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Supplementary table 1: PRISMA-P Checklist

Section and topic	Item No	Checklist item	Reported on page no.
ADMINISTRATIVE INFORMATION			
Title:			
Identification	1a	Identify the report as a protocol of a systematic review	1
Update	1b	If the protocol is for an update of a previous systematic review, identify as such	-
Registration	2	If registered, provide the name of the registry (such as PROSPERO) and registration number	-
Authors:			
Contact	3a	Provide name, institutional affiliation, and e-mail address of all protocol authors; provide physical mailing address of corresponding author	1
Contributions	3b	Describe contributions of protocol authors and identify the guarantor of the review	9
Amendments	4	If the protocol represents an amendment of a previously completed or published protocol, identify as such and list changes; otherwise, state plan for documenting important protocol amendments	-
Support:			
Sources	5a	Indicate sources of financial or other support for the review	9
Sponsor	5b	Provide name for the review funder and/or sponsor	9
Role of sponsor or funder	5c	Describe roles of funder(s), sponsor(s), and/or institution(s), if any, in developing the protocol	-
INTRODUCTION			
Rationale	6	Describe the rationale for the review in the context of what is already known	4
Objectives	7	Provide an explicit statement of the question(s) the review will address with reference to participants, interventions, comparators, and outcomes (PICO)	4-5
METHODS			
Eligibility criteria	8	Specify the study characteristics (such as PICO, study design, setting, time frame) and report characteristics (such as years considered, language, publication status) to be used as criteria for eligibility for the review	6
Information sources	9	Describe all intended information sources (such as electronic databases, contact with study authors, trial registers or other grey literature sources) with planned dates of coverage	6

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Search strategy	10	Present draft of search strategy to be used for at least one electronic database, including planned limits, such that it could be repeated	6, 12-14
Study records:			
Data management	11a	Describe the mechanism(s) that will be used to manage records and data throughout the review	6-7
Selection process	11b	State the process that will be used for selecting studies (such as two independent reviewers) through each phase of the review (that is, screening, eligibility and inclusion in meta-analysis)	7
Data collection process	11c	Describe planned method of extracting data from reports (such as piloting forms, done independently, in duplicate), any processes for obtaining and confirming data from investigators	7-8
Data items	12	List and define all variables for which data will be sought (such as PICO items, funding sources), any pre-planned data assumptions and simplifications	7-8
Outcomes and prioritization	13	List and define all outcomes for which data will be sought, including prioritization of main and additional outcomes, with rationale	-
Risk of bias in individual studies	14	Describe anticipated methods for assessing the risk of bias of individual studies, including whether this will be done at the outcome or study level, or both; state how this information will be used in data synthesis	-
Data synthesis	15a	Describe criteria under which study data will be quantitatively synthesised	8
	15b	If data are appropriate for quantitative synthesis, describe planned summary measures, methods of handling data and methods of combining data from studies, including any planned exploration of consistency (such as I^2, Kendall's τ)	-
	15c	Describe any proposed additional analyses (such as sensitivity or subgroup analyses, meta-regression)	-
	15d	If quantitative synthesis is not appropriate, describe the type of summary planned	-
Meta-bias(es)	16	Specify any planned assessment of meta-bias(es) (such as publication bias across studies, selective reporting within studies)	-
Confidence in cumulative evidence	17	Describe how the strength of the body of evidence will be assessed (such as GRADE)	-

From: Shamseer, et al. [25]

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Supplementary table 2: Example search strategies for MEDLINE (via PubMed)

Population	#1 Dementia[MeSH] #2 Dement*[T/A] #3 Alzheimer*[T/A] #4 Cognitive impairment* [T/A] #5 OR/ #1-4
Concept	#6 DICE[T/A] #7 Triangle[T/A] #8 Person-cent*[T/A] #9 "Person cent*"[T/A] #10 Client-cent*[T/A] #11 "Client cent*"[T/A] #12 Resident-cent*[T/A] #13 "Resident cent*"[T/A] #14 Patient-cent*[T/A] #15 "Patient cent*"[T/A] #16 "DICE approach"[T/A] #17 OR/ #6-16 #18 BPSD[T/A] #19 Behaviour*[T/A] #20 Behavior*[T/A] #21 Challenging behavior*[T/A] #22 Apathy [T/A] #23 Vocalization [T/A] #24 "Resistance to care"[T/A] #25 Resisting care[T/A] #26 Psychogeriat*[T/A] #27 Gerontopsy*[T/A] #28 "Behavioral Symptoms"[MeSH] #29 "Behavioral Symptoms"[T/A] #30 "Behavioural Symptoms"[T/A] #31 "Behavioral and Psychological Symptoms of Dementia"[T/A] #32 "Behavioural and Psychological Symptoms of Dementia"[T/A] #33 Aggression[T/A] #34 Agitation[T/A] #35 OR/ #18-34 #36 #17 AND #35 #37 Implement*[T/A] #38 Health plan implementation[MeSH] #39 Implementation Science [MeSH] #40 "Quality improvement*"[T/A] #41 Quality improvement[MeSH] #42 Diffused[T/A] #43 diffusion[T/A] #44 Diffusion of innovation[MeSH] #45 "Knowledge translation*"[T/A] #46 "Knowledge exchange"[T/A] #47 "Knowledge circulation"[T/A] #48 Facilitators[T/A] #49 Barriers[T/A] #50 "Process evaluation*"[T/A] #51 "Formative evaluation*"[T/A] #52 "Summative evaluation*"[T/A] #53 "Qualitative evaluation*"[T/A] #54 Sustainability[T/A] #55 Practicability[T/A] #56 Feasibility[T/A] #57 Fidelity[T/A] #58 Maintenance[T/A] #59 Adopt*[T/A] #60 Integrat*[T/A] #61 Disseminat*[T/A] #62 Promot*[T/A] #63 OR/ #37-62 #64 #36 AND #63
Context	#65 Long term care[MeSH] #66 Residential facilities[MeSH] #67 Skilled nursing facilities[MeSH] #68 Residential facilit*[T/A] #69 Skilled nursing facilit*[T/A] #70 Nursing home*[T/A]

