# NKR10 Rehabilitering af KOL. Gruppebaseret struktureret patientuddannelse for patienter med KOL

# Characteristics of studies

## Characteristics of included studies

#### Blackstock 2014

Methods	Study design: Randomized controlled trial Study grouping: Parallel group		
Participants	Baseline Characteristics Intervention 1 • COPD severity (GOLD/MRC): 56 (23) FEV1, % predicted • Age (range): 72.4 (10.0) Age, years • Male (%): 63%		
	Intervention 2 • COPD severity (GOLD/MRC): • Age (range): • Male (%):		
	Control • COPD severity (GOLD/MRC): 59 (22) FEV1, % predicted • Age (range): 72.0 (8.4) Age, years • Male (%): 57%		
	Overall <ul> <li>COPD severity (GOLD/MRC):</li> <li>Age (range):</li> <li>Male (%):</li> </ul>		
	<ul> <li>Included criteria: Eligible participants had a primary diagnosis ofCOPD,2reported dyspnoea with daily activities andwere on stable medical therapy.</li> <li>Excluded criteria: People were excluded if they were not fluent in English, had a documentedcognitive deficit limiting their ability to learn, hadcomorbidities limiting their ability to exercise, or ifthey had participated in a pulmonary rehabilitationprogramme in the preceding 2 years.</li> </ul>		
Interventions	Intervention Characteristics Intervention 1 • Description : Excercise training + education • Length (weeks): 8 weeks • Longest follow-up (after end of treatment): 12 months after end of treatment		
	Intervention 2  Description : Length (weeks): Longest follow-up (after end of treatment):		
	Control • Description : Exercise training • Length (weeks): 8 weeks • Longest follow-up (after end of treatment): 12 months after end of treatment		
Outcomes	Quality of life, SD Outcome type: ContinuousOutcome Quality of life, CI		
	Outcome type: ContinuousOutcome     ADL, SD     Outcome type: ContinuousOutcome		
	ADL, CI ● Outcome type: ContinuousOutcome Mortality, n		
	Outcome type: DichotomousOutcome  Hospital admission, n		
	Outcome type: DichotomousOutcome     Quality of life, SD (longest follow-up)		
	Outcome type : ContinuousOutcome  Quality of life, CI (longest follow-up)		
	Outcome type: ContinuousOutcome  ADL, SD (longest follow-up)      Outcome type: ContinuousOutcome		
	ADL, CI (longest follow-up) • Outcome type: ContinuousOutcome		

	Mortality, n (longest follow-up)  • Outcome type: DichotomousOutcome
	Hospital admission, n (longest follow-up)  • Outcome type: DichotomousOutcome
	Anxiety, SD (longest follow-up)  • Outcome type: ContinuousOutcome
	Depression, SD (longest follow-up) • Outcome type: ContinuousOutcome
Notes	Sponsorship source:
Notes	Sponsorship source: Country: Australia
Notes	Sponsorship source: Country: Australia Setting:
Notes	Sponsorship source: Country: Australia Setting: Comments: Australian Clinical Trial Registration Number: ACTRNO12605000703606.
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Notes	Sponsorship source: Country: Australia Setting: Comments: Australian Clinical Trial Registration Number: ACTRNO12605000703606. Authors name: Felicity C. Blackstock Institution: Department of Physiotherapy, School of Allied Health, La Trobe University, Melbourne Email: f.blackstock@latrobe.edu.au
Notes	Sponsorship source: Country: Australia Setting: Comments: Australian Clinical Trial Registration Number: ACTRNO12605000703606. Authors name: Felicity C. Blackstock Institution: Department of Physiotherapy, School of Allied Health, La Trobe University, Melbourne Email: f.blackstock@latrobe.edu.au Address: Felicity C. Blackstock, Department of Physiotherapy, Faculty of Health Sciences, School of Allied Health, La

