Supplementary Online Content

Elias S, Chen Y, Liu X, et al. Shared decision making in cardiovascular risk factor management: a systematic review and meta-analysis. *JAMA Netw Open*. 2024;7(3):e243779. doi:10.1001/jamanetworkopen.2024.3779

This supplementary material has been provided by the authors to give readers additional information about their work.

eMethods 1. Search Summary

Topic	Shared Decision Making in Cardiovascular Risk Management	Shared Decision Making in Cardiovascular Risk Management - update	
Reference Manager	Covidence	Covidence	
Databases	MEDLINE via PubMed, CINAHL, Embase, Cochrane, Web of Science, Scopus, ClinicalTrials.gov	MEDLINE via PubMed, CINAHL, Embase, Cochrane, Web of Science, Scopus, ClinicalTrials.gov	
Date Run	June 9, June 14	June 23, 2022	
Total Number of Results	8092	1273	9365
Number of Duplicates Removed by Stella EndNote	2398	425	2823
Number of Duplicates Removed by Sherry Zotero	146	-	146
Number of Duplicates Removed by Covidence	2	-	2
Remaining Number of Results	5696	848	6544
Search Prepared By	Stella M. Seal	Stella M. Seal, MLS	

	June 9, June 14	June 23, 2022	Total
Registers (n= 104)			
Clinicaltrials.gov (n=104)	104	23	127
Databases (n=7,988)			
MEDLINE via PubMed (n=2,121)	2,121	277	2398
EMBASE (n=1,759)	1,759	269	2028
CINAHL (n=662)	662	96	758
Cochrane (n= 94)	867	96	963
Web of Science (n=1,301)	1,301	204	1505
Scopus (n=1,278)	1,278	308	1586
Total	8,092	1273	9365

PubMed

Search number	Query	Results
10	#3 AND #8 AND #9	2,121
9	(clinical trial[pt] OR randomized controlled trial[pt] OR controlled clinical trial[pt] OR evaluation studies[pt] OR comparative study[pt] OR "intervention studies"[tw] OR Evaluation Studies as Topic[mh] OR program evaluation[mh] OR random allocation[mh] OR random*[tiab] OR double blind*[tiab] OR controlled trial*[tiab] OR clinical trial*[tiab] OR pretest*[tiab] OR pre test*[tiab] OR posttest*[tiab] OR post test*[tiab] OR prepost*[tiab] OR pre post*[tiab] OR controlled before*[tiab] OR "before and after"[tiab] OR interrupted time*[tiab] OR time serie*[tiab] OR intervention*[tiab])	5,387,985
8	#4 OR (#5 AND #6) OR (#5 AND #7) OR (#6 AND #7)	84,694
7	professional-patient relations[mh] OR ((nurses[mh] OR physicians[mh] OR nurse*[tw] OR physician*[tw] OR clinician*[tw] OR doctor*[tw] OR general practitioner*[tw] OR gps[tw] OR health care professional*[tw] OR healthcare professional*[tw] OR health care provider*[tw] OR healthcare provider*[tw] OR resident*[tw]) AND (patients[mh] OR patient*[tw] OR consumer*[tw] OR people*[tw]))	852,580
6	patient participation[mh] OR patient participation*[tw] OR consumer participation*[tw] OR patient involvement*[tw] OR consumer involvement*[tw] OR ((patient*[ti] OR consumer*[ti]) AND (involvement*[ti] OR involving*[ti] OR participation*[ti] OR participating*[ti]))	39,461
5	decision making[mh:noexp] OR decision support techniques[mh:noexp] OR decision support systems, clinical[mh] OR choice behavior[mh:noexp] OR decision making*[tw] OR decision support*[tw] OR choice behavio*[tw] OR ((decision*[ti] OR choice*[ti]) and (making*[ti] OR support*[ti] OR behavio*[ti]))	292,055
4	"Decision Making, Shared" [mesh] OR shared decision*[tw] OR sharing decision*[tw] OR informed decision*[tw] OR informed choice*[tw] OR decision aid*[tw] OR ((share*[ti] OR sharing*[ti] OR informed*[ti]) and (decision*[ti] OR deciding*[ti] OR choice*[ti]))	24,471
3	#1 OR #2	1,674,808
2	"Heart Disease Risk Factors"[Mesh] OR ("heart diseases" [mesh] AND "risk factors" [mesh]) OR "Cardiovascular Risk Factors" [tw] OR "Cardiovascular Risk Factor" [tw] OR "Risk Factors for Heart Disease" [tw] OR "Risk Factors for Cardiovascular Disease" [tw] OR "Cardiovascular Risk Score" [tw] OR "Cardiovascular Risk Scores" [tw] OR "Cardiovascular Risk" [tw] OR "Cardiovascular Risks" [tw] OR "Residual Cardiovascular Risk" [tw] OR "Residual Cardiovascular Risks" [tw]	182,379
1	"Overweight"[Mesh] OR "Obesity"[Mesh] OR "Tobacco Use"[Mesh] OR "Smoking"[Mesh] OR "Hypertension"[Mesh] OR "Diabetes Mellitus"[Mesh] OR "Dyslipidemias"[Mesh] OR "Hypercholesterolemia"[Mesh] OR "Tobacco Uses" [tw] OR "Tobacco Chewing" [tw] OR "Tobacco Consumption" [tw] OR "Smoking Behaviors" [tw] OR "Smoking Behavior" [tw] OR "Smoking Habit" [tw] OR "Smoking Habits" [tw] OR "Smoking Behaviors" [tw] OR "Smoking Behavior" [tw] OR "Smoking Habit" [tw] OR "Smoking Habits" [tw] OR "THC Vaping" [tw] OR "E-Cig Use" [tw] OR "E Cig Use" [tw] OR "ECig Use" [tw] OR "Vape" [tw] OR "Vapes" [tw] OR "E-Cigarette Use" [tw] OR "E Cigarette Use" [tw] OR "E-Cigarette Uses" [tw] OR "Nicotine Vaping" [tw] OR "Ecigarette Use" [tw] OR "Electronic Cigarette Use" [tw] OR "Electronic Cigarette Uses" [tw] OR "Overweight" [tw] OR "Obese" [tw] OR "obesity" [tw] OR "High Blood Pressure" [tw] OR "High Blood Pressures" [tw] OR "Elevated blood pressure" [tw] OR " Hypertens*" [tw] OR "Dyslipidemia" [tw] OR "Dyslipoproteinemias" [tw] OR "Dyslipoproteinemia" [tw] OR "Hyperlipemia" [tw] OR "Hyperlipemias" [tw] OR "Hyperlipidemia" [tw] OR "Lipidemia" [tw] OR "Lipidemias" [tw] OR "Lipemia" [tw] OR "Lipemias" [tw] OR "Hypercholesterolemias" [tw] OR "High Cholesterol Levels" [tw] OR "High Cholesterol Level" [tw] OR "Elevated Cholesterol" [tw] OR "Elevated Cholesterols" [tw] OR "Hypercholesteremia" [tw] OR "Hypercholesteremias" [tw] OR smoking [tw]	1,564,829

Embase

No.	Query	Results
#8	#1 AND #6 AND #7	1759
#7	#2 OR (#3 AND #4) OR (#3 AND #5) OR (#4 AND #5)	70726
#6	'clinical trial'/exp OR 'randomized controlled trial'/exp OR 'controlled clinical trial'/exp OR 'evaluation study'/exp OR 'comparative study'/exp OR 'intervention study'/exp OR 'program evaluation'/exp OR 'randomization'/exp OR ((((((((((random*:ti,ab,kw OR double:ti,ab,kw) AND blind*:ti,ab,kw OR controlled:ti,ab,kw) AND trial*:ti,ab,kw OR clinical:ti,ab,kw) AND trial*:ti,ab,kw OR pretest*:ti,ab,kw OR pre:ti,ab,kw) AND test*:ti,ab,kw OR posttest*:ti,ab,kw OR post:ti,ab,kw) AND test*:ti,ab,kw OR prepost*:ti,ab,kw OR pre:ti,ab,kw) AND post*:ti,ab,kw OR controlled:ti,ab,kw) AND before*:ti,ab,kw OR 'before and after':ti,ab,kw OR interrupted:ti,ab,kw) AND time*:ti,ab,kw OR time:ti,ab,kw) AND serie*:ti,ab,kw) OR intervention*:ti,ab,kw	4601654
#5	'doctor patient relation'/exp OR 'nurse patient relationship'/exp OR (('nurse'/exp OR 'physician'/exp OR nurse*:ti OR physician*:ti OR clinician*:ti OR doctor*:ti OR 'general practitioners':ti OR gps:ti OR 'health care professionals':ti OR 'healthcare professionals':ti OR 'health care providers':ti OR 'healthcare providers':ti OR resident*:ti) AND ('patient'/exp OR patient*:ti OR consumer*:ti OR people*:ti))	535189
#4	'patient participation'/exp OR 'patient participation':ti,ab,kw OR 'consumer participation':ti,ab,kw OR 'patient involvement':ti,ab,kw OR 'consumer involvement':ti,ab,kw OR ((patient*:ti OR consumer*:ti) AND (involvement*:ti OR involving*:ti OR participation*:ti OR participating*:ti))	46386
#3	'clinical decision making'/exp OR 'decision making'/exp OR 'decision support system'/exp OR 'ethical decision making'/exp OR 'family decision making'/exp OR 'medical decision making'/exp OR 'patient decision making'/exp OR 'decision making':ti,ab,kw OR 'decision support':ti,ab,kw OR 'choice behavior':ti,ab,kw OR ((decision*:ti OR choice*:ti) AND (making*:ti OR support*:ti OR behavio*:ti))	503272
#2	'shared decision making'/exp OR 'shared decision':ti,ab,kw OR 'sharing decision':ti,ab,kw OR 'informed decision':ti,ab,kw OR 'informed choice':ti,ab,kw OR 'decision aid':ti,ab,kw OR ((share*:ti OR sharing*:ti OR informed*:ti) AND (decision*:ti OR deciding*:ti OR choice*:ti))	27539
#1	'cardiovascular risk'/exp OR 'cardiovascular risk factor'/exp OR 'heart disease risk factor'/exp OR 'hypertension'/exp OR 'diabetes mellitus'/exp OR 'dyslipidemia'/exp OR 'hypercholesterolemia'/exp OR ('heart disease'/exp AND 'risk factor'/exp) OR 'obesity'/exp OR 'tobacco use'/exp OR 'smoking'/exp OR 'cardiovascular risk factors':ti,ab,kw OR 'cardiovascular risk factor':ti,ab,kw OR 'risk factors for heart disease':ti,ab,kw OR 'risk factors for cardiovascular disease':ti,ab,kw OR 'cardiovascular risk score':ti,ab,kw OR 'cardiovascular risk scores':ti,ab,kw OR 'cardiovascular risk':ti,ab,kw OR 'cardiovascular risks':ti,ab,kw OR 'residual cardiovascular risk':ti,ab,kw OR 'residual cardiovascular risks':ti,ab,kw OR 'high blood pressure':ti,ab,kw OR 'high blood pressures':ti,ab,kw OR 'elevated blood pressure':ti,ab,kw OR 'hypertens*':ti,ab,kw OR 'dyslipidemia':ti,ab,kw OR 'dyslipoproteinemias':ti,ab,kw OR 'dyslipoproteinemia':ti,ab,kw OR 'hyperlipemia':ti,ab,kw OR 'hyperlipemias':ti,ab,kw OR 'hyperlipidemia':ti,ab,kw OR 'lipidemia':ti,ab,kw OR 'lipidemias':ti,ab,kw OR 'lipemia':ti,ab,kw OR 'lipemias':ti,ab,kw OR 'hypercholesterolemias':ti,ab,kw OR 'high cholesterol levels':ti,ab,kw OR 'high cholesterol level':ti,ab,kw OR 'elevated cholesterol':ti,ab,kw OR 'elevated cholesterols':ti,ab,kw OR 'hypercholesteremia':ti,ab,kw OR 'hypercholesteremias':ti,ab,kw OR 'tobacco uses':ti,ab,kw OR 'tobacco chewing':ti,ab,kw OR 'tobacco consumption':ti,ab,kw OR 'smoking behaviors':ti,ab,kw OR 'smoking behavior':ti,ab,kw OR 'smoking habit':ti,ab,kw OR 'smoking habits':ti,ab,kw OR 'thc vaping':ti,ab,kw OR 'e-cig use':ti,ab,kw OR 'e cig use':ti,ab,kw OR 'ecig use':ti,ab,kw OR 'vape':ti,ab,kw OR 'vapes':ti,ab,kw OR 'e-cigarette use':ti,ab,kw OR 'e cigarette use':ti,ab,kw OR 'e-cigarette uses':ti,ab,kw OR 'nicotine vaping':ti,ab,kw OR 'ecigarette use':ti,ab,kw OR 'electronic cigarette use':ti,ab,kw OR 'electronic cigarette uses':ti,ab,kw OR 'overweight':ti,ab,kw OR 'obese':ti,ab,kw OR 'obesity':ti,ab,kw	2889550

CINAHL

#	Query	Limiters/Expanders	Last Run Via	Results
S8	S1 AND S6 AND S7	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Basic Search Database - CINAHL Plus with Full Text	662
S7	S2 OR (S3 AND S4) OR (S3 AND S5) OR (S4 AND S5)	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL Plus with Full Text	28,336
S6	(MH "Randomized Controlled Trials") OR (MH "Clinical Trials+") OR (MH "Evaluation Research+") OR (MH "Comparative Studies+") OR (MH "Clinical Research+") OR (MH "Experimental Studies+") OR (MH "Program Evaluation") OR (MH "Random Assignment") OR random* OR double blind* OR controlled trial* OR clinical trial* OR pretest* OR pre test* OR posttest* OR post test* OR prepost* OR pre post* OR controlled before* OR "before and after" OR interrupted time* OR time serie* OR intervention*	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL Plus with Full Text	1,371,390
S5	(MH "Professional-Patient Relations") OR MH Nurse Patient Relations OR MH Physician Patient Relations OR ((MH Nurses+ OR MH Physicians+ OR TI Nurse* OR TI Physician* OR TI Clinician* OR TI Doctor* OR TI General Practitioner* OR TI GPs OR TI Health Care Professional* OR TI Healthcare Professional* OR TI Health Care Provider*OR TI Healthcare Provider* OR TI Resident*) AND (MH Patients+ OR TI Patient* OR TI Consumer* OR TI People*))	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL Plus with Full Text	107,744
S4	(MH "Consumer Participation") OR AB Consumer Participation* OR TI Consumer Participation* OR AB Patient Participation* OR TI Patient Participation* OR AB Patient Involvement* OR TI Patient Involvement*OR AB Consumer Involvement* OR TI Consumer Involvement*OR ((TI Patient*OR TI Consumer*) AND (TI Participating* OR TI Participation* OR TI Involving* OR TI Involvement*))	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL Plus with Full Text	34,685
S3	(MH "Decision Making") OR MW Decision Support OR AB Decision Making* OR TI Decision Making* OR AB Decision Support* OR TI Decision Support* OR AB Choice Behavio* OR TI Choice Behavio* OR ((TI Decision* OR TI Choice*) AND (TI Making* OR TI Support* OR TI Behavio*))	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL Plus with Full Text	124,191
S2	(MH "Decision Making, Shared") OR AB Shared Decision* OR TI Shared Decision* OR AB Sharing Decision* OR TI Sharing Decision* OR AB Informed Decision* OR TI Informed Decision* OR AB Informed Choice* OR TI Informed Choice* OR AB Decision Aid* OR TI Decision Aid* OR ((TI Share* OR TI Sharing OR TI Informed*) AND (TI Decision* OR TI Deciding* OR TI Choice*))	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL Plus with Full Text	18,992
S1	(MH "Obesity+") OR (MH "Smoking+") OR (MH "Cardiovascular Risk Factors+") OR (MH "Hypertension+") OR (MH "Diabetes Mellitus+") OR (MH "Hyperlipidemia+") OR (MH "Hypercholesterolemia+") OR ((MH "Heart Diseases+") AND (MH "Risk Factors+")) OR	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL Plus with Full Text	557,808

	"Cardiovascular Risk Factors" OR "Cardiovascular Risk Factor" OR "Risk Factors for Heart Disease" OR "Risk Factors for Cardiovascular Disease" OR "Cardiovascular Risk Score" OR "Cardiovascular Risk Scores" OR "Cardiovascular Risk" OR "Cardiovascular Risks" OR "Residual Cardiovascular Risk" OR "Residual Cardiovascular Risks" OR "High Blood Pressure" OR "High Blood Pressures" OR "Elevated blood pressure" OR Hypertens* OR "Dyslipidemia" OR "Dyslipoproteinemias" OR "Dyslipoproteinemia" OR "Hyperlipemia" OR "Hyperlipemias" OR "Hyperlipidemia" OR "Lipidemia" OR "Lipidemias" OR "Lipemia" OR "Lipemias" OR "Hypercholesterolemias" OR "High Cholesterol Levels" OR "High Cholesterol Level" OR "Elevated Cholesterol" OR "Elevated Cholesterols" OR "Hypercholesteremia" OR "Hypercholesteremias" OR “Tobacco Uses” OR “Tobacco Chewing” OR “Tobacco Consumption” OR "smoking" OR “THC Vaping” OR “E Cig Use” OR “ECig Use” OR “Vape” OR “Vapes” OR “E Cigarette Use” OR “Nicotine Vaping” OR “Ecigarette Use” OR “Electronic Cigarette Use” OR “Electronic Cigarette Uses” OR “Overweight” OR “Obese” OR “obesity			

Cochrane

Search Name: SDM in Cardiovascular Risk Management Date Run: 10/06/2021 05:31:24

Comment: with the addition of obesity & smoking

ID	Search	Hits
#1	MeSH descriptor: [Heart Disease Risk Factors] explode all trees	94
#2	MeSH descriptor: [Hypertension] explode all trees	18921
#3	MeSH descriptor: [Diabetes Mellitus] explode all trees	32442
#4	MeSH descriptor: [Dyslipidemias] explode all trees	7665
#5	MeSH descriptor: [Hypercholesterolemia] explode all trees	3503
#6	MeSH descriptor: [Overweight] explode all trees	17146
#7	MeSH descriptor: [Obesity] explode all trees	14445
#8	MeSH descriptor: [Tobacco Use] explode all trees	272
#9	MeSH descriptor: [Smoking] explode all trees	6276
#10	MeSH descriptor: [Heart Diseases] explode all trees	53673
#11	MeSH descriptor: [Risk Factors] explode all trees	24961
#12	#10 AND #11	5471
#13	"Cardiovascular Risk Factors" OR "Cardiovascular Risk Factor" OR "Risk Factors for Heart Disease" OR "Risk Factors for Cardiovascular Disease" OR "Cardiovascular Risk Score" OR "Cardiovascular Risk Scores" OR "Cardiovascular Risk" OR "Cardiovascular Risks" OR "Residual Cardiovascular Risk" OR "Residual Cardiovascular Risks" OR "High Blood Pressure" OR "High Blood Pressures" OR "Elevated blood pressure" OR " Hypertens*" OR "Dyslipidemia" OR "Dyslipoproteinemias" OR "Dyslipoproteinemia" OR "Hyperlipemia" OR "Hyperlipemias" OR "Hyperlipidemia" OR "Lipidemia" OR "Lipidemias" OR "Lipemia" OR "Lipemias" OR "Hypercholesterolemias" OR "High Cholesterol Levels" OR "High Cholesterol Level" OR "Elevated Cholesterol" OR "Elevated Cholesterols" OR "Hypercholesteremia" OR "Hypercholesteremias" OR “Tobacco Uses” OR “Tobacco Chewing” OR “Tobacco Consumption” OR "smoking" OR “THC Vaping” OR “E Cig Use” OR “ECig Use” OR “Vape” OR “Vapes” OR “E Cigarette Use” OR “Nicotine Vaping” OR “Ecigarette Use” OR “Electronic Cigarette Use” OR “Electronic Cigarette Uses” OR “Overweight” OR “Obese” OR “obesity”	106496
#14	#1 OR #2 OR #3 OR #4 OR #5 OR #6 OR #7 OR #8 OR #9 OR #12 OR #13	154627
#15	MeSH descriptor: [Decision Making, Shared] explode all trees	36
#16	((shared OR sharing OR informed) NEAR/2 (decision* OR deciding OR choice*)) OR "decision aid" OR "decision aids"	4350
#17	#15 OR #16	4350
#18	MeSH descriptor: [Decision Making] this term only	2162
#19	MeSH descriptor: [Decision Support Techniques] this term only	831
#20	MeSH descriptor: [Decision Support Systems, Clinical] explode all trees	397
#21	MeSH descriptor: [Choice Behavior] this term only	1306
#22	((decision* OR choice*) NEAR/2 (making OR support* OR behavio*))	20836
#23	#18 OR #19 OR #20 OR #21 OR #22	20836
#24	MeSH descriptor: [Patient Participation] explode all trees	1427
#25	((patient* OR consumer*) NEAR/3 (involvement* OR involving* OR participation* OR participat*))	21825
#26	#24 OR #25	21825
#27	MeSH descriptor: [Professional-Patient Relations] explode all trees	2657
#28	((nurse* OR physician* OR clinician* OR doctor* OR "general practitioner" OR "general practitioners" OR "healthcare professional" OR "healthcare professionals" OR "health care provider" OR "health care providers" OR "healthcare provider" OR "healthcare providers") NEAR/3 (patient* OR consumer* OR people*))	27483
#29	#27 OR #28	28238
#30	#14 AND (#15 OR (#23 AND #26) OR (#23 AND #29) OR (#26 AND #29))	867