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	#71 Homes for the aged[T/A] #72 Care home*[T/A] #73 Long term care[T/A] #74 Short term care[T/A] #75 OR/ #65-74 #76 #5 AND #64 AND #75

Population	#1 Dementia[MeSH] #2 Dement*[T/A] #3 Alzheimer*[T/A] #4 Cognitive impairment*[T/A] #5 OR/ #1-4
Concept	#6 Delirium[MeSH] #7 Delir*[T/A] #8 "Delirium superimposed on dementia"[T/A] #9 DSD[T/A] #10 OR/ #6-9 #11 Prevention[T/A] #12 Identification[T/A] #13 Screen*[T/A] #14 Assessment[T/A] #15 Instrument[T/A] #16 "Delirium management"[T/A] #17 Management[T/A] #18 Guidelines[T/A] #19 OR/ #11-18 #20 #10 AND #19 #21 Implement*[T/A] #22 Health plan implementation[MeSH] #23 Implementation Science [MeSH] #24 "Quality improvement*"[T/A] #25 Quality improvement[MeSH] #26 Diffused[T/A] #27 diffusion[T/A] #28 Diffusion of innovation[MeSH] #29 "Knowledge translation*"[T/A] #30 "Knowledge exchange"[T/A] #31 "Knowledge circulation"[T/A] #32 Facilitators[T/A] #33 Barriers[T/A] #34 "Process evaluation*"[T/A] #35 "Formative evaluation*"[T/A] #36 "Summative evaluation*"[T/A] #37 "Qualitative evaluation*"[T/A] #38 Sustainability[T/A] #39 Practicability[T/A] #40 Feasibility[T/A] #41 Fidelity[T/A] #42 Maintenance[T/A] #43 Adopt*[T/A] #44 Integrat*[T/A] #45 Disseminat*[T/A] #46 Promot*[T/A] #47 OR/ #21-46 #48 #20 AND #47
Context	#49 Hospitals[MeSH] #50 Hospital*[T/A] #51 "Emergency Service, Hospital"[MeSH] #52 ER[T/A] #53 Emergency room[T/A] #54 Emergency department[T/A] #55 ED #56 "Acute care"[T/A] #57 "Acute setting"[T/A] #58 Inpatient[T/A] #59 Inpatient setting[T/A] #60 Secondary Care[T/A] #61 Clinic[T/A] #62 OR/ #49-61 #63 #5 AND #48 AND #62

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Population	#1 Dementia[MeSH] #2 Dement*[T/A] #3 Alzheimer*[T/A] #4 Cognitive impairment*[T/A] #5 OR/ #1-4
Concept	#6 Transitional Care[MeSH] #7 Transitional care[T/A] #8 Transitional care model[T/A] #9 TCM[T/A] #10 Transition*[T/A] #11 Care coordination[T/A] #12 Discharge management[T/A] #13 Continuity of Patient care [MeSH] #14 OR/ #6-13 #15 Implement*[T/A] #16 Health plan implementation[MeSH] #17 Implementation Science [MeSH] #18 "Quality improvement*"[T/A] #19 Quality improvement[MeSH] #20 Diffused[T/A] #21 Diffusion[T/A] #22 Diffusion of innovation[MeSH] #23 "Knowledge translation*"[T/A] #24 "Knowledge exchange"[T/A] #25 "Knowledge circulation"[T/A] #26 Facilitators[T/A] #27 Barriers[T/A] #28 "Process evaluation*"[T/A] #29 "Formative evaluation*"[T/A] #30 "Summative evaluation*"[T/A] #31 "Qualitative evaluation*"[T/A] #32 Sustainability[T/A] #33 Practicability[T/A] #34 Feasibility[T/A] #35 Fidelity[T/A] #36 Maintenance[T/A] #37 Adopt*[T/A] #38 Integrat*[T/A] #39 Disseminat*[T/A] #40 Promot*[T/A] #41 OR/ #15-40 #42 #14 AND #41
Context	#43 Hospitals[MeSH] #44 Hospital*[T/A] #45 Acute care [T/A] #46 Acute setting*[T/A] #47 Inpatient[T/A] #48 Inpatient setting[T/A] #49 Post acute[T/A] #50 Post acute setting[T/A] #51 Secondary care[T/A] #52 Clinic[T/A] #53 OR/ #43-52 #54 #5 AND #42 AND #53