#### Risk of bias table

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Low risk	Patients were assigned using computer-generated random numbers to one of two pulmonary rehabililtation intervention groups
Allocation concealment (selection bias)	Low risk	Allocation was performed independently using sequentially numbered sealed opaque envelopes
Blinding of participants and personnel (performance bias)	Unclear risk	Nothing mentioned
Blinding of outcome assessment (detection bias)	Unclear risk	Nothing mentioned
Incomplete outcome data (attrition bias)	Low risk	No apparent other sources of bias
Selective reporting (reporting bias)	Low risk	No apparent other sources of bias
Other bias	Low risk	No apparent other sources of bias

#### Casey 2013

Methods	Cluster RCT, 32 clusters, 350 participants
Participants	GOLD 3 severe COPD 27.7%, GOLD 2 moderate COPD 72.3%, mean age 68 years, 64% male
Interventions	A structured education pulmonary rehabilitation programme (SEPRP), delivered by the practice nurse and physiotherapist. 8 sessions over 8 weeks, 12-4 weeks follow up. Control: usual care
Outcomes	Adverse events, HRQoL (CRQ), All cause hospital admission
Notes	Ireland, Funded by the Health Research Board, Ireland and by an unconditional educational grant from Pfizer (grant number NMRPS/2007/1).

#### Risk of bias table

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Low risk	Group allocation concealment was achieved by giving responsibility for computerised allocation sequence generation and group allocation to a researcher independent of the research team and blinded to baseline outcome data. To minimise time delay and patient attrition, practices were randomised to control or intervention groups in four groups of eligible practices on a 1:1 ratio.
Allocation concealment (selection bias)	Low risk	Group allocation concealment was achieved by giving responsibility for computerised allocation sequence generation and group allocation to a researcher independent of the research team and blinded to baseline outcome data. To minimise time delay and patient attrition, practices were randomised to control or intervention groups in four groups of eligible practices on a 1:1 ratio.
Blinding of participants and personnel (performance bias)	High risk	Not blinded
Blinding of outcome assessment (detection bias)	High risk	Not blinded HRQoL Obs Outcome assessor blinded relevant for mortality and hospital admissions
Incomplete outcome data (attrition bias)	High risk	In all, 35 of the 178 participants (19.7%) allocated to the intervention and 38 of the 172 allocated to the control groups (22.1%) did not complete the CRQ (figure 2).
Selective reporting (reporting bias)	Low risk	Protocol available, all outcomes measured
Other bias	Low risk	No other apparent sources of bias. Cluster randomization taken into the data analyses

#### Emery 1998

Methods	Obs copied partly from Effing et al 2009 <u>http://onlinelibrary.wiley.com/doi/10.1002/14651858.CD002990.pub2/abstract</u> RCT. FUP= 2 m. Control: usual care
Participants	Eligible: 92 Randomised: 50 Completed: 49 Mean age: 1: 67 (6) yrs C: 67 (6) yrs Sex (% male): 1: 42 C: 48 Diagnosis of COPD: stable COPD; > 50 yrs; FEV1/VC<70;> 6 months clinical symptoms of COPD Recruitment: outpatients + GP-patients + advertisements + word of mouth Major exclusions: significant cardiac disease; other diseases affecting exercise tolerance or learning skills last 3 months; asthma without fixed obstruction FEV1%pred: 1: 43 (18) C: 39 (16) FEV1/VC:?
Interventions	Mode: group education Content:COPDknowledge;therapy; coping; interpreting pulmonary function tests; understanding of arterial blood gases; stress management Duration: 26 hrs Action Plan: N
Outcomes	Dropout due to illness, CES depression + SCL depression and anxiety + STAI anxiety - SIP (ADL scale) - HRQoL-MHLC
Notes	USA, Funding: Grants from the National Heart, Lung and blood institute and the National institute on aging

#### Risk of bias table

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Low risk	'Group assignments were taken from a random number schedule'
Allocation concealment (selection bias)	Low risk	'printed on a piece of paper, and placed in a sealed envelope. Participants were not given the envelope containing their group assignment until after completing the baseline assessment, and technical staff conducting the assessments were not aware of group assignments.'
Blinding of participants and personnel (performance bias)	High risk	no blinding
Blinding of outcome assessment (detection bias)	High risk	No information. Comment: likely no
Incomplete outcome data (attrition bias)	Unclear risk	
Selective reporting (reporting bias)	Unclear risk	
Other bias	Unclear risk	

