

Standard

Review information

Authors

[Empty name]¹

¹[Empty affiliation]

Citation example: [Empty name]. Standard. Cochrane Database of Systematic Reviews [Year], Issue [Issue].

Characteristics of studies

Characteristics of included studies

Cox 2008

Methods	Study design: Cluster randomized controlled trial Study grouping: Crossover The allocation was undertaken by an independent researcher:
Participants	Baseline Characteristics Intervention Kontrol Overall Included criteria: All 300 PCOs in England and Wales were invited to take part in 2003. Only those care homes were included in this evaluation for which the local ethics and research governance procedures were swift enough to enable them to be enrolled into the randomisation process. 58 agreed to participate and gained ethical approval in time to start the study: 29 clusters were randomised to the intervention group and 29 to the control. Excluded criteria: Those care homes for which the local ethics and research governance procedures was not swift enough to enable them to be enrolled into the randomisation process. Pretreatment: ikke angivet baseline værdier. Skriver at tilgængeligt online, men er ikke til at finde

<p>Interventions</p>	<p>Intervention Characteristics</p> <p>Intervention</p> <ul style="list-style-type: none"> ● <i>Intervention:</i> Half-a-day training sessions for managers, qualified nurses and Health care assistants attended the training and completed an evaluation at the end of the session, designed to assess the appropriateness of training. The training was given by specialist osteoporosis nurses employed by the NOS and included a background to the objectives of the project and sections on bone health and osteoporosis, falls and fall prevention, risk factors for falls and fractures, methods used for risk assessment and prevention of fractures in the workplace. The section on fall prevention included information on polypharmacy and the effectiveness of individual medications, such as benzodiazepines, and also detailed fall hazards in the home. Staff were trained on how to use the Black fracture risk assessment tool [15] and the STRATIFY fall risk assessment tool [19] and were encouraged to involve residents in the risk assessment process. Verbal training was supported by written literature <p>Kontrol</p> <ul style="list-style-type: none"> ● <i>Intervention:</i> Each PCO was randomised to receive the intervention at time 0 or commencing at 12 months.
<p>Outcomes</p>	<p><i>Antal fald</i></p> <ul style="list-style-type: none"> ● Outcome type: Dichotomous Outcome ● Direction: Lower is better ● Data value: Endpoint <p><i>Antal af personer som falder</i></p> <ul style="list-style-type: none"> ● Outcome type: Dichotomous Outcome ● Direction: Lower is better <p><i>Fald med fraktur (major injury)</i></p> <ul style="list-style-type: none"> ● Outcome type: Dichotomous Outcome ● Direction: Lower is better <p><i>Frygt for fald</i></p> <ul style="list-style-type: none"> ● Outcome type: Continuous Outcome <p><i>Personalets oplevelse af at kunne håndtere fald</i></p> <ul style="list-style-type: none"> ● Outcome type: Continuous Outcome

Identification	<p>Sponsorship source: Shire Pharmaceuticals - sponsoring the evaluation of the project.</p> <p>Country: UK</p> <p>Setting: Care homes (residential, nursing and EMI) across England and Wales within PCOs.</p> <p>Comments:</p> <p>Authors name: Helen Cox et al.</p> <p>Institution: University of York, Department of Health Sciences, SRB Area 4, York YO10 5DD, UK</p> <p>Email: hc18@york.ac.uk</p> <p>Address: SRB Area 4, York YO10 5DD, UK</p>
Notes	

