

## Web Appendices

The medline search strategy is summarised below:

- 1 Randomized Controlled Trial/ (366634)
- 2 Random Allocation/ (79124)
- 3 Double-Blind Method/ (125165)
- 4 Clinical Trial/ (490650)
- 5 Clinical trial, phase i.pt. (14574)
- 6 Clinical trial, phase ii.pt. (24041)
- 7 clinical trial, phase iii.pt. (9034)
- 8 clinical trial, phase iv.pt. (898)
- 9 controlled clinical trial.pt. (87662)
- 10 randomized controlled trial.pt. (366634)
- 11 multicenter study.pt. (167388)
- 12 clinical trial.pt. (490650)
- 13 exp Clinical Trials as topic/ (277707)
- 14 Randomized Controlled Trials as Topic/ (90747)
- 15 Single Blind Method/ (18370)
- 16 or/1-15 (1009657)
- 17 case report.tw. (178692)
- 18 letter/ (782419)
- 19 historical article/ (294857)
- 20 case-control studies/ (172380)
- 21 cohort studies/ (158274)
- 22 cross-sectional studies/ (165889)
- 23 or/17-22 (1707664)
- 24 16 not 23 (937394)
- 25 Motivational Interviewing/ (93)
- 26 (Brief intervention or minimal intervention or early intervention or cognitive behav\* or screen\* or counsel\* or brief advice or structured advice or identification or managed care or motivational interview).ab,ti. (856434) 27 25 or 26 (856487)
- 28 (((alcohol\* or beer or wine or lager or spirit\* or drink) adj3 (consum\* or unit or use\* or intake or binge or abuse\* or misuse\*)) or drink\* rate\* or drunk\*).ab,ti. (76049)
- 29 Alcohol Drinking/ (50093)
- 30 Binge Drinking/ (124)
- 31 Ethanol/ (71297)
- 32 28 or 29 or 30 or 31 (157841)
- 33 24 and 27 and 32 (1331)
- 34 animals/ (5263469)
- 35 33 not 34 (1328)

**Online Table 1: Study Level risk of bias assessment**

Study	Risk of bias indicator				
	Allocation	Blinding	Loss to follow up	Outcome	Intention to Treat Analysis
Aalto 2000	Adequate	C	A	C	A
Aalto 2001	Adequate	C	A	C	A
Anderson 1992	Unclear	C	A	C	A
Antti-Poika 1988	Unclear	C	A	C	C
Baer 2001	Unclear	C	B	C	A
Beich, 2007	Adequate	D	A	B	A
Bernstein 2010	Adequate	B	A	C	C
Butler 2009	Adequate	C	A	C	C
Carey 2006	Unclear	D	A	C	C
Cherpitel 2010	Adequate	B	A	A	B
Chick 1985	Inadequate	D	A	A	C
Cordoba 1998	Adequate	D	B	C	B
Crawford 2004	Adequate	B	B	B	A
Crawford 2014	Adequate	B	A	A	A
Curry 2003	Unclear	C	A	A	A
Daepfen 2007	Adequate	C	A	A	C
Daepfen 2011	Adequate	B	A	A	A
Drummond 2014	Adequate	B	A	A	A
Field 2010	Adequate	B	B	A	C
Fleming 1997; Manwell 2000, Grossberg 2004	Adequate	B	A	A	C
Fleming 1999	Unclear	B	A	C	C
Fleming 2009	Adequate	A	A	A	A
Freyer-Adam 2008	Adequate	B	A	B	C
Gaume 2011	Adequate	C	A	C	C
Gaume 2014	Unclear	C	A	A	C
Gentilello 1999	Adequate	C	A	C	A
Gottlieb-Hansen 2012	Adequate	D	A	B	A
Heather 1987	Unclear	C	A	A	C
Holloway 2007	Adequate	C	A	A	A

Study	Risk of bias indicator				
	Allocation	Blinding	Loss to follow up	Outcome	Intention to Treat Analysis
Ingersoll 2013	Adequate	C	A	A	C
Juarez 2006	Unclear	C	B	C	C
Kulesza 2010	Unclear	C	A	C	C
Kulesza 2013	Unclear	C	A	C	C
Larimer 2000	Unclear	C	B	C	A
Liu 2011	Adequate	C	A	A	A
Lock 2006	Adequate	C	A	A	C
Maisto 2001	Adequate	C	B	C	B
Murphy 2001	Adequate	C	B	C	C
Noknoy 2010	Adequate	C	A	A	A
Richmond 1995	Adequate	C	A	C	A
Rubio 2010	Adequate	C	B	A	A
Rubio 2014	Adequate	C	A	A	C
Saitz 2007	Adequate	D	A	B	A
Schaus 2009	Adequate	C	A	C	A
Senft 1997	Unclear	B	A	A	C
Shiles 2014	Adequate	C	A	A	A
Smith 2003	Adequate	B	A	C	A
Wagener 2012	Adequate	C	B	C	C
Walters 2009	Adequate	A	A	C	A
Watt 2008	Adequate	B	A	C	C

