr & ADL & mfar(w/slfm)	hmcr & mfa-	Care home and mortality (inverse of living at home)	-	-	x	+	+	Very serious concern: There was little information regarding missingness but it appears that most participants were not followed to 24 months. Some concerns: Computer-mediated minimisation used; concealment not mentioned. Participants and personnel were not blinded to assignments, and the authors suggested that the Hawthorne effect and experimenter effects were limitations, although it was impossible to determine the extent.	xx
Stuck 1995[39]	educ & mfar(w/med)	ac	Living at home (calculated, from losses to follow up)	+	-	+	+	+	Some concerns: No information indicating any deviations from the intended interventions due to trial context.	-
Stuck 2015[40]	educ & mfar(w/med+slfm)	ac	Living at home (calculated, from losses to follow up)	+	-	x	+	+	Serious concern: More people missing than were living in a care home. Some concerns: Unclear whether the differences in problem identification between the nurses was a deviation from the intended intervention due to trial context or other reasons.	x

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
Suijker 2016[10]	mfar(w/med)	ac	Living at home (calculated, from losses to follow up)	+/-	-	-	+	-	Some concerns: Lack of information about whether GPs who selected eligible participants were aware of cluster allocation when doing so. Lack of information about possible deviations from the intended intervention. There was some missingness although balanced between arms. The circumstances under which a person is classified as "Nursing home" as a reason of loss to follow-up are unclear.	-
Tomita 2007[41]	aids	ac	Living at home (pts)	x	-	x	+	-	Very serious concerns: No information about method of randomisation and allocation concealment, participants differed substantially in age and education (50% intervention group university educated vs 18.2% control group), the control group were also more likely to have almost all illnesses listed. 14/124 not included and substantial imbalance in missingness between arms. Some concerns: Insufficient to judge any deviations from the intended interventions due to trial context. The classification of losses to follow-up is not provided.	xx
Tulloch 1979[42]	mfar(w/med)	ac	Living at home (calculated, from losses to follow up)	-	-	-	+	-	Some concerns: The details of randomisation and allocation concealment methods were not provided; insufficient details about the participants' baseline characteristics provided to judge any imbalance or problems in the allocation method. Insufficient information is provided to judge whether there were any deviations from the intended intervention that arose because of the trial context. The amount of missing data is 18.3% of the known events (218); the reasons are moved away and refused participation at baseline which are not imbalanced. Choices may have been made about which reasons to provide for loss to follow.	-

Table 4. Instrumental activities of daily living: short-term timeframe

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
Auvinen 2020[43]	hmcr & med	hmcr	Lawton IADL scale (0-8) (Lawton & Brody 1969)	+	-	-	-	x	Serious concerns: Multiple models were fitted with only one result reported. Some concerns: 28 or 29 of 258 lost from intervention arm. 34 of 254 lost from control arm. Most withdrawals were deaths so clearly linked to health status. It is not clear whether participants knew their group assignment, and self-reported health status requires significant judgment. Insufficient information about any deviations from the intended interventions due to trial context in either group.	x

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
Clark 1997[44]	eng & educ	ac	Functional Status Questionnaire (IADL subscale) (0-100%)	x	-	x	-	x	Very serious concerns: Computer-generated sequence but block-size of six means allocation probably somewhat predictable. Data available for 304/361 due to death, becoming ill, relocation, personal reasons, and losses to follow-up, unclear whether reasons are balance between groups. Analyses were conducted with a combined control group on the grounds that there were no significant differences between the groups. Some concerns: Insufficient information to judge any deviations from the intended interventions, that attendance at intervention sessions in the OT and social group arms was similar, but unclear whether the non-treatment group began interventions as a result of the trial context. Self-assessing participants were probably aware of their assignment.	xx
Gill 2002[45]	ADL & exrc	ac	IADL (Lawton & Brody 1969) (5 items, 0-10)	-	-	+	-	-	Some concerns: Possible lack of allocation concealment, computer-generated random numbers were used but there is no reporting of allocation concealment. Insufficient information provided about any deviations from the intended interventions due to trial context. Unblinded participants self-reported the outcomes. No pre-specified analysis plan was available.	-
Gitlin 2006[46]	ADL & aids & exrc	ac	IADL (Gitlin 2006)	+	-	x	-	-	Serious concerns: Imbalance of loss to FU between groups - loss to follow up of 6/160 in the intervention arm, and 13/159 in the controls (6% in total, 3.8% for intervention arm, 8.2% for controls). Some concerns: Insufficient information to rule out deviations from the intended interventions due to trial context within each group. Unblinded participants self-assessed the outcomes. The pre-specified plan is unavailable.	x
King 2012[4]	hmcr & ADL & mfar(w/slfm)	hmcr	Nottingham Extended Activities of Daily Living (NEADL) (0-66)	+/+	-	-	-	-	Some concerns: It is unclear whether there were any changes in usual care due to the trial context. There was informative missingness but reasonably balanced. Participants self-reported their independence. The result may have been selected from multiple available.	-
Metzelthin 2013[7]	educ & mfar(w/med+slfm)	ac	Groningen Activity Restriction Scale (GARS) (IADL)	-/-	-	x	-	-	Serious concern: There was substantial imbalance in missingness between the arms. Some concerns: It appears the allocation was random and concealed, although it appears the authors intended to bias the allocation with a more urban intervention arm and more rural control arm but they were unsuccessful in implementing this approach. Participants were recruited after clusters were allocated and it is unclear if this was affected by knowledge of the allocation. It is unclear if there were deviations in care due to the trial context. It is unclear how participants were assigned their lost to follow-up status.	x

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
Morgan 2019[47]	exrc	ac	Lawton IADL scale (0-8) (Lawton & Brody 1969)	+	-	-	x	-	Serious concerns: Median value was the ceiling value for the scale. Some concerns: 4/51 (7.8%) missing from intervention arm. Independence likely to be related with dropout. 3 lost from intervention arm and 1 from control arm, and IG is twice bigger in group size (IG 34 vs CG 17). Some concerns: Insufficient information to judge any deviations from the intended interventions due to trial context. The pre-specified analysis plan is unclear.	x
Parsons M 2012[38]	hmcr & mfar	hmcr & mfa-	IADL Summary Scale (InterRAI, MDS-IADL scale)	+/-	-	-	-	-	Some concerns: Unclear whether and when the personnel recruiting participants would be unblinded to the assignments. Participants and personnel were not blinded to assignments, and the authors suggested that the Hawthorne effect and experimenter effects were limitations, although it was impossible to determine the extent. Overall, 17% of participants were lost to follow-up; more than 5% of participants died. There were small imbalances in losses to follow-up, which could be due to chance. Unblinded participants self-assessed the outcome. Unsure whether this outcome was pre-specified.	-
Parsons M 2017[8]	hmcr & ADL & mfar(w/slfm)	hmcr & mfa-	IADL Summary Scale (InterRAI, MDS-IADL scale)	-	-	x	-	-	Serious concerns: 56/113 (50%) participants were not followed up at 6m; there is some imbalance in missingness due to deaths and little further information. Some concerns: Computer-mediated minimisation used; concealment not mentioned. Participants and personnel were not blinded to assignments, and the authors suggested that the Hawthorne effect and experimenter effects were limitations, although it was impossible to determine the extent. Unblinded participants self-assessed the outcome. Unsure whether this outcome was pre-specified.	x
Rockwood 2000[29]	mfa-(w/med)	ac	Lawton IADL (8-31) (Lawton & Brody, 1969)	-	-	x	-	-	Serious concerns: 148/182 participants available (attrition: 18% intervention, 19.5% control), partly due to mortality and no information was provided about the other reasons. Some concerns: No description of randomisation procedures. Some control participants may have sought additional care because of the trial context although this is unlikely to have been a substantial number due to the nature of the intervention. Participants were unlikely blinded and self-assessed the outcome. Pre-specified analysis plan is unavailable.	x
Szanton 2011[11]	ADL&aids&educ&exrc&mfar(w/med+slfm)	ac	Lawton IADL (0-6) (Lawton & Brody 1969) 6 questions	-	-	x	-	-	Serious concerns: 12.5% missing data; the reasons of not completing the follow-up are linked to health status, and the reasons and proportions are imbalanced between groups. Some concerns: The methods of randomisation and allocation concealment are unclear. Insufficient information provided to judge any deviations from the intended interventions due to trial context. Participants were not blinded and they self-assessed the outcome. The pre-specified analysis plan is unavailable.	x

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
Whitehead 2016[48]	hmcr & ADL & aids & mfa-	hmcr & mfa-	Nottingham Extended Activities of Daily Living (NEADL) (0-22)	+	-	x	-	-	Serious concerns: 8/30 (26%) participants not included due to deaths and withdrew/ lost to follow-up, the reasons of dropouts between groups are imbalanced. Some concerns: Insufficient information to judge any deviations from the intended interventions although any material deviations seem unlikely. Participants self-assessed but they all were receiving reablement so lack of blinding may not influence their self-assessment. Post hoc analysis changes from descriptive statistics to using regression to calculate change in score from baseline.	x

Table 5. Instrumental activities of daily living: medium-term timeframe

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
Bernabei 1998[49]	hmcr & mfar(w/med)	hmcr	IADLs (0-7), British Columbia LTC programme application and assessment, modified validated version (Abate 1992)	-	-	x	-	-	Serious concerns: 25 deaths and no other loss to follow up is discussed, any missing data is likely missing secondary to the true value of this outcome. Some concerns: No indication of the concealment method of the allocation sequence. Potential for contamination of the control arm given the same group of GPs were caring for these individuals too but unclear whether there are material deviations from the intended interventions due to trial context. Unblinded participants self-assessed the outcome. Lack of information regarding the pre-specified plan	x
Blom 2016[13]	mfa-(w/med+slfm)	ac	Groningen Activity Restriction Scale (GARS) (IADL)	x/+	-	x	-	-	Very serious concerns: Unsure of the randomisation and allocation of clusters, and there is a large imbalance of cluster size. 38.9% missing data; mortality, care-home placement, too ill are linked with health status; reasons for much of the missing data not provided; the proportions of other and unknown dropout reasons are imbalanced between groups. Some concerns: Insufficient information to rule out any deviations due to trial context. Unblinded participants self-assessed the outcomes. Unclear of the analysis used.	xx

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
Bouman 2008[50]	mfar(w/med)	ac	Groningen Activity Restriction Scale (GARS) (IADL)	+	-	x	-	-	Serious concerns: more than 11.2% missing data, death and illness likely depend on its true value, there is imbalance between the groups due to self-withdrawal. Some concerns: No information about any deviations from the intended intervention due to trial context, though the authors suggested no methodological drawbacks. Unblinded participants self-assessing the outcome which involves judgement. Unblinded participants self-assessing the outcome which involves judgement. The published protocol stated that regression technique would be used, which matches the analyses description in the costs report. Linear mixed-effects regression model was used which seems appropriate, but the pre-specified regression model is not known.	x
Brettschneider 2015[51]	mfar(w/med)	ac	Lawton IADL scale (0-8) (Lawton & Brody 1969)	-	-	x	-	+	Serious concerns: 13.1% missing data likely due to death and care admission. Unclear who were not included in the assessment and analysis, because it seems some CG people who died were also included. It is likely that those died and admitted to nursing home were excluded but the true value depended on their values. Some concerns: Uncertainty about allocation concealment (particularly those recruited vis registration office). Participants and intervention deliverers were aware of the allocated interventions. Unclear of any deviations from the intended interventions due to trial context. Unblinded participants self-assessed the outcome.	x
Clark 1997[44]	eng & educ	ac	Functional Status Questionnaire (IADL subscale) (0-100%)	x	-	x	-	x	Very serious concerns: Computer-generated sequence but block-size of six means allocation probably somewhat predictable. Data available for 282/361, reasons including death and becoming ill, unclear whether reasons are balance between groups. Analyses were conducted with a combined control group on the grounds that there were no significant differences between the groups. Some concerns: Insufficient information to judge any deviations from the intended interventions, that attendance at intervention sessions in the OT and social group arms was similar, but unclear whether the non-treatment group began interventions as a result of the trial context. Self-assessing participants were probably aware of their assignment.	xx
Dorresteijn 2016[52]	ADL	ac	Groningen Activity Restriction Scale (GARS) (IADL)	+	-	x	-	-	Serious concerns: 24/195 and 53/194 lost. Loss to follow-up included for health reasons and there is an imbalance between arms. Some concerns: Insufficient information to rule out deviations from intended interventions due to trial context in both groups. Unblinded participants self-assessed outcomes. The pre-analysis plan is unavailable.	x

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
Fabacher 1994[15]	mfar(w/med)	ac	Lawton IADL scale (0-8) (Lawton & Brody 1969)	-	-	x	-	-	Serious concerns: 59/254 (23.2%) participants who refused assessments, moved and died were not included in the analysis. Some concerns: Unclear randomisation and allocation concealment method. The trial personnel and participants were unblinded, and unclear of any deviations from interventions due to trial context. Unblinded participants self-assessed the outcome. The pre-specified analysis plan is unavailable.	x
Gene Huguet 2018[53]	med & ntr & exrc	ac	Lawton IADL scale (0-8) (Lawton & Brody 1969)	-	-	x	-	-	Serious concerns: 13.5% missing data, the reasons of losses to follow-up are not reported. Some concerns: Unclear about the allocation concealment method, and any deviations from the intended interventions due to trial context, and pre-specified analysis. Participants who were likely aware of the intervention assignment self-assessed the outcome.	x
Gill 2002[45]	ADL & exrc	ac	IADL (Lawton & Brody 1969) (5 items, 0-10)	-	-	-	-	-	Some concerns: Possible lack of allocation concealment, computer-generated random numbers were used but there is no reporting of allocation concealment. Insufficient information provided about any deviations from the intended interventions due to trial context. 5.3% missing data due to death, and the proportion is not imbalanced between groups. Unblinded participants self-reported the outcomes. No pre-specified analysis plan was available.	-
Gitlin 2006[46]	ADL & aids & exrc	ac	IADL (Gitlin 2006)	+	-	x	-	-	Serious concerns: 285/319 (89.3%) participants analysed, part of the missing of data was due to deaths and ill health, and imbalance of loss to FU between groups. Part of the missing of data was due to deaths and ill health, but it is unclear how these participants would score in this IADL scale. Some concerns: Insufficient information to rule out deviations from the intended interventions due to trial context within each group. Unblinded participants self-assessed the outcomes. The pre-specified plan is unavailable.	x
Henderson 2005[20]	mfar	ac	Older Americans Research and Services Center Instrument (OARS) - IADL scale	+/x	+	x	+	-	Very serious concerns: The recruitment method seemed consistent across the clusters; however, the researchers already knew the cluster allocations and informed the participants about the intervention details of the cluster they belonged to. Missingness (37) was substantial and imbalanced between arms for deaths and overall. Some concerns: No pre-specified analysis plan available.	xx
Hogg 2009[54]	mfar(w/med)	ac	Lawton IADL scale (0-8) (Lawton & Brody 1969)	-	-	-	-	x	Serious concerns: The reported results may have been chosen from multiple eligible analyses of the data. Some concerns: Although the allocation seems random and concealed, there are some imbalances in the baseline characteristics. Some contamination was reported by the authors, but it was judged unlikely to affect the outcome. Small amount of missing data, which is unlikely to have any real impact. Unblinded participants self-assessed the outcomes.	x

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
Kerse 2014[21]	rsk-mfa-	ac	Nottingham Extended Activities of Daily Living (NEADL) (0-22)	+/+	-	-	+	-	Some concerns: It is unclear whether the trial context led to changes in usual care. Informative missingness was 18% but balanced in numbers and reasons between arms. It is unclear whether the result may have been selected from multiple available.	-
Kono 2012[37]	mfar	mfar	Tokyo Metropolitan Institute of Gerontology (TMIG) Index of Competence (Koyano et al., 1991) (Score range 0-13)	-	-	x	-	-	Serious concerns: 7 from IG and 9 from CG (total 16, 5.0%) were hospitalised that would not be assessed (fig 3, Kono 2013). It is likely that there are other losses to follow up from other reasons of missing data at this timepoint which are unknown. Some concerns: Unknown allocation concealment method. Insufficient information to rule out deviations from the intended interventions due to trial context in both groups. The participants were likely aware of the intervention and self-assessed the outcome. The pre-specified analysis intention/plan is unavailable.	x
Kono 2016[23]	mfar(w/med)	mfar	Tokyo Metropolitan Institute of Gerontology (TMIG) Index of Competence (Koyano et al., 1991) (Score range 0-13)	+	-	x	-	-	Serious concerns: missing data (15.3%), the values of the participants who died, hospitalised, institutionalised would affect this outcome estimate. Authors suggested that participants had other health related reasons might not return the questionnaires. Some concerns: Insufficient information to determine material contamination of interventions due to trial context. Unblinded participants self-reported the outcome. The pre-specified analysis plan is unavailable.	x
Mann WC 1999[55]	hmcr & aids	hmcr	Older Americans Research and Services Center Instrument (OARS) - IADL scale	-	-	x	+	-	Serious concerns: 13% missing data; the outcome is likely to depend on the true value of the missing data. Some concerns: The allocation concealment method is not reported. Insufficient information provided to determine any deviations from the intended intervention due to trial context. The pre-specified analysis plan is unavailable.	x
Metzelthin 2013[7]	educ & mfar(w/med+slfm)	ac	Groningen Activity Restriction Scale (GARS) (IADL)	-/-	-	x	-	-	Serious concern: There was substantial imbalance in missingness between the arms. Some concerns: It appears the allocation was random and concealed, although it appears the authors intended to bias the allocation with a more urban intervention arm and more rural control arm but they were unsuccessful in implementing this approach. Participants were recruited after clusters were allocated and it is unclear if this was affected by knowledge of the allocation. It is unclear if there were deviations in care due to the trial context. It is unclear how participants were assigned their lost to follow-up status.	x
Monteserin Nadal 2008[25]	educ & rsk-mfa-	ac	Lawton IADL scale (0-8) (Lawton & Brody 1969)	-	-	x	-	-	Serious concerns: 91/308 and 89/312 lost to follow-up (30.6%). Reasons such as home care, residential care and mortality clearly linked to IADL. Unclear what proportions in each arm. Some concerns: Unclear of allocation concealment method. Insufficient information to rule out deviations from the intended interventions due to trial context. Unblinded participants self-assessed the outcome. The pre-specified analysis plan is unavailable.	x

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
Parsons M 2012[38]	hmcr & mfar	hmcr & mfa-	IADL Summary Scale (InterRAI, MDS-IADL scale)	+/-	-	x	-	-	Serious concern: Overall 34% of participants were lost to follow-up; there were imbalances in losses to follow-up, including due to death. Some concerns: Unclear whether and when the personnel recruiting participants would be unblinded to the assignments. Participants and personnel were not blinded to assignments, and the authors suggested that the Hawthorne effect and experimenter effects were limitations, although it was impossible to determine the extent. Unblinded participants self-assessed the outcome. Unsure whether this outcome was pre-specified.	x
Parsons M 2017[8]	hmcr & ADL & mfar(w/slfm)	hmcr & mfa-	IADL Summary Scale (InterRAI, MDS-IADL scale)	-	-	x	-	-	Very serious concerns: 86/113 (76%) participants were not followed up at 12m; there is little information about the reasons for missingness. Some concerns: Computer-mediated minimisation used; concealment not mentioned. Participants and personnel were not blinded to assignments, and the authors suggested that the Hawthorne effect and experimenter effects were limitations, although it was impossible to determine the extent. Unblinded participants self-assessed the outcome. Unsure whether this outcome was pre-specified.	xx
Rockwood 2000[29]	mfa-(w/med)	ac	Lawton IADL (8-31) (Lawton & Brody, 1969)	-	-	x	-	-	Serious concerns: 145/182 participants available at 6 months follow-up (attrition: 21% intervention, 19.5% control), partly due to mortality and no information was provided about the other reasons. Some concerns: No description of randomisation procedures. Some control participants may have sought additional care because of the trial context although this is unlikely to have been a substantial number due to the nature of the intervention. Participants were unlikely blinded and self-assessed the outcome. Pre-specified analysis plan is unavailable.	x
Rooijackers 2021[9]	hmcr & ADL & mfar(w/slfm)	hmcr	Groningen Activity Restriction Scale (GARS) (IADL)	+/-	-	x	+	x	Very serious concerns: 63/264 missing (24%) mostly due to deaths, institutional place, and ill health and these reasons are imbalanced between groups. The age, sex and educational level are used in the regression analysis but not specified in the protocol. Some concerns: Participants were identified by the nurses who seemed to be aware of the intervention assignment. Insufficient information to rule out any deviations due to the trial context though blinding was in place.	xx
Rubenstein 2007[56]	mfar(w/med)	ac	IADL Functional Scale Questionnaire (FSQ)	-	-	-	-	-	Some concerns: Insufficient about the randomisation process. Insufficient information about any deviations from the intended interventions due to trial context in both groups. 15% of missing data (44% of this due to death). Unblinded participants self-reported the outcomes. The pre-specified analysis plan is unavailable.	-

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
Szanton 2019[57]	ADL&aids&educ&exrc&mfar(w/med+slfm)	ac	Lawton IADL (8 items, range 0-16)	+	-	x	-	-	Serious concerns: 13.3% missing data, more deaths in IG than in CG and thus the outcome is likely to depend on the true value of the missingness and there are imbalances in some of the reasons. Some concerns: Insufficient information to judge whether there were any deviations from the intended intervention due to trial context. Participants were not blinded and they self-assessed the outcome. Although the author did not conduct the regression analysis as specified in the protocol for this outcome, the means and standard errors and crude effect size were reported.	x
Tomita 2007[41]	aids	ac	Older Americans Research and Services Center Instrument (OARS) - IADL scale	x	-	x	-	-	Very serious concerns: No information about method of randomisation and allocation concealment, participants differed substantially in age and education (50% intervention group university educated vs 18.2% control group), the control group were also more likely to have almost all illnesses listed. 19/53 treatment participants and 27/71 control participants unavailable. IADLs likely to be associated with missingness due to mortality, care home admission and illness. Some concerns: Insufficient to judge any deviations from the intended interventions due to trial context. Unblinded participants self-assessed. The pre-specified plan is unavailable.	xx
van Heuvelen 2005[58]	exrc & psyc	ac	Groningen Activity Restriction Scale (GARS) (IADL)	-	x	x	-	-	Very serious concerns: Only the per-protocol analysis results were reported. 32.5% participants who dropped out or did not attend more than half of the sessions were excluded from the analysis. Some concerns: The participants who were likely aware of the intervention assignment self-assessed the outcome. The pre-specified analysis plan is unavailable.	xx
Wolter 2013[33]	hmcr & mfar(w/med)	hmcr	IADL (RAI Home Care) (7 items, 0-23)	+/-	-	x	+	-	Serious concerns: Some clusters (more in CG) withdrew after knowing the assignments in the first randomisation. Clusters who withdrew were not included, (115 NH +133 deaths +89 other reasons +99 from 7 IG withdrew clusters)/920 (47.4%) missing data. Some concerns: Participants were likely recruited after randomisation. Pre-specified analysis plan is unavailable. There is a possibility of some deviations from the intended interventions but this should not have considerably affected the results.	x

Table 6. Instrumental activities of daily living: long-term timeframe

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
Bouman 2008[50]	mfar(w/med)	ac	Groningen Activity Restriction Scale (GARS) (IADL)	+	-	x	-	-	Serious concerns: more than 11.2% missing data, death and illness likely depend on its true value, there is imbalance between the groups due to self-withdrawal. Some concerns: No information about any deviations from the intended intervention due to trial context, though the authors suggested no methodological drawbacks. Unblinded participants self-assessing the outcome which involves judgement. Unblinded participants self-assessing the outcome which involves judgement. The published protocol stated that regression technique would be used, which matches the analyses description in the costs report. Linear mixed-effects regression model was used which seems appropriate, but the pre-specified regression model is not known.	x
Counsell 2007[59]	educ & mfar(w/med+slfm)	ac	AHEAD survey IADL (7 items) (0-21)	+/-	-	x	-	-	Serious concern: There was imbalance in missingness between those who were unable to be contacted and between those who dropped out. Some concerns: It is unclear if the identification and recruitment of participants was likely to be influenced by the recruiters' knowledge of allocation. There is no information regarding possible differences in practice in the control arm due to the trial context. Self-reporting participants were aware of their allocation. It is unclear if the result presented was selected from multiple analyses conducted.	x
Jitapunkul 1998[60]	rsk-mfa-	ac	Chula ADL Index (CAI)	-	-	-	-	-	Some concerns: Randomisation and allocation concealment method unknown. Potential deviations in the control group are not mentioned. 27.5% missing but numbers and reasons balanced. Outcome was self-reported by participants aware of their assignment. No pre-specified analysis plan available.	-
Kerse 2014[21]	rsk-mfa-	ac	Nottingham Extended Activities of Daily Living (NEADL) (0-22)	+/+	-	-	+	-	Some concerns: It is unclear whether the trial context led to changes in usual care. Informative missingness was 18% but balanced in numbers and reasons between arms. It is unclear whether the result may have been selected from multiple available.	-
Kono 2012[37]	mfar	mfar	Tokyo Metropolitan Institute of Gerontology (TMIG) Index of Competence (Koyano et al., 1991) (Score range 0-13)	-	-	x	-	-	Serious concerns: 64/323 (18.8%) participants were lost to follow up. Most of the missing data were due to hospitalisation, death and institutionalisation, and the proportion for these reasons are higher in the control group. Some concerns: Unknown allocation concealment method. Insufficient information to rule out deviations from the intended interventions due to trial context in both groups. The participants were likely aware of the intervention and self-assessed the outcome. The pre-specified analysis intention/plan is unavailable.	x

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
Kono 2016[23]	mfar(w/med)	mfar	Tokyo Metropolitan Institute of Gerontology (TMIG) Index of Competence (Koyano *et al.*, 1991) (Score range 0-13)	+	-	x	-	-	Serious concerns: missing data (22.2%), the values of the participants who died, hospitalised, institutionalised would affect this outcome estimate. Authors suggested that participants had other health related reasons might not return the questionnaires. Some concerns: Insufficient information to determine material contamination of interventions due to trial context. Unblinded participants self-reported the outcome. The pre-specified analysis plan is unavailable.	x
Meng 2005[61]	educ & mfar(w/med+slfm)	ac	OASIS IADL dependence (6 items)	-	-	x	-	x	Very serious concerns: Data available for 218 and 234 of 443 and 459 participants, approximately 18% of participants died in each arm which would be associated with health status, substantial imbalance in voluntary withdrawal between arms (41 in the intervention group v 18 in the control group). Some concerns: No details on method of allocation provided. Insufficient information to rule out any deviations from the intended interventions due to trail context in both groups. Unblinded participants self-assessed the outcome. An analysis adjusted for multiple factors was presented and it is unclear whether other analyses were conducted.	xx
Metzelthin 2013[7]	educ & mfar(w/med+slfm)	ac	Groningen Activity Restriction Scale (GARS) (IADL)	-/-	-	x	-	-	Serious concern: There was substantial imbalance in missingness between the arms. Some concerns: It appears the allocation was random and concealed, although it appears the authors intended to bias the allocation with a more urban intervention arm and more rural control arm but they were unsuccessful in implementing this approach. Participants were recruited after clusters were allocated and it is unclear if this was affected by knowledge of the allocation. It is unclear if there were deviations in care due to the trial context. It is unclear how participants were assigned their lost to follow-up status.	x
Parsons M 2012[38]	hmcr & mfar	hmcr & mfa-	IADL Summary Scale (InterRAI, MDS-IADL scale)	+/-	-	x	-	-	Very serious concern: Overall 71% of participants were lost to follow-up; there were imbalances in losses to follow-up, including due to death. Some concerns: Unclear whether and when the personnel recruiting participants would be unblinded to the assignments. Participants and personnel were not blinded to assignments, and the authors suggested that the Hawthorne effect and experimenter effects were limitations, although it was impossible to determine the extent. Unblinded participants self-assessed the outcome. Unsure whether this outcome was pre-specified.	xx

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
Parsons M 2017[8]	hmcr & ADL & mfar(w/slfm)	hmcr & mfa-	IADL Summary Scale (InterRAI, MDS-IADL scale)	-	-	x	-	-	Very serious concerns: 101/113 (89%) participants were not followed up at 24m; there is little information regarding missingness. Some concerns: Computer-mediated minimisation used; concealment not mentioned. Participants and personnel were not blinded to assignments, and the authors suggested that the Hawthorne effect and experimenter effects were limitations, although it was impossible to determine the extent. Unblinded participants self-assessed the outcome. Unsure whether this outcome was pre-specified.	xx
Rubenstein 2007[56]	mfar(w/med)	ac	IADL Functional Scale Questionnaire (FSQ)	-	-	-	-	-	Some concerns: Insufficient about the randomisation process. Insufficient information about any deviations from the intended interventions due to trial context in both groups. 15% of missing data (44% of this due to death). Unblinded participants self-reported the outcomes. The pre-specified analysis plan is unavailable.	-
Stuck 1995[39]	educ & mfar(w/med)	ac	Lawton IADL scale (Lawton & Brody 1982) (0 -100) (used in Rubenstein 1994)	+	-	-	-	-	Some concerns: No information indicating any deviations from the intended interventions due to trial context. 23% missing data due to deaths, "refused", and moved away. Unblinded participants self-assessed the outcome. The result may have been selected from multiple available.	-
Tomita 2007[41]	aids	ac	Older Americans Research and Services Center Instrument (OARS) - IADL scale	x	-	x	-	-	Very serious concerns: No information about method of randomisation and allocation concealment, participants differed substantially in age and education (50% intervention group university educated vs 18.2% control group), the control group were also more likely to have almost all illnesses listed. 19/53 treatment participants and 27/71 control participants unavailable. (Note this was the 24 months status but it appears only data for participants available at 24 months were reported.). IADLs likely to be associated with missingness due to mortality, care home admission and illness. Some concerns: Insufficient to judge any deviations from the intended interventions due to trial context. Unblinded participants self-assessed. The pre-specified plan is unavailable.	xx
von Bonsdorff 2008[62]	exrc	ac	IADL (8-0) (von Bonsdorff 2008)	+	-	-	-	-	Some concerns: Uncertain of any material deviations from intended interventions due to trial context. The pre-specified analysis plan is unavailable. 8.3% participants were not included in this outcome analysis. The unblinded participants self-assessed the outcomes.	-

Table 7. Personal activities of daily living: short-term timeframe

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB

Study	Comparison	Arm	Outcome	D1	D2	D3	D4	D5	Supporting statement	Overall
Auvinen 2020[43]	hmcr & med	hmcr	Katz ADL Scale (Katz *et al.*, 1963) (Reverse scoring, 6 questions)	+	-	-	-	x	Serious concerns: Multiple models were fitted with only one result reported. Some concerns: 28 or 29 of 258 lost from intervention arm. 34 of 254 lost from control arm. Most withdrawals were deaths so clearly linked to health status. It is not clear whether participants knew their group assignment, and self-reported health status requires significant judgment. Insufficient information about any deviations from the intended interventions due to trial context in either group.	x
Bleijenberg 2016[63]	rsk-mfa-	ac	Katz ADL Scale (Katz *et al.*, 1963) (Range 0-6, 6 questions)	x/+	-	x	+	-	Very serious concerns: There was substantial imbalance in cluster size between the arms (2042/11, 3451/13, 2663/11), education level and socioeconomic status (both higher in the control arm). 89/790 and 85/856 did not return questionnaires at 6 months; reasons for loss to follow-up at 6 months are unclear (and therefore whether they are balanced), reasons provided at 12 months include mortality and being too unwell to fill in the questionnaire. Some concerns: There is insufficient information to judge potential deviations due to the trial context. Multiple analyses may have been conducted.	xx
Challis 2004[1]	mfar(w/med)	mfar	Barthel index (0-100 scale) (Mahoney & Barthel, 1965)	-	-	-	-	-	Some concerns: Lack of information about the randomization and allocation. Deviations from intended interventions due to trial context are not described and it is not clear whether contacts between specialists and care managers could have changed the case managers usual practice in some way. 14.8% missing data (17/129 and 21/127 deaths). Participants self-assessed the outcome and unclear whether they were aware of the assignments. Lack of information regarding the pre-specified plan.	-
Clark 1997[44]	eng & educ	ac	Functional Status Questionnaire (ADL subscale) (0-100%)	x	-	x	-	x	Very serious concerns: Computer-generated sequence but block-size of six means allocation probably somewhat predictable. Data available for 303/361, reasons including death and becoming ill, unclear whether reasons are balance between groups. Analyses were conducted with a combined control group on the grounds that there were no significant differences between the groups. Some concerns: Insufficient information to judge any deviations from the intended interventions, that attendance at intervention sessions in the OT and social group arms was similar, but unclear whether the non-treatment group began interventions as a result of the trial context. Self-assessing participants were probably aware of their assignment.	xx
Fernandez-Barres 2017[2]	hmcr & ntr	hmcr	Barthel index (0-100 scale) (Mahoney & Barthel, 1965)	+	-	x	-	-	Serious concern: 62/173 (35.8%) participants died, institutionalised, or withdrew. There was an imbalance in the proportion and reasons of missing data: withdrawals IG 5.0% vs CG 16.7%; deaths IG 12.1% vs CG 8.3%; institutionalised IG 10.9% vs CG 8.3%. Some concerns: Insufficient information to rule out any deviations from the intended interventions due to trial context. Unblinded participants self-assessed. The analysis plan is unavailable.	x

Study	Intervention	Comparator	Outcome	D1	D2	D3	D4	D5	Supporting statement	Overall
Gill 2002[45]	ADL & exrc	ac	Summary Disability ADL score (Gill 2002)	-	-	+	-	-	Some concerns: Possible lack of allocation concealment, computer-generated random numbers were used but there is no reporting of allocation concealment. Insufficient information provided about any deviations from the intended interventions due to trial context. Unblinded participants self-reported the outcomes. No pre-specified analysis plan was available.	-
Gitlin 2006[46]	ADL & aids & exrc	ac	ADL (Gitlin 2006)	+	-	x	-	-	Serious concerns: Imbalance of loss to FU between groups - loss to follow up of 6/160 in the intervention arm, and 13/159 in the controls (6% in total, 3.8% for intervention arm, 8.2% for controls). Some concerns: Insufficient information to rule out deviations from the intended interventions due to trial context within each group. Unblinded participants self-assessed the outcomes. The pre-specified plan is unavailable.	x
King 2012[4]	hmcr & ADL & mfar(w/slfm)	hmcr	Barthel Index (0-20 scale)	+/+	-	-	-	-	Some concerns: It is unclear whether there were any changes in usual care due to the trial context. There was informative missingness but reasonably balanced. Participants self-reported their independence. The result may have been selected from multiple available.	-
Liddle 1996[6]	aids & mfar	ac	Health Assessment Questionnaire Disability Index (HAQ-DI)	-	x	x	-	-	Very serious concerns: The authors describe significant contamination in both groups, whereby the interventions were sought and implemented to levels in excess of that provided in trial to the intervention group. 1/52 in IG and 3/53 in CG lost to follow-up, and 3/51 in IG and 6/50 in CG were missing for this specific measure at 6 months, lack of information regarding the reasons behind some of the missing data. Some concerns: Lack of information regarding the procedures to conceal the allocation sequence. Unblinded participants self-assessed the outcome. Lack of information about the pre-specified analysis plan.	xx
Metzelthin 2013[7]	educ & mfar(w/med+slfm)	ac	Groningen Activity Restriction Scale (GARS) (ADL)	-/-	-	x	-	-	Serious concern: There was substantial imbalance in missingness between the arms. Some concerns: It appears the allocation was random and concealed, although it appears the authors intended to bias the allocation with a more urban intervention arm and more rural control arm but they were unsuccessful in implementing this approach. Participants were recruited after clusters were allocated and it is unclear if this was affected by knowledge of the allocation. It is unclear if there were deviations in care due to the trial context. It is unclear how participants were assigned their lost to follow-up status.	x
Parsons M 2012[38]	hmcr & mfar	hmcr & mfa-	ADL Long Form Scale (The InterRAI MDS, Morris et al., 1999)	+/-	-	-	-	-	Some concerns: Unclear whether and when the personnel recruiting participants would be unblinded to the assignments. Participants and personnel were not blinded to assignments, and the authors suggested that the Hawthorne effect and experimenter effects were limitations, although it was impossible to determine the extent. Overall, 17% of participants were lost to follow-up; more than 5% of participants died. There were small imbalances in losses to follow-up, which could be due to chance. Unblinded participants self-assessed the outcome. Unsure whether this outcome was pre-specified.	-

Parsons M 2012[38]	hmcr & mfar	hmcr & mfa-	ADL Self-Performance Hierarchy Scale (The InterRAI MDS, Morris *et al.*, 1999)	+/-	-	-	-	-	Some concerns: Unclear whether and when the personnel recruiting participants would be unblinded to the assignments. Participants and personnel were not blinded to assignments, and the authors suggested that the Hawthorne effect and experimenter effects were limitations, although it was impossible to determine the extent. Overall, 17% of participants were lost to follow-up; more than 5% of participants died. There were small imbalances in losses to follow-up, which could be due to chance. Unblinded participants self-assessed the outcome. Unsure whether this outcome was pre-specified.	-
Parsons M 2012[38]	hmcr & mfar	hmcr & mfa-	MDS: Late loss ADL (Transfer, toilet use, bed mobility and eating; Morris *et al.*, 1999)	+/-	-	-	-	-	Some concerns: Unclear whether and when the personnel recruiting participants would be unblinded to the assignments. Participants and personnel were not blinded to assignments, and the authors suggested that the Hawthorne effect and experimenter effects were limitations, although it was impossible to determine the extent. Overall, 17% of participants were lost to follow-up; more than 5% of participants died. There were small imbalances in losses to follow-up, which could be due to chance. Unblinded participants self-assessed the outcome. Unsure whether this outcome was pre-specified.	-
Parsons M 2017[8]	hmcr & ADL & mfar(w/slfm)	hmcr & mfa-	ADL Long Form Scale (The InterRAI MDS, Morris *et al.*, 1999)	-	-	x	-	-	Serious concerns: 56/113 (50%) participants were not followed up at 6m; there is some imbalance in missingness due to deaths and little further information. Some concerns: Computer-mediated minimisation used; concealment not mentioned. Participants and personnel were not blinded to assignments, and the authors suggested that the Hawthorne effect and experimenter effects were limitations, although it was impossible to determine the extent. Unblinded participants self-assessed the outcome. Unsure whether this outcome was pre-specified.	x
Parsons M 2017[8]	hmcr & ADL & mfar(w/slfm)	hmcr & mfa-	ADL Self-Performance Hierarchy Scale (The InterRAI MDS, Morris *et al.*, 1999)	-	-	x	-	-	Serious concerns: 56/113 (50%) participants were not followed up at 6m; there is some imbalance in missingness due to deaths and little further information. Some concerns: Computer-mediated minimisation used; concealment not mentioned. Participants and personnel were not blinded to assignments, and the authors suggested that the Hawthorne effect and experimenter effects were limitations, although it was impossible to determine the extent. Unblinded participants self-assessed the outcome. Unsure whether this outcome was pre-specified.	x
Parsons M 2017[8]	hmcr & ADL & mfar(w/slfm)	hmcr & mfa-	MDS: Late loss ADL (Transfer, toilet use, bed mobility and eating; Morris *et al.*, 1999)	-	-	x	-	-	Serious concerns: 56/113 (50%) participants were not followed up at 6m; there is some imbalance in missingness due to deaths and little further information. Some concerns: Computer-mediated minimisation used; concealment not mentioned. Participants and personnel were not blinded to assignments, and the authors suggested that the Hawthorne effect and experimenter effects were limitations, although it was impossible to determine the extent. Unblinded participants self-assessed the outcome. Unsure whether this outcome was pre-specified.	x

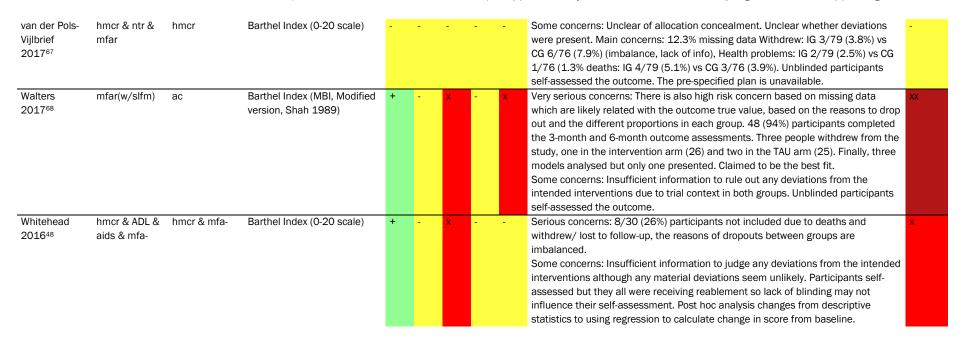| Study			Outcome						Supporting statements	Overall
Rockwood 2000[29]	mfa-(w/med)	ac	Barthel Index (Modified version. Grangers *et al.*, 1979)	-	-	x	-	-	Serious concerns: 148/182 participants available at 6 months follow-up (attrition: 18% intervention, 19.5% control), partly due to mortality and no information was provided about the other reasons. Some concerns: No description of randomisation procedures. Some control participants may have sought additional care because of the trial context although this is unlikely to have been a substantial number due to the nature of the intervention. Participants were unlikely blinded and self-assessed the outcome. Pre-specified analysis plan is unavailable.	x
Rockwood 2000[29]	mfa-(w/med)	ac	Physical Self-Maintenance Scale (6-30) (Lawton & Brody 1969)	-	-	x	-	-	Serious concerns: 148/182 participants available at 6 months follow-up (attrition: 18% intervention, 19.5% control), partly due to mortality and no information was provided about the other reasons. Some concerns: No description of randomisation procedures. Some control participants may have sought additional care because of the trial context although this is unlikely to have been a substantial number due to the nature of the intervention. Participants were unlikely blinded and self-assessed the outcome. Pre-specified analysis plan is unavailable.	x
Stewart 2005[64]	mfa-	mfa-	Community Dependence Index (CDI)	+	-	-	-	-	Some concerns: No evidence of contamination, and both active interventions and able to cross-refer so deviations unlikely, but insufficient information to rule out any deviation in both groups. 27/30 lost from 160/161, most losses to follow-up due to death or hospitalisation. Unblinded participants self-assessed the outcome. Unadjusted and adjusted results presented but unclear what other analyses may have been produced.	-
Szanton 2011[11]	ADL&aids&educ&exrc&mfar(w/med+slfm)	ac	Katz ADL Scale (Katz *et al.*, 1963) (Range 0-5, 5 questions)	-	-	x	-	-	Serious concerns: 12.5% missing data; the reasons of not completing the follow-up are linked to health status, and the reasons and proportions are imbalanced between groups. Some concerns: The methods of randomisation and allocation concealment are unclear. Insufficient information provided to judge any deviations from the intended interventions due to trial context. Participants were not blinded and they self-assessed the outcome. The pre-specified analysis plan is unavailable.	x
Takahashi 2012[65]	mntr-mfa-	ac	Barthel index (0-100 scale) (Mahoney & Barthel, 1965)	-	-	x	-	-	Serious concerns: Serious concerns: 39/205 (19.0%) participants not included, partly due to deaths which were imbalanced between groups. Some concerns: The method of allocation concealment is unclear. Unclear whether any deviations from the intended interventions happened due to trial context. Participants were aware of the intervention assignments and self-reported the outcome. The pre-specified analysis plan is unavailable.	x
Teut 2013[66]	hmcr & hmnt & exrc	hmcr	Barthel index (0-100 scale) (Mahoney & Barthel, 1965)	+/+	-	x	-	-	Serious concerns: Unclear of any and the amount of missing data at this timepoint. Some concerns: unclear of any deviations from the intended interventions due to trial context. Unblinded nurses assessed the participants. Unclear of the analysis plan and method.	x