#### Gallefoss 1999

Methods	Obs copied partly from Effing et al 2009 <u>http://onlinelibrary.wiley.com/doi/10.1002/14651858.CD002990.pub2/abstract</u> RCT. FUP=12 m. Control: usual care
Participants	Eligible: 68 Randomised: 62 Completed: 53 Mean age: I: 57 (9) yrs C: 58 (10) yrs Sex (% male): I:48 C: 52 Diagnosis of COPD: FEV1pred>= 40% and FEV1pred<80% Recruitment: outpatients Major exclusions: any serious disease FEV1%pred: I:59 (9) C: 56 (11) FEV1/VC: I: 55(9) C:52(10)
Interventions	Mode:patient brochure + group sessions Content:COPD knowledge; medication; symptoms; exacerbations; inhalation technique;smoking cessation; relaxation; coping Duration: max 6.5 hrs Action Plan: Y
Outcomes	SGRQ Hospital admissions Dropout due to illness
Notes	Norway, Supported by the Quality Improvement Fund II of the Norwegian Medical Association.

#### Risk of bias table

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Low risk	Participants 'randomized to an intervention group or a control group using random number tables.'
Allocation concealment (selection bias)	Low risk	Study investigators unaware as to order of treatment group assignment
Blinding of participants and personnel (performance bias)	High risk	No blinding
Blinding of outcome assessment (detection bias)	High risk	We were unable to ascertain whether outcome assessment was made blind to treatment group assignment Comment: likely no
Incomplete outcome data (attrition bias)	Unclear risk	
Selective reporting (reporting bias)	Unclear risk	
Other bias	Unclear risk	

#### Monnikhof 2003

Methods	Obs copied partly from Effing et al 2009 <u>http://onlinelibrary.wiley.com/doi/10.1002/14651858.CD002990.pub2/abstract</u> RCT. FUP= 12 m. Control: usual care
Participants	Eligible: 615 Randomised: 248 Completed: 236 Mean age: 1: 65 (7) yrs C: 65 (7) yrs Sex (% male): 1: 85% C: 84% Diagnosis of stable COPD (ATS). - Age 40-75 yrs - current or former smoker - FEV1% pred (pre): 25-80% - FEV1/VC (pre): < 60 - reversibility = < 12% pred - TLC > TLC pred (1.64*sd) Recruitment: outpatients Major exclusions: - no previous diagnosis of astma. - exacerbation in the months prior to inclusion - medical condition with low survival or serious psychiatric morbidity - any other lung disease - maintenance treatment of oral steroids or antibiotics
Interventions	Mode: group education by respiratory nurse. Content: COPD knowledge; inhalation technique; importance of exercise; relaxation; nutrition; coping with breathlessness; ergonomic posture and energy conservation during daily activities or work; communication and social relationships; guidelines for self-treatment for exacerbations (action plans). Duration: 5 * 2h A fitness program was aimed at coping with disease, recognising their individual capacity, social interactions and behavioural change. Duration 1-2 a week for 30-45 min. Action Plan: Y
Outcomes	- SGRQ - Hospital admissions
Notes	The Netherlands. This study was sponsored by the Netherlands Asthma Foundation, Boehringer Ingelheim, Amicon Health Care Insurance Company, and GlaxoSmithKline Ltd.

#### Risk of bias table

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Low risk	Computer-generated randomisation schedule.
Allocation concealment (selection bias)	Low risk	Central randomisation; study investigators were not aware as to the order of treatment group assignment
Blinding of participants and personnel (performance bias)	High risk	No blinding
Blinding of outcome assessment (detection bias)	High risk	No information. Comment: likely not
Incomplete outcome data (attrition bias)	Unclear risk	
Selective reporting (reporting bias)	Unclear risk	
Other bias	Unclear risk	

