National Institute for Health and Care Excellence

Draft for consultation

Antenatal care

[B] Approaches to information provision

NICE guideline <number>

Evidence reviews underpinning recommendations 1.1.13, 1.3.1, 1.3.3 to 1.3.4, 1.3.6 and 1.3.16

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These evidence reviews were developed by the National Guideline Alliance which is a part of the Royal College of Obstetricians and Gynaecologists

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Approaches to information provision

Review question

What approach to information giving during antenatal care is effective (including timing and mode of provision)?

Introduction

Women and their partners are receptive and keen for information in the antenatal period. Information may be provided in a number of ways: individually, at each antenatal appointment, and in antenatal classes, verbally, in leaflet/ booklet form and by signposting to digital/online sources. The aim of this review is to determine which approach to information giving works best for women and their partners.

Summary of the protocol

See Table 1 for a summary of the Population, Intervention, Comparison and Outcome (PICO) characteristics of this review.

Table 1: Summary of the protocol (PICO table)

Population	Women who have received information as part of antenatal care, and their partners or families.
Intervention	Interventions should be about providing information and support about specific aspects of antenatal care such as screening or preparation for labour. Studies may examine specific aspects of providing information and support such as: • How complex the information provided is (such as inclusion of technical medical terms) • How the information is provided (such as in-person or remotely) • The format of the information (such as support group, pamphlets, electronic media, mix of formats) • Specific information provision strategies • When or for how long the information is provided (such as specific trimester or time period, or antenatal appointment)
Comparison	Eligible comparators include different: • Complexity of information provision • Formats of information • Information provision strategies • Information regimens • Mix of how information is provided • Timing(s) of information provision
Outcome	**Critical** • Anxiety • Increase in knowledge • Satisfaction with information or support • Severe fetal morbidity (including admission to neonatal intensive care unit, fetal death) **Important** • Preparedness for labour, birth and parenthood • Satisfaction with maternity care • Self-efficacy

For further details, see the review protocol in appendix A.

Methods and process

This evidence review was developed using the methods and process described in Developing NICE guidelines: the manual 2014. Methods specific to this review question are described in the review protocol in appendix A.

Declarations of interest were recorded according to NICE's conflicts of interest policy.

Clinical evidence

Included studies

Nine publications reporting 8 randomised controlled trials (RCTs) were included in this review (Andersson 2013, Brixval 2016, Björklund 2013, Chi 2016, de Leeuw 2019, Graham 2000, Koushede 2017, Svensson 2009 and Yee 2014). Brixval 2016 and Koushede 2017 reported different outcomes from the same RCT.

The included studies are summarised in Table 2.

Two studies compared group based information provision with individual information provision (Andersson 2013, Chi 2016). Three studies compared digital in addition to face to face information provision with face to face alone (Björklund 2013, de Leeuw 2019, Yee 2014). One study compared digital in addition to a leaflet with a leaflet alone (Graham 2000). One study compared an enhanced antenatal care programme, which consisted of more interactive and group based teaching, with the standard antenatal care programme, which consisted of more lecture based teaching (Svensson 2009). One study reported in 2 publications compared information provision in a small group with information provision in a large group (Brixval 2016, Koushede 2017).

One study was conducted in Australia (Svensson 2009); 1 study was conducted in Denmark (Brixval 2016, Koushede 2017); 1 study was conducted in the Netherlands (de Leeuw 2019); 2 studies were conducted in Sweden (Andersson 2013, Björklund 2013); 1 study was conducted in Taiwan (Chi 2016); 1 study was conducted in the UK (Graham 2000); 1 study was conducted in US (Yee 2014).

See the literature search strategy in appendix B and study selection flow chart in appendix C.

Excluded studies

Studies not included in this review are listed, and reasons for their exclusion are provided in appendix K.

Summary of studies included in the evidence review

Summaries of the studies that were included in this review are presented in Table 2.

Table 2: Summary of included studies

Study	Population	Intervention	Comparison	Outcomes
Andersson 2013 RCT Sweden	N=700 pregnant women Mean maternal age years: Intervention: 29.7 Control: 29.5	Group based information provision: 8 group sessions beginning from 20 weeks' gestational age.	Individual based information provision: Standard antenatal care in Sweden. Women meets the same midwife during 6-9 antenatal visits.	• Satisfaction with information • Preparedness for labour

Study	Population	Intervention	Comparison	Outcomes
		An extra session 8-12 weeks after birth. Sessions last 2 hours, some sessions include a 10-minute individual antenatal assessment with the midwife. Topics include fetal development, breastfeeding, childbirth, pain management and parenthood.	Midwives provide health checks as well as antenatal education classes (mainly to first time parents).	
Brixval 2016 RCT Denmark	See Koushede	See Koushede	See Koushede	• Self-efficacy
Björklund 2013 RCT Sweden	N=483 pregnant women Mean maternal age years: Intervention: 32 Control: 32.4	Digital and face-to-face: Women offered prenatal screening information at 10 weeks' gestation at midwife visit. Verbal and written information is on the anomaly scan, CUB and invasive testing, with midwife. Women also shown a 25-minute film about prenatal screening and diagnosis. Film included information about detection of fetal anomalies and invasive tests. Film included information about choice, how the examinations are performed, detection rates for some abnormalities, and false positive and negative results. Film showed interviews with parents giving their own experiences.	Face-to-face alone: Women offered prenatal screening information at 10 weeks' gestation at midwife visit. Verbal and written information is on the anomaly scan, CUB and invasive testing, with midwife. Separate visit with the midwife or doctor booked for counselling in early pregnancy.	• Anxiety

Study	Population	Intervention	Comparison	Outcomes
		Midwife present during the video viewing, but discussion was not encouraged. Women saw the film individually or as a group, or with partners. Separate visit with the midwife or doctor booked for counselling in early pregnancy.		
Chi 2016 RCT Taiwan	N=172 pregnant women Maternal age: number ≤29 years: Intervention group based: 15 Intervention individual based: 9 Control: 5 number 30-34 years: Intervention group based: 28 Intervention individual based: 30 Control: 31 number ≥35 years: Intervention group based: 7 Intervention individual based: 11 Control: 14	Group based information provision: 50-minute educational group session during the first trimester. Content of the session consisted of teaching about the harms of second hand smoking and the benefits of avoiding it. Skills were taught in relation to refusing second hand smoke. Role play used to simulate scenarios where women might face negotiating with household members regarding smoking.	Individual based information provision: 50-minute educational one-to-one session taught during the first trimester. Content the same as the group based session. Control: Received treatment as usual. This is standard mandatory government antenatal care. No further details provided.	• Increase in knowledge • Self-efficacy
de Leeuw 2019 RCT The Netherlands	N=162 pregnant women Mean maternal age years: Intervention: 35.1 Control: 33.6	Digital and face-to-face: The video group was randomised between an instructional video or an interactive video. After the video the group continued with the usual care of face-to-face information provision and counselling after the	Face-to-face alone: Usual care. A single consultation of information provision and counselling. Video groups and control groups had the same face-to-face information. The usual face-to-face information consisted of basic information about prenatal screening options and	• Increase in knowledge • Satisfaction with information

Study	Population	Intervention	Comparison	Outcomes
		video (as the control group). Video groups and control groups had the same face-to-face information. Video consisted of information of trisomy prevalence in the Dutch population, chromosomal anomaly testing, screening methods and non-invasive and invasive testing. Interactive video had pauses with written information, mandatory questions and rewind/stop options.	consequences of a positive or negative result	
Graham 2000 RCT UK	N=1050 pregnant women Mean maternal age years: Control: 29.7 Intervention: 30.1	Digital and leaflet: Women accessed information on prenatal tests on the touch screen display that was located in the antenatal clinic waiting area. The display was menu driven with 8 main topics and included video clips and voice overs. Microphone headsets were available to ensure privacy. Women in the touch screen group also received the control group information leaflets that were available in the antenatal clinic.	Leaflet alone: Women received the information leaflets on prenatal test that were available in the antenatal clinic. The leaflets had similar information to the touch screen but with less detail and different scope	• Anxiety • Increase in knowledge
Koushede 2017 RCT Denmark	N=1766 pregnant women Mean maternal age years at birth Intervention: 30.7 Control: 30.8	Small group information provision: Groups of 6-8 women had three 2.5 hour sessions of antenatal classes. Sessions were led by a midwife. Sessions focused on relationship and parenthood skills.	Large group information provision: Standard education offered at Hvidovre hospital. Two antenatal lectures, 2 hours each. Lectures were on birth and	• Anxiety

Study	Population	Intervention	Comparison	Outcomes
		The sessions aimed to increase self-efficacy, for example by identification of coping strategies.	breastfeeding in an auditorium with up to 250 people. Midwives who taught the small class groups were not allowed to teach the lectures in the control group.	
Svensson 2009 RCT Australia	N=248 pregnant women Mean maternal age years: Intervention: 30.08 Control: 30.47	Enhanced ANC programme: The enhanced programme consisted of 7 2-hour sessions before birth. Additional meeting 6 weeks after birth. Labour, birth and early weeks with the baby were taught as integrated processes in life and not as isolated events. Relaxation strategies were presented as life skills. Take home activities provided at the end of each session - included resources in your community for a new parent, roles and responsibilities of parents. Less lecture and video based learning, and more group learning and discussions than the control. Experiential activities are reality based (for example a bath of a 1-day old baby, and discussions with mother and parents).	Standard ANC programme: The standard programme consisted of 7, 2hour sessions before birth. Labour, birth and early weeks with the baby were pre-set topics taught with little integration between them. Relaxation strategies were taught as labour skills. More lecture and video based learning, and less group learning than the intervention. Discussions and demonstrations with models (for example bath with a doll). The differences between the two programmes were the order they were delivered and the method of presentation.	• Anxiety • Increase in knowledge • Self-efficacy
Yee 2014 RCT US	N=150 pregnant women Maternal age - mean years: Intervention: 26.0 Control: 27.3	Digital and face-to-face: Standard care counselling - meet with a genetic counsellor.	Face-to-face only: Standard care counselling - meet with a genetic counsellor.	• Increase in knowledge

Study	Population	Intervention	Comparison	Outcomes
		Interactive education tool that enables users to view 3D models of the internal body. Guides covering prenatal testing, anatomy, common genetic abnormalities, invasive and non-invasive testing. Section for writing notes which could be discussed later.		

ANC: antenatal care; CUB: combined ultrasound and biochemical; RCT: randomised controlled trial.

See the full evidence tables in appendix D and forest plots in appendix E.

Quality assessment of studies included in the evidence review

See the evidence profiles in appendix F.

Economic evidence

Included studies

A systematic review of the economic literature was conducted but no economic studies were identified which were applicable to this review question.

A single economic search was undertaken for all topics included in the scope of this guideline. See supplementary material 2 for details.

Excluded studies

Economic studies not included in this review are listed, and reasons for their exclusion are provided in appendix K.

Summary of studies included in the economic evidence review

No economic studies were identified which were applicable to this review question.

Economic model

No economic modelling was undertaken for this review because the committee agreed that other topics were higher priorities for economic evaluation.

Evidence statements

Clinical evidence statements

Comparison 1: Group based vs individual based information provision

Critical outcomes

Anxiety

No evidence was identified to inform this outcome.

Increase in knowledge

- High quality evidence from 1 RCT (N= 100) showed that there is an important difference between group based and individual based information provision, favouring individual based information, on an increase in knowledge at 1 month follow up (measured with mean % of correct answers; range of scores: 0-100): MD 3.63 (95% CI 3.59 to 3.67).
- High quality evidence from 1 RCT (N= 100) showed that there is an important difference between group based and individual based information provision, favouring individual based information, on an increase in knowledge at 2 months follow up (measured with mean % of correct answers; range of scores: 0-100): MD 2.43 (95% CI 2.41 to 2.45).

Satisfaction with information

- Very low quality evidence from 1 RCT (N= 407) showed that there is no important difference between group based and individual based information provision on satisfaction with information: OR 0.75 (95% CI 0.4 to 1.4).

Severe fetal morbidity

No evidence was identified to inform this outcome.

Important outcomes

Preparedness for birth

- Very low quality evidence from 1 RCT (N= 407) showed that there is no important difference between group based and individual based information provision on preparedness for birth: OR 0.73 (95% CI 0.47 to 1.13).

Satisfaction with maternity care

No evidence was identified to inform this outcome.

Self-efficacy

- Low quality evidence from 1 RCT (N= 100) showed that there is no important difference between group based and individual based information provision on self-efficacy at 1 month follow up (measured with Likert type questionnaire; range of scores: 8-40): MD 1.38 (95% CI -0.81 to 3.57).
- Low quality evidence from 1 RCT (N= 100) showed that there is an important difference between group based and individual based information provision on self-efficacy at 2 months follow up, favouring individual based information (measured with Likert type questionnaire; range of scores: 8-40): MD 4.16 (95% CI 2.46 to 5.86).

