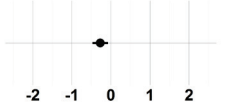
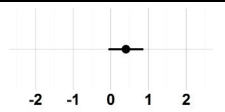
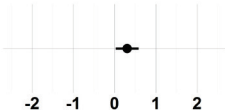
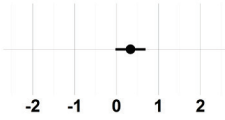
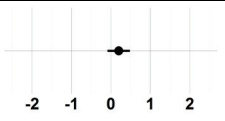

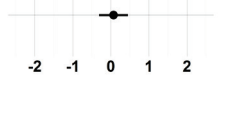
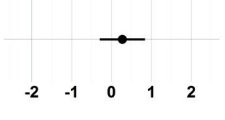

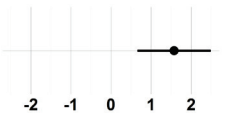
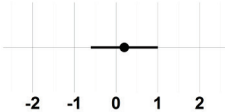
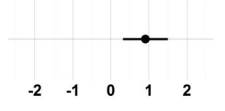

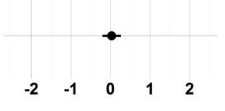


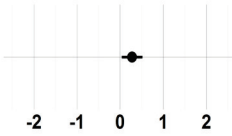
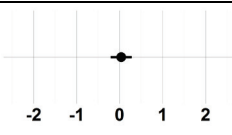
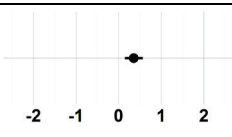
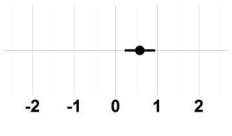
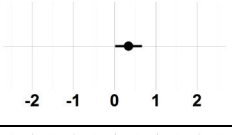
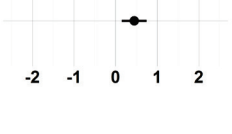
**Table DS1.** Characteristics of included studies.

Study	Study design	Sample size	Diagnosis	Guideline	Implementation strategy	Control group	Outcome	Effect of guideline implementation (SMD)	Study quality
Baandrup, 2010 [16]	Cluster RCT	Exp: 216 Cont: 386	Schizophrenia, Psychosis	Clinical Guidelines with emphasis on reducing/avoiding antipsychotic polypharmacy	<b>Professional intervention</b> distribution of educational material, educational outreach visits, reminders, educational meetings	Usual care	<i>Provider performance</i> Guideline adherence: rate of polypharmacy		16 (fair)
Baker, 2008 [17]	Before and after study	Post: 35 Pre: 35	Diagnosis of included patients is not reported	Clinical Practice Manual based on the work of the Medical Research Council that established PRN prescribing and administration habits of psychotropic medication, with the aim of improving clinical practice	<b>Professional intervention</b> distribution of educational material, audit and feedback (e.g. summaries of previously collected data), local consensus process	Usual care	<i>Provider performance</i> Guideline adherence: quality of prescription sheets		12 (poor)
Bauer Mark, 2009 [19]	RCT	Exp: 166 Cont: 164	Bipolar disorder	Evidence-based Veterans Affairs clinical practice guidelines	<b>Professional intervention</b> distribution of educational material, educational meetings <b>Organisational intervention</b> <u>provider orientated:</u> nurse as coordinator <u>patient orientated:</u> patient education	Usual care	<i>Provider performance</i> Guideline adherence: measured by serum level and dosage data		17 (fair)

Bauer Michael, 2009 [18]	RCT	Exp: 74 Cont: 74	Depression, Bipolar disorder	Treatment algorithm to standardize pharmacological treatment	Algorithm	Usual care	<i>Patient outcome</i> Remission rates: BRMS		22 (good)
Chong, 2006 [20]	Before and after study (incl. historical controls)	Post: 483 Pre: 68	First Episode Psychosis, Schizophrenia	Evidence-based treatment algorithm with emphasis on reduction of antipsychotic polypharmacy	Algorithm	Usual care	<i>Provider performance</i> Guideline adherence: rate of polypharmacy		11 (poor)
Chuang, 2003 [21]	Before and after study	Post: 30 Pre: 30	Schizophrenia	Treatment algorithm to standardize pharmacological treatment	<b>Professional intervention</b> distribution of educational material, educational meetings, reminders (special progress notes)	Usual care	<i>Provider performance</i> Guideline adherence: Number of written progress notes		13 (poor)
Hamann, 2006 [22]	Cluster RCT	Exp: 54 Cont: 59	Schizophrenia	Shared decision making intervention	<b>Professional intervention</b> distribution of educational material, educational meeting	Usual care	<i>Patient outcome</i> Psychopathology: PANSS		14 (poor)
Ince, 2015 [23]	Cluster RCT	Exp: 33 Cont: 35	Schizophrenia	Sections concerning the psychological interventions of NICE-guidelines on schizophrenia	<b>Professional intervention</b> Rewritten text of guidance in a plain and behaviourally specific language, distribution of educational material	Basic implementation strategy: Original text version of the guidance	<i>Provider performance</i> Guideline adherence: Number of participants that provided psychological interventions		15 (fair)
Miller, 2004 [25]	CCT	Exp: 165 Cont: 144	Schizophrenia	Texas Medication Algorithm Project to optimise pharmacotherapy and improve clinical outcomes	<b>Professional intervention</b> distribution of educational material, educational outreach visits, educational meetings, reminders <b>Organisational intervention</b>	Usual care	<i>Patient outcome</i> Psychopathology: BPRS		15 (fair)