**Allocation concealment:** Adequate allocation concealment (e.g. allocation by a central office unaware of subject characteristics; serially numbered, opaque, sealed envelopes; on-site computer system combined with allocations kept in a locked unreadable computer file that can be accessed only after the characteristics of an enrolled participant have been entered; or other description that contained elements convincing of concealment); Unclear allocation concealment (authors either did not report an allocation concealment approach at all or report an approach that did not fall in the category A or C); inadequate allocation concealment (alternation or reference to case numbers, dates of birth, day of the week; any procedure that is entirely transparent before allocation, such as an open list of random numbers or other description that contained elements convincing of none concealment)

**Blinding of participants:** A= double blind; B= single blind (blinding of participants); C= unclear D= not done

**Loss to follow up:** A= Loss to follow up completely recorded for each group; B= Loss to follow-up incompletely recorded (data reported only for one group or for the overall sample ); C= Unclear or not done

**Outcome assessment:** A= Blind to treatment allocation at outcome assessment; B= Not blind to treatment allocation at outcome assessment; C= Unclear

**Intention to Treat Analysis:** A= Intention to Treat Analysis conducted; B= Not conducted; C=Not clear

**Online table 2: Quantity of alcohol per unit time**

Outcomes	Group name	First time point				Last time point			
		ES (95% CI)	k	I <sup>2</sup> (%)	p	ES (95% CI)	k	I <sup>2</sup> (%)	p
Overall	Mean effect	-0.15 (-0.20, -0.10)	53	53%		-0.15 (-0.19, -0.10)	53	43%	
Setting of intervention	A&E	-0.08 (-0.20, 0.05)	12	49%	0.08	-0.12 (-0.23, -0.02)	11	43%	0.29
	Ambulatory or primary care	-0.21 (-0.30, -0.11)	19			-0.18 (-0.28, -0.09)	20		
	Hospital inpatient services	-0.10 (-0.29, 0.08)	5			-0.10 (-0.28, 0.07)	5		
	Non-health settings	-0.06 (-0.14, 0.02)	8			-0.05 (-0.15, 0.05)	8		
	University	-0.27 (-0.43, -0.10)	9			-0.24 (-0.42, -0.06)	9		
Provider	Counsellor/mental health clinician	-0.11 (-0.17, -0.04)	27	43%	0.048	-0.13 (-0.18, -0.07)	26	36%	0.12
	Different providers	-0.07 (-0.12, -0.03)	5			-0.04 (-0.18, 0.10)	5		
	Physician	-0.20 (-0.31, -0.09)	17			-0.18 (-0.28, -0.07)	18		
	Nurse	-0.30 (-0.41, -0.20)	12			-0.27 (-0.38, -0.16)	13		
	Peer intervention	-0.16 (-3.76, 3.44)*	2			-0.19 (-3.20, 2.81)	2		
Content	Brief advice	-0.25 (-0.42, -0.07)	10	43%	0.04	-0.24 (-0.43, -0.06)	10	40%	0.07
	Motivational interviewing	-0.09 (-0.15, -0.04)	31			-0.10 (-0.15, -0.06)	30		
	Motivational interviewing plus	-0.21 (-0.31, -0.11)	17			-0.16 (-0.27, -0.07)	18		

*k*=number of effect sizes, *p* is the value from a multiparameter Wald test of coefficients.\*This estimate was sensitive to type of maximum likelihood estimator used. We present this estimate without the Knapp-Hartung modification in the forest plot for interpretability.

**Online table 3: Quantity of alcohol per occasion**

Outcomes	Group name	First time point				Last time point			
		ES (95% CI)	k	I <sup>2</sup> (%)	p	ES (95% CI)	k	I <sup>2</sup> (%)	p
Overall	Mean effect	-0.09 (-0.18, -0.001)	15	51%		-0.06 (-0.15, 0.02)	15	39%	
Setting of intervention	A&E	0.005 (-0.29, 0.29)	4	44%	0.39	-0.01 (-0.23, 0.21)	4	43%	0.65
	Ambulatory or primary care	-0.14 (-0.28, 0.003)	7			-0.06 (-0.26, 0.13)	7		
	Hospital inpatient services	N/A				N/A			
	Non-health settings	-0.08 (-0.38, 0.23)	1			-0.02 (-0.35, 0.31)	1		
	University	-0.18 (-0.47, 0.10)	3			-0.16 (-0.46, 0.14)	3		
Provider	Counsellor/mental health clinician	-0.11 (-0.23, 0.002)	8	50%	0.75	-0.07 (-0.19, 0.06)	8	36%	0.47
	Different providers	N/A				N/A			
	Physician	-0.07 (-0.26, 0.12)	6			0.05 (-0.12, 0.22)	6		
	Nurse	-0.12 (-0.44, 0.20)	5			-0.11 (-0.43, 0.21)	5		
	Peer intervention	0.01 (-2.03, 2.06)	2			-0.02 (-1.04, 0.99)	2		
Content	Brief advice	-0.23 (-0.60, 0.14)	3	42%	0.48	-0.17 (-0.54, 0.19)	3	30%	0.57
	Motivational interviewing	-0.07 (-0.24, 0.09)	9			-0.05 (-0.20, 0.10)	9		
	Motivational interviewing plus	-0.11 (-0.25, 0.03)	6			-0.06 (-0.21, 0.09)	6		

k=number of effect sizes, p is the value from a multiparameter Wald test of coefficients.