Comparison 2: Digital in addition to face-to-face vs face-to-face alone information provision

Critical outcomes

Anxiety

- Moderate quality evidence from 1 RCT (N= 368) showed that there is no important difference between digital in addition to face-to-face and face-to-face alone information provision, on anxiety (measured with: Spielberger state-trait anxiety inventory- state subscale; range of scores: 20-80): MD -0.40 (95% CI -2.35 to 1.55).
- Moderate quality evidence from 1 RCT (N= 387) showed that there is no important difference between digital in addition to face-to-face and face-to-face alone information

provision, on anxiety – worry about the baby (measured with adapted Cambridge worry scale; range of score: 0-5): MD -0.04 (95% CI -0.28 to 0.2).

- Moderate quality evidence from 1 RCT (N= 389) showed that there is no important difference between digital in addition to face-to-face and face-to-face alone information provision, on anxiety – worry about the birth (measured with adapted Cambridge worry scale; range of score: 0-5): MD -0.07 (95% CI -0.34 to 0.2).

Increase in knowledge

- Moderate quality evidence from 1 RCT (N= 123) showed that there is an important difference between digital in addition to face-to-face and face-to-face alone information provision, favouring digital + face-to-face, on an increase in knowledge immediately after the intervention (measured with mean % of correct answers; range of scores: 0-100): MD 23.40 (95 % CI 18.2 to 28.6).
- Low quality evidence from 1 RCT (N= 123) showed that there is an important difference between digital in addition to face-to-face and face-to-face alone information provision, favouring digital in addition to face-to-face on an increase in knowledge at 23 days follow up (measured with mean % of correct answers; range of scores: 0-100): MD 10.90 (95 % CI 4.73 to 17.07).
- Low quality evidence from 1 RCT (N= 141) showed that there is no important difference between digital in addition to face-to-face and face-to-face alone information provision, on an increase in knowledge (measured with 7 question test on the information provided; range of scores 1-7): MD 1.16 (95 % CI 0.38 to 1.94).

Satisfaction with information

- Low quality evidence from 1 RCT (N= 141) showed that there is no important difference between digital in addition to face-to-face and face-to-face alone information provision, on satisfaction with information (measured with genetic counsel satisfaction scale; range of scores 6-30): MD 0.00 (95 % CI -0.15 to 0.15).

Severe fetal morbidity

No evidence was identified to inform this outcome.

Important outcomes

Preparedness for birth

No evidence was identified to inform this outcome.

Satisfaction with maternity care

No evidence was identified to inform this outcome.

Self-efficacy

No evidence was identified to inform this outcome.

Comparison 3: Digital in addition to leaflet vs leaflet alone format of ANC information

Critical outcomes

Anxiety

- Moderate quality evidence from 1 RCT (N= 649) showed that there is no important difference between digital in addition to leaflet and leaflet alone format of ANC information, on the change in anxiety after intervention (measured with Spielberger state-trait anxiety inventory, state subscale; range of scores 20-80): MD 1.90 (95 % CI 0.56 to 3.24).

Increase in knowledge

- Moderate quality evidence from 1 RCT (N= 735) showed that there is no important difference between digital in addition to leaflet and leaflet alone format of ANC information, on number of women reporting they had knowledge of the anomaly scan: RR 0.99 (95% CI 0.96 to 1.02).
- Moderate quality evidence from 1 RCT (N= 735) showed that there is no important difference between digital in addition to leaflet and leaflet alone format of ANC information, on number of women reporting they had knowledge of the blood test: RR 1.06 (95% CI 0.98 to 1.15).
- Moderate quality evidence from 1 RCT (N= 735) showed that there is no important difference between digital in addition to leaflet and leaflet alone format of ANC information, on number of women reporting they had knowledge of amniocentesis: RR 1.05 (95% CI 0.94 to 1.16).
- Low quality evidence from 1 RCT (N= 735) showed that there is no important difference between digital in addition to leaflet and leaflet alone format of ANC information, on number of women reporting they had knowledge of chorionic villus sampling (CVS): RR 1.07 (95% CI 0.89 to 1.29).

Satisfaction with information

No evidence was identified to inform this outcome.

Severe fetal morbidity

No evidence was identified to inform this outcome.

Important outcomes

Preparedness for birth

No evidence was identified to inform this outcome.

Satisfaction with maternity care

No evidence was identified to inform this outcome.

Self-efficacy

No evidence was identified to inform this outcome.

Comparison 4: Enhanced ANC programme (interactive group based teaching and life skills) vs standard ANC programme (lecture based learning)

Critical outcomes

Anxiety

- Moderate quality evidence from 1 RCT (N= 170) showed that there is no important difference between an enhanced ANC programme and a standard ANC programme on anxiety (assessed with Cambridge worry scale; range of scores 0-50): MD -0.10 (95% CI -0.85 to 0.65).

Increase in knowledge

- Moderate quality evidence from 1 RCT (N= 170) showed that there is no important difference between an enhanced ANC programme and a standard ANC programme on an increase in knowledge pre-birth (measured with assessment developed by researchers; range of scores 0-55): MD 0.72 (95% CI 0.06 to 1.38).

- High quality evidence from 1 RCT (N= 170) showed that there is no important difference between an enhanced ANC programme and a standard ANC programme on an increase in knowledge 8 weeks' post-partum (measured with assessment developed by researchers; range of scores 0-55): MD 0.82 (95% CI -0.31 to 1.95).

Satisfaction with information

No evidence was identified to inform this outcome.

Severe fetal morbidity

No evidence was identified to inform this outcome.

Important outcomes

Preparedness for birth

No evidence was identified to inform this outcome.

Satisfaction with maternity care

No evidence was identified to inform this outcome.

Self-efficacy

- Low quality evidence from 1 RCT (N= 170) showed that there is an important difference between an enhanced ANC programme and a standard ANC programme on self-efficacy, favouring an enhanced ANC programme (measured with parents' expectations survey; range of scores 0-250): MD 16.00 (95% CI 9.46 to 22.54).

Comparison 5: Small group vs large group information provision for ANC

Critical outcomes

Anxiety

- Low quality evidence from 1 RCT (N= 1766) showed that there is no important difference between small group and large group information provision on anxiety at 9 weeks' post-partum (measured with perceived stress scale; range of scores 0-40): MD -0.06 (95% CI -0.15 to 0.03).
- Low quality evidence from 1 RCT (N= 1766) showed that there is no important difference between small group and large group information provision on anxiety at 6 months' post-partum (measured with perceived stress scale; range of scores 0-40): MD -0.10 (95% CI -0.2 to 0.00).

Increase in knowledge

No evidence was identified to inform this outcome.

Satisfaction with information

No evidence was identified to inform this outcome

Severe fetal morbidity

No evidence was identified to inform this outcome.

Important outcomes

Preparedness for birth

No evidence was identified to inform this outcome.

Satisfaction with maternity care

No evidence was identified to inform this outcome.

Self-efficacy

- Moderate quality evidence from 1 RCT (N= 1335) showed that there is no important difference between small group and large group information provision on self-efficacy to handle the birth process: RR 1.02 (95% CI 0.94 to 1.09).
- Moderate quality evidence from 1 RCT (N= 1337) showed that there is no important difference between small group and large group information provision on self-efficacy to make delivery a positive experience: RR 1.02 (95% CI 0.99 to 1.06).

The committee's discussion of the evidence

Interpreting the evidence

The outcomes that matter most

The committee considered anxiety, increase in knowledge and satisfaction with information or support as the critical outcomes. Anxiety in particular was chosen as a critical outcome as mental health and wellbeing is vital for women as they build a solid foundation in pregnancy, for their child to grow. The outcomes identified as important were preparedness for labour, birth and parenthood, satisfaction with maternity care and self-efficacy.

The quality of the evidence

The quality of the evidence for establishing which approach for information giving in antenatal care is effective, ranged from very low to high, with most of the evidence of low or moderate quality. The main issues were due to imprecision around the estimate of effects in many outcomes. Some outcomes (such as anxiety) were also downgraded for risk of bias as they were subjective. Other reasons for downgrading were high risk of bias in the randomisation process for some outcomes, and also risk of bias due to deviations from the intended interventions. Anxiety, when measured by the perceived stress scale, was downgraded for indirectness as the scale is not a direct measure of anxiety.

No evidence was identified for severe fetal morbidity.

Benefits and harms

There were 2 studies that compared group based with individual based antenatal care information provision. The evidence showed an important difference favouring individual based information provision on an increase in knowledge at 1 and 2 months follow up. There was also an important difference favouring individual based information provision on self-efficacy at 2 months, though no difference for this outcome at 1 month. There was also no important difference for any of the other outcomes identified (satisfaction with information, preparedness for birth). One study compared information provision in small groups to large groups. The evidence showed that there were no important differences between the two groups for any of the outcomes identified (self-efficacy, anxiety).

Three studies compared digital and face to face information provision with face to face information provision alone for ANC. The evidence showed an important difference favouring digital information provision on an increase in knowledge in one study immediately after the intervention and at 23 days follow up, although there was no difference in this outcome in one other study. There were no important differences for any of the other outcomes identified (anxiety, satisfaction with information). One studies compared digital and leaflet information provision to a leaflet alone. The evidence showed that were no important differences for any

outcomes between the two groups for any of the outcomes identified (anxiety, increase in knowledge).

One study compared an enhanced ANC programme consisting of interactive group based teaching and life skills with a standard ANC programme consisting of lecture based learning. The evidence showed that was an important difference, favouring the enhanced programme, on self-efficacy. There were no important differences between the two groups for any of the other outcomes (anxiety, increase in knowledge).

Overall the evidence suggests that information provided to individuals, supplemented with digital approaches and generally with a more interactive focus may have some benefits in terms of knowledge and self-efficacy although this does not necessarily translate into outcomes around anxiety or satisfaction.

The committee agreed that there were two broad aspects of information provision that healthcare professionals needed to take into account. First information provision in formats that meet a woman's needs (for example in the correct language) which absolutely must be covered by services and are discussed in detail in the NICE adults experience guideline. Second there are then options in information provision which may suit certain women, services or categories of information better, for example format of written materials (digital or printed, or both), or individual or group formats. The committee agreed based on their experience and the evidence in this review that each of these options may have some benefits in certain situations, however, information provision should be based on one-to-one discussions (sometimes including the partner) but supplemented by other formats, including group discussions (which could be either women only or together with partners), and different format of written information (digital, printed leaflets). Ideally healthcare services would be able to offer every approach to information provision for every woman in every situation, however this would have significant resource impacts and is not currently supported by the strength of evidence on the efficacy of any of the approaches to provision. On balance the committee recommended that one-to-one discussions could be supplemented by with alternative approaches as described above.

The committee noted that one possible harm of group based information provision is that it cannot be tailored specifically to any one woman. This may cause problems if, for example, some women attending groups have partners and others do not and much of the information is heavily focused on partner interactions. The committee therefore agreed it was important to recommend that when information is provided in a group format, such as in antenatal classes, it is done in a way so as to make all women feel welcome.

There was no evidence identified to inform the timing of information, but the committee felt it was important to have a staged approach and cover topics relevant to each stage of pregnancy, throughout the pregnancy.

The committee also agreed that it is important for healthcare professionals providing antenatal care to check with the woman that they have understood the information they have been given and how it relates to her situation. Enough time should be provided for them to ask questions and to discuss concerns. Pregnancy and antenatal care brings a lot of new information to parents, particularly first-time parents to process and healthcare professionals should support that this information is understood.

The committee discussed the benefits of signposting to additional sources of information. They recognised that women, their partners and families often look for information in various sources and felt it was essential that information given to women and their partners was evidence-based and consistent. The committee also agreed based on experience that it would be beneficial to recommend that women are given information on how to get in touch with services specific to their needs and to the local area. They discussed that this information can come from sources such as local support groups in the community, or various national charities. The committee discussed that there are groups of women, such as

those with complex social factors, who may also benefit from additional support, and felt it was important to reference the NICE guidance on pregnancy and complex social factors which give guidance on caring for pregnant women who have substance use problems; who are recent migrants, asylum seekers or refugees, or women who have difficulty reading or speaking English; young women aged under 20; and women who experience domestic abuse.

The committee discussed that there are sometimes differences in the information given to partners and women. They agreed it was important to recommend that the same general information related to antenatal care and pregnancy which is provided to women is also made available for the partners.

The committee recognised that references to a partner may not be inclusive for all women. They also acknowledged that different women have different circumstances and discussions in antenatal care can bring up sensitive issues. Therefore, they felt it was necessary to highlight in the recommendations that information provided should be supportive and respectful so that all women, regardless of their circumstances felt welcome and cared for.

