Table 3.1.4 *Education as tool to increase adoption of guidelines and evidence regarding depression in primary care.*

Author Year Reference Country	Design and target Setting Population (patient, provider) Follow-up time	Intervention Control Drop-out rate	Result, process outcome (primary)	Result, patient outcome (primary)	Study quality Comments
Thompson et al 2000 [4] United Kingdom	*Design* Cluster RCT *Target* Recognition and management of depression in line with clinical guidelines *Setting* Primary care clinics in New Hampshire, United Kingdom *Patients* n=59 practices; 169 physicians. 21 409 patients were screened for depression (HAD scale) *Theoretical reference* Not described *Follow-up time* 6 months	*Intervention* Seminars in groups of 20 for 4 hours. Teaching was supplemented by videotapes, small groups discussions and role plays n=29 *Control* Care as usual (educational meetings delayed until after intervention period) n=30 *Drop-out rate* Providers: 9.7%	*Diagnosis of depression* Sensitivity: OR 1.00 (95% CI, 0.73; 1.37) Specificity: OR 0.97 (95% CI, 0.70; 1.34)	*Proportion improved* OR 1.23 (95% CI, 0.84; 1.79)	Moderate

The table continues on the next page

Table 3.1.4 *continued*

Author Year Reference Country	Design and target Setting Population (patient, provider) Follow-up time	Intervention Control Drop-out rate	Result, process outcome (primary)	Result, patient outcome (primary)	Study quality Comments
Lin et al 2001 [2] USA	*Design* Cluster RCT *Target* Improved depression care in patients not high utilizers of medical care *Setting* 2 HMO, urban, suburban and rural with 15 primary clinics *Patients* 124 893 enrolled patients *Providers* n=139 eligible primary care physicians, 109 participated *Theoretical reference* Not reported *Follow-up time* 1 year	*Intervention* Small group interactive discussion, role play, AD, feedback and review of patient progress with a psychiatric consultant, 2 hours training on diagnostic assessment, pharmacotherapy, patient education, importance of follow-up n=56 primary care physicians n=44 031 patients *Control* CAU n=53 primary care physicians n=46 693 patients *Drop-out rate (overall)* Providers 21.6%	*Diagnosis of new depression I vs C* OR 1.01 (95% CI, 0.83; 1.2) *Prescription of new antidepressant I vs C* OR 0.83 (95% CI, 0.69; 1.03)	*Adequacy of pharmacotherapy* OR 0.82 (95% CI, 0.43; 1.55)	Moderate

The table continues on the next page

Table 3.1.4 continued

Author Year Reference Country	Design and target Setting Population (patient, provider) Follow-up time	Intervention Control Drop-out rate	Result, process outcome (primary)	Result, patient outcome (primary)	Study quality Comments
Gerrity et al 1999 [1] USA	*Design* RCT, stratification by sex, blinded "patients" *Target* The AHCPR Guidelines on depression in Primary Care [7] *Setting* Primary care clinics in Portland, Oregon *Patients* Two standardized patients (actors), unannounced visit at the office *Providers* n=166 GPs that responded to an invitation n=56 practising at least 50% of the time and able to attend both sessions of the workshop *Theoretical reference* Not reported *Follow-up time* 2 to 6 weeks after intervention	*Intervention* The Depression Education Program focusing on diagnosis and communication skills. Two sessions, 4 hours each, given 2 weeks apart on communications skills and screening. Included setting personal goals, role plays, case discussions and home work (audiotape) n=27 *Control* CAU n=29 *Drop-out rate* 12%	*Physician behavior and communication skills* Behaviour improved for the female patient but not for the male		Moderate *Fidelity* Coaching the actors and videotaping being interviewed by 3 physicians as part of their training. Hidden microphones were used and 10% were reviewed

The table continues on the next page

Table 3.1.4 *continued*

Author Year Reference Country	Design and target Setting Population (patient, provider) Follow-up time	Intervention Control Drop-out rate	Result, process outcome (primary)	Result, patient outcome (primary)	Study quality Comments
Wong et al 2007 [3] Hong Kong	*Design* RCT *Target* Improve doctors' consultation skill to diagnose and manage patients with depression and generalized anxiety *Setting* Primary care Hong Kong *Patients* Standardized patients n=2 *Providers* n=40 of 2 260 (the first to respond to the invitation) *Theoretical reference* Not stated *Follow-up time* 1 month	*Intervention* CME, the Depression and Anxiety Education Program. Two hour sessions two days per week for two consecutive weeks. Covered eight communication skills and two knowledge objectives. Sessions were interactive and included role plays, video vignettes with discussion and oral presentations n=20 physicians *Control* CAU n=20 physicians *Drop-out rate* 20%	*Change in desired interviewing behaviour for depression, global rating (composite score)* I: 0.06 C: –0.34 p=0.052		Moderate

The table continues on the next page

Table 3.1.4 *continued*

Author Year Reference Country	Design and target Setting Population (patient, provider) Follow-up time	Intervention Control Drop-out rate	Result, process outcome (primary)	Result, patient outcome (primary)	Study quality Comments
Shirazi et al 2007 [5] Iran Shirazi et al 2011 [6] Iran	*Design* RCT, randomisation within stratified groups, no blinding *Target* Evidence based guidelines for depression in primary care based on WHO documents *Setting* Private primary care clinics registered with Teheran University of Medical Sciences, Iran *Population* n=300 GPs, randomly selected from all 1 600 GPs. 192 accepted to participate. They were stratified in three groups according to their readiness to change based on a questionnaire Attitude stage: n=147 Intention stage: n=45 Action stage: n=0 n=5 standardized patients (actors) who used validated checklists for performance on diagnosis and treatment. Max score 100 *Theoretical reference* The Prochaska theory of readiness to change (trans-theoretical model) *Follow-up time* Unannounced visit by SP 2 months before and 2 months after the training	All groups received 8 hours teacher led training and the same educational background material *Intervention (tailored education)* I1 (attitude stage): Large group education with methods relevant for large groups, Four extra hours with collaborative small-group learning n=74 I2 (intention stage): Small group training in workshop setting n=22 *Control (standard CME curricula)* C1 (attitude stage): Large group n=73 C2 (intention stage): Workshop with mini-lectures followed by questions and answers n=23 *Drop-out rate* n=19% in the intervention group n=15% in the control group	*Change in practice score for diagnostic performance* I: 15 C: 1 p=0.007 *Treatment performance* I: 16 C: –4 p<0.001 Differences between large and small group learning were not significant		Moderate