Risk of bias table

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Low risk	Quote: "Within each stratum, a single block of allocations was undertaken using a computer package to ensure equivalent numbers of PCOs in each group."
Allocation concealment (selection bias)	Low risk	Quote: "The allocation was undertaken by an independent researcher."
Blinding of participants and personnel (performance bias)	High risk	Judgement Comment: ikke muligt Alle medarbejdere får undervisning; nogle blot 12 mdr. senere
Blinding of outcome assessment (detection bias)	High risk	Quote: "to the care home level. All the outcome data were collected via questionnaire completed by each care home manager. Sample size We proposed to" Judgement Comment: ikke blindede, da de ved hvad som er sket på deres sted
Incomplete outcome data (attrition bias)	High risk	Judgement Comment: mange tabt i control (flowchart) 16/29
Selective reporting (reporting bias)	Low risk	Judgement Comment: ønsker kun at undersøge fald Der unlades ikke data i analysen af outcomes
Other bias	High risk	Quote: "This study has a number of limitations. Firstly, it is likely that data collection with regard to falls and fractures improved in the intervention arm due to training of care home staff by the specialist osteoporosis nurses in the importance of assessing the residents for risks of falls and fractures."

vanGaal 2010

Methods	<p>Study design: Randomized controlled trial</p> <p>Study grouping: Parallel group</p>
Participants	<p>Baseline Characteristics</p> <p>Intervention Kontrol Overall</p> <p>Included criteria: All nurses from participating Wards.</p> <p>Excluded criteria:</p> <p>Pretreatment: intet væsentligt ift fald</p>
Interventions	<p>Intervention Characteristics</p> <p>Intervention</p> <ul style="list-style-type: none"> ● <i>Intervention:</i> The nurses from the intervention wards received the educational interventions of the patient safety program. The content of the educational intervention was based on the existing guidelines for the prevention of pressure ulcers, urinary tract infections and falls and supplementary material and tailored to each individual ward. The education consisted of small-scale educational meetings, educational materials and outreach visits. <p>Kontrol</p> <ul style="list-style-type: none"> ● <i>Intervention:</i> Nurses from the control wards did not receive educational interventions.
Outcomes	<p><i>Antal fald</i></p> <ul style="list-style-type: none"> ● Outcome type: Dichotomous Outcome <p><i>Antal af personer som falder</i></p> <ul style="list-style-type: none"> ● Outcome type: Dichotomous Outcome <p><i>Fald med fraktur (major injury)</i></p> <ul style="list-style-type: none"> ● Outcome type: Dichotomous Outcome <p><i>Frygt for fald</i></p> <ul style="list-style-type: none"> ● Outcome type: Continuous Outcome <p><i>Personalets oplevelse af at kunne håndtere fald</i></p> <ul style="list-style-type: none"> ● Outcome type: Continuous Outcome

	<ul style="list-style-type: none"> ● Scale: questionnaire ● Direction: Higher is better ● Data value: Endpoint ● Notes: ikke angivet skala for spørgeskema, som er udviklet til formålet. Kun testet for face-validity
Identification	<p>Sponsorship source: Funding: The Netherland Organisation for Health Research and Development (ZonMW) funded and approved the design of this study [ID: 54010002]. This funding organisation did not have any role in the selection of the hospitals or nursing homes; the collection, analysis and interpretation of the data; the writing of the report or the decision to submit this paper for publication</p> <p>Country: The Netherlands</p> <p>Setting: Ten hospital wards and ten nursing home wards participated in this study. Prior to baseline, randomisation of the wards to an intervention or control group was stratified for centre and type of ward.</p> <p>Comments:</p> <p>Authors name: Betsie G.I. van Gaal</p> <p>Institution: Scientific Institute for Quality of Healthcare</p> <p>Email: B.vangaal@iq.umcn.nl</p> <p>Address: University Nijmegen Medical Centre, 114 IQ healthcare, P.O. Box 9 101, 6500 Nijmegen, The Netherlands</p>
Notes	

Risk of bias table

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	High risk	Quote: "Hospitals and nursing homes were asked to participate with two or four, more or less comparable wards. The" Judgement Comment: ingen rigtig randomisering
Allocation concealment (selection bias)	Unclear risk	Judgement Comment: ikke beskrevet
Blinding of participants and personnel (performance bias)	High risk	Quote: "All registered and licensed nurses working within the 20 participating wards were invited to participate in the study. Data were collected using questionnaires. At each ward, one nurse was responsible for the distribution and collection of the questionnaires."