Cost effectiveness and resource use

A systematic review of the economic literature was conducted but no relevant studies were identified which were applicable to this review question.

Detailed information giving will already be taking place in all centres providing antenatal care. These recommendations will reinforce best practice and improve consistency of care. It is not anticipated there will be any resource impact arising from these recommendations.

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Appendices

Appendix A - Review protocol

Review protocol for review question: What approach to information giving during antenatal care is effective (including timing and mode of provision)?

Table 3: Review protocol

Field (based on PRISMA-P)	Content
Review question	What approach to information giving during antenatal care is effective (including timing and mode of provision)?
Type of review question	Intervention
Objective of the review	The aim of this review is to determine what the most effective way is of providing topic-specific information, including how it should be delivered, how much of it should be given, and when it should be given.
Eligibility criteria – population	Women who have received information as part of antenatal care, and their partners or families.
Eligibility criteria – intervention(s)	Interventions should be about providing information and support about specific aspects of antenatal care such as screening or preparation for labour. Studies may examine specific aspects of providing information and support such as: • how complex the information provided is (such as inclusion of technical medical terms) • how the information is provided (such as in-person or remotely) • the format of the information (such as support group, pamphlets, electronic media, mix of formats) • specific information provision strategies • when or for how long the information is provided (such as specific trimester or time period, or antenatal appointment)
Eligibility criteria – comparator(s)	Eligible comparators include different: • complexity of information provision • formats of information • information provision strategies • information regimens

Field (based on PRISMA-P)	Content
	• mix of how information is provided • timing(s) of information provision
Outcomes and prioritisation	**Critical** • Anxiety • Increase in knowledge • Satisfaction with information or support • Severe fetal morbidity (including admission to NICU, fetal death) **Important** • Preparedness for labour, birth and parenthood • Satisfaction with maternity care • Self-efficacy
Eligibility criteria – study design	• Systematic review of randomised controlled trials (RCTs) • Randomised or quasi-randomised controlled trials (individual or cluster) Note: For further details, see the algorithm in appendix H, Developing NICE guidelines: the manual.
Other inclusion exclusion criteria	Exclusion STUDY DESIGN: • Case-control studies • Cohort studies • Cross-over studies • Cross-sectional studies • Epidemiological reviews or reviews on associations • Non-comparative studies PUBLICATION STATUS: • Conference abstract LANGUAGE: • Non-English **Inclusion** COUNTRY: • Only studies conducted in high-income countries, as defined by the World Bank, with centrally-funded healthcare systems will be included. For a list of these countries, see https://datahelpdesk.worldbank.org/knowledgebase/articles/906519-world-bank-country-and-lending-groups

Field (based on PRISMA-P)	Content
	Note: The use of the World Bank definitions of low-, middle- and high-income countries in this guideline is consistent with its use in the Postnatal care up to 8 weeks after birth (update) NICE guideline CG37.
Proposed sensitivity/sub-group analysis, or meta-regression	Particular attention will be given to the setting of the studies, and the sociodemographic characteristics (such as age, ethnicity) of the samples, in which they were conducted. In the presence of heterogeneity, the following subgroup analyses will be conducted: • Parity status (nulliparous, parous) Statistical heterogeneity will be assessed by visually examining the forest plots and by calculating the I2 inconsistency statistic (with an I2 value≥50% indicating serious heterogeneity, and ≥80% indicating very serious heterogeneity).
Selection process – duplicate screening/selection/analysis	Studies included in the 2008 NICE guideline on antenatal care for uncomplicated pregnancies (CG62), that satisfy the review protocol will be included in this review. Review questions selected as high priorities for health economic analysis (and those selected as medium priorities and where health economic analysis could influence recommendations) will be subject to dual weeding and study selection; any discrepancies above 10% of the dual weeded resources will be resolved through discussion between the first and second reviewers or by reference to a third person. All data extraction will quality assured by a senior reviewer. Draft excluded studies and evidence tables will be circulated to the Topic Group for their comments. Resolution of disputes will be by discussion between the senior reviewer, Topic Advisor and Chair.
Data management (software)	NGA STAR software will be used to generate bibliographies/citations, and perform conduct sifting and data extraction. Pairwise meta-analyses, if possible, will be conducted using Cochrane Review Manager (RevMan5). For details please see Supplement 1: methods. 'GRADEpro' will be used to assess the quality of evidence for each outcome.
Information sources – databases and dates	Sources to be searched: Medline, Medline In-Process, CCTR, CDSR, DARE, HTA, Embase. Limits (date, study design): • Date limit: 2000 (date restriction to studies conducted in 'internet-age'). • Apply standard animal/non-English language exclusion • Limit to RCTs and systematic reviews in first instance but download all results.

Identify if an update	This antenatal care update will replace the 2008 NICE guideline on antenatal care for uncomplicated pregnancies (CG62) which will be taken down in due course. The following relevant recommendations in the 2008 NICE guideline on antenatal care for uncomplicated (CG62) on what, when and how antenatal information should be provided were made:
	
	1.1.1 Antenatal information
	
	1.1.1.1 Antenatal information should be given to pregnant women according to the following schedule.
	• At the first contact with a healthcare professional:
	  ○ folic acid supplementation
	  ○ food hygiene, including how to reduce the risk of a food-acquired infection
	  ○ lifestyle advice, including smoking cessation, and the implications of recreational drug use and alcohol consumption in pregnancy
	  ○ all antenatal screening, including screening for haemoglobinopathies, the anomaly scan and screening for Down's syndrome, as well as risks and benefits of the screening tests
	• At booking (ideally by 10 weeks):

Field (based on PRISMA-P)	Content
	○ how the baby develops during pregnancy ○ nutrition and diet, including vitamin D supplementation for women at risk of vitamin D deficiency, and details of the Healthy Start programme ○ exercise, including pelvic floor exercises ○ place of birth (refer to intrapartum care NICE guideline CG55) ○ pregnancy care pathway ○ breastfeeding, including workshops ○ participant-led antenatal classes ○ further discussion of all antenatal screening ○ discussion of mental health issues (refer to antenatal and postnatal mental health NICE guideline CG45) • Before or at 36 weeks: ○ breastfeeding information, including technique and good management practices that would help a woman succeed, such as detailed in the UNICEF Baby Friendly Initiative ○ preparation for labour and birth, including information about coping with pain in labour and the birth plan ○ recognition of active labour ○ care of the new baby ○ vitamin K prophylaxis ○ newborn screening tests ○ postnatal self-care ○ awareness of 'baby blues' and postnatal depression. • At 38 weeks: ○ options for management of prolonged pregnancy. This can be supported by information such as 'The pregnancy book' (Department of Health 2007) and the use of other relevant resources such as UK National Screening Committee publications and the Midwives Information and Resource Service (MIDIRS) information leaflets. [2008] 1.1.1.2 Information should be given in a form that is easy to understand and accessible to pregnant women with additional needs, such as physical, sensory or learning disabilities, and to pregnant women who do not speak or read English. [2008] 1.1.1.3 Information can also be given in other forms such as audiovisual or touch-screen technology; this should be supported by written information. [2008] 1.1.1.4 Pregnant women should be offered information based on the current available evidence together with support to enable them to make informed decisions about their care. This information should include where they will be seen and who will undertake their care. [2008] 1.1.1.5 At each antenatal appointment, healthcare professionals should offer consistent information and clear explanations, and should provide pregnant women with an opportunity to discuss issues and ask questions. [2008] 1.1.1.6 Pregnant women should be offered opportunities to attend participant-led antenatal classes, including breastfeeding workshops. [2008] 1.1.1.7 Women's decisions should be respected, even when this is contrary to the views of the healthcare professional. [2008]

Field (based on PRISMA-P)	Content
	1.1.1.8 Pregnant women should be informed about the purpose of any test before it is performed. The healthcare professional should ensure the woman has understood this information and has sufficient time to make an informed decision. The right of a woman to accept or decline a test should be made clear. [2008] 1.1.1.9 Information about antenatal screening should be provided in a setting where discussion can take place; this may be in a group setting or on a one-to-one basis. This should be done before the booking appointment. [2008] 1.1.1.10 Information about antenatal screening should include balanced and accurate information about the condition being screened for. [2008]
Author contacts	Developer: National Guideline Alliance.
Highlight if amendment to previous protocol	For details please see section 4.5 of Developing NICE guidelines: the manual.
Search strategy – for one database	For details please see appendix B.
Data collection process – forms/duplicate	A standardised evidence table format will be used, and published as appendix D (clinical evidence tables) or H (economic evidence tables).
Data items – define all variables to be collected	For details please see evidence tables in appendix D (clinical evidence tables) or H (economic evidence tables).
Methods for assessing bias at outcome/study level	Quality assessment of individual studies will be performed using the following checklists: • ROBIS tool for systematic reviews • Cochrane RoB tool v.2 for RCTs and quasi-RCTs For details please see section 6.2 of Developing NICE guidelines: the manual. The risk of bias across all available evidence will be evaluated for each outcome using an adaptation of the 'Grading of Recommendations Assessment, Development and Evaluation (GRADE) toolbox' developed by the international GRADE working group: http://www.gradeworkinggroup.org/
Criteria for quantitative synthesis (where suitable)	For details please see section 6.4 of Developing NICE guidelines: the manual.
Methods for analysis – combining studies and exploring (in)consistency	For details please see the Supplement 1: methods.
Meta-bias assessment – publication bias, selective reporting bias	For details please see the Supplement 1: methods and section 6.2 of Developing NICE guidelines: the manual. If sufficient relevant RCT evidence is available, publication bias will be explored using RevMan software to examine funnel plots. Trial registries will be examined to identify missing evidence: Clinical trials.gov, NIHR Clinical Trials Gateway.
Assessment of confidence in cumulative evidence	For details please see sections 6.4 and 9.1 of Developing NICE guidelines: the manual.

Field (based on PRISMA-P)	Content
Rationale/context – Current management	For details please see the introduction to the evidence review.
Describe contributions of authors and guarantor	A multidisciplinary committee developed the guideline. The committee was convened by the National Guideline Alliance and chaired by Kate Harding in line with section 3 of Developing NICE guidelines: the manual. Staff from the National Guideline Alliance undertook systematic literature searches, appraised the evidence, conducted meta-analysis and cost-effectiveness analysis where appropriate, and drafted the guideline in collaboration with the committee. For details please see Supplement 1: methods.
Sources of funding/support	The National Guideline Alliance is funded by NICE and hosted by the Royal College of Obstetricians and Gynaecologists.
Name of sponsor	The National Guideline Alliance is funded by NICE and hosted by the Royal College of Obstetricians and Gynaecologists.
Roles of sponsor	NICE funds the National Guideline Alliance to develop guidelines for those working in the NHS, public health, and social care in England.
PROSPERO registration number	This protocol is not registered with PROSPERO.

CCTR: Cochrane Controlled Trials Register; CDSR: Cochrane Database of Systematic Reviews; CENTRAL: Cochrane Central Register of Controlled Trials; DARE: Database of Abstracts of Reviews of Effects; GRADE: Grading of Recommendations Assessment, Development and Evaluation; HTA: Health Technology Assessment; NGA: National Guideline Alliance; NICE: National Institute for Health and Care Excellence; NIHR: National Institute for Health Research; RCT(s): randomised controlled trial(s); RoB: risk of bias; ROBIS: Risk Of Bias In Systematic reviews tool; ROBINS-I: Risk Of Bias In Non-randomized studies – of Interventions tool.

Appendix B - Literature search strategies

Literature search strategy for review question: What approach to information giving during antenatal care is effective (including timing and mode of provision)?

This was a combined search to cover both this review (evidence review B) and also evidence review A.