					<u>patient orientated:</u> patient/family education program				
Mistler, 2009 [24]	Before and after study (incl historical controls)	Post: 12 Pre: 12	Schizophrenia, Psychosis, Depression, Bipolar disorder	Evidence-based treatment algorithm to optimize single drug regimens and to eliminate redundant medications, based on principles of collaborative care	Algorithm	Usual care	<i>Provider performance</i> Guideline adherence: rate of polypharmacy (Number of medication at discharge)		14 (poor)
							<i>Patient outcome</i> Psychopathology: BPRS		
Osborn, 2010 [26]	Cluster RCT	Exp: 59 Cont: 62	Psychosis , Schizophrenia, Bipolar disorder	Authors refer to the NICE recommendations of routine screening for cardiovascular risk factors for people with severe mental illness	<b>Professional intervention</b> reminders, educational material <b>Organisational intervention</b> <u>provider orientated:</u> nurse as coordinator	Basic implementation strategy: educational pack	<i>Provider performance</i> Guideline adherence: proportion of patients who had received screening		18 (fair)
							<i>Patient outcome</i> Satisfaction with cardiovascular screening: CSQ-8		
Owen, 2008 [27]	Cluster RCT	Exp: 173 Cont: 176	Schizophrenia	Authors refer to schizophrenia guidelines (not specified)	<b>Professional intervention</b> educational material, educational meetings <b>Organisational intervention</b> <u>patient orientated:</u> adherence barrier assessment and development of patient- tailored strategies to overcome these barriers	Basic implementation strategy: dissemination of educational material, basic education about medication schizophrenia guidelines	<i>Provider performance</i> Guideline adherence: proportion of patients prescribed antipsychotic doses		16 (fair)

Sorensen, 2008 [28]	Before and after study	Post: 62 Pre: 75	Schizophrenia	Evidence-based treatment algorithms to standardize pharmacological treatment	<b>Professional intervention</b> reminders, educational meetings	Usual care	<i>Provider performance</i> Guideline adherence: rate of polypharmacy (Number of prescribed drugs on discharge)	<i>Schizophrenia:</i>	18 (fair)
		Post: 34 Pre: 29	Depression					<i>Depression:</i>	
		Post: 62 Pre: 75	Schizophrenia					<i>Schizophrenia:</i>	
		Post: 34 Pre: 29	Depression					<i>Depression:</i>	
Steinacher, 2012 [29]	Before and after study	<i>Passive</i> Pre: 26 Post: 17	Schizophrenia	<i>Passive:</i> <b>Professional intervention</b> distribution of educational material, educational meetings, specially trained staff member as chief reference for pathway implementation	Usual care	<i>Provider performance</i> Guideline adherence: rate of polypharmacy	<i>Passive:</i>	15 (fair)	
		<i>Active</i> Pre: 34 Post: 20					<i>Active:</i>		
							<i>Passive:</i>		
							<i>Active:</i>		

Suppes, 2003 [30]	CCT	Exp: 141 Cont: 126	Bipolar disorder	Texas Medication Algorithm Project to optimise pharmacotherapy and improve clinical outcomes	<b>Professional intervention</b> distribution of educational material, educational meetings, educational outreach visits, reminders <b>Organisational intervention</b> <u>patient orientated:</u> patient/family education program	Usual care	<i>Patient outcome</i> Psychopathology: BPRS-24		15 (fair)
Thompson, 2007 [31]	Cluster RCT	Exp: 260 Cont: 220	"All diagnosis" (no information available)	Guideline on antipsychotic polypharmacy based on evidence-based sources, including NICE	<b>Professional intervention</b> distribution of educational material, educational outreach visits, reminders	Basic implementation strategy: guideline dissemination	<i>Provider performance</i> Guideline adherence: rate of polypharmacy		19 (fair)
Trivedi, 2004 [32]	CCT	Exp: 175 Cont: 175	Depression	Texas Medication Algorithm Project to optimise pharmacotherapy and improve clinical outcomes	<b>Professional intervention</b> distribution of educational material, educational meetings, educational outreach visits, reminders <b>Organisational intervention</b> <u>patient orientated:</u> patient/family education program	Usual care	<i>Patient outcome</i> Psychopathology: IDS-C <sub>30</sub>		15 (fair)
Weinmann, 2008 [33]	Before and after study	Post: 74 Pre: 77	Schizophrenia, Psychosis	Pharmacological part of the German evidence-based schizophrenia guideline	<b>Professional intervention</b> distribution of educational material, educational meetings (quality circle), audit and feedback	Usual care	<i>Provider performance</i> Guideline adherence: rate of polypharmacy  <i>Patient outcome</i> Psychopathology: PANSS	 	21 (good)
Yoshino, 2009 [34]	CCT	Exp: 83 Cont: 157	Depression	Treatment algorithm to standardize pharmacological treatment	Algorithm	Usual care	<i>Patient outcome</i> Remission rates: CGI (Clinical Global Improvement)		12 (poor)

BPRS, Brief Psychiatric Rating Scale; BRMS, Bech-Rafaelsen Melancholia Scale; CCT, controlled clinical trial; Exp, experimental group; Cont, control group; NICE, National Institute for Health Care Excellence; PANSS, Positive and Negative Syndrome Scale; CSQ-8, Client Satisfaction Questionnaire; Post, after guideline implementation; Pre, before guideline implementation; PRN, pro re nata; RCT, randomised controlled trial; SMD, Standardised Mean Difference (0 = no effect, <0 = negative effect, >0 = positive effect).