AD = Antidepressant drug; AHCPR = Agency for Health Care Policy and Research; C = Control; CAU = Care as usual; CI = Confidence interval; CME = Continuing medical education; GP = General practitioner; HAD = Hospital and anxiety depression scale; HMO = Health Maintenance Organization; n = Number; OR = Odds ratio; RCT = Randomised controlled trial; SP = Standardized patient; WHO = World Health Organization

Table 3.1.5 *Education as tool to increase adoption of guidelines and evidence regarding excessive alcohol consumption in primary care.*

Author Year Reference Country	Design and target Setting Population (patient, provider) Follow-up time	Intervention (I) Control (C) Drop-out rate	Result, process outcome (primary)	Result, patient outcome (primary)	Study quality Comments
Chossis et al 2007 [9] Switzerland	*Design* Cluster RCT, provider and staff researchers were blinded *Target* Reduce hazardous drinking *Setting* Primary care affiliated to internal medicine outpatient academic centers of Lausanne and Geneva university hospitals *Patients* n=2 438 patients n=1 985 french speaking patients were screened and n=160 hazardous drinkers were randomised *Providers* Residents without prior training in BAI *Theoretical reference* Not reported *Follow-up time* At index visit and at 3 months	*Intervention* BAI training, 2 group sessions, 2 weeks apart, one half-day each. Included theory, role playing, case discussion, practice with standardized patients n=14 *Control* Half-day traditional didactic training program on lipid management n=13 *Drop-out rate* 1/27 providers 15.8% of patients	*Mean numbers of BAI components performed by the resident (patient report) at index visit* I: 2.4 (out of 12) C: 1.5 p=0.001 *At follow-up* No differences between groups *Proportion of providers that addressed alcohol consumption at index visit* I: 54% C: 46% *Median occasions of heavy drinking per month at follow-up* I: 2.5 (5.0) C: 2.0 (2.7) p=0.05		Moderate

The table continues on the next page

Table 3.1.5 *continued*

Author Year Reference Country	Design and target Setting Population (patient, provider) Follow-up time	Intervention (I) Control (C) Drop-out rate	Result, process outcome (primary)	Result, patient outcome (primary)	Study quality Comments
Ruf et al 2010 [10] Germany	*Design* Cluster RCT *Target* Evaluate dissemination strategies to general practitioners of an online quality improvement program for alcohol-related disorders *Setting* GPs in 12 districts in South Baden and South Württemberg in Germany *Patients* – *Providers* n=2 647 of which 112 were included in the trial and randomised *Theoretical reference* – *Follow-up time* 4 months	*Intervention* I1: Physicians received 4–6 hour central training session on alcohol-related disorders, the online system, exercises on the system and a discussion of the transfer of the system into practice n=43 practices n=36 patients (baseline) I2: Physicians and the practice team (nurse) got the same program as in I1. The nurses also got an introduction to the guideline and potential responsibilities of nurses in the treatment of patients n=42 practices n=33 patients (baseline) *Control* Physicians were given access to the online system but no training n=27 practices n=22 patients (baseline) *Drop-out rate (intention to treat)* Providers: – Patients: I1:19% I2: 0% C: 18%	*Intention to treat analyses* *Acceptance and use of the system (registration and at least 1 login)* I1: 41.9% I2: 42.9% C: 44.4% (p=0.978) *Number of logins (≥6)* I1: 55.6% I2: 33.3% C: 8.3% (p=0.019)	*Intention to treat analyses* *Proportion of correct diagnoses* I1: 72.2% I2: 69.7% C: 36.4% (p 0.034) This outcome was not defined as a primary outcome. It was 1/7 secondary outcomes where two more had a patient outcome focus. These two were not significant	Moderate

The table continues on the next page

Table 3.1.5 *continued*

Author Year Reference Country	Design and target Setting Population (patient, provider) Follow-up time	Intervention (I) Control (C) Drop-out rate	Result, process outcome (primary)	Result, patient outcome (primary)	Study quality Comments
Kaner et al 1999 [11] United Kingdom	*Design* RCT *Target* Implementation of "Drink Less" program for screening and counselling of persons with hazardous drinking behaviors *Setting* Primary care practices in United Kingdom *Patients* All patients were screened with AUDIT in the waiting room (except repeat attenders) *Providers* 128 GPs, one per practice *Theoretical reference* Not stated *Follow-up time* 3 months after program delivery	*Intervention* I1: Face-to-face training at the GPs practice plus demonstration on how to run the program n=43 I2: I1 + supportive telephone calls by the researches fort-nightly n=42 *Control* Written guidelines were dropped-off at reception n=43 *Drop-out rate* Not reported	*Proportion of GPs who screened at least one patient using the program* I1: 56% I2: 71% C: 44% p=0.03 No other differences between groups were recorded		Moderate

AUDIT = Alcohol use disorders identification test; BAI = Brief alcohol intervention; C = Control; GP = General practitioner; I = Intervention; n = Number; RCT = Randomised controlled trial

Table 3.1.6 *Academic detailing as tool to increase adoption of guidelines and evidence regarding depression in primary care.*

Author Year Reference Country	**Design and target Setting Population (patient, provider) Follow-up time**	**Intervention (I) Control (C) Drop-out rate**	**Result, process outcome (primary)**	**Result, patient outcome (primary)**	**Study quality Comments**
Eccles et al 2007 [13] United Kingdom	*Design* Pragmatic RCT *Target* Evaluate the effectiveness of outreach visiting by existing pharmaceutical advisers for the choice of antidepressants in the management of depression *Setting* Primary care trusts in Newcastle and North Tyneside, United Kingdom *Patients* – *Providers* n=73 general practices (number of available practices, all randomised) *Theoretical reference* – *Follow-up time* 12 months	A guideline on depression medication were distributed by courier or post to all GPs in the study *Intervention* GPs received educational outreach visits by a pharmaceutical adviser (6 in total). The purpose of the visit was to encourage implementation of the main messages in the posted guideline using a set of educational materials based on the guideline. Two visits were planned at each practice n=35 practices *Control* GPs in the control arm only received the guideline n=37 practices *Drop-out rate* Not applicable as register data was used	Aggregated register data on prescribing was used to compare intervention and control arms. Number of items and costs were compared regarding prescriptions of: Tricyclic antidepressants (TCA) Ioeframine Selective serotonin re-uptake inhibitors (SSRI) Monoamine oxidase inhibitors (MAOI) *Results* There were no significant differences between intervention and control on prescribing for any of these drugs. There was a significant increase in costs in the control arm regarding TCAs	–	High