Database(s): Medline & Embase (Multifile)
Last searched on **Embase Classic+Embase** 1947 to 2020 January 21, **Ovid MEDLINE(R) and Epub Ahead of Print, In-Process & Other Non-Indexed Citations and Daily** 1946 to January 21, 2020
Date of last search: 22nd January 2020
Multifile database codes: emczd = Embase Classic+Embase; ppez= MEDLINE(R) and Epub Ahead of Print, In-Process & Other Non-Indexed Citations and Daily

#	Searches
1	*Pregnancy/ or Pregnant Women/ or *Prenatal Care/
2	1 use ppez
3	*pregnancy/ or pregnant woman/ or *prenatal care/ or *perinatal care/ or perinatal period/
4	3 use emczd
5	(antenatal* or ante natal* or prenatal* or pre natal* or pregnan*).ti.
6	((antenatal* or ante natal* or prenatal* or pre natal*) adj (care* or health* or education*)).ti,ab.
7	(pregnan* adj3 women).ti,ab.
8	or/2,4-7
9	access to information/ or communication/ or computer communication networks/ or consumer health information/ or health education/ or health promotion/ or information dissemination/ or information seeking behaviour/ or internet/ or pamphlets/ or patient education as topic/ or posters as topic/ or publications/ or government publications as topic/
10	9 use ppez
11	access to information/ or computer network/ or consumer health information/ or health education/ or health promotion/ or information dissemination/ or information seeking/ or information service/ or internet/ or medical information/ or patient education/ or patient information/ or information/ or publication/
12	11 use emczd
13	((user? or famil* or parent* or father? or husband? or partner? or mother? or carer? or caregive? or care giv?) adj3 educat*).ti.
14	((user? or famil* or parent* or father? or husband? or partner? or mother? or carer? or caregiv? or care giv?) adj3 educat*).ab. /freq=2
15	((user? or famil* or parent* or father? or husband? or partner? or mother? or carer? or caregive? or care giv?) adj3 (advice or informat*)).ti,ab.
16	((pamphlet? or leaflet? or booklet? or ict or phone or telephone or manual* or media or brochure? or publication? or handout? or written or website? or web site? or web page? or webpage? or web based or video? or dvd? or online? or internet? or app? or application?) adj5 (informat* or educat*)).ti,ab.
17	((user? or famil* or parent* or father? or husband? or partner? or mother? or carer? or caregiver?) adj5 (pamphlet? or leaflet? or booklet? or manual? or brochure? or publication? or handout? or written or website? or web site? or web page? or webpage? or web based or video? or dvd? or online? or internet? or app? or application?)).ti,ab.
18	(informat* adj3 (model? or program* or need? or requir* or seek* or access* or dissem* or shar* or provision)).ti,ab.
19	(informat* adj3 (provid* or provision)).ti.
20	((informat* or advice) adj3 (provision or provid*)).ab. and informat*.ab. /freq=2
21	(informat* adj3 (help* or support* or benefi* or hinder* or hindran* or barrier? or facilitat* or practical* or clear* or accurat*)).ti,ab.
22	(informat* adj3 (type? or content? or method? or quality)).ti,ab.
23	((additional or extra or added or further) adj3 informat*).ti,ab.
24	((time? or timing or when or prompt*) adj3 informat*).ti,ab.
25	((give? or giving or gave or receive*) adj3 (advice or informat*)).ti,ab.
26	(informat* adj3 (hospital? or service? or resource? or red flag? or emergency care or contact?)).ti,ab.
27	patient education handout.pt.
28	(patient care planning/ or critical pathway/ or clinical protocols/) and information*.ti,ab.
29	28 use ppez
30	(informat* adj3 (care plan* or pathway? or protocol?)).ti,ab.
31	communication barriers/ use ppez
32	((communicat* or language?) adj3 (barrier? or facilitat*)).ti,ab.
33	(communicat* adj3 (help* or unhelp* or un-help* or encourag* or prevent* or good or bad* or effect* or ineffect* or in-effect* or poor* or difficult*)).ti,ab.
34	(communicat* adj3 (time? or timing? or initiat*)).ti,ab.

#	Searches
35	translating/ use ppez or "translating (language)"/ use emczd
36	(translat* adj7 (communicat* or language? or informat*)).ti,ab.
37	((user? or famil* or parent* or father? or husband? or partner? or mother? or carer? or care giv* or caregiver?) adj3 (advice or informat*)).ab.
38	health information.tw.
39	*patient care planning/ or *clinical pathway/ or *clinical protocols/
40	39 use emczd
41	patient care planning/ or critical pathway/ or clinical protocols/
42	41 use ppez
43	informat*.ti,ab.
44	(or/40,42) and 43
45	informat*.ti. or ((information* or advice* or educat* or support*) adj5 (emotional or selfcare* or self care or selfmanag* or self manag* or selfinstruct* or self instruct* or selfmonitor* or self monitor* or wellbeing or well being)).ti,ab.
46	or/10,12-27,29-38,44-45
47	exp interviews as topic/ or health care surveys/ or interview.pt. or narration/ or nursing methodology research/ or qualitative research/ or "Surveys and Questionnaires"/
48	47 use ppez
49	health care survey/ or nursing methodology research/ or questionnaire/ or semi structured interview/
50	49 use emczd
51	(grounded theory or interview or qualitative research).sh.
52	(qualitative* or interview* or focus or group* or questionnaire* or narrative* or narration* or survey*).ti,ab.
53	(ethno* or emic or etic or phenomenolog* or grounded theory or constant compar* or (thematic adj4 analys*) or theoretical sampl* or purposive sampl*).tw.
54	(hermeneutic* or heidegger* or husser* or colaizzi* or van kaam* or van manen* or giorgi* or glaser* or strauss* or ricoeur* or spiegelberg* or merleau*).tw.
55	(metasynthes* or meta-synthes* or metasummar* or meta-summar* or metastud* or meta-stud* or metathem* or meta-them*).tw.
56	(critical interpretive synthes* or (realist adj (review* or synthes*)) or (noblit and hare) or (meta adj (method or triangulation)) or (cerqual or conqual) or ((thematic or framework) adj synthes*)).tw.
57	((brother* or famil* or father* or husband* or mother* or partner* or patient* or relative* or sibling* or sister* or spous* or consumer* or mother* or parent* or wife* or wive* or women* or woman*) adj6 (experience* or belief* or stress* or emotion* or anx* or fear* or concern* or uncertain* or unsure or thought* or feeling* or felt* or view* or opinion* or perception* or perspective* or attitud* or satisfact* or know* or understand* or aware*)).ti,ab.
58	((carer* or caregiv* or care giv*) adj6 (experience* or belief* or stress* or emotion* or anx* or fear* or concern* or uncertain* or unsure or thought* or feeling* or felt* or view* or opinion* or perception* or perspective* or attitud* or satisfact* or know* or understand* or aware*)).ti,ab.
59	((doctor* or gp or health visitor* or coordinator* or midwiv* or midwif* or nurs* or obstetrician* or pediatrician* or paediatrician* or officer* or personal assistant* or physiotherapist* or practitioner* or professional* or worker*) adj6 (experience* or belief* or stress* or emotion* or anx* or fear* or concern* or uncertain* or unsure or thought* or feeling* or felt* or view* or opinion* or perception* or perspective* or attitud* or satisfact* or know* or understand* or aware*)).ti,ab.
60	or/48,50-56
61	or/57-59
62	or/60-61
63	(controlled clinical trial or pragmatic clinical trial or randomized controlled trial).pt. or drug therapy.fs. or (groups or placebo or randomi#ed or randomly or trial).ab.
64	crossover procedure/ or double blind procedure/ or randomized controlled trial/ or single blind procedure/ or (assign* or allocat* or crossover* or cross over* or ((doubl* or singl*) adj blind*) or factorial* or placebo* or random* or volunteer*).ti,ab.
65	meta-analysis/
66	meta-analysis as topic/
67	systematic review/
68	meta-analysis/
69	(meta analy* or metanaly* or metaanaly*).ti,ab.
70	((systematic or evidence) adj2 (review* or overview*)).ti,ab.
71	((systematic* or evidence*) adj2 (review* or overview*)).ti,ab.
72	(reference list* or bibliograph* or hand search* or manual search* or relevant journals).ab.
73	(search strategy or search criteria or systematic search or study selection or data extraction).ab.
74	(search* adj4 literature).ab.
75	(medline or pubmed or cochrane or embase or psychlit or psyclit or psychinfo or psycinfo or cinahl or science citation index or bids or cancerlit).ab.
76	cochrane.jw.
77	((pool* or combined) adj2 (data or trials or studies or results)).ab.
78	63 use ppez
79	64 use emczd
80	78 or 79
81	(or/65-66,69,71-76) use ppez
82	(or/67-70,72-77) use emczd
83	81 or 82
84	80 or 83

#	Searches
85	8 and 46 and 62
86	limit 85 to english language
87	limit 86 to yr="2006 -Current"
88	8 and 46 and 84
89	limit 88 to english language
90	limit 89 to yr="2000 -Current"
91	87 or 90
92	letter/ or editorial/ or news/ or historical article/ or anecdotes as topic/ or comment/ or case reports/
93	92 use ppez
94	(conference abstract or letter).pt.
95	(editorial or note).pt. or case report/ or case study/ or letter/
96	(or/94-95) use emczd
97	(letter or comment* or abstracts).ti.
98	or/93,96-97
99	randomized controlled trial/
100	random*.ti,ab.
101	or/99-100
102	98 not 101
103	(animals/ not humans/) or exp animals, laboratory/ or exp animal experimentation/ or exp models, animal/ or exp rodentia/
104	103 use ppez
105	(animal/ not human/) or nonhuman/ or exp animal experiment/ or exp experimental animal/ or animal model/ or exp rodent/
106	105 use emczd
107	(rat or rats or mouse or mice).ti.
108	or/102,104,106-107
109	91 not 108

Database(s): Cochrane Library
Last searched on **Cochrane Database of Systematic Reviews**, Issue 1 of 12, January 2020, **Cochrane Central Register of Controlled Trials**, Issue 1 of 12, January 2020
Date of last search: 23nd January 2020

#	Searches
#1	MeSH descriptor: [Pregnancy] this term only
#2	MeSH descriptor: [Pregnant Women] this term only
#3	MeSH descriptor: [Prenatal Care] this term only
#4	((antenatal* or ante natal* or prenatal* or pre natal* or pregnan*)):ti
#5	(((antenatal* or ante natal* or prenatal* or pre natal*) NEXT (care* or health* or education*))):ti,ab,kw
#6	((pregnan* NEAR/3 women)):ti,ab,kw
#7	#1 OR #2 OR #3 OR #4 OR #5 OR #6
#8	MeSH descriptor: [Access to Information] this term only
#9	MeSH descriptor: [Communication] this term only
#10	MeSH descriptor: [Computer Communication Networks] this term only
#11	MeSH descriptor: [Consumer Health Information] this term only
#12	MeSH descriptor: [Health Education] this term only
#13	MeSH descriptor: [Health Promotion] this term only
#14	MeSH descriptor: [Information Dissemination] this term only
#15	MeSH descriptor: [Information Seeking Behavior] this term only
#16	MeSH descriptor: [Internet] this term only
#17	MeSH descriptor: [Pamphlets] this term only
#18	MeSH descriptor: [Patient Education as Topic] this term only
#19	MeSH descriptor: [Posters as Topic] this term only
#20	MeSH descriptor: [Publications] this term only
#21	MeSH descriptor: [Government Publications as Topic] this term only
#22	(((user? or famil* or parent* or father? or husband? or partner? or mother? or carer? or caregive? or care giv?) NEAR/3 educat*)):ti
#23	(((user? or famil* or parent* or father? or husband? or partner? or mother? or carer? or caregiv? or care giv?) NEAR/3 educat*)):ab
#24	(((user? or famil* or parent* or father? or husband? or partner? or mother? or carer? or caregive? or care giv?) NEAR/3 (advice or informat*))):ti,ab,kw
#25	(((pamphlet? or leaflet? or booklet? or ict or phone or telephone or manual* or media or brochure? or publication? or handout? or written or website? or web site? or web page? or webpage? or web based or video? or dvd? or online? or internet? or app? or application?) NEAR/5 (informat* or educat*))):ti,ab,kw
#26	(((user? or famil* or parent* or father? or husband? or partner? or mother? or carer? or caregiver?) NEAR/5 (pamphlet? or leaflet? or booklet? or manual? or brochure? or publication? or handout? or written or website? or web site? or web page? or webpage? or web based or video? or dvd? or online? or internet? or app? or application?))):ti,ab,kw