Study	Intervention 1	Intervention 2	Outcome measure	D1	D2	D3	D4	D5	Overall notes of risks of bias	Overall ROB
van der Pols-Vijlbrief 2017[67]	hmcr & ntr & mfar	hmcr	Barthel Index (0-20 scale)	-	-	-	-	-	Some concerns: Unclear of allocation concealment. Unclear whether deviations were present. Main concerns: 12.3% missing data Withdrew: IG 3/79 (3.8%) vs CG 6/76 (7.9%) (imbalance, lack of info), Health problems: IG 2/79 (2.5%) vs CG 1/76 (1.3% deaths: IG 4/79 (5.1%) vs CG 3/76 (3.9%). Unblinded participants self-assessed the outcome. The pre-specified plan is unavailable.	-
Walters 2017[68]	mfar(w/slfm)	ac	Barthel Index (MBI, Modified version, Shah 1989)	+	-	x	-	x	Very serious concerns: There is also high risk concern based on missing data which are likely related with the outcome true value, based on the reasons to drop out and the different proportions in each group. 48 (94%) participants completed the 3-month and 6-month outcome assessments. Three people withdrew from the study, one in the intervention arm (26) and two in the TAU arm (25). Finally, three models analysed but only one presented. Claimed to be the best fit. Some concerns: Insufficient information to rule out any deviations from the intended interventions due to trial context in both groups. Unblinded participants self-assessed the outcome.	xx
Whitehead 2016[48]	hmcr & ADL & aids & mfa-	hmcr & mfa-	Barthel Index (0-20 scale)	+	-	x	-	-	Serious concerns: 8/30 (26%) participants not included due to deaths and withdrew/ lost to follow-up, the reasons of dropouts between groups are imbalanced. Some concerns: Insufficient information to judge any deviations from the intended interventions although any material deviations seem unlikely. Participants self-assessed but they all were receiving reablement so lack of blinding may not influence their self-assessment. Post hoc analysis changes from descriptive statistics to using regression to calculate change in score from baseline.	x

Table 8. Personal activities of daily living: medium-term timeframe

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
Bernabei 1998[49]	hmcr & mfar(w/med)	hmcr	ADLs (0-6), British Columbia LTC programme application and assessment, modified validated version (Abate 1992)	-	-	x	-	-	Serious concerns: 25 deaths and no other loss to follow up is discussed, any missing data is likely missing secondary to the true value of this outcome. Some concerns: No indication of the concealment method of the allocation sequence. Potential for contamination of the control arm given the same group of GPs were caring for these individuals too but unclear whether there are material deviations from the intended interventions due to trial context. Unblinded participants self-assessed the outcome. Lack of information regarding the pre-specified plan.	x

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
Bleijenberg 2016[63]	rsk-mfa-	ac	Katz ADL Scale (Katz et al., 1963) (Range 0-6, 6 questions)	x/+	-	x	+	-	Very serious concerns: There was substantial imbalance in cluster size between the arms (2042/11, 3451/13, 2663/11), education level and socioeconomic status (both higher in the control arm). 162/790 and 142/856 did not return questionnaires at 12 months; reasons include mortality and being too unwell to fill in the questionnaire. Most reasons are unknown (and therefore whether they are balanced): 119 and 222. Some concerns: There is insufficient information to judge potential deviations due to the trial context. Multiple analyses may have been conducted.	xx
Blom 2016[13]	mfa-(w/med+slfm)	ac	Groningen Activity Restriction Scale (GARS) (ADL)	x/+	-	x	-	-	Very serious concerns: Unsure of the randomisation and allocation of clusters, and there is a large imbalance of cluster size. 38.9% missing data; mortality, care-home placement, too ill are linked with health status; reasons for much of the missing data not provided; the proportions of other and unknown dropout reasons are imbalanced between groups. Some concerns: Insufficient information to rule out any deviations due to trial context. Unblinded participants self-assessed the outcomes. Unclear of the analysis used.	xx
Borrows 2013[69]	aids	mfa-	Community Dependence Index (CDI)	+	-	-	-	-	Some concerns: Insufficient information about any deviations from the intended intervention due to trial context. The outcome assessors (participants) were aware of the interventions. The missing data could be related to true value. The pre-specified analysis plan is unavailable.	-
Bouman 2008[50]	mfar(w/med)	ac	Groningen Activity Restriction Scale (GARS) (ADL)	+	-	x	-	-	Serious concerns: more than 11.2% missing data, death and illness likely depend on its true value, there is imbalance between the groups due to self-withdrawal. Some concerns: No information about any deviations from the intended intervention due to trial context, though the authors suggested no methodological drawbacks. Unblinded participants self-assessing the outcome which involves judgement. Unblinded participants self-assessing the outcome which involves judgement. The published protocol stated that regression technique would be used, which matches the analyses description in the costs report. Linear mixed-effects regression model was used which seems appropriate, but the pre-specified regression model is not known.	x
Brettschneider 2015[51]	mfar(w/med)	ac	Barthel index (0-100 scale) (Mahoney & Barthel, 1965)	-	-	x	-	+	Serious concerns: Among those completed baseline, 262/305 (85.9%) participants were included. Unclear who were not included in the assessment and analysis, because it seems some CG people who died were also included. It is likely that those died and admitted to nursing home were excluded but the true value depended on their values. Some concerns: Uncertainty about allocation concealment (particularly those recruited vis registration office). Participants and intervention deliverers were aware of the allocated interventions. Unclear of any deviations from the intended interventions due to trial context. Unblinded participants self-assessed the outcome.	x

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
Cameron 2013[70]	exrc & mfar(w/med+slfm)	ac	Barthel index (0-100 scale) (Mahoney & Barthel, 1965)	+	-	-	-	+	Some concerns: Insufficient information about any deviations from the intended interventions due to trial context. 11.2% missing data mainly due to death. Unblinded participants self-assessed the outcome.	-
Clark 1997[44]	eng & educ	ac	Functional Status Questionnaire (ADL subscale) (0-100%)	x	-	x	-	x	303/361, reasons including death and becoming ill, unclear whether reasons are balance between groups. Analyses were conducted with a combined control group on the grounds that there were no significant differences between the groups. Some concerns: Insufficient information to judge any deviations from the intended interventions, that attendance at intervention sessions in the OT and social group arms was similar, but unclear whether the non-treatment group began interventions as a result of the trial context. Self-assessing participants were probably aware of their assignment.	xx
Dorresteijn 2016[52]	ADL	ac	Groningen Activity Restriction Scale (GARS) (ADL)	+	-	x	-	-	Serious concerns: 24/195 and 53/194 lost. Loss to follow-up included for health reasons and there is an imbalance between arms. Some concerns: Insufficient information to rule out deviations from intended interventions due to trial context in both groups. Unblinded participants self-assessed outcomes. The pre-analysis plan is unavailable.	x
Fabacher 1994[15]	mfar(w/med)	ac	Katz ADL Scale (Katz et al., 1963) (Range 0-6, 6 questions)	-	-	x	-	-	Serious concerns: 59/254 (23.2%) participants who refused assessments, moved and died were not included in the analysis. Some concerns: Unclear randomisation and allocation concealment method. The trial personnel and participants were unblinded, and unclear of any deviations from interventions due to trial context. Unblinded participants self-assessed the outcome. The pre-specified analysis plan is unavailable.	x
Fernandez-Barres 2017[2]	hmcr & ntr	hmcr	Barthel index (0-100 scale) (Mahoney & Barthel, 1965)	+	-	x	-	-	Serious concern: 62/173 (35.8%) participants died, institutionalised, or withdrew. There was an imbalance in the proportion and reasons of missing data: withdrawals IG 5.0% vs CG 16.7%; deaths IG 12.1% vs CG 8.3%; institutionalised IG 10.9% vs CG 8.3%. Some concerns: Insufficient information to rule out any deviations from the intended interventions due to trial context. Unblinded participants self-assessed. The analysis plan is unavailable.	x
Gene Huguet 2018[53]	med & ntr & exrc	ac	Barthel index (0-100 scale) (Mahoney & Barthel, 1965)	-	-	x	-	-	Serious concerns: 13.5% missing data, the reasons of losses to follow-up are not reported. Some concerns: Unclear about the allocation concealment method, and any deviations from the intended interventions due to trial context, and pre-specified analysis. Participants who were likely aware of the intervention assignment self-assessed the outcome.	x

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
Gill 2002[45]	ADL & exrc	ac	Summary Disability ADL score (Gill 2002)	-	-	-	-	-	Some concerns: Possible lack of allocation concealment, computer-generated random numbers were used but there is no reporting of allocation concealment. Insufficient information provided about any deviations from the intended interventions due to trial context. 5.3% missing data due to death, and the proportion is not imbalanced between groups. Unblinded participants self-reported the outcomes. No pre-specified analysis plan was available.	-
Gitlin 2006[46]	ADL & aids & exrc	ac	ADL (Gitlin 2006)	+	-	x	-	-	Serious concerns: 285/319 (89.3%) participants analysed, part of the missing of data was due to deaths and ill health, and imbalance of loss to FU between groups. Part of the missing of data was due to deaths and ill health, but it is unclear how these participants would score in this IADL scale. Some concerns: Insufficient information to rule out deviations from the intended interventions due to trial context within each group. Unblinded participants self-assessed the outcomes. The pre-specified plan is unavailable.	x
Henderson 2005[20]	mfar	ac	Comprehensive Assessment Tool - Activities of Daily Living Scale (CAT ADL)	+/x	+	x	+	-	Very serious concerns: The recruitment method seemed consistent across the clusters; however, the researchers already knew the cluster allocations and informed the participants about the intervention details of the cluster they belonged to. Missingness (37) was substantial and imbalanced between arms for deaths and overall. Some concerns: No pre-specified analysis plan available.	xx
Kono 2012[37]	mfar	mfar	Barthel index (0-100 scale) (Mahoney & Barthel, 1965)	-	-	x	-	-	Serious concerns: 7 from IG and 9 from CG (total 16, 5.0%) were hospitalised that would not be assessed (fig 3, Kono 2013). It is likely that there are other losses to follow up from other reasons of missing data at this timepoint which are unknown. Some concerns: Unknown allocation concealment method. Insufficient information to rule out deviations from the intended interventions due to trial context in both groups. The participants were likely aware of the intervention and self-assessed the outcome. The pre-specified analysis intention/plan is unavailable.	x
Kono 2016[23]	mfar(w/med)	mfar	Barthel index (0-100 scale) (Mahoney & Barthel, 1965)	+	-	x	-	-	Serious concerns: missing data (15.3%), the values of the participants who died, hospitalised, institutionalised would affect this outcome estimate. Authors suggested that participants had other health related reasons might not return the questionnaires. Some concerns: Insufficient information to determine material contamination of interventions due to trial context. Unblinded participants self-reported the outcome. The pre-specified analysis plan is unavailable.	x

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
Leveille 1998[71]	educ & exrc & mfar(w/med+slfm)	ac	Health Assessment Questionnaire Disability Index (HAQ-DI)	+	-	-	-	-	Some concerns: The trial team expected some of the usual care participants to access some of the facilities and measured this as an outcome against facility use in the intervention arm with their added intervention. Insufficient information to judge any deviations from the intended interventions due to trial context. Loss to follow: IG n=6/101 and CG n=7/100, proportions and reasons of missing data are balanced between groups. Unblinded participants self-assessing the outcome. Pre-specified analysis plan or protocol are unavailable.	-
Metzelthin 2013[7]	educ & mfar(w/med+slfm)	ac	Groningen Activity Restriction Scale (GARS) (ADL)	-/-	-	x	-	-	Serious concern: There was substantial imbalance in missingness between the arms. Some concerns: It appears the allocation was random and concealed, although it appears the authors intended to bias the allocation with a more urban intervention arm and more rural control arm but they were unsuccessful in implementing this approach. Participants were recruited after clusters were allocated and it is unclear if this was affected by knowledge of the allocation. It is unclear if there were deviations in care due to the trial context. It is unclear how participants were assigned their lost to follow-up status.	x
Monteserin Nadal 2008[25]	educ & rsk-mfa-	ac	Barthel index (0-100 scale) (Mahoney & Barthel, 1965)	-	-	x	x	-	Very serious concerns: 91/308 and 89/312 lost to follow-up (30.6%); reasons such as home care, residential care and mortality clearly linked to ADL. Unclear what proportions in each arm. Barthel Index appeared to have been at ceiling for a substantial proportion of participants (mean > 96, scale 0-100). Some concerns: Unclear of allocation concealment method. Insufficient information to rule out deviations from the intended interventions due to trial context. The pre-specified analysis plan is unavailable.	xx
Newbury 2001[26]	mfa-(w/med)	ac	Barthel index (0-100 scale) (Mahoney & Barthel, 1965)	-	-	x	-	-	Serious concerns: 11/100 (11%) not included, the dropout reasons are not balanced between the groups. Some concerns: Unclear whether allocation was adequate. Unclear of any deviations from the intended interventions due to trial context. Unclear whether the participants were aware of the differences in assignments when self-assessing. The pre-specified plan is not available.	x
Parsons M 2012[38]	hmcr & mfar	hmcr & mfa-	ADL Long Form Scale (The InterRAI MDS, Morris et al., 1999)	+/-	-	x	-	-	Serious concern: Overall 34% of participants were lost to follow-up; there were imbalances in losses to follow-up, including due to death. Some concerns: Unclear whether and when the personnel recruiting participants would be unblinded to the assignments. Participants and personnel were not blinded to assignments, and the authors suggested that the Hawthorne effect and experimenter effects were limitations, although it was impossible to determine the extent. Unblinded participants self-assessed the outcome. Unsure whether this outcome was pre-specified.	x

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
Parsons M 2012[38]	hmcr & mfar	hmcr & mfa-	ADL Self-Performance Hierarchy Scale (The InterRAI MDS, Morris et al., 1999)	+/-	-	x	-	-	Serious concern: Overall 34% of participants were lost to follow-up; there were imbalances in losses to follow-up, including due to death. Some concerns: Unclear whether and when the personnel recruiting participants would be unblinded to the assignments. Participants and personnel were not blinded to assignments, and the authors suggested that the Hawthorne effect and experimenter effects were limitations, although it was impossible to determine the extent. Unblinded participants self-assessed the outcome. Unsure whether this outcome was pre-specified.	x
Parsons M 2012[38]	hmcr & mfar	hmcr & mfa-	MDS: Late loss ADL (Transfer, toilet use, bed mobility and eating; Morris et al., 1999)	+/-	-	x	-	-	Serious concern: Overall 34% of participants were lost to follow-up; there were imbalances in losses to follow-up, including due to death. Some concerns: Unclear whether and when the personnel recruiting participants would be unblinded to the assignments. Participants and personnel were not blinded to assignments, and the authors suggested that the Hawthorne effect and experimenter effects were limitations, although it was impossible to determine the extent. Unblinded participants self-assessed the outcome. Unsure whether this outcome was pre-specified.	x
Parsons M 2017[8]	hmcr & ADL & mfar(w/slfm)	hmcr & mfa-	ADL Long Form Scale (The InterRAI MDS, Morris et al., 1999)	-	-	x	-	-	Very serious concerns: 86/113 (76%) participants were not followed up at 12m; there is little information about the reasons for missingness. Some concerns: Computer-mediated minimisation used; concealment not mentioned. Participants and personnel were not blinded to assignments, and the authors suggested that the Hawthorne effect and experimenter effects were limitations, although it was impossible to determine the extent. Unblinded participants self-assessed the outcome. Unsure whether this outcome was pre-specified.	xx
Parsons M 2017[8]	hmcr & ADL & mfar(w/slfm)	hmcr & mfa-	ADL Self-Performance Hierarchy Scale (The InterRAI MDS, Morris et al., 1999)	-	-	x	-	-	Very serious concerns: 86/113 (76%) participants were not followed up at 12m; there is little information about the reasons for missingness. Some concerns: Computer-mediated minimisation used; concealment not mentioned. Participants and personnel were not blinded to assignments, and the authors suggested that the Hawthorne effect and experimenter effects were limitations, although it was impossible to determine the extent. Unblinded participants self-assessed the outcome. Unsure whether this outcome was pre-specified.	xx
Parsons M 2017[8]	hmcr & ADL & mfar(w/slfm)	hmcr & mfa-	MDS: Late loss ADL (Transfer, toilet use, bed mobility and eating; Morris et al., 1999)	-	-	x	-	-	Very serious concerns: 86/113 (76%) participants were not followed up at 12m; there is little information about the reasons for missingness. Some concerns: Computer-mediated minimisation used; concealment not mentioned. Participants and personnel were not blinded to assignments, and the authors suggested that the Hawthorne effect and experimenter effects were limitations, although it was impossible to determine the extent. Unblinded participants self-assessed the outcome. Unsure whether this outcome was pre-specified.	xx

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
Rockwood 2000[29]	mfa-(w/med)	ac	Barthel Index (Modified version. Grangers *et al.*, 1979)	-	-	x	-	-	Serious concerns: 145/182 participants available at 6 months follow-up (attrition: 21% intervention, 19.5% control), partly due to mortality and no information was provided about the other reasons. Some concerns: No description of randomisation procedures. Some control participants may have sought additional care because of the trial context although this is unlikely to have been a substantial number due to the nature of the intervention. Participants were unlikely blinded and self-assessed the outcome. Pre-specified analysis plan is unavailable.	x
Rockwood 2000[29]	mfa-(w/med)	ac	Physical Self-Maintenance Scale (6-30) (Lawton & Brody 1969)	-	-	x	-	-	Serious concerns: 145/182 participants available at 6 months follow-up (attrition: 21% intervention, 19.5% control), partly due to mortality and no information was provided about the other reasons. Some concerns: No description of randomisation procedures. Some control participants may have sought additional care because of the trial context although this is unlikely to have been a substantial number due to the nature of the intervention. Participants were unlikely blinded and self-assessed the outcome. Pre-specified analysis plan is unavailable.	x
Rooijackers 2021[9]	hmcr & ADL & mfar(w/slfm)	hmcr	Groningen Activity Restriction Scale (GARS) (ADL)	+/-	-	x	+	x	Very serious concerns: 63/264 missing (24%) mostly due to deaths, institutional place, and ill health and these reasons are imbalanced between groups. The age, sex and educational level are used in the regression analysis but not specified in the protocol. Some concerns: Participants were identified by the nurses who seemed to be aware of the intervention assignment. Insufficient information to rule out any deviations due to the trial context though blinding was in place.	xx
Rubenstein 2007[56]	mfar(w/med)	ac	ADL Functional Scale Questionnaire (FSQ)	-	-	-	-	-	Some concerns: Insufficient about the randomisation process. Insufficient information about any deviations from the intended interventions due to trial context in both groups. 15% of missing data (44% of this due to death). Unblinded participants self-assessed the outcome. The pre-specified analysis plan is unavailable.	-
Serra-Prat 2017[72]	ntr & exrc	ac	Barthel index (0-100 scale) (Mahoney & Barthel, 1965)	-	-	x	-	-	Serious concerns: 133/172 (77.3%) participants are included in this results analysis, and lack of information about why the participants dropped out. Some concerns: Unclear randomisation and allocation method. Insufficient information about any deviations from intended interventions due to trial context. The outcome measures involve judgement from assessors who were not blinded. Unclear analysis method used for the adjusted intervention effect.	x

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
Szanton 2019[57]	ADL&aids&educ&exrc&mfar(w/med+slfm)	ac	Katz ADL Scale (8 items, range 0-16) (Modified by Branch et al.,1984)	+	-	x	-	-	Serious concerns: 13.3% missing data, more deaths in IG than in CG and thus the outcome is likely to depend on the true value of those died. Some concerns: Insufficient information to judge whether there were any deviations from the intended intervention due to trial context. Participants were not blinded and they self-assessed the outcome. Although the author did not conduct the regression analysis as specified in the protocol for this outcome, the means and standard errors and crude effect size were reported.	x
Takahashi 2012[65]	mntr-mfa-	ac	Barthel index (0-100 scale) (Mahoney & Barthel, 1965)	-	-	x	-	-	Serious concerns: 39/205 (19.0%) participants not included, partly due to deaths which were imbalanced between groups. Some concerns: The method of allocation concealment is unclear. Unclear whether any deviations from the intended interventions happened due to trial context. Participants were aware of the intervention assignments and self-reported the outcome. The pre-specified analysis plan is unavailable.	x
Teut 2013[66]	hmcr & hmnt & exrc	hmcr	Barthel index (0-100 scale) (Mahoney & Barthel, 1965)	+/+	-	x	-	-	Serious concerns: 13/58 (22.4%) participants were lost to follow-up, that is their data would be missing upon dropped out. The proportions and reasons of missing data are imbalanced. Some concerns: unclear of any deviations from the intended interventions due to trial context. Unblinded nurses assessed the participants. Unclear of the analysis plan and method.	x
van Heuvelen 2005[58]	exrc & psyc	ac	Groningen Activity Restriction Scale (GARS) (ADL)	-	x	x	-	-	Very serious concerns: Only the per-protocol analysis results were reported. 32.5% participants who dropped out or did not attend more than half of the sessions were excluded from the analysis. Some concerns: The participants who were likely aware of the intervention assignment self-assessed the outcome. The pre-specified analysis plan is unavailable.	xx
Wolter 2013[33]	hmcr & mfar(w/med)	hmcr	ADL (RAI Home care) (10 items, 0-66)	+/-	-	x	+	-	Serious concerns: Some clusters (more in CG) withdrew after knowing the assignments in the first randomisation. Clusters who withdrew were not included. Some concerns: Participants were likely recruited after randomisation. Pre-specified analysis plan is unavailable. There is a possibility of some deviations from the intended interventions but this should not have considerably affected the results.	x

Table 9. Personal activities of daily living: long-term timeframe

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
Balaban 1988[73]	mfa-(w/med)	ac	Barthel index (0-100 scale) (Mahoney & Barthel, 1965)	x	x	x	-	-	Very serious concerns: Subversion of allocation, deviations from the intended interventions in both groups in different parts of the intended interventions; the analysis only included people interviewed face-to-face. 57% missing data. Some concerns: Participants who were likely aware of the assignment self-assessed the outcome. The pre-specified analysis plan is unavailable.	xx
Bouman 2008[50]	mfar(w/med)	ac	Groningen Activity Restriction Scale (GARS) (ADL)	+	-	x	-	-	Serious concerns: more than 11.2% missing data, death and illness likely depend on its true value, there is imbalance between the groups due to self-withdrawal. Some concerns: No information about any deviations from the intended intervention due to trial context, though the authors suggested no methodological drawbacks. Unblinded participants self-assessing the outcome which involves judgement. Unblinded participants self-assessing the outcome which involves judgement. The published protocol stated that regression technique would be used, which matches the analyses description in the costs report. Linear mixed-effects regression model was used which seems appropriate, but the pre-specified regression model is not known.	x
Counsell 2007[59]	educ & mfar(w/med+s lfm)	ac	AHEAD survey ADL (6 items) (0-18)	+/-	-	x	-	-	Serious concern: There was imbalance in missingness between those who were unable to be contacted and between those who dropped out. Some concerns: It is unclear if the identification and recruitment of participants was likely to be influenced by the recruiters' knowledge of allocation. There is no information regarding possible differences in practice in the control arm due to the trial context. Self-reporting participants were aware of their allocation. It is unclear if the result presented was selected from multiple analyses conducted.	x
Jitapunkul 1998[60]	rsk-mfa-	ac	Barthel Index (0-20 scale)	-	-	-	-	-	Some concerns: Randomisation and allocation concealment method unknown. Potential deviations in the control group are not mentioned. 27.5% missing but numbers and reasons balanced. Outcome was self-reported by participants aware of their assignment. No pre-specified analysis plan available.	-
Kono 2012[37]	mfar	mfar	Barthel index (0-100 scale) (Mahoney & Barthel, 1965)	-	-	x	-	-	Serious concerns: 64/323 (18.8%) participants were lost to follow up. Most of the missing data were due to hospitalisation, death and institutionalisation, and the proportion for these reasons are higher in the control group. Some concerns: Unknown allocation concealment method. Insufficient information to rule out deviations from the intended interventions due to trial context in both groups. The participants were likely aware of the intervention and self-assessed the outcome. The pre-specified analysis intention/plan is unavailable.	x

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
Kono 2016[23]	mfar(w/med)	mfar	Barthel index (0-100 scale) (Mahoney & Barthel, 1965)	+	-	x	-	-	Serious concerns: missing data (22.2%), the values of the participants who died, hospitalised, institutionalised would affect this outcome estimate. Authors suggested that participants had other health related reasons might not return the questionnaires. Some concerns: Insufficient information to determine material contamination of interventions due to trial context. Unblinded participants self-reported the outcome. The pre-specified analysis plan is unavailable.	x
Meng 2005[61]	educ & mfar(w/med+slfm)	ac	OASIS ADL dependence (6 items)	-	-	x	-	x	Very serious concerns: Data available for 218 and 234 of 443 and 459 participants, approximately 18% of participants died in each arm which would be associated with health status, substantial imbalance in voluntary withdrawal between arms (41 in the intervention group v 18 in the control group). Some concerns: No details on method of allocation provided. Insufficient information to rule out any deviations from the intended interventions due to trail context in both groups. Unblinded participants self-assessed the outcome. An analysis adjusted for multiple factors was presented and it is unclear whether other analyses were conducted.	xx
Metzelthin 2013[7]	educ & mfar(w/med+slfm)	ac	Groningen Activity Restriction Scale (GARS) (ADL)	-/-	-	x	-	-	Serious concern: There was substantial imbalance in missingness between the arms. Some concerns: It appears the allocation was random and concealed, although it appears the authors intended to bias the allocation with a more urban intervention arm and more rural control arm but they were unsuccessful in implementing this approach. Participants were recruited after clusters were allocated and it is unclear if this was affected by knowledge of the allocation. It is unclear if there were deviations in care due to the trial context. It is unclear how participants were assigned their lost to follow-up status.	x
Parsons M 2012[38]	hmcr & mfar	hmcr & mfa-	ADL Long Form Scale (The InterRAI MDS, Morris et al., 1999)	+/-	-	x	-	-	Very serious concern: Overall 71% of participants were lost to follow-up; there were imbalances in losses to follow-up, including due to death. Some concerns: Unclear whether and when the personnel recruiting participants would be unblinded to the assignments. Participants and personnel were not blinded to assignments, and the authors suggested that the Hawthorne effect and experimenter effects were limitations, although it was impossible to determine the extent. Unblinded participants self-assessed the outcome. Unsure whether this outcome was pre-specified.	xx

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
Parsons M 2012[38]	hmcr & mfar	hmcr & mfa-	ADL Self-Performance Hierarchy Scale (The InterRAI MDS, Morris *et al.*, 1999)	+/-	-	x	-	-	Very serious concern: Overall 71% of participants were lost to follow-up; there were imbalances in losses to follow-up, including due to death. Some concerns: Unclear whether and when the personnel recruiting participants would be unblinded to the assignments. Participants and personnel were not blinded to assignments, and the authors suggested that the Hawthorne effect and experimenter effects were limitations, although it was impossible to determine the extent. Unblinded participants self-assessed the outcome. Unsure whether this outcome was pre-specified.	xx
Parsons M 2012[38]	hmcr & mfar	hmcr & mfa-	MDS: Late loss ADL (Transfer, toilet use, bed mobility and eating; Morris *et al.*, 1999)	+/-	-	x	-	-	Very serious concern: Overall 71% of participants were lost to follow-up; there were imbalances in losses to follow-up, including due to death. Some concerns: Unclear whether and when the personnel recruiting participants would be unblinded to the assignments. Participants and personnel were not blinded to assignments, and the authors suggested that the Hawthorne effect and experimenter effects were limitations, although it was impossible to determine the extent. Unblinded participants self-assessed the outcome. Unsure whether this outcome was pre-specified.	xx
Parsons M 2017[8]	hmcr & ADL & mfar(w/slfm)	hmcr & mfa-	ADL Long Form Scale (The InterRAI MDS, Morris *et al.*, 1999)	-	-	x	-	-	Very serious concerns: 101/113 (89%) participants were not followed up at 24m; there is little information regarding missingness. Some concerns: Computer-mediated minimisation used; concealment not mentioned. Participants and personnel were not blinded to assignments, and the authors suggested that the Hawthorne effect and experimenter effects were limitations, although it was impossible to determine the extent. Unblinded participants self-assessed the outcome. Unsure whether this outcome was pre-specified.	xx
Parsons M 2017[8]	hmcr & ADL & mfar(w/slfm)	hmcr & mfa-	ADL Self-Performance Hierarchy Scale (The InterRAI MDS, Morris *et al.*, 1999)	-	-	x	-	-	Very serious concerns: 101/113 (89%) participants were not followed up at 24m; there is little information regarding missingness. Some concerns: Computer-mediated minimisation used; concealment not mentioned. Participants and personnel were not blinded to assignments, and the authors suggested that the Hawthorne effect and experimenter effects were limitations, although it was impossible to determine the extent. Unblinded participants self-assessed the outcome. Unsure whether this outcome was pre-specified.	xx
Parsons M 2017[8]	hmcr & ADL & mfar(w/slfm)	hmcr & mfa-	MDS: Late loss ADL (Transfer, toilet use, bed mobility and eating; Morris *et al.*, 1999)	-	-	x	-	-	Very serious concerns: 101/113 (89%) participants were not followed up at 24m; there is little information regarding missingness. Some concerns: Computer-mediated minimisation used; concealment not mentioned. Participants and personnel were not blinded to assignments, and the authors suggested that the Hawthorne effect and experimenter effects were limitations, although it was impossible to determine the extent. Unblinded participants self-assessed the outcome. Unsure whether this outcome was pre-specified.	xx

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
Rubenstein 2007[56]	mfar(w/med)	ac	ADL Functional Scale Questionnaire (FSQ)	-	-	-	-	-	Some concerns: Insufficient about the randomisation process. Insufficient information about any deviations from the intended interventions due to trial context in both groups. 25% of missing data, fairly balanced between groups. Unblinded participants self-assessed the outcome. The pre-specified analysis plan is unavailable.	-
Stuck 1995[39]	educ & mfar(w/med)	ac	Physical Self-Maintenance Scale (0 -100) (Lawton & Brody; used in Rubenstein 1994)	+	-	-	-	-	Some concerns: No information indicating any deviations from the intended interventions due to trial context. 23% missing data due to deaths, "refused", and moved away. Unblinded participants self-assessed the outcome. It is unclear that the protocol provides information about analysis intentions before the data was unblinded, so the pre-specified analysis plan is unclear.	-

Table 10. Personal and instrumental activities of daily living: short-term timeframe

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
Alegria 2019[74]	exrc & psyc	ac	LLFDI: Function component overall score (Jette *et al.*, 2002; Sayers *et al.*, 2004) (Raw score - range 32-160)	x	x	x	-	-	Very serious concerns: Two-person block randomisation meant assignment was probably predictable by recruiters. 35 participants were excluded from analysis because of inability to participate in the intervention. Exclusions included due to lack of medical clearance and medical condition (14/120 participants). Loss to follow-up appeared balanced between arms but reasons were not given. Some concerns: The participants self-assessed and some were aware of the assignments. The description of analysis plan relating to exclusion of intervention participants implies data were unblinded.	xx
Bleijenberg 2016[63]	rsk-mfa-	ac	Katz-15 (0-15)	x/+	-	x	+	-	Very serious concerns: There was substantial imbalance in cluster size between the arms (2042/11, 3451/13, 2663/11), education level and socioeconomic status (both higher in the control arm). 89/790 and 85/856 did not return questionnaires at 6 months; reasons for loss to follow-up at 6 months are unclear (and therefore whether they are balanced), reasons provided at 12 months include mortality and being too unwell to fill in the questionnaire. Some concerns: There is insufficient information to judge potential deviations due to the trial context. Multiple analyses may have been conducted.	xx
Cutchin 2009[75]	mfar	ac	LLFDI: Function component overall score (Haley *et al.*, 2002; Jette *et al.*, 2002; Sayers *et al.*, 2004) (re-calculated score - range 0-100)	-	-	x	-	-	Serious concerns: Unclear of the reasons of missing data though proportions are balanced between groups. Some concerns: The method of allocation concealment is unclear. Insufficient information about any deviations from intended interventions due to trial context. The participants self-reported the outcomes. The pre-specified plan is unavailable.	x

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
de Craen 2006[76]	mfa-	ac	Groningen Activity Restriction Scale (GARS) (overall)	+	-	x	-	-	Main concerns: 12.7% missing data due to death, missed assessment and other reasons; so unsure whether the outcome depends on the true value of the missingness. Some concerns: Insufficient information provided about any deviation from the interventions due to trial context. Participants self-assessed the outcome. The intervention group were not blinded. Unsure whether there was any change in the analysis methods or the reasons of any changes.	x
Dupuy 2017[77]	hmcr & aids & comm	hmcr	Inventaire des Habiletés for pour la Vie en Appartement (IHVA Scale, Corbeil *et al.*, 2009) - proxy (completed by caregivers)	-	-	+	-	-	Some concerns: Unclear about the methods of randomisation and allocation concealment, any deviations from the intended interventions due to trial context, and the pre-specified analysis plan. The carers assessing the outcomes were likely aware of the assignments.	-
Gustafson 2021[78]	aids & educ & comm	ac	6-item independence in ADLs scale (Gustafson 2021)	+	-	x	-	-	Serious concerns: 10% participants did not complete the 6 months survey, the overall proportion of participants not completing the follow-up was not imbalanced between groups, the reasons included death, health reasons, entered assisted living/nursing home, did not like randomisation, unknow, and did not reconsent, but the proportion of these reasons in each group is not reported. Some concerns: Insufficient information to judge any deviations from the intended interventions due to trial context. Participants were unblinded and self-assessed the outcome. Possibly no substantial difference between the published protocol and result report, any amendment before publishing the protocol cannot be certain.	x
Jing 2018[79]	exrc & psyc	psyc	ADL scale (Jing 2018)	-	-	+	-	-	Some concerns: Lack of information about randomisation process. Uncertainty about any deviation from intended interventions due to trial context. The participants self-assessed on a bespoke outcome measure. The pre-specified analysis plan is unavailable.	-
Melis 2008[80]	mfar(w/med)	ac	Groningen Activity Restriction Scale (GARS-3) (overall) (18 items, score range 18-54)	+	-	x	-	-	Serious concerns: 20% missing data, the proportion of all losses to FU and the number of consent withdrawals are imbalanced between groups. Some concerns: Insufficient information about any deviations from the intended interventions due to trial context. Self-assessed by participants, and they were likely unblinded. The pre-specified analysis plan is unavailable, so unclear whether there are multiple eligible analyses of the data.	x

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
Metzelthin 2013[7]	educ & mfar(w/med+slfm)	ac	Groningen Activity Restriction Scale (GARS) (overall)	-/-	-	x	-	-	Serious concern: There was substantial imbalance in missingness between the arms. Some concerns: It appears the allocation was random and concealed, although it appears the authors intended to bias the allocation with a more urban intervention arm and more rural control arm but they were unsuccessful in implementing this approach. Participants were recruited after clusters were allocated and it is unclear if this was affected by knowledge of the allocation. It is unclear if there were deviations in care due to the trial context. It is unclear how participants were assigned their lost to follow-up status.	x
Morey 2009[81]	exrc	ac	LLFDI: Function component overall score (Haley *et al.*, 2002; Jette *et al.*, 2002; Sayers *et al.*, 2004) (re-calculated score - range 0-100)	-	-	-	-	-	Some concerns: Unclear whether allocation was securely concealed. Insufficient information to judge any deviations from the intended interventions due to trial context in both groups. 18/199 results were missing in both arms of the trial at this time point, likely these results were missing due to their true value, i.e., poorer function. Unblinded participants self-assessed the outcome. The pre-specified analysis plan is unavailable.	-
Suijker 2016[10]	mfar(w/med)	ac	Katz-15 (0-15)	+/-	-	x	+	+	Serious concern: Substantial missing data for unknown reasons. Some concerns: Unclear when GP practices were randomised and whether participants were identified and recruited prior to randomisation or whether those identifying participants were aware of the assignment. It is unclear whether there were deviations from the intended interventions due to trial context.	x

Table 11. Personal and instrumental activities of daily living- 12 months

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
Alegria 2019[74]	exrc & psyc	ac	LLFDI: Function component overall score (Jette *et al.*, 2002; Sayers *et al.*, 2004) (Raw score - range 32-160)	x	x	x	-	-	Very serious concerns: Two-person block randomisation meant assignment was probably predictable by recruiters. 35 participants were excluded from analysis because of inability to participate in the intervention. Exclusions included due to lack of medical clearance and medical condition (14/120 participants). Loss to follow-up appeared balanced between arms but reasons were not given. Some concerns: The participants self-assessed and some were aware of the assignments. The description of analysis plan relating to exclusion of intervention participants implies data were unblinded.	xx

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
Bleijenberg 2016[63]	rsk-mfa-	ac	Katz-15 (0-15)	x/+	-	x	+	-	Very serious concerns: There was substantial imbalance in cluster size between the arms (2042/11, 3451/13, 2663/11), education level and socioeconomic status (both higher in the control arm). 162/790 and 142/856 did not return questionnaires at 12 months; reasons include mortality and being too unwell to fill in the questionnaire. Most reasons are unknown (and therefore whether they are balanced): 119 and 89. Some concerns: There is insufficient information to judge potential deviations due to the trial context. Multiple analyses may have been conducted.	xx
Blom 2016[13]	mfa-(w/med+slfm)	ac	Groningen Activity Restriction Scale (GARS) (overall)	x/+	-	x	-	-	Very serious concerns: Unsure of the randomisation and allocation of clusters, and there is a large imbalance of cluster size. 38.9% missing data; mortality, care-home placement, too ill are linked with health status; reasons for much of the missing data not provided; the proportions of other and unknown dropout reasons are imbalanced between groups. Some concerns: Insufficient information to rule out any deviations due to trial context. Unblinded participants self-assessed the outcomes. Unclear of the analysis used.	xx
Cutchin 2009[75]	mfar	ac	LLFDI: Function component overall score (Haley *et al.*, 2002; Jette *et al.*, 2002; Sayers *et al.*, 2004) (re-calculated score - range 0-100)	-	-	x	-	-	Serious concern: unclear of the reasons of missing data though proportions are imbalanced between groups, 14.3% (n=48/56) in IG vs 7.4% (n=4/54) in CG are not included, though the adjusted treatment effect is not statistically significant. Some concerns: The method of allocation concealment is unclear. Insufficient information about any deviations from intended interventions due to trial context. The participants self-reported the outcomes. The pre-specified plan is unavailable.	x
Dorresteijn 2016[52]	ADL	ac	Groningen Activity Restriction Scale (GARS) (overall)	+	-	x	-	-	Serious concerns: 24/195 and 53/194 lost. Loss to follow-up included for health reasons and there is an imbalance between arms. Some concerns: Insufficient information to rule out deviations from intended interventions due to trial context in both groups. Unblinded participants self-assessed outcomes. The pre-analysis plan is unavailable.	x
Gustafson 2021[78]	aids & educ & comm	ac	6-item independence in ADLs scale (Gustafson 2021)	+	-	x	-	-	Serious concerns: 20.5% participants did not complete the 12 months survey, the overall proportion of participants not completing the follow-up was not imbalanced between groups, the reasons included death, health reasons, entered assisted living/nursing home, did not like randomisation, unknow, and did not reconsent, but the proportion of these reasons in each group is not reported. Some concerns: Insufficient information to judge any deviations from the intended interventions due to trial context. Participants were unblinded and self-assessed the outcome. Possibly no substantial difference between the published protocol and result report, any amendment before publishing the protocol cannot be certain.	x

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
Hay 1998[18]	mfa-	ac	Older Americans Research and Services Center Instrument (OARS) - ADL domain	-	x	x	-	-	Very serious concerns: 59.5% missing data. Unclear of all the missing data because the number is bigger than the losses to follow-up reported in the flowchart. Only those classified as complied with the intervention in Group 3 were analysed; and unclear about the selection of participants from Group 2 for this analysis. Some concerns: Insufficient information provided about the methods used to generate the sequence and allocation concealment. Insufficient information provided for judging any deviations from the intended interventions due to trial context. Participants self-assessed the outcome, and they were likely unblinded. Participants self-assessed the outcome, and they were likely unblinded. The pre-specified analysis plan is unavailable.	xx
Hebert 2001[19]	mfar(w/med)	ac	Functional Autonomy Measurement System (SMAF) (Hebert 2001, 1984)	-	-	-	+	-	Some concerns: No information provided about the allocation method. Insufficient information about any other potential deviations, e.g., within the IG intervention delivery. 7.8% missing data, reasons were dropouts and deaths which were not imbalanced between groups. The pre-specified analysis plan is unavailable.	-
Kerse 2014[21]	rsk-mfa-	ac	Activity Measure for Post-Acute Care (AM-PAC) daily activity scale (self-care and IADL)	+/+	-	x	+	-	Serious concern: Almost half of participants missing from the analysis. Some concerns: It is unclear whether the trial context led to changes in usual care. It is unclear whether the result may have been selected from multiple available.	x
Metzelthin 2013[7]	educ & mfar(w/med+slfm)	ac	Groningen Activity Restriction Scale (GARS) (overall)	-/-	-	x	-	-	Serious concern: There was substantial imbalance in missingness between the arms. Some concerns: It appears the allocation was random and concealed, although it appears the authors intended to bias the allocation with a more urban intervention arm and more rural control arm but they were unsuccessful in implementing this approach. Participants were recruited after clusters were allocated and it is unclear if this was affected by knowledge of the allocation. It is unclear if there were deviations in care due to the trial context. It is unclear how participants were assigned their lost to follow-up status.	x
Morey 2009[81]	exrc	ac	LLFDI: Function component overall score (Haley et al., 2002; Jette et al., 2002; Sayers et al., 2004) (re-calculated score - range 0-100)	-	-	-	-	-	Some concerns: Unclear whether allocation was securely concealed. Insufficient information to judge any deviations from the intended interventions due to trial context in both groups. 18/199 results were missing in both arms of the trial at this time point, likely these results were missing due to their true value, i.e., poorer function. Unblinded participants self-assessed the outcome. The pre-specified analysis plan is unavailable.	-

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
Rooijackers 2021[9]	hmcr & ADL & mfar(w/slfm)	hmcr	Groningen Activity Restriction Scale (GARS) (overall)	+/-	-	x	+	x	Very serious concerns: 63/264 missing (24%) mostly due to deaths, institutional place, and ill health and these reasons are imbalanced between groups. The age, sex and educational level are used in the regression analysis but not specified in the protocol. Some concerns: Participants were identified by the nurses who seemed to be aware of the intervention assignment. Insufficient information to rule out any deviations due to the trial context though blinding was in place.	xx
Siemonsma 2018[82]	ADL	mfa-	Groningen Activity Restriction Scale (GARS) (overall)	-	-	x	-	-	Serious concerns: Based on an imbalance in one of the reasons to drop out (research reasons) it seems possible that there are missing values dependent on its true value (related with ADLs). Some concerns: Unknown allocation concealment method. Insufficient information to judge any deviation from the intended interventions due to trial context. The participants self-assessed the outcome. The analysis plan is unavailable.	x
Siemonsma 2018[82]	ADL	mfa-	Katz-15 (0-15)	-	-	x	-	-	Serious concerns: Based on an imbalance in one of the reasons to drop out (research reasons) it seems possible that there are missing values dependent on its true value (related with ADLs). Some concerns: Unknown allocation concealment method. Insufficient information to judge any deviation from the intended interventions due to trial context. The participants self-assessed the outcome. The analysis plan is unavailable.	x
Suijker 2016[10]	mfar(w/med)	ac	Katz-15 (0-15)	+/-	-	x	+	+	Serious concern: Substantial missing data for unknown reasons. Some concerns: Unclear when GP practices were randomised and whether participants were identified and recruited prior to randomisation or whether those identifying participants were aware of the assignment. It is unclear whether there were deviations from the intended interventions due to trial context.	x
van Hout 2010[32]	mfar(w/med)	ac	Groningen Activity Restriction Scale (GARS) (overall)	+	-	x	-	-	Serious concerns: 227/651 missing data (34.9%), the missingness includes death, institutionalisation, medical reasons that the true value in this outcome is likely depending on them, and there are imbalances in some of the missing data reasons. Some concerns: Insufficient information provided about any deviations from the interventions due to trial context. Participants self-assessed the outcome. The pre-specified analysis plan is unavailable.	x
Williams 1992[83]	mfar	mfa-	Townsend Disability Scale (9 items, 0-18)	-	-	-	-	-	Some concerns: Unclear of the sources of random number and allocation conceal method. Insufficient information about any deviations from the intended intervention due to trial context, especially about the controls. 22.6% missing data, but the proportions and reasons are not imbalanced between groups. Unclear whether participants were aware of the trial assignments, and it seemed to be self-assessed the participants. Pre-specified analysis plan is unavailable.	-