Web of Science

TS=("Cardiovascular Risk Factors" OR "Cardiovascular Risk Factor" OR "Risk Factors for Heart Disease" OR "Risk Factors for Cardiovascular Disease" OR "Cardiovascular Risk Score" OR "Cardiovascular Risk Scores" OR "Cardiovascular Risk" OR "Cardiovascular Risks" OR "Residual Cardiovascular Risk" OR "Residual Cardiovascular Risks" OR "High Blood Pressure" OR "High Blood Pressures" OR "Elevated blood pressure" OR " Hypertens*" OR "Dyslipidemia" OR "Dyslipoproteinemias" OR "Dyslipoproteinemia" OR "Hyperlipemia" OR "Hyperlipemias" OR "Hyperlipidemia" OR "Lipidemia" OR "Lipidemias" OR "Lipemia" OR "Lipemias" OR "Hypercholesterolemias" OR "High Cholesterol Levels" OR "High Cholesterol Level" OR "Elevated Cholesterol" OR "Elevated Cholesterols" OR "Hypercholesteremia" OR "Hypercholesteremias" OR “Tobacco Uses” OR “Tobacco Chewing” OR “Tobacco Consumption” OR “Smoking Behaviors” OR “Smoking Behavior” OR “Smoking Habit” OR “Smoking Habits” OR “Smoking Behaviors” OR “Smoking Behavior” OR “Smoking Habit” OR “Smoking Habits” OR “smoking” OR “THC Vaping” OR “E-Cig Use” OR “E Cig Use” OR “ECig Use” OR “Vape” OR “Vapes” OR “E-Cigarette Use” OR “E Cigarette Use” OR “E-Cigarette Uses” OR “Nicotine Vaping” OR “Ecigarette Use” OR “Electronic Cigarette Use” OR “Electronic Cigarette Uses” OR “Overweight” OR “Obese” OR “obesity” OR ((cardiovascular OR "heart disease" OR "heart diseases") NEAR/3 risk*))
AND
(TS=(((shared OR sharing OR informed) NEAR/2 (decision* OR deciding OR choice*)) OR "decision aid" OR "decision aids") OR (TS=(((decision* OR choice*) NEAR/2 (making OR support* OR behavio*))) AND TS=(((nurse* OR physician* OR clinician* OR doctor* OR "general practitioner" OR "general practitioners" OR "healthcare professional" OR "healthcare professionals" OR "health care provider" OR "health care providers" OR "healthcare provider" OR "healthcare providers") NEAR/3 (patient* OR consumer* OR people*)))) OR (TS=(((decision* OR choice*) NEAR/2 (making OR support* OR behavio*))) AND TS=(((patient* OR consumer*) NEAR/3 (involvement* OR involving* OR participation* OR participat*)))) OR (TS=(((nurse* OR physician* OR clinician* OR doctor* OR "general practitioner" OR "general practitioners" OR "healthcare professional" OR "healthcare professionals" OR "health care provider" OR "health care providers" OR "healthcare provider" OR "healthcare providers") NEAR/3 (patient* OR consumer* OR people*))) AND TS=(((patient* OR consumer*) NEAR/3 (involvement* OR involving* OR participation* OR participat*)))))
AND
TS=(random* OR "double blind" OR ((clinical OR control* OR program OR evaluation OR comparative) NEAR/2 (trial* OR study OR studies)) OR pretest* OR "pre test" OR posttest* OR "post test" OR prepost* OR "pre post" OR "controlled before" OR "before and after" OR "interrupted time" OR "time serie" OR "time series" OR intervention* OR "program evaluation")
Timespan: All years. Indexes: SCI-EXPANDED, SSCI, A&HCI, CPCI-S, CPCI-SSH, BKCI-S, BKCI-SSH, ESCI, CCR-EXPANDED, IC.
Searched 06/09/2021
1301 citations

Scopus

TITLE-ABS-KEY ((shared W/2 decision*) OR (sharing W/2 decision*) OR (informed W/2 decision*) OR (shared W/3 deciding) OR (sharing W/2 deciding) OR (informed W/2 deciding) OR (shared W/2 choice*) OR (sharing W/2 choice*) OR (informed W/2 choice*) OR "decision aid" OR "decision aids") OR (TITLE-ABS-KEY ((decision* W/2 making) OR (decision W/2 support*) OR (decision W/2 behavio*) OR (choice* W/2 making) OR (choice* W/2 support*) OR (choice* W/2 behavio*)) AND TITLE-ABS-KEY ((nurse* W/3 patient*) OR (nurse* W/3 consumer*) OR (nurse* W/3 people*) OR (physician* W/3 patient*) OR (physician* W/3 consumer*) OR (physican W/3 people*) OR (clinician* W/3 patient*) OR (clinician* W/3 consumer*) OR (clinician* W/3 people*) OR (doctor* W/3 patient*) OR (doctor* W/3 consumer*) OR (doctor* W/3 people*) OR ("general practitioner" W/3 patient*) OR ("general practitioner" W/3 consumer*) OR ("general practitioner" W/3 people*) OR ("healthcare professional" W/3 patient*) OR ("healthcare professional" W/3 consumer*) OR ("healthcare professional" W/3 people*) OR ("health care provider" W/3 patient*) OR ("health care provider" W/3 consumer*) OR ("health care provider" W/3 people*) OR ("healthcare provider" W/3 patient*) OR ("healthcare provider W/3 consumer*) OR (" healthcare AND provider " W/3 people*))) OR (TITLE-ABS-KEY((decision* W/2 making) OR (decision W/2 support*) OR (decision W/2 behavio*) OR (choice* W/2 making) OR (choice* W/2 support*) OR (choice* W/2 behavio*)) AND TITLE-ABS-KEY((patient* W/3 involvement*) OR (consumer* W/3 involvement*) OR (patient W/3 involving*) OR (consumer W/3 involving*) OR (patient* W/3 participation*) OR (consumer W/3 participation*) OR (patient* W/3 participat*) OR (consumer* W/3 participat*))) OR (TITLE-ABS-KEY((nurse* W/3 patient*) OR (nurse* W/3 consumer*) OR (nurse* W/3 people*) OR (physician* W/3 patient*) OR (physician* W/3 consumer*) OR (physican W/3 people*) OR (clinician* W/3 patient*) OR (clinician* W/3 consumer*) OR (clinician* W/3 people*) OR (doctor* W/3 patient*) OR (doctor* W/3 consumer*) OR (doctor* W/3 people*) OR (" general AND practitioner " W/3 patient*) OR (" general AND practitioner " W/3 consumer*) OR (" general AND practitioner " W/3 people*) OR (" healthcare AND professional " W/3 patient*) OR (" healthcare AND professional " W/3 consumer*) OR (" healthcare AND professional " W/3 people*) OR (" health AND care AND provider " W/3 patient*) OR (" health AND care AND provider " W/3 consumer*) OR (" health AND care AND provider " W/3 people*) OR (" healthcare AND provider " W/3 patient*) OR (" healthcare AND provider W/3 consumer*) OR ("healthcare provider" W/3 people*)) AND TITLE-ABS-KEY ((patient* W/3 involvement*) OR (consumer* W/3 involvement*) OR (patient W/3 involving*) OR (consumer W/3 involving*) OR (patient* W/3 participation*) OR (consumer W/3 participation*) OR (patient* W/3 participat*) OR (consumer* W/3 participat*)))
AND
TITLE-ABS-KEY (random* OR "double blind" OR (clinical W/2 trial*) OR (clinical W/3 study) OR (clinical W/3 studies) OR (control* W/3 trial*) OR (control* W/2 study) OR (control* W/2 studies) OR (evaluation W/2 trial*) OR (evaluation W/2 study) OR (evaluation W/2 studies) OR (comparative W/2 trial*) OR (comparative W/2 study) OR (comparative AND w/2studies) OR pretest* OR "pre test" OR posttest* OR "post test" OR prepost* OR "pre post" OR "controlled before" OR "before and after" OR "interrupted time" OR "time serie" OR "time series" OR intervention* OR "program evaluation")
AND
TITLE-ABS-KEY ((cardiovascular W/3 risk) OR ("heart disease" W/2 risk*) OR "Cardiovascular Risk Factors" OR "Cardiovascular Risk Factor" OR "Risk Factors for Heart Disease" OR "Risk Factors for Cardiovascular Disease" OR "Cardiovascular Risk Score" OR "Cardiovascular Risk Scores" OR "Cardiovascular Risk" OR "Cardiovascular Risks" OR "Residual Cardiovascular Risk" OR "Residual Cardiovascular Risks" OR "High Blood Pressure" OR "High Blood Pressures" OR "Elevated blood pressure" OR "Hypertens*" OR "Dyslipidemia" OR "Dyslipoproteinemias" OR "Dyslipoproteinemia" OR "Hyperlipemia" OR "Hyperlipemias" OR "Hyperlipidemia" OR "Lipidemia" OR "Lipidemias" OR "Lipemia" OR "Lipemias" OR "Hypercholesterolemias" OR "High Cholesterol Levels" OR "High Cholesterol Level" OR "Elevated Cholesterol" OR "Elevated Cholesterols" OR "Hypercholesteremia" OR "Hypercholesteremias" OR "Tobacco Uses" OR "Tobacco Chewing" OR "Tobacco Consumption" OR "Smoking Behaviors" OR "Smoking Behavior" OR "Smoking Habit" OR "Smoking Habits" OR "Smoking Behaviors" OR "Smoking Behavior" OR "Smoking Habit" OR "Smoking Habits" OR "smoking" OR "THC Vaping" OR "E-Cig Use" OR "E Cig Use" OR "ECig Use" OR "Vape" OR "Vapes" OR "E-Cigarette Use" OR "E Cigarette Use" OR "E-Cigarette Uses" OR "Nicotine Vaping" OR "Ecigarette Use" OR "Electronic Cigarette Use" OR "Electronic Cigarette Uses" OR "Overweight" OR "Obese" OR "obesity")
Searched 06/09/2021
1278 citations

Clinicaltrials.gov

6 Studies found for: **shared decision making | obesity**
5 Studies found for: **shared decision making | overweight**
8 Studies found for: **shared decision making | smoking**
3 Studies found for: **shared decision making | tobacco use**
1 Study found for: **shared decision making | vaping**
9 Studies found for: **shared decision making | cardiovascular risk**
3 Studies found for: **shared decision making | heart disease risk factors**
7 Studies found for: **shared decision making | cardiac risk**
10 Studies found for: **shared decision making | hypertension**
32 Studies found for: **shared decision making | diabetes**
8 Studies found for: **shared decision making | dyslipidemia**
7 Studies found for: **shared decision making | hyperlipemia**
5 Studies found for: **shared decision making | Hypercholesterolemia**
TOTAL 104

Books (n=6)

Author	Title	Year	Journal
Geary, D. F.; Schaefer, F.	Comprehensive Pediatric Nephrology	2008	Comprehensive Pediatric Nephrology
Parker, M. S.; Kusmirek…	**Elements of a Successful Lung Cancer-Screening Program**	**2018**	**Lung Cancer Screening**
Beswick, A. D.; Brindle, P…	National Institute for Health and Clinical Excellence: Guidance	2008	A Systematic Review of Risk Scoring Methods and Clinical Decision Aids U…
McGrady, A.; Moss, D.	**Pathways to illness, pathways to health**	**2013**	**Pathways to Illness, Pathways to Health**
Sombra, L. R. S.; Anast…	**Pharmacologic Therapy For Obesity**	**2021**	**StatPearls**
Dalton, J.; Thomas, S.;…	The provision of services in the UK for UK armed forces veterans with PTSD: a rapid evidence synthesis	2018	Health Services and Delivery Research

Book Chapters (n=20)

Author	Title	Year	Journal
Nelson, H. D.; Cantor, A…	**Achieving Health Equity in Preventive Services**	**2019**	**AHRQ Comparative Effectiveness Reviews**
Kumanyika, S. K.	**Assembling Evidence and Informing Decisions**	**2010**	**Bridging the Evidence Gap in Obesity Prevention: A Framework to In**
Jackson, M. L.; Howard…	**Cognition and daytime functioning in sleep-related breathing disorders**	**2011**	**Human Sleep and Cognition, Pt Ii: Clinical and Applied Research**
Muhlhauser, I.	**Evidence-based patient education in diabetes and beyond-application to other chronic diseases - From o…**	**2005**	**Embedding Education into Diabetes Practice**
Cheng, S. L.; Liao, H. H…	**Exploring oral cancer patients' preference in medical decision making and quality of life**	**2017**	**Studies in Health Technology and Informatics**
Lim, A.; Muir, K.; Giaco…	**Glaucoma**	**2015**	**The Ophthalmol. Clin. Trials Handb.**
Delichatsios, H. K.; Pitt…	**Integrating Nutrition Education into Clinical Practice**	**2020**	**Nutrition Education: Strategies for Improving Nutrition and Healthy E**
Zhang, Y.; Padman, R.	**An interactive platform to visualize data-driven clinical pathways for the management of multiple chronic…**	**2017**	**16th World Congress of Medical and Health Informatics: Precision He**
Streja, E.; Streja, D. A.	**Management of Dyslipidemia in the Elderly**	**2000**	**Endotext**
Leweke, F. M.; Odorfer,…	**Medical needs in the treatment of psychotic disorders**	**2012**	**Handbook of Experimental Pharmacology**
Panigrahi, R.; Joshi, B. L.	**Oh no, someone get the NO!**	**2010**	**Core Clinical Competencies in Anesthesiology: A Case-Based Appro**
Kukafka, R.; Jeong, I. C…	**Optimizing Decision Support for Tailored Health Behavior Change Applications**	**2015**	**15th World Congress on Health and Biomedical Informatics, MEDINF**
Burkhardt, H.; Koffner,…	**PATIENT EDUCATION IN AN ACUTE CARE SETTING. FEASABILITY AND MEDIUM-TIME EFFECTS OF A S…**	**2009**	**Multimedia in Education and Special Education**
Deffenbacher, J. L.	**Psychosocial interventions: Anger disorders**	**2003**	**Aggression: Psychiatric Assess. and Treatment**
Ambrose, K. R.; Atzeni, F.	The Relevance of Preoperative Education Among Healthcare Providers, Family Caregivers, and Patients With S…	2018	Handbook of Systemic Autoimmune Diseases
Bui, T.	**Renal considerations in palliative medicine**	**2013**	**Hospice Care: Health Serv., Qual. and Clin. Manage.**
Witkop, C. T.	**Shared decision making and labor management in parturients**	**2014**	**Obes. Dur. Pregnancy in Clinical Practice**
Njunju, E. M.; Mazaba,…	**Suicidal ideation among adolescents attending junior high school in suriname**	**2017**	**Suicide: A Global View on Suicidal Ideation among Adolescents**
Mitchell, E.; Sullivan, F.…	**Using electronic patient records to inform strategic decision making in primary care**	**2004**	**Medinfo 2004: Proceedings of the 11th World Congress on Medical In**
Rodriguez-Araujo, G.;…	**Utility of invasive and non-invasive cardiovascular research methodologies in drug development for diab…**	**2019**	**Transl. Res. Methods in Diabetes, Obes., and Nonalcoholic Fatty Live**

Conference Abstracts (n=6)

Author	Title	Year	Journal
Paredes, S.; Rocha, T.;…	**cardioRisk Project: Clinical Validation Applied To a Portuguese Population**	**2015**	**2015 International Conference on Education, Management and Systen**
Tipprom, A.; Soontornp…	**Development of a Rehabilitation Monitoring System on Web-Based Application for Patients with Knee Pain**	**2018**	**2018 6th International Electrical Engineering Congress**
Andriopoulou, F. G.; Bir…	**Ef-Zin: A hybrid framework for ubiquitous management of comorbidity and multimorbidity in chronic dis…**	**2013**	**2013 Ieee 13th International Conference on Bioinformatics and Bioeng**
Albini, F.; Liu, X. Q.; Tor…	**An ICT and mobile Health integrated approach to optimize patients' education on hypertension and its m…**	**2016**	**2016 38th Annual International Conference of the Ieee Engineering in.**
Lee, S.; Bareinboim, E.;…	**Structural Causal Bandits with Non-Manipulable Variables**	**2019**	**Thirty-Third Aaai Conference on Artificial Intelligence / Thirty-First Inn**
De Mello Ara˙jo, E. F.; S…	**Using simulations for exploring interventions in social networks modeling physical activity behaviour in…**	**2018**	**8th International Conference on Simulation and Modeling Methodolog**

Title	Year	Journal
Highlights from the 7th Practical Diabetes International Foot Conference: The future of diabetic foot care: Modern management and re…	2000	Practical Diabetes International
Society of General Internal Medicine - 33rd Annual Meeting	2010	Journal of General Internal Medicine
Singapore Health and Biomedical Congress, SHBC 2013	2013	Annals of the Academy of Medicine Singapore
Abstracts from the 36th Annual Meeting of the Society of General Internal Medicine, SGIM 2013	2013	Journal of General Internal Medicine
2013 CAEP/ACMU Scientific Abstracts, CAEP 2013	2013	Canadian Journal of Emergency Medicine
The opportunities and challenges of pragmatic point-of-care randomised trials using routinely collected electronic records: evaluatio…	2014	Health Technology Assessment
Abstracts from the 37th Annual Meeting of the Society of General Internal Medicine, SGIM 2014	2014	Journal of General Internal Medicine
Family Medicine Forum Research Proceedings 2014	2015	Canadian Family Physician
HEC 2016	2016	European Journal of Epidemiology
Scientific Poster Abstracts Selected for the National Lipid Association 2016 Scientific Sessions	2016	Journal of Clinical Lipidology
EuroHeartCare 2016	2016	European Journal of Cardiovascular Nursing
延續「腎」命 糖尿病腎病變病人&#3…	2018	Tzu Chi Nursing Journal
Research on multimorbidity in primary care. Selected abstracts from the EGPRN meeting in Tampere, Finland, 9-12 May 2019 All abstr…	2019	European Journal of General Practice
General Practice and the Community: Research on health service, quality improvements and training. Selected abstracts from the EG…	2020	European Journal of General Practice
ICS 2020 LAS VEGAS SCIENTIFIC PROGRAMME	2020	Neurourology and Urodynamics