Blinding of outcome assessment (detection bias)	Unclear risk	Judgement Comment: ikke beskrevet
Incomplete outcome data (attrition bias)	High risk	Quote: "CI: 0.10–0.81). 3.2. Nursing homes In nursing homes 234 (63%) nurses returned the knowledge test. The response rate at baseline was higher (69%) than at follow-up (57%). The mean age of the" Judgement Comment: lille svarrate
Selective reporting (reporting bias)	Low risk	Judgement Comment: ønskes kun at undersøge hvorvidt sygeplejerske fik noget ud af undervisningen
Other bias	High risk	Quote: "First there is the issue of data collection. In our study it was not possible to fill in the knowledge test under exam conditions. Despite the fact that the wards were asked to organise these exam conditions they did not succeed in doing so. It is possible that nurses who received the knowledge test looked up the answers, e.g. on the internet, or in a protocol, or that they asked each other for the correct answers. Therefore it is possible that the results of our study are biased."

vanGaal 2011

Methods	Study design: Cluster randomized controlled trial Study grouping: Parallel group
Participants	Baseline Characteristics Intervention Kontrol Overall Included criteria: During baseline and follow-up data collection periods, all adult patients (18 years) admitted to the wards were asked to participate. Hospital patients with an expected length of stay of at least five days were asked to participate within 48 h after admission. Excluded criteria: Yngre end 18 år og demens Pretreatment: ingen angivne
Interventions	Intervention Characteristics Intervention <ul style="list-style-type: none"> ● <i>Intervention:</i> Every intervention ward started with small-scale educational meetings for all nurses and the introduction of the information leaflet for the patients at risk for the specific adverse event. Additionally, the wards received the CD-ROM with educational material. Within two to three months, case discussions were held twice on

	<p>every intervention ward. Finally, the digital computerised registration and feedback system was introduced on the wards.</p> <p>Kontrol</p> <ul style="list-style-type: none"> ● <i>Intervention</i>: The usual care group continued care as usual.
Outcomes	<p><i>Antal fald</i></p> <ul style="list-style-type: none"> ● Outcome type: Dichotomous Outcome <p><i>Antal af personer som falder</i></p> <ul style="list-style-type: none"> ● Outcome type: Dichotomous Outcome <p><i>Fald med fraktur (major injury)</i></p> <ul style="list-style-type: none"> ● Outcome type: Dichotomous Outcome <p><i>Frygt for fald</i></p> <ul style="list-style-type: none"> ● Outcome type: Continuous Outcome <p><i>Personalets oplevelse af at kunne håndtere fald</i></p> <ul style="list-style-type: none"> ● Outcome type: Continuous Outcome
Identification	<p>Sponsorship source: The Netherlands Organisation for Health Research and Development (ZonMw) funded and approved the design of this study</p> <p>Country: The Netherlands</p> <p>Setting: two large teaching hospitals and one small hospital) and six nursing homes in The Netherlands</p> <p>Comments:</p> <p>Authors name: Betsie G.I. van Gaal et al.</p> <p>Institution: Scientific Institute for Quality of Healthcare, Radboud University Nijmegen Medical Centre, Nijmegen, The Netherlands</p> <p>Email: B.vangaal@iq.umcn.nl</p> <p>Address:</p>
Notes	<p><i>Pia Ravnsbæk Bjærg</i> on 04/04/2017 22:22</p> <p>Outcomes</p> <p>Baseline periode: 3 mdr. Interventionsperiode: 14 mdr. Follow-up: 9 mdr.</p>