The table continues on the next page

Table 3.1.6 *continued*

Author Year Reference Country	Design and target Setting Population (patient, provider) Follow-up time	Intervention (I) Control (C) Drop-out rate	Result, process outcome (primary)	Result, patient outcome (primary)	Study quality Comments
van Eijk et al 2001 [15] The Netherlands	*Design* Cluster RCT *Target* Decrease prescribing of highly anticholinergic antidepressant for elderly people *Setting* Primary care in the Netherlands *Patients* 46 078 >60 years *Providers* n=21 groups of GPs education groups *Theoretical reference* Social marketing *Follow-up time* Not reported	*Intervention complex* I1: Individual approach 20 minutes academic detailing, visit by peer presenting evidence 4 months later feedback of prescribing performance n=70 GPs I2: Group approach 20 minutes academic detailing visit by peer presenting evidence 4 months later feedback of prescribing performance n=52 GPs *Control* CAU n=66 GPs *Drop-out rate* 14% individual visits only 1 visit 85% group visits only 1 visit	*Rate ratios for highly anticholinergic antidepressant compared to control after intervention (ITT)* I1: 2.02 p=0.005 I2: 1.66 p=0.066		Moderate

The table continues on the next page

Table 3.1.6 *continued*

Author **Year** **Reference** **Country**	**Design and target** **Setting** **Population (patient, provider)** **Follow-up time**	**Intervention (I)** **Control (C)** **Drop-out rate**	**Result,** **process outcome** **(primary)**	**Result,** **patient outcome** **(primary)**	**Study quality** **Comments**
Nilsson et al 2001 [16] Sweden	*Design* Cluster RCT *Target* Increased prescribing of antidepressants *Setting* 3 CME groups (I) and 6 health care centers (C), Stockholm, Sweden *Patients* 50 000 *Providers* n=50 GPs *Theoretical reference* None stated *Follow-up time* 1 year	*Intervention* CME group 3 x 1–1,5 hour academic detailing, local opinion leader, individual feedback + educational material n=23 GPs *Control* CAU n=27 GPs *Drop-out rate (overall)* GPs 20%	I: 6.8% increase of prescribed DDD of antidepressants/1 000 patients C: 4.3% decrease of prescribed DDD of antidepressants/1 000 patients ns		Moderate

C = Control; CAU = Care as usual; CME = Continuing medical education;
DDD = Defined daily dose; GP = General practitioner; I = Intervention;
n = Number; ns = Not significant; RCT = Randomised controlled trial

Table 3.1.7 *Academic detailing as tool to increase adoption of guidelines and evidence regarding use of benzodiazepines in primary care.*

Author Year Reference Country	Design and target Setting Population (patient, provider) Follow-up time	Intervention (I) Control (C) Drop-out rate	Result, process outcome (primary)	Result, patient outcome (primary)	Study quality Comments
Avorn et al 1992 [17] USA	*Design* Six matched pairs, randomisation within each pair *Target* Prescription rate of inappropriate psychoactive drugs *Setting* 12 nursing homes in Massachusetts *Patients* n=823 residents *Providers* Physicians with prescription rate exceeding a threshold level at baseline, not reported *Theoretical reference* Not reported	*Intervention* Academic detailing. Printed, educational material was based on systematic reviews and interviews with nurses and physicians on factors that influenced prescription. The educational material was mailed to the participants. Three interactive visits by a clinical pharmacist Four training sessions for nurses and assistants *Control* No intervention *Drop-out rate* I: 22% C: 27%	*Decrease in inappropriate drug use score* I: 27% C: 8% p=0.02		Moderate

The table continues on the next page

Table 3.1.7 *continued*

Author Year Reference Country	Design and target Setting Population (patient, provider) Follow-up time	Intervention (I) Control (C) Drop-out rate	Result, process outcome (primary)	Result, patient outcome (primary)	Study quality Comments
de Burgh et al 1995 [18] Australia	*Design* Cluster RCT *Target* Improve benzodiazepine prescription *Setting* Primary care clinics in New South Wales, returning at least 1 500 Medicare consultation claim forms to the government *Patients with insomnia or anxiety* n=1 464 at baseline n=1 127 at follow-up *Providers* A representative sample for the area, who had at least 110 GP patients in 3 weeks and who reported being present during the study period (n=633), n=286 completed baseline data survey *Theoretical reference* Not reported *Follow-up time* 5 months	*Intervention* Academic detailing 2 months after data survey. 20 minutes educational visit by one in the research team. Interactive talk on benzodiazepines and other topics. Educational material was offered, including management guidelines n=142 providers *Control* CAU n=144 providers *Drop-out rate* 11/286 dropped out 5/142 in the intervention group declined a visit	*Decrease in benzodiazepine prescription rate ARR* *Anxiety, new prescriptions* OR=0.66 p=0.4 *Insomnia, new prescriptions* OR=0.47 p=0.17		Moderate 50% of the variance was accounted for by decline in rate of diagnosis of insomnia *Fidelity* High

ARR = Absolute risk ratio; C = Control; CAU = Care as usual; GP = General practitioner;
I = Intervention; n= Number; OR = Odds ratio; RCT = Randomised controlled trial

Table 3.1.8 *Audit and feedback and reminders as tools to increase adoption of guidelines and evidence regarding depression in primary care.*