Dissertations (n=7)

Author	Title	Year
Greenwood, Deborah A…	Evaluation of a Telehealth Intervention Combining Structured Self-Monitoring of Blood Glucose and Nurse Care Coordination Among People Wit…	2014
Hebert, Rosemary	Making Homes Smoke-Free: The Impact of an Empowerment Intervention for Parents	2008
Holman, G. T.	Patient handling: restrictions & conditions	2007
Kennett, James R.	Improving diabetic outcomes with caring communication: Identifying communication patterning for the human diabetic	2011
McDonnell, Karen Kane	A Decision Aid to Improve Smoking Abstinence and HRQL for Families Facing Cancer	2013
Sasichay, T.	The relationship between nurse staffing and patient outcomes	2001
Schlenk, E. A.	Choice behaviors performed by persons with type II diabetes participating in behavioral analysis with nurses	1994

Lack Primary Data (n=7)

Author	Title	Year	Journal
Jacobson, F. L.; Jaklits…	Computed Tomography Scanning for Early Detection of Lung Cancer	2018	Annual Review of M
Lands, W. E. M.	Dietary fat and health: The evidence and the politics of prevention: Careful use of dietary fats can improve life and prevent disease	2005	Annals of the New Y
Harous, S.; Serhani, M.…	Hybrid obesity monitoring model using sensors and community engagement	2017	13th IEEE Internatio
Heldt, T.; Zoerle, T.; Tei…	Intracranial Pressure and Intracranial Elastance Monitoring in Neurocritical Care	2019	Annual Review of Bi
Feliciano, E. M. C.; Kro…	The Obesity Paradox in Cancer: How Important Is Muscle?	2018	Annual Review of N
Patnode, C. D.; Hender…	U.S. Preventive Services Task Force Evidence Syntheses, formerly Systematic Evidence Reviews	2021	Interventions for To
	Univentricular Right Heart Support Using a Single Axial Flow Catheter for High Risk Multivessel Percutaneous Coronary Intervention	2019	Hirst, Colin

eMethods 2. Quality Appraisal

We used the Quality Assessment Tool for Controlled Intervention Studies Criteria developed by the National Heart, Lung, and Blood Institute of the National Institutes of Health.[1] This tool addresses 14 elements of quality and risk assessment (see below), which provides an overall rating of "good", "fair", or "poor" based on critical appraisal of characteristics that are relevant to high-quality research studies. The greater the risk of bias, the lower the quality rating of the study. High potential for risk of bias translates to a rating of poor quality. A "poor" study was defined as if the study has a "fatal flaw" including high dropout rates, high differential dropout rates, no intention-to-treatment (ITT) analysis, or other unsuitable statistical analysis (e.g., completers-only analysis).[1] A study was rated as "fair" if the study did not meet all criteria and did not have "fatal flaws".[2] Low potential for risk of bias translates to a rating of good quality. A study was defined as "good" if the study did not report on adherence in the treatment group but met all other criteria of the study quality assessment tool.[2] Two researchers independently assessed each article, and any discrepancies in the cross-check were evaluated by a third researcher for consensus.

Quality Assessment Tool for Controlled Intervention Studies Criteria:

Q1. Was the study described as randomized, a randomized trial, a randomized clinical trial, or an RCT?

Q2. Was the method of randomization adequate (i.e., use of randomly generated assignment)?

Q3. Was the treatment allocation concealed (so that assignments could not be predicted)?

Q4. Were study participants and providers blinded to treatment group assignment?

Q5. Were the people assessing the outcomes blinded to the participants' group assignments?

Q6. Were the groups similar at baseline on important characteristics that could affect outcomes (e.g., demographics, risk factors, co-morbid conditions)?

Q7. Was the overall drop-out rate from the study at endpoint 20% or lower of the number allocated to treatment?

Q8. Was the differential drop-out rate (between treatment groups) at endpoint 15 percentage points or lower?

Q9. Was there high adherence to the intervention protocols for each treatment group?

Q10. Were other interventions avoided or similar in the groups (e.g., similar background treatments)?

Q11. Were outcomes assessed using valid and reliable measures, implemented consistently across all study participants?

Q12. Did the authors report that the sample size was sufficiently large to be able to detect a difference in the main outcome between groups with at least 80% power?

Q13. Were outcomes reported or subgroups analyzed prespecified (i.e., identified before analyses were conducted)?

Q14. Were all randomized participants analyzed in the group to which they were originally assigned (i.e., did they use an intention-to-treat analysis)?

Overall quality rating (good, fair, poor). (1) "good": meet all 14 criteria; (2) "fair": did not meet all 14 criteria and had no high dropout rates; (3) “poor”: A “poor” study was defined as if the study has a "fatal flaw"

eMethods 3. Data Synthesis and Data Transformation

Data were grouped into different study duration periods based on the trials included for the outcome analysis: immediately to less than 1 month, 3 months, 6 months, 12 months, or 24 months post-intervention. In cases where two follow-up endpoints fell into the same period, the later scores were utilized (e.g., for 3-month and 6-month postoperative endpoints, those at 6 months were used). For decisional conflict, HbA1c, and SBP levels, we used the mean and standard deviations (SD) of the outcomes measured at the follow-up time points to perform meta-analyses. The effect size was presented as the mean difference between experimental intervention and control groups accompanied by the 95% confidence interval (CI). For continuous outcomes such as satisfaction regarding the decision and treatment where scales differed, data were pooled using standardized mean difference (SMD), and their corresponding 95% CIs were computed after standardizing to a scale from 0 to 100, where a higher score indicated a better outcome. Due to the variability in interventions and population demographics, a random-effects model was used for all outcomes.[3]

For studies that only reported standard errors (SE) or 95% CI, confidence interval (CI) or presented the mean change from baseline to the follow-up time point, we employed a transformation method in accordance with Cochrane's handbook [4] to estimate the mean and standard deviations (SD) values. For example, SDs were calculated using the formula: $SD = SE \times \sqrt{n}$. If change scores (such as total scores of decisional conflict scales) were provided, the follow-up scores were calculated by summing the change scores and baseline scores. In instances where the essential data for analysis were not obtainable from articles, supplementary materials, or secondary analysis publications, efforts were made to reach out to corresponding authors for the necessary information. Studies in which analytical data remained inaccessible, despite these efforts, were excluded from the analysis.

Heterogeneity was assessed using Cochran's Q-test and Higgins I^2 statistics. The interpretation of I^2 values followed Cochrane's handbook guidelines.[4] Hedges' test was employed to evaluate publication bias, and funnel plots were visually examined. Subgroup meta-analyses were carried out for different study durations as reported across the studies. $I^2 < 40\%$ indicated it might not be important, 40%-50% suggested it may represent moderate

heterogeneity, 50%-90% indicated it may represent substantial heterogeneity, and I^2 > 90% suggested considerable heterogeneity. We assessed publication bias by examining funnel plot asymmetry and performing the Egger test.[5]

eTable 1. Quality Assessment Using the Quality Assessment of Controlled Intervention Studies Criteria

Study	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Overall quality rating	Comment
Adarkwah 2016	Yes	Yes	Yes	Other (CD, NR, NA)	Other (CD, NR, NA)	Other (CD, NR, NA)	Yes	Yes	Yes	Yes	Yes	Other (CD, NR, NA)	Yes	Other (CD, NR, NA)	Poor	Not clear if used ITT analysis, and not reporting of sample size based on power
Applegate 2021	Yes	Yes	Yes	Yes	Other (CD, NR, NA)	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Fair	
Bailey 2016	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Poor	Method of randomization was not adequate
Bailey 2018	Yes	Yes	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Other (CD, NR, NA)	Poor	Used ITT analysis not reported
Boulware 2020	Yes	Yes	Yes	No	Yes	Yes	No	No	No	Yes	Yes	Yes	Yes	Other (CD, NR, NA)	Poor	Not clear if used ITT analysis, higher then 20% dropout rate, higher then 15% differential drop out rate, and not high adherence to the intervention.
Branda 2013	Yes	Yes	Yes	Yes	Other (CD, NR, NA)	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Other (CD, NR, NA)	Poor	Used ITT analysis not reported
Buhse 2015	Yes	Yes	Yes	Yes	Yes	Other (CD, NR, NA)	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Fair	
Buhse 2018	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Other (CD, NR, NA)	Yes	Yes	Yes	Yes	Yes	Fair	
Cheng 2021	Yes	Yes	Yes	Other (CD, NR, NA)	Yes	Yes	Yes	Yes	Other (CD, NR, NA)	Yes	Yes	Yes	Yes	Yes	Fair	
Cooper 2011	Yes	Yes	Yes	No	Yes	Yes	Yes	Other (CD, NR, NA)	Other (CD, NR, NA)	Yes	Yes	Other (CD, NR, NA)	Yes	Yes	Poor	Differential drop out rate > 15%, and power not reported
Coronado-Vazquez 2019	Yes	Yes	Other (CD, NR, NA)	Other (CD, NR, NA)	Other (CD, NR, NA)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Fair	
Den Ouden 2017	Yes	Yes	No	No	No	Other (CD, NR, NA)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Fair	

Study	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Overall quality rating	Comment
Denig 2014	Yes	Yes	Yes	No	Other (CD, NR, NA)	No	No	No	No	Other (CD, NR, NA)	Yes	Yes	Yes	Yes	Poor	Overall drop-out rate > 20%
Dwinger 2020	Yes	Yes	Yes	No	No	Yes	No	No	No	Yes	Yes	Yes	Yes	Yes	Poor	overall drop-out rate > 20% and differential drop out rate > 15%
Eaton 2011	Yes	Yes	Other (CD, NR, NA)	No	Other (CD, NR, NA)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Fair	
Eckman 2012	Yes	Yes	Other (CD, NR, NA)	Other (CD, NR, NA)	Other (CD, NR, NA)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Other (CD, NR, NA)	Poor	Used ITT analysis not reported
Edwards 2006	Yes	Yes	Other (CD, NR, NA)	No	No	Yes	Yes	Other (CD, NR, NA)	Other (CD, NR, NA)	Yes	Yes	Yes	Yes	Other (CD, NR, NA)	Poor	No reporting on used ITT analysis, and if the differential drop out rate > 15% or not
Farmer 2005	Yes	Yes	Other (CD, NR, NA)	Yes	Yes	Yes	No	No	Yes	Other (CD, NR, NA)	Yes	Yes	Yes	Yes	Poor	Overall drop-out rate > 20% and differential drop out rate > 15%
Grant 2008	Yes	Yes	Other (CD, NR, NA)	Other (CD, NR, NA)	Other (CD, NR, NA)	No	Other (CD, NR, NA)	Other (CD, NR, NA)	Other (CD, NR, NA)	Other (CD, NR, NA)	Yes	No	Yes	Yes	Poor	Overall drop-out rate and differential drop out rate not reported
Greenfield 1988	Yes	Yes	No	No	Yes	Yes	Yes	Other (CD, NR, NA)	Other (CD, NR, NA)	Yes	Yes	No	Yes	Other (CD, NR, NA)	Poor	No reporting on used ITT analysis, dropout rate and if differential drop out rate > 15%,
Heisler 2014	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Other (CD, NR, NA)	Yes	Yes	Yes	Yes	No	Poor	No ITT analysis or other unsuitable analysis (completers only)
Hsu 2016	Yes	Other (CD, NR, NA)	Other (CD, NR, NA)	Other (CD, NR, NA)	Other (CD, NR, NA)	Yes	No	Yes	Other (CD, NR, NA)	Yes	Yes	Yes	Yes	Yes	Poor	Method of randomization was not reported, drop out rate higher than 20%
Hu 2021	Yes	Yes	Other (CD, NR, NA)	No	Other (CD, NR, NA)	Yes	Yes	Yes	Other (CD, NR, NA)	Yes	Yes	Yes	Yes	Other (CD, NR, NA)	Poor	Used ITT analysis not reported
Jaspers 2021	Yes	Yes	Yes	Other (CD, NR, NA)	Other (CD, NR, NA)	Other (CD, NR, NA)	Yes	Yes	Other (CD, NR, NA)	Other (CD, NR, NA)	Yes	Yes	Yes	Yes	Fair	
Jouni 2017	Yes	Yes	Yes	Other (CD, NR, NA)	Other (CD, NR, NA)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Fair	

Study	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Overall quality rating	Comment
Karagiannis 2016	Yes	Yes	No	No	Other (CD, NR, NA)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Fair	
Kask-Flight 2021	Yes	Yes	Other (CD, NR, NA)	Other (CD, NR, NA)	Other (CD, NR, NA)	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Other (CD, NR, NA)	Poor	No clear if used ITT analysis, and higher then 20% dropout rate, no clear info on allocation concealed, blindness,
Keyserling 2014	Yes	Yes	Yes	No	Other (CD, NR, NA)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Fair	
Koelewijn-vanLoon 2009	Yes	Yes	No	No	Other (CD, NR, NA)	No	Yes	Yes	Yes	Other (CD, NR, NA)	Yes	Yes	Yes	Yes	Fair	
Koelewijn-vanLoon 2010	Yes	Yes	Yes	No	Other (CD, NR, NA)	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Fair	
Krones 2008	Yes	Yes	Yes	Other (CD, NR, NA)	No	No	Yes	No	Other (CD, NR, NA)	Other (CD, NR, NA)	Yes	Yes	Yes	Other (CD, NR, NA)	Poor	Not clear if used ITT analysis, higher then 15% differential droop out rate, participants not similar at baseline, not clear if adherence to intervention was high and if other similar interventions were avoided.
Kulzer 2018	Yes	Yes	Other (CD, NR, NA)	Other (CD, NR, NA)	Other (CD, NR, NA)	Other (CD, NR, NA)	Yes	No	Yes	Yes	Yes	Other (CD, NR, NA)	Yes	Yes	Poor	Differential drop rate > 15%, and lack of reporting on many other characteristics.
Kunneman 2022	Yes	Yes	Yes	No	No	Yes	Yes	Yes	Yes	Other (CD, NR, NA)	Yes	No	Yes	Yes	Fair	
Lauffenburger 2019	Yes	Yes	Yes	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Fair	
Lee 2016	Yes	Yes	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Other (CD, NR, NA)	Poor	No clear if used ITT analysis, no concealment or blindness and no outcomes reported, or subgroups analyzed prespecified
Maindal 2014	Yes	Yes	Other (CD, NR, NA)	Other (CD, NR, NA)	Yes	Yes	Yes	Yes	Other (CD, NR, NA)	Yes	Yes	No	Yes	Yes	Fair	

Study	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Overall quality rating	Comment
Mathers 2012	Yes	Yes	Yes	No	No	Other (CD, NR, NA)	Yes	Yes	Yes	Other (CD, NR, NA)	Yes	Yes	Yes	Yes	Fair	
Moin 2019	Yes	Yes	No	Other (CD, NR, NA)	Other (CD, NR, NA)	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Fair	
Montgomery 2003	Yes	Yes	Yes	No	No	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Fair	Differential drop rate not reported but met all other important features
Mullan 2009	Yes	Yes	Yes	No	No	Other (CD, NR, NA)	Yes	Yes	Yes	Other (CD, NR, NA)	Yes	Yes	Yes	Other (CD, NR, NA)	Poor	Used ITT analysis not reported
Naik 2011	Yes	Yes	Yes	Other (CD, NR, NA)	Other (CD, NR, NA)	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Fair	
O'Malley 2022	Yes	Yes	Other (CD, NR, NA)	No	Other (CD, NR, NA)	Other (CD, NR, NA)	Yes	Yes	Yes	Other (CD, NR, NA)	Yes	Yes	Yes	Yes	Fair	
Peiris 2015	Yes	Yes	Yes	Other (CD, NR, NA)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Fair	
Perestelo-PÈrez 2016	Yes	Yes	Yes	Other (CD, NR, NA)	Other (CD, NR, NA)	No	No	Yes	Other (CD, NR, NA)	Other (CD, NR, NA)	Yes	Other (CD, NR, NA)	Yes	No	Poor	No ITT analysis
Prabhakaran 2019	Yes	Yes	Yes	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Fair	
Ramallo-Fariña 2021	Yes	Yes	Other (CD, NR, NA)	No	Other (CD, NR, NA)	Other (CD, NR, NA)	Yes	Yes	Yes	Other (CD, NR, NA)	Yes	Other (CD, NR, NA)	Yes	Yes	Fair	
Rost 1991	Yes	Yes	Other (CD, NR, NA)	No	Yes	Yes	Yes	Yes	Other (CD, NR, NA)	Yes	Yes	Yes	Yes	Other (CD, NR, NA)	Poor	Used ITT analysis not reported
Smith 2008	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Other (CD, NR, NA)	Yes	Yes	Other (CD, NR, NA)	Yes	Yes	Fair	
Sperl-Hillen 2018	Yes	Yes	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Fair	
Swoboda 2017	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Other (CD, NR, NA)	Yes	Yes	No	Yes	No	Poor	No ITT analysis

Study	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Overall quality rating	Comment
Tinsel 2013	Yes	Yes	Yes	No	Other (CD, NR, NA)	No	No	No	Other (CD, NR, NA)	Other (CD, NR, NA)	Yes	No	Yes	Yes	Poor	Overall drop-out rate > 20% and differential drop rate > 15%
Tinsel 2018	Yes	Yes	Other (CD, NR, NA)	No	No	No	Yes	Yes	Yes	Other (CD, NR, NA)	Yes	No	Yes	Yes	Fair	
Tusa 2021	Yes	Yes	Yes	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Fair	
Tutino 2017	Yes	Yes	No	No	No	Yes	No	Yes	Other (CD, NR, NA)	Other (CD, NR, NA)	Other (CD, NR, NA)	No	Yes	No	Poor	No ITT analysis
vanSteenkiste 2007	Yes	Yes	Yes	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Other (CD, NR, NA)	Poor	Used ITT analysis not reported
Warner 2015	Yes	Yes	Other (CD, NR, NA)	Other (CD, NR, NA)	Other (CD, NR, NA)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Other (CD, NR, NA)	Other (CD, NR, NA)	Poor	Used ITT analysis not reported
Weymiller 2007	Yes	Yes	Yes	Yes	Other (CD, NR, NA)	Yes	Yes	Yes	Yes	Other (CD, NR, NA)	Yes	Yes	Yes	Yes	Fair	
Wollny 2019	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Other (CD, NR, NA)	Yes	Yes	Yes	Yes	Fair	
Yu 2020	Yes	Yes	No	Other (CD, NR, NA)	Other (CD, NR, NA)	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Poor	Overall drop out rate > 20%

"CD, NR, NA," stands for "Cannot Determine, Not Relevant, Not Applicable."

ITT: intent-to-treatment

Q1. Was the study described as randomized, a randomized trial, a randomized clinical trial, or an RCT?

Q2. Was the method of randomization adequate (i.e., use of randomly generated assignment)?

Q3. Was the treatment allocation concealed (so that assignments could not be predicted)?

Q4. Were study participants and providers blinded to treatment group assignment?

Q5. Were the people assessing the outcomes blinded to the participants' group assignments?

Q6. Were the groups similar at baseline on important characteristics that could affect outcomes (e.g., demographics, risk factors, co-morbid conditions)?

Q7. Was the overall drop-out rate from the study at endpoint 20% or lower of the number allocated to treatment?

Q8. Was the differential drop-out rate (between treatment groups) at endpoint 15 percentage points or lower?

Q9. Was there high adherence to the intervention protocols for each treatment group?