Risk of bias table

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Judgement Comment: Ikke beskrevet (heller ikke i van Gaal 2009)
Allocation concealment (selection bias)	Unclear risk	Judgement Comment: Ikke beskrevet (heller ikke i van Gaal 2009)
Blinding of participants and personnel (performance bias)	High risk	Judgement Comment: Ikke muligt
Blinding of outcome assessment (detection bias)	Unclear risk	Quote: "Consequently, all falls that occurred after the first visit of the research assistant and that were documented in the patient's file have been included." Judgement Comment: ikke angivet om assistent var blindet
Incomplete outcome data (attrition bias)	Low risk	Judgement Comment: mange flere i FU ift baseline, men det kan vel ikke give bias
Selective reporting (reporting bias)	Low risk	Judgement Comment: samme outcomes i method og results
Other bias	Low risk	Judgement Comment: intet åbenlyst

Footnotes

Characteristics of excluded studies

Colon Emeric 2013

Reason for exclusion	Wrong comparator
----------------------	------------------

Hill 2015

Reason for exclusion	Wrong setting
----------------------	---------------

Liu 2012

Reason for exclusion	Wrong setting
----------------------	---------------

Resnick 2012

Reason for exclusion	Wrong intervention
----------------------	--------------------

Vieira 2013

Reason for exclusion	Wrong setting
----------------------	---------------

*Footnotes***Characteristics of studies awaiting classification***Footnotes***Characteristics of ongoing studies***Footnotes***Summary of findings tables****Additional tables****References to studies**

Included studies***Cox 2008***

Cox, Helen; Puffer, Suezann; Morton, Veronica; Cooper, Cyrus; Hodson, Jean; Masud, Tahir; Oliver, David; Preedy, Danielle; Selby, Peter; Stone, Mike; Sutcliffe, Anne; Torgerson, David. Educating nursing home staff on fracture prevention: a cluster randomised trial. *Age and Ageing* 2008;37(2):167-72. [DOI:]

vanGaal 2010

van Gaal, Betsie,G.I.; Schoonhoven, Lisette; Vloet, Lilian C. M.; Mintjes, Joke A. J.; Borm, George F.; Koopmans, Raymond T. C. M.; van Achterberg, Theo. The effect of the SAFE or SORRY? programme on patient safety knowledge of nurses in hospitals and nursing homes: a cluster randomised trial. *International journal of nursing studies* 2010;47(9):1117-25. [DOI:]

vanGaal 2011

van Gaal, Betsie,G.I.; Schoonhoven, Lisette; Mintjes, Joke A. J.; Borm, George F.; Hulscher, Marlies E. J. L.; Defloor, Tom; Habets, Herbert; Voss, Andreas; Vloet, Lilian C. M.; Koopmans, Raymond T. C. M.; van Achterberg, Theo. Fewer adverse events as a result of the SAFE or SORRY? programme in hospitals and nursing homes. part i: primary outcome of a cluster randomised trial. *International journal of nursing studies* 2011;48(9):1040-8. [DOI:]

Excluded studies***Colon Emeric 2013***

Colon-Emeric, Cathleen; McConnell, Eleanor; Pinheiro, Sandro O.; Corazzini, Kirsten; Porter, Kristie; Earp, Kelly M.; Landerman, Lawrence; Beales, Julie; Lipscomb, Jeffrey; Hancock, Kathryn; Anderson, Ruth A.. CONNECT for better fall prevention in nursing homes: results from a pilot intervention study. *Journal of the American Geriatrics Society* 2013;61(12):2150-9. [DOI:]

Hill 2015

Hill, Anne-Marie; McPhail, Steven M.; Waldron, Nicholas; Etherton-Beer, Christopher; Ingram, Katharine; Flicker, Leon; Bulsara, Max; Haines, Terry P.. Fall rates in hospital rehabilitation units after individualised patient and staff education programmes: a pragmatic, stepped-wedge, cluster-randomised controlled trial. *Lancet* (London, England) 2015;385(9987):2592-9. [DOI:]

Liu 2012

Liu, Hui; Shen, Jun; Xiao, Lily Dongxia. Effectiveness of an educational intervention on improving knowledge level of Chinese registered nurses on prevention of falls in hospitalized older people--a randomized controlled trial. *Nurse education today* 2012;32(6):695-702. [DOI:]