#	Searches
#27	((informat* NEAR/3 (model? or program* or need? or requir* or seek* or access* or dissem* or shar* or provision))):ti,ab,kw
#28	((informat* NEAR/3 (provid* or provision))):ti
#29	(((informat* or advice) NEAR/3 (provision or provid*)).ab. and informat*):ab
#30	((informat* NEAR/3 (help* or support* or benefi* or hinder* or hindran* or barrier? or facilitat* or practical* or clear* or accurat*))):ti,ab,kw
#31	((informat* NEAR/3 (type? or content? or method? or quality))):ti,ab,kw
#32	(((additional or extra or added or further) NEAR/3 informat*)):ti,ab,kw
#33	(((time? or timing or when or prompt*) NEAR/3 informat*)):ti,ab,kw
#34	(((give? or giving or gave or receive*) NEAR/3 (advice or informat*))):ti,ab,kw
#35	((informat* NEAR/3 (hospital? or service? or resource? or red flag? or emergency care or contact?))):ti,ab,kw
#36	(patient education handout):pt
#37	MeSH descriptor: [Patient Care Planning] this term only
#38	MeSH descriptor: [Critical Pathways] this term only
#39	MeSH descriptor: [Clinical Protocols] this term only
#40	#37 OR #38 OR #39
#41	(information*):ti,ab,kw
#42	#40 AND #41
#43	((informat* NEAR/3 (care plan* or pathway? or protocol?))):ti,ab,kw
#44	MeSH descriptor: [Communication Barriers] this term only
#45	(((communicat* or language?) NEAR/3 (barrier? or facilitat*))):ti,ab,kw
#46	((communicat* NEAR/3 (help* or unhelp* or un-help* or encourag* or prevent* or good or bad* or effect* or ineffect* or in-effect* or poor* or difficult*))):ti,ab,kw
#47	((communicat* NEAR/3 (time? or timing? or initiat*))):ti,ab,kw
#48	MeSH descriptor: [Translating] this term only
#49	((translat* NEAR/7 (communicat* or language? or informat*))):ti,ab,kw
#50	(((user? or famil* or parent* or father? or husband? or partner? or mother? or carer? or care giv* or caregiver?) NEAR/3 (advice or informat*))):ab
#51	(health information):ti,ab,kw
#52	(informat*):ti
#53	(((information* or advice* or educat* or support*) NEAR/5 (emotional or selfcare* or self care or selfmanag* or self manag* or selfinstruct* or self instruct* or selfmonitor* or self monitor* or wellbeing or well being))):ti,ab,kw
#54	#52 AND #53
#55	#8 OR #9 OR #10 OR #11 OR #12 OR #13 OR #14 OR #15 OR #16 OR #17 OR #18 OR #19 OR #20 OR #21 OR #22 OR #23 OR #24 OR #25 OR #26 OR #27 OR #28 OR #29 OR #30 OR #31 OR #32 OR #33 OR #34 OR #35 OR #36 OR #42 OR #43 OR #44 OR #45 OR #46 OR #47 OR #48 OR #49 OR #50 OR #52 OR #54
#56	#7 AND #55 Publication Year from 2000 to current

Database(s): CRD: Database of Abstracts of Reviews of Effects (DARE), HTA Database
Date of last search: 22nd January 2020

#	Searches
1	MeSH DESCRIPTOR Pregnancy IN DARE,HTA
2	MeSH DESCRIPTOR Pregnant Women IN DARE,HTA
3	MeSH DESCRIPTOR Prenatal Care IN DARE,HTA
4	((antenatal* or ante natal* or prenatal* or pre natal* or pregnan*)):TI IN DARE, HTA
5	(((antenatal* or ante natal* or prenatal* or pre natal*) NEXT (care* or health* or education*))) IN DARE, HTA
6	((pregnan* NEAR3 women)) IN DARE, HTA
7	#1 OR #2 OR #3 OR #4 OR #5 OR #6
8	MeSH DESCRIPTOR Access to Information IN DARE,HTA
9	MeSH DESCRIPTOR Communication IN DARE,HTA
10	MeSH DESCRIPTOR Computer Communication Networks IN DARE,HTA
11	MeSH DESCRIPTOR Consumer Health Information IN DARE,HTA
12	MeSH DESCRIPTOR Health Education IN DARE,HTA
13	MeSH DESCRIPTOR Health Promotion IN DARE,HTA
14	MeSH DESCRIPTOR Information Dissemination IN DARE,HTA
15	MeSH DESCRIPTOR Information Seeking Behavior IN DARE,HTA
16	MeSH DESCRIPTOR Internet IN DARE,HTA
17	MeSH DESCRIPTOR Pamphlets IN DARE,HTA
18	MeSH DESCRIPTOR Patient Education as Topic IN DARE,HTA
19	MeSH DESCRIPTOR Posters as Topic IN DARE,HTA
20	MeSH DESCRIPTOR Publications IN DARE,HTA
21	MeSH DESCRIPTOR Government Publications as Topic IN DARE,HTA
22	(((user? or famil* or parent* or father? or husband? or partner? or mother? or carer? or caregiv? or care giv?) NEAR3 educat*)) IN DARE, HTA
23	(((user? or famil* or parent* or father? or husband? or partner? or mother? or carer? or caregive? or care giv?) NEAR3 (advice or informat*))) IN DARE, HTA

#	Searches
24	(((pamphlet? or leaflet? or booklet? or ict or phone or telephone or manual* or media or brochure? or publication? or handout? or written or website? or web site? or web page? or webpage? or web based or video? or dvd? or online? or internet? or app? or application?) NEAR5 (informat* or educat*))) IN DARE, HTA
25	(((user? or famil* or parent* or father? or husband? or partner? or mother? or carer? or caregiver?) NEAR5 (pamphlet? or leaflet? or booklet? or manual? or brochure? or publication? or handout? or written or website? or web site? or web page? or webpage? or web based or video? or dvd? or online? or internet? or app? or application?))) IN DARE, HTA
26	((informat* NEAR3 (model? or program* or need? or requir* or seek* or access* or dissem* or shar* or provision))) IN DARE, HTA
27	((informat* NEAR3 (provid* or provision))):TI IN DARE, HTA
28	(((informat* or advice) NEAR3 (provision or provid*))) IN DARE, HTA
29	((informat* NEAR3 (help* or support* or benefi* or hinder* or hindran* or barrier? or facilitat* or practical* or clear* or accurat*))) IN DARE, HTA
30	((informat* NEAR3 (type? or content? or method? or quality))) IN DARE, HTA
31	(((additional or extra or added or further) NEAR3 informat*)) IN DARE, HTA
32	(((time? or timing or when or prompt*) NEAR3 informat*)) IN DARE, HTA
33	(((give? or giving or gave or receive*) NEAR3 (advice or informat*))) IN DARE, HTA
34	((informat* NEAR3 (hospital? or service? or resource? or red flag? or emergency care or contact?))) IN DARE, HTA
35	MeSH DESCRIPTOR Patient Care Planning IN DARE,HTA
36	MeSH DESCRIPTOR Critical Pathways IN DARE,HTA
37	MeSH DESCRIPTOR Clinical Protocols IN DARE,HTA
38	#35 OR #36 OR #37
39	((information*)) IN DARE, HTA
40	#38 AND #39
41	((informat* NEAR3 (care plan* or pathway? or protocol?))) IN DARE, HTA
42	MeSH DESCRIPTOR Communication Barriers IN DARE,HTA
43	(((communicat* or language?) NEAR3 (barrier? or facilitat*))) IN DARE, HTA
44	((communicat* NEAR3 (help* or unhelp* or un-help* or encourag* or prevent* or good or bad* or effect* or ineffect* or in-effect* or poor* or difficult*))) IN DARE, HTA
45	((communicat* NEAR3 (time? or timing? or initiat*))) IN DARE, HTA
46	MeSH DESCRIPTOR Translating IN DARE,HTA
47	((translat* NEAR7 (communicat* or language? or informat*))) IN DARE, HTA
48	(((user? or famil* or parent* or father? or husband? or partner? or mother? or carer? or care giv* or caregiver?) NEAR3 (advice or informat*))) IN DARE, HTA
49	((health information)) IN DARE, HTA
50	((informat*)):TI IN DARE, HTA
51	(((information* or advice* or educat* or support*) NEAR5 (emotional or selfcare* or self care or selfmanag* or self manag* or selfinstruct* or self instruct* or selfmonitor* or self monitor* or wellbeing or well being))) IN DARE, HTA
52	#50 AND #51
53	#8 OR #9 OR #10 OR #11 OR #12 OR #13 OR #14 OR #15 OR #16 OR #17 OR #18 OR #19 OR #20 OR #21 OR #22 OR #23 OR #24 OR #25 OR #26 OR #27 OR #28 OR #29 OR #30 OR #31 OR #32 OR #33 OR #34 OR #40 OR #41 OR #42 OR #43 OR #44 OR #45 OR #46 OR #47 OR #48 OR #49 OR #52
54	#7 AND #53 Publication Year from 2000 to current

Database(s): Cinahl Plus

Date of last search: 23rd January 2020

#	Searches
S58	S53 NOT S54 Limiters - Publication Year: 2006-2020; English Language; Exclude MEDLINE records;
S54	PT anecdote or PT audiovisual or PT bibliography or PT biography or PT book or PT book review or PT brief item or PT cartoon or PT commentary or PT computer program or PT editorial or PT games or PT glossary or PT historical material or PT interview or PT letter or PT listservs or PT masters thesis or PT obituary or PT pamphlet or PT pamphlet chapter or PT pictorial or PT poetry or PT proceedings or PT “questions and answers” or PT response or PT software or PT teaching materials or PT website
S53	S7 AND S51
S52	S7 AND S51
S51	S8 OR S9 OR S10 OR S11 OR S12 OR S13 OR S14 OR S15 OR S16 OR S17 OR S18 OR S19 OR S20 OR S21 OR S22 OR S23 OR S24 OR S25 OR S26 OR S27 OR S28 OR S29 OR S30 OR S31 OR S32 OR S33 OR S39 OR S40 OR S41 OR S42 OR S43 OR S44 OR S45 OR S46 OR S47 OR S48 OR S49 OR S50
S50	TI ((information* or advice* or educat* or support*) N5 (emotional or selfcare* or self care or selfmanag* or self manag* or selfinstruct* or self instruct* or selfmonitor* or self monitor* or wellbeing or well being)) OR AB ((information* or advice* or educat* or support*) N5 (emotional or selfcare* or self care or selfmanag* or self manag* or selfinstruct* or self instruct* or selfmonitor* or self monitor* or wellbeing or well being))
S49	TI informat*
S48	TX health information
S47	AB ((user? or famil* or parent* or father? or husband? or partner? or mother? or carer? or care giv* or caregiver?) N3 (advice or informat*))
S46	TI (translat* N7 (communicat* or language? or informat*)) OR AB (translat* N7 (communicat* or language? or informat*))
S45	(MH "Interpreter Services")

#	Searches
S44	TI (communicat* N3 (time? or timing? or initiat*)) OR AB (communicat* N3 (time? or timing? or initiat*))
S43	TI (communicat* N3 (help* or unhelp* or un-help* or encourag* or prevent* or good or bad* or effect* or ineffect* or in-effect* or poor* or difficult*)) OR AB (communicat* N3 (help* or unhelp* or un-help* or encourag* or prevent* or good or bad* or effect* or ineffect* or in-effect* or poor* or difficult*))
S42	TI ((communicat* or language?) N3 (barrier? or facilitat*)) OR AB ((communicat* or language?) N3 (barrier? or facilitat*))
S41	(MH "Communication Barriers")
S40	TI (informat* N3 (care plan* or pathway? or protocol?)) OR AB (informat* N3 (care plan* or pathway? or protocol?))
S39	S37 AND S38
S38	TI information* OR AB information*
S37	S34 OR S35 OR S36
S36	(MH "Protocols")
S35	(MH "Critical Path")
S34	(MH "Patient Care Plans")
S33	PT patient education handout
S32	TI (informat* N3 (hospital? or service? or resource? or red flag? or emergency care or contact?)) OR AB (informat* N3 (hospital? or service? or resource? or red flag? or emergency care or contact?))
S31	TI ((give? or giving or gave or receive*) N3 (advice or informat*)) OR AB ((give? or giving or gave or receive*) N3 (advice or informat*))
S30	TI ((time? or timing or when or prompt*) N3 informat*) OR AB ((time? or timing or when or prompt*) N3 informat*)
S29	TI ((additional or extra or added or further) N3 informat*) OR AB ((additional or extra or added or further) N3 informat*)
S28	TI (informat* N3 (type? or content? or method? or quality)) OR AB (informat* N3 (type? or content? or method? or quality))
S27	TI (informat* N3 (help* or support* or benefi* or hinder* or hindran* or barrier? or facilitat* or practical* or clear* or accurat*)) OR AB (informat* N3 (help* or support* or benefi* or hinder* or hindran* or barrier? or facilitat* or practical* or clear* or accurat*))
S26	TI (informat* N3 (provid* or provision))
S25	TI (informat* N3 (model? or program* or need? or requir* or seek* or access* or dissem* or shar* or provision)) OR AB (informat* N3 (model? or program* or need? or requir* or seek* or access* or dissem* or shar* or provision))
S24	TI ((user? or famil* or parent* or father? or husband? or partner? or mother? or carer? or caregiver?) N5 (pamphlet? or leaflet? or booklet? or manual? or brochure? or publication? or handout? or written or website? or web site? or web page? or webpage? or web based or video? or dvd? or online? or internet? or app? or application?)) OR AB ((user? or famil* or parent* or father? or husband? or partner? or mother? or carer? or caregiver?) N5 (pamphlet? or leaflet? or booklet? or manual? or brochure? or publication? or handout? or written or website? or web site? or web page? or webpage? or web based or video? or dvd? or online? or internet? or app? or application?))
S23	TI ((pamphlet? or leaflet? or booklet? or ict or phone or telephone or manual* or media or brochure? or publication? or handout? or written or website? or web site? or web page? or webpage? or web based or video? or dvd? or online? or internet? or app? or application?) N5 (informat* or educat*)) OR AB ((pamphlet? or leaflet? or booklet? or ict or phone or telephone or manual* or media or brochure? or publication? or handout? or written or website? or web site? or web page? or webpage? or web based or video? or dvd? or online? or internet? or app? or application?) N5 (informat* or educat*))
S22	TI ((user? or famil* or parent* or father? or husband? or partner? or mother? or carer? or caregive? or care giv?) N3 (advice or informat*)) OR AB ((user? or famil* or parent* or father? or husband? or partner? or mother? or carer? or caregive? or care giv?) N3 (advice or informat*))
S21	TI ((user? or famil* or parent* or father? or husband? or partner? or mother? or carer? or caregiv? or care giv?) N3 educat*) OR AB ((user? or famil* or parent* or father? or husband? or partner? or mother? or carer? or caregiv? or care giv?) N3 educat*)
S20	(MH "Government Publications")
S19	(MH "Posters")
S18	(MH "Patient Education")
S17	(MH "Pamphlets")
S16	(MH "Internet")
S15	(MH "Information Seeking Behavior")
S14	(MH "Selective Dissemination of Information")
S13	(MH "Health Promotion")
S12	(MH "Health Education")
S11	(MH "Consumer Health Information")
S10	(MH "Computer Communication Networks")
S9	(MH "Communication")
S8	(MH "Access to Information")
S7	S1 OR S2 OR S3 OR S4 OR S5 OR S6
S6	TI (pregnan* N3 women) OR AB (pregnan* N3 women)
S5	TI ((antenatal* or ante natal* or prenatal* or pre natal*) N1 (care* or health* or education*)) OR AB ((antenatal* or ante natal* or prenatal* or pre natal*) N1 (care* or health* or education*))
S4	TI (antenatal* or ante natal* or prenatal* or pre natal* or pregnan*)
S3	(MM "Prenatal Care")
S2	(MH "Expectant Mothers")
S1	(MM "Pregnancy")