Q10. Were other interventions avoided or similar in the groups (e.g., similar background treatments)?

Q11. Were outcomes assessed using valid and reliable measures, implemented consistently across all study participants?

Q12. Did the authors report that the sample size was sufficiently large to be able to detect a difference in the main outcome between groups with at least 80% power?

Q13. Were outcomes reported or subgroups analyzed prespecified (i.e., identified before analyses were conducted)?

Q14. Were all randomized participants analyzed in the group to which they were originally assigned (i.e., did they use an intention-to-treat analysis)?
Overall quality rating (good, fair, poor). (1) "good": meet all 14 criteria; (2) "fair": did not meet all 14 criteria and had no high dropout rates; (3) “poor”: A “poor” study was defined as if the study has a "fatal flaw"

eTable 2. Summary of Patient and Clinician Sociodemographic Characteristics and Outcomes

Author Year Country	Patients' and clinician' sociodemographic Characteristics	Outcomes* SDM and Decision making aspects CV risk factors and CVDs CV health behaviors
Adarkwah 2016 Germany	**Patients' Characteristics** Age (Mean): I: 57.83 (11.03) C: 58.01 (10.66) Males: I: 87 (55%) C: 88 (60%) Race/Ethnicity: NR Education: Low Education: I: 67 (43), C: 66 (45%) **Clinician' Characteristics** Age (Mean): 44.6 Males: 24 (59) Race/Ethnicity: White 39 (95) Asian: 1 (2.5) Experience (Mean Years): 14 Professions: NR	**Decision making** • Shared decision-making: Confirmed non-inferiority of Time-to-Event illustration • Decisional Conflict Scale: Confirmed non-inferiority of Time-to-Event illustration **CV risk factors and CVDs: NR** **CV health behaviors: NR**
Applegate 2021 United States	Age (Median): I: 50, C: 53 Males: I: 87 (55), C: 88 (60) Race/Ethnicity: White I: 6 (9.2), C: 4 (6.0); Black: I: 10 (15.4), C: 15 (22.4); Latino: I: 36 (55.4), Con 41 (61.2); Asians: I: 4 (6.2), C: 3 (4.5) Education: NR	**Decision making: NR** **CV risk factors and CVDs** • Systolic BP: NS • Diastolic BP: NS • LDL cholesterol: NS • BMI: NS • A1c: NS **CV health behaviors:** • Average # fulfilled preventive care goals: 0.53, 95% CI: 0.19–0.86 • Number achieved hypertension goal: 1.8, 95% CI: 1.1- 3.2
Bailey 2016 United States	Age (Mean): I: 53 (13.8), C: 51.6 (11.5) Males: I: 52 (45.6), C: 50 (45.1) Race/Ethnicity: White: 101 (45) Black: 63 (28) Latino: 29 (13) Asians: 14 (6) Native American Or Alaska Native: 3 (1) Education: < High School: I: 14, C: 3 High School: I: 29 (25.4), C: 29 (26.1) > High School: I: 56, C: 68	**Decision making** • Lower decisional conflict: −22.2 [20.6] vs−7.5 [16.6]; p < 0.0001 • Self-efficacy: 3.7 (16.7) vs−3.9 (19.2); p < 0.0001 • Knowledge gain, % (SD): 35.0 % (22.3) vs 9.9 % (22.2); p < 0.0001 • Knowledge confidence, % (SD): 11.0 (12.8) vs 1.6 (8.9); p <0.0001 **CV risk factors and CVDs: NR** **CV health behaviors: NR**

Author Year Country	Patients' and clinician' sociodemographic Characteristics	Outcomes* SDM and Decision making aspects CV risk factors and CVDs CV health behaviors
Bailey 2018 United States	Age (Mean): 53; Males: 52 (46.5%) Race/Ethnicity: White: 53 (46.5) Black: 32 (28.1) Latino: 14 (12.3) Asian: 5 (4.4) Education: Grade School/High School: I: 43 (36); Some College: I: 30 (26); >College Graduate: I: 41 (36)	**Decision making** • Decisional self-efficacy: NS **CV risk factors and CVDs: NR** **CV health behaviors: NR**
Boulware 2020 United States	Age (Mean): 57 Males: I: 15 (28.3) C: 13 (24.5) T: 42 (26.1%) Race/Ethnicity: Black: 159 (100) Education: < High School: 62 (39.0) High School: 89 (56.0) > High School: 8 (5)	**Decision making** • Hypertension behavior: NS • Hypertension self-efficacy: NS • Problem-solving: NS • Clinic visit patient-centeredness: NS **CV risk factors and CVDs** • BP outcomes: NS • **CV health behaviors** • BP self-monitor use: NS • Self-management: NS
Branda 2013 United States	**Patients' Characteristics** Age (Mean): I: 57.9 (10.5) C: 57.3 (11.4) Males: I: 37 (70) C: 26 (52) Race/Ethnicity: White I: 53 (100), C: 36 (72) Education: < High School: 22 (44), C: 10 (22); Some College: I: 19 (38), C: 25 (54); College+: I: 9 (18), C: 11 (24) **Clinician' Characteristics** Age (Mean): T: 44.6, I: 44.6 Males: 24 (59) Race/Ethnicity: White: 39 (95) Asian: 1 (2.5) Experience (Mean Years): I: 14 Professions: NR	**Decision making** • Patient engagement in decision making by clinician: 21.4, p=0.01 • Discussed about medications: 77% vs. 45%, p<0.001 • More knowledge about options: 57% vs. 33%, p=0.002 **CV risk factors and CVDs** HbA1c: NS LDL: NS **CV health behaviors** • Adherence: NS
Buhse 2015 Germany	Age (Mean): I: 61.8 (6.5) C: 61.7 (6.5) Females: I: 36 (46.8) C: 36 (46.8)	**Decision making** • Higher levels of risk comprehension: 5.63, 95% CI: 4.82 - 6.44 • Realistic expectations: 3.67 95% CI: 3.23 - 4.11

Author Year Country	Patients' and clinician' sociodemographic Characteristics	Outcomes* SDM and Decision making aspects CV risk factors and CVDs CV health behaviors
	Race/Ethnicity: NR Education: NR	**CV risk factors and CVDs** • Blood pressure - achievement of treatment goal: NS • HbA1c - achievement of treatment goal: 10.1%, p= 0.046 • Smoking- achievement of treatment goal: NS **CV health behaviors** • Medication uptake for BP: NS • Medication uptake for statin: NS • Wished to take statins: 28.7%; p Value 0.001
Buhse 2018 Germany	Age (Mean): I: 59.5, C: 58.7 Females: I: 67 (44.4), C: 59 (46.1) Race/Ethnicity: NR Education: < High School: 55 (20) High School: 179 (64) > High School: 45 (16)	**Decision making** • Adequate risk knowledge: AOR 29.3, p=<0.001 • Informed choice - statins: AOR 16.6, p= <0.001 • Informed choice - BP: AOR 22.2, p= <0.001 • Informed choice - HbA1c: AOR 26.0, p= <0.001 • Informed choice: smoking: NS • Treatment goal match clinician & patients - BP: -4.0mm Hg, p= 0.005 • Treatment Goal match clinician & patients - HBA1c: -0.2, p= 0.003 **CV risk factors and CVDs: NR** **CV health behaviors** • Adherence to therapy - antihypertensive: NS • Adherence to therapy - statin: NS
Cheng 2021 China	Age (Mean): I: 56.13, C: 53.91 Males: I: 93 (76.86), C: 86 (71.07) Race/Ethnicity: NR Education: < High School: 71 (29.3) High School: 87 (35.9) > High School: 84 (34.7)	**Decision making** • Empowerment level: 0.176, p=0.027 • Emotional distress: −0.424, p= 0.027 • Diabetes distress: −0.180, p=0.042 • Regimen-related distress: −0.397, p= 0.011 **CV risk factors and CVDs: NR** **CV health behaviors: NR** **Additional outcome** • Quality of life: 4.151, p=0.004
Cooper 2011 United States	**Patients' Characteristics** Age (Mean): T: 61.3 I: 59.7 (11.9), C1: 63.7 (11.1), C2: 60.5 (12.0), C3: 62.4 (12.1) Females: 66% Race/Ethnicity: White: 101 (36) Black: 173 (62) Asians: 3 (1) Education: Education, Mean (Sd), Years: I: 11.3 (2.6), C1: 12.2 (2.1), C2: 11.8 (2.4), C3: 12.2 (2.3)	**Decision making** • Physicians participatory decision-making, reported by patients: +6.2 vs. –5.2, p=0.03 • Doctor facilitation of patient Involvement: 0.22 vs. −0.17, p = 0.03 • Information exchange : 0.32 vs. −0.22, p= 0.005 • Patient decision making: NS **CV risk factors and CVDs** • Changes in systolic BP: NS • Changes in diastolic BP: NS **CV health behaviors**

Author Year Country	Patients' and clinician' sociodemographic Characteristics	Outcomes* SDM and Decision making aspects CV risk factors and CVDs CV health behaviors
	Clinician' Characteristics Age (Mean): I: 41.8 (6.7), C: 44.3 (10.3) Females: I: 11 (50), C: 11 (58) Race/Ethnicity: White: 18 (43.9) Black: 12 (29.2) Latino: 1 (2.4) Asian: 10 (24.3) Experience (Mean Years): I: 10.0 (6.2), C: 12.6 (8.9) Professions: Physician: 44 (100%)	• Adherence to medications: NS
Coronado-Vázquez 2019 Spain	Age (Mean): I: 78.9 (0.94), C: 79.9 (0.73) Males: I: 19 (33.3), C: 25 (38.5) Race/Ethnicity: NR Education: None: 21 (20.1) Primary School: 80 (76.9) Secondary School: 2 (1.9) University: 1 (0.9)	**Decision making: NR** **CV risk factors and CVDs: NR** **CV health behaviors** • Proportion of patients with adapted medication: 32.5% vs. 27.9%, p= 0.008 • Probability of medication appropriateness OR=2.8, p=0.008 • Appropriateness of medication among patients with good adherence: 62.1% vs. 37.9%, p=0.005 • Average of inappropriate medications withdrawn: 0.34, p=0.04
Den Ouden 2017 Netherlands	Age (Mean): I: 70, C: 68.5 Males: I: 39(54.2), C: 50(58.8) Race/Ethnicity: NR Education: High: I: 12(16.7), C: 14(17.3) Middle: I: 23(31.9), C: 25(30.9) Low: I: 37(51.4), C: 42(51.9)	**Decision making: NR** **CV risk factors and CVDs** • HbA1c: NS • SBP: NS • Total cholesterol: NS • BMI: NS **CV health behaviors: NR**
Denig 2014 Netherlands	Age (Mean): I: 61.8 (8.5), C: 61.5 (8.5) Females: I: 94 (42), C: 54 (46) Race/Ethnicity: NR Education: Not More Than Primary School or Lower Vocational Education: I: 90 (40), C: 45 (38)	**Decision making** • Empowerment: NS • Presentation formats on patient empowerment: NS **CV risk factors and CVDs** • Uncontrolled SBP: NS • Mean SBP: NS • Uncontrolled HbA1c: NS • Mean HbA1c: NS **CV health behaviors** • Lipid regulating drug treatment: NS • Lipid regulating drug treatment with printed version of the decision aid: OR: 3.90, 95% CI: 1.29 to 11.80 • SBP intensification of drug treatment: NS

Author Year Country	Patients' and clinician' sociodemographic Characteristics	Outcomes* SDM and Decision making aspects CV risk factors and CVDs CV health behaviors
		• HbA1c intensification of drug treatment: NS • LDL intensification of drug treatment: NS
Dwinger 2020 Germany	Age (Mean): I: 66.29, C1: 67.28, C2: 66.9 (9.260), C3: 66.60 (9.156) Females, %: I: 54.4, C1: 57.5, C2: 54.7, C3: 55.9 Race/Ethnicity: NR Education: Apprenticeship: 63.90% Technical College: 14.10% University: 6.00% Other: 6.90%	**Decision making** • Patient activation: $p < 0.001$ • Health literacy: $p < 0.001$ • Process of behavior change (Stages of Change) p=0.005 **CV risk factors and CVDs** • Blood pressure measurement: $p < 0.001$ • BMI: $p = 0.009$ • Smoking: NS **CV health behaviors** • Physical activity (hours per week): p=0.030 • Physical activity (metabolic rate per week): p=0.048
Eaton 2011 United States	**Patients' Characteristics** Age (Mean): I: 54.0 (1.1), C: 52.3 (1.1) Males: I: 39.70%, C: 41.80% Race/Ethnicity: White: I: 95.80%, C: 95.70% Black: I: 1.30%, C: 1.20% Hispanic: I: 1.30%, C: 1.70% Asian: I: 0.70%, C: 0.80% American Indian: I: 0.50%, C: 0.50% Education: NR **Clinician' Characteristics** Age (Mean): I: 46.4 (8.4), C: 46.7 (6.3) Males: I: 16 (62%), C: 22 (76%) Race/Ethnicity: NR Experience (Mean Years): I: 15.0 (8.8), C: 15.8 (6.9) Professions: Physicians: 55 (100%)	**Decision making: NR** **CV risk factors and CVDs** • Percentage of patients who achieved LDL goals: NS • Percentage of patients who achieved non-HDL cholesterol goals: NS **CV health behaviors: NR** **Additional outcome** • Screening: NS
Eckman 2012 United States	Age (Mean): T: 59.97, I: 58.49, C: 61.37 Females: T: 104 (61.2), I: 57.80%, C: 64.40% Race/Ethnicity: White: 61 (35.9) Black: 109 (64.1) Education: High School Graduate: 58.80%	**Decision making: NR** • Diet information focused on saturated fat and cholesterol intake: NS **CV risk factors and CVDs** • Mean blood pressure: NS • Mean blood pressure: NS • Cigarette smoking: NS

Author Year Country	Patients' and clinician' sociodemographic Characteristics	Outcomes* SDM and Decision making aspects CV risk factors and CVDs CV health behaviors
		• Average number of cigarettes smoked per day among those who smoked: NS **CV health behaviors** • Take medication: NS • Exercise habits: NS
Edwards 2006 United Kingdom	Age (Mean): NR Females: T: 309 (60.8) Race/Ethnicity: White: 439 (86.4%) Education: NR	**Decision making** • Decisional conflict: NS • Satisfaction with information: NS **CV risk factors and CVDs: NR** **CV health behaviors: NR**
Farmer 2005 United Kingdom	Age (Mean): I: 24.5 (4.2), C: 23.2 (4.2) Males: I: 28(59.6), C: 27 (58.7) Race/Ethnicity: NR Education: NR	**Decision making: NR** **CV risk factors and CVDs** • A1C: NS **CV health behaviors: NR**
Grant 2008 United States	Age (Mean): T: 56.1, I: 58.8, C: 53.3 Females: T: 49%, I: 43%, C: 56% Race/Ethnicity: White: T: 88%, I: 93%, C: 84% Education: NR	**Decision making: NR** **CV risk factors and CVDs** • Blood pressure changes: NS • LDL-C level: NS **CV health behaviors** • Diabetes mellitus-related medication changes: 53% vs 15% ; p < 0.001 • Medication initiation or dosage adjustment for: - hyperglycemia (29% vs 15%;p=0.10) - hypertension (13% vs 0%;p=0.02) - hyperlipidemia (11% vs 0%;p=0.03)
Greenfield 1988 United States	Age (Mean): I: 49.8 (14.7), C: 49.5 (13.0) Females: I: 48%, C: 52% Race/Ethnicity: NR Education: Mean (Sd) Years: I: 13.5 (3.2) Years, C: 13.3 (2.6) Years	**Decision making** • Patient satisfaction: NS • Knowledge: NS • Patient involvement indicators: - Length of visit: NS - # of patient controlling behaviors: 5.06, p< 0.05 - Ratio of patient to physician conversational utterances: 6.25, p< 0.05 - Effectiveness of patient information seeking: 5.34, p< 0.05 **CV risk factors and CVDs** • Glycosylated Hemoglobin: 9.06 vs. 10.61, p<0.01 **CV health behaviors** • Self-care: NS • No change or decrease in treatment regimen: 5.58, p<0.01

Author Year Country	Patients' and clinician' sociodemographic Characteristics	Outcomes* SDM and Decision making aspects CV risk factors and CVDs CV health behaviors
Heisler 2014 United States	Age (Mean): I: 51, C: 52 Females: I: 76%, C: 66% Race/Ethnicity: Black: I: 53%, C: 32% Hispanic: I: 53%, C: 61% Education: Less Than High School: I: 39%, C: 65%	**Decision making** • Medication decisional conflict: NS • Knowledge about antihyperglycemic medications: NS • Satisfaction with clarity of medication information, 22.2 vs 13.0, p = 0.03 • Satisfaction with helpfulness of medication information, 21.5 vs 10.2, p = 0.007 • Improvement in diabetes distress: 14.1 vs -1.6, p < 0.001 • Diabetes care self-efficacy: NS **CV risk factors and CVDs** • HbA1c: NS **CV health behaviors** • Medication adherence: NS
Hsu 2016 United States	Age (Mean): I: 53.3, C: 53.8 Males: I: NR C: NR Race/Ethnicity: NR Education: NR	**Decision making** • Satisfaction with diabetes management: 2.1 vs 10.1, p = 0.01 **CV risk factors and CVDs** • HbA1c mean decline: p = 0.048 • Percentage reaching the glycemic target: NS • Weight: NS **CV health behaviors** • Insulin dose: NS
Hu 2021 China	Age (Mean): I: 53.62 (14.33), C: 54.77 (13.43) Males: I: 263 (60.6%), C: 248(57%) Race/Ethnicity: NR Education: NR	**Decision making** • Diabetes empowerment: 38.53 vs 26.00, p<0.001 • Diabetes knowledge:19.15 vs 16.71, p <0.01 **CV risk factors and CVDs** • HbA1c: 6.66 vs 7.45, p <0.001 • Fasting plasma glucose: 6.33 vs 7.13, p <0.001 • Postprandial plasma glucose: 7.72 vs 8.18, p <0.001 • Proportion of patients with hypoglycemia events: NS • Changes of body weight: NS • BMI: NS **CV health behaviors** • More diabetes self-care activities: p <0.01
Jaspers 2021 Netherlands	Age (Mean): I: 66, C1: 66(59-70), C2: 64 Males: I: 82%, C1: 86%, C2: 85% Race/Ethnicity: NR Education: NR	**Decision making** • Shared Decision Making: NS • Decisional conflict: individual 10-year absolute CVD risk group vs control: 22 vs 27, p = 0.001 CVD-free life-expectancy group vs control: 25 vs 27, p = 0.021