Author Year Reference Country	Design and target Setting Population (patient, provider) Follow-up time	Intervention (I) Control (C) Drop-out rate	Result, process outcome (primary)	Result, patient outcome (primary)	Study quality Comments
Simon et al 2000 [19] USA	*Design* Cluster RCT, randomised at patient level, blinded assessors *Target* Improved depression management *Setting* Five primary care clinics of an HMO in Washington state *Patients* n=872 patients with a new prescription for antidepressants (no use in the previous 120 days) and who had a diagnosis of depression; n=613 were eligible and consented *Providers* Not described *Theoretical reference* Not described *Follow-up time* Interviews at 3 and 6 months	*Intervention* I1: Feedback. Computerized data on prescription and visits + algorithm based treatment recommendations based on the data n=221 I2: Complex intervention, see Table 3.1.12 *Control* CAU n=196 *Drop-out rate* 5% at 6 months follow-up	*Adequate prescription of antidepressants* No difference between I1 and C No differences between groups regarding number of visits in primary care or mental health	There were no differences between I1 and C on any measure	Moderate (no description of providers which may confound results)

The table continues on the next page

Table 3.1.8 *continued*

Author Year Reference Country	Design and target Setting Population (patient, provider) Follow-up time	Intervention (I) Control (C) Drop-out rate	Result, process outcome (primary)	Result, patient outcome (primary)	Study quality Comments
Rollman et al 2002 [24] USA	*Design* RCT *Target* Examine whether feedback and treatment advice for depression presented for primary care physicians via an electronic medical record system improve clinical outcomes and care processes *Setting* University of Pittsburgh School of Medicine's main urban primary care centre *Patients* All patients (n=9 513) were screened for mood disorder. Through a step-wise procedure the final sample for randomisation was established (n=226) *Provider* All eligible primary care physicians were included stratified according to their number of half-day clinic sessions per week (n=17) *Theoretical reference* – *Follow-up time* 6 months	Primary care physicians were randomised to 3 electronic medical record (EMR) conditions *Intervention* I1 (care as usual): Notification of depression diagnosis via EMR n=71 I2 (passive care): As I1 and depression diagnosis on patient encounter form n=77 I3 (active care): As I2 and patient-specific guideline-based treatment advice on patient encounter form n=78 *Drop-out rate* Providers: – *Patients* I1: 13% I2: 9% I3: 13%	A number of care processes variables were assessed at 3 and 6 months. However, none of them pointed out as primary. Of 20 variables 3 were significant favouring active and passive care before usual (mean office visits with usual GP at 3 and 6 months and >2 contacts with usual GP at 6 months)	Intention to treat analyses: Patient's depression status at 6 months did not differ between the 3 EMR conditions (p=0.8)	High

The table continues on the next page

Table 3.1.8 *continued*

Author Year Reference Country	Design and target Setting Population (patient, provider) Follow-up time	Intervention (I) Control (C) Drop-out rate	Result, process outcome (primary)	Result, patient outcome (primary)	Study quality Comments
Magruder-Habib et al 1990 [20] USA	*Design* RCT, triple blind *Setting* One clinic at the VA medical centre in Durham, North Carolina *Patients* n=1 586 veterans whereof 880 eligible and consented patients with depression in the medical record 6 months prior to the index visit were excluded. Screening with SDS and DIS *Follow-up time* Regularly up to 12 months	*Intervention* Feedback of SDS scores at index visit n=48 patients Mean SDS: 60.4 (0.77) *Control* C1: No feedback n=52 patients Mean SDS: 61.6 (0.85) C2: No feedback; random sample of those who were negative in both screens n=60 patients Mean SDS: 37.4 (0.88)	*Percent recognized at index visit* I: 25.0 C1: 7.7 p<0.05 *At 12 months* I: 41.7 C1: 21.2 C2: 6.7	*Treatment initiated at index visit* I: 27.9% C1: 3.8% p<0.05 C2: 5% *At 12 months* I: 56.2% C1: 42.3% C2: 11.7%	Moderate

C = Control; CAU = Care as usual; EMR = Electronic medical record; DIS = Diagnostic interview schedule; HMO = Health maintenance organization; I = Intervention; n = Number; RCT = Randomised controlled trial; SDS = Zung depression rating scale; VA = Veteran affairs

Table 3.1.9 *Audit and feedback and reminders as tools to increase adoption of guidelines and evidence regarding excessive use of alcohol in primary care.*

Author Year Reference Country	**Design and target Setting Population (patient, provider) Follow-up time**	**Intervention (I) Control (C) Drop-out rate**	**Result, process outcome (primary)**	**Result, patient outcome (primary)**	**Study quality Comments**
Saitz et al 2003 [21] USA	*Design* Cluster RCT, randomised at GP level *Target* Increase alcohol counselling for hazardous drinkers *Setting* Urban, academic primary care clinic in Boston *Patients* After screening for hazardous drinking n=565 were eligible n=312 consented *Providers* n=all 82 GPs whereof n=50 were eligible, consented and were randomised *Theoretical reference* Not reported *Follow-up time* 6 months	*Intervention* Reminder. Screening results, a preliminary assessment and specific recommendations. Included a patient pamphlet on drinking n=24 physicians (20 randomly selected to participate, 10 faculty and 10 resident physicians) n=168 patients *Control* CAU n=26 physicians (20 randomly selected to participate, 11 faculty and 10 resident physicians) n=144 patients *Drop-out rate* Providers: Physicians with lack of patients were replaced I: n=3 C: n=3 Patients: I: 20% C: 29%	*Discussing alcohol with patients* *Faculty physicians* I: 74 (95% CI, 59; 85) C: 51 (95% CI, 39; 62) ns *Resident physicians* I: 51 (95% CI, 32; 69) C: 70 (95% CI, 55; 82) ns *Advice* *Faculty physicians* I: 64 (95% CI, 47; 79) C: 42 (95% CI, 33; 53) ns *Resident physicians* I: 38 (95% CI, 21; 60) C: 59 (95% CI, 43; 73) ns *Alcohol counselling* *Faculty physicians* 1: 56 (95% CI, 47; 79) C: 41 (95% CI, 30; 52) ns *Resident physicians* I: 29 (95% CI, 17; 45) C: 46 (95% CI, 29; 64) ns	*Drinks per day (185 patients)* *Faculty physicians* I: 6.0 (95% CI, 4.3; 7.7) C: 6.5 (95% CI, 4.4; 8.6) *Resident physicians* I: 3.8 (95% CI, 1.9; 5.7) C: 11.6 (95% CI, 5.4; 17.7)	Moderate