Database(s): PsycINFO 1806 to January Week 2 2020
Date of last search: 23rd January 2020

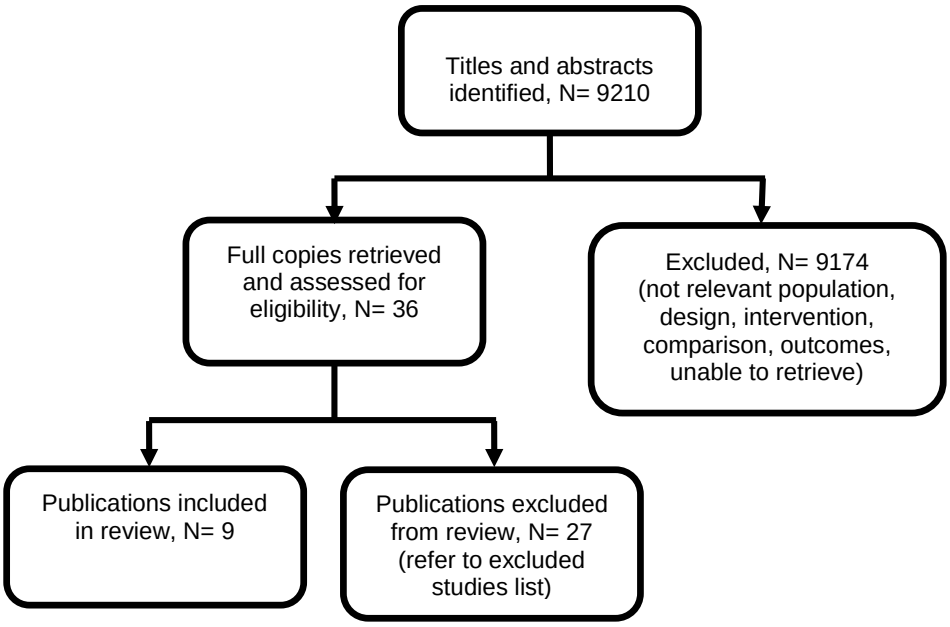
#	Searches
1	Pregnancy/ or Prenatal Care/ or Perinatal Period/
2	1 use psyh
3	(antenatal* or ante natal* or prenatal* or pre natal* or pregnan*).ti.
4	((antenatal* or ante natal* or prenatal* or pre natal*) adj (care* or health* or education*)).ti,ab.
5	(pregnan* adj3 women).ti,ab.
6	or/2-5
7	Information/ or Communication/ or Computer Mediated Communication/ or Health Information/ or Health Education/ or Client Education/ or Health Promotion/ or Information Dissemination/ or Information Seeking/ or Internet/ or Information Services/
8	7 use psyh
9	((user? or famil* or parent* or father? or husband? or partner? or mother? or carer? or caregive? or care giv?) adj3 educat*).ti.
10	((user? or famil* or parent* or father? or husband? or partner? or mother? or carer? or caregiv? or care giv?) adj3 educat*).ab. /freq=2
11	((user? or famil* or parent* or father? or husband? or partner? or mother? or carer? or caregive? or care giv?) adj3 (advice or informat*)).ti,ab.
12	((pamphlet? or leaflet? or booklet? or ict or phone or telephone or manual* or media or brochure? or publication? or handout? or written or website? or web site? or web page? or webpage? or web based or video? or dvd? or online? or internet? or app? or application?) adj5 (informat* or educat*)).ti,ab.
13	((user? or famil* or parent* or father? or husband? or partner? or mother? or carer? or caregiver?) adj5 (pamphlet? or leaflet? or booklet? or manual? or brochure? or publication? or handout? or written or website? or web site? or web page? or webpage? or web based or video? or dvd? or online? or internet? or app? or application?)).ti,ab.
14	(informat* adj3 (model? or program* or need? or requir* or seek* or access* or dissem* or shar* or provision)).ti,ab.
15	(informat* adj3 (provid* or provision)).ti.
16	((informat* or advice) adj3 (provision or provid*)).ab. and informat*.ab. /freq=2
17	(informat* adj3 (help* or support* or benefi* or hinder* or hindran* or barrier? or facilitat* or practical* or clear* or accurat*)).ti,ab.
18	(informat* adj3 (type? or content? or method? or quality)).ti,ab.
19	((additional or extra or added or further) adj3 informat*).ti,ab.
20	((time? or timing or when or prompt*) adj3 informat*).ti,ab.
21	((give? or giving or gave or receive*) adj3 (advice or informat*)).ti,ab.
22	(informat* adj3 (hospital? or service? or resource? or red flag? or emergency care or contact?)).ti,ab.
23	Treatment Planning/ and information*.ti,ab.
24	23 use psyh
25	(informat* adj3 (care plan* or pathway? or protocol?)).ti,ab.
26	Communication Barriers/ use psyh
27	((communicat* or language?) adj3 (barrier? or facilitat*)).ti,ab.
28	(communicat* adj3 (help* or unhelp* or un-help* or encourag* or prevent* or good or bad* or effect* or ineffect* or in-effect* or poor* or difficult*)).ti,ab.
29	(communicat* adj3 (time? or timing? or initiat*)).ti,ab.
30	(translat* adj7 (communicat* or language? or informat*)).ti,ab.
31	((user? or famil* or parent* or father? or husband? or partner? or mother? or carer? or care giv* or caregiver?) adj3 (advice or informat*)).ab.
32	health information.tw.
33	informat*.ti. or ((information* or advice* or educat* or support*) adj5 (emotional or selfcare* or self care or selfmanag* or self manag* or selfinstruct* or self instruct* or selfmonitor* or self monitor* or wellbeing or well being)).ti,ab.
34	or/8-22,24-33
35	exp Interviews/ or Surveys/ or Questionnaires/ or Narratives/ or Qualitative Methods/
36	35 use psyh
37	(grounded theory or interview or qualitative research).sh.
38	(qualitative* or interview* or focus or group* or questionnaire* or narrative* or narration* or survey*).ti,ab.
39	(ethno* or emic or etic or phenomenolog* or grounded theory or constant compar* or (thematic adj4 analys*) or theoretical sampl* or purposive sampl*).tw.
40	(hermeneutic* or heidegger* or husser* or colaizzi* or van kaam* or van manen* or giorgi* or glaser* or strauss* or ricoeur* or spiegelberg* or merleau*).tw.
41	(metasynthes* or meta-synthes* or metasummar* or meta-summar* or metastud* or meta-stud* or metathem* or meta-them*).tw.
42	(critical interpretive synthes* or (realist adj (review* or synthes*)) or (noblit and hare) or (meta adj (method or triangulation)) or (cerqual or conqual) or ((thematic or framework) adj synthes*)).tw.
43	((brother* or famil* or father* or husband* or mother* or partner* or patient* or relative* or sibling* or sister* or spous* or consumer* or mother* or parent* or wife* or wive* or women* or woman*) adj6 (experience* or belief* or stress* or emotion* or anx* or fear* or concern* or uncertain* or unsure or thought* or feeling* or felt* or view* or opinion* or perception* or perspective* or attitud* or satisfact* or know* or understand* or aware*)).ti,ab.
44	((carer* or caregiv* or care giv*) adj6 (experience* or belief* or stress* or emotion* or anx* or fear* or concern* or uncertain* or unsure or thought* or feeling* or felt* or view* or opinion* or perception* or perspective* or attitud* or satisfact* or know* or understand* or aware*)).ti,ab.

#	Searches
45	((doctor* or gp or health visitor* or coordinator* or midwiv* or midwif* or nurs* or obstetrician* or pediatrician* or paediatrician* or officer* or personal assistant* or physiotherapist* or practitioner* or professional* or worker*) adj6 (experience* or belief* or stress* or emotion* or anx* or fear* or concern* or uncertain* or unsure or thought* or feeling* or felt* or view* or opinion* or perception* or perspective* or attitud* or satisfact* or know* or understand* or aware*)).ti,ab.
46	or/36-45
47	6 and 34 and 46
48	limit 47 to (english language and yr="2006 -Current")
49	letter.pt.
50	Letter/
51	letter$/
52	editorial.pt.
53	historical article.pt.
54	anecdote.pt.
55	commentary.pt.
56	note.pt.
57	Case Report/
58	case report$.pt.
59	Case Study/
60	case study.pt.
61	exp animal/ not human/
62	Nonhuman/
63	exp Experimental Animal/
64	exp animal experiment/
65	exp animal model/
66	exp rodentia/
67	exp rodent/
68	Animals, Laboratory/
69	exp Animal Studies/
70	exp RODENTS/
71	or/49-70
72	48 not 71

Appendix C - Clinical evidence study selection

Study selection for: What approach to information giving during antenatal care is effective (including timing and mode of provision)?

Figure 1: Study selection flow chart



Appendix D - Clinical evidence tables

Evidence tables for review question: What approach to information giving during antenatal care is effective (including timing and mode of provision)?

Table 4: Evidence tables

Study details	Participants	Interventions	Methods	Outcomes and Results	Comments
Full citation Andersson, E., Christensson, K., Hildingsson, I., Mothers' satisfaction with group antenatal care versus individual antenatal care--a clinical trial, Sexual & reproductive healthcare, 4, 113-120, 2013 **Ref Id** 891828 **Country/ies where the study was carried out** Sweden **Study type** Cluster randomised controlled trial	**Sample size** N=700 (407 analysed) Intervention: n=399 (228 analysed) Control: n=301 (179 analysed) **Characteristics** Maternal age - mean years (range) Intervention: 29.7 (19-44) Control: 29.5 (17-44) p=0.507 Primiparous - number/total Intervention: 292/399 Control: 169/301 p<0.000 **Inclusion criteria** • Pregnant women able to speak	**Interventions** Group based antenatal care: 8 group sessions beginning from 20 weeks' gestational age. An extra session 8-12 weeks after birth. Sessions last 2 hours, some sessions include a 10-minute individual antenatal assessment with the midwife. Topics include fetal development, breastfeeding, childbirth, pain management and parenthood. Control:	**Details** Power analysis: Estimated sample size of 400 women (200 in each arm) needed to detect an 8% difference in satisfaction, with 80% power and significance level of 0.05. Statistical analysis: Intention to treat analysis. Descriptive statistics, t-test and chi-squared tests used in the analysis. Crude and adjusted odds ratio at 95% confidence intervals used.	**Results** Outcomes: Critical outcomes: **Satisfaction with information or support - number of women satisfied with antenatal care n/N:** questionnaire filled out 6 months postpartum OR adjusted for education and parity Intervention: 187/228 Control: 156/179 OR (95% CI): 0.68 (0.38 to 1.21) p=0.19 Adjusted OR (95% CI): 0.75 (0.40 to 1.40) p=0.37 Important outcomes: **Preparedness for labour, birth and parenthood:** questionnaire filled out 6 months postpartum - number of women reporting they felt prepared. OR adjusted for education and parity	**Limitations** Cochrane risk of bias tool V2: Randomisation process: High risk. (No information on concealment or randomisation process. Significant difference in baseline for number of primipara women in each group). Deviations from intended interventions (assignment): Some concern. (Participants aware of assignment. No information on deviations. Appropriate analysis). Missing outcome data: Some concerns. (Outcome data not available for all randomised participants. Possible that missingness could depend on the true value). Measurement of the outcome: All outcomes: Some concerns. (Appropriate method of measurement. Possibility that the assessment was influenced by knowledge of intervention - all self-reported).