#### Ninot 2011

Methods	RCT, 45 participants, Moderate to severe COPD patients, age 56 to 74, 84% male
Participants	Moderate to severe COPD patients, age 56 to 74, 84% male
Interventions	The self-management program was provided in the hospital on an outpatient basis. A health professional gave 8 lectures to small groups of 4-8 participants at a rate of 2 sessions (i.e. 2 h per session) per week for 4 weeks. The program emphasized on the acquisition of self-management skills: to promote smoking cessation, encourage prompt management of acute exacerbation (e.g., advice about when to initiate antibiotics or steroid regimens), ensure correct inhaler

	techniques, ensure right secretion removal techniques, optimize nutrition and promote active lifestyle (particularly exercise). After each educational session within the same group, participants performed the usual exercise program used in our laboratory12 (i.e. cycling at the level of the ventilatory threshold for 30e45 min under the supervision of a qualified exercise trainer). The provider was insisted on the use of correct breathing techniques during exercise. Control: Usual care. 1 month treatment and follow-up after 12 month
Outcomes	Drop out due to illness, HRQoL (NHP sub scales, SGRQ total and sub scales), All cause hospitalization
Notes	France, Funded by a grant from the Hospital of Montpellier CHRU, PHRC (Grant: number UF7608).

#### Risk of bias table

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Low risk	The trial statistician, MCP, generated the random allocation sequence using the random procedure in SAS (SAS v.9.1 e SAS Institute, Cary NC), with a 1:1 allocation using block size of 4. The enrollment of patients in the study proceeded as follows: (i) patients were contacted via flyers advertizing the study in the corridors of the hospital; (ii) they met the investigator (i.e. physician) who informed them about the objective of the study; and he verified their eligibility; (iii) eligible patients were invited to participate in the study. After the physician had obtained the patient's consent, he sent by fax the randomization form to the Clinical Research Unit (AJ) for allocation consignment re-addressed by fax. He subsequently informed patients of their group allocation.
Allocation concealment (selection bias)	Low risk	The trial statistician, MCP, generated the random allocation sequence using the random procedure in SAS (SAS v.9.1 e SAS Institute, Cary NC), with a 1:1 allocation using block size of 4. The enrollment of patients in the study proceeded as follows: (i) patients were contacted via flyers advertizing the study in the corridors of the hospital; (ii) they met the investigator (i.e. physician) who informed them about the objective of the study; and he verified their eligibility; (iii) eligible patients were invited to participate in the study. After the physician had obtained the patient's consent, he sent by fax the randomization form to the Clinical Research Unit (AJ) for allocation consignment re-addressed by fax. He subsequently informed patients of their group allocation
Blinding of participants and personnel (performance bias)	High risk	No blinding
Blinding of outcome assessment (detection bias)	High risk	No blinding
Incomplete outcome data (attrition bias)	Unclear risk	7 out of 45 lost to Follow up
Selective reporting (reporting bias)	Low risk	No protocol available, but all mentioned outcomes are reported
Other bias	Low risk	No obvious other sources of bias

#### Rice 2010

Methods	RCT
Participants	Most patients had severe COPD, as indicated by the overall mean FEV1 , 37% of predicted and by the 55% rate of home oxygen use. 98% male
Interventions	Patients assigned to usual care received a one-page handout containing a summary of the principles of COPD care and the telephone number for the 24-hour VA [Veterans Affair Medical Centers] nursing helpline, which is a service available to all VA patients. Patients assigned to the disease management arm attended a single 1- to 1.5-hour group education session conducted by a respiratory therapist case manager. The patient education session included general information about COPD, direct observation of inhaler techniques, a review and adjustment of outpatient COPD medications, smoking cessation counseling, recommendations concerning influenza and pneumococcal vaccinations, encouragement of regular exercise, and instruction in hand hygiene (17). Each subject received an individualized written action plan that included refillable prescriptions for prednisone and an oral antibiotic, contact information for a case manager, and the telephone number of the 24-hour VA helpline (see Appendix 2 in the online supplement). Subjects were to be in possession of action plan medications at all times and were to refill prescriptions immediately upon initiating the action plan. The case manager made monthly phone calls to patients in disease management. We encouraged patients to call the case manager during regular working hours if they took action plan medications or if they had questions relating to their medical care. There were no subsequent scheduled clinic visits. Duration: 1 single education session and monthly phone calls for 12 month
Outcomes	HRQoL (SGRQ total), mortality, Hospital admissions
Notes	USA, Funding: Department of Veterans Affairs

