Supplementary Material 1 : Description of included articles

Ref.	Authors	Title	Date	Location	Aim related to our scoping review	Methods	Settings
32	Li M, Okamoto R, Tada A, Kiya M.	Factors Associated with Prenatal Smoking Cessation Interventions among Public Health Nurses in Japan.	2020	Japan	"To identify the factors associated with prenatal smoking cessation interventions based on the 5As model"	Quantitative study	Health centers of municipalities and special wards
33	Gould GS, Twyman L, Stevenson L, Gribbin GR, Bonevski B, Palazzi K, Bar Zeev Y.	What components of smoking cessation care during pregnancy are implemented by health providers? A systematic review and meta-analysis.	2019	Australia	"to examine which factors were associated with delivery of the 5As"	Systematic review and meta-analysis	Any setting
34	Baraona LK, Lovelace D, Daniels JL, McDaniel L.	Tobacco Harms, Nicotine Pharmacology, and Pharmacologic Tobacco Cessation Interventions for Women.	2017	United States of America	N/A	Review	N/A
35	Colomar M, Tong VT, Morello P, Farr SL, Lawsin C, Dietz PM, Aleman A, Berrueta M, Mazzoni A, Becu A, Buekens P, Belizán J, Althabe F.	Barriers and promoters of an evidenced-based smoking cessation counseling during prenatal care in Argentina and Uruguay.	2015	Argentina Uruguay	"To improve the understanding of systematic and individual factors influencing the implementation of the 5A's in prenatal care settings"	Qualitative study	Public prenatal clinics
36	Passey ME, Longman JM, Adams C, Johnston JJ, Simms J, Rolfe M.	Factors associated with provision of smoking cessation support to pregnant women - a cross-sectional survey of midwives in New South Wales, Australia.	2020	Australia	"To examine the association between midwives' self-reported	Quantitative study	Public health system

					implementation of the 5As and reported barriers and enablers to their implementation"		
37	Chertok IR, Archer SH.	Evaluation of a midwife- and nurse-delivered 5 A's prenatal smoking cessation program.	2015	United States of America	"To evaluate the implementation of the ACOG 5 A's program on prenatal care"	Quantitative study	Prenatal care clinics
38	De Wilde K, Tency I, Steckel S, Temmerman M, Boudrez H, Maes L.	Which role do midwives and gynecologists have in smoking cessation in pregnant women? - A study in Flanders, Belgium.	2015	Belgium	"To explore the implementation of a smoking cessation policy"	Qualitative study	Prenatal care
39	Longman JM, Adams CM, Johnston JJ, Passey ME	Improving implementation of the smoking cessation guidelines with pregnant women: How to support clinicians?	2018	Australia	"To explore the enablers and barriers to implementation of the antenatal smoking cessation guidelines among clinicians"	Qualitative study	Public health system
40	Zeev Y, Bonevski B, Twyman L, Watt K, Atkins L, Palazzi K, Oldmeadow C, Gould GS.	Opportunities Missed: A Cross-Sectional Survey of the Provision of Smoking Cessation Care to Pregnant Women by Australian General Practitioners and Obstetricians.	2017	Australia	"To examine (…) barriers and enablers to [smoking cessation care]"	Quantitative study	N/A
41	Agaku IT, Olaiya O, Quinn C, Tong VT, Kuiper NM, Conrey EJ,	A Mixed-Methods Assessment of a Brief Smoking Cessation Intervention Implemented in Ohio Public Health Clinics, 2013.	2015	United States of America	To assess "barriers and facilitators to implementing the 5As"	Mixed-methods approach	Public health clinics

	Sharma AJ, Mullen S, Dee D.						
42	Bailey BA.	Effectiveness of a Pregnancy Smoking Intervention: The Tennessee Intervention for Pregnant Smokers Program.	2015	United States of America	"To describe the components of a smoking cessation intervention"	Quantitative study	Prenatal practices
43	Murphy K, Steyn K, Mathews C.	The midwife's role in providing smoking cessation interventions for pregnant women: The views of midwives working with high risk, disadvantaged women in public sector antenatal services in South Africa.	2016	South Africa	"To assess current attitudes and practices of midwives in relation to smoking education or counselling with pregnant women and the possible factors which would facilitate or hinder their participation in a potential smoking cessation intervention"	Mixed-methods approach	Maternal Obstetric Units
44	Reeks R, Padmakumar G, Andrew B, Huynh D, Longman JM.	Barriers and enablers to implementation of antenatal smoking cessation guidelines in general practices	2019	Australia	"To identify and understand the facilitators and barriers to providing smoking cessation support in antenatal care perceived by GPs"	Qualitative study	Antenatal care

Supplementary Material 2: Factors associated with the implementation of the 5As model in pregnancy