C = Control; CAU = Care as usual; CI = Confidence interval; GP = General practitioner;
I = Intervention; n = Number; ns = Not significant; RCT = Randomised controlled trial

Table 3.1.10 *Audit and feedback and reminders as tools to increase adoption of guidelines and evidence regarding use of benzodiazepines in primary care.*

Author Year Reference Country	**Design and target Setting Population (patient, provider) Follow-up time**	**Intervention (I) Control (C) Drop-out rate**	**Result, process outcome (primary)**	**Result, patient outcome (primary)**	**Study quality Comments**
Bonevski et al 1999 [22] Australia	*Design* Cluster RCT *Target* Improve identification rate of benzodiazepine use and excessive drinking *Setting* General practices in one part of Australia *Patients* Two cohorts of 80 patients >17 years, presenting for a consultation *Providers* 37 GPs were invited; 21 accepted to participate *Theoretical reference* The program was designed to include features advocated as important for adult behaviour change (Diffusion of Innovation) *Follow-up time* 3 months	*Intervention* Computer feedback system with CME program. Physicians set their own performance goals. After each cohort of patients GPs had feedback on performance. Number not reported *Control* The same components as the intervention group but feedback was delayed 3 months. Number not reported *Drop-out rate* 10%	*Accuracy of benzodiazepine use classification (vs self report) at 3 months* Z=2.7339, p<0.05 *Detection of harmful drinking at 3 months* Z=2.3079, p<0.02		Moderate

The table continues on the next page

Table 3.1.10 *continued*

Author Year Reference Country	Design and target Setting Population (patient, provider) Follow-up time	Intervention (I) Control (C) Drop-out rate	Result, process outcome (primary)	Result, patient outcome (primary)	Study quality Comments
Baker et al 1997 [23] United Kingdom	*Design* Cluster RCT *Target* Management of long term benzodiazepine users *Setting* Primary care *Patients* n=125 846; whereof 2 409 were long term benzodiazepine users (1.9%) *Providers* 20 practices in Leicestershire out of 147 accepted to participate *Theoretical reference* Not reported *Follow-up time* 12 months	*Intervention* Audit and feedback + reminders n=8 practices n=791 patients Mean medication time: 10.4 (6.7) years *Control* Audit and feedback n=10 practices n=1 618 patients Mean medication time: 9.9 (6.7) years *Drop-out rate* 20% (2 practices in the I-group) 20% in the I-group did not use the reminders None in the C-group		*Proportion of patients withdrawing at* I: 9.9% C: 9.4% ns	Moderate

CI = Control; CME = Continuing medical education; GP = General practitioner; I = Intervention; n = Number; ns = Not significant; RCT = Randomised controlled trial

Table 3.1.11 *Complex interventions without organizational change as tool to increase adoption of guidelines and evidence regarding depression in primary care.*

Author Year Reference Country	Design and target Setting Population (patient, provider) Follow-up time	Intervention (I) Control (C) Drop-out rate	Result, process outcome (primary)	Result, patient outcome (primary)	Study quality Comments
Baker et al 2001 [26] United Kingdom	*Design* RCT *Target* Examine whether methods to overcome obstacles to change using psychological theories are more effective than dissemination alone in the implementation of guidelines for depression among general practitioners *Setting* General practitioners in 5 districts in England *Patients* 1st data collection n=402 2nd data collection n=378 *Provider* n=64 *Theoretical reference* Various psychological theories (specified in another paper) were used to guide tailoring of implementation methods to the obstacles facing general practitioners asked to implement guidelines for the management of depression *Follow-up time* One year in between first and second data collection. The intervention was delivered meanwhile. Data regarding specific patients were collected 4 and 16 weeks after initial consultation	*Intervention* Received guidelines and tailored implementation General practitioners n=34 Patients: 1st data collection n=192 2nd data collection n=181 *Control* Only received guidelines General practitioners n=30 Patients: 1st data collection n=210 2nd data collection n=197 *Drop-out rate* Providers: – Patients: 1st data collection At recruitment: I: 18%, C: 19% After 4 weeks: I: 34%, C: 36% After 16 weeks: I: 45%, C: 44% 2nd data collection At recruitment: I: 19%, C: 14% After 4 weeks: I: 27%, C: 29% After 16 weeks: I: 36%, C: 38%	Adherence to eight guideline recommendations was assessed. Of these were only one significant (and in favour of intervention): ≥3 symptoms recorded for diagnosis, OR 5.6 (95% CI, 2.8; 11.3)	*Beck depression inventory (BDI)* BDI <11 at 16 weeks 1st data collection C: 45% I: 27% 2nd data collection C: 42% I: 45% OR 2.5 (95% CI, 1.5; 5.2) (Not significant results at 4 weeks)	Moderate

The table continues on the next page

Table 3.1.11 *continued*

Author **Year** **Reference** **Country**	**Design and target** **Setting** **Population (patient, provider)** **Follow-up time**	**Intervention (I)** **Control (C)** **Drop-out rate**	**Result,** **process outcome** **(primary)**	**Result,** **patient outcome** **(primary)**	**Study quality** **Comments**
Brown et al 2000 [14] USA	*Design* Two studies run simultaneously with the same cohort of physicians; one randomised in matched pairs (AD) and one quasi randomised per geographical area (CQI) *Target* Implementation of the AHCPR guideline on depression *Setting* A not-for-profit group model HMO in Oregon *Patients* Cohort 1: A randomly sampled "depressive cohort" of HMO members likely to have had MDD at study baseline, n=3 320; n=928 patients had HSCL-D >1.1 at entry and retained the same provider throughout follow-up Cohort 2: "Membership population cohort" consisting of all members >18 years of the HMO, n=115 486 were eligible *Providers* n=211 physicians, nurse practitioners or physician *Theoretical reference* Not reported *Follow-up time* 1 year	*Intervention* Were built up locally I1: AD. Pharmacists from the providers' own medical offices delivered three messages formed in focus groups and a fourth meeting was used to reinforce the messages. The pharmacist had 14 hours training in presentation skills n=79 providers C1: CAU n=81 I2: CQI. A team analyzed "roots of failure", defined and pilot tested remedial actions. A sponsor group was appointed for broad scale implementation. The model included: new printed material for patients, expert meetings, availability of support and local recommendations for treatment strategy n=84 providers C2: CAU n=76 *Provider drop-out rate* n=55 that were no longer in active practice at follow-up	*Receipt of depression treatment in cohort 1 (%)* I1: 2 C1: –5.50 p= 0.046 I2: –3.90 C2: 0.60 p=0.223 *Dispensing of antidepressant medication in cohort 2 (%)* I1: 3.10 C1: 2.40 p=0.025 I2: 2.90 C2: 2.70 p=0.439	*Change in HSCL-D in cohort 1* I1: 0.08 C1: 0.13 ns I2: 0.11 C2: 0.10 ns	Moderate Low level of use of the CQI components