**Online table 4: Frequency of drinking occasions per unit time**

Outcomes	Group name	First time point				Last time point			
		ES (95% CI)	k	I <sup>2</sup> (%)	p	ES (95% CI)	k	I <sup>2</sup> (%)	p
Overall	Mean effect	-0.12 (-0.20, -0.05)	16	34%		-0.14 (-0.22, -0.05)	16	45%	
Setting of intervention	A&E	-0.11 (-0.29, 0.08)	4	36%	0.42	-0.14 (-0.39, 0.12)	4	50%	0.53
	Ambulatory or primary care	-0.08 (-0.21, 0.04)	5			-0.08 (-0.20, 0.05)	5		
	Hospital inpatient services	-0.51 (-0.89, -0.12)	1			-0.51 (-0.89, -0.12)	1		
	Non-health settings	-0.14 (-1.85, 1.58)	2			-0.14 (-1.84, 1.56)	2		
	University	-0.25 (-0.75, 0.25)	4			-0.23 (-0.83, 0.37)	4		
Provider	Counsellor/mental health clinician	-0.12 (-0.26, 0.01)	9	38%	0.89	-0.14 (-0.30, 0.02)	9	47%	0.83
	Different providers	-0.26 (-0.47, -0.05)	1			-0.26 (-0.47, -0.05)	1		
	Physician	-0.10 (-0.23, 0.02)	6			-0.09 (-0.21, 0.04)	6		
	Nurse	-0.21 (-0.55, 0.13)	4			-0.21 (-0.55, 0.13)	4		
	Peer intervention	-0.07 (-1.08, 0.95)	2			-0.07 (-1.08, 0.95)	2		
Content	Brief advice	0.17 (-1.96, 2.30)	2	28%	0.32	0.13 (-2.00, 2.26)	2	41%	0.36
	Motivational interviewing	-0.14 (-0.27, -0.01)	9			-0.16 (-0.30, -0.01)	9		
	Motivational interviewing plus	-0.12 (-0.23, -0.01)	7			-0.11 (-0.22, -0.002)	7		

*k*=number of effect sizes, *p* is the value from a multiparameter Wald test of coefficients.

**Online table 5: Frequency of binge drinking occasions per unit time**

Outcomes	Group name	First time point				Last time point			
		ES (95% CI)	k	I <sup>2</sup> (%)	p	ES (95% CI)	k	I <sup>2</sup> (%)	p
Overall	Mean effect	-0.15 (-0.22, -0.08)	19	38%		-0.14 (-0.22, -0.06)	20	50%	
Setting of intervention	A&E	-0.09 (-0.29, 0.10)	5	24%	0.18	-0.11 (-0.35, 0.13)	5	57%	0.70
	Ambulatory or primary care	-0.20 (-0.30, 0.10)	6			-0.21 (-0.36, -0.06)	7		
	Hospital inpatient services	-0.06 (-0.30, 0.17)	1			-0.06 (-0.30, 0.17)	1		
	Non-health settings	-0.06 (-0.28, 0.16)	4			-0.06 (-0.28, 0.16)	4		
	University	-0.31 (-0.73, 0.11)	3			-0.21 (-1.17, 0.74)	3		
Provider	Counsellor/mental health clinician	-0.12 (-0.22, -0.02)	13	36%	0.36	-0.09 (-0.20, 0.01)	13	21%	0.11
	Different providers	N/A				N/A			
	Physician	-0.20 (-0.30, -0.09)	5			-0.20 (-0.27, -0.03)	6		
	Nurse	-0.24 (-0.52, 0.04)	3			-0.32 (-0.57, -0.08)	4		
	Peer intervention	N/A				N/A			
Content	Brief advice	-0.26 (-1.17, 0.65)	2	24%	0.25	-0.26 (-1.17, 0.65)	2	46%	0.71
	Motivational interviewing	-0.11 (-0.21, -0.02)	13			-0.12 (-0.23, -0.01)	13		
	Motivational interviewing plus	-0.18 (-0.29, -0.08)	6			-0.14 (-0.31, 0.03)	7		

k=number of effect sizes, p is the value from a multiparameter Wald test of coefficients. N/A= Not Available