Author Year Country	Patients' and clinician' sociodemographic Characteristics	Outcomes* SDM and Decision making aspects CV risk factors and CVDs CV health behaviors
		• Patient Activation: NS • **CV risk factors and CVDs** • Median serum LDL-c levels: NS **CV health behaviors: NR**
Jouni 2017 United States	Age (Mean): I: 59 (4.9), C: 59 (5.2) Males: I: 48 (46.2%), C: 50 (48.5%) Race/Ethnicity: NR Education: College Education Or Higher: I: 53 (56.7%), C: 68 (66%)	**Decision making** • Shared decision-making: NS • Satisfaction with the clinical encounter: NS • Perception of the quality of the discussion: NS • Participation in decision-making: NS • Physician visit satisfaction: NS **CV risk factors and CVDs: NR** **CV health behaviors: NR**
Karagiannis 2016 Greece	Age (Mean): I: 65.8 (11.0), C: 64.4 (11.3) Females: I: 55 (54.5), C: 61 (59.2) Race/Ethnicity: NR Education: ≤High School Degree: 147 (73) >High School: 54 (27)	**Decision making** • Overall decisional comfort: NS • Knowledge: NS • Satisfaction with decision made: NS • Satisfaction with the conversation with the clinician: NS **CV risk factors and CVDs** • Change in HbA1c: NS • BMI: NS **CV health behaviors** • Proportion of days covered for all antidiabetic medications: NS • Missed medicine in prior week: NS
Kask-Flight 2021 Estonia	Age (Mean): I: 40.96 (7.22), C: 36.98 (7.93) Males: 100% Race/Ethnicity: NR Education: NR	**Decision making: NR** **CV risk factors and CVDs** • Systolic BP: NS • Systolic BP (Patients with Hypertension Grade 2): − 7.86, p = 0.038 • Diastolic BP: NS • Total cholesterol: NS • Reduced the number of cigarettes per day: − 6.05, p = 0.001 • BMI: NS **CV health behaviors**: **NR**
Keyserling 2014 United States	Age (Mean): 62 (0.4) Females: 186 (48) Race/Ethnicity: White: 292 (76) Black: 92 (24) Education: < High School: 68(18) High School: 144(37)	**Decision making: NR** **CV risk factors and CVDs** • Framingham Risk Score: −1.0%, p = 0.03 • Systolic BP: NS • Diastolic BP: NS • Total cholesterol: NS • HDL-C: NS

Author Year Country	Patients' and clinician' sociodemographic Characteristics	Outcomes* SDM and Decision making aspects CV risk factors and CVDs CV health behaviors
	>High School: 173(45)	• LDL-C: NS • Weight in kg: NS • Smoking: NS • HbA1c, those with diabetes: NS **CV health behaviors** • Dietary intake: NS • Physical activity: NS • Adherence: NS • Taking blood pressure medication: NS • Taking cholesterol medication: NS
Koelewijn-van Loon 2009 Netherlands	**Patients' Characteristics** Age (Mean): I: 56, C: 58 Males: I: 130 (43), C: 134 (47) Race/Ethnicity: NR Education: NR **Clinician' Characteristics** Age (Mean): I: 38 (7), C: 39 (9) Females: I: 13, C: 11 Race/Ethnicity: NR Experience: NR Professions: RNs: 24 (100%) I: 13, C: 11	**Decision making: NR** **CV risk factors and CVDs** • Cardiovascular 10-year risk: NS • Smoking: NS **CV health behaviors** • Consumption of vegetables/fruit: NS • Physical activity: NS • Intake of fat: NS
Koelewijn-van Loon 2010 Netherlands	**Patients' Characteristics** Age (Mean): T 57, I: 56, C: 58 Males: T: 45, I: 43, C: 47 Race/Ethnicity: NR Education: NR **Clinician' Characteristics** Age (Mean): I: 38, C: 39 Females: 24 Race/Ethnicity: NR Experience (Mean Years): NR Professions: RNs: 24 (100%)	**Decision making** • Appropriateness of anxiety: 131, $p < 0.01$ • More satisfied with the communication (Sum score): 35.4, $p<0.01$ • Absolute risk perception (mean): 3.6, $p < 0.01$ • Appropriateness of risk perception: NS **CV risk factors and CVDs: NR** • Smoking: OR 1.91, $p = 0.01$ **CV health behaviors** • Fat score: NS • Fruit (pieces/week): NS • Vegetables (tablespoons/week): NS • Physical activity: NS
Krones 2008 Germany	**Patients' Characteristics** Age (Mean): I: 59.1, C: 58.6 (12.5) Males: I: 231 (42.0), C: 265 (45.5) Race/Ethnicity: NR Education: No Or Basic Education: 604 (54)	**Decision making** • SDM steps reported: 1.99, $p<0.001$ • Patient participation and satisfaction: -0.80, $p<0.001$ • Decisional regret was significantly lower at follow-up: 3.39, $p = 0.02$ • Knowledge: NS **CV risk factors and CVDs**

Author Year Country	Patients' and clinician' sociodemographic Characteristics	Outcomes* SDM and Decision making aspects CV risk factors and CVDs CV health behaviors
	Medium Education: 337 (30) Higher Education: 182 (16) **Clinician' Characteristics** Age (Mean): NR Males: I: 27 (61.4%), C: 26 (55.3%) Race/Ethnicity: NR Experience (Mean Years): NR Professions: Physician: 91 (100%), I: 44 (48%), C: 47 (52%)	• Mean change of CVD risk: NS **CV health behaviors: NR**
Kulzer 2018 Germany	**Patients' Characteristics** Age (Mean): I: 64.5, C: 64.9 Males: I: 266 (60.5%), C: 261 (55.9%) Race/Ethnicity: NR Education: <High School: 701 (79) High School/Technical: I: 131 (15) University: 53 (6)	**Decision making** • Diabetes treatment satisfaction, status (Month 12): OR=0.92, p=0.0127 • Diabetes treatment satisfaction (Month 12): OR=1.8, p=0.0035 • Assessment of the quality of the analysis and discussion of blood glucose values: OR=1.4, p<0.0027 • More behavioral/ lifestyle recommendations for diabetes training: OR = 1.8; p = 0.045 **CV risk factors and CVDs** • Reduction in HbA1c (at 3, 6, 9 and 12 months, p<0.05); 3 months: 0.2%, p = 0.0054 **CV health behaviors** • Therapy adjustments: p < 0.01 • Better adherence: OR= 2.4, p=0.0003 • Physical activity/exercise: OR = 2.4; p = 0.0063 • Nutrition counseling OR = 2.2; p = 0.013
Kunneman 2022 United States	**Patients' Characteristics** Age (Mean): I: 59 (11), C: 62 (12) Females: I: 72 (38), C: 86 (53) Race/Ethnicity: White: I: 155 (82), C: 139 (86) Black: I: 24 (13), C: 14 (9) Education: High School Or Less: I: 66 (42), C: 50 (35); Vocational/4-Year College Degree: I: 76 (49), C: 84 (59); Graduate Degree: I: 14 (9), C: 8 (6), Adequate Literacy, N(%): I: 21 (13), C: 24 (17) **Clinician' Characteristics** Age (Mean): I: 45 (11) , C: 45 (12) Females: I: 26 (54), C: 27 (51) Race/Ethnicity: NR Experience (Mean Years): I: 12, C: 12	**Decision making** • Knowledge: 6.2, p=0.04 • Clinician involvement of patients: 7.3, p=0.003 • Decision conflict: NS • Treatment choice: NS • Patient satisfaction: NS • Clinician satisfaction: NS • Encounter length: NS • Perception of being informed: NS • Perception of being supported: NS • Having made a good decision: NS • Being satisfied with the information given: NS **CV risk factors and CVDs** • Glycemic control: NS **CV health behaviors**

Author Year Country	Patients' and clinician' sociodemographic Characteristics	Outcomes* SDM and Decision making aspects CV risk factors and CVDs CV health behaviors
	Professions: Physician: I: 39 (77), C: 46 (87); Advance Practitioner (Pa/Np) : I: 7 (15), C: 6 (11)	• Medication adherence: NS
Lauffenburger 2019 United States	**Patients' Characteristics** Age (Mean): I: 54.9 (8.1), C: 54.6 (8.4) Females: I: 34.60%, C: 39.80% Race/Ethnicity: NR Education: NR	**Decision making: NR** **CV risk factors and CVDs** • Diabetes control: NS • As-treated analyses, diabetes control: -0.48, 95%CI: -0.91, -0.05 • As-treated analyses, proportion achieving optimal HbA1c: 1.37, 95%CI: 0.86, 2.17 Note: as-treated analysis can introduce bias, therefore these significant results were not included in the intervention and outcomes summary table. **CV health behaviors** • Medication adherence: NS • As-treated analyses, medication adherence: NS • As-treated analyses, proportion achieving optimal adherence: NS
Lee 2016 South Korea	**Patients' Characteristics** Age (Mean): T 48.2 (12.8), I: 48.0 (13.3), C: 48.4 (12.4) Males: T: 381 (92.0), I: 184 (94.4), C: 197 (90.0) Race/Ethnicity: NR Education: NR	**Decision making: NR** **CV risk factors and CVDs: NR** • Smoking cessation after 6 months: NS • Smoking amount reduced after 6 months: NS **CV health behaviors** • Medication prescribed within 1 month: NS • Medication prescribed within 6 months: NS
Maindal 2014 Denmark	**Patients' Characteristics** Age (Mean): I: 62, C: 62 Females: T: 47%, I: 152 (47.2), C1: 86 (46.0), C2: 59 (48.0) Race/Ethnicity: NR Education: At Least Vocational Education: I: 207 (68.5) , C1: 118 (66.3), C2: 90 (76.3)	**Decision making** • Patient activation: 5.3, p = 0.017 • Perception of received care: NS **CV risk factors and CVDs** • Total cholesterol: -0.24mmol/l, p = 0.027 • Modelled cardiovascular risk at 3 years: NS **CV health behaviors: NR**
Mathers 2012 United Kingdom	**Patients' Characteristics** Age (Mean): I: 66 (39-82), C: 62 (42-87) Males: I: 50 (52%), C: 46 (57%) Race/Ethnicity: White: I: 85 (89.5%), C: 71 (88.8%) Education: Duration Of Education (Years) (Sd): I: 12.22 (4.83), C: 1.49 (2.74)	**Decision making** • Decisional Conflict: 17.4 vs 25.2, p<0.001 • Better knowledge: 51.6% vs 28.8%, p<0.001 • Better realistic expectations: - Risk of hypo: 81.0% vs 5.2%, p<0.001 - Risk of weight gain: 70.5% vs 5.3%, p<0.001 - Risk of complications: 26.3% vs 5.0% respectively, p<0.001 • Autonomous in decision-making: 64.1% vs 42.9%, p=0.012 **CV risk factors and CVDs**

Author Year Country	Patients' and clinician' sociodemographic Characteristics	Outcomes* SDM and Decision making aspects CV risk factors and CVDs CV health behaviors
		• Glycemic control: NS **CV health behaviors: NR**
Moin 2019 United States	**Patients' Characteristics** Age (Mean): I: 55.9 (11.5), C: 56.3 (11.6) Females: I: 58.70%, C: 66.80% Race/Ethnicity: White: I: 52.20%, C: 52.60% Black: I: 13.10%, C: 16.20% Latino: I: 15.20%, C: 14.40% Asian: I: 21.50%, C: 20.20% Education: NR	**Decision making: NR** **CV risk factors and CVDs** • At 12-month adjusted weight loss: − 5.1 lbs, p < 0.001 **CV health behaviors** • Use metformin: 19% vs. 1.6%, p < 0.001 • Uptake of DPP and/or metformin: 38% vs. 2%, p < 0.001
Montgomery 2003 United Kingdom	**Patients' Characteristics** Age (Mean): I: 57 (11), C1: 59 (9), C2: 60 (10), C3: 58 (11) Females: I: 49%, C1: 46%, C2: 47%, C3: 49% Race/Ethnicity: NR Education: NR	**Decision making** • Decisional conflict (decision analysis): 27.6 vs 38.9, p <0.001 Decisional conflict (video/leaflet): 30.3 vs 36.8, p = 0.021 • Knowledge (decision analysis): 73% vs 67%, p = 0.003 Knowledge (video/leaflet): 75% vs 65%, p <0.001 • Decision quality (decision analysis and video/leaflet): NS • Increased state anxiety (decision analysis and video/leaflet): NS **CV risk factors and CVDs: NR** **CV health behaviors** • Intention to start treatment: NS • Proportion of patients prescribed antihypertensive medication: NS
Mullan 2009 United States	**Patients' Characteristics** Age (Mean): I: 62.1 (10.9), C: 62.2 (12.4) Females: I: 22 (46), C: 18 (49) Race/Ethnicity: NR Education: High School Education Completed: I: 46 (96), C: 34 (94) **Clinician' Characteristics** Age (Mean): NR Males: NR Race/Ethnicity: NR Experience (Mean Years): NR Professions: Nurse Practitioner: I: 3 (14), C: 1 (5); Physician: I: 17 (81), C: 13 (68); Residents: I: 1(5), C: 5 (26)	**Decision making** • Involvement in making decisions: 21.8, 95% CI, 13.0-30.5 • Improved knowledge: 1.10, 95% CI, 0.11, 2.09 • Decisional Conflict: NS • Trust in Physician: NS • Clarity of information: NS • Helpfulness of the information: NS **CV risk factors and CVDs** • HbA1c (at 6 months): NS **CV health behaviors** • Worse adherence (at 6 months): −8.88, 95%CI: −13.6 to −4.14 • Did not miss a dose in last week (at 6 months): 0.74, 95%CI: 0.24 to 2.32
Naik 2011 United States	**Patients' Characteristics** Age (Mean): I: 63.82 (7.9), C: 63.45 (7.8) Males: I: NR C: NR Race/Ethnicity:	**Decision making** • Self-efficacy: 0.84, p=0.02 **CV risk factors and CVDs** • HbA1c: difference 0.67%, p=0.03 **CV health behaviors: NR**

Author Year Country	Patients' and clinician' sociodemographic Characteristics	Outcomes* SDM and Decision making aspects CV risk factors and CVDs CV health behaviors
	Black I: 15 (33.3), C: 12 (28.6) Education: At Least Some College Education: I: 31 (69), C: 31 (74)	
O'Malley 2022 United States	**Patients' Characteristics** Age (Mean): I: 65.6, C: 66.5 Females: I: 52.30%, C: 54.10% Race/Ethnicity: White: I: 43.8, C: 29.5 Black: I: 50, C: 62.3 Latino: I: 2.1, C: 3.3 Education: NR **Clinician' Characteristics** Age (Mean): 47 Females: 6 (54%) Race/Ethnicity: White: 5 (45%) Experience (Mean Years): NR Professions: Physicians: 11 (100%)	**Decision making** • Shared decision making: NS • Patient activation: 4.4 vs. 3.8, p = 0.047 • Patient satisfaction: NS • Patient trust: NS • Physician perceived difficulty of the encounter: NS **CV risk factors and CVDs** • Blood pressure change: NS • Blood pressure control: NS **CV health behaviors** • Medication adherence: NS • Change in adherence over time: NS
Peiris 2015 Autralia	**Patients' Characteristics** Age (Mean): I: 60.7 (12.4), C: 61.3 (12.7) Males: I: 7729 (40%), C: 8536 (44%) Race/Ethnicity: Aboriginal/Torres Strait Islander: T: 19385, I: 3624 (18.7), C: 3292 (17.0) Education: NR	**Decision making: NR** **CV risk factors and CVDs** • Systolic BP: NS • Low-density lipo-protein cholesterol: NS • Total & HDL cholesterol: Risk ratio: 1.19, p = 0.02 • **CV health behaviors** • Recommended prescriptions: NS • Treatment escalations for antiplatelet: 17.9% vs 2.7%; p<0.001 • Treatment escalations for lipid-lowering: 19.2% vs 4.8%; p<0.001 • Treatment escalations for blood pressure–lowering medications: 23.3% vs 12.1%; p=0.02 **Additional outcome** • Appropriate screening for CVD risk: Risk ratio: 1.25, p=0.02
Perestelo-Pérez 2016 Spain	**Patients' Characteristics** Age (Mean): I: 63.9 (9.7), C: 59.6 (12.3) Females: I: 35 (41), C: 28 (34) Race/Ethnicity: NR Education: Primary: I: 63(74.0%), C: 63(78.8%); Secondary: I: 16(18.8%), C: 12(15%); University: I: 6(7.1%), C: 5(6.3%)	**Decision making** • Decisional conflict: NS • Knowledge: 1.11, p = 0.01 • Satisfaction with decision-making process: 10.62, p = 0.01 • Consultation time: NS • Perception of the 10-year risk of myocardial infarction - without statins: 3.14, p = 0.01 - with statins: 2.47, p = 0.08

Author Year Country	Patients' and clinician' sociodemographic Characteristics	Outcomes* SDM and Decision making aspects CV risk factors and CVDs CV health behaviors
		CV risk factors and CVDs: NR **CV health behaviors** • Adherence: NS • Taking all pills during the last week: NS
Prabhakaran 2019 India	**Patients' Characteristics** Age (Mean): I: 55.8(11.0), C: 54.5 (10.9) Males: I: 1056 (57.3), C: 985 (53.1) Race/Ethnicity: NR Education: Illiterate, N (%): I: 772 (41.9), C: 635 (34.5); Primary Education, N (%): I: 331 (18.0), C: 374 (20.3); Secondary Education And Above, N (%): I: 739 (40.1), C: 847 (45.6)	**Decision making: NR** **CV risk factors and CVDs** • Systolic BP: NS • HbA1c: NS • Total cholesterol: NS • Change in tobacco use: NS • Body mass index: NS **CV health behaviors: NR**
Ramallo-Fariña 2021 Spain	**Patients' Characteristics** Mean Age: T 55.7 (7.1) Female: 51.9% Race/Ethnicity: NR Education: NR Employed: NR	**Decision making** • Knowledge (at 12 and 24 months, PTI): p<0.007 Knowledge (at 24 months, PFI): p=0.01 Knowledge (at 12 months, CBI): p=0.008 • Self-empowerment (at 24 months, PTI): p=0.002 Self-empowerment (at 12 months, PFI): p<0.001 Self-empowerment (at 12 and 24months, CBI): p<0.008 • Distress (at 24 months, PTI): p=0.01 Distress (at 24 months, PFI): p=0.03 Distress (at 24 months, CBI): p=0.01 **CV risk factors and CVDs: NR** • Proportion of patients who quit smoking PTI at 12 and 24 months: p < 0.012 PFI: NS CBI at 24 months: p=0.012 **CV health behaviors** • Adherence to dietary recommendations PTI: at 12 and 24 months: p<0.01 PFI at 12 months: p<0.001 CBI at 24 months: p=0.004 • Medication adherence (PTI, PFI, CBI): NS
Rost 1991 United States	**Patients' Characteristics** Mean Age: 40 Female: 60% Education: 13.2 Y Employed: 52.4%	**Decision making: NR** • Asked for questions: 7.4 vs 3.0, p<0.001 **CV risk factors and CVDs:** • Glycosylated hemoglobin levels at follow-up: NS **CV health behaviors: NR**

Author Year Country	Patients' and clinician' sociodemographic Characteristics	Outcomes* SDM and Decision making aspects CV risk factors and CVDs CV health behaviors
		Additional outcomes: • Fewer physical limitations in activities of daily living at 4-month follow-up, $p = 0.02$ • Metabolic control ↑ only for intervention patients , $p = 0.02$
Smith 2008 United States	**Patients' Characteristics** Mean Age: 65 Female: 53% Race: NR Education: NR **Clinician' Characteristics** Physicians: 100% Male: 64% Median Years In Practice: 13-15	**Decision making: NR** **CV risk factors and CVDs** • HbA1c: NS • LDL: NS • SBP: NS • Estimated risk of coronary artery: NS • Not smoking or advised to quit: OR 1.80, p=0.04 **CV health behaviors: NR**
Sperl-Hillen 2018 United States	**Patients' Characteristics** Mean Age: 59 Female: 26% White: 79% Black: 12% Education: NR	**Decision making: NR** **CV risk factors and CVDs:** • Better predicted annual rate of change in absolute 10-year CV risk, -2.24%, $p < 0.001$ • 10-year CV risk at 12 months post-index: 22.5% vs 24.4%, $p < 0.03$ **CV health behaviors: NR**
Swoboda 2017 United States	**Patients' Characteristics** Mean Age: 56.76 (I); 55.41 (C) Female: 67.57% (I); 70.59% (C) White: 78.38% (I); 70.59% (C) Black: 21.62% (I); 17.65% (C) High School Diploma: 10.81% (I); 5.88% (C) Full-Time Employed: 56.76% (I); 52.94% (C)	**Decision making:** • Diabetes empowerment at week 16, 0.26 vs -0.27, p = 0.045 • Diabetes self-efficacy: NS • Diabetes distress: NS **CV risk factors and CVDs: NR** **CV health behaviors:** • Diet quality: NS • **Additional outcome** • Depressive symptoms: NS
Tinsel 2013 Germany	**Patients' Characteristics** Mean Age: 63.8 (I); 65.0 (C) Male: 46.7% (I); 44.7% (C) Race: NR Education: NR Employment Status: NR	**Decision making:** • Perceived participation: NS • Knowledge about hypertension: NS **CV risk factors and CVDs:** • SBP: NS • DBP: NS • Cardiovascular risk score: NS **CV health behaviors:** • Adherence: NS
Tinsel	**Patients' Characteristics**	**Decision making:**