Table 12. Personal and instrumental activities of daily living- 24 months

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
de Craen 2006[76]	mfa-	ac	Groningen Activity Restriction Scale (GARS) (overall)	+	-	x	-	-	Main concerns: 26.1% missing data due to death and other reasons; and half of the missingness was not explained, so unsure whether the outcome depends on the true value of the missingness. Some concerns: Insufficient information provided about any deviation from the interventions due to trial context. Participants self assessed the outcome. The intervention group were not blinded. Unsure whether there was any change in the analysis methods or the reasons of any changes.	x
Hay 1998[18]	mfa-	ac	Older Americans Research and Services Center Instrument (OARS) - ADL domain	-	x	x	-	-	Very serious concerns: 59.7% missing data. Unclear of all the missing data because the number is bigger than the losses to follow-up reported in the flowchart. Large amount of missingness because the outcome is only reported for those in the IG who were compliant. Some concerns: Insufficient information provided about the methods used to generate the sequence and allocation concealment. Insufficient information provided for judging any deviations from the intended interventions due to trial context. Participants self-assessed the outcome, and they were likely unblinded. Participants self-assessed the outcome, and they were likely unblinded. The pre-specified analysis plan is unavailable.	xx
Kerse 2014[21]	rsk-mfa-	ac	Activity Measure for Post-Acute Care (AM-PAC) daily activity scale (self-care and IADL)	+/+	-	x	+	-	Serious concern: Almost half of participants missing from the analysis. Some concerns: It is unclear whether the trial context led to changes in usual care. It is unclear whether the result may have been selected from multiple available.	x
Metzelthin 2013[7]	educ & mfar(w/med+slfm)	ac	Groningen Activity Restriction Scale (GARS) (overall)	-/-	-	x	-	-	Serious concern: There was substantial imbalance in missingness between the arms. Some concerns: It appears the allocation was random and concealed, although it appears the authors intended to bias the allocation with a more urban intervention arm and more rural control arm but they were unsuccessful in implementing this approach. Participants were recruited after clusters were allocated and it is unclear if this was affected by knowledge of the allocation. It is unclear if there were deviations in care due to the trial context. It is unclear how participants were assigned their lost to follow-up status.	x
Moll van Charante 2016[84]	educ & mfar(w/slfm)	ac	Academic Medical Center Linear Disability Score (ALDS) (1-100)	+/+	-	x	-	-	Serious concern: approximately 20% of participants not included in analysis, most due to withdrawal, but reasons for withdrawal not specified. Some concerns: It is unclear whether there were deviations from the intended intervention because of the trial context. Self-reporting participants may have been influenced by knowledge of the intervention received but this is unlikely. The analysis method for this outcome was not specified in the published protocol.	x

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
Stuck 1995[39]	educ & mfar(w/med)	ac	Physical Self Maintenance and IADL scale (0-100) (Lawton and Brody; Kempen)	+	-	-	-	-	Some concerns: No information indicating any deviations from the intended interventions due to trial context. 23% missing data due to deaths, "refused", and moved away. Unblinded participants self-assessed the outcome. It is unclear that the protocol provides information about analysis intentions before the data was unblinded, so the pre-specified analysis plan is unclear.	-
Suijker 2016[10]	mfar(w/med)	ac	Katz-15 (0-15)	+/-	-	x	+	+	Serious concern: Substantial missing data for unknown reasons. Some concerns: Unclear when GP practices were randomised and whether participants were identified and recruited prior to randomisation or whether those identifying participants were aware of the assignment. It is unclear whether there were deviations from the intended interventions due to trial context.	x

Table 13. Hospitalisation: short-term timeframe

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
Auvinen 2020[43]	hmcr & med	hmcr	Hospitalisation (admissions/ last 6 mth)	+	-	-	+	-	Some concerns: there was only data on 300 of the 512 randomized. Insufficient information about any deviations from the intended interventions due to trial context in either group. Data collected from routine data but unclear of the planned analysis.	-
Challis 2004[1]	mfar(w/med)	mfar	Hospitalisation (pts hospitalised once or more)	-	-	x	+	-	Serious concerns: 38 deaths (missing data), and mortality is closely related to hospitalisation. Some concerns: Lack of information about the randomization and allocation. Deviations from intended interventions due to trial context are not described and it is not clear whether contacts between specialists and care managers could have changed the case managers usual practice in some way. The pre-specified analysis plan for the collected hospitalisation data is unavailable.	X
Counsell 2007[59]	educ & mfar(w/med+slfm)	ac	Hospitalisation (admissions / per 1000 persons/ last 12 mth)	+/-	-	-	+	-	Some concerns: It is unclear if the identification and recruitment of participants was likely to be influenced by the recruiters' knowledge of allocation. There is no information regarding possible differences in practice in the control arm due to the trial context. There was a significant proportion of informatively missing data. It is unclear if the result presented was selected from multiple analyses conducted.	-
Hattori 2019[85]	educ & mfar(w/slfm)	mfar	Hospitalisation (pts hospitalised once or more)	+	-	+	+	-	Some concerns: Unclear of any deviations from the intended interventions due to trial context. Assuming the data were collected records, but unclear of the planned analysis.	-

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
Hendriksen 1984[86]	mfar	ac	Hospitalisation (pts hospitalised once or more/ last 6 mth)	-	-	-	+	-	Some concerns: The details of the randomisation and allocation concealment methods were not provided. There was unlikely any deviations from the intended intervention in the control group, however insufficient information is provided about any deviation from the experimental intervention due to trial context. It appears that all participants' living and survival status were traced during the trial period; however, some participants may become censored upon their deaths. The pre-specified analysis plan is unavailable.	-
Imhof 2012[3]	mfar	ac	Hospitalisation (pts hospitalised once or more/ last 3 mth)	-	-	-	+	-	Some concerns: The method of allocation concealment is unclear. Insufficient information provided about any deviations from the intended interventions due to trial context. There were substantial losses to follow-up but these were balanced between arms. The analysis plan and approach to choosing a time-period for hospitalisation are unknown.	-
King 2012[4]	hmcr & ADL & mfar(w/slfm)	hmcr	Hospitalisation (pts hospitalised once or more/ last 3 mth)	+/+	-	-	+	+	Some concerns: It is unclear whether there were any changes in usual care due to the trial context. There was informative missingness but reasonably balanced.	-
Leung 2004[87]	mfar(w/med)	ac	Hospitalisation (days or nights/ last 6 mth)	-	-	-	+	-	Some concerns: The method for randomisation and allocation concealment, any deviations from the intended interventions due to trial context, and pre-specified analysis plan and method are not reported. The number of participants included in the data analysis is unknow, but possibly there are missing data at this timepoint due to deaths and care-home placement.	-
Mann J 2021[88]	mfa-(w/med)	ac	Hospitalisation (admissions /per 1000 person days)	-/+	+	-	+	-	Some concerns: Computer-generated allocation sequence which may not have been concealed (or may have been recomputed). Unclear of any deviations from the intended interventions due to trial context, especially in the control period. 20/92 participants missing by final follow-up, reasons lost include death, illness and admission to care which seem reasonably balanced in numbers and reason between arms. The pre-specified plan is unavailable.	-
Melis 2008[80]	mfar(w/med)	ac	Hospitalisation (days or nights per person)	+	-	x	+	-	Serious concerns: If data is only for those who completed follow up, the proportion of all losses to FU and the number of consent withdrawals are imbalanced between groups. Some concerns: Insufficient information about any deviations from the intended interventions due to trial context. Unclear what types of hospital admission were analysed.	x
Morgan 2019[47]	exrc	ac	Hospitalisation (admissions / per person-year)	+	-	x	+	-	Serious concerns: Data at follow-up for 39 of 51 participants. Data collected electronically so may have been unrelated but unclear whether data were collected from those who withdrew. Hospitalisation likely to be related with dropout. 2 withdrew from intervention arm but none from control arm. Overall, 10 without data in intervention arm, 2 without data in control. Some concerns: Insufficient information to judge any deviations from the intended interventions due to trial context. The pre-specified analysis plan is unclear.	x

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
Ng 2015[89]	cgn & ntr & exrc	ac	Hospitalisation (pts hospitalised once or more)	+	-	x	+	-	Serious concerns: 5 persons not included vs 6 persons were hospitalised. Some concerns: Unclear of any deviations from the intended intervention due to trial context. The pre-specified analysis plan for the collected data is not provided.	x
Suijker 2016[10]	mfar(w/med)	ac	Hospitalisation (admissions/ last 6 mth)	+/-	-	x	+	-	Serious concern: Substantial missing data for unknown reasons. Some concerns: Unclear when GP practices were randomised and whether participants were identified and recruited prior to randomisation or whether those identifying participants were aware of the assignment. It is unclear whether there were deviations from the intended interventions due to trial context. The reported result may have been selected from multiple available.	x
van Dongen 2020[90]	ntr & exrc	ac	Hospitalisation (pts hospitalised once or more)	-	+	x	+	-	Serious concerns: 16/168 (9.5%) participants withdrew (missing data), 13 of them due to medical reason, physical complaints, mental complaints, and there is imbalance between groups. Some concerns: Unclear randomisation and allocation method. The trial was registered prospectively in 2016 shortly after the trial commencement; it seems likely hospitalisation was not subject to multiple possible definitions but it is unclear.	x
Whitehead 2016[48]	hmcr & ADL & aids & mfa-	hmcr & mfa-	Hospitalisation (pts hospitalised once or more/ last 3 mth)	+	-	x	+	+	Serious concerns: The missingness is imbalanced between the 2 groups: 5 deaths in IG vs 1 in CG and 2 other dropouts in CG, and people who died were likely admitted to hospital but seems not counted in this result. Some concerns: Insufficient information to judge any deviations from the intended interventions although any material deviations seem unlikely.	x
Wong 2019[12]	mfar(w/slfm)	ac	Hospitalisation (admissions)	x	-	-	-	+	Serious concern: Allocation was likely predictable. Some concerns: Unsure of any intervention deviation from the intended interventions due to trial context. 459/540 (85.0%) participants included; the proportions are not imbalanced. Unclear about who and how the data were reported or confirmed.	x
Wong 2019[12]	mfar(w/slfm)	ac	Hospitalisation (days or nights)	x	-	-	-	+	Serious concern: Allocation was likely predictable. Some concerns: Unsure of any intervention deviation from the intended interventions due to trial context. 459/540 (85.0%) participants included; the proportions are not imbalanced. Unclear about who and how the data were reported or confirmed.	x

Table 14. Hospitalisation: medium-term timeframe

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
Auvinen 2020[43]	hmcr & med	hmcr	Hospitalisation (admissions/ last 6 mth)	+	-	-	+	-	Some concerns: At 12 months, there was data on 300 - 37 of the 512 randomized. Most withdrawals were deaths so clearly linked to hospitalisation. Insufficient information about any deviations from the intended interventions due to trial context in either group. Data collected from routine data but unclear of the planned analysis.	-
Bernabei 1998[49]	hmcr & mfar(w/med)	hmcr	Hospitalisation (days or nights/ last 12 mth)	-	-	x	-	-	Serious concerns: The amount of missing data is unclear. Some concerns: No indication of the concealment method of the allocation sequence. Potential for contamination of the control arm given the same group of GPs were caring for these individuals too but unclear whether there are material deviations from the intended interventions due to trial context. Unclear about who collected the data and the sources, but unlikely influenced by knowledge of assignments.	x
Bernabei 1998[49]	hmcr & mfar(w/med)	hmcr	Hospitalisation (pts hospitalised once or more)	-	-	x	-	-	Serious concerns: The amount of missing data is unclear. Some concerns: No indication of the concealment method of the allocation sequence. Potential for contamination of the control arm given the same group of GPs were caring for these individuals too but unclear whether there are material deviations from the intended interventions due to trial context. Unclear about who collected the data and the sources, but unlikely influenced by knowledge of assignments. Unclear of the plan for classification and analysing the admissions.	x
Bleijenberg 2016[63]	rsk-mfa-	ac	Hospitalisation (admissions/ last 12 mth)	x/+	-	x	+	-	Very serious concerns: There was substantial imbalance in cluster size between the arms (2042/11, 3451/13, 2663/11), education level and socioeconomic status (both higher in the control arm). 162/790 and 142/856 did not return questionnaires at 12 months; reasons include mortality and being too unwell to fill in the questionnaire. Most reasons are unknown (and therefore whether they are balanced): 119 and 89. Some concerns: There is insufficient information to judge potential deviations due to the trial context. The analysis of hospitalisation data was reportedly post-hoc; unclear if multiple analyses were conducted.	xx
Blom 2016[13]	mfa-(w/med+slfm)	ac	Hospitalisation (days or nights)	x/+	-	x	+	-	Very serious concerns: Unsure of the randomisation and allocation of clusters, and there is a large imbalance of cluster size. 38.8% missing data; Mortality, care-home placements, too ill - linked with hospitalisation - among the substantial reasons for missingness. Reasons for much of the missing data not provided; the proportions of other and unknown dropout reasons are imbalanced between groups. Some concerns: Insufficient information to rule out any deviations due to trial context. Insufficient information regarding the planned analysis.	xx

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
Bouman 2008[50]	mfar(w/med)	ac	Hospitalisation (pts hospitalised once or more)	+	-	+	+	-	Some concerns: No information about any deviations from the intended intervention due to trial context, though the authors suggested no methodological drawbacks. Unblinded participants self-assessing the outcome which involves judgement. The published protocol stated that regression technique would be used, which matches the analyses description in the costs report. GLL model (negative binominal distribution) was used which seems appropriate, but the pre-specified regression model is not known.	-
Cameron 2013[70]	exrc & mfar(w/med+slfm)	ac	Hospitalisation (admissions/ last 12 mth)	+	-	+	+	+	Some concerns: Insufficient information about any deviations from the intended interventions due to trial context.	-
Cameron 2013[70]	exrc & mfar(w/med+slfm)	ac	Hospitalisation (days or nights/ last 12 mth)	+	-	+	+	+	Some concerns: Insufficient information about any deviations from the intended interventions due to trial context.	-
Cameron 2013[70]	exrc & mfar(w/med+slfm)	ac	Hospitalisation (pts hospitalised once or more/ last 12 mth)	+	-	+	+	+	Some concerns: Insufficient information about any deviations from the intended interventions due to trial context.	-
Counsell 2007[59]	educ & mfar(w/med+slfm)	ac	Hospitalisation (admissions / per 1000 persons/ last 12 mth)	+/-	-	-	+	-	Some concerns: It is unclear if the identification and recruitment of participants was likely to be influenced by the recruiters' knowledge of allocation. There is no information regarding possible differences in practice in the control arm due to the trial context. There was a significant proportion of informatively missing data. It is unclear if the result presented was selected from multiple analyses conducted.	-
Counsell 2007[59]	educ & mfar(w/med+slfm)	ac	Hospitalisation (days or nights / per 1000 persons / last 12 mth)	+/-	-	-	+	-	Some concerns: It is unclear if the identification and recruitment of participants was likely to be influenced by the recruiters' knowledge of allocation. There is no information regarding possible differences in practice in the control arm due to the trial context. There was a significant proportion of informatively missing data. It is unclear if the result presented was selected from multiple analyses conducted.	-
Dalby 2000[14]	mfar(w/med)	ac	Hospitalisation (admissions)	-	-	x	+	-	Serious concerns: Although hospitalisation data is presented for all but 3 participants, 10 participants died during the trial so there would be incomplete data. Some concerns: The method of allocation concealment is unclear. Insufficient information provided about any deviations from the intended intervention due to trial context. Data were obtained from routine records but unclear about what types of hospital admission were analysed.	x

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
Dalby 2000[14]	mfar(w/med)	ac	Hospitalisation (days or nights)	-	-	x	+	-	Serious concerns: Although hospitalisation data is presented for all but 3 participants, 10 participants died during the trial so there would be incomplete data. Some concerns: The method of allocation concealment is unclear. Insufficient information provided about any deviations from the intended intervention due to trial context. Data were obtained from routine records but unclear about what types of hospital admission were analysed.	x
Fabacher 1994[15]	mfar(w/med)	ac	Hospitalisation (pts hospitalised once or more)	-	-	x	+	+	Serious concerns: At least IG 27 vs CG 24 not followed up, if excluding deaths, so the number of missing data is bigger than the known number of people that had been hospitalised. Some concerns: Unclear randomisation and allocation concealment method. The trial personnel and participants were unblinded, and unclear of any deviations from interventions due to trial context.	x
Fristedt 2019[91]	hmcr & mfar(w/med)	hmcr	Hospitalisation (admissions/ last 12 mth)	x	-	-	+	-	Serious concerns: Randomisation took place before enrolling participants, and at recruitment, they were informed of the study details, which introduces recruitment bias. Some concerns: Insufficient information to determine any deviations from the intended intervention due to trial context. All participants were included while still alive, but 14/62 (22.6%) had died during the 12m and thus becoming missing data after they died. The pre-specified analysis plan is unavailable.	x
Fristedt 2019[91]	hmcr & mfar(w/med)	hmcr	Hospitalisation (days or nights/ last 12 mth)	x	-	-	+	-	Serious concerns: Randomisation took place before enrolling participants, and at recruitment, they were informed of the study details, which introduces recruitment bias. Some concerns: Insufficient information to determine any deviations from the intended intervention due to trial context. All participants were included while still alive, but 14/62 (22.6%) had died during the 12m and thus becoming missing data after they died. The pre-specified analysis plan is unavailable.	x
Harari 2008[17]	mfar(w/med)	ac	Hospitalisation (pts hospitalised once or more/ last 12 mth)	+	x	x	+	+	Very serious concerns: Possibly contamination in usual care. Hospitalisation data were self-reported by postal questionnaire at 1 year, 2006/2503 (80.1%) participants responded, the missingness of data could depend on true value (reasons of loss to follow-up unknown).	xx
Henderson 2005[20]	mfar	ac	Hospitalisation (days or nights)	+/x	+	x	+	-	Very serious concerns: The recruitment method seemed consistent across the clusters; however, the researchers already knew the cluster allocations and informed the participants about the intervention details of the cluster they belonged to. Missingness (37) was substantial and imbalanced between arms for deaths and overall. Some concerns: Different definitions of hospitalisation may have been considered but results not reported. Alternative analyses may have been conducted.	xx

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
Henderson 2005[20]	mfar	ac	Hospitalisation (pts hospitalised once or more)	+/x	+	x	+	-	Very serious concerns: The recruitment method seemed consistent across the clusters; however, the researchers already knew the cluster allocations and informed the participants about the intervention details of the cluster they belonged to. Missingness (37) was more than the number of events (34). Some concerns: Different definitions of hospitalisation may have been considered but results not reported.	xx
Hendriksen 1984[86]	mfar	ac	Hospitalisation (pts hospitalised once or more/ last 6 mth)	-	-	x	+	-	Serious concerns: The amount of missing data (45) is 70% of the number of known events (64). Some concerns: The details of the randomisation and allocation concealment methods were not provided. There was unlikely any deviations from the intended intervention in the control group, however insufficient information is provided about any deviation from the experimental intervention due to trial context. The pre-specified analysis plan is unavailable.	x
Hogg 2009[54]	mfar(w/med)	ac	Hospitalisation (admissions)	-	-	+	+	-	Some concerns: Although the allocation seems random and concealed, there are some imbalances in the baseline characteristics. Some contamination was reported by the authors, but it was judged unlikely to affect the outcome. No information of the analysis plan available.	-
Hogg 2009[54]	mfar(w/med)	ac	Hospitalisation (pts hospitalised once or more)	-	-	-	+	-	Some concerns: Although the allocation seems random and concealed, there are some imbalances in the baseline characteristics. Some contamination was reported by the authors, but it was judged unlikely to affect the outcome. There is a small amount of missing data. No information of the analysis plan available.	-
Kono 2016[23]	mfar(w/med)	mfar	Hospitalisation (pts hospitalised once or more/ last 12 mth)	+	-	x	+	-	Serious concerns: the missingness (15.3%) depends on its true value (death, institutionalised, declined postal FU completion), and the analysis plan is unknown. Some concerns: Insufficient information to determine material contamination of interventions due to trial context. The pre-specified analysis plan is unavailable.	x
Kukkonen-Harjula 2017[5]	ADL & ntr & exrc	ac	Hospitalisation (days per person-year)	+	-	-	+	-	Some concerns: It is unclear if there were any deviations due to the trial context. There was a small imbalance in missingness due to mortality. It is unclear if the result was selected from multiple available.	-
Leveille 1998[71]	educ & exrc & mfar(w/med+slfm)	ac	Hospitalisation (days or nights / only admitted pts / last 12 mth)	+	x	+	+	-	Serious concerns: The person died and thus excluded from this analysis could have had a high number of days in hospital which would impact this result. Some concerns: The trial team expected some of the usual care participants to access some of the facilities and measured this as an outcome against facility use in the intervention arm with their added intervention. Insufficient information to judge any deviations from the intended interventions due to trial context. Data collected from routine data but unclear of the planned analysis.	x

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
Leveille 1998[71]	educ & exrc & mfar(w/med+slfm)	ac	Hospitalisation (pts hospitalised once or more/ last 12 mth)	+	-	+	+	-	Some concerns: The trial team expected some of the usual care participants to access some of the facilities and measured this as an outcome against facility use in the intervention arm with their added intervention. Insufficient information to judge any deviations from the intended interventions due to trial context. Data collected from routine data but unclear of the planned analysis.	-
Lewin 2013[24]	hmcr & educ & mfar	hmcr	Hospitalisation (days or nights)	x	x	-	+	-	Very serious concerns: There are imbalances in the baseline characteristics, possibly due to the subverted randomisation and the reassignment of some intervention arm participants who did not participate in the programme. Insufficient information provided about how many intervention arm participants were reassigned to the control arm. Some concerns: Although all participants were included from the beginning, some participants may be censored, e.g., due to death. The pre-specified analysis plan is unavailable, unclear of what types of admissions were counted.	xx
Lewin 2013[24]	hmcr & educ & mfar	hmcr	Hospitalisation (pts hospitalised once or more)	x	x	-	+	-	Very serious concerns: There are imbalances in the baseline characteristics, possibly due to the subverted randomisation and the reassignment of some intervention arm participants who did not participate in the programme. Insufficient information provided about how many intervention arm participants were reassigned to the control arm. Some concerns: Although all participants were included from the beginning, some participants may be censored, e.g., due to death. The pre-specified analysis plan is unavailable, unclear of what types of admissions were counted.	xx
Mann WC 1999[55]	hmcr & aids	hmcr	Hospitalisation (days or nights)	-	-	x	+	-	Serious concerns: 4 participants in control group (3 due to ill health) withdrew and thus their data were unavailable. Moreover, upon participants' deaths, they became censored; the outcome is likely to depend on the true value of the missing data. Some concerns: The allocation concealment method is not reported. Insufficient information provided to determine any deviations from the intended intervention due to trial context. The pre-specified analysis plan is unavailable.	x
Newcomer 2004[27]	educ & mfar(w/med)	ac	Hospitalisation (pts hospitalised once or more/ last 12 mth)	-	-	-	+	-	Some concerns: Unclear about how the sequence was generated and the allocation method. Insufficient information available to judge whether there were any deviations from the intended intervention due to trial context in each arm. Unclear how many of the total attrition would have been hospitalised before being censored. Pre-specified plan is unavailable.	-
Ng 2015[89]	cgn & ntr & exrc	ac	Hospitalisation (pts hospitalised once or more)	+	-	x	+	-	Serious concerns: 7 persons not included vs 8 persons were hospitalised. Some concerns: Unclear of any deviations from the intended intervention due to trial context. The pre-specified analysis plan for the collected data is not provided.	x

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
Phelan 2007[92]	mfar(w/med+s lfm)	ac	Hospitalisation (pts hospitalised once or more/ last 12 mth)	-/x	-	x	+	-	Very serious concerns: It appears that selection and recruitment of participants was performed following randomisation by people who knew the allocation. Reasons and numbers for missingness in the direct group were not provided. Some concerns: There is no information on the allocation sequence generation process or concealment of the sequence and it is unclear whether clusters had balanced characteristics. Contamination was speculated as plausible but no evidence was presented regarding deviations due to the trial context. Participants self-assessed mood and may have been influenced by knowledge of the intervention received. It is unclear if the result presented was selected from multiple available.	xx
Ploeg 2010[28]	educ & mfar(w/med)	ac	Hospitalisation (admissions)	+	-	x	+	-	Serious concerns: 10.7% participants not included; the outcome is likely to depend on the true values of those died, other (didn't complete 12 FU then died), and proportion of dropouts is imbalanced between group. Some concerns: Insufficient information provided to make judgement about any deviations from the intended interventions due to trial context. The pre-specified analysis plan is unavailable.	x
Rubenstein 2007[56]	mfar(w/med)	ac	Hospitalisation (days or nights)	-	-	x	+	-	Main concerns: 53/217 (24.4%) of the missing data were due to death. There is a bigger proportion of death in the IG. Most other reasons are unknown (not reported). Some concerns: Insufficient about the randomisation process. Insufficient information about any deviations from the intended interventions due to trial context in both groups. The pre-specified analysis plan is unavailable.	x
Rubenstein 2007[56]	mfar(w/med)	ac	Hospitalisation (pts hospitalised once or more/ last 12 mth)	-	-	x	+	-	Main concerns: 53/217 (24.4%) of the missing data were due to death. There is a bigger proportion of death in the IG. Most other reasons are unknown (not reported). Some concerns: Insufficient about the randomisation process. Insufficient information about any deviations from the intended interventions due to trial context in both groups. The pre-specified analysis plan is unavailable.	x
Suijker 2016[10]	mfar(w/med)	ac	Hospitalisation (admissions/ last 6 mth)	+/-	-	x	+	-	Serious concern: Substantial missing data for unknown reasons. Some concerns: Unclear when GP practices were randomised and whether participants were identified and recruited prior to randomisation or whether those identifying participants were aware of the assignment. It is unclear whether there were deviations from the intended interventions due to trial context. The reported result may have been selected from multiple available.	x
Takahashi 2012[65]	mntr-mfa-	ac	Hospitalisation (admissions)	-	-	x	+	+	Serious concerns: Imbalance in proportions of missing data (9.3%) between arms. Some concerns: The method of allocation concealment is unclear. Unclear whether any deviations from the intended interventions happened due to trial context.	x

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
Takahashi 2012[65]	mntr-mfa-	ac	Hospitalisation (days or nights per person)	-	-	x	+	+	Serious concerns: Imbalance in proportions of missing data (9.3%) between arms. Some concerns: The method of allocation concealment is unclear. Unclear whether any deviations from the intended interventions happened due to trial context.	x
Takahashi 2012[65]	mntr-mfa-	ac	Hospitalisation (pts hospitalised once or more)	-	-	x	+	+	Serious concerns: Imbalance in proportions of missing data (9.3%) between arms. Some concerns: The method of allocation concealment is unclear. Unclear whether any deviations from the intended interventions happened due to trial context.	x
Teut 2013[66]	hmcr & hmnt & exrc	hmcr	Hospitalisation (admissions)	+/+	-	x	+	-	Serious concerns: 13/58 (22.4%) participants were lost to follow-up, that is their data would be missing upon dropped out. The proportions and reasons of missing data are imbalanced. Some concerns: Unclear of any deviations from the intended interventions due to trial context. The pre-specified analysis plan is not available.	x
van Hout 2010[32]	mfar(w/med)	ac	Hospitalisation (pts hospitalised once or more)	+	-	-	+	-	Some concerns: Insufficient information provided about any deviations from the interventions due to trial context. Unclear whether those died during the trial period would have counted in this outcome before their deaths, otherwise they would become censored. Unclear what types of hospital admission were included in the analysis.	-
van Lieshout 2018[93]	ADL & med & ntr & sst	ac	Hospitalisation (pts hospitalised once or more/ last 12 mth)	-	-	x	+	-	Very serious concerns: 207/710 (29.2%) participants completed the trial, imbalance between the number of losses to follow-up after baseline that more people were lost in the intervention group. Some concerns: Insufficient information about allocation method. No information about any deviations from intended interventions to trial context. Unsure if imputed data was planned.	xx
van Rossum 1993[94]	mfar	ac	Hospitalisation (admissions)	-	-	-	+	-	Some concerns: The method of allocation concealment is unclear. Insufficient information about any deviations from the intended intervention due to trial context. It appears that all participants' living and survival status were traced throughout the 3-year trial period, but upon a participant's death, the person became censored; deaths were fairly balanced between groups. The pre-specified analysis plan is unavailable.	-
van Rossum 1993[94]	mfar	ac	Hospitalisation (days or nights)	-	-	-	+	-	Some concerns: The method of allocation concealment is unclear. Insufficient information about any deviations from the intended intervention due to trial context. It appears that all participants' living and survival status were traced throughout the 3-year trial period, but upon a participant's death, the person became censored; deaths were fairly balanced between groups. The pre-specified analysis plan is unavailable.	-

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
van Rossum 1993[94]	mfar	ac	Hospitalisation (pts hospitalised once or more)	-	-	-	+	-	Some concerns: The method of allocation concealment is unclear. Insufficient information about any deviations from the intended intervention due to trial context. It appears that all participants' living and survival status were traced throughout the 3-year trial period, but upon a participant's death, the person became censored; deaths were fairly balanced between groups. The pre-specified analysis plan is unavailable.	-
Wolter 2013[33]	hmcr & mfar(w/med)	hmcr	Hospitalisation (pts hospitalised once or more)	+/-	-	x	+	-	Serious concerns: Some clusters (more in CG) withdrew after knowing the assignments in the first randomisation. Clusters who withdrew were not included, (115 NH +133 deaths +89 other reasons +99 from 7 IG withdrew clusters)/920 (47.4%) missing data. Some concerns: Participants were likely recruited after randomisation. Pre-specified analysis plan is unavailable. There is a possibility of some deviations from the intended interventions but this should not have considerably affected the results.	x

Table 15. Hospitalisation: long-term timeframe

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
Balaban 1988[73]	mfa-(w/med)	ac	Hospitalisation (admissions/ last 12 mth)	x	x	-	-	-	Very serious concerns: Subversion of allocation, deviations from the intended interventions in both groups in different parts of the intended interventions. Some concerns: 27.8% missing data and the outcome is likely depended on true value of missing data (25.7% are deaths). Participants who were aware of their allocation self-reported outcomes over a long time-period. Pre-specified analysis plan is not available.	xx
Balaban 1988[73]	mfa-(w/med)	ac	Hospitalisation (days or nights / only admitted pts / last 12 mth)	x	x	-	-	-	Very serious concerns: Subversion of allocation, deviations from the intended interventions in both groups in different parts of the intended interventions. Some concerns: 27.8% missing data and the outcome is likely depended on true value of missing data (25.7% are deaths). Participants who were aware of their allocation self-reported the result over a long time-period. Pre-specified analysis plan is not available.	xx
Balaban 1988[73]	mfa-(w/med)	ac	Hospitalisation (days or nights/ last 12 mth)	x	x	-	-	-	Very serious concerns: Subversion of allocation, deviations from the intended interventions in both groups in different parts of the intended interventions Some concerns: 27.8% missing data and the outcome is likely depended on true value of missing data (25.7% are deaths). Participants who were aware of their allocation self-reported the result over a long time-period. Pre-specified analysis plan is not available.	xx

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
Bouman 2008[50]	mfar(w/med)	ac	Hospitalisation (admissions)	+	-	+	+	-	Some concerns: No information about any deviations from the intended intervention due to trial context, though the authors suggested no methodological drawbacks. Unblinded participants self-assessing the outcome which involves judgement. The published protocol stated that regression technique would be used, which matches the analyses description in the costs report. GLL model (negative binominal distribution) was used which seems appropriate, but the pre-specified regression model is not known.	-
Bouman 2008[50]	mfar(w/med)	ac	Hospitalisation (days or nights)	+	-	+	+	-	Some concerns: No information about any deviations from the intended intervention due to trial context, though the authors suggested no methodological drawbacks. Unblinded participants self-assessing the outcome which involves judgement. The published protocol stated that regression technique would be used, which matches the analyses description in the costs report. GLL model (negative binominal distribution) was used which seems appropriate, but the pre-specified regression model is not known.	-
Bouman 2008[50]	mfar(w/med)	ac	Hospitalisation (pts hospitalised once or more)	+	-	+	+	-	Some concerns: No information about any deviations from the intended intervention due to trial context, though the authors suggested no methodological drawbacks. Unblinded participants self-assessing the outcome which involves judgement. The published protocol stated that regression technique would be used, which matches the analyses description in the costs report. GLL model (negative binominal distribution) was used which seems appropriate, but the pre-specified regression model is not known.	-
Carpenter 1990[34]	rsk-mfa-	ac	Hospitalisation (admissions)	-	-	x	+	+	Serious concerns: Unclear about the number of participants who would be censored or missing from these analyse. There are 120 deaths during the cause of the trial, thus they would become censored. Some concerns: The allocation concealment method is unclear. Insufficient information provided about any deviations from the intended interventions due to trial context.	x
Carpenter 1990[34]	rsk-mfa-	ac	Hospitalisation (days or nights)	-	-	x	+	+	Serious concerns: Unclear about the number of participants who would be censored or missing from these analyse. There are 120 deaths during the cause of the trial, thus they would become censored. Some concerns: The allocation concealment method is unclear. Insufficient information provided about any deviations from the intended interventions due to trial context.	x
Coleman 1999[95]	educ & mfar(w/med+slfm)	ac	Hospitalisation (admissions/ last 12 mth)	-/-	-	-	+	-	Some concerns: It is unclear if the allocation sequence was concealed. It is unclear whether participants were recruited prior to cluster-randomisation; if they were recruited afterwards their allocation was probably known. It is unclear if there were deviations due to the trial context. There was some missingness due to death but this was relatively balanced. There was no pre-specified analysis plan.	-

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
Coleman 1999[95]	educ & mfar(w/med+s lfm)	ac	Hospitalisation (days or nights / only admitted pts / last 12 mth)	-/-	-	-	+	-	Some concerns: It is unclear if the allocation sequence was concealed. It is unclear whether participants were recruited prior to cluster-randomisation; if they were recruited afterwards their allocation was probably known. It is unclear if there were deviations due to the trial context. There was some missingness due to death but this was relatively balanced. There was no pre-specified analysis plan.	-
Coleman 1999[95]	educ & mfar(w/med+s lfm)	ac	Hospitalisation (pts hospitalised once or more/ last 12 mth)	-/-	-	-	+	-	Some concerns: It is unclear if the allocation sequence was concealed. It is unclear whether participants were recruited prior to cluster-randomisation; if they were recruited afterwards their allocation was probably known. It is unclear if there were deviations due to the trial context. There was some missingness due to death but this was relatively balanced. There was no pre-specified analysis plan.	-
Counsell 2007[59]	educ & mfar(w/med+s lfm)	ac	Hospitalisation (admissions / per 1000 persons/ last 12 mth)	+/-	-	-	+	-	Some concerns: It is unclear if the identification and recruitment of participants was likely to be influenced by the recruiters' knowledge of allocation. There is no information regarding possible differences in practice in the control arm due to the trial context. There was a significant proportion of informatively missing data. It is unclear if the result presented was selected from multiple analyses conducted.	-
Counsell 2007[59]	educ & mfar(w/med+s lfm)	ac	Hospitalisation (days or nights / per 1000 persons / last 12 mth)	+/-	-	-	+	-	Some concerns: It is unclear if the identification and recruitment of participants was likely to be influenced by the recruiters' knowledge of allocation. There is no information regarding possible differences in practice in the control arm due to the trial context. There was a significant proportion of informatively missing data. It is unclear if the result presented was selected from multiple analyses conducted.	-
Fischer 2009[35]	eng & mfa-(w/slfm)	ac	Hospitalisation (admissions)	+	-	+	+	-	Some concerns: Insufficient information about any deviations from the intended interventions due to trial context. The classification and analysis of admissions were unclear.	-
Fischer 2009[35]	eng & mfa-(w/slfm)	ac	Hospitalisation (days or nights)	+	-	+	+	-	Some concerns: Insufficient information about any deviations from the intended interventions due to trial context. The classification and analysis of admissions were unclear.	-
Ford 1971[36]	mfar(w/med)	ac	Hospitalisation (admissions)	+	-	x	+	-	Serious concern: 29% persons died during the 24-month period, and the proportions between groups are imbalance (IG n=33/150 vs CG n=54/150). Some Concerns: Unclear of any deviations from the intended interventions due to trial context. Pre-specified analysis plan is unavailable.	x

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
Hendriksen 1984[86]	mfar	ac	Hospitalisation (admissions)	-	-	x	+	-	Serious concerns: It appears all participants were analysed; however, 131 participants (IG 56, CG 75) became censored upon their deaths, which is imbalanced between groups; the outcome is likely to depend on the true values of the missingness. Some concerns: The details of the randomisation and allocation concealment methods were not provided. There was unlikely any deviations from the intended intervention in the control group, however insufficient information is provided about any deviation from the experimental intervention due to trial context. The pre-specified analysis plan is unavailable.	x
Hendriksen 1984[86]	mfar	ac	Hospitalisation (days or nights)	-	-	x	+	-	Serious concerns: It appears all participants were analysed; however, 131 participants (IG 56, CG 75) became censored upon their deaths, which is imbalanced between groups; the outcome is likely to depend on the true values of the missingness. Some concerns: The details of the randomisation and allocation concealment methods were not provided. There was unlikely any deviations from the intended intervention in the control group, however insufficient information is provided about any deviation from the experimental intervention due to trial context. The pre-specified analysis plan is unavailable.	x
Hendriksen 1984[86]	mfar	ac	Hospitalisation (pts hospitalised once or more/ last 6 mth)	-	-	x	+	-	Serious concerns: The amount of missing data (69) is greater than the known number of events (60). Some concerns: The details of the randomisation and allocation concealment methods were not provided. There was unlikely any deviations from the intended intervention in the control group, however insufficient information is provided about any deviation from the experimental intervention due to trial context. The pre-specified analysis plan is unavailable.	x
Jitapunkul 1998[60]	rsk-mfa-	ac	Hospitalisation (pts hospitalised once or more)	-	-	x	+	-	Serious concerns: Missingness is similar to the number of hospitalisations. Some concerns: Randomisation and allocation concealment method unknown. Potential deviations in the control group are not mentioned. No pre-specified analysis plan available, although it seems unlikely there was any selection of the reported result.	x
Kono 2016[23]	mfar(w/med)	mfar	Hospitalisation (pts hospitalised once or more/ last 12 mth)	+	-	x	+	-	Serious concerns: the missingness (22.2%) depends on its true value (death, institutionalised, declined postal FU completion), and the analysis plan is unknown. Some concerns: Insufficient information to determine material contamination of interventions due to trial context. The pre-specified analysis plan is unavailable.	x
Kukkonen-Harjula 2017[5]	ADL & ntr & exrc	ac	Hospitalisation (days per person-year)	+	-	-	+	-	Some concerns: It is unclear if there were any deviations due to the trial context. There was some missingness but this was balanced between arms. It is unclear if the result was selected from multiple available.	-

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
Lewin 2013[24]	hmcr & educ & mfar	hmcr	Hospitalisation (days or nights)	x	x	x	+	-	Very serious concerns: There are imbalances in the baseline characteristics, possibly due to the subverted randomisation and the reassignment of some intervention arm participants who did not participate in the programme. Insufficient information provided about how many intervention arm participants were reassigned to the control arm. Unclear about how many people were censored due to death, and the number of deaths is imbalanced in the second year. Some concerns: The pre-specified analysis plan is unavailable, unclear of what types of admissions were counted.	xx
Lewin 2013[24]	hmcr & educ & mfar	hmcr	Hospitalisation (pts hospitalised once or more)	x	x	x	+	-	Very serious concerns: There are imbalances in the baseline characteristics, possibly due to the subverted randomisation and the reassignment of some intervention arm participants who did not participate in the programme. Insufficient information provided about how many intervention arm participants were reassigned to the control arm. Unclear about how many people were censored due to death, and the number of deaths is imbalanced in the second year. Some concerns: The pre-specified analysis plan is unavailable, unclear of what types of admissions were counted.	xx
Liimatta 2019[96]	exrc & mfa-(w/med)	ac	Hospitalisation (days or nights)	-	-	+	+	-	Some concerns: Allocation concealment method unclear. Unclear of any deviations from the intended interventions due to trial context. The pre-specified analysis plan was unavailable.	-
Metzelthin 2013[7]	educ & mfar(w/med+slfm)	ac	Hospitalisation (days or nights)	-/-	-	x	+	-	Serious concern: 67/346 missing with substantial imbalance in missingness between the arms. Some concerns: It appears the allocation was random and concealed, although it appears the authors intended to bias the allocation with a more urban intervention arm and more rural control arm but they were unsuccessful in implementing this approach. Participants were recruited after clusters were allocated and it is unclear if this was affected by knowledge of the allocation. It is unclear if there were deviations in care due to the trial context. The result may have been selected from multiple available.	x
Metzelthin 2013[7]	educ & mfar(w/med+slfm)	ac	Hospitalisation (pts hospitalised once or more)	-/-	-	x	+	-	Serious concern: 67/346 missing with substantial imbalance in missingness between the arms. Some concerns: It appears the allocation was random and concealed, although it appears the authors intended to bias the allocation with a more urban intervention arm and more rural control arm but they were unsuccessful in implementing this approach. Participants were recruited after clusters were allocated and it is unclear if this was affected by knowledge of the allocation. It is unclear if there were deviations in care due to the trial context. The result may have been selected from multiple available.	x