#### Risk of bias table

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Low risk	We assigned subjects in equal proportions to each of the two treatment arms by permuted-block randomization
Allocation concealment (selection bias)	Low risk	Allocation: concealed. Comment: likely yes
Blinding of participants and personnel (performance bias)	High risk	Not blinded
Blinding of outcome assessment (detection bias)	Low risk	Blinded (data collectors, primary outcome assessors, data analysts)
Incomplete outcome data (attrition bias)	Low risk	Follow up on all patients

Selective reporting (reporting bias)	Low risk	Match to protocol
Other bias	Low risk	No obvious other sources of bias

#### Van Wetering 2009

Methods	RCT
Participants	71% male, moderate airflow obstruction but impaired exercise capacity (mean (SD) forced expiratory volume in 1 s (FEV1) 60 (16)%, peak work load (Wmax) ,70%)
Interventions	The programme was designed to improve and subsequently maintain exercise capacity, to promote selfmanagement skills and improve knowledge of COPD. Nutritional intervention and smoking cessation support were provided when indicated. The programme was offered by local physiotherapists and dieticians in the proximity of the patient's home and by respiratory nurses from the hospital. Local caregivers were supervised by colleagues from the hospital. During the first 4 months the patients visited the physiotherapists twice a week (30 min per visit) for intensive exercise training consisting of endurance training (cycling and walking) and four specific exercises for upper and lower extremities to improve both strength and endurance without the use of special equipment. Patients were instructed to perform the same exercises twice a day during 30 min in their home environment in addition to walking and cycling outside. Furthermore, all patients participated in an individualised education programme that was structured using a patient education book. All smokers were assigned to the respiratory nurse for standardised smoking cessation counselling according to the Minimal Intervention Strategy for Lung patients.12 Nutritionally depleted patients received scheduled cousselling (four visits) by a dietician and nutritional supplements (Respifor, Nutricia, The Netherlands). Control: The usual care group received pharmacotherapy according to accepted guidelines, a short smoking cessation advice by their chest physician and, if they were nutritionally depleted, a recommendation by their respiratory physician to eat more.4-month standardised supervised rehabilitation phase and a 20-month active maintenance phase
Outcomes	Drop out due to 'Co-morbidity', HRQoL (SGRQ total + sub scales), Mortality
Notes	The Netherlands, This study was financially supported by the Netherlands Asthma Foundation (NAF 3.4.01.63), the "Stichting Astma Bestrijding" (SAB), Nutricia Netherlands, Pfizer and Partners in Care Solutions (PICASSO) for COPD. The funding sources had no role in the design, conduct or reporting of the study or the decision to submit the manuscript for publication.

#### Risk of bias table

Bias	Authors' judgement	Support for judgement				
Random sequence generation (selection bias)	Low risk	Patients were randomised to the INTERCOM programme or to usual care using a computerised Chronic obstructive pulmonary disease procedure with concealed patient allocation.				
Allocation concealment (selection bias)	Low risk	Patients were randomised to the INTERCOM programme or to usual care using a computerised Chronic obstructive pulmonary disease procedure with concealed patient allocation.				
Blinding of participants and personnel (performance bias)	High risk	Not blinded				
Blinding of outcome assessment (detection bias)	High risk	No info, judgement: not blinded				
Incomplete outcome data (attrition bias)	Unclear risk	intervention: (77+7) 84 out of 102, Control (81+5) 85 out of 97				
Selective reporting (reporting bias)	Low risk	Outcomes reported match study protocol				
Other bias	Low risk	none detected				