Author Year Country	Patients' and clinician' sociodemographic Characteristics	Outcomes* SDM and Decision making aspects CV risk factors and CVDs CV health behaviors
2018 Germany	Mean Age: 65.1 (I); 59.3 (C) Female: 52.4% (I); 60.0% (C) Race: NR 9 Years Of Education: 47.6% (I); 44.4% (C)	• Patient activation scores: 3.30, $p = 0.023$ **CV risk factors and CVDs:** • Cardiovascular risk score: NS • Systolic blood pressure: NS • Total cholesterol: NS • HDL cholesterol: NS • BMI: NS **CV health behaviors: NR**
Tusa 2021 Finland	**Patients' Characteristics** Age (Mean): I: 69, C: 69 Female: I: 54% , C: 50% Race/Ethnicity: NR Education: NR	**Decision making: NR** **CV risk factors and CVDs: NS** • BMI: NS • Haemoglobin A1c: NS • SBP: NS • DBP: NS **CV health behaviors: NR**
Tutino 2017 China	**Patients' Characteristics** Age (Mean): I: 56.1, C:56.8 Male: I: 54.4%, C: 54.5% Race/Ethnicity: NR Education: NR	**Decision making: NR** **CV risk factors and CVDs:** • HbA1c: NS • SBP: NS • LDL cholesterol: NS • Blood glucose defaulters: 25.6% vs. 32.0%, p < 0001 **CV health behaviors:** • Blood glucose self-monitoring; 50.5% vs. 44.2%, p = 0.005 • Physical activity: NS • Adherence to balanced diet: NS
van Steenkiste 2007 Netherlands	**Patients' Characteristics** Mean Age: 54 (I); 54 (C) Male: 45% (I); 45% (C) Race: NR Education: NR **Clinician' Characteristics** Mean Age: 49 (I); 47 (C) Male: 38% (I); 35% (C) Mean Work Experience: 19 (I); 16 (C) Full-Time Employment: 38% (I); 21% (C)	**Decision making** • Provider's performance: NS • Patients' risk perception: NS **CV risk factors and CVDs: NR** **CV health behaviors:** • Physical activity in men: OR 3.8, p < 0.05
Warner 2015 United States	**Patients' Characteristics** Age (Mean): I: 54, C: 53 Female: I: 44% , C: 57%	**Decision making:** • Improved measures of decisional quality: 86 vs 76, p= 0.0003 • Patient involvement in decision making: 46 vs 23, p< 0.0001

Author Year Country	Patients' and clinician' sociodemographic Characteristics	Outcomes* SDM and Decision making aspects CV risk factors and CVDs CV health behaviors
	Race/Ethnicity: White: I: 86% , C:95% (C) Education: Some College: I: 65%, C: 62%	• Clinician decisional comfort: 81 vs 74, p=0.034 • Smoking knowledge: NS **CV risk factors and CVDs: NR** **CV health behaviors: NS**
Weymiller 2007 United States	**Patients' Characteristics** Age (Mean): I: 64, C:66 Female: I: 31%, C: 57% Race/Ethnicity: NR Education: High School Completed: I: 98%, C: 87%	**Decision making:** • Patients favored using the decision aid: OR 2.8, 95% CI, 1.2-6.9 • Knowledge: 2.4, 95% CI, 1.5-3.3 • Decisional conflict: −10.6, 95% CI, −15.4 to −5.9 **CV risk factors and CVDs:** • Estimated cardiovascular risk: OR 22.4, 95% CI, 5.9- 85.6 • Potential absolute risk reduction with statin drugs: OR 6.7, 95% CI, 2.2-19.7 **CV health behaviors:** • Missing medication dose: OR 3.4, 95% CI, 1.5-7.5
Wollny 2019 Germany	**Patients' Characteristics** Age (Mean): I: 65.9, C: 65.8 Female: I: 44.6%, C: 46.7% Race/Ethnicity: NR Education: NR	**Decision making: NS** Shared decision making: NS Patient-centeredness: NS **CV risk factors and CVDs: NR** **CV health behaviors: NR**
Yu 2020 Canada	**Patients' Characteristics** Age (Mean): 65.9 (I); 65.8 (C) Female: 54.9% (I); 41.4% (C) White: 63.3% (I); 67.6% (C) Race/Ethnicity: NR Education: Bachelor's Degree: 23.3% (I); 16.0% (C) **Clinician' Characteristics** Female: 72% (I); 46% (C)	**Decision making** • Reduction in total decisional conflicts: NS • Diabetes distress: NS • Patient assessment of chronic illness care: 0.7, p<0.001 **CV risk factors and CVDs: NR** **CV health behaviors: NR** **Additional outcome** • Health-related quality of life: NS

*Outcomes reported as total difference, or intervention versus control and P value.
NR: Not Reported; NS: Non-significant. I: Intervention Group; C: Control Group; T: Total groups; BP: Blood Pressure; RCTs: Randomized Controlled Trials, OR: Odds Ratio; CVD: Cardiovascular disease

eTable 3. Summary of Interventions

Author, Year, Country	Country	Target	Main Topic	Frequency (F) and duration (D)	Patients' intervention										Clinician' intervention/ training				Decision aid used
					Individual consultation	Group session	Workbook, card, diary, printed materials, etc	Text message	Email	Software/ app	Website	Phone	Video	Behavior change techniques (including motivational	SDM skills	Communication or education skills, motivational interviewing	Behavior change techniques	Training in the use of decision aid	
Adarkwah 2016, Germany	Germany	Patients and clinician	multiple CVD risk factors	F: Once in 3 months D: NR	X					X	X					X		X	Arriba software
Applegate 2021 United States	United States	Patients	multiple CVD risk factors	F: 4 monthly visits followed by 2 quarterly visits D: 40 min	X		X					X		X			X		None
Bailey 2016 United States	United States	Patients	diabetes	F: Once D: 30 min				X	X		X		X					X	Diabetes decision Aid for type 2 diabetes mellitus
Bailey 2018, United States	United States	Patients	diabetes	F: Once D: NR	X						X							X	Diabetes Decision Aid for type 2 diabetes mellitus
Boulware 2020, United States	United States	Patients	hypertension	F: Once D: NR	X		X					X							None
Branda 2013, United States	United States	Patients and clinician	diabetes	F: Once D: NR	X													X	DA for diabetes medication choice, and statin choice
Buhse 2015, Germany	Germany	Patients and clinician	diabetes	F: Once D: 90 min	X						X		X		X	X		X	Evidence-based decision aid for patients on the

Author, Year, Country	Country	Target	Main Topic	Frequency (F) and duration (D)	Patients' intervention										Clinician' intervention/ training				Decision aid used
					Individual consultation	Group session	Workbook, card, diary, printed materials, etc	Text message	Email	Software/ app	Website	Phone	Video	Behavior change techniques (including motivational	SDM skills	Communication or education skills, motivational interviewing	Behavior change techniques	Training in the use of decision aid	
																			preventi on of heart attack
Buhse 2018, Germany	Germany	Patient s and clinicia n	diabet es	F: NR D: NR	X		X								X			X	An evidence -based patient decision aid
Cheng 2021, China	China	Patient s	diabet es	F: Weekly interventio n D: 6 weeks	X	X						X							None
Cooper 2011, United States	United States	Patient s and clinicia n	hypert ensio n	F: Bimonthly and monthly D: NR			X								X				None
Coronado-Vázquez 2019, Spain	Spain	Patient s and clinicia n	multi ple CVD risk factor s and medic ation	F: One time visit to doctor's office D: NR	X						X	X	X					X	A decision support tool in paper format
Den Ouden 2017, Netherland s	Netherlan ds	Patient s and clinicia n	multi ple CVD risk factor s	F: 2 times 12 months apart D: NR	X										X			X	OPTIM AL decision support aid
Denig 2014, Netherland s	Netherlan ds	Patient s	diabet es	F: Once D: NR	X		X									X		X	A decision aid for people with diabetes
Dwinger 2020, Germany	Germany	Patient s	multi ple CVD risk	F: Every six weeks D: 1 year								X		X					None

Author, Year, Country	Country	Target	Main Topic	Frequency (F) and duration (D)	Patients' intervention										Clinician' intervention/ training				Decision aid used
					Individual consultation	Group session	Workbook, card, diary, printed materials, etc	Text message	Email	Software/ app	Website	Phone	Video	Behavior change techniques (including motivational	SDM skills	Communication or education skills, motivational interviewing	Behavior change techniques	Training in the use of decision aid	
			factors																
Eaton 2011, United States	United States	Patients and clinician	multiple CVD risk factors	F: NR D: 1 hour	X		X				X		X			X		X	A personal digital assistant (PDA)-based decision support tool for physician
Eckman 2012, United States	United States	Patients	multiple CVD risk factors	F: NR D: 70 min	X		X						X						None
Edwards 2006, United Kindom	United Kingdom	Patients	diabetes	F: Once D: NR									X						None
Farmer 2005, United Kingdom	United Kingdom	Patients	diabetes	F: 3 times over 9 months D: NR	X		X				X		X						None
Grant 2008, United States	United States	Patients	diabetes	F: NR D: NR							X		X						None
Greenfield 1988, United States	United States	Patients	diabetes	F: Twice D: 20 min	X														None
Heisler 2014, United States	United States	Patients	diabetes	F: 4 times during 6 weeks D: 1.5-2 hours	X		X				X	X	X			X			None

Author, Year, Country	Country	Target	Main Topic	Frequency (F) and duration (D)	Patients' intervention										Clinician' intervention/ training				Decision aid used
					Individual consultation	Group session	Workbook, card, diary, printed materials, etc	Text message	Email	Software/ app	Website	Phone	Video	Behavior change techniques (including motivational	SDM skills	Communication or education skills, motivational interviewing	Behavior change techniques	Training in the use of decision aid	
Hsu 2016, United States	United States	Patients	diabetes	F: Weekly D: 12 weeks	X			X		X			X						None
Hu 2021, China	China	Patients	diabetes and medication	F: 5 times over 12 weeks D: NR	X														None
Jaspers 2021, Netherlands	Netherlands	Patients	CVD risk	F: Once D: NR	X		X					X	X						None
Jouni 2017, United States	United States	Patients	multiple CVD risk factors	F: NR D: NR	X						X							X	A modified version of the Statin Choice decision aid
Karagiannis 2016, Greece	Greece	Patients	diabetes	F: initial visit, 12 weeks, and 24 weeks D: 6 months	X		X				X							X	Greek version of the Diabetes Medication Choice Decision Aid
Kask-Flight 2021, Estonia	Estonia	Patients and clinician	multiple CVD risk factors	F: NR D: 3 months	X						X							X	A computer-based DA program, ARRIBA HERZ
Keyserling 2014, United States	United States	Patients	smoking	F: 7 times D: 45-60 min followed by 15-30 min	X						X		X					X	A decision aid for CVD

Author, Year, Country	Country	Target	Main Topic	Frequency (F) and duration (D)	Patients' intervention										Clinician' intervention/ training				Decision aid used
					Individual consultation	Group session	Workbook, card, diary, printed materials, etc	Text message	Email	Software/ app	Website	Phone	Video	Behavior change techniques (including motivational	SDM skills	Communication or education skills, motivational interviewing	Behavior change techniques	Training in the use of decision aid	
Koelewijn-Van Loon 2009, Netherlands	Netherlands	Patients and clinician	multiple CVD risk factors	F: Twice D: 15-20 min	X		X				X	X						X	A decision aid for CVD
Koelewijn-Van Loon 2010, Netherlands	Netherlands	Patients and clinician	multiple CVD risk factors	F: Twice D: 20 min	X							X				X			None
Krones 2008, Germany	Germany	Patients and clinician	CVD risk	F: NR D: NR	X											X		X	A decision aid for CVD
Kulzer 2018, Germany	Germany	Patients and clinician	diabetes and medication	F: 6 times D: NR	X										X				None
Kunneman 2022, United States	United States	Patients and clinician	diabetes and medication	F: Once D: NR	X		X											X	A Diabetes Medication Choice conversation aid
Lauffenburger 2019, United States	United States	Patients	diabetes and medication	F: Four times D: 30 min			X					X			X			X	A postcard sized SDM tool
Lee 2016, South Korea	South Korea	Patients	smoking	F: Once D: 7-minute video & 5-15 minutes of routine medical care & 5-10 minutes of smoking cessation counseling	X						X		X					X	A decision aid

Author, Year, Country	Country	Target	Main Topic	Frequency (F) and duration (D)	Patients' intervention										Clinician' intervention/ training				Decision aid used
					Individual consultation	Group session	Workbook, card, diary, printed materials, etc	Text message	Email	Software/ app	Website	Phone	Video	Behavior change techniques (including motivational	SDM skills	Communication or education skills, motivational interviewing	Behavior change techniques	Training in the use of decision aid	
				and prescription															
Maindal 2014, Denmark	Denmark	Patients and clinician	diabetes	F: 2 interviews and 8 group session D: 18 h over 3 months	X	X											X		None
Mathers 2012, United Kingdom	United Kingdom	Patients and clinician	diabetes	F: NR D: NR	X										X	X		X	A PANDAs decision aid
Moin 2019, United States	United States	Patients	diabetes and medication	F: NR D: 35-45 min	X		X								X			X	A decision aid for diabetes prevention
Montgomery 2003, England, United Kindom	United Kingdom	Patients	hypertension and medication	F: NR D: 60 min	X		X			X	X		X					X	A simple decision tree
Mullan 2009, United States	United States	Patients	diabetes and medication	F: Once D: 3 min	X		X											X	The Diabetes Medication Choice decision aid tool
Naik 2011, United States	United States	Patients	diabetes	F: Every 3 weeks D: 3 months, 1	X	X													None

Author, Year, Country	Country	Target	Main Topic	Frequency (F) and duration (D)	Patients' intervention										Clinician' intervention/ training				Decision aid used
					Individual consultation	Group session	Workbook, card, diary, printed materials, etc	Text message	Email	Software/ app	Website	Phone	Video	Behavior change techniques (including motivational	SDM skills	Communication or education skills, motivational interviewing	Behavior change techniques	Training in the use of decision aid	
				hour/each session															
O'malley 2022, United States	United States	Patients and clinician	multiple CVD risk factors and medication	F: Once D: NR			X								X				None
Peiris 2015, Australia	Australia	Patients and clinician	CVD risk	F: Monthly D: 48 min						X									None
Perestelo-Pérez 2016, Spain	Spain	Patients and clinician	CVD risk and medication	F: Once D: 1 hour	X		X											X	A decision aid for CVD
Prabhakaran 2019, India	India	Patients and clinician	multiple CVD risk factors	F: NR D: 12 months			X	X		X								X	mWellcare system
Ramallo-Fariña 2021, Spain	Spain	Patients and clinician	diabetes	F: Every 3 months D: 2 years	X	X	X	X			X				X			X	A decision-making aid for diabetes prevention
Rost 1991, United States	United States	Patients	diabetes	F: 2 D: 45 min + 1hr	X		X											X	Decision tree
Smith 2008, United States	United States	Patients and clinician	diabetes	F: NR D: NR									X					X	Electronic decision support system

Author, Year, Country	Country	Target	Main Topic	Frequency (F) and duration (D)	Patients' intervention										Clinician' intervention/ training				Decision aid used
					Individual consultation	Group session	Workbook, card, diary, printed materials, etc	Text message	Email	Software/ app	Website	Phone	Video	Behavior change techniques (including motivational	SDM skills	Communication or education skills, motivational interviewing	Behavior change techniques	Training in the use of decision aid	
Sperl-Hillen, 2018 United States	United States	Patients and clinician	diabetes	F: NR D: NR							X							X	EHR-integrated, point-of-care clinical decision support system
Swoboda 2017, United States	United States	Patients	diabetes	F: one in-person session and bi-weekly phone call till week 16 D: NR	X							X		X					None
Tinsel 2013, Germany	Germany	Clinician	hypertension	F: Once D: NR											X	X			None
Tinsel 2018, Germany	Germany	Patients	CVD risk	F: 4 consultations D: NR	X		X											X	DECADE brochure
Tusa 2021, Finland	Finland	Patients	CVD risk	F: One health care visit D: 30-60 minutes with nurse and 30-40 minutes with general practitioner	X														None
Tutino 2017, China	China	Patients and clinician	diabetes	F: One intervention session and at least 2 follow-up facilitated by a nurse coordinator D: 2-4 hours of	X						X							X	Web-based disease management program

Author, Year, Country	Country	Target	Main Topic	Frequency (F) and duration (D)	Patients' intervention										Clinician' intervention/ training				Decision aid used
					Individual consultation	Group session	Workbook, card, diary, printed materials, etc	Text message	Email	Software/ app	Website	Phone	Video	Behavior change techniques (including motivational	SDM skills	Communication or education skills, motivational interviewing	Behavior change techniques	Training in the use of decision aid	
				diabetes education															
van Steenkiste 2007, Netherlands	Netherlands	Patients and clinician	multiple CVD risk factors	F: One training and two consultations D: 8 months	X		X										X	X	Decision support tool
Warner 2015, United States	United States	Patients and clinician	smoking	F: Once D: NR	X		X											X	Decision aid
Weymiller 2007, United States	United States	Patients and clinician	diabetes	F: Once and 3-month follow-up D: NR	X		X											X	Statin Choice decision aid
Wollny 2019, Germany	Germany	Patients and clinician	diabetes	F: Once D: NR	X										X	X		X	Electronic decision aid
Yu 2020, Canada	Canada	Patients and clinician	diabetes	F: NR D: NR	X								X		X	X		X	Web-based patient decision aid

X: Reported in this study. NR: not reported. F: Frequency. D: duration. SMD: shared decision-making. CVD: cardiovascular disease.

eTable 4. Studies Incorporating Decision Aids in the Intervention

Author, Year, Country	Target and main topic	Decision aid	Format
Adarkwah 2016, Germany	Patients and clinician, multiple CVD risk factors	Arriba software	Software application
Bailey 2016, United States	Patients only, diabetes	Diabetes decision Aid for type 2 diabetes mellitus	Online
Bailey 2018, United States	Patients only, diabetes	Diabetes Decision Aid for type 2 diabetes mellitus	Online
Branda 2013, United States	Patients and clinician, diabetes	Decision aid for diabetes medication choice, and statin choice	Online
Buhse 2015, Germany	Patients and clinician, diabetes	Evidence-based decision aid for patients on the prevention of heart attack	Online
Buhse 2018, Germany	Patients and clinician, diabetes	An evidence-based patient decision aid	Online
Coronado-Vázquez 2019, Spain	Patients and clinician, multiple CVD risk factors and medication	A decision support tool in paper format	Paper-based
Den Ouden 2017, Netherlands	Patients and clinician, multiple CVD risk factors	OPTIMAL decision support aid	Paper-based
Denig 2014, Netherlands	Patients only, diabetes	A decision aid for people with diabetes	Computer-based
Eaton 2011, United States	Patients and clinician, multiple CVD risk factors	A personal digital assistant -based decision support tool for physician	Personal digital assistant (PDA)-based
Jouni 2017, United States	Patients only, multiple CVD risk factors	A modified version of the Statin Choice decision aid	Online
Karagiannis 2016, Greece	Patients only, diabetes	Greek version of the Diabetes Medication Choice Decision Aid	Online
Kask-Flight 2021, Estonia	Patients and clinician, multiple CVD risk factors	A computer-based decision aid program, ARRIBA HERZ	Computer-based
Keyserling 2014, United States	Patients only, smoking	A decision aid for CVD	Online
Koelewijn-Van Loon 2009, Netherlands	Patients and clinician, multiple CVD risk factors	A decision aid for CVD	Booklet-based
Krones 2008, Germany	Patients and clinician, CVD risk	A decision aid for CVD	Online
Kunneman 2022, United States	Patients and clinician, diabetes and medication	A Diabetes Medication Choice conversation aid	Online
Lauffenburger 2019, United States	Patients only, diabetes and medication	A postcard sized SDM tool	Postcard-based
Lee 2016,	Patients only, smoking	A decision aid	Video-based