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
Moll van Charante 2016[84]	educ & mfar(w/slfm)	ac	Hospitalisation (pts hospitalised once or more)	+/+	-	-	+	-	Some concerns: It is unclear whether there were deviations from the intended intervention because of the trial context. Losses to mortality were substantial but relatively balanced between arms (309/1890 and 269/1636). It is unclear if the result was selected from multiple available.	-
Parsons M 2012[38]	hmcr & mfar	hmcr & mfa-	Hospitalisation (admissions)	+/-	-	x	+	+	Very serious concern: Overall 71% of participants were lost to follow-up; there were imbalances in losses to follow-up, including due to death. Some concerns: Unclear whether and when the personnel recruiting participants would be unblinded to the assignments. Participants and personnel were not blinded to assignments, and the authors suggested that the Hawthorne effect and experimenter effects were limitations, although it was impossible to determine the extent.	xx
Parsons M 2012[38]	hmcr & mfar	hmcr & mfa-	Hospitalisation (pts hospitalised once or more)	+/-	-	x	+	+	Very serious concern: Overall 71% of participants were lost to follow-up; there were imbalances in losses to follow-up, including due to death. Some concerns: Unclear whether and when the personnel recruiting participants would be unblinded to the assignments. Participants and personnel were not blinded to assignments, and the authors suggested that the Hawthorne effect and experimenter effects were limitations, although it was impossible to determine the extent.	xx
Parsons M 2017[8]	hmcr & ADL & mfar(w/slfm)	hmcr & mfa-	Hospitalisation (admissions)	-	-	x	+	+	Some concerns: Computer-mediated minimisation used; concealment not mentioned. Participants and personnel were not blinded to assignments, and the authors suggested that the Hawthorne effect and experimenter effects were limitations, although it was impossible to determine the extent.	xx
Parsons M 2017[8]	hmcr & ADL & mfar(w/slfm)	hmcr & mfa-	Hospitalisation (pts hospitalised once or more)	-	-	x	+	+	Some concerns: Computer-mediated minimisation used; concealment not mentioned. Participants and personnel were not blinded to assignments, and the authors suggested that the Hawthorne effect and experimenter effects were limitations, although it was impossible to determine the extent.	xx
Pathy 1992[97]	rsk-mfa-	ac	Hospitalisation (admissions)	-	-	x	+	-	Serious concerns: 6.5% missing data, data was included up until participants died or moved practice and presented in the 3 years data point. However, we considered that people who died would still be missing data (loss to follow up) at 3 years. Some concerns: Randomisation and allocation concealment methods unclear. Insufficient information about any deviations from the intended interventions due to trial context. The pre-specified analysis plan is unavailable.	x

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
Phelan 2007[92]	mfar(w/med+slfm)	ac	Hospitalisation (pts hospitalised once or more/ last 12 mth)	-/x	-	x	+	-	Very serious concerns: It appears that selection and recruitment of participants was performed following randomisation by people who knew the allocation. Reasons and numbers for missingness in the direct group were not provided. Some concerns: There is no information on the allocation sequence generation process or concealment of the sequence and it is unclear whether clusters had balanced characteristics. Contamination was speculated as plausible but no evidence was presented regarding deviations due to the trial context. Participants self-assessed mood and may have been influenced by knowledge of the intervention received. It is unclear if the result presented was selected from multiple available.	xx
Rubenstein 2007[56]	mfar(w/med)	ac	Hospitalisation (days or nights)	-	-	x	+	-	Main concerns: 100/305 (32.8%) of the missing data were due to death. Most other reasons are unknown (not reported). Some concerns: Insufficient about the randomisation process. Insufficient information about any deviations from the intended interventions due to trial context in both groups. The pre-specified analysis plan is unavailable.	x
Rubenstein 2007[56]	mfar(w/med)	ac	Hospitalisation (pts hospitalised once or more/ last 12 mth)	-	-	x	+	-	Main concerns: 100/305 (32.8%) of the missing data were due to death. Most other reasons are unknown (not reported). Some concerns: Insufficient about the randomisation process. Insufficient information about any deviations from the intended interventions due to trial context in both groups. The pre-specified analysis plan is unavailable.	x
Stuck 1995[39]	educ & mfar(w/med)	ac	Hospitalisation (days or nights / 100 persons / year)	+	-	+	+	-	Some concerns: No information indicating any deviations from the intended interventions due to trial context. No information about the pre-specified outcome measures and there are various methods to calculate hospitalisation outcome/ number of people admitted.	-
Stuck 1995[39]	educ & mfar(w/med)	ac	Hospitalisation (pts hospitalised once or more)	+	-	+	+	-	Some concerns: No information indicating any deviations from the intended interventions due to trial context. No information about the pre-specified outcome measures and there are various methods to calculate hospitalisation outcome/ number of people admitted.	-
Suijker 2016[10]	mfar(w/med)	ac	Hospitalisation (admissions/ last 6 mth)	+/-	-	x	+	-	Serious concern: Substantial missing data for unknown reasons. Some concerns: Unclear when GP practices were randomised and whether participants were identified and recruited prior to randomisation or whether those identifying participants were aware of the assignment. It is unclear whether there were deviations from the intended interventions due to trial context. The reported result may have been selected from multiple available.	x

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
Tulloch 1979[42]	mfar(w/med)	ac	Hospitalisation (admissions)	-	-	x	+	-	Serious concerns: 295 participants who started at baseline were included, but participants who died (59 deaths from baseline to 24m) would not contribute to the data from their deaths; unclear other losses to follow-up were included from when they no longer participated in the trial. Some concerns: The details of randomisation and allocation concealment methods were not provided; insufficient details about the participants' baseline characteristics provided to judge any imbalance or problems in the allocation method. Insufficient information provided for making a judgement. The classification of hospitalisation is not reported.	x
Tulloch 1979[42]	mfar(w/med)	ac	Hospitalisation (days or nights)	-	-	x	+	-	Serious concerns: 295 participants who started at baseline were included, but participants who died (59 deaths from baseline to 24m) would not contribute to the data from their deaths; unclear other losses to follow-up were included from when they no longer participated in the trial. Some concerns: The details of randomisation and allocation concealment methods were not provided; insufficient details about the participants' baseline characteristics provided to judge any imbalance or problems in the allocation method. Insufficient information provided for making a judgement. The classification of hospitalisation is not reported.	x
Tulloch 1979[42]	mfar(w/med)	ac	Hospitalisation (pts hospitalised once or more)	-	-	x	+	-	Serious concerns: 295 participants who started at baseline were included, but participants who died (59 deaths from baseline to 24m) would not contribute to the data from their deaths; unclear other losses to follow-up were included from when they no longer participated in the trial. Some concerns: The details of randomisation and allocation concealment methods were not provided; insufficient details about the participants' baseline characteristics provided to judge any imbalance or problems in the allocation method. Insufficient information provided for making a judgement. The classification of hospitalisation is not reported.	x
van Rossum 1993[94]	mfar	ac	Hospitalisation (admissions)	-	-	-	+	-	Some concerns: The method of allocation concealment is unclear. Insufficient information about any deviations from the intended intervention due to trial context. It appears that all participants' living and survival status were traced throughout the 3-year trial period, but upon a participant's death, the person became censored; deaths were fairly balanced between groups. The pre-specified analysis plan is unavailable.	-
van Rossum 1993[94]	mfar	ac	Hospitalisation (days or nights)	-	-	-	+	-	Some concerns: The method of allocation concealment is unclear. Insufficient information about any deviations from the intended intervention due to trial context. It appears that all participants' living and survival status were traced throughout the 3-year trial period, but upon a participant's death, the person became censored; deaths were fairly balanced between groups. The pre-specified analysis plan is unavailable.	-

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
van Rossum 1993[94]	mfar	ac	Hospitalisation (pts hospitalised once or more)	-	-	-	+	-	Some concerns: The method of allocation concealment is unclear. Insufficient information about any deviations from the intended intervention due to trial context. It appears that all participants' living and survival status were traced throughout the 3-year trial period, but upon a participant's death, the person became censored; deaths were fairly balanced between groups. The pre-specified analysis plan is unavailable.	-
Vass 2005[98]	mfar(w/med)	mfar	Hospitalisation (pts hospitalised once or more)	+/+	-	-	+	-	Some concerns: There is no information regarding possible deviations arising from the trial context. There were a substantial number of deaths over the follow-up period. The results may have been selected from multiple available.	-

Table 16. Care home admission: short-term timeframe

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
Challis 2004[1]	mfar(w/med)	Mfar	Care-home placement (including deaths)	-	-	+	+	-	Some concerns: Lack of information about the randomization and allocation. Deviations from intended interventions due to trial context are not described and it is not clear whether contacts between specialists and care managers could have changed the case managers usual practice in some way. Various types of care admission are reported. It is unclear which types of care admission are included in this outcome.	-
Fernandez-Barres 2017[2]	hmcr & ntr	hmcr	Care-home placement (survivors/follow-up)	+	-	x	+	-	Serious concern: 25/173 (14.4%) participants died or withdrew, hence not included, i.e., more missing data then total number of events in each group. There was an imbalance in the proportion and reasons of missing data: withdrawals IG 4% vs CG 8.3%; deaths IG 10.9% vs CG 5.6%. Some concerns: Insufficient information to rule out any deviations from the intended interventions due to trial context. The classification of losses to follow-up is not provided.	x
Hendriksen 1984[86]	mfar	ac	Care-home placement (including deaths)	-	-	x	+	-	Serious concerns: It appears that all participants' living and survival status were traced during the trial period, but upon a participant's death, the person became censored (28 deaths during first 6 months, and 4 care admissions). Some concerns: The details of the randomisation and allocation concealment methods were not provided. There was unlikely any deviations from the intended intervention in the control group, however insufficient information is provided about any deviation from the experimental intervention due to trial context. The pre-specified analysis plan is unavailable.	x

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
Imhof 2012[3]	mfar	ac	Care-home placement (survivors/follow-up)	-	-	x	+	-	Serious concerns: 12/461 died prior to 6-month follow-up, there were only 7 people admitted to care homes. Deaths are closely linked to care home admission. Some concerns: The method of allocation concealment is unclear. Insufficient information provided about any deviations from the intended interventions due to trial context. The analysis plan and classification of reasons for losses to follow-up are unavailable.	x
King 2012[4]	hmcr & ADL & mfar(w/ slfm)	hmcr	Care-home placement (survivors/follow-up)	+/+	-	x	+	-	Serious concern: There were more losses than admissions. Some concerns: It is unclear whether there were any changes in usual care due to the trial context. It is unclear how losses to follow-up were attributed.	x
Kukkonen-Harjula 2017[5]	ADL & ntr & exrc	ac	Care-home placement (survivors/follow-up)	+	-	x	+	-	Serious concern: 16 missing, 0 events. Some concerns: It is unclear if there were any deviations due to the trial context. It is unclear how competing losses to follow-up were allocated.	x
Liddle 1996[6]	aids & mfar	ac	Care-home placement (survivors/follow-up)	-	x	x	+	-	Very serious concerns: The authors describe significant contamination in both groups, whereby the interventions were sought and implemented to levels in excess of that provided in trial to the intervention group. 3 deaths (missing data) vs 2 care home admission. Some concerns: Lack of information regarding the procedures to conceal the allocation sequence. Classification of reasons for losses to follow-up is not provided.	xx
Melis 2008[80]	mfar(w/med)	ac	Nursing home (days per person)	+	-	x	+	-	Serious concerns: If data is only for those who completed follow up, the proportion of all losses to FU and the number of consent withdrawals are imbalanced between groups. Some concerns: Insufficient information about any deviations from the intended interventions due to trial context. Unclear what types of institutions were analysed.	x
Metzelthin 2013[7]	educ & mfar(w/med+slfm)	ac	Care-home placement (survivors/follow-up)	-/-	-	x	+	-	Serious concern: 11/346 missing with only 4 events and imbalance in missingness between the arms. Some concerns: It appears the allocation was random and concealed, although it appears the authors intended to bias the allocation with a more urban intervention arm and more rural control arm but they were unsuccessful in implementing this approach. Participants were recruited after clusters were allocated and it is unclear if this was affected by knowledge of the allocation. It is unclear if there were deviations in care due to the trial context. It is unclear how participants were assigned as lost to follow-up due to care home admission.	x
Parsons M 2017[8]	hmcr & ADL & mfar(w/slfm)	hmcr & mfa-	Care-home placement (survivors/follow-up)	-	-	x	+	+	Serious concern: Missingness totalled over half of events. Reasons for missingness were unclear. Some concerns: Computer-mediated minimisation used; concealment not mentioned. Participants and personnel were not blinded to assignments, and the authors suggested that the Hawthorne effect and experimenter effects were limitations, although it was impossible to determine the extent.	x

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
Rooijackers 2021[9]	hmcr & ADL & mfar(w/slfm)	hmcr	Care-home placement (survivors/follow-up)	+/-	-	x	+	-	Serious concerns: The number of missing data due to deaths (n=18) is bigger than the number of events (n=7). Some concerns: Participants were identified by the nurses who seemed to be aware of the intervention assignment. Insufficient information to rule out any deviations due to the trial context though blinding was in place. The classification of reasons of loss to follow-up is not provided.	x
Suijker 2016[10]	mfar(w/med)	ac	Care-home placement (survivors/follow-up)	+/-	-	x	+	-	Serious concern: There was far more informative missingness than events. Some concerns: Lack of information about whether GPs who selected eligible participants were aware of cluster allocation when doing so. Lack of information about possible deviations from the intended intervention. The circumstances under which a person is classified as "Nursing home" as a reason of loss to follow-up are unclear.	x
Szanton 2011[11]	ADL&aids&educ&exrc&mfar(w/med+slfm)	ac	Care-home placement (survivors/follow-up)	-	-	+	+	-	Some concerns: The methods of randomisation and allocation concealment are unclear. Insufficient information provided to judge any deviations from the intended interventions due to trial context. Choices may have been made about which reasons to provide for loss to follow-up.	-
Whitehead 2016[48]	hmcr & ADL & aids & mfa-	hmcr & mfa-	Care-home placement (survivors/follow-up)	+	-	x	+	+	Serious concerns: 8/30 (26%) participants not included due to deaths and withdrew/ lost to follow-up, the reasons of dropouts between groups are imbalanced. Some concerns: Insufficient information to judge any deviations from the intended interventions although any material deviations seem unlikely.	x
Wong 2019[12]	mfar(w/slfm)	ac	Care-home placement (survivors/follow-up)	x	-	x	+	-	Very serious concern: Allocation was likely predictable. Only 46/540 participants not included, that is more than the known admissions (n=14). The proportions of some reasons are imbalanced. Some concerns: Unsure of any intervention deviation from the intended interventions due to trial context. The classification of losses to follow-up is not reported.	xx

Table 17. Care home admission: medium-term timeframe

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
Bernabei 1998[49]	hmcr & mfar(w/med)	hmcr	Nursing home (long-term) (days per year)	-	-	x	-	-	Serious concerns: The amount of missing data is unclear. Some concerns: No indication of the concealment method of the allocation sequence. Potential for contamination of the control arm given the same group of GPs were caring for these individuals too but unclear whether there are material deviations from the intended interventions due to trial context. Unclear about who collected the data and the sources, but unlikely influenced by knowledge of assignments. Assuming data collected from routine data but unclear of the planned analysis.	x
Bernabei 1998[49]	hmcr & mfar(w/med)	hmcr	Nursing home (long-term) (pts)	-	-	x	-	-	Serious concerns: The amount of missing data is unclear. Some concerns: No indication of the concealment method of the allocation sequence. Potential for contamination of the control arm given the same group of GPs were caring for these individuals too but unclear whether there are material deviations from the intended interventions due to trial context. Unclear about who collected the data and the sources, but unlikely influenced by knowledge of assignments. Assuming data collected from routine data but unclear of the planned analysis.	x
Blom 2016[13]	mfa-(w/med+slfm)	ac	Care-home placement (survivors/follow-up)	x/+	-	x	+	-	Very serious concerns: Unsure of the randomisation and allocation of clusters, and there is a large imbalance of cluster size. 68/288 and 311/1091 missing, vs 36 . Care home admission are linked to deaths. There is a substantial imbalance in missingness between arms, and more missingness than care home admissions. Some concerns: Insufficient information to rule out any deviations due to trial context. Unclear of the analysis used.	xx
Blom 2016[13]	mfa-(w/med+slfm)	ac	Nursing home (long-term) (days)	x/+	-	x	+	-	Very serious concerns: Unsure of the randomisation and allocation of clusters, and there is a large imbalance of cluster size. 38.9% missing data; some dropout reasons, e.g., deaths, too ill, residential care admission are linked to this outcome; the proportions of other and unknown dropout reasons are imbalanced between groups. Some concerns: Insufficient information to rule out any deviations due to trial context. Unclear of the analysis used.	xx
Blom 2016[13]	mfa-(w/med+slfm)	ac	Residential care home (long-term) (days)	x/+	-	x	+	-	Very serious concerns: Unsure of the randomisation and allocation of clusters, and there is a large imbalance of cluster size. 38.9% missing data; some dropout reasons, e.g., deaths, too ill, nursing home admission are linked to this outcome; the proportions of other and unknown dropout reasons are imbalanced between groups. Some concerns: Insufficient information to rule out any deviations due to trial context. Unclear of the analysis used.	xx

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
Brettschneider 2015[51]	mfar(w/med)	ac	Care-home placement (including deaths)	-	-	x	+	+	Serious concerns: Total number included is unclear. It seems like info was available for all but people who revoked their consent. It is possible that the people who dropped out and revoked their consent may have been sicker but there is no information about this. Some concerns: Uncertainty about allocation concealment (particularly those recruited vis registration office). Participants and intervention deliverers were aware of the allocated interventions, unclear of any deviations from the intended interventions due to trial context.	x
Cameron 2013[70]	exrc & mfar(w/med+slfm)	ac	Care-home placement (including deaths)	+	-	+	+	+	Some concerns: Insufficient information about any deviations from the intended interventions due to trial context.	-
Dalby 2000[14]	mfar(w/med)	ac	Care-home placement (survivors/follow-up)	-	-	x	+	-	Serious concerns: The number of missing data (13) is bigger than the number of known event (1). Some concerns: The method of allocation concealment is unclear. Insufficient information provided about any deviations from the intended intervention due to trial context. The data are reported as a reason of loss to follow-up; choices may have been made about which reasons to report for the losses to follow-up.	x
Fabacher 1994[15]	mfar(w/med)	ac	Care-home placement (survivors/follow-up)	-	-	x	+	-	Serious concerns: At least 13 in IG refused assessment at baseline were not followed up, i.e., number of missing data is bigger than known event (no admission), so do not know whether they would have gone into nursing home. Assuming those refused FUs were alive and not in nursing home, but unsure whether people moved out of areas were missing data or not. Some concerns: Unclear randomisation and allocation concealment method; unblinded personnel and participants and unclear of any deviations from intervention.	x
Fernandez-Barres 2017[2]	hmcr & ntr	hmcr	Care-home placement (survivors/follow-up)	+	-	x	+	-	Serious concern: 44/173 (26%) participants died or withdrew, hence not included, i.e., more missing data then total number of events in each group. There was an imbalance in the proportion and reasons of missing data, especially in withdrawals IG 5.0% vs CG 16.7%; deaths IG 20.8% vs CG 8.3%. Some concerns: Insufficient information to rule out any deviations from the intended interventions due to trial context. The classification of losses to follow-up is not provided.	x
Hall 1992[16]	hmcr & mfar(w/slfm)	hmcr & mfar	Care-home placement (survivors/follow-up)	-	-	x	+	-	Serious concerns: The number of missing data (12) is bigger than the number of events (11). Some concerns: Insufficient details about the allocation concealment method. Insufficient information provided to assess any deviations from the intended interventions due to trial context. Unclear what types of care admission were analysed.	x
Harari 2008[17]	mfar(w/med)	ac	Care-home placement (survivors/follow-up)	+	x	x	+	+	Very serious concerns: Possibly contamination in usual care. The missingness of data could depend on true value (reasons of loss to follow-up unknown).	xx

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
Hay 1998[18]	ac	ac	Care-home placement (survivors/follow-up)	-	-	x	+	-	Serious concerns: The number of missing data (84) is bigger than the number of events (3), and the proportions is imbalanced between groups. Some concerns: Insufficient information provided about the methods used to generate the sequence and allocation concealment. Insufficient information provided for judging any deviations from the intended interventions due to trial context. Results reported as one of the losses to follow-up reasons, and choices may have been made about which reasons to provide for loss to follow-up.	x
Hay 1998[18]	mfa-	ac	Care-home placement (survivors/follow-up)	-	-	x	+	-	Serious concerns: The number of missing data (133) is bigger than the number of events (1). Some concerns: Insufficient information provided about the methods used to generate the sequence and allocation concealment. Insufficient information provided for judging any deviations from the intended interventions due to trial context. Results reported as one of the losses to follow-up reasons, and choices may have been made about which reasons to provide for loss to follow-up.	x
Hebert 2001[19]	mfar(w/med)	ac	Care-home placement (survivors/follow-up)	-	-	x	+	-	Serious concerns: The number of missing data (39) is bigger than the number of known events (10). Some concerns: No information provided about the randomisation and allocation methods. Insufficient information about any other potential deviations from the intended interventions due to trial context. The results are reported as one of loss to follow-up reasons. Choices may have been made about which reasons to provide for loss to follow-up.	x
Henderson 2005[20]	mfar	ac	Care-home placement (survivors/follow-up)	+/x	+	x	+	-	Very serious concerns: The recruitment method seemed consistent across the clusters; however, the researchers already knew the cluster allocations and informed the participants about the intervention details of the cluster they belonged to. The missingness was more than the number of events. Some concerns: The data were reported as a reason of withdrawal, but the approach to classifying withdrawals was not specified.	xx
Hendriksen 1984[86]	mfar	ac	Care-home placement (including deaths)	-	-	x	+	-	Serious concerns: It appears that all participants' living and survival status were traced during the trial period, but upon a participant's death, the person became censored (45 deaths during first 12 months, and 16 care admissions). Some concerns: The details of the randomisation and allocation concealment methods were not provided. There was unlikely any deviations from the intended intervention in the control group, however insufficient information is provided about any deviation from the experimental intervention due to trial context. The pre-specified analysis plan is unavailable.	x

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
Kerse 2014[21]	rsk-mfa-	ac	Care-home placement (survivors/follow-up)	+/+	-	x	+	-	Serious concern: There were more deaths than the number of care home admissions. Some concerns: It is unclear whether the trial context led to changes in usual care. It is unclear whether the result may have been selected from multiple available.	x
Kono 2004[22]	mfar	ac	Care-home placement (survivors/follow-up)	-	-	x	+	-	Serious concern: 12 missing, 13 events. More events than missing, mainly due to death. Some concerns: Unclear allocation concealment method. Lack information about any deviations from the intended interventions due to trial context. Reported as one of the reasons of loss to follow-up and the losses of follow-up classification is not provided.	x
Kono 2016[23]	mfar(w/med)	Mfar	Care-home placement (survivors/follow-up)	+	-	x	+	-	Serious concerns: 15.3% of missing data in which some depend on the true value of outcome. Some concerns: Insufficient information to determine material contamination of interventions due to trial context. The pre-specified analysis plan is unavailable.	x
Kukkonen-Harjula 2017[5]	ADL & ntr & exrc	ac	Care-home placement (survivors/follow-up)	+	-	x	+	-	Serious concern: Many more missing than admissions. Some concerns: It is unclear if there were any deviations due to the trial context. It is unclear how competing losses to follow-up were allocated.	x
Kukkonen-Harjula 2017[5]	ADL & ntr & exrc	ac	Nursing home (long-term) (days per person-years)	+	-	-	+	-	Some concerns: It is unclear if there were any deviations due to the trial context. There was a small imbalance in mortality but it is unlikely this substantially affected the estimate. It is unclear if the result was selected from multiple available.	-
Lewin 2013[24]	hmcr & educ & mfar	hmcr	Care-home placement (survivors/follow-up)	x	x	x	+	-	Very serious concerns: There are imbalances in the baseline characteristics, possibly due to the subverted randomisation and the reassignment of IG participants who did not participate in the programme. Insufficient information provided about how many IG participants were reassigned due to non-participation. If participants were reassigned, they were not analysed according to their initial assignment. The number of missing data (143) is more than the known events (92). Some concerns: The data are reported as loss to follow-up; choices may have been made about which reasons to report for losses to follow-up.	xx
Mann WC 1999[55]	hmcr & aids	hmcr	Care Home (days)	-	-	x	+	-	Serious concerns: 4 participants in control group (3 due to ill health) withdrew and thus their data were unavailable. Moreover, upon participants' deaths, they became censored; the outcome is likely to depend on the true value of the missing data. Some concerns: The allocation concealment method is not reported. Insufficient information provided to determine any deviations from the intended intervention due to trial context. The pre-specified analysis plan is unavailable.	x

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
Metzelthin 2013[7]	educ & mfar(w/med+slfm)	ac	Care-home placement (survivors/follow-up)	-/-	-	x	+	-	Serious concern: 33/346 missing with substantial imbalance in missingness between the arms. Some concerns: It appears the allocation was random and concealed, although it appears the authors intended to bias the allocation with a more urban intervention arm and more rural control arm but they were unsuccessful in implementing this approach. Participants were recruited after clusters were allocated and it is unclear if this was affected by knowledge of the allocation. It is unclear if there were deviations in care due to the trial context. It is unclear how participants were assigned as lost to follow-up due to care home admission.	x
Monteserin Nadal 2008[25]	educ & rsk-mfa-	ac	Care-home placement (survivors/follow-up)	-	-	x	+	-	Serious concerns: Only 3 and 5 events per arm. 146/620 (16.8%) missing: 88 withdrawals, 16 moved, 42 deaths. Substantial data missing due to mortality which is associated with care home admission. Other reasons not given. Some concerns: Unclear of allocation concealment method. Insufficient information to rule out deviations from the intended interventions due to trial context. The pre-specified analysis plan is unavailable.	x
Newbury 2001[26]	mfa-(w/med)	ac	Care-home placement (survivors/follow-up)	-	-	x	+	-	Serious concerns: The number of deaths (n=6) is larger than that of care admission (n=4). There are 1 vs 5 deaths between IG and CG, so it was likely the missing data true value would favour IG. Some concerns: Unclear whether allocation was adequate. Unclear of any deviations from the intended interventions due to trial context. The pre-specified plan is not available.	x
Newcomer 2004[27]	educ & mfar(w/med)	ac	Care-home placement (survivors/follow-up)	-	-	x	+	-	Serious concerns: The number of missing data (234) is bigger than the known events (30). Some concerns: Unclear about how the sequence was generated and the allocation method. Insufficient information available to judge whether there were any deviations from the intended intervention due to trial context in each arm. The care admission data were reported as one of the attrition reasons. Choices may have been made about which reasons to provide for loss to follow-up.	x
Parsons M 2017[8]	hmcr & ADL & mfar(w/slfm)	hmcr & mfa-	Care-home placement (survivors/follow-up)	-	-	x	+	+	Serious concern: Missingness was greater than the number of events. Reasons for missingness were unclear. Some concerns: Computer-mediated minimisation used; concealment not mentioned. Participants and personnel were not blinded to assignments, and the authors suggested that the Hawthorne effect and experimenter effects were limitations, although it was impossible to determine the extent.	x

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
Ploeg 2010[28]	educ & mfar(w/med)	ac	Care-home placement (survivors/follow-up)	+	-	x	+	-	Serious concerns: 74 participants not included (missing data), number of missing data is bigger than the known number of events, and the reasons included deaths and dropouts. Some concerns: Insufficient information provided to make judgement about any deviations from the intended interventions due to trial context. Unclear of all the methods used to collect the data, that is how the participants were classified as "admitted to long term care home".	x
Rockwood 2000[29]	mfa-(w/med)	ac	Care-home placement (including deaths)	-	-	x	+	-	Serious concerns: 11% (n=20) had died (7/87 control, 13/95 intervention), substantial imbalance in deaths. Some concerns: No description of randomisation procedures. Some control participants may have sought additional care because of the trial context although this is unlikely to have been a substantial number due to the nature of the intervention. The analysis plan for the collected care admission data is unavailable.	x
Romera-Liebana 2018[30]	cgn & med & ntr & exrc	ac	Care-home placement (survivors/follow-up)	+	-	x	+	-	Serious concerns: The number of missing data (28) is bigger than known events (5). Some concerns: Any deviations from the intended interventions due to trial contact are not known. The process for classifying people as losses to follow-up is not specified.	x
Rooijackers 2021[9]	hmcr & ADL & mfar(w/slfm)	hmcr	Care-home placement (survivors/follow-up)	+/-	-	x	+	-	Serious concerns: The number of missing data due to deaths (n=27) is bigger than the number of events (n=19). Some concerns: Participants were identified by the nurses who seemed to be aware of the intervention assignment. Insufficient information to rule out any deviations due to the trial context though blinding was in place. The classification of reasons of loss to follow-up is not provided.	x
Shapiro 2002[31]	hmcr & mfar	ac	Care-home placement (survivors/follow-up)	-	-	x	+	-	(Very high risk) Very serious concerns: High amount of attrition (at least 38%) and was imbalanced between groups. Some concerns: Unclear allocation concealment method. Intention to treat principle was not followed when excluded non-participants from IG before starting the intervention. The classification of losses to follow-up is not specified.	xx
Suijker 2016[10]	mfar(w/med)	ac	Care-home placement (survivors/follow-up)	+/-	-	x	+	-	Serious concern: There was far more informative missingness than events. Some concerns: Lack of information about whether GPs who selected eligible participants were aware of cluster allocation when doing so. Lack of information about possible deviations from the intended intervention. The circumstances under which a person is classified as "Nursing home" as a reason of loss to follow-up are unclear.	x
van Hout 2010[32]	mfar(w/med)	ac	Care-home placement (including deaths)	+	-	+	+	-	Some concerns: Insufficient information provided about any deviations from the interventions due to trial context. Unclear what types of institutions were included in the analysis.	-

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
van Hout 2010[32]	mfar(w/med)	ac	Care-home placement (survivors/follow-up)	+	-	x	+	-	Serious concerns: More missing data (214) than the known events (19). Some concerns: Insufficient information provided about any deviations from the interventions due to trial context. The results were reported as a reason of loss to follow-up, and choices may have been made about which reasons to report for losses to follow-up.	x
van Hout 2010[32]	mfar(w/med)	ac	Time to institutionalisation	+	-	-	+	-	Some concerns: Insufficient information provided about any deviations from the interventions due to trial context. Small number of deaths and fairly balanced between groups. The pre-specified analysis plan is unavailable.	-
van Lieshout 2018[93]	ADL & med & ntr & sst	ac	Nursing home (short-term) (pts)	-	-	x	+	-	Very serious concerns: 207/710 (29.2%) participants completed the trial, imbalance between the number of losses to follow-up after baseline that more people were lost in the intervention group. Some concerns: Insufficient information about allocation method. No information about any deviations from intended interventions to trial context. Unsure if imputed data was planned.	xx
van Rossum 1993[94]	mfar	ac	Care-home placement (including deaths)	-	-	x	+	-	Serious concerns: It appears that all participants' living and survival status were traced throughout the trial period, but those who died outside nursing home during the first 12 months became censored; hence there are more missing data (total of 31 deaths) than events (3). Some concerns: The method of allocation concealment is unclear. Insufficient information about any deviations from the intended intervention due to trial context. The pre-specified analysis plan is unavailable.	x
van Rossum 1993[94]	mfar	ac	Nursing home (long-term) (months)	-	-	x	+	-	Serious concerns: Amount of missing data (31) greater than number of known events (3). Some concerns: The method of allocation concealment is unclear. Insufficient information about any deviations from the intended intervention due to trial context. The pre-specified analysis plan is unavailable.	x
Wolter 2013[33]	hmcr & mfar(w/med)	hmcr	Care-home placement (survivors/follow-up)	+/-	-	x	+	-	Serious concerns: Some clusters (more in CG) withdrew after knowing the assignments in the first randomisation which are missing data. Clusters who withdrew at baseline and during the trial were not included, (133 died + 89 other reasons +99 from 7 IG withdrew clusters)/920 missing data. Some concerns: Participants were likely recruited after randomisation. Pre-specified analysis plan is unavailable. There is a possibility of some deviations from the intended interventions but this should not have considerably affected the results.	x

Table 18. Care home admission: long-term timeframe

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
Bouman 2008[50]	mfar(w/med)	ac	Care-home placement (including deaths)	+	-	+	+	-	Some concerns: No information about any deviations from the intended intervention due to trial context, though the authors suggested no methodological drawbacks. The pre-specified analysis plan is unavailable.	-
Bouman 2008[50]	mfar(w/med)	ac	Nursing home (long-term) (days)	+	-	+	+	-	Some concerns: No information about any deviations from the intended intervention due to trial context, though the authors suggested no methodological drawbacks. The published protocol stated that regression technique would be used, which matches the analyses description in the costs report. Negative binominal distribution model was used which seems appropriate, but the pre-specified regression model is not known.	-
Carpenter 1990[34]	rsk-mfa-	ac	Care-home placement (including deaths)	-	-	x	+	-	Serious concerns: Amount of missing data (145) is greater than the known number of events (18). Some concerns: The allocation concealment method is unclear. Insufficient information provided about any deviations from the intended interventions due to trial context. Unclear about the types of institution analysed.	x
Carpenter 1990[34]	rsk-mfa-	ac	Care-home placement (survivors/follow-up)	-	-	x	+	-	Serious concerns: The number of missing data (145) is bigger than the number of events (3). Some concerns: The allocation concealment method is unclear. Insufficient information provided about any deviations from the intended interventions due to trial context. The data are reported as a reason of loss to follow-up; choices may have been made about which reason to report for losses to follow-up.	x
Fischer 2009[35]	eng & mfa- (w/slfm)	ac	Care-home placement (survivors/follow-up)	+	-	x	+	-	Serious concerns: 524 participants not included due to moving home or death compared to 94 in care home at 43 months. Some concerns: Insufficient information about any deviations from the intended interventions due to trial context. The classification and analysis of admissions were unclear.	x
Fischer 2009[35]	eng & mfa- (w/slfm)	ac	Nursing home (long-term) (months)	+	-	+	+	-	Some concerns: Insufficient information about any deviations from the intended interventions due to trial context. The classification and analysis of admissions were unclear.	-
Ford 1971[36]	mfar(w/med)	ac	Care-home placement (survivors/follow-up)	+	-	x	+	-	Serious concern: More missing data than care home admissions. Imbalance in numbers missing and reason is mortality. Some Concerns: Unclear of any deviations from the intended interventions due to trial context. Unsure if nursing home admission definition.	x
Hall 1992[16]	hmcr & mfar(w/slfm)	hmcr & mfar	Care-home placement (survivors/follow-up)	-	-	x	+	-	Serious concerns: The number of missing data (24) is bigger than the number of events (14). Some concerns: Insufficient details about the allocation concealment method. Insufficient information provided to assess any deviations from the intended interventions due to trial context. Unclear what types of care admission were analysed.	x

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
Hay 1998[18]	ac	ac	Care-home placement (survivors/follow-up)	-	-	x	+	-	Serious concerns: The number of missing data (172) is bigger than the number of events (3). Some concerns: Insufficient information provided about the methods used to generate the sequence and allocation concealment. Insufficient information provided for judging any deviations from the intended interventions due to trial context. Results reported as one of the losses to follow-up reasons, and choices may have been made about which reasons to provide for loss to follow-up.	x
Hay 1998[18]	mfa-	ac	Care-home placement (survivors/follow-up)	-	-	x	+	-	Serious concerns: The number of missing data (183) is bigger than the number of events (2). Some concerns: Insufficient information provided about the methods used to generate the sequence and allocation concealment. Insufficient information provided for judging any deviations from the intended interventions due to trial context. Results reported as one of the losses to follow-up reasons, and choices may have been made about which reasons to provide for loss to follow-up.	x
Hendriksen 1984[86]	mfar	ac	Care-home placement (including deaths)	-	-	x	+	-	Serious concerns: It appears that all participants' living and survival status were traced during the trial period, but upon a participant's death, the person became censored (91 deaths during first 24 months, and 31 care admissions). Some concerns: The details of the randomisation and allocation concealment methods were not provided. There was unlikely any deviations from the intended intervention in the control group, however insufficient information is provided about any deviation from the experimental intervention due to trial context. The pre-specified analysis plan is unavailable.	x
Kerse 2014[21]	rsk-mfa-	ac	Care-home placement (survivors/follow-up)	+/+	-	x	+	-	Serious concern: There were more deaths than the number of care home admissions. Some concerns: It is unclear whether the trial context led to changes in usual care. It is unclear whether the result may have been selected from multiple available.	x
Kono 2012[37]	mfar	Mfar	Care-home placement (survivors/follow-up)	-	-	x	+	-	Serious concern: 43/323 missing. More missingness than admissions. Some concerns: Unknown allocation concealment method. Insufficient information to rule out deviations from the intended interventions due to trial context in both groups. The pre-specified analysis intention/plan is unavailable.	x
Kono 2016[23]	mfar(w/med)	Mfar	Care-home placement (survivors/follow-up)	+	-	x	+	-	Serious concerns: 15.3% of missing data in which some depend on the true value of outcome. Some concerns: Insufficient information to determine material contamination of interventions due to trial context. The pre-specified analysis plan is unavailable.	x
Kukkonen-Harjula 2017[5]	ADL & ntr & exrc	ac	Care-home placement (survivors/follow-up)	+	-	x	+	+	Main concern: More missing than number of admissions. Some concerns: It is unclear if there were any deviations due to the trial context.	x
Kukkonen-Harjula 2017[5]	ADL & ntr & exrc	ac	Nursing home (long-term) (days per person-years)	+	-	-	+	-	Some concerns: It is unclear if there were any deviations due to the trial context. There was some loss due to mortality but this was balanced between arms. It is unclear if the result was selected from multiple available.	-

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
Liimatta 2019[96]	exrc & mfa-(w/med)	ac	Nursing home (long-term) (days per person-years)	-	-	+	+	-	Some concerns: Allocation concealment method unclear. Unclear of any deviations from the intended interventions due to trial context. The pre-specified analysis plan was unavailable.	-
Metzelthin 2013[7]	educ & mfar(w/med+slfm)	ac	Care Home (days)	-/-	-	x	+	-	Serious concern: 93/346 missing with substantial imbalance in missingness between the arms. Some concerns: It appears the allocation was random and concealed, although it appears the authors intended to bias the allocation with a more urban intervention arm and more rural control arm but they were unsuccessful in implementing this approach. Participants were recruited after clusters were allocated and it is unclear if this was affected by knowledge of the allocation. It is unclear if there were deviations in care due to the trial context. The result may have been selected from multiple available.	x
Metzelthin 2013[7]	educ & mfar(w/med+slfm)	ac	Care-home placement (survivors/follow-up)	-/-	-	x	+	-	Serious concern: 93/346 missing with substantial imbalance in missingness between the arms. Some concerns: It appears the allocation was random and concealed, although it appears the authors intended to bias the allocation with a more urban intervention arm and more rural control arm but they were unsuccessful in implementing this approach. Participants were recruited after clusters were allocated and it is unclear if this was affected by knowledge of the allocation. It is unclear if there were deviations in care due to the trial context. It is unclear how participants were assigned as lost to follow-up due to care home admission.	x
Parsons M 2012[38]	hmcr & mfar	hmcr & mfa-	Care-home placement (survivors/follow-up)	+/-	-	x	+	+	Very serious concern: Overall 71% of participants were lost to follow-up; there were imbalances in losses to follow-up, including due to death. Some concerns: Unclear whether and when the personnel recruiting participants would be unblinded to the assignments. Participants and personnel were not blinded to assignments, and the authors suggested that the Hawthorne effect and experimenter effects were limitations, although it was impossible to determine the extent.	xx
Parsons M 2017[8]	hmcr & ADL & mfar(w/slfm)	hmcr & mfa-	Care-home placement (survivors/follow-up)	-	-	x	+	+	Very serious concern: There was little information regarding missingness but it appears that most participants were not followed to 24 months. Some concerns: Computer-mediated minimisation used; concealment not mentioned. Participants and personnel were not blinded to assignments, and the authors suggested that the Hawthorne effect and experimenter effects were limitations, although it was impossible to determine the extent.	xx
Pathy 1992[97]	rsk-mfa-	ac	Care-home placement (including deaths)	-	-	x	+	-	Serious concerns: 47/725 (6.5%) participants left to register with other GP, their living status was not followed, the reasons of the participants moving general practices are not known. Some concerns: Randomisation and allocation concealment methods unclear. Insufficient information about any deviations from the intended interventions due to trial context. The pre-specified analysis plan is unavailable.	x

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
Stuck 1995[39]	educ & mfar(w/med)	ac	Care-home placement (including deaths)	+	-	x	+	-	Serious concern: There were more deaths than people living in care homes. Some concerns: No information indicating any deviations from the intended interventions due to trial context. The analysis of institutionalisation data is unclear.	x
Stuck 1995[39]	educ & mfar(w/med)	ac	Care-home placement (survivors/follow-up)	+	-	x	+	-	Main concern: More missingness due to death at home than care home admissions. Some concerns: No information indicating any deviations from the intended interventions due to trial context. The analysis of institutionalisation data is unclear.	x
Stuck 1995[39]	educ & mfar(w/med)	ac	Nursing home (long-term) (days/100 persons/year)	+	-	+	+	-	Some concerns: No information indicating any deviations from the intended interventions due to trial context. The analysis of institutionalisation data is unclear.	-
Stuck 2000[99]	mfar(w/med)	ac	Care-home placement (including deaths)	+	-	x	+	-	Serious concern: More people missing than were living in a care home. Some concerns: Unclear whether the differences in problem identification between the nurses was a deviation from the intended intervention due to trial context or other reasons. Pre-specified analysis plan is unavailable.	x
Stuck 2015[40]	educ & mfar(w/med+s lfm)	ac	Care-home placement (survivors/follow-up)	+	x	x	+	+	Very serious concerns: The degree of contamination is unknown but it is likely not balanced between groups. 83/874 and 156/1410 missing for intervention and control; The sensitivity analysis (although not for this variable) shows that people who withdraw are more likely to have had an hospital admission at baseline. This suggests that there is a link between drop out for this reason and health status which is likely to affect the present outcome.	xx
Suijker 2016[10]	mfar(w/med)	ac	Care-home placement (survivors/follow-up)	+/-	-	x	+	-	Serious concern: There was far more informative missingness than events. Some concerns: Lack of information about whether GPs who selected eligible participants were aware of cluster allocation when doing so. Lack of information about possible deviations from the intended intervention. The circumstances under which a person is classified as "Nursing home" as a reason of loss to follow-up are unclear.	x
Thomas 2007[100]	mfar(w/med)	ac	Care-home placement (survivors/follow-up)	-	-	-	+	-	Some concerns: The method of allocation concealment is unclear. Insufficient information provided about any deviations from the intended interventions due to trial context. Unclear from flow chart, some lost to follow up could be in a home, some who died may have done so in a care home. Unclear of the classification of institutionalisation and the analysis plan.	-

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
Tomita 2007[41]	aids	ac	Care-home placement (survivors/follow-up)	x	-	x	+	-	Very serious concerns: No information about method of randomisation and allocation concealment, participants differed substantially in age and education (50% intervention group university educated vs 18.2% control group), the control group were also more likely to have almost all illnesses listed. At least 23/124 (18.5%) not included: 11 dropped out at baseline, 6 participants died in each arm (12/124), care home admission and mortality are closely linked outcomes. Some concerns: Insufficient to judge any deviations from the intended interventions due to trial context. The classification of losses to follow-up is not provided.	xx
Tulloch 1979[42]	mfar(w/med)	ac	Care-home placement (survivors/follow-up)	-	-	x	+	-	Serious concerns: The number of missing data (116) is bigger than the number of events (5). Some concerns: The details of randomisation and allocation concealment methods were not provided; insufficient details about the participants' baseline characteristics provided to judge any imbalance or problems in the allocation method. Insufficient information provided for making a judgement. Choices may have been made about which reasons to provide for loss to follow.	x
van Rossum 1993[94]	mfar	ac	Care-home placement (including deaths)	-	-	x	+	-	Serious concerns: It appears that all participants' living and survival status were traced throughout the trial period, but those who died outside nursing home during the first 24 months became censored; hence there are more missing data (total of 65 deaths) than events (7). Some concerns: The method of allocation concealment is unclear. Insufficient information about any deviations from the intended intervention due to trial context. The pre-specified analysis plan is unavailable.	x
van Rossum 1993[94]	mfar	ac	Nursing home (long-term) (months)	-	-	-	+	-	Some concerns: The method of allocation concealment is unclear. Insufficient information about any deviations from the intended intervention due to trial context. When participants died, they became censored; the number was fairly balanced between groups. The pre-specified analysis plan is unavailable.	-