Study details	Participants	Interventions	Methods	Outcomes and Results	Comments
Aim of the study To compare the satisfaction of women who took part in a group based antenatal care and standard care. **Study dates** September 2008 to December 2010 **Source of funding** No information given.	and understand Swedish. **Exclusion criteria** None specified	Standard antenatal care in Sweden. Women meets the same midwife during 6-9 antenatal visits. Midwives provide health checks as well as antenatal education classes (mainly to first time parents). Individual care.		Felt well prepared for birth- - n/N: Intervention: 152/228 Control: 112/179 OR (95% CI): 0.78 (0.51 to 1.20) Adjusted OR (95% CI): 0.72 (0.47 to 1.13)	Selection of the reported result: Low risk. (Data reported as mentioned in pre-specified plan. Results not selected from multiple measurements). Overall: High risk
Full citation Björklund, U., Marsk, A., Ohman, S. G., Does an information film about prenatal testing in early pregnancy affect women's anxiety and worries? Journal of psychosomatic obstetrics and gynaecology, 34, 9-14, 2013	**Sample size** N=483 (390 analysed) Intervention: n=236 (184 analysed) Control: n=247 (206 analysed) **Characteristics** Mean maternal age - years (SD) Intervention: 32 (4.6) Control: 32.4 (4.8) Nulliparous n/N:	**Interventions** Film about prenatal screening and diagnosis: Women offered prenatal screening information at 10 weeks' gestation at midwife visit. Verbal and written information is on the anomaly scan, CUB and	**Details** Power analysis: No information given Statistical analysis: Two-sided tests. Statistical significance defined as p=0.05 or less. Categorical data analysed using the 2test. For normally distributed variables, student's t-test was used.	**Results** Outcomes: Critical outcomes: **Anxiety:** - measured using Speilberger state-trait anxiety inventory (STAI) range 20-80 - higher scores indicate higher anxiety Trait anxiety - how the person generally feels State anxiety - how the person feels at present	**Limitations** Cochrane risk of bias tool V2: Randomisation process: Some concerns. (No information on allocation concealment. No baseline imbalances). Deviations from intended interventions (assignment): Some concern. (Participants aware of assignment. No information on deviations. No information if analysis performed was by intention to treat).

Study details	Participants	Interventions	Methods	Outcomes and Results	Comments
Ref Id 1187487 **Country/ies where the study was carried out** Sweden **Study type** Randomised controlled trial **Aim of the study** To find out if an information film on prenatal examinations has an effect on anxiety and worry in women. **Study dates** March to July 2009 **Source of funding** No information given.	Intervention: 107/184 (59.1) Control: 117/206 (57.6) **Inclusion criteria** • Women who speak Swedish. • Consent to participate in the study. • Gestational age more than 11 weeks. **Exclusion criteria** • Gestational age less than or equal to 11 weeks. • Women who do not speak Swedish. • Women who did not want prenatal examination information.	invasive testing, with midwife. Women also shown a 25-minute film about prenatal screening and diagnosis. Film included information about detection of fetal anomalies and invasive tests. Film included information about choice, how the examinations are performed, detection rates for some abnormalities, and false positive and negative results. Film showed interviews with parents giving their own experiences. Midwife present during the video viewing, but discussion was not encouraged. Women saw the film individually or as a group, or with partners. Separate visit with the midwife		Intervention - mean (SD): Trait anxiety (n=178): 34.0 (9.2) State anxiety (n=177): 32.5 (9.2) Control: Trait anxiety (n=194): 34.7 (8.7) State anxiety (n=191): 32.9 (9.9) **Anxiety (Worry):** - measured using 2 questions from the Cambridge Worry Scale Range 0-5 - higher scores indicate increased worry Worry about something being wrong with baby - mean (SD): Intervention (n=184): 2.02 (1.23) Control (n=203): 2.06 (1.19) Worry about giving birth - mean (SD): Intervention (n=184): 2.15 (1.45) Control (n=205): 2.22 (1.28)	Missing outcome data: Some concerns. (Outcome data not available for all randomised participants. Possible that missingness could depend on the true value). Measurement of the outcome: All outcomes: Some concerns. (Appropriate method of measurement. Possibility that the assessment was influenced by knowledge of intervention - all self-reported). Selection of the reported result: Some concern. (No information on pre-specified plan. Not likely to have been selected). Overall: Some concern

Study details	Participants	Interventions	Methods	Outcomes and Results	Comments
		or doctor booked for counselling in early pregnancy. Standard care: Women offered prenatal screening information at 10 weeks' gestation at midwife visit. Verbal and written information is on the anomaly scan, CUB and invasive testing, with midwife. Separate visit with the midwife or doctor booked for counselling in early pregnancy.			
Full citation Brixval, C. S., Axelsen, S. F., Thygesen, L. C., Due, P., Koushede, V., Antenatal education in small classes may increase childbirth self-efficacy: Results from a Danish randomised	**Sample size** See Koushede 2017 **Characteristics** See Koushede 2017 **Inclusion criteria** See Koushede 2017 **Exclusion criteria**	**Interventions** See Koushede 2017 .	**Details** Power analysis: Not specified Statistical analysis: Intention to treat analysis. Multinomial logistic regression model used to test differences in childbirth self-efficacy between the intervention and control groups.	**Results** Outcomes: Important outcomes: **Self-efficacy:** Measured with number reporting totally agree or agree - indicating high self-efficacy. Confidence in own ability to make the delivery a positive experience n/N:	**Limitations** Cochrane risk of bias tool V2: Randomisation process: Low risk. (Allocation concealed. Computer generated allocation sequence. No baseline imbalances). Deviations from intended interventions (assignment): Some concerns. (Participants were aware of assignment. No information on

Study details	Participants	Interventions	Methods	Outcomes and Results	Comments
trial, Sexual & reproductive healthcare: official journal of the Swedish Association of Midwives, 10, 32-34, 2016 **Ref Id** 630411 **Country/ies where the study was carried out** Denmark **Study type** Randomised controlled trial (From the same trial as Koushede 2017) **Aim of the study** See Koushede 2017 **Study dates** See Koushede 2017 **Source of funding**	See Koushede 2017			Intervention: 620/660 Control: 619/675 Confidence in own ability to handle the birth process no matter how it turns out n/N: Intervention: 455/661 Control: 458/676	deviations. Appropriate analysis performed). Missing outcome data: Some concerns. (Outcome data not available for all randomised participants. Possible that missingness could depend on the true value). Measurement of the outcome: Some concerns. (Appropriate method of measurement. Possibility that the assessment was influenced by knowledge of intervention - self-reported). Selection of the reported result: Low risk. (Data reported as mentioned in the pre-specified plan. Results not selected from multiple outcomes). Overall: Some concerns

Study details	Participants	Interventions	Methods	Outcomes and Results	Comments
Not industry funded					
Full citation Chi, Y. C., Sha, F., Yip, P. S., Chen, J. L., Chen, Y. Y., Randomized comparison of group versus individual educational interventions for pregnant women to reduce their second hand smoke exposure, Medicine (Baltimore), 95, e5072, 2016 **Ref Id** 1188881 **Country/ies where the study was** carried out Taiwan **Study type** Randomised controlled trial	**Sample size** N=172 (150 analysed) Intervention group based: n=55 (50 analysed) Intervention individual based: n=57 (50 analysed) Control group: 60 (50 analysed) **Characteristics** Maternal age - number ≤29: Intervention group based: 15 Intervention individual based: 9 Control: 5 30-34: Intervention group based: 28 Intervention individual based: 30 Control: 31 ≥35: Intervention group based: 7 Intervention individual based: 11 Control: 14	**Interventions** Group based education: 50-minute educational group session during the first trimester. Content of the session consisted of teaching about the harms of second hand smoking and the benefits of avoiding it. Skills were taught in relation to refusing second hand smoke. Role play used to simulate scenarios where women might face negotiating with household members regarding smoking. Individual based education: 50-minute educational one-to-one session	**Details** Power analysis: A sample size of 50 women in each arm was required to detect a 0.8 change in effect size, with an 85% power at 5% statistical significance. Statistical significance: Baseline characteristics between the groups were analysed using chi-squared. Analysis of variance was used to compare differences in self-efficacy and knowledge.	**Results** Outcomes: Critical outcomes: **Increase in knowledge** - mean % (SD): Mean % of correct answers Baseline: Intervention - group: 86.50 (0.12) Intervention - individual: 87.00 (0.14) Control: 80.13 (0.16) p=0.02 1 month post intervention: Intervention - group: 97.63 (0.09) Intervention - individual: 94.00 (0.11) Control: 76.88 (0.17) 2 months post intervention: Intervention - group: 99.88 (0.01) Intervention - individual: 97.45 (0.06) Control: 89.13 (0.11) Note: There was a statistically significant difference between the intervention groups and the control group at baseline. Important outcomes: **Self-efficacy** - mean score (SD): Self-efficacy for rejecting second hand smoke exposure. Measured using a questionnaire consisting of 8 items and a 5 point Likert type scale. Range 8-40.	**Limitations** Cochrane risk of bias tool V2: Randomisation process: Some concerns. (No information on allocation concealment or sequence. No baseline imbalances). Deviations from intended interventions (assignment): Low risk. (Participants not aware of assignment). Missing outcome data: Some concerns. (Outcome data not available for all randomised participants. Possible that missingness could depend on the true value). Measurement of the outcome: Self-efficacy. Some concerns. (Appropriate method of measurement. Possibility that the assessment was influenced by knowledge of intervention - self-reported). Increase in knowledge. Low risk. (Appropriate method of measurement. Assessment could not have been influenced by knowledge of intervention). Selection of the reported result: Some concerns. (No information on outcomes as pre-specified plan not available).

Study details	Participants	Interventions	Methods	Outcomes and Results	Comments
Aim of the study To investigate the effects of group versus individual second hand smoke education on self-efficacy and other outcomes. **Study dates** May 2013 to September 2013 **Source of funding** Not government funded	**Inclusion criteria** • Pregnant women of 12 or fewer weeks gestation. • Non smokers • 18 years or older **Exclusion criteria** • Illiterate. • Not a Taiwanese citizen • Those who terminated tier pregnancy during the study period • History of psychiatric or substance use disorders.	taught during the first trimester. Content the same as the group based session. Control: Received treatment as usual. This is standard mandatory government antenatal care. No further details provided.		Higher scores indicate increased self-efficacy. 1 month post intervention: Intervention - group: 33.64 (5.57) Intervention - individual: 32.26 (5.59) Control: 31.52 (4.44) 2 months post intervention: Intervention - group: 38.26 (3.24) Intervention - individual: 34.10 (5.21) Control: 33.50 (4.02)	Overall: Some concerns
Full citation de Leeuw, R. A., van der Horst, S. F. B., de Soet, A. M., van Hensbergen, J. P., Bakker, Pcam, Westerman, M., de Groot, C. J. M., Scheele, F., Digital vs face-to-face information provision in	**Sample size** N=162 (141 analysed) Intervention Total: n=80 (n=74 analysed) Intervention - instructional video: n=40 Intervention - interactive video: n=40 Control: n=77 (n=67 analysed) **Characteristics**	**Interventions** Digital and face-to-face: The video group was randomised between an instructional video or an interactive video. After the video the group continued with the usual care of face-to-face information provision and	**Details** Power analysis: A sample size of 160 women, 80 in each arm, would be needed to show a statistically significant difference in satisfaction, with 80% power at 5% statistical significance. Statistical significance: Aspin-Welch test used to compare the main outcomes of the survey. The difference within groups was analysed	**Results** Outcomes: Critical outcomes: **Knowledge grade difference** pre/post test - mean difference: Knowledge evaluated by a seven question test based on the information provided. Range 1-7. Higher scores indicate increased knowledge. Intervention: +2.07 Control: +0.91 **Satisfaction with information or support** - Satisfaction with the	**Limitations** Cochrane risk of bias tool V2: Randomisation process: High risk. (Pseudo randomised allocation sequence. Allocation concealed. No baseline imbalances). Deviations from intended interventions (assignment): Some concerns. (Participants aware of assignment. No information on deviations. No information whether analysis was performed as intention to treat).