South Korea			
Mathers 2012,United Kingdom	Patients and clinician, diabetes	A PANDAs decision aid	Postcard-based
Moin 2019, United States	Patients only, diabetes and medication	A decision aid for diabetes prevention	Online
Montgomery 2003, England, United Kingdom	Patients only, hypertension and medication	A simple decision tree	Decision tree
Mullan 2009, United Sates	Patients only, diabetes and medication	The Diabetes Medication Choice decision aid tool	Postcard-based
Perestelo-Pérez 2016, Spain	Patients and clinician, CVD risk and medication	A decision aid for CVD	Online
Prabhakaran 2019, India	Patients and clinician, multiple CVD risk factors	mWellcare system	Software application
Ramallo-Fariña 2021, Spain	Patients and clinician, diabetes	A decision-making aid for diabetes prevention	Online
Rost 1991, United States	Patients only, diabetes	Decision tree	Decision tree
Smith 2008, United States	Patients and clinician, diabetes	Electronic decision support system	Online
Sperl-Hillen 2018, United States	Patients and clinician, cardiovascular risk	EHR-integrated, point-of-care clinical decision support system	Online
Tinsel 2018, Germany	Patients, CVD risk	DECADE Brochure	Brochure-based
Tutino 2017, China	Patients, diabetes	Web-based disease management program	Online
van Steenkiste 2007, Netherlands	Clinician and patients, multiple CVD risk factors	Decision support tool	Booklet-based
Warner 2015, United States	Clinician and patients, smoking	Decision aid	Postcard-based
Weymiller 2007, United States	Clinician and patients, diabetes	Decision aid	Online
Wollny 2019, Germany	Clinician and patients, diabetes	Electronic decision aid	Online
Yu 2020, Canada	Clinician and patients, diabetes	Web-based patient decision aid	Online

CVD: cardiovascular disease; SDM: Shared decision making; GP: general practitioner; SBP: systolic blood pressure, DBP: diastolic blood pressure.

eTable 5. Summary of Outcomes

Outcomes	Adarkwah 2016	Applegate 2021	Bailey 2016	Bailey 2018	Boulware 2020	Branda 2013	Buhse 2015	Buhse 2018	Cheng 2021	Cooper 2011	Coronado-Vázquez 2019	Den Ouden 2017	Denig 2014	Dwinger 2020	Eaton 2011	Eckman 2012	Edwards 2006	Farmer 2005	Grant 2008	Greenfield 1988	Heisler 2014	Hsu 2016	Hu 2021	Jaspers 2021	Jouni 2017	Karagiannis 2016	Kask-Flight 2021	Keyserling 2014	Koelewijn-Van Loon 2009	Koelewijn-Van Loon 2010
Decisional outcomes																														
SDM	+																						NS	NS					
Patient centeredness					NS	+				+																				
Decisional Conflict	+		+														NS				NS			+		NS				
Decision quality								+		+										+					NS					
Self-efficacy			+	NS	NS																NS									
Empowerment									+				NS										+							
Patient activation														+										NS						
Knowledge			+			+	+	+						+		NS				NS	NS		+			NS				
Distress									+												+									+
Satisfaction																	NS			NS	NS	+			NS	NS				+
Risk Perception & Realistic expectations							+																							+
Behavior change commendations					NS									+						+										
Encounter length																				NS										
Cardiovascular risk factors outcomes																														
Diabetes		NS				NS	+					NS	NS					NS		+	NS	+	+			NS		NS		
Hypertension		NS			NS		NS			NS		NS	NS			NS			NS								+	NS		
Dyslipidemia		NS				NS						NS			NS				NS					NS			NS	NS		
Obesity		NS										NS		+		NS						ns	NS			NS	NS	NS		
Tobacco Use							+							+													+	NS	NS	+
CVD Risk																												+	NS	
Cardiovascular health behaviors outcomes																														
Physical Activity														+		NS												NS	NS	NS
Diet																												NS	NS	NS
Self-management					NS									+						NS			+							
Adherence						NS	NS	NS		NS						NS					NS					NS		NS		
Medication management						+					+		NS						+	+		NS						NS		

NS: non-significant. +: There was a statistically significant positive relationship or effect observed in the analysis. SDM: shared decision-making. CVD: cardiovascular disease.

eTable 5. Summary of Outcomes (continued)

Outcomes	Krones 2008	Kulzer 2018	Kunneman 2022	Lauffenburger 2019	Lee 2016	Maindal 2014	Mathers 2012	Moin 2019	Montgomery 2003	Mullan 2009	Naik 2011	O'malley 2022	Peiris 2015	Perestelo-Pérez 2016	Prabhakaran 2019	Ramallo-Fariña 2021	Rost 1991	Smith 2008	Sperl-Hillen 2018	Swoboda 2017	Tinsel 2013	Tinsel 2018	Tusa 2021	Tutino 2017	van Steenkiste 2007	Warner 2015	Weymiller 2007	Wollny 2019	Yu 2020
Decisional outcomes																													
SDM	+											NS																NS	
Patient centeredness			+							+							+									+		NS	
Decisional Conflict	+		NS				+		+	NS				NS													+		NS
Decision quality		+	NS						NS	NS																+			
Self-efficacy											+									NS									
Empowerment																+				+									
Patient activation						+						+										+							
Knowledge	NS		+				+		+	+				+		+					NS					NS	+		
Distress									NS							+				NS									NS
Satisfaction	+	+	NS									NS		+											NS				+
Risk Perception & Realistic expectations							+							+											NS				
Behavior change recommendations		+																											
Encounter length			NS											NS															
Cardiovascular risk factors outcomes																													
Diabetes		+	NS	NS			NS			NS	+				NS		NS	NS						NS	NS				
Hypertension												NS	NS		NS			NS			NS	NS	NS	NS					
Dyslipidemia						+							+		NS			NS				NS		NS					
Obesity								+							NS							NS	NS						
Tobacco Use					NS										NS	+		NS											
CVD Risk	NS					NS												NS	+		NS	NS					+		
Cardiovascular health behaviors outcomes																													
Physical Activity		+																						NS	+				
Diet		+																		NS				NS					
Self-management																								+					
Adherence		+	NS	NS					NS	-		NS		NS		+					NS						+		
Medication management		+			NS			+	NS				+																

NS: non-significant. +: There was a statistically significant positive relationship or effect observed in the analysis. SDM: shared decision-making. CVD: cardiovascular disease.

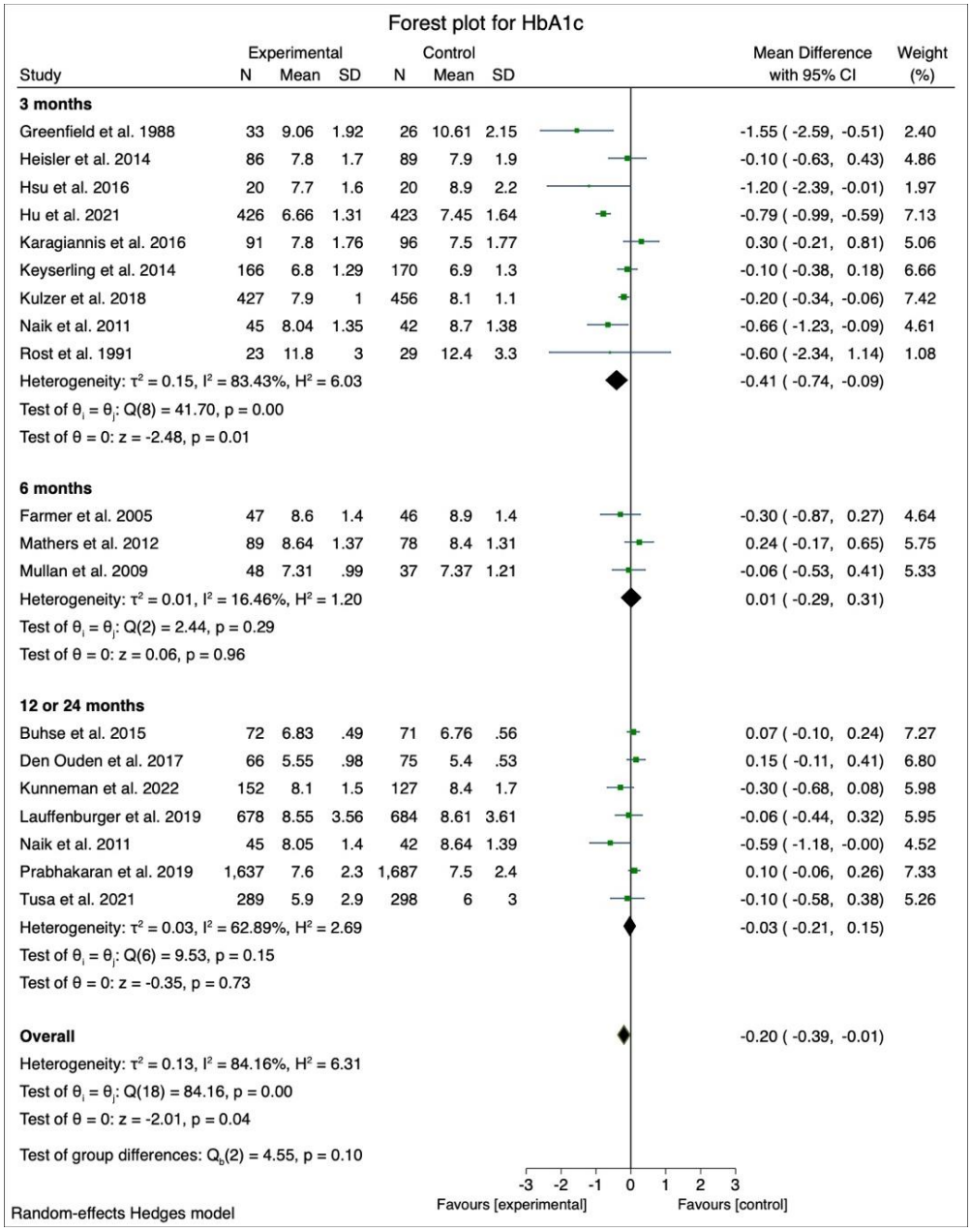
eTable 6. Studies Reporting Satisfaction Outcome

Author, Year, Country	Country	Target	Main Topic	Measurements	Score range	Time measured	Effect size	CG: n	CG: mean	CG: SD	IG 1: n	IG : mean	IG: SD	P value
Edwards 2006, United Kindom	United Kingdom	Patients and family	diabetes	Four further questions addressed satisfaction with information and the value of the information to participants in making treatment decisions	NR	Immediately	NR	NR	NR	NR	NR	NR	NR	NR
Greenfield 1988, United States	United States	Patients	diabetes	12-item patient satisfaction with the interpersonal style of the physician, the technical quality of care and care in general	5-60	Immediately	0.2 (95% CI: -4.2 to 4.6)	26	45.9	9.1	33	46.1	7.9	NR
Heisler 2014, United States	United States	Patients	diabetes	Satisfaction with clarity of medication information	0-100	Immediately	NR	95	88.4	16	92	89	17.5	NR
Hsu 2016, United States	United States	Patients	diabetes	Diabetes Treatment Satisfaction Questionnaire	0-48	2 weeks	NR	20	36.4	8.9	20	42	3.8	NR
Jouni 2017, United States	United States	Patients	multiple CVD risk factors	Physician visit satisfaction was assessed by a 6-statement survey adapted from the Consumer Assessment of Health Plans and Systems	0-6	6 months	NR	103	5.99	0.1	104	5.97	0.17	0.32
Karagiannis 2016, Greece	Greece	Patients	diabetes	Satisfaction with decision made	1 item	Immediately	NR	103	35.9% (n=37) strongly agree	NR	101	51.5% (n=52) strongly agree	NR	NR
Koelewijn-Van Loon 2010, Netherlands	Netherlands	Patients and providers	multiple CVD risk factors	10-item satisfaction with communication	10-50	12 weeks		258	35.4	8.6	264	37.9	8.4	

Author, Year, Country	Country	Target	Main Topic	Measurements	Score range	Time measured	Effect size	CG: n	CG: mean	CG: SD	IG 1: n	IG : mean	IG: SD	P value
Krones 2008, Germany	Germany	Patients and providers	CVD risk	Patient Participation Scale	NR	Immediately	-0.80 (95% CI: -1.23 to -0.37)	536	7.56	NR	501	6.76	NR	<0.001
Kulzer 2018, Germany	Germany	Patients and providers	diabetes and medication	Diabetes treatment satisfaction questionnaire	0-48	12 months	OR 0.92 (95% CI 0.13 to 1.7)	399	30	6.1	370	30.9	5.5	0.0127
Kunneman 2022, United States	United States	Patients and providers	diabetes and medication	Patient satisfaction with conversation	NR	Immediately	NR	129	96% (n=124)	NR	152	96% (n=146)	NR	0.98
O'malley 2022, United States	United States	Patients and providers	multiple CVD risk factors and medication	5-point Likert scale with 5 questions ranging from excellent to poor	5-25	Immediately	NR	69	23.6	1.9	51	23.8	2.3	0.63
Perestelo-Pérez 2016, Spain	Spain	Patients and providers	CVD risk and medication	Satisfaction with the decision-making process (SDMP)*: the 12-item questionnaire developed by Barry et al. for patients with benign prostatic hyperplasia was slightly modified to reflect a context of cardiovascular risk	0-100	Immediately	OR 10.62 (95% CI: 2.60 to 18.63)	73	61.56	17.37	80	70.4	17.62	0.18
van Steenkiste 2007, Netherlands	Netherlands	Patients and providers	multiple CVD risk factors	Five performance indicators: Appropriate assessment	NR	Immediately	NR	214	Probability 0.82 (95% CI: 0.64 to 0.92)	NR	276	Probability 0.85 (95% CI: 0.71 to 0.93)	NR	NR
Yu 2020, Canada	Canada	Patients and providers	diabetes	Patient Assessment of Chronic Illness Care	0-5	12 months	0.71 (95% CI: 0.38 to 1.04)	79	3.22	1.08	72	3.16	1.1	<0.001

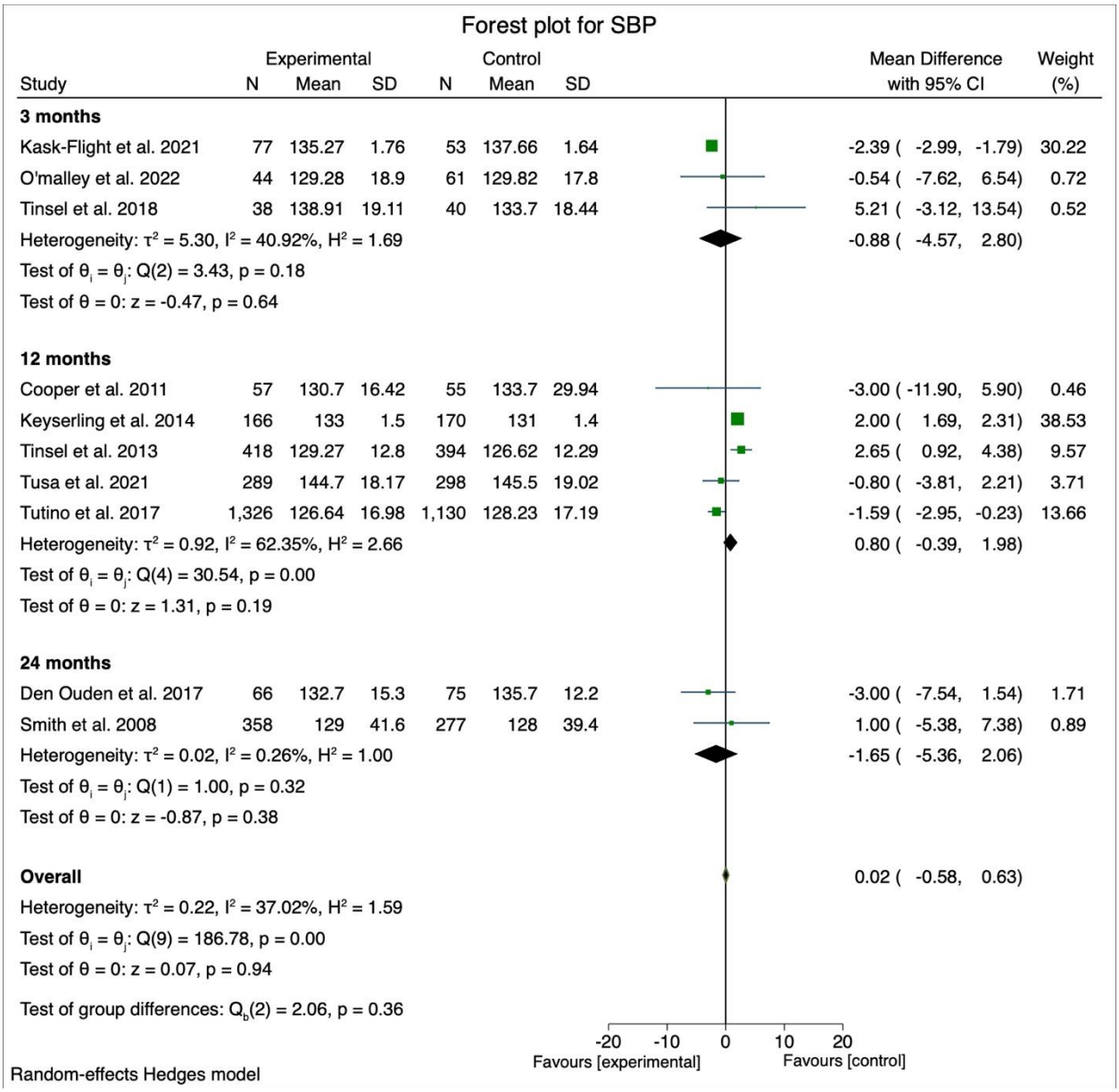
CG: control group; CVD: cardiovascular disease; CI: confidence interval; IG: intervention group; NR: not reported; OR: odds ratio.

eFigure 1. Forest Plot of Hemoglobin A_{1c} (HbA_{1c})