Table 19. Homecare services usage: short-term timeframe

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
Challis 2004[1]	mfar(w/med)	mfar	Home care (pts)	-	-	-	+	-	Some concerns: Lack of information about the randomization and allocation. Deviations from intended interventions due to trial context are not described and it is not clear whether contacts between specialists and care managers could have changed the case managers usual practice in some way. 38 deaths (missing data), and mortality is closely related to home care needs. Lack of information regarding the pre-specified measurement and analysis plan.	-

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
King 2012[4]	hmcr & ADL & mfar(w/slfm)	hmcr	Home care (hours per visit)	+/+	-	-	-	-	Some concerns: It is unclear whether there were any changes in usual care due to the trial context. There was informative missingness but reasonably balanced. Participants self-reported their home care. The result may have been selected from multiple available.	-
King 2012[4]	hmcr & ADL & mfar(w/slfm)	hmcr	Home care (visits per month)	+/+	-	-	-	-	Some concerns: It is unclear whether there were any changes in usual care due to the trial context. There was informative missingness but reasonably balanced. Participants self-reported their home care. The result may have been selected from multiple available.	-
Whitehead 2016[48]	hmcr & ADL & aids & mfa-	hmcr & mfa-	Home care (pts/ last 3 mth)	+	-	x	+	+	Serious concerns: 8/30 missing data (66.6% of known cases) which could lead the effect to any direction or remain at null. Some concerns: Insufficient information to judge any deviations from the intended interventions although any material deviations seem unlikely.	x

Table 20. Homecare services usage: medium-term timeframe

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
Bernabei 1998[49]	hmcr & mfar(w/med)	hmcr	Home care (hours/ person/ year)	-	-	x	-	-	Serious concerns: The amount of missing data is unclear. Some concerns: No indication of the concealment method of the allocation sequence. Potential for contamination of the control arm given the same group of GPs were caring for these individuals too but unclear whether there are material deviations from the intended interventions due to trial context. Unclear about who collected the data and the sources, but unlikely influenced by knowledge of assignments. It is unclear if any other metrics might have been collected regarding home care service use (e.g., level of care requirements).	x
Blom 2016[13]	mfa-(w/med+slfm)	ac	Home care (hours)	x/+	-	x	+	-	Very serious concerns: Unsure of the randomisation and allocation of clusters, and there is a large imbalance of cluster size. 38.8% missing data; Mortality - linked with home care use - among the substantial reasons for missingness. Reasons for much of the missing data not provided; the proportions of other and unknown dropout reasons are imbalanced between groups. Some concerns: Insufficient information to rule out any deviations due to trial context. Insufficient information regarding the planned analysis.	xx
Blom 2016[13]	mfa-(w/med+slfm)	ac	Home care (pts)	x/+	-	x	+	-	Very serious concerns: Unsure of the randomisation and allocation of clusters, and there is a large imbalance of cluster size. 38.8% missing data; Mortality - linked with home care use - among the substantial reasons for missingness. Reasons for much of the missing data not provided; the proportions of other and unknown dropout reasons are imbalanced between groups. Some concerns: Insufficient information to rule out any deviations due to trial context. Insufficient information regarding the planned analysis.	xx

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
Hall 1992[16]	hmcr & mfar(w/slfm)	hmcr & mfar	Home care (pts)	-	-	-	+	+	Some concerns: Insufficient details about the allocation concealment method. Insufficient information provided to assess any deviations from the intended interventions due to trial context. 23 persons who were admitted to care facilities or died are regarded as missing data; the proportions are fairly balanced between groups.	-
Kerse 2014[21]	rsk-mfa-	ac	Home care - domestic care only (pts)	+/+	-	x	+	-	Serious concern: Informative missingness was approximately half of the number of events.\nSome concerns: It is unclear whether the trial context led to changes in usual care. It is unclear whether the result may have been selected from multiple available.	x
Kerse 2014[21]	rsk-mfa-	ac	Home care - personal care only (pts)	+/+	-	x	+	-	Serious concern: There was more informative missingness than events.\nSome concerns: It is unclear whether the trial context led to changes in usual care. It is unclear whether the result may have been selected from multiple available.	x
Kukkonen-Harjula 2017[5]	ADL & ntr & exrc	ac	Home care (visits/ per person-years)	+	-	-	+	-	Some concerns: It is unclear if there were any deviations due to the trial context. There was a small imbalance in missingness due to mortality. It is unclear if the result was selected from multiple available.	-
Lewin 2013[24]	hmcr & educ & mfar	hmcr	Home care - personal care only (pts)	x	x	x	+	-	Very serious concerns: There are imbalances in the baseline characteristics, possibly due to the subverted randomisation and the reassignment of IG participants who did not participate in the programme. Insufficient information provided about how many IG participants were reassigned due to non-participation. If participants were reassigned, they were not analysed according to their initial assignment. 234 missing data, more than the known events (218).\nSome concerns: The pre-specified analysis plan is unavailable, unclear whether this was the only type of home care pre-specified.	xx
Meng 2005[61]	educ & mfar(w/med+slfm)	ac	Home care (pts)	-	x	x	+	x	Very serious concerns: Substantial losses to follow-up mainly due to death. Reasons for dropout not given but this was substantially higher in the nursing arm than the voucher arm (14.9% v 6%). Post-randomisation exclusion of substantial number of individuals on the basis of age. Data on the sample before exclusions was probably examined and is not provided\nSome concerns: No details on method of allocation provided. Insufficient information to rule out any deviations from the intended interventions due to trail context in both groups.	xx

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
Meng 2005[61]	educ & mfar(w/med+s lfm)	educ & vchr & mfar(w/med+s lfm)	Home care (pts)	-	x	x	+	x	Very serious concerns: Substantial losses to follow-up mainly due to death. Reasons for dropout not given but this was substantially higher in the nursing arm than the combination arm (14.9% v 5.3%). Post-randomisation exclusion of substantial number of individuals on the basis of age. Data on the sample before exclusions was probably examined and is not provided. Some concerns: No details on method of allocation provided. Insufficient information to rule out any deviations from the intended interventions due to trail context in both groups.	xx
Meng 2005[61]	educ & mfar(w/med+s lfm)	vchr	Home care (pts)	-	x	x	+	x	Very serious concerns: Substantial losses to follow-up mainly due to death. Reasons for dropout not given but this was substantially higher in the nursing arm than the voucher arm (14.9% v 6%). Post-randomisation exclusion of substantial number of individuals on the basis of age. Data on the sample before exclusions was probably examined and is not provided. Some concerns: No details on method of allocation provided. Insufficient information to rule out any deviations from the intended interventions due to trail context in both groups.	xx
Meng 2005[61]	educ & vchr & mfar(w/med+s lfm)	ac	Home care (pts)	-	x	x	+	x	Very serious concerns: Substantial losses to follow-up mainly due to death. Reasons for dropout not given. Post-randomisation exclusion of substantial number of individuals on the basis of age. Data on the sample before exclusions was probably examined and is not provided. Some concerns: No details on method of allocation provided. Insufficient information to rule out any deviations from the intended interventions due to trail context in both groups.	xx
Meng 2005[61]	vchr	ac	Home care (pts)	-	x	x	-	x	Very serious concerns: post-randomisation exclusion of substantial number of individuals on the basis of age. Of 459 and 439 randomised, 75 and 20 were lost prior to intervention delivery, and further losses to follow-up, substantial imbalance in losses prior to intervention delivery. Data on the sample before exclusions was probably examined and is not provided. Some concerns: No details on method of allocation provided. Insufficient information to rule out any deviations from the intended interventions due to trail context in both groups.	xx
Meng 2005[61]	vchr	educ & vchr & mfar(w/med+s lfm)	Home care (pts)	-	x	x	-	x	Very serious concerns: Substantial losses to follow-up mainly due to death. Reasons for dropout not given. Data on the sample before exclusions was probably examined and is not provided. These exclusions may have affected the analysis of the assigned interventions. Some concerns: No details on method of allocation provided. Insufficient information to rule out any deviations from the intended interventions due to trail context in both groups.	xx

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
Monteserin Nadal 2008[25]	educ & rsk-mfa-	ac	Home care (pts)	-	-	x	+	-	Serious concerns: Data missing for 71/308 and 74/312 with only 17 and 19 events per arm. Substantial data missing due to mortality which is associated with care home admission. Other reasons not known. Some concerns: Unclear of allocation concealment method. Insufficient information to rule out deviations from the intended interventions due to trial context. The pre-specified analysis plan is unavailable.	x
Newbury 2001[26]	mfa-(w/med)	ac	Home care (pts)	-	-	x	+	-	Serious concerns: 11/100 (11%) not included, the numbers of deaths and other dropouts are not balanced between the groups though the number of missing is similar (IG n=5 vs CG n=6). Some concerns: Unclear whether allocation was adequate. Unclear of any deviations from the intended interventions due to trial context. The pre-specified plan is not available.	x
Thomas 2007[100]	mfar(w/med)	ac	Home care (pts)	-	-	x	-	-	Serious concern: The reasons of missing data are unknown, but there seemed more missing data (63) than events (8). Some concerns: The method of allocation concealment is unclear. Insufficient information provided about any deviations from the intended interventions due to trial context. Unclear how data was ascertained. Pre-specified analysis plan is unavailable.	x

Table 21. Homecare services usage: long-term timeframe

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
Bouman 2008[50]	mfar(w/med)	ac	Home care - domestic care only (hours)	+	-	+	+	-	Some concerns: No information about any deviations from the intended intervention due to trial context, though the authors suggested no methodological drawbacks. Unblinded participants self-assessing the outcome which involves judgement. The published protocol stated that regression technique would be used, which matches the analyses description in the costs report. GLL model (negative binominal distribution) was used which seems appropriate, but the pre-specified regression model is not known.	-
Bouman 2008[50]	mfar(w/med)	ac	Home care - personal care only (hours)	+	-	+	+	-	Some concerns: No information about any deviations from the intended intervention due to trial context, though the authors suggested no methodological drawbacks. Unblinded participants self-assessing the outcome which involves judgement. The published protocol stated that regression technique would be used, which matches the analyses description in the costs report. Negative binominal distribution model was used which seems appropriate, but the pre-specified regression model is not known.	-

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
Hall 1992[16]	hmcr & mfar(w/slfm)	hmcr & mfar	Home care (pts)	-	-	x	+	+	Serious concerns: 38 persons who were admitted to care facilities or died are regarded as missing data; the overall proportion of missing data is imbalanced. Some concerns: Insufficient details about the allocation concealment method. Insufficient information provided to assess any deviations from the intended interventions due to trial context. 23 persons who were admitted to care facilities or died are regarded as missing data; the proportions are fairly balanced between groups.	x
Howel 2019[101]	wlfr	ac	Home care (Only pts receiving care/ hours per week)	+	+	x	+	+	Serious concerns: Assuming 562/755 (74.4%, IG 283, CG 279) participants who completed the 24m interview were assessed and analysed; the missing data amount and reasons (viz., death, withdrawal, loss to follow-up) seem balanced, but the outcome is likely to depend on the true value of these missing data.	x
Howel 2019[101]	wlfr	ac	Home care (pts)	+	+	x	+	+	Serious concerns: Assuming 562/755 (74.4%, IG 283, CG 279) participants who completed the 24m interview were assessed and analysed; the missing data amount and reasons (viz., death, withdrawal, loss to follow-up) seem balanced, but the outcome is likely to depend on the true value of these missing data.	x
Kerse 2014[21]	rsk-mfa-	ac	Home care - domestic care only (pts)	+/+	-	x	+	-	Serious concern: There was a similar amount of informative missingness as events. Some concerns: It is unclear whether the trial context led to changes in usual care. It is unclear whether the result may have been selected from multiple available.	x
Kerse 2014[21]	rsk-mfa-	ac	Home care - personal care only (pts)	+/+	-	x	+	-	Serious concern: There was more informative missingness than events. Some concerns: It is unclear whether the trial context led to changes in usual care. It is unclear whether the result may have been selected from multiple available.	x
Kukkonen-Harjula 2017[5]	ADL & ntr & exrc	ac	Home care (visits/ per person-years)	+	-	-	+	-	Some concerns: It is unclear if there were any deviations due to the trial context. There was some missingness but this was balanced between arms. It is unclear if the result was selected from multiple available.	-
Liimatta 2019[96]	exrc & mfa-(w/med)	ac	Home care (visits/ per person-years)	-	-	+	+	-	Some concerns: Allocation concealment method unclear. Unclear of any deviations from the intended interventions due to trial context. The pre-specified analysis plan was unavailable.	-
Metzelthin 2013[7]	educ & mfar(w/med+slfm)	ac	Home care (hours)	-/-	-	x	+	-	Serious concern: 93/346 missing with substantial imbalance in missingness between the arms. Some concerns: It appears the allocation was random and concealed, although it appears the authors intended to bias the allocation with a more urban intervention arm and more rural control arm but they were unsuccessful in implementing this approach. Participants were recruited after clusters were allocated and it is unclear if this was affected by knowledge of the allocation. It is unclear if there were deviations in care due to the trial context. The result may have been selected from multiple available.	x

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
Pathy 1992[97]	rsk-mfa-	ac	Home care (pts)	-	-	x	+	-	Serious concerns: 419/725 (57.8%) included in the provided/included in this analysis, i.e., 42.2% missing. Nearly half of the participants who did not provide the data died or admitted to nursing home (201/725). Some concerns: Randomisation and allocation concealment methods unclear. Insufficient information about any deviations from the intended interventions due to trial context. The pre-specified analysis plan is unavailable.	X
Thomas 2007[100]	mfar(w/med)	ac	Home care (pts)	-	-	x	-	-	Serious concern: The reasons of missing data are unknown, but there seemed more missing data (99) than events (9). Some concerns: The method of allocation concealment is unclear. Insufficient information provided about any deviations from the intended interventions due to trial context. Unclear how data was ascertained. Pre-specified analysis plan is available.	X
von Bonsdorff 2008[62]	exrc	ac	Home care (pts)	+	-	-	+	-	Some concerns: Uncertain of any material deviations from intended interventions due to trial context. The pre-specified analysis plan is unavailable. 10.8% participants were not included in this outcome analysis, the reasons of those not giving consent to data collection were not known.	-

Table 22. Health status: short-term timeframe

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
Auvinen 2020[43]	hmcr & med	hmcr	EQ-5D EQ-VAS (Health today 0-100)	+	-	-	-	x	Serious concerns: Multiple models were fitted with only one result reported. Some concerns: 28 or 29 of 258 lost from intervention arm. 34 of 254 lost from control arm. Most withdrawals were deaths so clearly linked to health status. It is not clear whether participants knew their group assignment, and self-reported health status requires significant judgment. Insufficient information about any deviations from the intended interventions due to trial context in either group.	x
Auvinen 2020[43]	hmcr & med	hmcr	EQ-5D-3L (self-completion)	+	-	-	-	x	Serious concerns: Multiple models were fitted with only one result reported. Some concerns: 28 or 29 of 258 lost from intervention arm. 34 of 254 lost from control arm. Most withdrawals were deaths so clearly linked to health status. It is not clear whether participants knew their group assignment, and self-reported health status requires significant judgment. Insufficient information about any deviations from the intended interventions due to trial context in either group.	x

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
Bleijenberg 2016[63]	rsk-mfa-	ac	EQ-5D-3L (self-completion)	x/+	-	x	+	-	Very serious concerns: There was substantial imbalance in cluster size between the arms (2042/11, 3451/13, 2663/11), education level and socioeconomic status (both higher in the control arm). 89/790 and 164/1446 did not return questionnaires at 6 months; reasons for loss to follow-up at 6 months are unclear (and therefore whether they are balanced), reasons provided at 12 months include mortality and being too unwell to fill in the questionnaire. Some concerns: There is insufficient information to judge potential deviations due to the trial context. Multiple analyses may have been conducted.	xx
Clark 2012[102]	eng & educ	ac	SF-36: Mental Component Summary (MCS) score	-	-	-	-	-	Some concerns: Insufficient information about any deviations from the intended interventions due to trial context, e.g., contamination between the groups within each site. 22% missing data; the missing data are fairly balanced and most of them seem not related to ill health. Unblinded participants self-rated the outcome. The pre-specified analysis plan is unavailable.	-
Clark 2012[102]	eng & educ	ac	SF-36: Physical Component Summary (PCS) score	-	-	-	-	-	Some concerns: Insufficient information about any deviations from the intended interventions due to trial context, e.g., contamination between the groups within each site. 22% missing data; the missing data are fairly balanced and most of them seem not related to ill health. Unblinded participants self-rated the outcome. The pre-specified analysis plan is unavailable.	-
Cutchin 2009[75]	mfar	ac	SF-12: mental component summary	-	-	x	-	-	Serious concerns: Unclear of the reasons of missing data though proportions are balanced between groups. Some concerns: The method of allocation concealment is unclear. Insufficient information about any deviations from intended interventions due to trial context. The participants self-reported the outcomes. The pre-specified plan is unavailable.	x
Cutchin 2009[75]	mfar	ac	SF-12: Physical component summary	-	-	x	-	-	Serious concerns: Unclear of the reasons of missing data though proportions are balanced between groups. Some concerns: The method of allocation concealment is unclear. Insufficient information about any deviations from intended interventions due to trial context. The participants self-reported the outcomes. The pre-specified plan is unavailable.	x
Gustafson 2021[78]	aids & educ & comm	ac	PROMIS Global Mental Health (GMH) [Patient-Reported Outcomes Measurement Information System Global Health scale Mental Health summary score]	+	-	x	-	-	Serious concerns: 10% participants did not complete the 6 months survey, the overall proportion of participants not completing the follow-up was not imbalanced between groups, the reasons included death, health reasons, entered assisted living/nursing home, did not like randomisation, unknow, and did not reconsent, but the proportion of these reasons in each group is not reported. Some concerns: Insufficient information to judge any deviations from the intended interventions due to trial context. Participants were unblinded and self-assessed the outcome. Possibly no substantial difference between the published protocol and result report, any amendment before publishing the protocol cannot be certain.	x

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
Gustafson 2021[78]	aids & educ & comm	ac	PROMIS Global Physical Health (GPH) [Patient-Reported Outcomes Measurement Information System Global Health scale Physical Health summary score]	+	-	x	-	-	Serious concerns: 10% participants did not complete the 6 months survey, the overall proportion of participants not completing the follow-up was not imbalanced between groups, the reasons included death, health reasons, entered assisted living/nursing home, did not like randomisation, unknow, and did not reconsent, but the proportion of these reasons in each group is not reported. Some concerns: Insufficient information to judge any deviations from the intended interventions due to trial context. Participants were unblinded and self-assessed the outcome. Possibly no substantial difference between the published protocol and result report, any amendment before publishing the protocol cannot be certain.	x
Jing 2018[79]	exrc & psyc	psyc	Health self-evaluation (Jing 2018)	-	-	+	-	-	Some concerns: Lack of information about randomisation process. Uncertainty about any deviation from intended interventions due to trial context. The participants self-assessed on a bespoke outcome measure. The pre-specified analysis plan is unavailable.	-
King 2012[4]	hmcr & ADL & mfar(w/slfm)	hmcr	EQ-5D EQ-VAS (0-10)	+/+	-	-	-	-	Some concerns: It is unclear whether there were any changes in usual care due to the trial context. There was informative missingness but reasonably balanced. Participants self-reported their health status. The result may have been selected from multiple available.	-
King 2012[4]	hmcr & ADL & mfar(w/slfm)	hmcr	SF-36: Mental Component Summary (MCS) score	+/+	-	-	-	-	Some concerns: It is unclear whether there were any changes in usual care due to the trial context. There was informative missingness but reasonably balanced. Participants self-reported their health status. The result may have been selected from multiple available.	-
King 2012[4]	hmcr & ADL & mfar(w/slfm)	hmcr	SF-36: Physical Component Summary (PCS) score	+/+	-	-	-	-	Some concerns: It is unclear whether there were any changes in usual care due to the trial context. There was informative missingness but reasonably balanced. Participants self-reported their health status. The result may have been selected from multiple available.	-
Metzelthin 2013[7]	educ & mfar(w/med+slfm)	ac	EQ-5D-3L (self-completion)	-/-	-	x	-	-	Serious concern: There was substantial imbalance in missingness between the arms. Some concerns: It appears the allocation was random and concealed, although it appears the authors intended to bias the allocation with a more urban intervention arm and more rural control arm but they were unsuccessful in implementing this approach. Participants were recruited after clusters were allocated and it is unclear if this was affected by knowledge of the allocation. It is unclear if there were deviations in care due to the trial context. It is unclear how participants were assigned their lost to follow-up status.	x

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
Morgan 2019[47]	exrc	ac	EQ-5D-3L (self-completion)	+	-	x	-	-	Serious concerns: 7 missing from 51 (13.7%), 6/34 (17.6%) missing from intervention arm, 1/17 (5.9%) missing from controls. The number of people included in this analysis is unclear so assuming same as GDS because the data was analysed and provided by author at the same time upon email request. Health status likely to be related with dropout. Reasons of missing for 3 in IG and 1 in CG not provided; in IG, 1 died, 2 discontinued study. Some concerns: Insufficient information to judge any deviations from the intended interventions due to trial context. Unblinded participants self-assessed. The pre-specified analysis plan is unclear.	x
Parsons J 2012[103]	hmcr & mfar(w/slfm)	hmcr & mfa-	SF-36: Mental Component Summary (MCS) score	-/x	-	+	-	-	Serious concern: It appeared participants were recruited after clusters were randomised and those identifying participants may not have been blinded to allocation; additionally, the groups appeared imbalanced with the intervention group probably having higher needs due to older age, more of them living alone, and worse health status. Some concerns: It is unclear whether the allocation sequence for clusters was concealed and whether the resulting allocation was balanced. It is unclear if there were deviations from the intended intervention related to trial context. Participants who may have been aware of their allocation self-assessed their health status. It is unclear whether the result presented was selected from multiple available.	x
Parsons J 2012[103]	hmcr & mfar(w/slfm)	hmcr & mfa-	SF-36: Physical Component Summary (PCS) score	-/x	-	+	-	-	Serious concern: It appeared participants were recruited after clusters were randomised and those identifying participants may not have been blinded to allocation; additionally, the groups appeared imbalanced with the intervention group probably having higher needs due to older age, more of them living alone, and worse health status. Some concerns: It is unclear whether the allocation sequence for clusters was concealed and whether the resulting allocation was balanced. It is unclear if there were deviations from the intended intervention related to trial context. Participants who may have been aware of their allocation self-assessed their health status. It is unclear whether the result presented was selected from multiple available.	x
Parsons M 2012[38]	hmcr & mfar	hmcr & mfa-	EQ-5D EQ-VAS (Health today 0-100)	+/-	-	-	-	-	Some concerns: Unclear whether and when the personnel recruiting participants would be unblinded to the assignments. Participants and personnel were not blinded to assignments, and the authors suggested that the Hawthorne effect and experimenter effects were limitations, although it was impossible to determine the extent. Overall, 17% of participants were lost to follow-up; more than 5% of participants died. There were small imbalances in losses to follow-up, which could be due to chance. Unblinded participants self-assessed the outcome. Unsure whether this outcome was pre-specified.	-

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
Parsons M 2017[8]	hmcr & ADL & mfar(w/slfm)	hmcr & mfa-	EQ-5D EQ-VAS (Health today 0-100)	-	-	x	-	-	Serious concerns: 56/113 (50%) participants were not followed up at 6m; there is some imbalance in missingness due to deaths and little further information. Some concerns: Computer-mediated minimisation used; concealment not mentioned. Participants and personnel were not blinded to assignments, and the authors suggested that the Hawthorne effect and experimenter effects were limitations, although it was impossible to determine the extent. Unblinded participants self-assessed the outcome. Unsure whether this outcome was pre-specified.	x
Ploeg 2010[28]	educ & mfar(w/med)	ac	Health Utilities Index Mark 3	+	-	x	-	-	Serious concerns: 10.6% participants not included; the outcome was likely to depend on the true values of those died and dropouts but these reasons do not explain all the missing data. Some concerns: Insufficient information provided to make judgement about any deviations from the intended interventions due to trial context. Participants were not blinded and self-assessed the outcome. The pre-specified analysis plan is unavailable.	x
Stewart 2005[64]	mfa-	mfa-	EQ-5D EQ-VAS (Health today 0-100)	+	-	-	-	-	Main concerns: 27/30 lost from 160/161, most losses to follow-up due to death or hospitalisation. Some concerns: No evidence of contamination, and both active interventions and able to cross-refer so deviations unlikely, but insufficient information to rule out any deviation in both groups. Unblinded participants self-assessed the outcome. Unadjusted and adjusted results presented but unclear what other analyses may have been produced.	-
Stewart 2005[64]	mfa-	mfa-	EQ-5D-3L (self-completion)	+	-	-	-	-	Main concerns: 27/30 lost from 160/161, most losses to follow-up due to death or hospitalisation. Some concerns: No evidence of contamination, and both active interventions and able to cross-refer so deviations unlikely, but insufficient information to rule out any deviation in both groups. Unblinded participants self-assessed the outcome. Unadjusted and adjusted results presented but unclear what other analyses may have been produced.	-
Suijker 2016[10]	mfar(w/med)	ac	EQ-5D-3L (self-completion)	+/-	-	x	+	+	Serious concern: Substantial missing data for unknown reasons. Some concerns: Unclear when GP practices were randomised and whether participants were identified and recruited prior to randomisation or whether those identifying participants were aware of the assignment. It is unclear whether there were deviations from the intended interventions due to trial context.	x

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
Szanton 2011[11]	ADL&aids&educ&exrc&mfar(w/med+slfm)	ac	EQ-5D EQ-VAS (Health today 0-100)	-	-	x	-	-	Serious concerns: 12.5% missing data; the reasons of not completing the follow-up are linked to health status, and the reasons and proportions are imbalanced between groups. Some concerns: The methods of randomisation and allocation concealment are unclear. Insufficient information provided to judge any deviations from the intended interventions due to trial context. Participants were not blinded and they self-assessed the outcome. The pre-specified analysis plan is unavailable.	x
Takahashi 2012[65]	mntr-mfa-	ac	Health Perception (EVGFP / 1-5, SF-36)	-	-	x	-	+	Serious concerns: 39/205 (19.0%) participants not included, partly due to deaths which is imbalanced between groups. Some concerns: The method of allocation concealment is unclear. Unclear whether any deviations from the intended interventions happened due to trial context. Participants were aware of the intervention assignments and self-reported the outcome.	x
Takahashi 2012[65]	mntr-mfa-	ac	SF-12: mental component summary	-	-	x	-	+	Serious concerns: 39/205 (19.0%) participants not included, partly due to deaths which is imbalanced between groups. Some concerns: The method of allocation concealment is unclear. Unclear whether any deviations from the intended interventions happened due to trial context. participants were aware of the intervention assignments and self-reported the outcome.	x
Takahashi 2012[65]	mntr-mfa-	ac	SF-12: Physical component summary	-	-	x	-	+	Serious concerns: 39/205 (19.0%) participants not included, partly due to deaths which is imbalanced between groups. Some concerns: The method of allocation concealment is unclear. Unclear whether any deviations from the intended interventions happened due to trial context. participants were aware of the intervention assignments and self-reported the outcome.	x
Tuntland 2015[104]	hmcr & ADL & aids & mfa-(w/slfm)	hmcr & mfa-	COOP/ Wonca Charts - Overall health chart (Holm & Steen, 2005; van Weel, 1993)	+	-	-	-	-	Some concerns: Unclear of any deviations or none from the intended intervention due to trial context. 16.4% of missing data though reasons and proportions were balanced between groups. Participants were not blinded and self-assessed the outcome. Unclear of the pre-planned analysis.	-
van der Pols-Vijlbrief 2017[67]	hmcr & ntr & mfar	hmcr	QALY from EQ-5D-3L	-	-	-	-	-	Some concerns: Unclear of allocation concealment. Unclear whether deviations from the intended interventions due to trial context were present. Main concerns: 12.3% missing data Withdrew: IG 3/79 (3.8%) vs CG 6/76 (7.9%) (imbalance, lack of info), Health problems: IG 2/79 (2.5%) vs CG 1/76 (1.3% deaths: IG 4/79 (5.1%) vs CG 3/76 (3.95). Unblinded participants self-assessed the outcome. The pre-specified plan is unavailable.	-

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
van der Pols-Vijlbrief 2017[67]	hmcr & ntr & mfar	hmcr	SF-12: mental component summary	-	-	-	-	-	Some concerns: Unclear of the allocation concealment. Unclear whether deviations from the intended interventions due to trial context were present. Main concerns: 12.3% missing data Withdrew: IG 3/79 (3.8%) vs CG 6/76 (7.9%) (imbalance, lack of info), Health problems: IG 2/79 (2.5%) vs CG 1/76 (1.3%) deaths: IG 4/79 (5.1%) vs CG 3/76 (3.9%). Unblinded participants self-assessed the outcome. The pre-specified plan is unavailable.	-
van der Pols-Vijlbrief 2017[67]	hmcr & ntr & mfar	hmcr	SF-12: Physical component summary	-	-	-	-	-	Some concerns: Unclear of the allocation concealment. Unclear whether deviations from the intended interventions due to trial context were present; Main concerns: 12.3% missing data Withdrew: IG 3/79 (3.8%) vs CG 6/76 (7.9%) (imbalance, lack of info), Health problems: IG 2/79 (2.5%) vs CG 1/76 (1.3%) deaths: IG 4/79 (5.1%) vs CG 3/76 (3.9%). Unblinded participants self-assessed the outcome. The pre-specified plan is unavailable.	-
van Dongen 2020[90]	ntr & exrc	ac	EQ-5D EQ-VAS (Health today 0-100)	-	+	x	-	-	Serious concerns: 16/168 (9.5%) participants withdrew (missing data), 13 of them due to medical reason, physical complaints, mental complaints, and there is imbalance between groups. Some concerns: Unclear randomisation and allocation method. Unblinded participants might have prior perception when self-assessing the outcome. Protocol was published but after the start of trial; it stated linear mixed model analysis and it was conducted; crude model results were used in the main text of report for interpretation of treatment effects, the results from the mixed models were also presented and the reason of not using was given.	x
van Dongen 2020[90]	ntr & exrc	ac	EQ-5D-5L (self-completion)	-	+	x	-	-	Serious concerns: 16/168 (9.5%) participants withdrew (missing data), 13 of them due to medical reason, physical complaints, mental complaints, and there is imbalance between groups. Some concerns: Unclear randomisation and allocation method. Unblinded participants might have prior perception when self-assessing on EQ-5D-5L. The trial was registered prospectively in 2016 shortly after the trial commencement. The analysis details in study design report published in 2019 match those in the result report. However, the pre-specified plan nor any tracked changes during the time are unavailable.	x
van Dongen 2020[90]	ntr & exrc	ac	QALY from EQ-5D-5L	-	+	x	-	-	Serious concerns: 16/168 (9.5%) participants withdrew (missing data), 13 of them due to medical reason, physical complaints, mental complaints, and there is imbalance between groups. Some concerns: Unclear randomisation and allocation method. Unblinded participants might have prior perception when self-assessing on EQ-5D-5L. The trial was registered prospectively in 2016 shortly after the trial commencement. The analysis details in study design report published in 2019 match those in the result report. However, the pre-specified plan nor any tracked changes during the time are unavailable.	x

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
van Hout 2010[32]	mfar(w/med)	ac	SF-36: Mental Component Summary (MCS) score	+	-	x	-	-	Serious concerns: 27.3% missing data, the exact reasons of all the missing data are not provided for this timepoint. Some concerns: Insufficient information provided about any deviations from the interventions due to trial context. Participants self-assessed the outcome. The pre-specified analysis plan is unavailable.	x
van Hout 2010[32]	mfar(w/med)	ac	SF-36: Physical Component Summary (PCS) score	+	-	x	-	-	Serious concerns: 27.3% missing data, the exact reasons of all the missing data are not provided for this timepoint. Some concerns: Insufficient information provided about any deviations from the interventions due to trial context. Participants self-assessed the outcome. The pre-specified analysis plan is unavailable.	x
Walters 2017[68]	mfar(w/slfm)	ac	EQ-5D-5L (self-completion)	+	-	x	-	-	Serious concerns: There is also high risk concern based on missing data which are likely related with the outcome true value, based on the reasons to drop out and the different proportions in each group. 48 (94%) participants completed the 3-month and 6-month outcome assessments. Three people withdrew from the study, one in the intervention arm (26) and two in the TAU arm (25). Some concerns: Insufficient information to rule out any deviations from the intended interventions due to trial context in both groups. Unblinded participants self-assessed the outcome. Some concerns related to the lack of information about the pre specified analysis plan.	x
Walters 2017[68]	mfar(w/slfm)	ac	QALY from EQ-5D-5L	+	-	x	-	-	Serious concerns: There is also high risk concern based on missing data which are likely related with the outcome true value, based on the reasons to drop out and the different proportions in each group. 48 (94%) participants completed the 3-month and 6-month outcome assessments. Three people withdrew from the study, one in the intervention arm (26) and two in the TAU arm (25). Some concerns: Insufficient information to rule out any deviations from the intended interventions due to trial context in both groups. Unblinded participants self-assessed the outcome. Some concerns related to the lack of information about the pre specified analysis plan.	x
Whitehead 2016[48]	hmcr & ADL & aids & mfa-	hmcr & mfa-	EQ-5D-3L (self-completion)	+	-	x	-	-	Serious concerns: 8/30 (26%) participants not included due to deaths and withdrew/ lost to follow-up, the reasons of dropouts between groups are imbalanced. Some concerns: Insufficient information to judge any deviations from the intended interventions although any material deviations seem unlikely. Participants self-assessed but they all were receiving reablement so lack of blinding may not influence their self-assessment. Post hoc analysis changes from descriptive statistics to using regression to calculate change in score from baseline.	x

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
Whitehead 2016[48]	hmcr & ADL & aids & mfa-	hmcr & mfa-	SF-36: Mental Component Summary (MCS) score	+	-	x	-	-	Serious concerns: 8/30 (26%) participants not included due to deaths and withdrew/ lost to follow-up, the reasons of dropouts between groups are imbalanced. Some concerns: Insufficient information to judge any deviations from the intended interventions although any material deviations seem unlikely. Participants self-assessed but they all were receiving reablement so lack of blinding may not influence their self-assessment. Post hoc analysis changes from descriptive statistics to using regression to calculate change in score from baseline.	x
Whitehead 2016[48]	hmcr & ADL & aids & mfa-	hmcr & mfa-	SF-36: Physical Component Summary (PCS) score	+	-	x	-	-	Serious concerns: 8/30 (26%) participants not included due to deaths and withdrew/ lost to follow-up, the reasons of dropouts between groups are imbalanced. Some concerns: Insufficient information to judge any deviations from the intended interventions although any material deviations seem unlikely. Participants self-assessed but they all were receiving reablement so lack of blinding may not influence their self-assessment. Post hoc analysis changes from descriptive statistics to using regression to calculate change in score from baseline.	x
Wong 2019[12]	mfar(w/slfm)	ac	QALY from SF-12	x	-	-	+	-	Serious concern: Allocation was likely predictable. Some concerns: 466/540 (86.3%) participants included; the proportions of some reasons are not imbalanced. Unsure of any intervention deviation from the intended interventions due to trial context. The pre-analysis plan is unavailable.	x
Wong 2019[12]	mfar(w/slfm)	ac	SF-6D (QOL from SF-12)	x	-	-	+	-	Serious concern: Allocation was likely predictable. Some concerns: 466/540 (86.3%) participants included; the proportions of some reasons are not imbalanced. Unsure of any intervention deviation from the intended interventions due to trial context. The pre-analysis plan is unavailable.	x

Table 23. Health status: medium-term timeframe

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
Bleijenberg 2016[63]	rsk-mfa-	ac	EQ-5D-3L (self-completion)	x/+	-	x	+	-	Very serious concerns: There was substantial imbalance in cluster size between the arms (2042/11, 3451/13, 2663/11), education level and socioeconomic status (both higher in the control arm). 162/790 and 142/856 did not return questionnaires at 12 months; reasons include mortality and being too unwell to fill in the questionnaire. Most reasons are unknown (and therefore whether they are balanced): 119 and 89. Some concerns: There is insufficient information to judge potential deviations due to the trial context. Multiple analyses may have been conducted.	xx

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
Blom 2016[13]	mfa-(w/med+slfm)	ac	Health Perception (EVGFP / 1-5, SF-36)	x/+	-	x	-	+	Very serious concerns: Unsure of the randomisation and allocation of clusters, and there is a large imbalance of cluster size. 38.8% missing data; mortality, care admission, too ill are linked with health status; the proportions of other and unknown dropout reasons are imbalanced between groups. Some concerns: Insufficient information to rule out any deviations due to trial context. Unblinded participants self-assessed the outcomes.	xx
Blom 2016[13]	mfa-(w/med+slfm)	ac	QALY from EQ-5D EQ-VAS (0-100)	x/+	-	x	-	-	Very serious concerns: Unsure of the randomisation and allocation of clusters, and there is a large imbalance of cluster size. If assuming deaths (n=105) were assigned zero score, 432/1379 (31.3%) missing data; ; some dropout reasons, e.g., too ill, residential care and nursing home admission are linked to this outcome; the proportions of other and unknown dropout reasons are imbalanced between groups. Some concerns: Insufficient information to rule out any deviations due to trial context. Unblinded participants self-assessed the outcomes. Unclear of the analysis used.	xx
Borrows 2013[69]	aids	mfa-	EQ-5D-3L (self-completion)	+	-	-	-	-	Some concerns: Insufficient information about any deviations from the intended intervention due to trial context. The outcome assessors (participants) were aware of the interventions. The missing data could be related to true value. The pre-specified analysis plan is unavailable.	-
Bouman 2008[50]	mfar(w/med)	ac	Self-rated Health (Dutch educational system)	+	-	x	-	-	Serious concerns: more than 11.2% missing data, death and illness likely depend on its true value, there is imbalance between the groups due to self-withdrawal. Some concerns: No information about any deviations from the intended intervention due to trial context, though the authors suggested no methodological drawbacks. Unblinded participants self-assessing the outcome which involves judgement. Unblinded participants self-assessing the outcome which involves judgement. The published protocol stated that regression technique would be used, which matches the analyses description in the costs report. Linear mixed-effects regression model was used which seems appropriate, but the pre-specified regression model is not known.	x
Brettschneider 2015[51]	mfar(w/med)	ac	EQ-5D EQ-VAS (Health today 0-100)	-	-	x	-	+	Serious concerns: Among those completed baseline, 230/305 (75.4%) participants included, 66.7% of missing data were due to deaths and ill health. Some concerns: Uncertainty about allocation concealment (particularly those recruited vis registration office). Participants and intervention deliverers were aware of the allocated interventions, unclear of any deviations from the intended interventions due to trial context. Unblinded participants self-assessing the outcome.	x

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
Brettschneider 2015[51]	mfar(w/med)	ac	EQ-5D-3L (self-completion)	-	-	x	-	+	Serious concerns: Assuming same as QALY n numbers: 278/305 (145+133; 91.1%) participants included. 21/27 of the missing data participants withdrew; the reasons are not reported. Some concerns: Uncertainty about allocation concealment (particularly those recruited vis registration office). Participants and intervention deliverers were aware of the allocated interventions, unclear of any deviations from the intended interventions due to trial context. Unblinded participants self-assessing the outcome.	x
Brettschneider 2015[51]	mfar(w/med)	ac	QALY from EQ-5D-3L	-	-	x	-	+	Serious concerns: Among those completed baseline, 278/305 (145+133; 91.1%) participants included. 8.9% missing data, withdrawal reasons unknown. Some concerns: Uncertainty about allocation concealment (particularly those recruited vis registration office). Participants and intervention deliverers were aware of the allocated interventions, unclear of any deviations from the intended interventions. Unblinded participants self-reporting the outcome.	x
Cameron 2013[70]	exrc & mfar(w/med+slfm)	ac	EQ-5D EQ-VAS (Health today 0-100)	+	-	-	-	+	Some concerns: Insufficient information about any deviations from the intended interventions due to trial context. 11.2% missing data mainly due to death. Unblinded participants self-assessed the outcome.	-
Cameron 2013[70]	exrc & mfar(w/med+slfm)	ac	EQ-5D-3L (self-completion)	+	-	+	-	+	Some concerns: Insufficient information about any deviations from the intended interventions due to trial context. Unblinded participants self-assessed the outcome.	-
Cameron 2013[70]	exrc & mfar(w/med+slfm)	ac	QALY from EQ-5D-3L	+	-	+	-	-	Some concerns: Insufficient information about any deviations from the intended interventions due to trial context. Unblinded participants self-assessed the outcome. The pre-specified calculation and analysis methods are unavailable.	-
Cutchin 2009[75]	mfar	ac	SF-12: mental component summary	-	-	x	-	-	Serious concern: Unclear of the reasons of missing data though proportions are imbalanced between groups, 14.3% (n=48/56) in IG vs 5.6% (n=3/54) in CG are not included, though the adjusted treatment effect is not statistically significant. Some concerns: The method of allocation concealment is unclear. Insufficient information about any deviations from intended interventions due to trial context. The participants self-reported the outcomes. The pre-specified plan is unavailable.	x
Cutchin 2009[75]	mfar	ac	SF-12: Physical component summary	-	-	x	-	-	Serious concern: Unclear of the reasons of missing data though proportions are imbalanced between groups, 14.3% (n=48/56) in IG vs 5.6% (n=3/54) in CG are not included, though the adjusted treatment effect is not statistically significant. Some concerns: The method of allocation concealment is unclear. Insufficient information about any deviations from intended interventions due to trial context. The participants self-reported the outcomes. The pre-specified plan is unavailable.	x
Dorresteijn 2016[52]	ADL	ac	SF-6D (QOL from SF-12)	+	-	x	-	-	Serious concerns: 36/195 and 64/194 lost. Loss to follow-up included for health reasons and there is an imbalance between arms. Some concerns: Insufficient information to rule out deviations from intended interventions due to trial context in both groups. Unblinded participants self-assessed outcomes. The pre-analysis plan is unavailable.	x

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
Gustafson 2021[78]	aids & educ & comm	ac	PROMIS Global Mental Health (GMH) [Patient-Reported Outcomes Measurement Information System Global Health scale Mental Health summary score]	+	-	x	-	-	Serious concerns: 20.5% participants did not complete the 12 months survey, the overall proportion of participants not completing the follow-up was not imbalanced between groups, the reasons included death, health reasons, entered assisted living/nursing home, did not like randomisation, unknow, and did not reconsent, but the proportion of these reasons in each group is not reported. Some concerns: Insufficient information to judge any deviations from the intended interventions due to trial context. Participants were unblinded and self-assessed the outcome. Possibly no substantial difference between the published protocol and result report, any amendment before publishing the protocol cannot be certain.	x
Gustafson 2021[78]	aids & educ & comm	ac	PROMIS Global Physical Health (GPH) [Patient-Reported Outcomes Measurement Information System Global Health scale Physical Health summary score]	+	-	x	-	-	Serious concerns: 20.5% participants did not complete the 12 months survey, the overall proportion of participants not completing the follow-up was not imbalanced between groups, the reasons included death, health reasons, entered assisted living/nursing home, did not like randomisation, unknow, and did not reconsent, but the proportion of these reasons in each group is not reported. Some concerns: Insufficient information to judge any deviations from the intended interventions due to trial context. Participants were unblinded and self-assessed the outcome. Possibly no substantial difference between the published protocol and result report, any amendment before publishing the protocol cannot be certain.	x
Henderson 2005[20]	mfar	ac	Health Perception Scale (Henderson 2005, 2005)	+/x	+	x	+	-	Very serious concerns: The recruitment method seemed consistent across the clusters; however, the researchers already knew the cluster allocations and informed the participants about the intervention details of the cluster they belonged to. Missingness (37) was substantial and imbalanced between arms for deaths and overall. Some concerns: No pre-specified analysis plan available.	xx
Hogg 2009[54]	mfar(w/med)	ac	SF-36: Mental Component Summary (MCS) score	-	-	-	-	x	Serious concerns: The reported results may have been chosen from multiple eligible analyses of the data. Some concerns: Although the allocation seems random and concealed, there are some imbalances in the baseline characteristics. Some contamination was reported by the authors, but it was judged unlikely to affect the outcome. 7% missing data; 3 people died in the intervention group which could be related with the outcome, but due to the very low number of participants in a sample of more than 100 participants it is very unlikely this had any real impact. Unblinded participants self-assessed the outcomes.	x