Resnick 2012

Resnick, Barbara; Galik, Elizabeth; Gruber-Baldini, Ann; Zimmerman, Sheryl. Falls and fall-related injuries associated with function-focused care. *Clinical nursing research* 2012;21(1):43-63. [DOI:]

Vieira 2013

Vieira, Edgar Ramos; Berean, Colleen; Paches, Debra; Caveny, Penny; Yuen, Doris; Ballash, Lauralee; Freund-Heritage, Rosalie. Reducing falls among geriatric rehabilitation patients: a controlled clinical trial. *Clinical rehabilitation* 2013;27(4):325-35. [DOI:]

Studies awaiting classification

Ongoing studies

Other references

Additional references

Other published versions of this review

Data and analyses

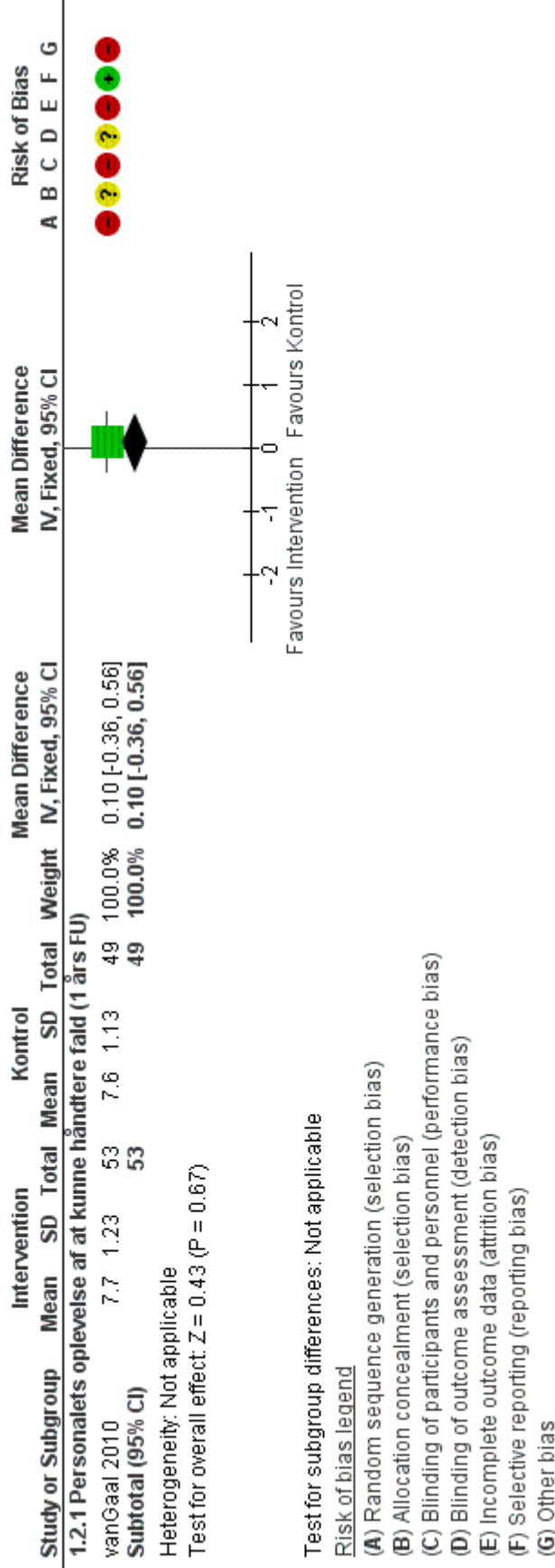
1 Intervention vs Kontrol

Outcome or Subgroup	Studies	Participants	Statistical Method	Effect Estimate
1.1 Frygt for fald	0	0	Mean Difference (IV, Fixed, 95% CI)	Not estimable
1.2 Personalets oplevelse af at kunne håndtere fald	1		Mean Difference (IV, Fixed, 95% CI)	Subtotals only
1.2.1 Personalets oplevelse af at kunne håndtere fald (1 års FU)	1	102	Mean Difference (IV, Fixed, 95% CI)	0.10 [-0.36, 0.56]
1.3 Antal fald	2		Risk Ratio (IV, Random, 95% CI)	No totals
1.3.1 Antal fald (6 mdr. FU)	2		Risk Ratio (IV, Random, 95% CI)	No totals