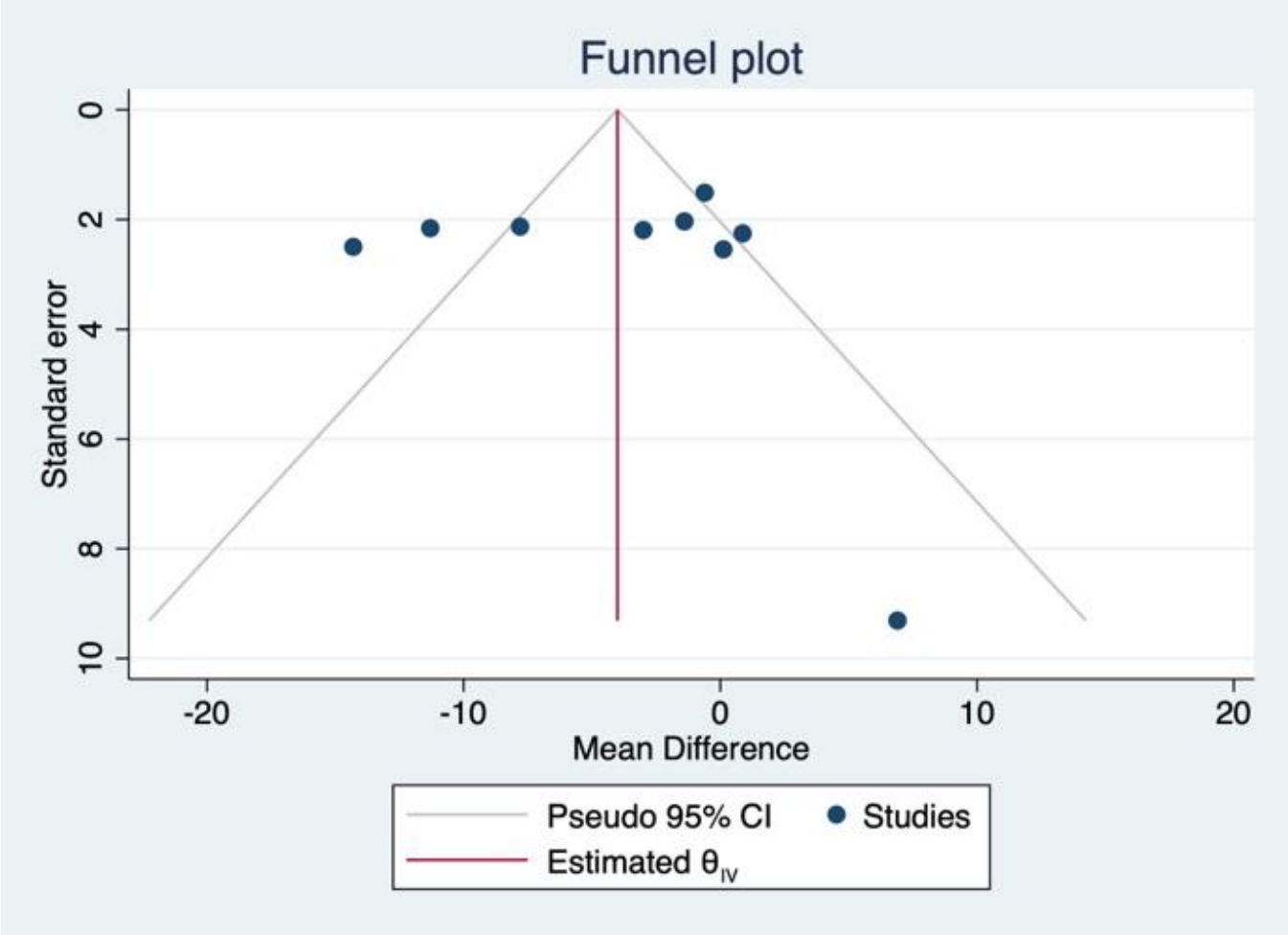
SD: Standard Deviation; CI: Confidence Interval; HbA1c: Hemoglobin A1c. The size of the squares is proportional to the weight of each study. Horizontal lines indicate the 95% CI of each study; diamond, the pooled estimate with 95% CI; and the vertical line is the line of no effect.

eFigure 2. Forest Plot of Systolic Blood Pressure



SD: Standard Deviation; CI: Confidence Interval. The size of the squares is proportional to the weight of each study. Horizontal lines indicate the 95% CI of each study; diamond, the pooled estimate with 95% CI; and the vertical line is the line of no effect.

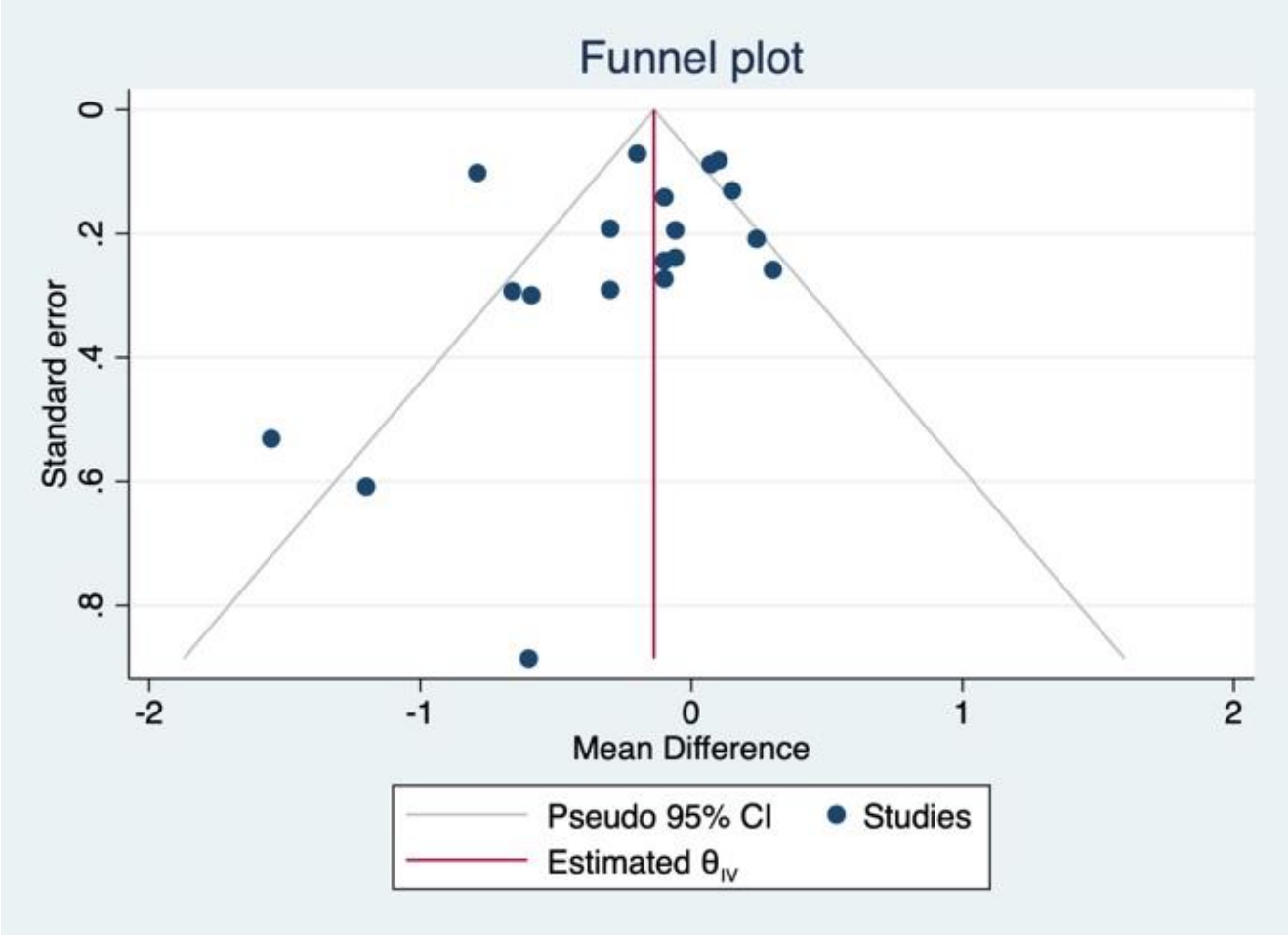
eFigure 3. Funnel Plot of Decisional Conflict



CI: Confidence Interval.

The funnel plot was generally symmetrical (Egger test, P=.890), which implied no publication bias existed in the included studies.

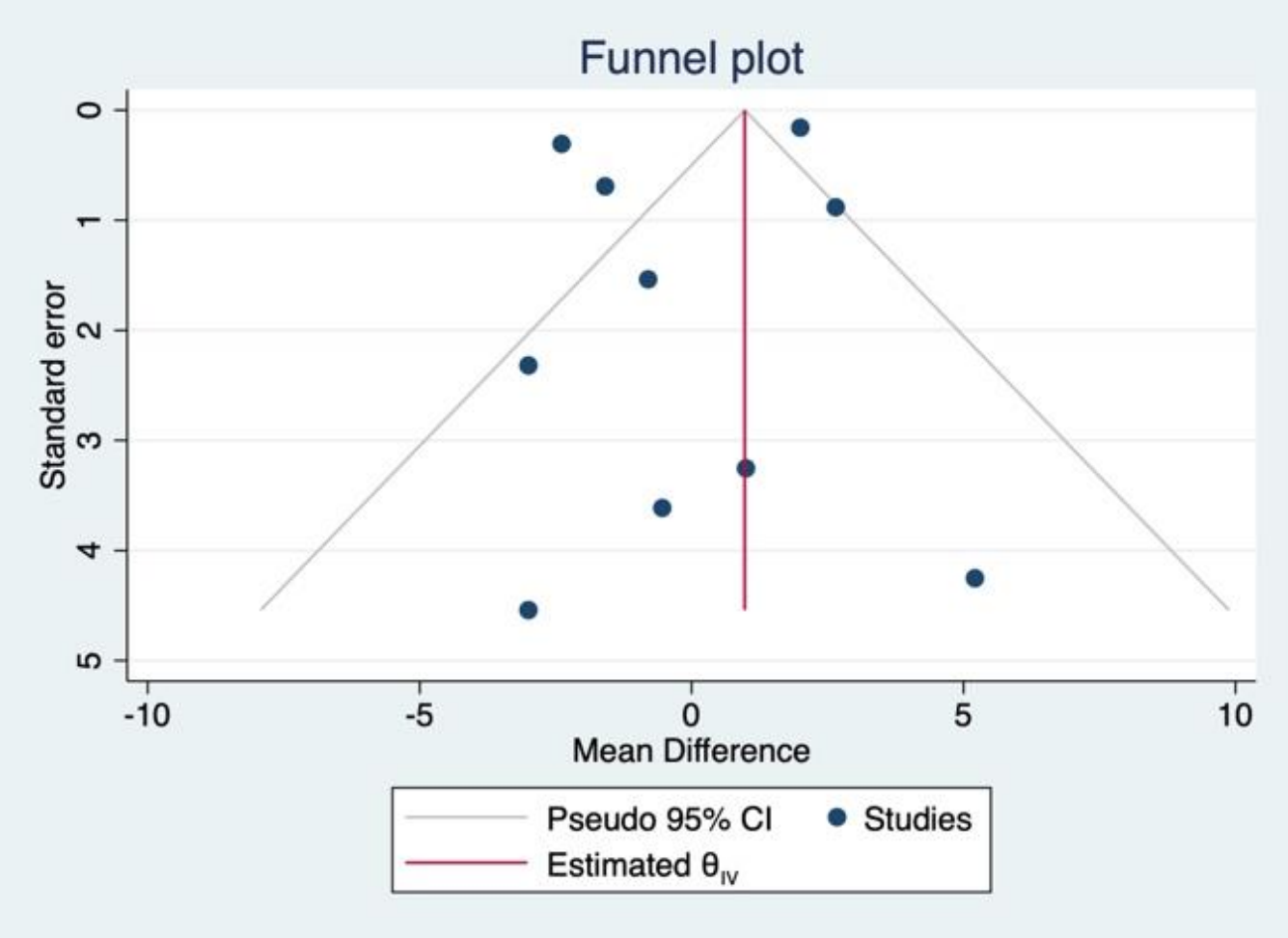
eFigure 4. Funnel Plot of Hemoglobin A_{1c}



CI: Confidence Interval; HbA1c: Hemoglobin A1c

The funnel plot was generally symmetrical (Egger test, P=.376), which implied no publication bias existed in the included studies.

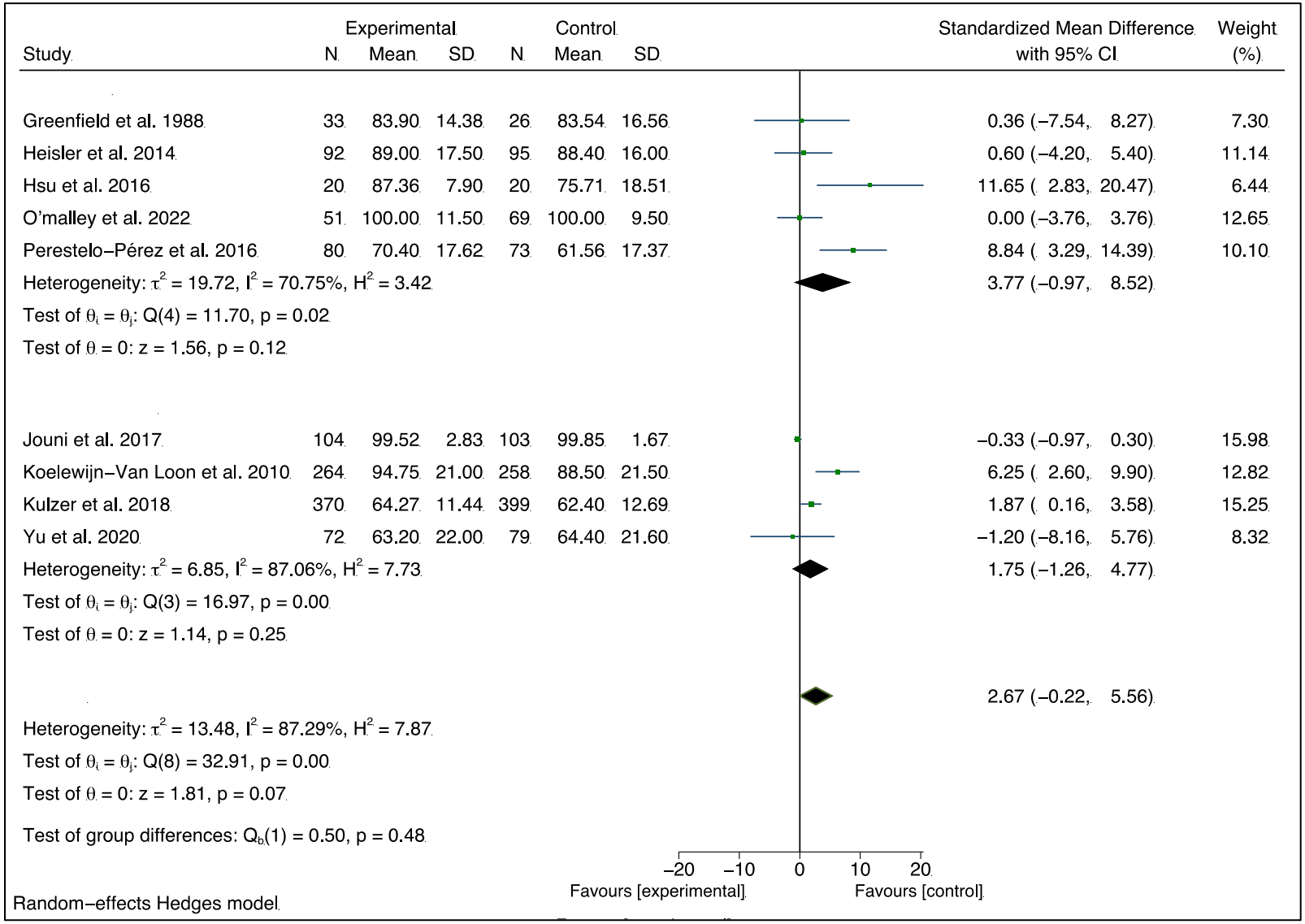
eFigure 5. Funnel Plot of Systolic Blood Pressure



CI: Confidence Interval

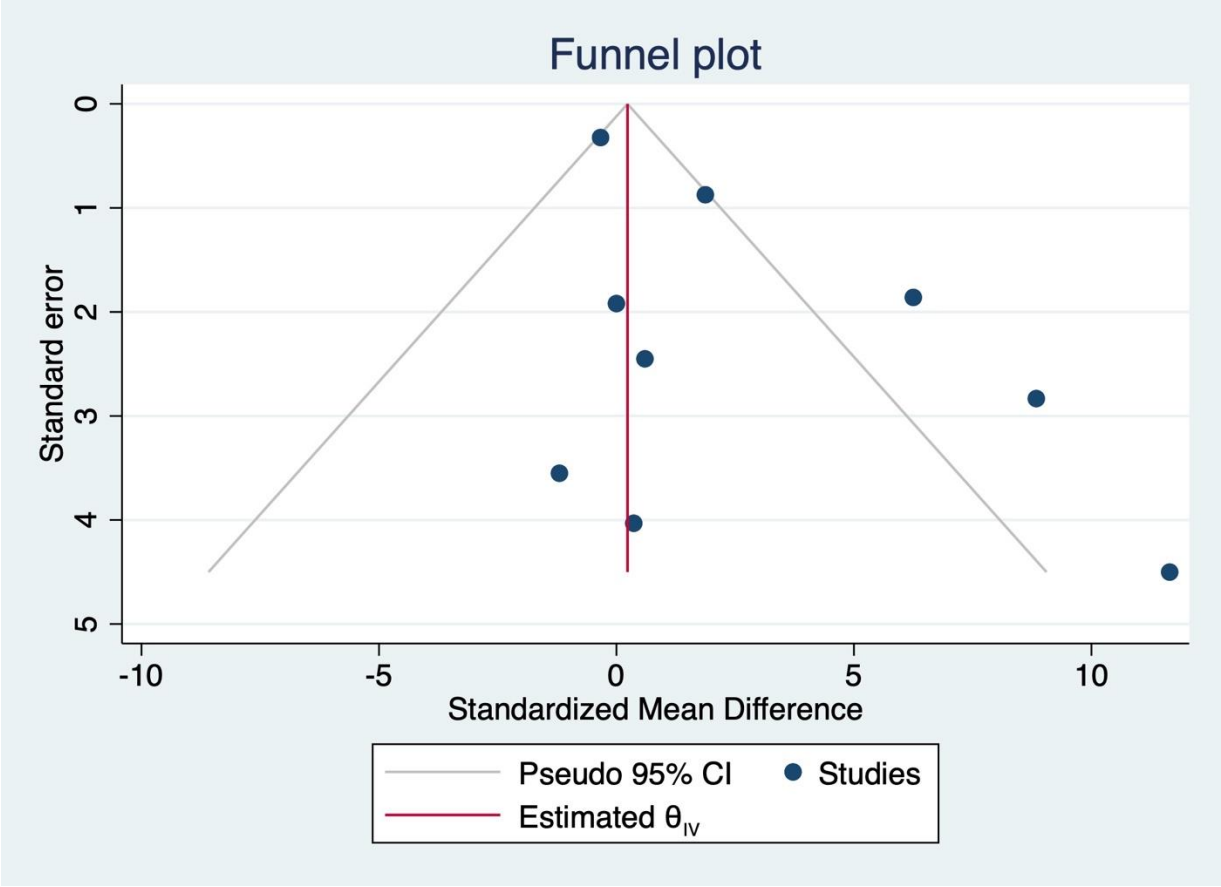
The funnel plot was generally symmetrical (Egger test, P=.436), which implied no publication bias existed in the included studies.

eFigure 6. Forest Plot of Satisfaction About the Decision or Treatment



SD: Standard Deviation; CI: Confidence Interval. Data were pooled using standardized mean difference, and their corresponding 95% CIs were computed after standardizing to a scale from 0 to 100, where a higher score indicated a better outcome. The size of the squares is proportional to the weight of each study. Horizontal lines indicate the 95% CI of each study; diamond, the pooled estimate with 95% CI; and the vertical line is the line of no effect.

eFigure 7. Funnel Plot of Satisfaction About the Decision or Treatment



CI: Confidence Interval

The funnel plot was not generally symmetrical (Egger test, P=.052), which implied potential publication bias existed in the included studies.

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