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
Hogg 2009[54]	mfar(w/med)	ac	SF-36: Physical Component Summary (PCS) score	-	-	-	-	x	Serious concerns: The reported results may have been chosen from multiple eligible analyses of the data. Some concerns: Although the allocation seems random and concealed, there are some imbalances in the baseline characteristics. Some contamination was reported by the authors, but it was judged unlikely to affect the outcome. 7% missing data; 3 people died in the intervention group which could be related with the outcome, but due to the very low number of participants in a sample of more than 100 participants it is very unlikely this had any real impact. Unblinded participants self-assessed the outcomes.	x
Howel 2019[101]	wlfr	ac	CASP-19 (0-57)	+	+	x	-	+	Serious concerns: 21.2% participants as missing data, reasons included death, withdrawal, declined IG intervention; the number of known withdrawals at the time was imbalanced between groups but most of the missing data in CG were not explained. Some concerns: Participants were unblinded and self-assessed the outcome.	x
Liimatta 2019[96]	exrc & mfa-(w/med)	ac	15D HRQoL (15-75)	-	-	-	-	-	Some concerns: Allocation concealment method unclear. Unclear of any deviations from the intended interventions due to trial context. The overall proportion of missing data and the reasons are not imbalanced between groups, and the total amount of missing data is 13.3%. Participants were not blinded and self-assessed the outcome. The pre-specified analysis plan was unavailable.	-
Metzelthin 2013[7]	educ & mfar(w/med+slfm)	ac	EQ-5D-3L (self-completion)	-/-	-	x	-	-	Serious concern: There was substantial imbalance in missingness between the arms. Some concerns: It appears the allocation was random and concealed, although it appears the authors intended to bias the allocation with a more urban intervention arm and more rural control arm but they were unsuccessful in implementing this approach. Participants were recruited after clusters were allocated and it is unclear if this was affected by knowledge of the allocation. It is unclear if there were deviations in care due to the trial context. It is unclear how participants were assigned their lost to follow-up status.	x
Newcomer 2004[27]	educ & mfar(w/med)	ac	SF-12: mental component summary	-	-	x	-	-	Serious concerns: About 20% of participant did not complete the end of study interview, some of the reasons are related to ill health, and more IG participants not included overall and in each of the reasons given. Some concerns: Unclear about how the sequence was generated and the allocation method. Insufficient information available to judge whether there were any deviations from the intended intervention due to trial context in each arm. Participants self-assessed the outcome and some participants were likely unblinded. Pre-specified plan is unavailable.	x

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
Newcomer 2004[27]	educ & mfar(w/med)	ac	SF-12: Physical component summary	-	-	x	-	-	Serious concerns: About 20% of participant did not complete the end of study interview, some of the reasons are related to ill health, and more IG participants not included overall and in each of the reasons given. Some concerns: Unclear about how the sequence was generated and the allocation method. Insufficient information available to judge whether there were any deviations from the intended intervention due to trial context in each arm. Participants self-assessed the outcome and some participants were likely unblinded. Pre-specified plan is unavailable.	x
Parsons M 2012[38]	hmcr & mfar	hmcr & mfa-	EQ-5D EQ-VAS (Health today 0-100)	+/-	-	x	-	-	Serious concern: Overall 34% of participants were lost to follow-up; there were imbalances in losses to follow-up, including due to death. Some concerns: Unclear whether and when the personnel recruiting participants would be unblinded to the assignments. Participants and personnel were not blinded to assignments, and the authors suggested that the Hawthorne effect and experimenter effects were limitations, although it was impossible to determine the extent. Unblinded participants self-assessed the outcome. Unsure whether this outcome was pre-specified.	x
Parsons M 2017[8]	hmcr & ADL & mfar(w/slfm)	hmcr & mfa-	EQ-5D EQ-VAS (Health today 0-100)	-	-	x	-	-	Very serious concerns: 86/113 (76%) participants were not followed up at 12m; there is little information about the reasons for missingness. Some concerns: Computer-mediated minimisation used; concealment not mentioned. Participants and personnel were not blinded to assignments, and the authors suggested that the Hawthorne effect and experimenter effects were limitations, although it was impossible to determine the extent. Unblinded participants self-assessed the outcome. Unsure whether this outcome was pre-specified.	xx
Ploeg 2010[28]	educ & mfar(w/med)	ac	Health Perception (EVGFP / 1-5, SF-36)	+	-	x	-	-	Serious concerns: 11.3% participants not included; the outcome is likely to depend on the true values of those died, other (didn't complete 12 FU then died), and proportion of dropouts is imbalanced between group. Some concerns: Insufficient information provided to make judgement about any deviations from the intended interventions due to trial context. Participants were not blinded and self-assessed the outcome. The pre-specified analysis plan is unavailable.	x
Ploeg 2010[28]	educ & mfar(w/med)	ac	Health Utilities Index Mark 3	+	-	x	-	-	Serious concerns: 13.8% participants not included; the outcome was likely to depend on the true values of those died and dropouts but these reasons do not explain all the missing data. Some concerns: Insufficient information provided to make judgement about any deviations from the intended interventions due to trial context. Participants were not blinded and self-assessed the outcome. The pre-specified analysis plan is unavailable.	x

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
Ploeg 2010[28]	educ & mfar(w/med)	ac	QALY from HUI-3	+	-	x	-	-	Serious concerns: Unclear of the number of participants included in the analysis; the outcome was likely to depend on the true values of those dropouts and did not complete the FU then died, and there was an imbalance in dropouts between groups. Some concerns: Insufficient information provided to make judgement about any deviations from the intended interventions due to trial context. Participants were not blinded and self-assessed the outcome. The pre-specified analysis plan is unavailable.	x
Serra-Prat 2017[72]	ntr & exrc	ac	EQ-5D EQ-VAS (0-10)	-	-	x	-	-	Serious concerns: 133/172 (77.3%) participants are included in this results analysis, and lack of information about why the participants dropped out. Some concerns: Unclear randomisation and allocation method. Insufficient information about any deviations from intended interventions due to trial context. The outcome measures involve judgement from assessors who were not blinded. Unclear analysis method used for the adjusted intervention effect.	x
Siemonsma 2018[82]	ADL	mfa-	Health Perception (EVGFP / 1-5, SF-36)	-	-	x	-	-	Serious concerns: Based on a imbalance in one of the reasons to drop out (research reasons) it seems possible that there are missing values dependent on its true value (related with ADLs). Some concerns: Unknown allocation concealment method. Insufficient information to judge any deviation from the intended interventions due to trial context. The participants self-assessed the outcome. The analysis plan is unavailable.	x
Suijker 2016[10]	mfar(w/med)	ac	EQ-5D-3L (self-completion)	+/-	-	x	+	+	Serious concern: Substantial missing data for unknown reasons. Some concerns: Unclear when GP practices were randomised and whether participants were identified and recruited prior to randomisation or whether those identifying participants were aware of the assignment. It is unclear whether there were deviations from the intended interventions due to trial context.	x
Suijker 2016[10]	mfar(w/med)	ac	QALY from EQ-5D-3L	+/-	-	x	+	-	Serious concern: Substantial missing data for unknown reasons. Some concerns: Unclear when GP practices were randomised and whether participants were identified and recruited prior to randomisation or whether those identifying participants were aware of the assignment. It is unclear whether there were deviations from the intended interventions due to trial context. QALYs were not mentioned in the protocol although the EQ-5D was.	x

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
Szanton 2019[57]	ADL&aids&educ&exrc&mfar(w/med+slfm)	ac	EQ-5D EQ-VAS (Health today 0-100)	+	-	x	-	-	Serious concerns: 13.3% missing data, more deaths in IG than in CG and thus the outcome is likely to depend on the true value of the missing data and there are imbalances between groups. Some concerns: Insufficient information to judge whether there were any deviations from the intended intervention due to trial context. Participants were not blinded and they self-assessed the outcome. Although the author did not conduct the regression analysis as specified in the protocol for this outcome, it did not appear she conducted multiple analyses then choose the results to provide to this review.	x
Takahashi 2012[65]	mntr-mfa-	ac	Health Perception (EVGFP / 1-5, SF-36)	-	-	x	-	+	Serious concerns: 39/205 (19.0%) participants not included, partly due to deaths which is imbalanced between groups. Some concerns: The method of allocation concealment is unclear. Unclear whether any deviations from the intended interventions happened due to trial context. participants were aware of the intervention assignments and self-reported the outcome.	x
Takahashi 2012[65]	mntr-mfa-	ac	SF-12: mental component summary	-	-	x	-	+	Serious concerns: 39/205 (19.0%) participants not included, partly due to deaths which is imbalanced between groups. Some concerns: The method of allocation concealment is unclear. Unclear whether any deviations from the intended interventions happened due to trial context. participants were aware of the intervention assignments and self-reported the outcome.	x
Takahashi 2012[65]	mntr-mfa-	ac	SF-12: Physical component summary	-	-	x	-	+	Serious concerns: 39/205 (19.0%) participants not included, partly due to deaths which is imbalanced between groups. Some concerns: The method of allocation concealment is unclear. Unclear whether any deviations from the intended interventions happened due to trial context. participants were aware of the intervention assignments and self-reported the outcome.	x
Thomas 2007[100]	mfar(w/med)	ac	Self-rated health (used in Thomas 2007)	-	-	x	-	-	Serious concern: 15.5% missing data, the reasons of missing data are unknown; therefore, unable to determine whether the outcome depended on the missing data values. Some concerns: The method of allocation concealment is unclear. Insufficient information provided about any deviations from the intended interventions due to trial context. The participants self-assessed the outcomes and they were likely aware of the assignments. Pre-specified analysis plan is unavailable.	x

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
van Hout 2010[32]	mfar(w/med)	ac	SF-36: Mental Component Summary (MCS) score	+	-	x	-	-	Serious concerns: 227/651 missing data (34.9%), the missingness includes death, institutionalisation, medical reasons that the true value in this outcome is likely depending on them, and there are imbalances in some of the missing data reasons. Some concerns: Insufficient information provided about any deviations from the interventions due to trial context. Participants self-assessed the outcome. The pre-specified analysis plan is unavailable.	x
van Hout 2010[32]	mfar(w/med)	ac	SF-36: Physical Component Summary (PCS) score	+	-	x	-	-	Serious concerns: 227/651 missing data (34.9%), the missingness includes death, institutionalisation, medical reasons that the true value in this outcome is likely depending on them, and there are imbalances in some of the missing data reasons. Some concerns: Insufficient information provided about any deviations from the interventions due to trial context. Participants self-assessed the outcome. The pre-specified analysis plan is unavailable.	x
van Lieshout 2018[93]	ADL & med & ntr & sst	ac	SF-12: mental component summary	-	-	x	-	-	Very serious concerns: 207/710 (29.2%) participants completed the trial, imbalance between the number of losses to follow-up after baseline that more people were lost in the intervention group. Some concerns: Insufficient information about allocation method. No information about any deviations from intended interventions to trial context. Unblinded participants self-assessed the outcome. Unsure if imputed data was planned.	xx
van Lieshout 2018[93]	ADL & med & ntr & sst	ac	SF-12: Physical component summary	-	-	x	-	-	Very serious concerns: 207/710 (29.2%) participants completed the trial, imbalance between the number of losses to follow-up after baseline that more people were lost in the intervention group. Some concerns: Insufficient information about allocation method. No information about any deviations from intended interventions to trial context. Unblinded participants self-assessed the outcome. Unsure if imputed data was planned.	xx
van Rossum 1993[94]	mfar	ac	Self-rated Health (Dutch educational system)	-	-	-	-	-	Some concerns: The method of allocation concealment is unclear. Insufficient information about any deviations from the intended intervention due to trial context. 70/580 (12%) missing data, the proportions of missing data are fairly balanced between groups. Participants were unblinded and self-assessed the outcomes on the postal questionnaire. The pre-specified analysis plan is unavailable.	-
Wolter 2013[33]	hmcr & mfar(w/med)	hmcr	EQ-5D-3L (self-completion)	+/-	-	x	-	-	Serious concerns: Some clusters (more in CG) withdrew after knowing the assignments in the first randomisation. Clusters who withdrew were not included. Some concerns: Participants were likely recruited after randomisation. The participants self-assessed, unclear whether they were aware of their participating in a trial or the intervention assignments. Pre-specified analysis plan is unavailable.	x

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
Yamada 2003[105]	mfar(w/med)	ac	EQ-5D-5L (self-completion)	+	-	x	-	-	Serious concerns: 16.0% of missing data, the participants who died, at hospital or nursing home, and did not reply to the follow-up questionnaire were not included. Some concerns: Any deviations from the intended interventions due to trial context are not known. The participants were aware of the assignments while self-assessing the outcome. The pre-specified plan is unavailable.	x

Table 24. Health status: long-term timeframe

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
Balaban 1988[73]	mfa-(w/med)	ac	Quality of Well-being (QWB) Scale	x	x	x	-	-	Very serious concerns: Subversion of allocation, deviations from the intended interventions in both groups in different parts of the intended interventions; the analysis only included people interviewed face-to-face. 57% missing data. Some concerns: Participants who were likely aware of the assignment self-reported the outcome. The pre-specified analysis plan unavailable.	xx
Bouman 2008[50]	mfar(w/med)	ac	Self-rated Health (Dutch educational system)	+	-	x	-	-	Serious concerns: more than 11.2% missing data, death and illness likely depend on its true value, there is imbalance between the groups due to self-withdrawal. Some concerns: No information about any deviations from the intended intervention due to trial context, though the authors suggested no methodological drawbacks. Unblinded participants self-assessing the outcome which involves judgement. Unblinded participants self-assessing the outcome which involves judgement. The published protocol stated that regression technique would be used, which matches the analyses description in the costs report. Linear mixed-effects regression model was used which seems appropriate, but the pre-specified regression model is not known.	x
Counsell 2007[59]	educ & mfar(w/med+slfm)	ac	SF-36: Mental Component Summary (MCS) score	+/-	-	x	-	-	Serious concern: There was imbalance in missingness between those who were unable to be contacted and between those who dropped out. Some concerns: It is unclear if the identification and recruitment of participants was likely to be influenced by the recruiters' knowledge of allocation. There is no information regarding possible differences in practice in the control arm due to the trial context. Self-reporting participants were aware of their allocation. It is unclear if the result presented was selected from multiple analyses conducted.	x
Counsell 2007[59]	educ & mfar(w/med+slfm)	ac	SF-36: Physical Component Summary (PCS) score	+/-	-	x	-	-	Serious concern: There was imbalance in missingness between those who were unable to be contacted and between those who dropped out. Some concerns: It is unclear if the identification and recruitment of participants was likely to be influenced by the recruiters' knowledge of allocation. There is no information regarding possible differences in practice in the control arm due to the trial context. Self-reporting participants were aware of their allocation. It is unclear if the result presented was selected from multiple analyses conducted.	x

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
Howel 2019[101]	wlfr	ac	CASP-19 (0-57)	+	+	x	-	+	Serious concerns: 26.5% participants as missing data, unclear of all the reasons for missing data, the missing data amount and reasons seem balanced, but the outcome is likely to depend on the true value of those withdrew or lost to FU. Some concerns: Participants were unblinded and self-assessed the outcome.	x
Howel 2019[101]	wlfr	ac	EQ-5D-3L (self-completion)	+	+	-	-	+	Some concerns: Participants were unblinded and self-assessed the outcome. 26.8% participants as missing data, the missing data amount and reasons seem balanced and authors conducted an analysed to conclude that the missingness could be assumed as random.	-
Howel 2019[101]	wlfr	ac	QALY from EQ-5D-3L	+	+	-	-	+	Some concerns: Participants were unblinded and self-assessed the outcome. 180 (23.8%, IG 88, CG 92) missing data, the missing data amount and reasons seem balanced and authors conducted an analysed to conclude that the missingness could be assumed as random.	-
Liimatta 2019[96]	exrc & mfa-(w/med)	ac	15D HRQoL (15-75)	-	-	-	-	-	Some concerns: Allocation concealment method unclear. Unclear of any deviations from the intended interventions due to trial context. The overall proportion of missing data and the reasons are not imbalanced between groups, and the total amount of missing data is 26.7%. Participants were not blinded and self-assessed the outcome. The pre-specified analysis plan was unavailable.	-
Liimatta 2019[96]	exrc & mfa-(w/med)	ac	QALY from 15D	-	-	-	-	-	Some concerns: Allocation concealment method unclear. Unclear of any deviations from the intended interventions due to trial context. The overall proportion of missing data and the reasons are not imbalanced between groups, and the total amount of missing data is 26.7%. Participants were not blinded and self-assessed the outcome. The pre-specified analysis plan was unavailable.	-
Meng 2005[61]	educ & mfar(w/med+slfm)	ac	Health Perception (EVGFP / 5-1) - RAND Medical Outcome Study (MOS)	-	-	x	-	-	Very serious concerns: Data available for 218 and 234 of 443 and 459 participants, approximately 18% of participants died in each arm which would be associated with health status, substantial imbalance in voluntary withdrawal between arms (41 in the intervention group v 18 in the control group). Some concerns: No details on method of allocation provided. Insufficient information to rule out any deviations from the intended interventions due to trail context in both groups. Unblinded participants self-assessed the outcome. An analysis adjusted for multiple factors was presented and it is unclear whether other analyses were conducted.	xx
Meng 2005[61]	educ & mfar(w/med+slfm)	ac	SF-36: Mental Component Summary (MCS) score	-	-	x	-	-	Very serious concerns: Data available for 218 and 234 of 443 and 459 participants, approximately 18% of participants died in each arm which would be associated with health status, substantial imbalance in voluntary withdrawal between arms (41 in the intervention group v 18 in the control group). Some concerns: No details on method of allocation provided. Insufficient information to rule out any deviations from the intended interventions due to trail context in both groups. Unblinded participants self-assessed the outcome. An analysis adjusted for multiple factors was presented and it is unclear whether other analyses were conducted.	xx

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
Meng 2005[61]	educ & mfar(w/med+slfm)	ac	SF-36: Physical Component Summary (PCS) score	-	-	x	-	-	Very serious concerns: Data available for 218 and 234 of 443 and 459 participants, approximately 18% of participants died in each arm which would be associated with health status, substantial imbalance in voluntary withdrawal between arms (41 in the intervention group v 18 in the control group). Some concerns: No details on method of allocation provided. Insufficient information to rule out any deviations from the intended interventions due to trail context in both groups. Unblinded participants self-assessed the outcome. An analysis adjusted for multiple factors was presented and it is unclear whether other analyses were conducted.	xx
Metzelthin 2013[7]	educ & mfar(w/med+slfm)	ac	EQ-5D-3L (self-completion)	-/-	-	x	-	-	Serious concern: There was substantial imbalance in missingness between the arms. Some concerns: It appears the allocation was random and concealed, although it appears the authors intended to bias the allocation with a more urban intervention arm and more rural control arm but they were unsuccessful in implementing this approach. Participants were recruited after clusters were allocated and it is unclear if this was affected by knowledge of the allocation. It is unclear if there were deviations in care due to the trial context. It is unclear how participants were assigned their lost to follow-up status.	x
Metzelthin 2013[7]	educ & mfar(w/med+slfm)	ac	QALY from EQ-5D-3L	-/-	-	x	-	-	Serious concern: There was substantial imbalance in missingness between the arms. Some concerns: It appears the allocation was random and concealed, although it appears the authors intended to bias the allocation with a more urban intervention arm and more rural control arm but they were unsuccessful in implementing this approach. Participants were recruited after clusters were allocated and it is unclear if this was affected by knowledge of the allocation. It is unclear if there were deviations in care due to the trial context. It is unclear how participants were assigned their lost to follow-up status.	x
Parsons M 2012[38]	hmcr & mfar	hmcr & mfa-	EQ-5D EQ-VAS (Health today 0-100)	+/-	-	x	-	-	Very serious concern: Overall 71% of participants were lost to follow-up; there were imbalances in losses to follow-up, including due to death. Some concerns: Unclear whether and when the personnel recruiting participants would be unblinded to the assignments. Participants and personnel were not blinded to assignments, and the authors suggested that the Hawthorne effect and experimenter effects were limitations, although it was impossible to determine the extent. Unblinded participants self-assessed the outcome. Unsure whether this outcome was pre-specified.	xx

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
Parsons M 2017[8]	hmcr & ADL & mfar(w/slfm)	hmcr & mfa-	EQ-5D EQ-VAS (Health today 0-100)	-	-	x	-	-	Very serious concerns: 101/113 (89%) participants were not followed up at 24m; there is little information regarding missingness. Some concerns: Computer-mediated minimisation used; concealment not mentioned. Participants and personnel were not blinded to assignments, and the authors suggested that the Hawthorne effect and experimenter effects were limitations, although it was impossible to determine the extent. Unblinded participants self-assessed the outcome. Unsure whether this outcome was pre-specified.	xx
Pathy 1992[97]	rsk-mfa-	ac	Health Status (Pathy 1992)	-	-	x	-	-	Serious concerns: 42.2% missing data, nearly half of the participants who did not provide the data died or admitted to nursing home (201/725). Some concerns: Randomisation and allocation concealment methods unclear. Insufficient information about any deviations from the intended interventions due to trial context. The participants self-assessed outcome but unclear whether they were aware of the assignments. The pre-specified analysis plan is unavailable.	x
Suijker 2016[10]	mfar(w/med)	ac	EQ-5D-3L (self-completion)	+/-	-	x	+	+	Serious concern: Substantial missing data for unknown reasons. Some concerns: Unclear when GP practices were randomised and whether participants were identified and recruited prior to randomisation or whether those identifying participants were aware of the assignment. It is unclear whether there were deviations from the intended interventions due to trial context.	x
Thomas 2007[100]	mfar(w/med)	ac	Self-rated health (used in Thomas 2007)	-	-	x	-	-	Serious concern: 17.1% missing data, the reasons of missing data are unknown; therefore, unable to determine whether the outcome depended on the missing data values. Some concerns: The method of allocation concealment is unclear. Insufficient information provided about any deviations from the intended interventions due to trial context. The participants self-assessed the outcomes and they were likely aware of the assignments. Pre-specified analysis plan is unavailable.	x
van Rossum 1993[94]	mfar	ac	Self-rated Health (Dutch educational system)	-	-	x	-	-	Serious concerns: 127/580 (22%) missing data., some missing data were not explained and unable to determine whether the underlying reasons would affect the outcome. Some concerns: The method of allocation concealment is unclear. Insufficient information about any deviations from the intended intervention due to trial context. 127/580 (22%) missing data, the proportions of missing data are fairly balanced between groups. Participants were unblinded and self-assessed the outcomes on the postal questionnaire. The pre-specified analysis plan is unavailable.	x

Table 25. Depression: short-term timeframe

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
Auvinen 2020[43]	hmcr & med	hmcr	Geriatric Depression Scale (GDS 15) (Sheikh & Yesavage, 1986)	+	-	-	-	x	Serious concerns: Multiple models were fitted with only one result reported. Some concerns: 28 or 29 of 258 lost from intervention arm. 34 of 254 lost from control arm. Most withdrawals were deaths so clearly linked to health status. It is not clear whether participants knew their group assignment, and self-reported health status requires significant judgment. Insufficient information about any deviations from the intended interventions due to trial context in either group.	x
Bleijenberg 2016[63]	rsk-mfa-	ac	SF-36: Mental Health	x/+	-	x	+	-	Very serious concerns: There was substantial imbalance in cluster size between the arms (2042/11, 3451/13, 2663/11), education level and socioeconomic status (both higher in the control arm). 89/790 and 164/1446 did not return questionnaires at 6 months; reasons for loss to follow-up at 6 months are unclear (and therefore whether they are balanced), reasons provided at 12 months include mortality and being too unwell to fill in the questionnaire. Some concerns: There is insufficient information to judge potential deviations due to the trial context. Multiple analyses may have been conducted.	xx
Challis 2004[1]	mfar(w/med)	mfar	Geriatric Depression Scale (GDS) (Long version, 30 questions) (Yesavage et al., 1983)	-	-	-	-	-	Some concerns: Lack of information about the randomization and allocation. Deviations from intended interventions due to trial context are not described and it is not clear whether contacts between specialists and care managers could have changed the case managers usual practice in some way. 14.8% missing data (17/129 and 21/127 deaths). Lack of information regarding the pre-specified plan.	-
Clark 1997[44]	eng & educ	ac	CES-D depression scale (20 items; Radloff 1977)	x	-	x	-	x	Very serious concerns: Computer-generated sequence but block-size of six means allocation probably somewhat predictable. Data available for 304/361, reasons including death and becoming ill, unclear whether reasons are balance between groups. Analyses were conducted with a combined control group on the grounds that there were no significant differences between the groups. Some concerns: Insufficient information to judge any deviations from the intended interventions, that attendance at intervention sessions in the OT and social group arms was similar, but unclear whether the non-treatment group began interventions as a result of the trial context. Self-assessing participants were probably aware of their assignment.	xx

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
Clark 1997[44]	eng & educ	ac	SF-36: Mental Health	x	-	x	-	x	Very serious concerns: Computer-generated sequence but block-size of six means allocation probably somewhat predictable. Data available for 159/361 (from the 218 randomised in the 2nd cohort), reasons including death and becoming ill, unclear whether reasons are balance between groups. Analyses were conducted with a combined control group on the grounds that there were no significant differences between the groups. Some concerns: Insufficient information to judge any deviations from the intended interventions, that attendance at intervention sessions in the OT and social group arms was similar, but unclear whether the non-treatment group began interventions as a result of the trial context. Self-assessing participants were probably aware of their assignment.	xx
Clark 2012[102]	eng & educ	ac	CES-D depression scale (20 items; Radloff 1977)	-	-	-	-	-	Some concerns: Insufficient information about any deviations from the intended interventions due to trial context, e.g., contamination between the groups within each site. 22% missing data; the missing data are fairly balanced and most of them seem not related to ill health. Unblinded participants self-rated the outcome. The pre-specified analysis plan is unavailable.	-
Clark 2012[102]	eng & educ	ac	SF-36: Mental Health	-	-	-	-	-	Some concerns: Insufficient information about any deviations from the intended interventions due to trial context, e.g., contamination between the groups within each site. 22% missing data; the missing data are fairly balanced and most of them seem not related to ill health. Unblinded participants self-rated the outcome. The pre-specified analysis plan is unavailable.	-
Cutchin 2009[75]	mfar	ac	CES-D depression scale (10 items; Andresen et al., 1994 & Irwin et al., 1999)	-	-	x	-	-	Serious concerns: unclear of the reasons of missing data though proportions are balanced between groups. Some concerns: The method of allocation concealment is unclear. Insufficient information about any deviations from intended interventions due to trial context. The participants self-reported the outcomes. The pre-specified plan is unavailable.	x
Fernandez-Barres 2017[2]	hmcr & ntr	hmcr	Geriatric Depression Scale 5-item version	+	-	x	-	-	Serious concern: 62/173 (35.8%) participants died, institutionalised, or withdrew. There was an imbalance in the proportion and reasons of missing data: withdrawals IG 5.0% vs CG 16.7%; deaths IG 12.1% vs CG 8.3%; institutionalised IG 10.9% vs CG 8.3%. Some concerns: Insufficient information to rule out any deviations from the intended interventions due to trial context. Unblinded participants self-assessed. The analysis plan is unavailable.	x

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
Gustafson 2021[78]	aids & educ & comm	ac	Patient Health Questionnaire 8 (PHQ-8) [1-4]	+	-	x	-	-	Serious concerns: 10% participants did not complete the 6 months survey, the overall proportion of participants not completing the follow-up was not imbalanced between groups, the reasons included death, health reasons, entered assisted living/nursing home, did not like randomisation, unknow, and did not reconsent, but the proportion of these reasons in each group is not reported. Some concerns: Insufficient information to judge any deviations from the intended interventions due to trial context. Participants were unblinded and self-assessed the outcome. Possibly no substantial difference between the published protocol and result report, any amendment before publishing the protocol cannot be certain.	x
Jing 2018[79]	exrc & psyc	psyc	Geriatric Depression Scale (GDS 15) (Sheikh & Yesavage, 1986)	-	-	+	-	-	Some concerns: Lack of information about randomisation process. Uncertainty about any deviation from intended interventions due to trial context. The participants self-assessed the outcome. The pre-specified analysis plan is unavailable.	-
King 2012[4]	hmcr & ADL & mfar(w/slfm)	hmcr	SF-36: Mental Health	+/+	-	-	-	-	Some concerns: It is unclear whether there were any changes in usual care due to the trial context. There was informative missingness but reasonably balanced. Participants self-reported their mental health status. The result may have been selected from multiple available.	-
Markle-Reid 2006[106]	hmcr & mfar(w/med+slfm)	hmcr & mfar	CES-D depression scale (20 items; Radloff 1977)	+	-	x	-	-	Serious concerns: 16% missing data due to dropouts, the overall proportion is balanced between groups, but the proportion of each reported reason in each group is not known. The reasons included death, unable to locate, physically unable to participants, and refused to participate. Hence, the outcome may depend on the missingness. Some concerns: Insufficient information about any deviations from the intended intervention (usual home care) in the CG or arose by the unblinded participants. Participants self-assessed the outcome. The pre-specified analysis plan is unavailable.	x
Markle-Reid 2006[106]	hmcr & mfar(w/med+slfm)	hmcr & mfar	SF-36: Mental Health	+	-	x	-	-	Serious concerns: 16% missing data due to dropouts, the overall proportion is balanced between groups, but the proportion of each reported reason in each group is not known. The reasons included death, unable to locate, physically unable to participants, and refused to participate. Hence, the outcome may depend on the missingness. Some concerns: Insufficient information about any deviations from the intended intervention (usual home care) in the CG or arose by the unblinded participants. Participants self-assessed the outcome. The pre-specified analysis plan is unavailable.	x

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
Melis 2008[80]	mfar(w/med)	ac	SF-20: Mental Health	+	-	x	-	-	Serious concerns: 20% missing data, the proportion of all losses to FU and the number of consent withdrawals are imbalanced between groups. Some concerns: Insufficient information about any deviations from the intended interventions due to trial context. Self-assessed by participants, and they were likely unblinded. The pre-specified analysis plan is unavailable, so unclear whether there are multiple eligible analyses of the data.	x
Metzelthin 2013[7]	educ & mfar(w/med+slfm)	ac	Hospital Anxiety and Depression Scale (depression subscore) (HADS-D)	-/-	-	x	-	-	Serious concern: There was substantial imbalance in missingness between the arms. Some concerns: It appears the allocation was random and concealed, although it appears the authors intended to bias the allocation with a more urban intervention arm and more rural control arm but they were unsuccessful in implementing this approach. Participants were recruited after clusters were allocated and it is unclear if this was affected by knowledge of the allocation. It is unclear if there were deviations in care due to the trial context. It is unclear how participants were assigned their lost to follow-up status.	x
Morgan 2019[47]	exrc	ac	Geriatric Depression Scale (GDS 15) (Sheikh & Yesavage, 1986)	+	-	x	-	-	Serious concerns: 6/34 (17.6%) missing from intervention arm, 1/17 (5.9%) missing from controls, total 13.7% missing. Depression likely to be related with dropout. Reasons of missing for 3 in IG and 1 in CG not provided; in IG, 1 died, 2 discontinued study. Some concerns: Insufficient information to judge any deviations from the intended interventions due to trial context. Unblinded participants self-assessed. The pre-specified analysis plan is unclear.	x
Parsons M 2012[38]	hmcr & mfar	hmcr & mfa-	Depression Rating Scale (DRS) (Burrows et al., 2000)	+/-	-	-	-	-	Some concerns: Unclear whether and when the personnel recruiting participants would be unblinded to the assignments. Participants and personnel were not blinded to assignments, and the authors suggested that the Hawthorne effect and experimenter effects were limitations, although it was impossible to determine the extent. Overall, 17% of participants were lost to follow-up; more than 5% of participants died. There were small imbalances in losses to follow-up, which could be due to chance. Unblinded participants self-assessed the outcome. Unsure whether this outcome was pre-specified.	-
Parsons M 2017[8]	hmcr & ADL & mfar(w/slfm)	hmcr & mfa-	Depression Rating Scale (DRS) (Burrows et al., 2000)	-	-	x	-	-	Serious concerns: 56/113 (50%) participants were not followed up at 6m; there is some imbalance in missingness due to deaths and little further information. Some concerns: Computer-mediated minimisation used; concealment not mentioned. Participants and personnel were not blinded to assignments, and the authors suggested that the Hawthorne effect and experimenter effects were limitations, although it was impossible to determine the extent. Unblinded participants self-assessed the outcome. Unsure whether this outcome was pre-specified.	x

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
Takahashi 2012[65]	mntr-mfa-	ac	Patient Health Questionnaire (PHQ-9)	-	-	x	-	+	Serious concerns: 39/205 (19.0%) participants not included, partly due to deaths which is imbalanced between groups. Some concerns: The method of allocation concealment is unclear. Unclear whether any deviations from the intended interventions happened due to trial context. participants were aware of the intervention assignments and self-reported the outcome.	x
Teut 2013[66]	hmcr & hmnt & exrc	hmcr	Nurses Observation Scale for Geriatric Patients (NOSGER) - Depressed mood	+/+	-	x	-	-	Serious concerns: Unclear of any and the amount of missing data at this timepoint. Some concerns: Unclear of any deviations from the intended interventions due to trial context. Unblinded nurse assessed the outcomes. Unclear of analysis plan and method.	x
Wallace 1998[107]	exrc & mfar	ac	CES-D depression scale (20 items; Radloff 1977)	-	-	x	-	-	Serious concerns: At least 10% missing data; the proportions of dropouts are imbalanced between groups. Some concerns: Details of the randomisation and allocation concealment methods are not provided. Insufficient information provided to determine any deviations from the intended intervention due to trial context. The participants were unblinded and self-assessed the outcome. Results from adjusted and unadjusted analyses were reported, but unclear whether the methods were pre-specified.	x
Wallace 1998[107]	exrc & mfar	ac	SF-36: Mental Health	-	-	x	-	-	Serious concerns: At least 10% missing data; the proportions of dropouts are imbalanced between groups. Some concerns: Details of the randomisation and allocation concealment methods are not provided. Insufficient information provided to determine any deviations from the intended intervention due to trial context. The participants were unblinded and self-assessed the outcome. Results from adjusted and unadjusted analyses were reported, but unclear whether the methods were pre-specified.	x
Walters 2017[68]	mfar(w/slfm)	ac	General Health Questionnaire 12 items (GHQ-12)	+	-	x	-	x	Very serious concerns: There is also high risk concern based on missing data which are likely related with the outcome true value, based on the reasons to drop out and the different proportions in each group. 48 (94%) participants completed the 3-month and 6-month outcome assessments. Three people withdrew from the study, one in the intervention arm (26) and two in the TAU arm (25). Finally, three models analysed but only one presented. Claimed to be the best fit. Some concerns: Insufficient information to rule out any deviations from the intended interventions due to trial context in both groups. Unblinded participants self-assessed the outcome.	xx

Table 26. Depression: medium-term timeframe

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
Bernabei 1998[49]	hmcr & mfar(w/med)	hmcr	Geriatric Depression Scale (GDS) (Long version, 30 questions) (Yesavage et al., 1983)	-	-	x	-	-	Serious concerns: 25 deaths and no other loss to follow up is discussed, any missing data is likely missing secondary to the true value of this outcome. Some concerns: No indication of the concealment method of the allocation sequence. Potential for contamination of the control arm given the same group of GPs were caring for these individuals too but unclear whether there are material deviations from the intended interventions due to trial context. Unblinded participants self-assessed the outcome. Lack of information regarding the pre-specified plan.	x
Bleijenberg 2016[63]	rsk-mfa-	ac	SF-36: Mental Health	x/+	-	x	+	-	Very serious concerns: There was substantial imbalance in cluster size between the arms (2042/11, 3451/13, 2663/11), education level and socioeconomic status (both higher in the control arm). 162/790 and 142/856 did not return questionnaires at 12 months; reasons include mortality and being too unwell to fill in the questionnaire. Most reasons are unknown (and therefore whether they are balanced): 119 and 222. Some concerns: There is insufficient information to judge potential deviations due to the trial context. Multiple analyses may have been conducted.	xx
Blom 2016[13]	mfa-(w/med+slfm)	ac	Geriatric Depression Scale (GDS 15) (Sheikh & Yesavage, 1986)	x/+	-	x	-	-	Very serious concerns: Unsure of the randomisation and allocation of clusters, and there is a large imbalance of cluster size. 38.9% missing data; mortality, care admission, too ill are linked with health status; reasons for much of the missing data not provided; the proportions of other and unknown dropout reasons are imbalanced between groups. Some concerns: Insufficient information to rule out any deviations due to trial context. Unclear of the analysis used.	xx
Bouman 2008[50]	mfar(w/med)	ac	Geriatric Depression Scale (GDS 15) (Sheikh & Yesavage, 1986)	+	-	x	-	-	Serious concerns: more than 11.2% missing data, death and illness likely depend on its true value, there is imbalance between the groups due to self-withdrawal. Some concerns: No information about any deviations from the intended intervention due to trial context, though the authors suggested no methodological drawbacks. Unblinded participants self-assessing the outcome which involves judgement. Unblinded participants self-assessing the outcome which involves judgement. The published protocol stated that regression technique would be used, which matches the analyses description in the costs report. Linear mixed-effects regression model was used which seems appropriate, but the pre-specified regression model is not known.	x

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
Bouman 2008[50]	mfar(w/med)	ac	SF-20: Mental Health	+	-	x	-	-	Serious concerns: more than 11.2% missing data, death and illness likely depend on its true value, there is imbalance between the groups due to self-withdrawal. Some concerns: No information about any deviations from the intended intervention due to trial context, though the authors suggested no methodological drawbacks. Unblinded participants self-assessing the outcome which involves judgement. Unblinded participants self-assessing the outcome which involves judgement. The published protocol stated that regression technique would be used, which matches the analyses description in the costs report. Linear mixed-effects regression model was used which seems appropriate, but the pre-specified regression model is not known.	x
Cameron 2013[70]	exrc & mfar(w/med+slfm)	ac	Geriatric Depression Scale (GDS 15) (Sheikh & Yesavage, 1986)	+	-	-	-	+	Some concerns: Insufficient information about any deviations from the intended interventions due to trial context. 11.2% missing data; the reasons of missing data are fairly balanced between groups. Unblinded participants self-assessed the outcome.	-
Clark 1997[44]	eng & educ	ac	CES-D depression scale (20 items; Radloff 1977)	x	-	x	-	x	Very serious concerns: Computer-generated sequence but block-size of six means allocation probably somewhat predictable. Data available for 283/361, reasons including death and becoming ill, unclear whether reasons are balance between groups. Analyses were conducted with a combined control group on the grounds that there were no significant differences between the groups. Some concerns: Insufficient information to judge any deviations from the intended interventions, that attendance at intervention sessions in the OT and social group arms was similar, but unclear whether the non-treatment group began interventions as a result of the trial context. Self-assessing participants were probably aware of their assignment.	xx
Coleman 1999[95]	educ & mfar(w/med+slfm)	ac	CES-D depression scale (20 items; Radloff 1977)	-/-	-	x	-	-	Serious concern: There is insufficient information about missingness. Some concerns: It is unclear if the allocation sequence was concealed. It is unclear whether participants were recruited prior to cluster-randomisation; if they were recruited afterwards their allocation was probably known. It is unclear if there were deviations due to the trial context. Self-reported mood may be influenced by knowledge of the intervention but this is unlikely. There was no pre-specified analysis plan.	x
Cutchin 2009[75]	mfar	ac	CES-D depression scale (10 items; Andresen et al., 1994 & Irwin et al., 1999)	-	-	x	-	-	Serious concern: Unclear of the reasons of missing data though proportions are imbalanced between groups, 14.3% (n=48/56) in IG vs 5.6% (n=3/54) in CG are not included, though the adjusted treatment effect is not statistically significant. Some concerns: The method of allocation concealment is unclear. Insufficient information about any deviations from intended interventions due to trial context. The participants self-reported the outcomes. The pre-specified plan is unavailable.	x

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
Fernandez-Barres 2017[2]	hmcr & ntr	hmcr	Geriatric Depression Scale 5-item version	+	-	x	-	-	Serious concern: 62/173 (35.8%) participants died, institutionalised, or withdrew. There was an imbalance in the proportion and reasons of missing data: withdrawals IG 5.0% vs CG 16.7%; deaths IG 12.1% vs CG 8.3%; institutionalised IG 10.9% vs CG 8.3%. Some concerns: Insufficient information to rule out any deviations from the intended interventions due to trial context. Unblinded participants self-assessed. The analysis plan is unavailable.	x
Gustafson 2021[78]	aids & educ & comm	ac	Patient Health Questionnaire 8 (PHQ-8) [1-4]	+	-	x	-	-	Serious concerns: 20.5% participants did not complete the 12 months survey, the overall proportion of participants not completing the follow-up was not imbalanced between groups, the reasons included death, health reasons, entered assisted living/nursing home, did not like randomisation, unknow, and did not reconsent, but the proportion of these reasons in each group is not reported. Some concerns: Insufficient information to judge any deviations from the intended interventions due to trial context. Participants were unblinded and self-assessed the outcome. Possibly no substantial difference between the published protocol and result report, any amendment before publishing the protocol cannot be certain.	x
Henderson 2005[20]	mfar	ac	General Health Questionnaire 12 items (GHQ-12)	+/x	+	x	+	-	Very serious concerns: The recruitment method seemed consistent across the clusters; however, the researchers already knew the cluster allocations and informed the participants about the intervention details of the cluster they belonged to. Missingness (37) was substantial and imbalanced between arms for deaths and overall. Some concerns: No pre-specified analysis plan available.	xx
Holland 2005[108]	educ & exrc & mfar(w/slfm)	ac	Geriatric Depression Scale (GDS 15) (Sheikh & Yesavage, 1986)	+	-	-	-	-	Some concerns: Insufficient information provided about any deviations from the intended interventions due to trial context. There was some imbalance in the loss to follow-up between groups, but the overall missing data amount is small (4%). Participants self-assessed and they were likely aware of the assignments. The pre-specified analysis plan is unavailable.	-
Kerse 2014[21]	rsk-mfa-	ac	Geriatric Depression Scale (GDS 15) (Sheikh & Yesavage, 1986)	+/+	-	-	+	-	Some concerns: It is unclear whether the trial context led to changes in usual care. Informative missingness was 18% but balanced in numbers and reasons between arms. It is unclear whether the result may have been selected from multiple available.	-
Kono 2012[37]	mfar	mfar	Geriatric Depression Scale (GDS 15) (Sheikh & Yesavage, 1986)	-	-	x	-	-	Serious concerns: 7 from IG and 9 from CG (total 16, 5.0%) were hospitalised that would not be assessed (fig 3, Kono 2013). It is likely that there are other losses to follow up from other reasons of missing data at this timepoint which are unknown. Some concerns: Unknown allocation concealment method. Insufficient information to rule out deviations from the intended interventions due to trial context in both groups. The participants were likely aware of the intervention and self-assessed the outcome. The pre-specified analysis intention/plan is unavailable.	x