Theoretical framework	Categories	Sub-categories	Factors	Li et al.[32]	Gould et al.[33]	Baraona et al.[34]	Colomar et al.[35]	Passey et al.[36]	Chertok et al.[37]	De Wild et al.[38]	Longman et al.[39]	Zeev et al.[40]	Agaku et al.[41]	Bailey[42]	Murphy et al.[43]	Reeks et al.[44]
Clinical level	Clinical practices	Posture	Has a trusting relationship and positive attitude towards the pregnant woman			X	X		X						X	
			Takes into account the pregnant woman as a whole			X			X							X
			Takes a pro-active approach during every contact with the pregnant woman			X		X								
		Interprofessional cooperation	Builds a interprofessional partnership						X							
			Establishes communication between stakeholders (professionals, partners)					X	X							
			Knows the network of local actors					X				X				
		clinical support tools	Uses motivational interviewing		X	X				X					X	
			Produces informatial materials for pregnant women		X		X	X					X		X	
Clinical level	Perceptions of the 5As model		Takes into account the doubts of professionals about the effectiveness of the 5As model			X						X	X			
			Provides information on the effectiveness of referring							X						

Clinical level	**Professional role and identity**	Perceived role	Clarifies the importance of tobacco management during pregnancy follow-up					X				X			X	
			Encourages professionals to embrace their role			X									X	X
		Motivation	Builds on the interest and motivation of professionals for the 5As model and its implementation			X					X			X		
			Builds on the willingness of professionals to change smoking behavior			X										X
			Pays particular attention to the fact that gynecologists do not feel concerned by prevention						X	X						
			Involves midwives and nurses			X										
		Self-efficacy	Improves the self-efficacy of professionals	X		X	X					X	X		X	X
			Improves the legitimacy of professionals regardless of their personal smoking status				X									
Clinical level	**Health professionals' perceptions of pregnant women**		Takes into account the perception of smoking as a choice									X		X		
			Takes into account the negative perception of the pregnant woman							X					X	
			Takes into account the fear of losing the relationship with the pregnant woman		X	X										X
Clinical level	**Influence of beneficiaries**		Takes into account the lack of knowledge about the health effects of tobacco on women and children			X							X		X	
			Takes into account the lack of motivation of pregnant women												X	

Level	Category	Subcategory	Practice	1	2	3	4	5	6	7	8	9	10	11	12	13
Organization level	Organization of practices		Takes into account the poor estimation of the difficulty of smoking cessation				X									
			Takes into account the dissatisfaction of pregnant women with professionals				X									
		Healthcare pathway	Uses time in the waiting room for smoking prevention				X									
			Uses time during the examination for smoking prevention								X					
			Integrates tobacco cessation into pre-existing consultations				X						X			
			Offers consultations dedicated to tobacco management			X										X
		Deployment	Develops a 5As model deployment protocol				X	X								
			Involves line management in communication in relation to the 5As model								X		X			
			Involves opinion leaders in the communication of the 5As model				X	X			X					
			Sets up a monitoring of the implementation of the 5As model					X								
Organization level	Resources	Financial resources	Takes into account the cost of implementation			X	X		X			X		X		
		Time resources	Takes into account the time available			X	X	X	X	X		X	X	X	X	X

Level	Category	Subcat.	Indicator	1	2	3	4	5	6	7	8	9	10	11	12	13
Organization level	Support for professionals		Prioritizes the issues to be addressed during perinatal consultations								X					
			Takes into account the patient's comorbidities			X										
		Training	Follows a training on the 5As method	X	X	X	X	X	X	X		X	X	X	X	
			Acquires skills (e.g. having a positive posture towards the woman's smoking history, communicating on the risks for the fetus, implementing each step of the 5As model)				X			X		X				X
			Acquires knowledge (e.g. on NRTs, on addictions and on the specific risks of tobacco on the fetus)				X		X	X		X			X	X
		Resources for professionals	Develops a clinical guidelines		X		X									
			Develops and disseminates expert recommendations				X						X			
			Sets up automatic computer reminders		X		X	X				X				
			Trains professionals in the 5As model to support perinatal professionals		X				X							
			Provides feedback on the practices of professionals				X									
Health system level	Political environment		Involves patient organizations (advocacy)					X								
			Has commitment from management			X	X									

Makes smoking cessation a priority (support from management teams, authorities, learned societies, etc.)		X										

Supplementary Material 3: PRISMA 2020 checklist

Section and Topic	Item #	Checklist item	Location where item is reported
TITLE			
Title	1	Identify the report as a systematic review.	P.1
ABSTRACT			
Abstract	2	See the PRISMA 2020 for Abstracts checklist.	
INTRODUCTION			
Rationale	3	Describe the rationale for the review in the context of existing knowledge.	P. 2-3
Objectives	4	Provide an explicit statement of the objective(s) or question(s) the review addresses.	p.3
METHODS			
Eligibility criteria	5	Specify the inclusion and exclusion criteria for the review and how studies were grouped for the syntheses.	p.3
Information sources	6	Specify all databases, registers, websites, organisations, reference lists and other sources searched or consulted to identify studies. Specify the date when each source was last searched or consulted.	p.3
Search strategy	7	Present the full search strategies for all databases, registers and websites, including any filters and limits used.	p.3-4
Selection process	8	Specify the methods used to decide whether a study met the inclusion criteria of the review, including how many reviewers screened each record and each report retrieved, whether they worked independently, and if applicable, details of automation tools used in the process.	p.3-4
Data collection process	9	Specify the methods used to collect data from reports, including how many reviewers collected data from each report, whether they worked independently, any processes for obtaining or confirming data from study investigators, and if applicable, details of automation tools used in the process.	P.3-4
Data items	10a	List and define all outcomes for which data were sought. Specify whether all results that were compatible with each outcome domain in each study were sought (e.g. for all measures, time points, analyses), and if not, the methods used to decide which results to collect.	Not concerned
	10b	List and define all other variables for which data were sought (e.g. participant and intervention characteristics, funding sources). Describe any assumptions made about any missing or unclear information.	p. 3-4