Footnotes

#### **Characteristics of excluded studies**

Footnotes

## Characteristics of studies awaiting classification

Footnotes

### Characteristics of ongoing studies

Footnotes

# Summary of findings tables Additional tables

#### **References to studies**

**Included studies** Blackstock 2014 [Empty] Casey 2013 [Empty] Emery 1998 [Empty] Gallefoss 1999 [Empty] Monnikhof 2003 [Empty] Ninot 2011 [Empty] **Rice 2010** [Empty] Van Wetering 2009 [Empty] **Excluded studies** Studies awaiting classification **Ongoing studies Other references** Additional references Other published versions of this review

**Classification pending references** 

#### **Data and analyses**

#### 2 Group-based therapy versus no group-based therapy

Outcome or Subgroup	Studies	Participants	Statistical Method	Effect Estimate
2.1 Quality of life. End of treatment	1	267	Mean Difference (IV, Fixed, 95% CI)	0.80 [-0.57, 2.17]
2.2 Quality of life. Longest follow-up	6		Mean Difference (IV, Random, 95% CI)	-2.74 [-4.60, -0.89]
2.4 ADL. End of treatment	1	73	Mean Difference (IV, Fixed, 95% CI)	-2.25 [-5.86, 1.35]
2.5 Mortality. End of treatment	3	1190	Risk Ratio (M-H, Random, 95% CI)	0.81 [0.56, 1.17]
2.6 Hospital admission. Longest follow-up.	4	1184	Mean Difference (IV, Random, 95% CI)	-0.27 [-1.24, 0.70]
2.7 No. of hospital admisssions. Longest follow-up	1	181	Risk Ratio (M-H, Fixed, 95% CI)	0.81 [0.64, 1.02]
2.8 Depression. End of treatment	1	73	Mean Difference (IV, Fixed, 95% CI)	-2.43 [-5.52, 0.66]
2.9 Anxiety. End of treatment	1	73	Mean Difference (IV, Fixed, 95% CI)	0.74 [-2.10, 3.58]

#### **Figures**

Figure 1 (Analysis 2.1)



(G) Other bias

Forest plot of comparison: 2 Group-based therapy versus no group-based therapy, outcome: 2.1 Quality of life. End of treatment.

#### Figure 2 (Analysis 2.4)



(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: 2 Group-based therapy versus no group-based therapy, outcome: 2.4 ADL. End of treatment.

#### Figure 3 (Analysis 2.2)

				Mean Difference	Mean Difference	Risk of Bias			
Study or Subgroup	Mean Difference	SE	Weight	IV, Random, 95% Cl	IV, Random, 95% Cl	ABCDEFG			
Blackstock 2014	-1.3	0.6426	34.1%	-1.30 [-2.56, -0.04]	=	$\bullet \bullet \circ \circ \circ \circ \bullet \bullet \bullet$			
Gallefoss 1999	-3.1	5.1174	3.2%	-3.10 [-13.13, 6.93]		•••			
Monnikhof 2003	-0.3	2.3368	11.7%	-0.30 [-4.88, 4.28]		•••			
Ninot 2011	-8	4.0817	4.8%	-8.00 [-16.00, -0.00]		🔁 🖶 🖨 🖨 🖓 🖶 🖶			
Rice 2010	-5.1	1.2755	23.3%	-5.10 [-7.60, -2.60]	-				
Van Wetering 2009	-2.6	1.3	23.0%	-2.60 [-5.15, -0.05]		😠 🖶 🖨 🖨 🖓 🖶 🖶			
Total (05% CI)			100.0%	2741460 0.001					
Total (95% CI)			100.0%	-2.74 [-4.00, -0.89]	•				
Heterogeneity: lau*=	2.23; Chi* = 9.93, d	t= 5 (P =	: 0.08); I*:	= 50%	-20 -10 0 10 20	_			
lest for overall effect:	Z = 2.89 (P = 0.004)	)		Favo	ours gr. based therapy Favours control				
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: 2 Group-based therapy versus no group-based therapy, outcome: 2.2 Quality of life. Longest follow-up.