Community-based complex interventions to sustain independence in older people, stratified by frailty: a systematic review and network meta-analysis (NIHR128862; CRD42019162195). Supplementary material 10. Risk of bias judgements and supporting statements

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
Kono 2016[23]	mfar(w/med)	mfar	Geriatric Depression Scale 5-item version	+	-	x	-	-	Serious concerns: missing data (15.3%), the values of the participants who died, hospitalised, institutionalised would affect this outcome estimate. Authors suggested that participants had other health related reasons might not return the questionnaires. Some concerns: Insufficient information to determine material contamination of interventions due to trial context. Unblinded participants self-reported the outcome. The pre-specified analysis plan is unavailable.	x
Leveille 1998[71]	educ & exrc & mfar(w/med+slfm)	ac	CES-D depression scale (20 items; Radloff 1977)	+	-	-	-	-	Some concerns: The trial team expected some of the usual care participants to access some of the facilities and measured this as an outcome against facility use in the intervention arm with their added intervention. Insufficient information to judge any deviations from the intended interventions due to trial context. Loss to follow: IG n=6/101 and CG n=7/100, proportions and reasons of missing data are balanced between groups. Unblinded participants self-assessing the outcome. Pre-specified analysis plan or protocol are unavailable.	-
Metzelthin 2013[7]	educ & mfar(w/med+slfm)	ac	Hospital Anxiety and Depression Scale (depression subscore) (HADS-D)	-/-	-	x	-	-	Serious concern: There was substantial imbalance in missingness between the arms. Some concerns: It appears the allocation was random and concealed, although it appears the authors intended to bias the allocation with a more urban intervention arm and more rural control arm but they were unsuccessful in implementing this approach. Participants were recruited after clusters were allocated and it is unclear if this was affected by knowledge of the allocation. It is unclear if there were deviations in care due to the trial context. It is unclear how participants were assigned their lost to follow-up status.	x
Newbury 2001[26]	mfa-(w/med)	ac	Geriatric Depression Scale (GDS 15) (Sheikh & Yesavage, 1986)	-	-	x	-	-	Serious concerns: 11/100 (11%) not included, the dropout reasons are not balanced between the groups. Some concerns: Unclear whether allocation was adequate. Unclear of any deviations from the intended interventions due to trial context. Unclear whether the participants were aware of the differences in assignments when self-assessing. The pre-specified plan is not available.	x
Parsons M 2012[38]	hmcr & mfar	hmcr & mfa-	Depression Rating Scale (DRS) (Burrows et al., 2000)	+/-	-	x	-	-	Serious concern: Overall 34% of participants were lost to follow-up; there were imbalances in losses to follow-up, including due to death. Some concerns: Unclear whether and when the personnel recruiting participants would be unblinded to the assignments. Participants and personnel were not blinded to assignments, and the authors suggested that the Hawthorne effect and experimenter effects were limitations, although it was impossible to determine the extent. Unblinded participants self-assessed the outcome. Unsure whether this outcome was pre-specified.	x

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
Parsons M 2017[8]	hmcr & ADL & mfar(w/slfm)	hmcr & mfa-	Depression Rating Scale (DRS) (Burrows et al., 2000)	-	-	x	-	-	Very serious concerns: 86/113 (76%) participants were not followed up at 12m; there is little information about the reasons for missingness. Some concerns: Computer-mediated minimisation used; concealment not mentioned. Participants and personnel were not blinded to assignments, and the authors suggested that the Hawthorne effect and experimenter effects were limitations, although it was impossible to determine the extent. Unblinded participants self-assessed the outcome. Unsure whether this outcome was pre-specified.	xx
Phelan 2007[92]	mfar(w/med+slfm)	ac	Mental Health Index-5 (MHI-5)	-/x	-	x	-	-	Very serious concerns: It appears that selection and recruitment of participants was performed following randomisation by people who knew the allocation. Reasons and numbers for missingness in the direct group were not provided. Some concerns: There is no information on the allocation sequence generation process or concealment of the sequence and it is unclear whether clusters had balanced characteristics. Contamination was speculated as plausible but no evidence was presented regarding deviations due to the trial context. Participants self-assessed mood and may have been influenced by knowledge of the intervention received. It is unclear if the result presented was selected from multiple available.	xx
Rooijackers 2021[9]	hmcr & ADL & mfar(w/slfm)	hmcr	Patient Health Questionnaire (PHQ-9)	+/-	-	x	+	x	Very serious concerns: 63/264 missing (24%) mostly due to deaths, institutional place, and ill health and these reasons are imbalanced between groups. The age, sex and educational level are used in the regression analysis but not specified in the protocol. Some concerns: Participants were identified by the nurses who seemed to be aware of the intervention assignment. Insufficient information to rule out any deviations due to the trial context though blinding was in place.	xx
Rubenstein 2007[56]	mfar(w/med)	ac	Geriatric Depression Scale (GDS 15) (Sheikh & Yesavage, 1986)	-	-	-	-	-	Some concerns: Insufficient about the randomisation process. Insufficient information about any deviations from the intended interventions due to trial context in both groups. 15% of missing data (44% of this due to death). Unblinded participants self-reported the outcomes. The pre-specified analysis plan is unavailable.	-
Shapiro 2002[31]	hmcr & mfar	ac	CES-D depression scale (12 items; Shapiro 2002 bespoke selection)	-	x	x	-	-	Very serious concerns: High amount of attrition (at least 50.9%) and was imbalanced between groups. Intention to treat principle was not followed when excluded non-participants from IG before starting the intervention, 5.6% of participants were analysed in the group which they were not randomised to. Some concerns: Unclear allocation concealment method. Participants were aware of the assignment and self-assessed the outcome. The pre-specified analysis plan is not available.	xx

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
Szanton 2019[57]	ADL&aids&educ&exrc&mfar(w/med+slfm)	ac	Patient Health Questionnaire (PHQ-9)	+	-	x	-	-	Serious concerns: 13.3% missing data, more deaths in IG than in CG and thus the outcome is likely to depend on the true value of the missing data and there are imbalances between groups. Some concerns: Insufficient information to judge whether there were any deviations from the intended intervention due to trial context. Participants were not blinded and they self-assessed the outcome. Although the author did not conduct the regression analysis as specified in the protocol for this outcome, it did not appear she conducted multiple analyses then choose the results to provide to this review.	x
Takahashi 2012[65]	mntr-mfa-	ac	Patient Health Questionnaire (PHQ-9)	-	-	x	-	+	Serious concerns: 39/205 (19.0%) participants not included, partly due to deaths which is imbalanced between groups. Some concerns: The method of allocation concealment is unclear. Unclear whether any deviations from the intended interventions happened due to trial context. participants were aware of the intervention assignments and self-reported the outcome.	x
Teut 2013[66]	hmcr & hmnt & exrc	hmcr	Nurses Observation Scale for Geriatric Patients (NOSGER) - Depressed mood	+/+	-	x	-	-	Serious concerns: 13/58 (22.4%) participants were lost to follow-up, that is their data would be missing upon dropped out. The proportions and reasons of missing data are imbalanced. Some concerns: Unclear of any deviations from the intended interventions due to trial context. Unblinded nurse assessed the outcomes. Unclear of analysis plan and method.	x
van Heuvelen 2005[58]	exrc & psyc	ac	Hospital Anxiety and Depression Scale (depression subscore) (HADS-D)	-	x	x	-	-	Very serious concerns: Only the per-protocol analysis results were reported. 32.5% participants who dropped out or did not attend more than half of the sessions were excluded from the analysis. Some concerns: The participants who were likely aware of the intervention assignment self-assessed the outcome. The pre-specified analysis plan is unavailable.	xx

Table 27. Depression: long-term timeframe

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
Balaban 1988[73]	mfa-(w/med)	ac	Beck Depression Inventory-Short Form (BDI-SF)	x	x	x	-	-	Very serious concerns: Subversion of allocation, deviations from the intended interventions in both groups in different parts of the intended interventions; the analysis only included people interviewed face-to-face. 57% missing data. Some concerns: Participants who were likely aware of the assignment self-assessed the outcome. The pre-specified analysis plan is unavailable.	xx

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
Bouman 2008[50]	mfar(w/med)	ac	SF-20: Mental Health	+	-	x	-	-	Serious concerns: more than 11.2% missing data, death and illness likely depend on its true value, there is imbalance between the groups due to self-withdrawal. Some concerns: No information about any deviations from the intended intervention due to trial context, though the authors suggested no methodological drawbacks. Unblinded participants self-assessing the outcome which involves judgement. Unblinded participants self-assessing the outcome which involves judgement. The published protocol stated that regression technique would be used, which matches the analyses description in the costs report. Linear mixed-effects regression model was used which seems appropriate, but the pre-specified regression model is not known.	x
Coleman 1999[95]	educ & mfar(w/med+slfm)	ac	CES-D depression scale (20 items; Radloff 1977)	-/-	-	x	-	-	Serious concern: There is insufficient information about missingness. Some concerns: It is unclear if the allocation sequence was concealed. It is unclear whether participants were recruited prior to cluster-randomisation; if they were recruited afterwards their allocation was probably known. It is unclear if there were deviations due to the trial context. Self-reported mood may be influenced by knowledge of the intervention but this is unlikely. There was no pre-specified analysis plan.	x
Counsell 2007[59]	educ & mfar(w/med+slfm)	ac	SF-36: Mental Health	+/-	-	x	-	-	Serious concern: There was imbalance in missingness between those who were unable to be contacted and between those who dropped out. Some concerns: It is unclear if the identification and recruitment of participants was likely to be influenced by the recruiters' knowledge of allocation. There is no information regarding possible differences in practice in the control arm due to the trial context. Self-reporting participants were aware of their allocation. It is unclear if the result presented was selected from multiple analyses conducted.	x
Howel 2019[101]	wlfr	ac	Patient Health Questionnaire (PHQ-9)	+	+	x	-	+	Serious concerns: 26.6% participants as missing data, unclear of all the reasons for missing data, the missing data amount and reasons seem balanced, but the outcome is likely to depend on the true value of those withdrew or lost to FU. Some concerns: Participants were unblinded and self-assessed the outcome.	x
Kerse 2014[21]	rsk-mfa-	ac	Geriatric Depression Scale (GDS 15) (Sheikh & Yesavage, 1986)	+/+	-	-	+	-	Some concerns: It is unclear whether the trial context led to changes in usual care. Informative missingness was 18% but balanced in numbers and reasons between arms. It is unclear whether the result may have been selected from multiple available.	-
Kono 2012[37]	mfar	mfar	Geriatric Depression Scale (GDS 15) (Sheikh & Yesavage, 1986)	-	-	x	-	-	Serious concerns: 64/323 (18.8%) participants were lost to follow up. Most of the missing data were due to hospitalisation, death and institutionalisation, and the proportion for these reasons are higher in the control group. Some concerns: Unknown allocation concealment method. Insufficient information to rule out deviations from the intended interventions due to trial context in both groups. The participants were likely aware of the intervention and self-assessed the outcome. The pre-specified analysis intention/plan is unavailable.	x

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
Kono 2016[23]	mfar(w/med)	mfar	Geriatric Depression Scale 5-item version	+	-	x	-	-	Serious concerns: missing data (22.2%), the values of the participants who died, hospitalised, institutionalised would affect this outcome estimate. Authors suggested that participants had other health related reasons might not return the questionnaires. Some concerns: Insufficient information to determine material contamination of interventions due to trial context. Unblinded participants self-reported the outcome. The pre-specified analysis plan is unavailable.	x
Metzelthin 2013[7]	educ & mfar(w/med+slfm)	ac	Hospital Anxiety and Depression Scale (depression subscore) (HADS-D)	-/-	-	x	-	-	Serious concern: There was substantial imbalance in missingness between the arms. Some concerns: It appears the allocation was random and concealed, although it appears the authors intended to bias the allocation with a more urban intervention arm and more rural control arm but they were unsuccessful in implementing this approach. Participants were recruited after clusters were allocated and it is unclear if this was affected by knowledge of the allocation. It is unclear if there were deviations in care due to the trial context. It is unclear how participants were assigned their lost to follow-up status.	x
Moll van Charante 2016[84]	educ & mfar(w/slfm)	ac	Geriatric Depression Scale (GDS 15) (Sheikh & Yesavage, 1986)	+/+	-	x	-	-	Serious concern: approximately 20% of participants not included in analysis, most due to withdrawal, but reasons for withdrawal not specified and there was 55% missingness by 6 years. Some concerns: It is unclear whether there were deviations from the intended intervention because of the trial context. Self-reporting participants may have been influenced by knowledge of the intervention received but this is unlikely. It is unclear if the result presented was selected from multiple available.	x
Parsons M 2012[38]	hmcr & mfar	hmcr & mfa-	Depression Rating Scale (DRS) (Burrows et al., 2000)	+/-	-	x	-	-	Very serious concern: Overall 71% of participants were lost to follow-up; there were imbalances in losses to follow-up, including due to death. Some concerns: Unclear whether and when the personnel recruiting participants would be unblinded to the assignments. Participants and personnel were not blinded to assignments, and the authors suggested that the Hawthorne effect and experimenter effects were limitations, although it was impossible to determine the extent. Unblinded participants self-assessed the outcome. Unsure whether this outcome was pre-specified.	xx
Parsons M 2017[8]	hmcr & ADL & mfar(w/slfm)	hmcr & mfa-	Depression Rating Scale (DRS) (Burrows et al., 2000)	-	-	x	-	-	Very serious concerns: 101/113 (89%) participants were not followed up at 24m; there is little information regarding missingness. Some concerns: Computer-mediated minimisation used; concealment not mentioned. Participants and personnel were not blinded to assignments, and the authors suggested that the Hawthorne effect and experimenter effects were limitations, although it was impossible to determine the extent. Unblinded participants self-assessed the outcome. Unsure whether this outcome was pre-specified.	xx

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
Phelan 2007[92]	mfar(w/med+slfm)	ac	Mental Health Index-5 (MHI-5)	-/x	-	x	-	-	Very serious concerns: It appears that selection and recruitment of participants was performed following randomisation by people who knew the allocation. Reasons and numbers for missingness in the direct group were not provided. Some concerns: There is no information on the allocation sequence generation process or concealment of the sequence and it is unclear whether clusters had balanced characteristics. Contamination was speculated as plausible but no evidence was presented regarding deviations due to the trial context. Participants self-assessed mood and may have been influenced by knowledge of the intervention received. It is unclear if the result presented was selected from multiple available.	xx
Rubenstein 2007[56]	mfar(w/med)	ac	Geriatric Depression Scale (GDS 15) (Sheikh & Yesavage, 1986)	-	-	-	-	-	Some concerns: Insufficient about the randomisation process. Insufficient information about any deviations from the intended interventions due to trial context in both groups. 38.8% of missing data. Unblinded participants self-reported the outcomes. The pre-specified analysis plan is unavailable.	-

Table 28. Loneliness: short-term timeframe

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
de Craen 2006[76]	mfa-	ac	Loneliness (de Jong-Gierveld Scale) (0-11)	+	-	x	-	-	Serious concerns: 12.7% missing data due to death, missed assessment and other reasons; so unsure whether the outcome depends on the true value of the missingness. Some concerns: Insufficient information provided about any deviation from the interventions due to trial context. Participants self-assessed the outcome. The intervention group were not blinded. Unsure whether there was any change in the analysis methods or the reasons of any changes.	x
Jing 2018[79]	exrc & psyc	psyc	Loneliness (Jing 2018)	-	-	+	-	-	Some concerns: Lack of information about randomisation process. Uncertainty about any deviation from intended interventions due to trial context. The participants self-assessed on a bespoke outcome measure. The pre-specified analysis plan is unavailable.	-

Table 29. Loneliness: medium-term timeframe

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
Blom 2016[13]	mfa-(w/med+slfm)	ac	Loneliness (de Jong-Gierveld Scale) (0-11)	x/+	-	x	-	-	Very serious concerns: Unsure of the randomisation and allocation of clusters, and there is a large imbalance of cluster size. 38.9% missing data; mortality, care admission, too ill are linked with health status; reasons for much of the missing data not provided; the proportions of other and unknown dropout reasons are imbalanced between groups. Some concerns: Insufficient information to rule out any deviations due to trial context. Unblinded participants self-assessed the outcomes. Unclear of the analysis used.	xx
Bouman 2008[50]	mfar(w/med)	ac	Loneliness (de Jong-Gierveld Scale) (0-11)	+	-	x	-	-	Serious concerns: more than 11.2% missing data, death and illness likely depend on its true value, there is imbalance between the groups due to self-withdrawal. Some concerns: No information about any deviations from the intended intervention due to trial context, though the authors suggested no methodological drawbacks. Unblinded participants self-assessing the outcome which involves judgement. Unblinded participants self-assessing the outcome which involves judgement. The published protocol stated that regression technique would be used, which matches the analyses description in the costs report. Linear mixed-effects regression model was used which seems appropriate, but the pre-specified regression model is not known.	x
Sherman 2016[109]	mfa-(w/med)	ac	Loneliness (in Health Index) (1 item, 1-4)	+/+	x	x	-	-	Very serious concerns: In IG, those did not receive PHV and then not return the FU questionnaire were not included in this analysis, which is a violation of the intention to treat analysis. Participants who did not accept the PHV reported ill health which could have influence the outcome. There is also missing data for this reason and other unknown reasons, which could have affected this outcome. Other concerns: unclear whether CG participants were aware of the assignments but IG seemed to know from the invitation letter; participants self-assessed the outcome; pre-specified analysis plan unavailable.	xx

Table 30. Loneliness: long-term timeframe

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
de Craen 2006[76]	mfa-	ac	Loneliness (de Jong-Gierveld Scale) (0-11)	+	-	x	-	-	Main concerns: 26.1% missing data due to death and other reasons; and half of the missingness was not explained, so unsure whether the outcome depends on the true value of the missingness. Some concerns: Insufficient information provided about any deviation from the interventions due to trial context. Participants self-assessed the outcome. The intervention group were not blinded. Unsure whether there was any change in the analysis methods or the reasons of any changes.	x
van Rossum 1993[94]	mfar	ac	Loneliness (de Jong-Gierveld Scale) (0-11)	-	-	x	-	-	Serious concerns: 127/580 (22%) missing data., some missing data were not explained and unable to determine whether the underlying reasons would affect the outcome. Some concerns: The method of allocation concealment is unclear. Insufficient information about any deviations from the intended intervention due to trial context. 127/580 (22%) missing data, the proportions of missing data are fairly balanced between groups. Participants were unblinded and self-assessed the outcomes on the postal questionnaire. The pre-specified analysis plan is unavailable.	x

Table 31. Falls: short-term timeframe

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
King 2012[4]	hmcr & ADL & mfar(w/slfm)	hmcr	Falls (pts fell once or more / last 3 mths)	+/+	-	x	-	+	Serious concerns: The proportion of missing data (n=29) is 72% of reported events (n=40). Some concerns: It is unclear whether there were any changes in usual care due to the trial context. Participants self-reported their falls.	x
Ng 2015[89]	cgn & ntr & exrc	ac	Falls (pts fell once or more)	+	-	x	-	+	Serious concerns: 5 persons not included vs 6 persons had fall. Some concerns: Unclear of any deviations from the intended intervention due to trial context. Participant self-reported the outcome and unclear whether all of them were blinded.	x
Rooijackers 2021[9]	hmcr & ADL & mfar(w/slfm)	hmcr	Falls (pts fell once or more / last 6 mths)	+/-	-	-	+	+	Some concerns: Participants were identified by the nurses who seemed to be aware of the intervention assignment. Insufficient information to rule out any deviations due to the trial context though blinding was in place. The number of missing data (n=30, 38% of known events).	-

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
Suijker 2016[10]	mfar(w/med)	ac	Falls (incidents / last 6 mths)	+/-	-	x	+	-	Serious concern: Substantial missing data for unknown reasons. Some concerns: Unclear when GP practices were randomised and whether participants were identified and recruited prior to randomisation or whether those identifying participants were aware of the assignment. It is unclear whether there were deviations from the intended interventions due to trial context. The reported result may have been selected from multiple available.	x
Walters 2017[68]	mfar(w/slfm)	ac	Falls (pts fell once or more)	+	-	-	-	+	Some concerns: Although only three participants missing, there are only six/seven cases in the two arms, so a difference of two participants could affect results substantially. However, two seemed unrelated to falls and were in the control arm. Insufficient information to rule out any deviations from the intended interventions due to trial context in both groups. Unblinded participants self-reported the outcome.	-
Whitehead 2016[48]	hmcr & ADL & aids & mfa-	hmcr & mfa-	Falls (incidents / only pts had fell / last 3 mths)	+	-	x	-	+	Serious concerns: The reasons of dropouts between groups are imbalanced, e.g., 5 deaths in IG vs 1 death in CG, and no reported withdrawal/other loss to follow-up in IG vs 2 in CG. Some concerns: Insufficient information to judge any deviations from the intended interventions although any material deviations seem unlikely. Unblinded participants self-reported the outcome.	x
Whitehead 2016[48]	hmcr & ADL & aids & mfa-	hmcr & mfa-	Falls (pts fell once or more / last 3 mths)	+	-	x	-	+	Serious concerns: The reasons of dropouts between groups are imbalanced, e.g., 5 deaths in IG vs 1 death in CG, and no reported withdrawal/other loss to follow-up in IG vs 2 in CG. Some concerns: Insufficient information to judge any deviations from the intended interventions although any material deviations seem unlikely. Unblinded participants self-reported the outcome.	x

Table 32. Falls: medium-term timeframe

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
Brettschneider 2015[51]	mfar(w/med)	ac	Falls (incidents / last 12 mths)	-	-	x	-	+	Serious concern: 25% of participants were missing, most for informative reasons, and it is unclear what proportion came from each group. Some concerns: Uncertainty about allocation concealment (particularly those recruited vis registration office). Participants and intervention deliverers were aware of the allocated interventions, unclear of any deviations from the intended interventions due to trial context. Participants self-reported falls over a long time-period.	x

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
Cameron 2013[70]	exrc & mfar(w/med+slfm)	ac	Falls (incidents)	+	-	-	-	+	Some concerns: Insufficient information about any deviations from the intended interventions due to trial context. 107 and 109 completed 12 months follow-up for intervention and controls respectively. 120 and 121 data sets were reportedly analysed and adjusted for length of follow up but only 119 and 119 respectively are accounted for in the data count. Unblinded participants self-reported the outcome.	-
Coleman 1999[95]	educ & mfar(w/med+slfm)	ac	Falls (pts fell once or more / last 12 mths)	-/-	-	x	-	+	Serious concern: There is insufficient information about missingness. Some concerns: It is unclear if the allocation sequence was concealed. It is unclear whether participants were recruited prior to cluster-randomisation; if they were recruited afterwards their allocation was probably known. It is unclear if there were deviations due to the trial context. Self-reported falls may be influenced by knowledge of the intervention but this is unlikely.	x
Dorresteijn 2016[52]	ADL	ac	Falls (incidents / last 12 mths)	+	-	x	-	+	Serious concerns: 15/195 and 28/194 lost. 94 and 106 fallers per arm. Loss to follow-up included for health reasons and there is an imbalance between arms. Some concerns: Insufficient information to rule out deviations from intended interventions due to trial context in both groups. Unblinded participants self-reported outcomes.	x
Dorresteijn 2016[52]	ADL	ac	Falls (pts fell once or more / last 12 mths)	+	-	x	-	+	Serious concerns: 15/195 and 28/194 lost. 94 and 106 fallers per arm. Loss to follow-up included for health reasons and there is an imbalance between arms. Some concerns: Insufficient information to rule out deviations from intended interventions due to trial context in both groups. Unblinded participants self-reported outcomes.	x
Fabacher 1994[15]	mfar(w/med)	ac	Falls (pts fell once or more)	-	-	x	-	+	Serious concerns: At least IG 27 vs CG 24 not followed up, if excluding deaths, so the number of missing data is bigger than the known number of people that had fall(s). Some concerns: Unclear randomisation and allocation concealment method. The trial personnel and participants were unblinded, and unclear of any deviations from interventions due to trial context. Unblinded participants self-reported the outcome.	x
Gill 2002[45]	ADL & exrc	ac	Falls (pts fell once or more)	-	-	-	-	+	Some concerns: Possible lack of allocation concealment, computer-generated random numbers were used but there is no reporting of allocation concealment. Insufficient information provided about any deviations from the intended interventions due to trial context. 10 missing data due to death (9.6%) of known events. Unblinded participants self-reported the outcomes.	-
Henderson 2005[20]	mfar	ac	Falls (incidents)	+/x	+	x	+	-	Very serious concerns: The recruitment method seemed consistent across the clusters; however, the researchers already knew the cluster allocations and informed the participants about the intervention details of the cluster they belonged to. Missingness was substantial and imbalanced between arms for deaths and overall. Some concerns: Different analyses may have been conducted and not reported.	xx

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
Henderson 2005[20]	mfar	ac	Falls (pts fell once or more)	+/x	+	x	+	+	Very serious concerns: The recruitment method seemed consistent across the clusters; however, the researchers already knew the cluster allocations and informed the participants about the intervention details of the cluster they belonged to. Missingness was similar to the number of events.	xx
Kono 2016[23]	mfar(w/med)	mfar	Falls (pts fell once or more / last 12 mths)	+	-	x	-	+	Serious concerns: the missingness (15.3%) depends on its true value (death, institutionalised, hospitalised, declined postal FU completion). Some concerns: Some concerns: Insufficient information to determine material contamination of interventions due to trial context. Unblinded participants self-reported the outcome.	x
Monteserin Nadal 2008[25]	educ & rsk-mfa-	ac	Falls (pts fell once or more)	-	-	x	-	+	Serious concerns: Data missing for 91/308 and 99/312 with 50 and 44 events per arm. Substantial data missing due to mortality which is associated with falling. Other reasons unknown. Some concerns: Unclear of allocation concealment method. Insufficient information to rule out deviations from the intended interventions due to trial context. Unblinded participants self-reported the outcomes.	x
Newbury 2001[26]	mfa-(w/med)	ac	Falls (pts fell once or more / last 12 mths)	-	-	x	+	+	Serious concerns: 11/100 (11%) not included, the numbers of deaths and other dropouts are not balanced between the groups. Some concerns: Some other concerns: Unclear whether allocation was adequate. Unclear of any deviations from the intended interventions due to trial context.	x
Ng 2015[89]	cgn & ntr & exrc	ac	Falls (pts fell once or more)	+	-	x	-	+	Serious concerns: 7 persons not included vs 7 persons had fall. Some concerns: Unclear of any deviations from the intended intervention due to trial context. Participant self-reported the outcome and unclear whether all of them were blinded.	x
Rooijackers 2021[9]	hmcr & ADL & mfar(w/slfm)	hmcr	Falls (pts fell once or more / last 6 mths)	+/-	-	x	+	+	Serious concerns: The number of missing data (n=63) is the same as the number of events (n=63), mostly due to death, institutional placement, and deteriorated health. Some concerns: Participants were identified by the nurses who seemed to be aware of the intervention assignment. Insufficient information to rule out any deviations due to the trial context though blinding was in place.	x
Rubenstein 2007[56]	mfar(w/med)	ac	Falls (pts fell once or more / last 3 mths)	-	-	-	-	-	Some concerns: Insufficient about the randomisation process. Insufficient information about any deviations from the intended interventions due to trial context in both groups. 15% of missing data (44% of this due to death). Unblinded participants self-reported the outcomes. Possible selection of the outcome measure, because the participants were asked about the history of previous 12 months but the results were reported as falls in previous 3 months.	-

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
Serra-Prat 2017[72]	ntr & exrc	ac	Falls (pts fell once or more / last 3 mths)	-	-	x	-	+	Serious concerns: 133/172 (77.3%) participants are included in this results analysis. High concerns related missing data which is likely related with the outcome true value, based on the reasons to drop out. Some concerns: Unclear randomisation and allocation method. Insufficient information about any deviations from intended interventions due to trial context. Method of ascertainment is unclear, and nurses and participants were unblinded.	x
Suijker 2016[10]	mfar(w/med)	ac	Falls (incidents / last 6 mths)	+/-	-	x	+	-	Serious concern: Substantial missing data for unknown reasons. Some concerns: Unclear when GP practices were randomised and whether participants were identified and recruited prior to randomisation or whether those identifying participants were aware of the assignment. It is unclear whether there were deviations from the intended interventions due to trial context. The reported result may have been selected from multiple available.	x

Table 33. Falls: long-term timeframe

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
Carpenter 1990[34]	rsk-mfa-	ac	Falls (incidents / last 1 mth)	-	-	x	-	+	Serious concerns: The number of missing data (172) is bigger than the number of events (48), and some imbalances between groups. Some concerns: The allocation concealment method is unclear. Insufficient information provided about any deviations from the intended interventions due to trial context. The participants self-reported the outcomes and they may be aware of their assignment.	x
Coleman 1999[95]	educ & mfar(w/med+slfm)	ac	Falls (pts fell once or more / last 12 mths)	-/-	-	x	-	+	Serious concern: There is insufficient information about missingness. Some concerns: It is unclear if the allocation sequence was concealed. It is unclear whether participants were recruited prior to cluster-randomisation; if they were recruited afterwards their allocation was probably known. It is unclear if there were deviations due to the trial context. Self-reported falls may be influenced by knowledge of the intervention but this is unlikely.	x
Jitapunkul 1998[60]	rsk-mfa-	ac	Falls (pts fell once or more / last 3 mths)	-	-	x	-	+	Serious concerns: Missingness is greater than number of fallers. Some concerns: Randomisation and allocation concealment method unknown. Potential deviations in the control group are not mentioned. Self-reported outcome by participants aware of their assignment.	x
Kono 2016[23]	mfar(w/med)	mfar	Falls (pts fell once or more / last 12 mths)	+	-	x	-	+	Serious concerns: the missingness (22.2%) depends on its true value (death, institutionalised, hospitalised, declined postal FU completion), and the analysis plan is unknown. Some concerns: Insufficient information to determine material contamination of interventions due to trial context. Unblinded participants self-reported the outcome.	x

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
Parsons M 2012[38]	hmcr & mfar	hmcr & mfa-	Falls (incidents)	+/-	-	x	-	+	Very serious concern: Overall 71% of participants were lost to follow-up; there were imbalances in losses to follow-up, including due to death. Some concerns: Unclear whether and when the personnel recruiting participants would be unblinded to the assignments. Participants and personnel were not blinded to assignments, and the authors suggested that the Hawthorne effect and experimenter effects were limitations, although it was impossible to determine the extent. Unblinded participants self-assessed the outcome.	xx
Parsons M 2012[38]	hmcr & mfar	hmcr & mfa-	Falls (pts fell once or more)	+/-	-	x	-	+	Very serious concern: Overall 71% of participants were lost to follow-up; there were imbalances in losses to follow-up, including due to death. Some concerns: Unclear whether and when the personnel recruiting participants would be unblinded to the assignments. Participants and personnel were not blinded to assignments, and the authors suggested that the Hawthorne effect and experimenter effects were limitations, although it was impossible to determine the extent. Unblinded participants self-assessed the outcome.	xx
Parsons M 2017[8]	hmcr & ADL & mfar(w/slfm)	hmcr & mfa-	Falls (incidents)	-	-	x	-	+	Very serious concerns: The denominator is unclear. Substantial attrition during the 24-month trial period; only 12/113 participants were followed up at 18 months. Some concerns: Computer-mediated minimisation used; concealment not mentioned. Participants and personnel were not blinded to assignments, and the authors suggested that the Hawthorne effect and experimenter effects were limitations, although it was impossible to determine the extent. Unblinded participants and personnel reporting and collecting the outcome.	xx
Parsons M 2017[8]	hmcr & ADL & mfar(w/slfm)	hmcr & mfa-	Falls (pts fell once or more)	-	-	x	-	+	Very serious concerns: The denominator is unclear. Substantial attrition during the 24-month trial period; only 12/113 participants were followed up at 18 months. Some concerns: Computer-mediated minimisation used; concealment not mentioned. Participants and personnel were not blinded to assignments, and the authors suggested that the Hawthorne effect and experimenter effects were limitations, although it was impossible to determine the extent. Unblinded participants and personnel reporting and collecting the outcome.	xx
Profener 2016[110]	educ & mfar	ac	Falls (pts fell once or more / last 12 mths)	+	-	x	-	+	Serious concerns: 28.6% missing data; the proportion of people followed up were imbalanced between groups due to more people declined it in CG. Some concerns: Insufficient information provided about any deviations from the intended intervention due to trial context. Participants self-reported the outcomes, and at least those IG were unblinded.	x
Rubenstein 2007[56]	mfar(w/med)	ac	Falls (pts fell once or more / last 3 mths)	-	-	x	-	-	Serious concerns: 24.7% of missing data (51% of this due to death) Some concerns: Insufficient about the randomisation process. Insufficient information about any deviations from the intended interventions due to trial context in both groups. Unblinded participants self-reported the outcomes. Possible selection of the outcome measure, because the participants were asked about the history of previous 12 months but the results were reported as falls in previous 3 months.	x

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
Suijker 2016[10]	mfar(w/med)	ac	Falls (incidents / last 6 mths)	+/-	-	x	+	-	Serious concern: Substantial missing data for unknown reasons. Some concerns: Unclear when GP practices were randomised and whether participants were identified and recruited prior to randomisation or whether those identifying participants were aware of the assignment. It is unclear whether there were deviations from the intended interventions due to trial context. The reported result may have been selected from multiple available.	x

Table 34. Mortality: short-term timeframe

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
Auvinen 2020[43]	hmcr & med	hmcr	Deaths (reported as loss to follow-up)	+	-	-	+	+	Some concerns: Insufficient information about any deviations from the intended interventions due to trial context in either group. 43 events, 9 missing, reason was "not contacted", fairly balanced between groups.	-
Barenfeld 2018[111]	educ	ac	Deaths (reported as loss to follow-up)	-	x	x	+	-	Very serious concerns: High risk of contamination. More missing data (4) than the number of events (2). Some concerns: Methods use to generate random sequence and allocation were unclear. The process for classifying people as missing for different reasons when more than one may have been known is not specified.	xx
Challis 2004[1]	mfar(w/med)	mfar	Deaths (from routine data)	-	-	+	+	+	Some concerns: Lack of information about the randomization and allocation. Deviations from intended interventions due to trial context are not described and it is not clear whether contacts between specialists and care managers could have changed the case managers usual practice in some way.	-
Clark 2012[102]	eng & educ	ac	Deaths (reported as loss to follow-up)	-	-	x	+	-	Serious concerns: Missing number (32) is bigger than the number of events (7). Some concerns: Insufficient information about any deviations from the intended interventions due to trial context, e.g., contamination between the groups within each site. The death data are reported as a reason of loss to follow-up; choices may have been made about which reasons to report for losses to follow-up.	x
Counsell 2007[59]	educ & mfar(w/med+slfm)	ac	Deaths (pre-specified outcome, method of ascertainment unspecified)	+/-	-	x	+	+	Serious concern: More missingness than number of deaths. Some concerns: It is unclear if the identification and recruitment of participants was likely to be influenced by the recruiters' knowledge of allocation. There is no information regarding possible differences in practice in the control arm due to the trial context.	x

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
de Craen 2006[76]	mfa-	ac	Deaths (reported as loss to follow-up)	+	-	x	+	-	Serious concerns: The number of missing data (43) is bigger than the number of known events (8). Some concerns: Insufficient information provided about any deviation from the interventions due to trial context. The data were reported as a reason of losses to follow-up. Choices may have been made about which reasons to provide for loss to follow-up.	x
Fernandez-Barres 2017[2]	hmcr & ntr	hmcr	Deaths (reported as loss to follow-up)	+	-	x	+	-	Serious concerns: 10/173 participants missing, i.e., more than half the total number of events in each group. There was an imbalance in the proportion and reasons of missing data, especially in withdrawals IG 4% vs CG 8.3%. Some concerns: Insufficient information to rule out any deviations from the intended interventions due to trial context. Unblinded participants self-assessed. The classification of losses to follow-up is not provided.	x
Hattori 2019[85]	educ & mfar(w/slfm)	mfar	Deaths (pre-specified outcome, method of ascertainment unspecified)	+	-	+	+	+	Some concerns: Unclear of any deviations from the intended interventions due to trial context.	-
Hendriksen 1984[86]	mfar	ac	Deaths (from routine data)	-	-	+	+	+	Some concerns: The details of the randomisation and allocation concealment methods were not provided. There was unlikely any deviations from the intended intervention in the control group, however insufficient information is provided about any deviation from the experimental intervention due to trial context.	-
Imhof 2012[3]	mfar	ac	Deaths (reported as loss to follow-up)	-	-	x	+	-	Serious concerns: 15/461 missing at 6-month follow-up, 12 people died. Deaths may be linked to missingness. More missingness than mortality. Some concerns: The method of allocation concealment is unclear. Insufficient information provided about any deviations from the intended interventions due to trial context. The analysis plan and classification of reasons for losses to follow-up are unavailable.	x
Jing 2018[79]	exrc & psyc	psyc	Deaths (reported as loss to follow-up)	-	-	+	+	-	Some concerns: Lack of information about randomisation process. Uncertainty about any deviation from intended interventions due to trial context. The classification of loss to follow-up reasons is not explained.	-
King 2012[4]	hmcr & ADL & mfar(w/slfm)	hmcr	Deaths (reported as loss to follow-up)	+/+	-	x	+	-	Serious concern: Number of losses exceeds number of deaths. Some concerns: It is unclear whether there were any changes in usual care due to the trial context. It is unclear how losses to follow-up were categorised.	x
Kukkonen-Harjula 2017[5]	ADL & ntr & exrc	ac	Deaths (reported as loss to follow-up)	+	-	x	+	-	Serious concern: Missingness was equal to the number of deaths. Some concerns: It is unclear if there were any deviations due to the trial context. It is unclear how competing losses to follow-up were allocated.	x

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
Liddle 1996[6]	aids & mfar	ac	Deaths (reported as loss to follow-up)	-	x	+	+	-	Very serious concerns: The authors describe significant contamination in both groups, whereby the interventions were sought and implemented to levels in excess of that provided in trial to the intervention group. Some concerns: Lack of information regarding the procedures to conceal the allocation sequence. Classification of reasons for losses to follow-up is not provided.	xx
Melis 2008[80]	mfar(w/med)	ac	Deaths (pre-specified outcome, method of ascertainment unspecified)	+	-	x	+	-	Serious concerns: The number of missing data (10) is bigger than the known events (9); there are imbalances in missingness. Some concerns: Insufficient information about any deviations from the intended interventions due to trial context. Data were reported as a loss to follow-up reason, choices may have been made about which reason to report for loss to follow-up.	x
Metzelthin 2013[7]	educ & mfar(w/med+slfm)	ac	Deaths (reported as loss to follow-up)	-/-	-	x	+	-	Serious concern: There was more missingness than events with some imbalance in missingness between the arms. Some concerns: It appears the allocation was random and concealed, although it appears the authors intended to bias the allocation with a more urban intervention arm and more rural control arm but they were unsuccessful in implementing this approach. Participants were recruited after clusters were allocated and it is unclear if this was affected by knowledge of the allocation. It is unclear if there were deviations in care due to the trial context. It is unclear how participants were assigned their lost to follow-up status.	x
Morgan 2019[47]	exrc	ac	Deaths (reported as loss to follow-up)	+	-	-	+	-	Some concerns: Insufficient information to judge any deviations from the intended interventions due to trial context. 2/34 missing from intervention arm with 1 death, missing data and events all in the intervention arm. Reasons of loss to follow-up classification is not provided.	-
Ng 2015[89]	cgn & ntr & exrc	ac	Deaths (pre-specified outcome, method of ascertainment unspecified)	+	-	x	+	+	Serious concerns: 5 persons not included vs no deaths reported. Some concerns: Unclear of any deviations from the intended intervention due to trial context.	x
Parsons J 2012[103]	hmcr & mfar(w/slfm)	hmcr & mfa-	Deaths (reported as loss to follow-up)	-/x	-	+	+	-	Serious concern: It appeared participants were recruited after clusters were randomised and those identifying participants may not have been blinded to allocation; additionally, the groups appeared imbalanced with the intervention group probably having higher needs due to older age, more of them living alone, and worse health status. Some concerns: It is unclear whether the allocation sequence for clusters was concealed and whether the resulting allocation was balanced. It is unclear if there were deviations from the intended intervention related to trial context. It is unclear how participants were allocated as lost to follow-up.	x

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
Parsons M 2012[38]	hmcr & mfar	hmcr & mfa-	Deaths (reported as loss to follow-up)	+/-	-	x	+	-	Serious concern: There were more missing data than deaths. Reasons for missingness were unclear. Some concerns: Unclear whether and when the personnel recruiting participants would be unblinded to the assignments. Participants and personnel were not blinded to assignments, and the authors suggested that the Hawthorne effect and experimenter effects were limitations, although it was impossible to determine the extent. It's unclear how people would be assigned when there might be multiple reasons for loss to follow-up.	x
Parsons M 2017[8]	hmcr & ADL & mfar(w/slfm)	hmcr & mfa-	Deaths (from routine data)	-	-	x	+	+	Serious concern: Missingness totalled over half of events. Reasons for missingness were unclear. Some concerns: Computer-mediated minimisation used; concealment not mentioned. Participants and personnel were not blinded to assignments, and the authors suggested that the Hawthorne effect and experimenter effects were limitations, although it was impossible to determine the extent.	x
Ploeg 2010[28]	educ & mfar(w/med)	ac	Deaths (reported as loss to follow-up)	+	-	+	+	-	Some concerns: Insufficient information provided to make judgement about any deviations from the intended interventions due to trial context. Unclear of how losses to follow-up were classified.	-
Rooijackers 2021[9]	hmcr & ADL & mfar(w/slfm)	hmcr	Deaths (reported as loss to follow-up)	+/-	-	+	+	-	Some concerns: Participants were identified by the nurses who seemed to be aware of the intervention assignment. Insufficient information to rule out any deviations due to the trial context though blinding was in place. The classification of reasons of loss to follow-up is not provided.	-
Stewart 2005[64]	mfa-	mfa-	Deaths (reported as loss to follow-up)	+	-	x	+	-	Serious concerns: 10/9 lost , 19/17 events, number of losses in each group is over 50% of event number, most losses to follow-up due to withdrawal. Some concerns: No evidence of contamination, and both active interventions and able to cross-refer so deviations unlikely, but insufficient information to rule out any deviation in both groups. Unclear of classification of losses to follow-up reasons.	x
Suijker 2016[10]	mfar(w/med)	ac	Deaths (from routine data)	+/-	-	+	+	+	Some concerns: Unclear when GP practices were randomised and whether participants were identified and recruited prior to randomisation or whether those identifying participants were aware of the assignment. It is unclear whether there were deviations from the intended interventions due to trial context.	-
Szanton 2011[11]	ADL&aids&educ&exrc&mfar(w/med+slfm)	ac	Deaths (reported as loss to follow-up)	-	-	+	+	-	Some concerns: The methods of randomisation and allocation concealment are unclear. Insufficient information provided to judge any deviations from the intended interventions due to trial context. Choices may have been made about which reasons to provide for loss to follow-up.	-