AD = Academic detailing; AHCPR = Agency for Health Care Policy and Research; BDI = Beck depression inventory; C = Control; CAU = Care as usual; CI = Confidence interval; HMO = Health Maintenance Organization; HSCL-D = Hopkins symptom checklist depression scale; I = Intervention; MDD = Major depression disorder; OR = Odds ratio; RCT = Randomised controlled trial; SP = Standardized patient

Table 3.1.12 *Complex interventions including nurse assigned as care manager as tool to increase adoption of guidelines and evidence regarding depression in primary care.*

Author Year Reference Country	**Design and target Setting Population (patient, provider) Follow-up time**	**Intervention (I) Control (C) Drop-out rate**	**Result, process outcome (primary)**	**Result, patient outcome (primary)**	**Study quality Comments**
Hunkeler et al 2000 [27] USA	*Design* RCT, stratified for facility, unbalanced (60% intervention) *Target* Improved depression care *Setting* Two clinics within Kaiser Permanente HMO in California *Patients* Patients who were diagnosed with MDD or dysthymia and given a prescription on SSRI. Patients who had received a previous prescription within the past 6 months were excluded n=486 were referred and 302 were enrolled *Providers* 90 GPs and 10 nurse practitioners. All received 2 hours training on detection and management of depression + at least 1 hour booster training *Theoretical reference* Not reported *Follow-up time* 6 weeks and 6 months after study entry	*Intervention* I1: CAU + nurse telehealth care 12 to 14 nurse calls during 16 weeks, limited to 10 minutes each. Content: questions, importance to take medication, emotional support, review of activities and plan for next steps. Telehealth nurses received a manualized 6 hours training workshop and weekly supervision n=117 I2: I1 + peer support Volunteer peers had experienced a successfully treated episode of MDD or dysthymia. Peers were trained for approximately 20 hours Peers were expected to share their skills, provide emotional support and encourage connection with care. At least on contact during 6 months n=62 *Control* C: CAU n=123 *Drop-out rate* 15% of patients at 6 months		*50% improvement in HDRS at 6 months* I1 + I2: 57% C: 38% p=0.003 No differences between I1 and I2	Moderate

The table continues on the next page

Table 3.1.12 *continued*

Author Year Reference Country	Design and target Setting Population (patient, provider) Follow-up time	Intervention (I) Control (C) Drop-out rate	Result, process outcome (primary)	Result, patient outcome (primary)	Study quality Comments
Rost et al 2001 [25] USA	*Design* Cluster RCT *Target* Management of depression *Setting* Community primary care practices, urban and rural *Patients* n=479 screened with depression *Providers* n=12 Primary care practices *Theoretical reference* Quality enhancement by strategic teaming *Follow-up time* 6 months	*Intervention* 4 x 90 minutes conferences for two physicians and one nurse/ practice + 8 hours training for one nurse/practice Screening of patients and notifying physician. First revisit after 1 week to nurse and physician. Visits and contacts by the nurse weekly during 8 weeks n=239 patients n=41 primary care physicians *Control* CAU n=240 patients n=30 primary care physicians *Drop-out rate* I: 12% C: 7%	*Guideline-concordant pharmacotherapy and/or psychotherapy* *New treatment episode* I: 42.3% C: 12.0% p=0.0001 *Recently treated group* I: 82.1% C: 74.8% p=0.31	*Depression severity* Effect size: 0.43 p=0.04	High

The table continues on the next page

Table 3.1.12 *continued*

Author Year Reference Country	Design and target Setting Population (patient, provider) Follow-up time	Intervention (I) Control (C) Drop-out rate	Result, process outcome (primary)	Result, patient outcome (primary)	Study quality Comments
Wells et al 2000 [28] USA Unutzer et al 2001 [29] USA	*Design* RCT *Target* Improved depression care and health related outcomes *Setting* 6 managed care organisations spread over the nation, 46 primary care clinics *Patients* 27 332 patients screened 3 918 potentially eligible 1 356 eligible enrolled *Providers* n=181 primary care clinicians (internists, family practice physicians 87% and nurse practitioners 13%) *Theoretical reference* Collaborative care model *Follow-up time* 6, 12, 18 and 24 months	*Intervention* Common intervention in both arms. I: Two days training of a primary care physician, a nursing supervisor, a mental health specialist, who distributed material, gave monthly lectures, academic detailing, feedback on clinical or individual clinician level. One day workshop of nurses for clinical assessment, patient education and activation. List of study patients. Nurses contacted intervention patient 2 weeks after screening, physicians asked to provide a treatment plan I1: I + antidepressant medication and monthly follow-up by nurse for 6 or 12 months n=424 patients I2: I + therapy and assistance of nurse with referral n=489 *Control* CAU n=443 patients *Drop-out rate (overall)* *12 months* I: 18% C: 16%	*Overall appropriate care (medication use or specialty counselling)* *6 months* I: 50.9% C: 39.7% p<0.001 *12 months* I: 59.2% C: 50.1% p=0.006 *Antidepressant use* *6 months* I 1: 52.4% I 2: 40.3% C: 32.9% I1 vs C: p<0.001 I2 vs C: p=0.02 *12 months* I1: 43.5% I2: 35.8% C: 33.7% I1 vs C: p=0.003 I2 vs C: p=0.49 *24 months* I1: 40.4% I2: 33.6% C: 35.7% I1 vs C: p=0.14 I2 vs C: p=0.5	*Proportion depressed (CES-D) (Wells)* *6 months* I: 55.4% C: 64.4% p=0.005 *12 months* I: 54.5% C: 61.4% p=0.04	Moderate