#### Figure 4 (Analysis 2.5)

	Group based th	erapy	Contr	ol		Risk Ratio	Risk Ratio	Risk of Bias
Study or Subgroup	Events	Total	Events	Total	Weight	M-H, Random, 95% Cl	M-H, Random, 95% Cl	ABCDEFG
Monnikhof 2003	3	127	3	121	5.5%	0.95 [0.20, 4.63]		•••
Rice 2010	36	372	48	371	83.3%	0.75 [0.50, 1.12]		
Van Wetering 2009	7	102	5	97	11.2%	1.33 [0.44, 4.05]		••••
Total (95% CI)		601		589	100.0%	0.81 [0.56, 1.17]	•	
Total events	46		56					
Heterogeneity: Tau <sup>2</sup> =	0.00; Chi <sup>2</sup> = 0.95	df = 2 (F	<sup>o</sup> = 0.62);	$ ^{2} = 0\%$	5			100
Test for overall effect:	Z = 1.12 (P = 0.28	5)				Fav	ours gr. based therapy Favours control	100

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: 2 Group-based therapy versus no group-based therapy, outcome: 2.5 Mortality. End of treatment.

#### Figure 5 (Analysis 2.6)

	Group	based the	rapy		Control			Mean Difference	Mean Difference Risk of Bias
Study or Subgroup	Mean	SD	Total	Mean	SD	Total	Weight	IV, Random, 95% C	IV, Random, 95% CI A B C D E F G
Casey 2013	0.5	2.8	178	0.1	0.6	172	39.9%	0.40 [-0.02, 0.82	
Gallefoss 1999	0.7	2	26	2.5	11	27	4.7%	-1.80 [-6.02, 2.42	
Ninot 2011	0	2.6	20	0	1.5	18	23.8%	0.00 [-1.33, 1.33	
Rice 2010	1.7	6.2583	372	2.8	6.2583	371	31.5%	-1.10 [-2.00, -0.20	
Total (95% CI)			596			588	100.0%	-0.27 [-1.24, 0.70	↓ ♦
Heterogeneity: Tau <sup>2</sup> = 0.57; Chi <sup>2</sup> = 9.58, df = 3 (P = 0.02); l <sup>2</sup> = 69%									
Test for overall effect: Z = 0.55 (P = 0.58)								F	-10 -5 0 5 10 ivours gr. based therapy Favours control
Risk of bias legend	o dopora	tion (solor	tion his	e)					

(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: 2 Group-based therapy versus no group-based therapy, outcome: 2.6 Hospital admission. Longest follow-up..

#### Figure 6 (Analysis 2.7)



Forest plot of comparison: 2 Group-based therapy versus no group-based therapy, outcome: 2.7 No. of hospital admisssions. Longest follow-up.

#### Figure 7 (Analysis 2.8)



(G) Other bias

Forest plot of comparison: 2 Group-based therapy versus no group-based therapy, outcome: 2.8 Depression. End of treatment.

#### Figure 8 (Analysis 2.9)

	Group based therapy Control							Mean Difference	Mean Difference	Risk of Bias
Study or Subgroup	Mean	SD	Total	Mean	SD	Total	Weight	IV, Fixed, 95% CI	IV, Fixed, 95% Cl	ABCDEFG
Emery 1998	52.7375	6.0286	48	52	5.8	25	100.0%	0.74 [-2.10, 3.58]	• <b>•</b> •	•••
Total (95% CI)			48			25	100.0%	0.74 [-2.10, 3.58]	➡	
Heterogeneity: Not ap	plicable									-
Test for overall effect:	Test for overall effect: Z = 0.51 (P = 0.61) - 2U - 1U U 2U Favours or based therapy Favours control									
<u>Risk of bias legend</u> ( <b>A</b> ) Random sequenc	Risk of bias legend									
(B) Allocation conceal	Iment (sele	ection bias	5)	,						
(C) Blinding of participants and personnel (performance bias)										
(D) Blinding of outcome assessment (detection bias)										
(E) Incomplete outcor	ne data (at	trition bias	s)							
(F) Selective reporting	ı (reporting	bias)								

(G) Other bias

Forest plot of comparison: 2 Group-based therapy versus no group-based therapy, outcome: 2.9 Anxiety. End of treatment.