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Supplementary table 3: Coding categories for implementation strategies, ERIC[31-33]

Categories	Subcategories
Use evaluative and iterative strategies	▪ Assess for readiness and identify barriers and facilitators ▪ Audit and provide feedback ▪ Purposefully reexamine the implementation ▪ Develop and implement tools for quality monitoring ▪ Develop and organize quality monitoring systems ▪ Develop a formal implementation blueprint ▪ Conduct local need assessment ▪ Stage implementation scale up ▪ Obtain and use patients/consumers and family feedback ▪ Conduct cyclical small tests of change
Provide interactive assistance	▪ Facilitation ▪ Provide local technical assistance ▪ Provide clinical supervision ▪ Centralize technical assistance
Adapt and tailor to context	▪ Tailor strategies ▪ Promote adaptability ▪ Use data experts ▪ Use data warehousing techniques
Develop stakeholder interrelationships	▪ Identify and prepare champions ▪ Organize clinician implementation team meetings ▪ Recruit, designate, and train for leadership ▪ Inform local opinion leaders ▪ Build a coalition ▪ Obtain formal commitments ▪ Identify early adopters ▪ Conduct local consensus discussions ▪ Capture and share local knowledge ▪ Use advisory boards and workgroups ▪ Use an implementation advisor ▪ Model and simulate change ▪ Visit other sites ▪ Involve executive boards ▪ Develop an implementation glossary ▪ Develop academic partnerships ▪ Promote network weaving
Train and educate stakeholders	▪ Conduct ongoing training ▪ Provide ongoing consultation ▪ Develop educational materials ▪ Make training dynamic ▪ Distribute educational materials ▪ Use train-the-trainer strategies ▪ Conduct educational meetings ▪ Conduct educational outreach visits ▪ Create a learning collaborative ▪ Shadow other experts ▪ Work with educational institutions
Support clinicians	▪ Facilitate relay of clinical data to providers

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	▪ Remind clinicians ▪ Develop resource sharing agreements ▪ Revise professional roles ▪ Create new clinical teams
Engage consumers	▪ Involve patients/consumers and family members ▪ Intervene with patients/consumers to enhance uptake and adherence ▪ Prepare patients/consumers to be active participants ▪ Increase demand ▪ Use mass media
Utilize financial strategies	▪ Fund and contract for the clinical innovation ▪ Access new funding ▪ Place innovation on fee for service lists/formularies ▪ Alter incentive/allowance structures ▪ Make billing easier ▪ Alter patient/consumer fees ▪ Use other payment schemes ▪ Develop disincentives ▪ Use capitated payments
Change infrastructure	▪ Mandate change ▪ Change record systems ▪ Change physical structure and equipment ▪ Create or change credentialing and/or licensure standards ▪ Change service sites ▪ Change accreditation or membership requirements ▪ Start a dissemination organization ▪ Change liability laws

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Supplementary table 4: Coding categories for potential factors influencing the implementation processes, CFIR[34]

Categories	Subcategories
Intervention characteristics	▪ Intervention source ▪ Evidence strength and quality ▪ Relative advantage ▪ Adaptability ▪ Trialability ▪ Complexity ▪ Design quality and packaging ▪ Cost
Outer setting	▪ Patient needs and resources ▪ Cosmopolitanism ▪ Peer pressure ▪ External policy and incentives
Inner setting	▪ Structural characteristics ▪ Networks and communications ▪ Culture ▪ Implementation climate ▪ Tension for change ▪ Compatibility ▪ Relative priority ▪ Organizational incentives and rewards ▪ Goals and feedback ▪ Learning climate ▪ Readiness for implementation ▪ Leadership engagement ▪ Available resources ▪ Access to knowledge and information
Characteristics of individuals	▪ Knowledge and beliefs about the intervention ▪ Self-efficacy ▪ Individual stage of change ▪ Individual identification with organization ▪ Other personal attributes
Process	▪ Planning ▪ Engaging ▪ Opinion leaders ▪ Formally appointed internal implementation leaders ▪ Champions ▪ External change agents ▪ Executing ▪ Reflecting and Evaluating