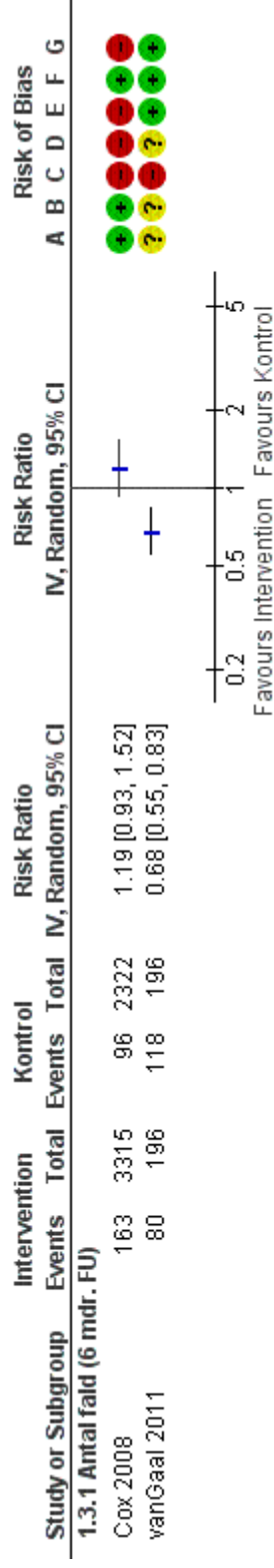
1.4 Antal af personer som falder	0					Risk Ratio (IV, Fixed, 95% CI)	No totals
1.5 Fald med fraktur (major injury)	1					Risk Ratio (IV, Fixed, 95% CI)	No totals
1.5.1 Fald med fraktur (major injury) (1 års FU)	1					Risk Ratio (IV, Fixed, 95% CI)	No totals

Figures

Figure 1 (Analysis 1.2)



Forest plot of comparison: 1 Intervention vs Kontrol, outcome: 1.2 Personalets oplevelse af at kunne håndtere fald.

Figure 2 (Analysis 1.3)Risk of bias legend

- (A) Random sequence generation (selection bias)
- (B) Allocation concealment (selection bias)
- (C) Blinding of participants and personnel (performance bias)
- (D) Blinding of outcome assessment (detection bias)
- (E) Incomplete outcome data (attrition bias)
- (F) Selective reporting (reporting bias)
- (G) Other bias

Forest plot of comparison: 1 Intervention vs Control, outcome: 1.3 Antal fald.

Figure 3 (Analysis 1.5)

Study or Subgroup	Intervention		Kontrol		Risk Ratio IV, Fixed, 95% CI	Risk Ratio IV, Fixed, 95% CI		Risk of Bias						
	Events	Total	Events	Total		IV, Fixed, 95% CI	IV, Fixed, 95% CI	A	B	C	D	E	F	G
1.5.1 Fald med fraktur (major injury) (1 års FU)														
Cox 2008	110	3315	82	2322	0.94 [0.71, 1.24]			+						

Risk of bias legend

- (A) Random sequence generation (selection bias)
- (B) Allocation concealment (selection bias)
- (C) Blinding of participants and personnel (performance bias)
- (D) Blinding of outcome assessment (detection bias)
- (E) Incomplete outcome data (attrition bias)
- (F) Selective reporting (reporting bias)
- (G) Other bias

Forest plot of comparison: 1 Intervention vs Kontrol, outcome: 1.5 Fald med fraktur (major injury).