The table continues on the next page

Table 3.1.12 *continued*

Author Year Reference Country	Design and target Setting Population (patient, provider) Follow-up time	Intervention (I) Control (C) Drop-out rate	Result, process outcome (primary)	Result, patient outcome (primary)	Study quality Comments
Katzelnick et al 2000 [30] USA	*Design* Cluster RCT *Target* Identify and treat depression among high utilizers of medical care *Setting* 3 HMO (for profit and not-for-profit), urban, suburban and rural *Patients* Patients 25–63 years with ambulatory visits >85th percentile 2 previous years and Ham-D score >15 n=410 eligible n=407 consented *Providers* n=163 physicians practices *Theoretical reference* None stated *Follow-up time* 1 year	*Intervention* 2 hours physician education + patient education (booklet + videotape) + prescheduled physician visits + monitoring and feedback to physician by coordinator + telephone monitoring of patients by coordinator + access to psychiatric consultation n=82 physicians n=218 patients *Control* CAU n=81 physicians n=189 patients *Drop-out rate (overall)* 7%		*Response rate to treatment of depression after 12 months (ITT)* I: 53.2% C: 32.8% p<0.001 *Remission rate of depression after 12 months (ITT)* I: 45.3% C: 27.7% p<0.001	Moderate

The table continues on the next page

Table 3.1.12 *continued*

Author Year Reference Country	Design and target Setting Population (patient, provider) Follow-up time	Intervention (I) Control (C) Drop-out rate	Result, process outcome (primary)	Result, patient outcome (primary)	Study quality Comments
Simon et al 2000 [19] USA	*Design* Cluster RCT, randomised at patient level, blinded assessors *Target* Improved depression management *Setting* 5 primary care clinics of an HMO in Washington state *Patients* n=872 patients with a new prescription for antidepressants (no use in the previous 120 days) and who had a diagnosis of depression n=613 were eligible and consented *Providers* Not described *Theoretical reference* Not described *Follow-up time* Interviews at 3 and 6 months	*Intervention* I1: Reminder n=221 I2: I1 + care management. Supplemented with three phone assessments (0, 8 and 16 weeks) by a care manager. The care manager supported doctors in implementation of recommendations n=196 *Control* C: CAU n=196 *Drop-out rate* 5% at 6 months follow-up	*Adequate prescription of antidepressants* OR 1.99 (95% CI, 1.23; 3.22) for I2 and C No difference between I1 and C No differences between groups regarding number of visits in primary care or mental health	*HSCL-20 depression score at 6 months follow-up* I2: 0.83 C: 0.98 (95% CI for the difference, 0.02; 0.27) *Response rate (50% decrease in HSCL-20* OR 2.22 (95% CI, 1.31; 3.75) for I2 and C There were no differences between I1 and C on any measure	Moderate (no description of providers which may confound results)

C = Control; CAU = Care as usual; CES-D = Center for Epidemiologic Studies Depression Scale; GP = General practitioner; HDRS = Hamilton depression rating scale; HMO = Health Maintenance Organization; HSCL = Hopkins symptom checklist; I = Intervention; ITT = Intention to treat; MDD = Major depression disorder; N = Number; OR = Odds ratio; RCT = Randomised controlled trial; SSRI = Selective serotonin receptor indicator

Table 3.1.13 *Complex interventions as tools to increase adoption of guidelines and evidence regarding excessive alcohol consumption in primary care.*

Author Year Reference Country	**Design and target Setting Population (patient, provider) Follow-up time**	**Intervention (I) Control (C) Drop-out rate**	**Result, process outcome (primary)**	**Result, patient outcome (primary)**	**Study quality Comments**
Kaner et al 2003 [12] United Kingdom	*Design* RCT, cluster at practice level *Target* Screening and brief alcohol intervention (SBI) program, Drink Less *Setting* General practices from 7 health districts in Northern England n=312 Clinics were eligible if they contained at least one nurse who would not be away for the practice for more than 2 weeks during the study n=212 practices agreed to participate *Patients* Risk drinkers identified by AUDIT, Cut off = +8 for men and +7 for women *Providers* Nurses *Theoretical reference* Not reported *Follow-up time* 3 months	*Intervention* I1: Training in the program during an outreach visit (mean duration 34 minutes, SD13) n=68 practices I2: I1 (mean duration 33 minutes, SD10) + biweekly telephone support calls n=68 practices *Control* Written guidelines on how to use the program were delivered to the nurses in person to avoid that they were lost n=76 practices *Drop-out rate* I1: 26% I2: 29% C: 61%	*Proportion implementing SBI* I1: 74% I2: 71% C: 39% p<0.001 between I1+I2 and C	*Appropriate management of patients* C: Displayed more appropriate management because they were less likely to erroneously intervene with non-risk drinkers p<0.001	Moderate

AUDIT = Alcohol use disorders identification test; C = Control; I = Intervention;
n = Number; RCT = Randomised controlled trial; SBI = Screening and brief intervention;
SD = Standard deviation

Table 3.1.14 *Interventions to patients as tool to increase adoption of psychiatric guidelines and evidence in primary care.*

Author Year Reference Country	**Design and target Setting Population (patient, provider) Follow-up time**	**Intervention (I) Control (C) Drop-out rate**	**Result, process outcome (primary)**	**Result, patient outcome (primary)**	**Study quality Comments**
Boekeloo et al 2003 [31] USA Boekeloo et al 2004 [32] USA	*Design* Cluster RCT *Target* Reduce adolescent alcohol use *Setting* Five of seven managed care organisation primary care group practices in Washington and Maryland accepted to participate *Patients* n=1 333 adolescents Age: 12–17 years Participation rate: 50.1% *Providers* n=27 of 30 providers accepted to participate Mean number of patients/ provider: 17.1 (±15.9) *Theoretical reference* Not reported *Follow-up time* 6 and 12 months	*Intervention* I1: Provider prompts + adolescent priming + self-assessment + CAU. Adolescent priming was repeated as a booster at 6 month follow-up n=147 patients Drop-out rate: 6% I2: Adolescent priming + self-assessment + CAU. Adolescent priming was repeated as a booster at 6 month follow-up n=150 Drop-out rate: 10% *Control* Radio program of own choice + CAU n=150 Drop-out rate: 9%	There were more provider discussion about alcohol in I1 vs C. There were no differences in I2 vs C *Physician used brochure to discuss alcohol (adolescent report)* I1: 41.5% I2: 7.5% C: 4.0%	*Refusal to drink (self report) at 6 months* I1 vs I2: OR 2.08 (95% CI, 1.29; 3.35) *Binge drinking (self report at 6 months)* I2 vs C: OR 3.44 (95% CI, 1.07; 11.01) I1 vs C: OR 4.71 (95% CI, 1.55; 14.30) (results maintained at 1 year follow-up) *Alcohol consumption the previous 30 days (self report at 1 year follow-up)* I2 vs C: OR 2.31 (95% CI, 1.31; 4.07)	High