Section and Topic	Item #	Checklist item	Location where item is reported
Study risk of bias assessment	11	Specify the methods used to assess risk of bias in the included studies, including details of the tool(s) used, how many reviewers assessed each study and whether they worked independently, and if applicable, details of automation tools used in the process.	Not concerned
Effect measures	12	Specify for each outcome the effect measure(s) (e.g. risk ratio, mean difference) used in the synthesis or presentation of results.	Not concerned
Synthesis methods	13a	Describe the processes used to decide which studies were eligible for each synthesis (e.g. tabulating the study intervention characteristics and comparing against the planned groups for each synthesis (item #5)).	p.3
	13b	Describe any methods required to prepare the data for presentation or synthesis, such as handling of missing summary statistics, or data conversions.	Not concerned
	13c	Describe any methods used to tabulate or visually display results of individual studies and syntheses.	Not concerned
	13d	Describe any methods used to synthesize results and provide a rationale for the choice(s). If meta-analysis was performed, describe the model(s), method(s) to identify the presence and extent of statistical heterogeneity, and software package(s) used.	p.3-4
	13e	Describe any methods used to explore possible causes of heterogeneity among study results (e.g. subgroup analysis, meta-regression).	Not concerned
	13f	Describe any sensitivity analyses conducted to assess robustness of the synthesized results.	Not concerned
Reporting bias assessment	14	Describe any methods used to assess risk of bias due to missing results in a synthesis (arising from reporting biases).	p.4
Certainty assessment	15	Describe any methods used to assess certainty (or confidence) in the body of evidence for an outcome.	Not concerned
RESULTS			
Study selection	16a	Describe the results of the search and selection process, from the number of records identified in the search to the number of studies included in the review, ideally using a flow diagram.	
	16b	Cite studies that might appear to meet the inclusion criteria, but which were excluded, and explain why they were excluded.	p.4 fig.1
Study characteristics	17	Cite each included study and present its characteristics.	p.4 Supp. mat. 1
Risk of bias in studies	18	Present assessments of risk of bias for each included study.	Not concerned
Results of	19	For all outcomes, present, for each study: (a) summary statistics for each group (where appropriate) and (b) an effect estimate and	p. 4-7

Section and Topic	Item #	Checklist item	Location where item is reported
individual studies		its precision (e.g. confidence/credible interval), ideally using structured tables or plots.	Supp. mat 2
Results of syntheses	20a	For each synthesis, briefly summarise the characteristics and risk of bias among contributing studies.	Supp. mat. 1
	20b	Present results of all statistical syntheses conducted. If meta-analysis was done, present for each the summary estimate and its precision (e.g. confidence/credible interval) and measures of statistical heterogeneity. If comparing groups, describe the direction of the effect.	Not concerned
	20c	Present results of all investigations of possible causes of heterogeneity among study results.	Not concerned
	20d	Present results of all sensitivity analyses conducted to assess the robustness of the synthesized results.	Not concerned
Reporting biases	21	Present assessments of risk of bias due to missing results (arising from reporting biases) for each synthesis assessed.	Not concerned
Certainty of evidence	22	Present assessments of certainty (or confidence) in the body of evidence for each outcome assessed.	Not concerned
DISCUSSION			
Discussion	23a	Provide a general interpretation of the results in the context of other evidence.	p. 8-10
	23b	Discuss any limitations of the evidence included in the review.	p. 9-10
	23c	Discuss any limitations of the review processes used.	p. 9-10
	23d	Discuss implications of the results for practice, policy, and future research.	p. 8-10
OTHER INFORMATION			
Registration and protocol	24a	Provide registration information for the review, including register name and registration number, or state that the review was not registered.	Not concerned
	24b	Indicate where the review protocol can be accessed, or state that a protocol was not prepared.	Not concerned
	24c	Describe and explain any amendments to information provided at registration or in the protocol.	Not concerned
Support	25	Describe sources of financial or non-financial support for the review, and the role of the funders or sponsors in the review.	p. 10
Competing interests	26	Declare any competing interests of review authors.	p. 11
Availability of	27	Report which of the following are publicly available and where they can be found: template data collection forms; data extracted from	Not

Section and Topic	Item #	Checklist item	Location where item is reported
data, code and other materials		included studies; data used for all analyses; analytic code; any other materials used in the review.	concerned