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
Takahashi 2012[65]	mntr-mfa-	ac	Deaths (pre-specified outcome, method of ascertainment unspecified)	-	-	x	+	+	Serious concerns: 19 withdrawals according the flowchart by 12 months; number withdrawals is not provided for 6 months. The missing numbers reported Upatising 2013 included those with incomplete assessment data. Some concerns: The method of allocation concealment is unclear. Unclear whether any deviations from the intended interventions happened due to trial context.	x
Tuntland 2015[104]	hmcr & ADL & aids & mfa-(w/slfm)	hmcr & mfa-	Deaths (reported as loss to follow-up)	+	-	-	+	-	Some concerns: Unclear of any deviations or none from the intended intervention due to trial context. 3 missing vs 7 known deaths missing data though reasons and proportions were balanced between groups and thus would not bias towards favouring the opposite direction. Non-blinded participants were not blinded and self-assessed the outcome. Unclear of how losses to follow up were classified.	-
van der Pols-Vijlbrief 2017[67]	hmcr & ntr & mfar	hmcr	Deaths (reported as loss to follow-up)	-	-	x	+	-	Serious concerns: 9/155 participants missing, the number of missing data (9) is bigger than the number of events (7). Some concerns: Unclear of the allocation concealment, any deviations from the intended interventions due to trial context. Choices may have been made about which reason to provide for loss to follow-up.	x
van Rossum 1993[94]	mfar	ac	Deaths (from routine data)	-	-	+	+	+	Some concerns: The method of allocation concealment is unclear. Insufficient information about any deviations from the intended intervention due to trial context.	-
Whitehead 2016[48]	hmcr & ADL & aids & mfa-	hmcr & mfa-	Deaths (reported as loss to follow-up)	+	-	-	+	-	Some concerns: Insufficient information to judge any deviations from the intended interventions although any material deviations seem unlikely. 2 CG participants withdrew or were lost to follow-up, no missing data from IG, and the result is unlikely depending on the true value of the missing data. Classification of losses to follow-up is not provided.	-
Wong 2019[12]	mfar(w/slfm)	ac	Deaths (reported as loss to follow-up)	x	-	x	+	-	Very serious concern: Allocation was likely predictable. 41/540 not included due to not tracing after loss to follow-up, that is a lot more participants than the total number of known deaths (n=7). The proportions of some reasons are imbalanced. Some concerns: Unsure of any intervention deviation from the intended interventions due to trial context. The classification of losses to follow-up is not reported.	xx

Table 35. Mortality: medium-term timeframe

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
Alegria 2019[74]	exrc & psyc	ac	Deaths (reported as loss to follow-up)	x	x	x	+	-	Very serious concerns: Two-person block randomisation meant assignment was probably predictable by recruiters. 35 participants were excluded from analysis because of inability to participate in the intervention. Exclusions included due to lack of medical clearance and medical condition (14/120 participants). Loss to follow-up was far greater than the number of deaths and reasons were not given. Some concern: No analysis plan available.	xx
Auvinen 2020[43]	hmcr & med	hmcr	Deaths (reported as loss to follow-up)	+	-	x	+	+	Serious concerns: 18 missing, reasons not given. Some concerns: Insufficient information about any deviations from the intended interventions due to trial context in either group.	x
Barenfeld 2018[111]	educ	ac	Deaths (reported as loss to follow-up)	-	x	x	+	-	Very serious concerns: High risk of contamination. More missing data (6) than the number of events (2). Some concerns: Methods use to generate random sequence and allocation were unclear. The process for classifying people as missing for different reasons when more than one may have been known is not specified.	xx
Bernabei 1998[49]	hmcr & mfar(w/med)	hmcr	Deaths (from routine data)	-	-	+	+	+	Some concerns: No indication of the concealment method of the allocation sequence. Potential for contamination of the control arm given the same group of GPs were caring for these individuals too but unclear whether there is material deviations from the intended interventions due to trial context.	-
Bleijenberg 2016[63]	rsk-mfa-	ac	Deaths (from routine data)	x/+	-	+	+	-	Serious concerns: There was substantial imbalance in cluster size between the arms (2042/11, 3451/13, 2663/11), education level and socioeconomic status (both higher in the control arm). Some concerns: There is insufficient information to judge potential deviations due to the trial context. The process for classifying people as missing for different reasons when more than one may have been known is not specified.	x
Blom 2016[13]	mfa-(w/med+slfm)	ac	Deaths (reported as loss to follow-up)	x/+	-	x	+	-	Very serious concerns: Unsure of the randomisation and allocation of clusters, and there is a large imbalance of cluster size. 48/288 and 236/1091 assumed missing, vs 105 deaths. However, the precise number is unclear. Nursing home admission and too ill are linked to deaths. There is a substantial imbalance in missingness between arms, and more missingness than deaths in the intervention group. Some concerns: Insufficient information to rule out any deviations due to trial context. Unclear of the analysis used.	xx
Borrows 2013[69]	aids	mfa-	Deaths (reported as loss to follow-up)	+	-	x	+	-	Serious concerns: Missing data: IG 2 CG 1, so more missing data than the events. Some concerns: Insufficient information about any deviations from the intended intervention due to trial context. The classification of losses to follow-up is not reported.	x

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
Bouman 2008[50]	mfar(w/med)	ac	Deaths (reported as loss to follow-up)	+	-	x	+	+	Serious concern: Large imbalance in withdrawals (missing data). Some concerns: No information about any deviations from the intended intervention due to trial context, though the authors suggested no methodological drawbacks.	x
Brettschneider 2015[51]	mfar(w/med)	ac	Deaths (from routine data)	-	-	x	+	+	Serious concerns: Total number included unclear. It seems like info was available for all but people who revoked their consent. It is possible that the people who dropped out and revoked their consent may have been sicker but there is no information about this. Some concerns: Uncertainty about allocation concealment (particularly those recruited vis registration office). Participants and intervention deliverers were aware of the allocated interventions.	x
Cameron 2013[70]	exrc & mfar(w/med+slfm)	ac	Deaths (from routine data)	+	-	-	+	+	Some concerns: Insufficient information about any deviations from the intended interventions due to trial context. 3 withdrew consent presumed missing, 22 known deaths.	-
Coleman 1999[95]	educ & mfar(w/med+slfm)	ac	Deaths (reported as loss to follow-up)	-/-	-	x	+	-	Serious concern: There were at least half as many missing as there were deaths. Some concerns: It is unclear if the allocation sequence was concealed. It is unclear whether participants were recruited prior to cluster-randomisation; if they were recruited afterwards their allocation was probably known. It is unclear if there were deviations due to the trial context. It is unclear how participants were classified as lost to follow-up in the flowchart.	x
Counsell 2007[59]	educ & mfar(w/med+slfm)	ac	Deaths (pre-specified outcome, method of ascertainment unspecified)	+/-	-	x	+	+	Serious concern: More missingness than number of deaths. Some concerns: It is unclear if the identification and recruitment of participants was likely to be influenced by the recruiters' knowledge of allocation. There is no information regarding possible differences in practice in the control arm due to the trial context.	x
Dalby 2000[14]	mfar(w/med)	ac	Deaths (from routine data)	-	-	+	+	+	Some concerns: The method of allocation concealment is unclear. Insufficient information provided about any deviations from the intended intervention due to trial context.	-
de Craen 2006[76]	mfa-	ac	Deaths (reported as loss to follow-up)	+	-	x	+	-	Serious concerns: The number of missing data (67) is bigger than the known events (23). Some concerns: Insufficient information provided about any deviation from the interventions due to trial context. The data were reported as a reason of losses to follow-up. Choices may have been made about which reasons to provide for loss to follow-up.	x
Dorresteijn 2016[52]	ADL	ac	Deaths (reported as loss to follow-up)	+	-	+	+	-	Some concerns: Insufficient information to rule out deviations from intended interventions due to trial context in both groups. Reasons of loss to follow-up classification is not provided.	-

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
Fabacher 1994[15]	mfar(w/med)	ac	Deaths (pre-specified outcome, method of ascertainment unspecified)	-	-	x	+	+	Serious concerns: 25 participants' data were missing, more than the number of known events. Some concerns: Unclear randomisation and allocation concealment method. The trial personnel and participants were unblinded, and unclear of any deviations from interventions due to trial context.	x
Fernandez-Barres 2017[2]	hmcr & ntr	hmcr	Deaths (reported as loss to follow-up)	+	-	x	+	-	Serious concern: 26/173 participants missing i.e., more missing data then total number of events in each group. There was an imbalance in the proportion and reasons of missing data, especially in withdrawals IG 5.0% vs CG 16.7%. Some concerns: Insufficient information to rule out any deviations from the intended interventions due to trial context. Unblinded participants self-assessed. The classification of losses to follow-up is not provided.	x
Fristedt 2019[91]	hmcr & mfar(w/med)	hmcr	Deaths (from routine data)	x	-	+	+	+	Serious concerns: Randomisation took place before enrolling participants, and at recruitment, they were informed of the study details, which introduces recruitment bias. Some concerns: Insufficient information to determine any deviations from the intended intervention due to trial context.	x
Gill 2002[45]	ADL & exrc	ac	Deaths (from routine data)	-	-	+	+	+	Some concerns: Possible lack of allocation concealment, computer-generated random numbers were used but there is no reporting of allocation concealment. Insufficient information provided about any deviations from the intended interventions due to trial context. Quote: "Those who agreed had a comprehensive baseline assessment and were subsequently randomized to either the physical therapy intervention or an educational control group." Quote: "Randomization occurred within strata, defined on the basis of recruitment strategy (office-based vs roster based) and level of physical frailty (moderate vs severe), and was implemented by the data manager by using a computer-generated algorithm." There were slight differences in disability, gender and number over 85 years but this was not reflected in mean age and differences were not large.	-
Gitlin 2006[46]	ADL & aids & exrc	ac	Deaths (from routine data)	+	-	+	+	+	Some concerns: Insufficient information to rule out deviations from the intended interventions due to trial context within each group.	-

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
Gustafsson 2013[112]	educ	ac	Deaths (reported as loss to follow-up)	-	-	x	+	-	Serious concern: The proportions of missing data are imbalanced between groups as those that withdrew were probably not followed; differences in timing of dropout between arms due to disinterest / withdrawal of consent were marked and the process that led to withdrawal of consent at baseline in the intervention arm is unclear. Some concerns: It appeared that additional participants were recruited to one arm to replace those who dropped out at baseline but this is not discussed and the arms appeared balanced. There is no information about uptake of possible alternative interventions by the control group because of the trial context. It is unclear how competing reasons for loss to follow up were allocated.	x
Gustafsson 2013[112]	educ	educ & mfa-	Deaths (reported as loss to follow-up)	-	-	x	+	-	Serious concern: There was a substantial imbalance in missingness between arms and substantially more missingness than events. Some concerns: It appeared that additional participants were recruited to one arm to replace those who dropped out at baseline but this is not discussed and the arms appeared balanced. There is no information about uptake of possible alternative interventions by the control group because of the trial context. It is unclear how competing reasons for loss to follow up were allocated.	x
Gustafsson 2013[112]	educ & mfa-	ac	Deaths (reported as loss to follow-up)	-	-	x	+	-	Serious concern: There was a large number of dropouts relative to the number of events and these were all withdrawals from the intervention group (4), 6 events in total. Some concerns: It appeared that additional participants were recruited to one arm to replace those who dropped out at baseline but this is not discussed and the arms appeared balanced. There is no information about uptake of possible alternative interventions by the control group because of the trial context. It is unclear how competing reasons for loss to follow up were allocated.	x
Hall 1992[16]	hmcr & mfar(w/slfm)	hmcr & mfar	Deaths (from routine data)	-	-	+	+	+	Some concerns: Insufficient details about the allocation concealment method. Insufficient information provided to assess any deviations from the intended interventions due to trial context.	-
Harari 2008[17]	mfar(w/med)	ac	Deaths (reported as loss to follow-up)	+	x	x	+	+	Very serious concerns: Possibly contamination in usual care. 81/2503 (3.2%) participants were not included, the reasons of loss to follow-up are unknown and the majority of missing data is loss to follow-up.	xx
Hay 1998[18]	ac	ac	Deaths (reported as loss to follow-up)	-	-	x	+	-	Serious concerns: The number of missing data (73) is bigger than the number of events (12), and the proportions is imbalanced between groups. Some concerns: Insufficient information provided about the methods used to generate the sequence and allocation concealment. Insufficient information provided for judging any deviations from the intended interventions due to trial context. Results reported as one of the losses to follow-up reasons, and choices may have been made about which reasons to provide for loss to follow-up.	x

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
Hay 1998[18]	mfa-	ac	Deaths (reported as loss to follow-up)	-	-	x	+	-	Serious concerns: The number of missing data (125) is bigger than the number of events (9). Some concerns: Insufficient information provided about the methods used to generate the sequence and allocation concealment. Insufficient information provided for judging any deviations from the intended interventions due to trial context. Results reported as one of the losses to follow-up reasons, Results reported as one of the losses to follow-up reasons, and choices may have been made about which reasons to provide for loss to follow-up.	x
Hebert 2001[19]	mfar(w/med)	ac	Deaths (reported as loss to follow-up)	-	-	-	+	-	Some concerns: No information provided about the randomisation and allocation methods. Insufficient information about any other potential deviations from the intended interventions due to trial context. The number of missing data (9) is 30% of the known events (30). The reason for missing data is fairly balanced between groups. The results are reported as one of loss to follow-up reasons. Choices may have been made about which reasons to provide for loss to follow-up.	-
Henderson 2005[20]	mfar	ac	Deaths (reported as loss to follow-up)	+/x	+	x	+	-	Very serious concerns: The recruitment method seemed consistent across the clusters; however, the researchers already knew the cluster allocations and informed the participants about the intervention details of the cluster they belonged to. The number of unknown survival status of 31 withdrawals (including 6 admitted to care) was more than the known events. Some concerns: The data were reported as a reason of withdrawals, but unclear of the classification of withdrawals.	xx
Hendriksen 1984[86]	mfar	ac	Deaths (from routine data)	-	-	+	+	+	Some concerns: The details of the randomisation and allocation concealment methods were not provided. There was unlikely any deviations from the intended intervention in the control group, however insufficient information is provided about any deviation from the experimental intervention due to trial context.	-
Hogg 2009[54]	mfar(w/med)	ac	Deaths (reported as loss to follow-up)	-	-	-	+	-	Some concerns: Although the allocation seems random and concealed, there are some imbalances in the baseline characteristics. Some contamination was reported by the authors, but it was judged unlikely to affect the outcome. There is a small amount of missing data. The death data are reported as a reason of loss to follow-up; choices may have been made about which reasons to provide about loss to follow-up.	-
Holland 2005[108]	educ & exrc & mfar(w/slfm)	ac	Deaths (from routine data)	+	-	x	+	-	Serious concerns: The number of missing data (10) is bigger than the known event number (9). Some concerns: Insufficient information provided about any deviations from the intended interventions due to trial context. The classification of losses to follow-up is not reported, and choices may have been made about which reasons to provide for loss to follow-up.	x
Howel 2019[101]	wlfr	ac	Deaths (from routine data)	+	+	x	+	+	Serious concern: The number of missing data (8) is 50% of the known events (16).	x

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
Kerse 2014[21]	rsk-mfa-	ac	Deaths (reported as loss to follow-up)	+/+	-	x	+	-	Serious concern: There was more informative missingness than deaths. Some concerns: It is unclear whether the trial context led to changes in usual care. Process of classifying losses to follow-up is unclear.	x
Kono 2004[22]	mfar	ac	Deaths (reported as loss to follow-up)	-	-	-	+	-	Some concerns: Unclear allocation concealment method. Lack information about any deviations from the intended interventions due to trial context. Two participants moved area missing, ten deaths total, but balanced between arms. Reported as one of the reasons of loss to follow-up and the losses of follow-up classification is not provided.	-
Kono 2016[23]	mfar(w/med)	mfar	Deaths (pre-specified outcome, method of ascertainment unspecified)	+	-	x	+	+	Serious concerns: 9 participants moved were missing vs 8 known deaths. Some concerns: Insufficient information to determine material contamination of interventions due to trial context.	x
Kukkonen-Harjula 2017[5]	ADL & ntr & exrc	ac	Deaths (reported as loss to follow-up)	+	-	x	+	-	Main concern: Missingness was similar to the number of deaths. Some concerns: It is unclear if there were any deviations due to the trial context. It is unclear how competing losses to follow-up were allocated.	x
Leveille 1998[71]	educ & exrc & mfar(w/med+slfm)	ac	Deaths (reported as loss to follow-up)	+	-	x	+	-	Serious concerns: 10/201 dropped out, the reasons are unclear. Some concerns: The trial team expected some of the usual care participants to access some of the facilities and measured this as an outcome against facility use in the intervention arm with their added intervention. Insufficient information to judge any deviations from the intended interventions due to trial context. Classification of loss to follow-up reasons is not provided.	x
Lewin 2013[24]	hmcr & educ & mfar	hmcr	Deaths (reported as loss to follow-up)	x	x	+	+	+	Very serious concerns: There are imbalances in the baseline characteristics, possibly due to the subverted randomisation and the reassignment of IG participants who did not participate in the programme. Insufficient information provided about how many IG participants were reassigned due to non-participation. If participants were reassigned, they were not analysed according to their initial assignment.	xx
Liimatta 2019[96]	exrc & mfa-(w/med)	ac	Deaths (from routine data)	-	-	+	+	+	Some concerns: Allocation concealment method unclear. Unclear of any deviations from the intended interventions due to trial context.	-
Mann WC 1999[55]	hmcr & aids	hmcr	Deaths (reported as loss to follow-up)	-	-	-	+	-	Some concerns: The allocation concealment method is not reported. Insufficient information provided to determine any deviations from the intended intervention due to trial context. The missing data are the 4 withdrawals in the control group, no missing data in the intervention group; there are more events in the control and thus the true value of the missing data would not affect the direction of the relative outcome effect. The results are reported as a reason of loss to follow-up. Choices may have been made about which reasons to report for losses to follow-up.	-

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
Meng 2005[61]	vchr	ac	Deaths (reported as loss to follow-up)	-	x	x	+	x	Very serious concerns: Participants were excluded from these results post-randomisation due to age (n=86). This could substantially impact on the result given it is more than the number of deaths recorded. Sample included 279 and 320 of 459 and 439 randomised, 75 and 20 of whom were lost prior to intervention delivery. Additionally, there were further losses to follow-up. There were far fewer events than missing data (34 and 29 deaths). There was substantial imbalance in losses prior to intervention delivery. The process for classifying people as missing for different reasons when more than one may have been known is not specified. Data on the sample before exclusions was probably examined and is not provided. Some concerns: No details on method of allocation provided. Insufficient information to rule out any deviations from the intended interventions due to trail context in both groups.	xx
Metzelthin 2013[7]	educ & mfar(w/med+slfm)	ac	Deaths (reported as loss to follow-up)	-/-	-	x	+	-	Serious concern: There was more missingness than events with some imbalance in missingness between the arms. Some concerns: It appears the allocation was random and concealed, although it appears the authors intended to bias the allocation with a more urban intervention arm and more rural control arm but they were unsuccessful in implementing this approach. Participants were recruited after clusters were allocated and it is unclear if this was affected by knowledge of the allocation. It is unclear if there were deviations in care due to the trial context. It is unclear how participants were assigned their lost to follow-up status.	x
Monteserin Nadal 2008[25]	educ & rsk-mfa-	ac	Deaths (reported as loss to follow-up)	-	-	x	+	+	Serious concerns: There were 104 withdrawals and mortality data were not available for these participants. Withdrawal may be linked to mortality. No reasons for voluntary withdrawal were provided. Some concerns: Unclear of allocation concealment method. Insufficient information to rule out deviations from the intended interventions due to trial context.	x
Morey 2009[81]	exrc	ac	Deaths (reported as loss to follow-up)	-	-	x	+	-	Serious concerns: The number of missing data (36) is bigger than the number of events (7). Some concerns: Unclear whether allocation was securely concealed. Insufficient information to judge any deviations from the intended interventions due to trial context in both groups. Reasons of loss to follow-up classification is not provided.	x
Newbury 2001[26]	mfa-(w/med)	ac	Deaths (from routine data)	-	-	+	+	+	Some concerns: Unclear whether allocation was adequate. Unclear of any deviations from the intended interventions due to trial context.	-

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
Newcomer 2004[27]	educ & mfar(w/med)	ac	Deaths (reported as loss to follow-up)	-	-	x	+	-	Serious concerns: More participants missing (145) than the known events (89). Some concerns: Unclear about how the sequence was generated and the allocation method. Insufficient information available to judge whether there were any deviations from the intended intervention due to trial context in each arm. The care admission data were reported as one of the attrition reasons. Choices may have been made about which reasons to provide for loss to follow-up.	x
Ng 2015[89]	cgn & ntr & exrc	ac	Deaths (pre-specified outcome, method of ascertainment unspecified)	+	-	x	+	+	Serious concerns: 4 persons not included vs 1 known death. Some concerns: Unclear of any deviations from the intended intervention due to trial context.	x
Parsons M 2012[38]	hmcr & mfar	hmcr & mfa-	Deaths (reported as loss to follow-up)	+/-	-	x	+	-	Serious concern: There were more missing data than deaths. Reasons for missingness were unclear. Some concerns: Unclear whether and when the personnel recruiting participants would be unblinded to the assignments. Participants and personnel were not blinded to assignments, and the authors suggested that the Hawthorne effect and experimenter effects were limitations, although it was impossible to determine the extent. It's unclear how people would be assigned when there might be multiple reasons for loss to follow-up.	x
Parsons M 2017[8]	hmcr & ADL & mfar(w/slfm)	hmcr & mfa-	Deaths (from routine data)	-	-	x	+	+	Serious concern: Missingness was greater than the number of events. Reasons for missingness were unclear. Some concerns: Computer-mediated minimisation used; concealment not mentioned. Participants and personnel were not blinded to assignments, and the authors suggested that the Hawthorne effect and experimenter effects were limitations, although it was impossible to determine the extent.	x
Ploeg 2010[28]	educ & mfar(w/med)	ac	Deaths (reported as loss to follow-up)	+	-	-	+	-	Some concerns: Insufficient information provided to make judgement about any deviations from the intended interventions due to trial context. Some missing data but balanced between arms. Unclear of how losses to follow-up were classified.	-
Rockwood 2000[29]	mfa-(w/med)	ac	Deaths (pre-specified outcome, method of ascertainment unspecified)	-	-	+	+	+	Some concerns: No description of randomisation procedures. Some control participants may have sought additional care because of the trial context although this is unlikely to have been a substantial number due to the nature of the intervention.	-
Romera-Liebana 2018[30]	cgn & med & ntr & exrc	ac	Deaths (reported as loss to follow-up)	+	-	x	+	-	Serious concerns: Missing data (10) is 55.6% of the known deaths (18). Some concerns: Any deviations from the intended interventions due to trial contact are not known. The process for classifying people as losses to follow-up is not specified.	x
Rooijackers 2021[9]	hmcr & ADL & mfar(w/slfm)	hmcr	Deaths (reported as loss to follow-up)	+/-	-	-	+	-	Some concerns: Participants were identified by the nurses who seemed to be aware of the intervention assignment. Just over 5% of participants missing from the control arm. Insufficient information to rule out any deviations due to the trial context though blinding was in place. The classification of reasons of loss to follow-up is not provided.	-

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
Rubenstein 2007[56]	mfar(w/med)	ac	Deaths (from routine data)	-	-	+	+	+	Some concerns: Insufficient about the randomisation process. Insufficient information about any deviations from the intended interventions due to trial context in both groups.	-
Serra-Prat 2017[72]	ntr & exrc	ac	Deaths (reported as loss to follow-up)	-	-	+	+	-	Some concerns: Unclear randomisation and allocation method. Insufficient information about any deviations from intended interventions due to trial context. Mortality was pre-specified but it is uncertain whether the number of deaths reported were confirmed among all participants or just those did not drop out for other reasons.	-
Shapiro 2002[31]	hmcr & mfar	ac	Deaths (reported as loss to follow-up)	-	x	x	+	-	(Very high risk) Very serious concerns: High amount of attrition (at least 45.3%) and was imbalanced between groups. Intention to treat principle was not followed when excluded non-participants from IG before starting the intervention. Some concerns: Unclear allocation concealment method. The classification of losses to follow-up is not specified.	xx
Siemonsma 2018[82]	ADL	mfa-	Deaths (reported as loss to follow-up)	-	-	x	+	-	Serious concerns: Based on a imbalance in one of the reasons to drop out (research reasons) it seems possible that there are missing values dependent on its true value (related with ADLs). Some concerns: Unknown allocation concealment method. Insufficient information to judge any deviation from the intended interventions due to trial context. Reasons of loss to follow-up classification is not provided.	x
Suijker 2016[10]	mfar(w/med)	ac	Deaths (from routine data)	+/-	-	+	+	+	Some concerns: Unclear when GP practices were randomised and whether participants were identified and recruited prior to randomisation or whether those identifying participants were aware of the assignment. It is unclear whether there were deviations from the intended interventions due to trial context.	-
Szanton 2019[57]	ADL&aids&educ&exrc&mfar(w/med+slfm)	ac	Deaths (reported as loss to follow-up)	+	-	x	+	-	Serious concerns: The number of missing data (27) is bigger than the number of events (9). Some concerns: Insufficient information to judge whether there were any deviations from the intended intervention due to trial context. The classification of withdrawals is not explained.	x
Takahashi 2012[65]	mntr-mfa-	ac	Deaths (pre-specified outcome, method of ascertainment unspecified)	-	-	x	+	-	Serious concerns: At least 19/205 people who withdrew are missing data, number of missing data is the same as events. Some concerns: The method of allocation concealment is unclear. Unclear whether any deviations from the intended interventions happened due to trial context. Death is reported as a reason of loss to follow-up; choices may have been made about which reasons to provide for loss to follow-up.	x
Teut 2013[66]	hmcr & hmnt & exrc	hmcr	Deaths (reported as loss to follow-up)	+/+	-	-	+	-	Some concerns: Unclear of any deviations from the intended interventions due to trial context. Data missing from 3 participant in CG who moved out (known deaths IG n=7 vs CG n=3) but unlikely to bias and change the direction of effect. The classification of losses to follow-up is not provided.	-

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
van Hout 2010[32]	mfar(w/med)	ac	Deaths (from routine data)	+	-	+	+	+	Some concerns: Insufficient information provided about any deviations from the interventions due to trial context.	-
van Hout 2010[32]	mfar(w/med)	ac	Survival time / Time to death	+	-	+	+	-	Some concerns: Insufficient information provided about any deviations from the interventions due to trial context. The pre-specified analysis plan is unavailable.	-
van Rossum 1993[94]	mfar	ac	Deaths (from routine data)	-	-	+	+	+	Some concerns: The method of allocation concealment is unclear. Insufficient information about any deviations from the intended intervention due to trial context.	-
Vass 2005[98]	mfar(w/med)	mfar	Deaths (from routine data)	+/+	-	+	+	+	Some concerns: There is no information regarding possible deviations arising from the trial context.	-
Williams 1992[83]	mfar	mfa-	Deaths (from routine data)	-	-	+	+	+	Some concerns: Unclear of the sources of random number and allocation conceal method. Insufficient information about any deviations from the intended intervention due to trial context, especially about the controls.	-
Wolter 2013[33]	hmcr & mfar(w/med)	hmcr	Deaths (reported as loss to follow-up)	+/-	-	x	+	-	Serious concerns: Some clusters (more in CG) withdrew after knowing the assignments in the first randomisation. (89 other reasons +99 from 7 IG withdrew clusters)/920 missing data, and clusters which withdrew at baseline were not included. Some concerns: Participants were likely recruited after randomisation. Pre-specified analysis plan is unavailable. There is a possibility of some deviations from the intended interventions but this should not have considerably affected the results.	x
Yamada 2003[105]	mfar(w/med)	ac	Deaths (reported as loss to follow-up)	+	-	x	+	-	Serious concerns: At least 12 of missing data, 46.2% of the number of known deaths. It is unclear whether these participants' survival status was confirmed, but the PHN were likely to record the deaths in IG while having regular contacts with them. Some concerns: Any deviations from the intended interventions due to trial context are not known. Choices may have been made about which reasons to provide for loss to follow-up.	x

Table 36. Mortality: long-term timeframe

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
Balaban 1988[73]	mfa-(w/med)	ac	Deaths (from routine data)	x	x	+	+	+	Very serious concerns: Subversion of allocation, deviations from the intended interventions in both groups in different parts of the intended interventions.	xx
Bouman 2008[50]	mfar(w/med)	ac	Deaths (reported as loss to follow-up)	+	-	x	+	+	Serious concern: Large, imbalance in withdrawals (missing data). Some concerns: No information about any deviations from the intended intervention due to trial context, though the authors suggested no methodological drawbacks.	x

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
Carpenter 1990[34]	rsk-mfa-	ac	Deaths (reported as loss to follow-up)	-	-	-	+	-	Some concerns: The allocation concealment method is unclear. Insufficient information provided about any deviations from the intended interventions due to trial context. 24 missing data is 20% of 120 known events, the reasons and proportions are fairly balanced. The data are reported as a reason of loss to follow-up; choices may have been made about which reason to report for losses to follow-up.	-
Coleman 1999[95]	educ & mfar(w/med+slfm)	ac	Deaths (reported as loss to follow-up)	-/-	-	x	+	-	Serious concern: The numbers and reasons for missingness are unclear but equal at least quarter of the deaths. Some concerns: It is unclear if the allocation sequence was concealed. It is unclear whether participants were recruited prior to cluster-randomisation; if they were recruited afterwards their allocation was probably known. It is unclear if there were deviations due to the trial context. It is unclear how participants were classified as lost to follow-up in the flowchart.	x
Counsell 2007[59]	educ & mfar(w/med+slfm)	ac	Deaths (pre-specified outcome, method of ascertainment unspecified)	+/-	-	x	+	+	Serious concern: There was more missingness than deaths. Some concerns: It is unclear if the identification and recruitment of participants was likely to be influenced by the recruiters' knowledge of allocation. There is no information regarding possible differences in practice in the control arm due to the trial context.	x
de Craen 2006[76]	mfa-	ac	Deaths (reported as loss to follow-up)	+	-	x	+	-	Serious concerns: The number of missing data (81) is bigger than the number of events (52). Some concerns: Insufficient information provided about any deviation from the interventions due to trial context. The data were reported as a reason of losses to follow-up. Choices may have been made about which reasons to provide for loss to follow-up.	x
Fischer 2009[35]	eng & mfa-(w/slfm)	ac	Deaths (from routine data)	+	-	-	+	+	Some concerns: Insufficient information about any deviations from the intended interventions due to trial context. 57/4224 (1.3%) participants not included dues to moving home, that is 12.3% of the events (57/465).	-
Fischer 2009[35]	eng & mfa-(w/slfm)	ac	Survival time / Time to death	+	-	x	+	-	Serious concerns: 17+28/4224 (1.1%) participants not included dues to moving home, that is 47.9% of the events (45/94). The missing data included people that died before intervention commenced. No information about the reasons of these people's moving home or their health status during the trial period. Some concerns: Insufficient information about any deviations from the intended interventions due to trial context. The pre-specified analysis plan is unavailable.	x
Ford 1971[36]	mfar(w/med)	ac	Deaths (from routine data)	+	-	+	+	+	Some Concerns: Unclear of any deviations from the intended interventions due to trial context.	-
Gitlin 2006[46]	ADL & aids & exrc	ac	Deaths (from routine data)	+	-	+	+	+	Some concerns: Insufficient information to rule out deviations from the intended interventions due to trial context within each group.	-

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
Gustafsson 2013[112]	educ	ac	Deaths (reported as loss to follow-up)	-	-	x	+	-	Serious concern: Substantial difference in reasons for missingness and substantially more missingness than deaths. Some concerns: It appeared that additional participants were recruited to one arm to replace those who dropped out at baseline but this is not discussed and the arms appeared balanced. There is no information about uptake of possible alternative interventions by the control group because of the trial context. It is unclear how competing reasons for loss to follow up were allocated.	x
Gustafsson 2013[112]	educ	educ & mfa-	Deaths (reported as loss to follow-up)	-	-	x	+	-	Serious concern: Substantial imbalance in total and reasons for missingness and substantially more missingness than deaths. Some concerns: It appeared that additional participants were recruited to one arm to replace those who dropped out at baseline but this is not discussed and the arms appeared balanced. There is no information about uptake of possible alternative interventions by the control group because of the trial context. It is unclear how competing reasons for loss to follow up were allocated.	x
Gustafsson 2013[112]	educ & mfa-	ac	Deaths (reported as loss to follow-up)	-	-	x	+	-	Serious concern: The proportions of missing data and reasons are imbalanced between groups. Some concerns: It appeared that additional participants were recruited to one arm to replace those who dropped out at baseline but this is not discussed and the arms appeared balanced. There is no information about uptake of possible alternative interventions by the control group because of the trial context. It is unclear how competing reasons for loss to follow up were allocated.	x
Hall 1992[16]	hmcr & mfar(w/slfm)	hmcr & mfar	Deaths (from routine data)	-	-	+	+	+	Some concerns: Insufficient details about the allocation concealment method. Insufficient information provided to assess any deviations from the intended interventions due to trial context.	-
Hay 1998[18]	ac	ac	Deaths (reported as loss to follow-up)	-	-	x	+	-	Serious concerns: The number of missing data (153) is bigger than the number of events (22). Some concerns: Insufficient information provided about the methods used to generate the sequence and allocation concealment. Insufficient information provided for judging any deviations from the intended interventions due to trial context. Results reported as one of the losses to follow-up reasons, and choices may have been made about which reasons to provide for loss to follow-up.	x
Hay 1998[18]	mfa-	ac	Deaths (reported as loss to follow-up)	-	-	x	+	-	Serious concerns: The number of missing data (151) is bigger than the number of events (16). Some concerns: Insufficient information provided about the methods used to generate the sequence and allocation concealment. Insufficient information provided for judging any deviations from the intended interventions due to trial context. Results reported as one of the losses to follow-up reasons, and choices may have been made about which reasons to provide for loss to follow-up.	x

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
Hendriksen 1984[86]	mfar	ac	Deaths (from routine data)	-	-	+	+	+	Some concerns: The details of the randomisation and allocation concealment methods were not provided. There was unlikely any deviations from the intended intervention in the control group, however insufficient information is provided about any deviation from the experimental intervention due to trial context.	-
Howel 2019[101]	wlfr	ac	Deaths (from routine data)	+	+	x	+	+	Serious concerns: The number of missing data (70) is bigger than the number of known events (36). Some concerns: Participants were unblinded and self-assessed the outcome.	x
Jitapunkul 1998[60]	rsk-mfa-	ac	Deaths (pre-specified outcome, method of ascertainment unspecified)	-	-	x	+	+	Serious concerns: Missingness due to moving elsewhere may be associated with mortality and losses were high proportionate to the number of deaths (69%). Some concerns: Randomisation and allocation concealment method unknown. Potential deviations in the control group are not mentioned.	x
Kerse 2014[21]	rsk-mfa-	ac	Deaths (reported as loss to follow-up)	+/+	-	x	+	-	Serious concern: There was more informative missingness than deaths. Some concerns: It is unclear whether the trial context led to changes in usual care. Process of classifying losses to follow-up is unclear.	x
Kono 2012[37]	mfar	mfar	Deaths (pre-specified outcome, method of ascertainment unspecified)	-	-	-	+	+	Some concerns: Unknown allocation concealment method. Insufficient information to rule out deviations from the intended interventions due to trial context in both groups. 6 from each arm (3.7%) moved away and thus whether they died or not is unknown, 31 known deaths.	-
Kono 2016[23]	mfar(w/med)	mfar	Deaths (pre-specified outcome, method of ascertainment unspecified)	+	-	x	+	+	Serious concerns: 12 participants moved were missing vs 22 known deaths. Some concerns: Insufficient information to determine material contamination of interventions due to trial context.	x
Kukkonen-Harjula 2017[5]	ADL & ntr & exrc	ac	Deaths (reported as loss to follow-up)	+	-	+	+	+	Some concerns: It is unclear if there were any deviations due to the trial context.	-
Lewin 2013[24]	hmcr & educ & mfar	hmcr	Deaths (reported as loss to follow-up)	x	x	+	+	+	Very serious concerns: There are imbalances in the baseline characteristics, possibly due to the subverted randomisation and the reassignment of IG participants who did not participate in the programme. Insufficient information provided about how many IG participants were reassigned due to non-participation. If participants were reassigned, they were not analysed according to their initial assignment.	xx
Liimatta 2019[96]	exrc & mfa-(w/med)	ac	Deaths (from routine data)	-	-	+	+	+	Some concerns: Allocation concealment method unclear. Unclear of any deviations from the intended interventions due to trial context.	-
Meng 2005[61]	educ & mfar(w/med+slfm)	ac	Deaths (reported as loss to follow-up)	-	-	x	+	-	Very serious concerns: Data for 309/443 and 335/459 participants. Reasons for disenrollment included entering the Medicare end stage renal disease program. There was substantial difference in voluntary dropout between arms (10.7% v 4.7%). Some concerns: No details on method of allocation provided. Insufficient information to rule out any deviations from the intended interventions due to trail context in both groups. The process for classifying people as missing for different reasons when more than one may have been known is not specified.	xx

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Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
Metzelthin 2013[7]	educ & mfar(w/med+slfm)	ac	Deaths (reported as loss to follow-up)	-/-	-	x	+	-	Serious concern: There was more missingness than events with some imbalance in missingness between the arms. Some concerns: It appears the allocation was random and concealed, although it appears the authors intended to bias the allocation with a more urban intervention arm and more rural control arm but they were unsuccessful in implementing this approach. Participants were recruited after clusters were allocated and it is unclear if this was affected by knowledge of the allocation. It is unclear if there were deviations in care due to the trial context. It is unclear how participants were assigned their lost to follow-up status.	x
Moll van Charante 2016[84]	educ & mfar(w/slfm)	ac	Deaths (from routine data)	+/+	-	x	+	+	Serious concern: more participants were missing than died and it appears there was an imbalance in missingness although precise numbers were not reported. Some concerns: It is unclear whether there were deviations from the intended intervention because of the trial context.	x
Moll van Charante 2016[84]	educ & mfar(w/slfm)	ac	Survival time / Time to death	+/+	-	x	+	+	Serious concern: Missingness in mortality information was not balanced at the 4 years follow up. Some concern: It is unclear whether there were deviations from the intended intervention because of the trial context.	x
Parsons M 2012[38]	hmcr & mfar	hmcr & mfa-	Deaths (reported as loss to follow-up)	+/-	-	x	+	-	Very serious concern: 186/351 (53%) of participants were missing with some imbalance in numbers and unclear reasons. Some concerns: Unclear whether and when the personnel recruiting participants would be unblinded to the assignments. Participants and personnel were not blinded to assignments, and the authors suggested that the Hawthorne effect and experimenter effects were limitations, although it was impossible to determine the extent. It's unclear how people would be assigned when there might be multiple reasons for loss to follow-up.	xx
Parsons M 2017[8]	hmcr & ADL & mfar(w/slfm)	hmcr & mfa-	Deaths (from routine data)	-	-	x	+	+	Very serious concern: There was little information regarding missingness but it appears that most participants were not followed to 24 months or death. Some concerns: Computer-mediated minimisation used; concealment not mentioned. Participants and personnel were not blinded to assignments, and the authors suggested that the Hawthorne effect and experimenter effects were limitations, although it was impossible to determine the extent.	xx
Pathy 1992[97]	rsk-mfa-	ac	Deaths (from routine data)	-	-	-	+	+	Some concerns: Randomisation and allocation concealment methods unclear. Insufficient information about any deviations from the intended interventions due to trial context. 6.5% missing data, about a third of deaths, the reasons of the participants moving general practices are not known but relatively balanced.	-

Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
Phelan 2007[92]	mfar(w/med+slfm)	ac	Deaths (from routine data)	-/x	-	+	+	+	Serious concerns: It appears that selection and recruitment of participants was performed following randomisation by people who knew the allocation. Some concerns: There is no information on the allocation sequence generation process or concealment of the sequence and it is unclear whether clusters had balanced characteristics. Contamination was speculated as plausible but no evidence was presented regarding deviations due to the trial context.	x
Profener 2016[110]	educ & mfar	ac	Deaths (reported as loss to follow-up)	+	-	+	+	+	Some concerns: Insufficient information provided about any deviations from the intended intervention due to trial context.	-
Rubenstein 2007[56]	mfar(w/med)	ac	Deaths (from routine data)	-	-	+	+	+	Some concerns: Insufficient about the randomisation process. Insufficient information about any deviations from the intended interventions due to trial context in both groups.	-
Stuck 1995[39]	educ & mfar(w/med)	ac	Deaths (from routine data)	+	-	+	+	+	Some concerns: No information indicating any deviations from the intended interventions due to trial context.	-
Stuck 2000[99]	mfar(w/med)	ac	Deaths (pre-specified outcome, method of ascertainment unspecified)	+	-	+	+	+	Some concerns: Unclear whether the differences in problem identification between the nurses was a deviation from the intended intervention due to trial context or other reasons.	-
Stuck 2015[40]	educ & mfar(w/med+slfm)	ac	Deaths (reported as loss to follow-up)	+	x	+	+	+	Serious concerns: The degree of contamination is unknown but it is likely not balanced between groups.	x
Suijker 2016[10]	mfar(w/med)	ac	Deaths (from routine data)	+/-	-	+	+	+	Some concerns: Unclear when GP practices were randomised and whether participants were identified and recruited prior to randomisation or whether those identifying participants were aware of the assignment. It is unclear whether there were deviations from the intended interventions due to trial context.	-
Tomita 2007[41]	aids	ac	Deaths (reported as loss to follow-up)	x	-	x	+	-	Very serious concerns: No information about method of randomisation and allocation concealment, participants differed substantially in age and education (50% intervention group university educated vs 18.2% control group), the control group were also more likely to have almost all illnesses listed. At least 11 were missing who dropped out at baseline. Similar missingness to mortality. Some concerns: Insufficient to judge any deviations from the intended interventions due to trial context. The classification of losses to follow-up is not provided.	xx
Tulloch 1979[42]	mfar(w/med)	ac	Deaths (reported as loss to follow-up)	-	-	x	+	-	Serious concerns: The number of missing data (40) is 52.6% of the number of events (76), reasons of missing data are moved away, and refused to take part which proportion was imbalanced. Some concerns: The details of randomisation and allocation concealment methods were not provided; insufficient details about the participants' baseline characteristics provided to judge any imbalance or problems in the allocation method. Insufficient information provided for making a judgement. Choices may have been made about which reasons to provide for loss to follow.	x

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Study	Intervention 1	Intervention 2	Outcome measure	D1[a]	D2[b]	D3[c]	D4[d]	D5[e]	Overall notes of risks of bias	Overall ROB
van Rossum 1993[94]	mfar	ac	Deaths (from routine data)	-	-	+	+	+	Some concerns: The method of allocation concealment is unclear. Insufficient information about any deviations from the intended intervention due to trial context.	-
Vass 2005[98]	mfar(w/med)	mfar	Deaths (from routine data)	+/+	-	+	+	+	Some concerns: There is no information regarding possible deviations arising from the trial context.	-
Vetter 1984[113]	mfar	ac	Deaths (pre-specified outcome, method of ascertainment unspecified)	-	-	+	+	+	Some concerns: Unclear about the randomisation and allocation concealment method. Insufficient information provided about any deviations from the intended interventions due to trial context.	-
von Bonsdorff 2008[62]	exrc	ac	Deaths (from routine data)	+	-	+	+	+	Some concerns: Uncertain of any material deviations from intended interventions due to trial context.	-

+ (light green shading): low risk of bias; - (yellow shading): some concerns; x (red shading): high risk of bias / serious concerns; xx (dark red shading): very serious concerns (overall risk of bias only).

a. Domain 1: risk of bias arising from the randomisation process (individual); or, for cluster trials, Domain 1a: risk of bias arising from the randomisation process / Domain 1b: risk of bias arising from the identification or recruitment of participants into clusters.

b. Domain 2: risk of bias due to deviations from the intended interventions (effect of assignment to the intervention).

c. Domain 3: risk of bias due to missing outcome data.

d. Domain 4: risk of bias in measurement of the outcome.

e. Domain 5: risk of bias in selection of the reported result.

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