The table continues on the next page

Table 3.1.14 *continued*

Author **Year** **Reference** **Country**	**Design and target** **Setting** **Population (patient, provider)** **Follow-up time**	**Intervention (I)** **Control (C)** **Drop-out rate**	**Result,** **process outcome** **(primary)**	**Result,** **patient outcome** **(primary)**	**Study quality** **Comments**
Little et al 2004 [33] United Kingdom	*Design* Cluster RCT *Target* – *Setting* 5 general practices in United Kingdom *Patients* n=636 consecutive patients *Theoretical reference* Not stated *Follow-up time* Results measured immediately after the consultation	*Intervention* I1: General leaflet asking patients to list issues they wanted to raise with their physician I2: Leaflet on depression, listing symptoms and asking if patients had any of these and encouraging them to discuss it with their physician I3: I1 + I2 *Control* No leaflet *Drop-out rate* Patients: 23% Physicians: 4%	*Number of clinical investigations, general leaflet* OR 1.43 (95% CI, 1.00; 2.05) No effect on rate of diagnosis, prescribing or referral	*Patient satisfaction, general leaflet* Cohen's d=0.17 No effect from the depression leaflet	Moderate

C = Control; CAU = Care as usual; CI = Confidence interval; I = Intervention;
n = Number; OR = Odds ratio; RCT = Randomised controlled trial

Table 3.2.1 *Health economic findings.*

Author Year Reference Country	Study design	Population characteristics	Intervention (I) Control (C)	Follow-up period Drop-out rate	Results	Study quality and relevance Comments
Neumeyer-Gromen et al 2004 [1] Germany	Review, based on RCTs Cost-effectiveness analysis	Patients with depression as main diagnosis n=1 763 (from 2 studies (4 CEA excluded due to other intervention)	I: Care manager C: Usual primary care	Between 6 and 12 months Drop-out rate: Not stated in the review	The cost per QALY gained for a care manager vs care as usual ranged between 15 331 USD and 49 500 USD, depending on various assumptions	High
Kaner et al 1999 [11] United Kingdom	RCT Cost-effectiveness analysis	General practitioners who had taken up and agreed to use the 'drink less' SBI programme earlier n=128	I1: Trained GPs (programme + practice-based training) I2: Trained and supported GOs (programme + practice-based training + a support telephone call) C: Written guidelines	3 months Drop-out rate: Not presented	I2 Were more likely to implement the programme (71%) than C (44%) or I1 (56%) <u>*Costs per patient screened*</u> I1: 1.08 GBP I2: 1.05 GBP C: 1.47 GBP <u>*Costs per patient intervened with*</u> I1: 6.02 GBP I2: 5.43 GBP C: 8.19 GBP	Moderate
Kaner et al 2003 [10] United Kingdom	RCT Cost-effectiveness analysis	Nurses who had earlier been included in SBI n=212	I1: Training I2: Training + telephone-based support C: Written guidelines	3 months Drop-out rate: Not presented	<u>*Cost of implementing SBI*</u> I1: 157 GBP I2: 163 GBP C: 93 GBP <u>*Implementation rates*</u> I1: 74% I2: 71% C: 39% <u>*Cost per appropriate intervention*</u> I1: 32 GBP I2: 31 GBP C: 32 GBP	Moderate

The table continues on the next page

Table 3.2.1 *continued*

Author Year Reference Country	Study design	Population characteristics	Intervention (I) Control (C)	Follow-up period Drop-out rate	Results	Study quality and relevance Comments
Simon et al 2000 [6] USA	RCT Cost calculations	Patients starting antidepressant n=613 Female/male: 72%/28% Mean age: 46 year	I1: Feedback only I2: Feedback + care management C: Continued care as usual	6 months Drop-out rate: 5%	<u>*Costs*</u> I1 vs C: No significant difference I2 vs C: 83 USD higher costs per patient	Moderate
Pyne et al 2003 [7] USA	RCT (randomised at clinical level) Cost-effectiveness analysis	Patients beginning a new treatment episode for major depression n=211 Female/male: 84%/16% Mean age: 43 year, significantly lower in the intervention group	I: Training the primary care team to assess, educate, and monitor depressed patients C: Care as usual	12 months Drop-out rate: 20.8%	<u>*Costs*</u> I vs C: 634 USD higher <u>*Effects*</u> I vs C: 0.041 QALY <u>*ICER (cost per QALY gained)*</u> I vs C: 15 463 USD	Moderate

The table continues on the next page

Table 3.2.1 continued

Author Year Reference Country	Study design	Population characteristics	Intervention (I) Control (C)	Follow-up period Drop-out rate	Results	Study quality and relevance Comments
Pyne et al 2005 [9] USA	RCT (randomised at clinical level) Cost-effectiveness analysis	Patients beginning a new treatment episode for major depression n=211 Receptivity to anti-depressant medication: 52.6% Female/male: 84%/16% Mean age: 43 year, significantly lower in the intervention group	I: Training the primary care team to assess, educate, and monitor depressed patients C: Care as usual	12 months Drop-out rate: 20.8%	*Costs* I vs C: Costs for patients receptive to antidepressant medication was $516 higher *Effects* I vs C: QALYs for patients receptive to antidepressant medication was 0.088 ICER (cost per QALY gained) I vs C: 5 864 USD	Moderate

C = Control; CEA = Cost-effectiveness analysis; GP = General practitioner;
I = Intervention; ICER = Incremental cost-effectiveness ratio; n= Number;
QALY = Quality adjusted life years; RCT = Randomised controlled trial;
SBI = Screening and brief intervention