Study details	Participants	Interventions	Methods	Outcomes and Results	Comments
patient counselling for prenatal screening: a noninferiority randomized controlled trial, Prenatal Diagnosis, 39, 456-463, 2019 **Ref Id** 1190636 **Country/ies where the study was carried out** The Netherlands **Study type** Cluster randomised controlled trial **Aim of the study** To compare face-to-face prenatal counselling with two forms of digital information. **Study dates**	Mean maternal age - years (SD) Intervention: 35.1 (4.1) Control: 33.6 (4.5) Multipara - n/N Intervention: 56/80 Control: 55/77 **Inclusion criteria** • 18 years or older. • Spoke Dutch. • Came in for routine prenatal screening counselling. **Exclusion criteria** • Increased risk of chromosomal abnormalities.	counselling after the video (as the control group). Video groups and control groups had the same face-to-face information. Video consisted of information of trisomy prevalence in the Dutch population, chromosomal anomaly testing, screening methods and non-invasive and invasive testing. Interactive video had pauses with written information, mandatory questions and rewind/stop options. Face-to-face alone: Usual care. A single consultation of information provision and counselling. Video groups and control groups had the same	using the Wilcoxon signed rank test.	counselling - Mean (SD): Measured using the genetic counselling satisfaction scale. 6-item Likert type scale. Range from 6-30. Higher score indicates increased satisfaction. Intervention: 3.9 (0.4) Control: 3.9 (0.5) 3.91 (95% CI, 3.38 to 4.42)	Missing outcome data: Some concerns. (Outcome data not available for all randomised participants. Missingness could depend on the true value). Measurement of the outcome: Satisfaction: Some concern. (Appropriate method of measurement. Possibility that the assessment was influenced by knowledge of intervention). Knowledge: Low risk. (Appropriate method of measurement. Assessment could not have been influenced by knowledge of intervention). Selection of the reported result: Some concerns. (No information on outcomes as pre-specified plan not available). Overall: High risk

Study details	Participants	Interventions	Methods	Outcomes and Results	Comments
August 2017 and December 2017 **Source of funding** Not specified		face-to-face information. The usual face-to-face information consisted of basic information about prenatal screening options and consequences of a positive or negative result.			
Full citation Graham, W., Smith, P., Kamal, A., Fitzmaurice, A., Smith, N., Hamilton, N., Randomised controlled trial comparing effectiveness of touch screen system with leaflet for providing women with information on prenatal tests, British Medical Journal, 320, 155-160, 2000 **Ref Id** 630613	**Sample size** N=1050 randomised (n=875 analysed) Control: n= 526 (n=430 analysed) Intervention: n=524 (n=445 analysed) **Characteristics** Mean maternal age years (SD): Control: 29.7 (5.4) Intervention: 30.1 (5.2) p=0.253 Mean gestational age weeks (SD): Control: 11.8 (2.4) Intervention: 11.7 (2.2) p=0.949	**Interventions** Touch screen: Women accessed information on prenatal tests on the touch screen display that was located in the antenatal clinic waiting area. The display was menu driven with 8 main topics and included video clips and voice overs. Microphone headsets were available to ensure privacy. Women in the touch screen group also	**Details** Power analysis: Sample size of 1000 women needed, 500 in each arm, for a 90% power to detect a difference of 10% at 5% significance level. Statistical analysis: Analysis was by intention to treat. Outcome variables for the two groups were compared using the ÷2 test and McNemar's test for paired data. Significance levels of differences were given with 95% confidence intervals. Confounding factors, parity and education, were adjusted for.	**Results** Outcomes: Critical outcomes: **Anxiety (follow up 9 weeks)** Measured with Spielberger state-trait anxiety inventory (STAI) Each subscale (state and trait) has 20 items and 4 point Likert scale. Ranges for each subscale: 20-80 Before information results from baseline questionnaire at approximately 11 weeks gestation After information from questionnaire at approximately 20 weeks gestation Intervention: n=332 A-state (current state of anxiety) Mean score before information: 35.58 Mean score after information: 34.20 Mean difference (95% confidence	**Limitations** Cochrane risk of bias tool V2: Randomisation process: Low risk. (Allocation concealed. No information about allocation sequence. No baseline differences). Deviations from intended interventions (assignment): Some concern. (Participants aware of assignment. No information on deviations. Appropriate analysis). Missing outcome data: Some concerns. (Outcome data not available for all randomised participants. Possible that missingness could depend on the true value). Measurement of the outcome: Anxiety and Knowledge increase: Some concerns. (Appropriate method of measurement. Possibility that the

Study details	Participants	Interventions	Methods	Outcomes and Results	Comments
Country/ies where the study was carried out UK **Study type** Randomised controlled trial **Aim of the study** To investigate whether a touch screen system or an information leaflet is more effective at providing women with information on prenatal tests. **Study dates** April 1997 to January 1998 **Source of funding** Not industry funded	**Inclusion criteria** • Women attended a booking appointment at one of the antenatal care clinics at Aberdeen Maternity Hospital. **Exclusion criteria** No information provided.	received the control group information leaflets that were available in the antenatal clinic. Control: Women received the information leaflets on prenatal test that were available in the antenatal clinic. The leaflets had similar information to the touch screen but with less detail and different scope.		interval): 1.38 (0.50 to 2.28) p=0.002 A-trait (anxiety proneness) Mean score before information: 37.12 Mean score after information: 35.41 Mean difference (95% CI): 1.71 (0.87 to 2.56) p<0.001 Control: n=317 A-state Mean score before information: 35.15 Mean score after information: 35.67 Mean difference (95% CI): -0.52 (-1.54 to 0.50) p=0.317 A-trait Mean score before information: 36.87 Mean score after information: 37.38 Mean difference (95% CI): -0.51 (-1.31 to 0.28) p=0.204 **Increase in knowledge (follow up 9 weeks)** Number of women who had knowledge of 4 prenatal tests (detailed anomaly scan, blood test, amniocentesis, chorionic villus sampling). Intervention n/N: Number before information: Detailed anomaly scan: 348/374 Blood test: 246/374 Amniocentesis: 228/374 Chorionic villus sampling: 121/374	assessment could have been influenced by knowledge of intervention - self-reported). Selection of the reported result: Some concern. (No information on pre-specified plan. Results unlikely to have been selected from multiple outcomes). Overall: Some concern

Study details	Participants	Interventions	Methods	Outcomes and Results	Comments
				Number after information: Detailed anomaly scan: 357/374 Blood test: 293/374 Amniocentesis: 251/374 Chorionic villus sampling: 150/374 Control n/N: Number before information: Detailed anomaly scan: 311/361 Blood test: 237/361 Amniocentesis: 201/361 Chorionic villus sampling: 111/361 Number after information: Detailed anomaly scan: 347/361 Blood test: 267/361 Amniocentesis: 231/361 Chorionic villus sampling: 135/361	
Full citation Koushede, V., Brixval, C. S., Thygesen, L. C., Axelsen, S. F., Winkel, P., Lindschou, J., Gluud, C., Due, P., Antenatal small-class education versus auditorium-based lectures to promote positive transitioning to parenthood - A	**Sample size** N=1766 Intervention: n=883 Control: n=883 **Characteristics** Mean maternal age at birth -years (SD): Intervention: 30.7 (4.1) Control: 30.8 (4.1) Nulliparous - n/N (%): Intervention: 787/883 (89.1)	**Interventions** Small group antenatal classes: Groups of 6-8 women had three 2.5 hour sessions of antenatal classes. Sessions were led by a midwife. Sessions focused on relationship and parenthood skills. The sessions aimed to	**Details** Power analysis: Sample size of 1756 was able to detect a minimally relevant difference of 1 on the perceived stress scale with a power of 0.94. Statistical analysis: Mean differences at different time points between groups were examined using a general linear model. Mean square root used	**Results** Outcomes: Critical outcomes: **Anxiety:** Perceived stress scale (PSS). 10 items. Answers added together for a sum score, range 0-40. Low score indicates better outcomes. At 37 weeks gestation - mean square root (mean): Intervention: 3.22 (10.18) Control: 3.25 (10.50) Mean difference (95% CI): -0.03 (-0.12 to 0.07). Mean difference (95% CI), adjusted for	**Limitations** Cochrane risk of bias tool V2: Randomisation process: Low risk. (Allocation concealed. Computer generated allocation sequence. No baseline imbalances). Deviations from intended interventions (assignment): Some concerns. (Participants aware of assignment. No information of deviations. Appropriate analysis). Missing outcome data: Some concerns. (Outcome data not available for all randomised participants.

Study details	Participants	Interventions	Methods	Outcomes and Results	Comments
randomised trial, PLoS ONE [Electronic Resource], 12, e0176819, 2017 **Ref Id** 824270 **Country/ies where the study was carried out** Denmark **Study type** Randomised controlled trial (From the same trial as Brixval 2016) **Aim of the study** To investigate the effects of antenatal education in small classes versus auditorium-based lectures on outcomes in childbirth. **Study dates** August 2012 - May 2014	Control: 785/883 (88.9) **Inclusion criteria** • Pregnant women with a singleton pregnancy. • 18 years or over at enrolment. • Due to give birth at Hvidovre hospital, Denmark. • Speak and understand Danish. • Signed the informed consent form. **Exclusion criteria** • Not signing the consent form.	increase self-efficacy, for example by identification of coping strategies. Control group: Standard education offered at Hvidovre hospital. Two antenatal lectures, 2 hours each. Lectures were on birth and breastfeeding in an auditorium with up to 250 people. Midwives who taught the small class groups were not allowed to teach the lectures in the control group.	to transform the data as it was non-normally distributed.	parity and vulnerability: -0.03 (-0.12 to 0.07). Mean difference (95% CI), adjusted for parity, vulnerability and baseline PSS: -0.06 (-0.14 to 0.02) At 9 weeks postpartum - mean square root (mean): Intervention: 3.24 (10.53) Control: 3.27 (10.72) Mean difference (95% CI): -0.03 (-0.13 to 0.08) Mean difference (95% CI), adjusted for parity and vulnerability: -0.03 (-0.13 to 0.07) Mean difference (95% CI), adjusted for parity, vulnerability and baseline PSS: -0.06 (-0.15 to 0.04) At 6 months postpartum - mean square root (mean): Intervention: 3.19 (10.19) Control: 3.26 (10.66) Mean difference (95% CI): -0.07 (-0.18 to 0.03) Mean difference (95% CI), adjusted for parity and vulnerability: -0.07 (-0.18 to 0.03) Mean difference (95% CI), adjusted for parity, vulnerability and baseline PSS: -0.10 (-0.20 to -0.01), p=0.04	Possible that missingness could depend on the true value). Measurement of the outcome: Some concern. (Appropriate method of measurement. Possibility that the assessment was influenced by knowledge of intervention. Selection of the reported result: Low risk. (Data reported as mentioned in the pre-specified plan. Results not selected from multiple outcomes). Overall: Some concerns **Other information** Adherence: 68% adhered to the intervention - participated in all three lectures before birth, and used the website. 59% of the control group attended both lectures.

Study details	Participants	Interventions	Methods	Outcomes and Results	Comments
Source of funding Not industry funded					
Full citation Svensson,J., Barclay,L., Cooke,M., Randomised-controlled trial of two antenatal education programmes, Midwifery, 25, 114-125, 2009 **Ref Id** 116352 **Country/ies where the study was carried out** Australia Study type Randomised controlled trial **Aim of the study** To find out the effects of the 'Having a Baby' programme compared with a regular	**Sample size** N=248 (n=170 analysed) Intervention: n=124 (n=91 analysed) Control: n=124 (n=79 analysed) **Characteristics** Mean maternal age-years (SD) Intervention: 30.08 (4.33) Control: 30.47 (4.19) Nulliparous - number (%) Intervention: 91 (100) Control: 79 (100) **Inclusion criteria** • Primiparous. • English speaking. **Exclusion criteria** Not specified.	**Interventions** The 'having a baby' and control programmes were the same in length. The broad topic areas taught were similar. The differences between the two programmes were in the order they were delivered and the method of presentation. Having a baby programme: 7, 2hour sessions before birth. Additional meeting 6 weeks after birth. Labour, birth and early weeks with the baby were taught as integrated processes in life and not as isolated events.	**Details** Power analysis: Estimated sample size of 140 with 80% power and significance level of 0.05, to detect a significant effect in perceived parenting self-efficacy scores. Statistical analysis: Continuous data analysed using independent t-tests.	**Results** Outcomes: Critical outcomes: **Anxiety:** Maternal worry about the baby - measured using the Cambridge Worry Scale. 10 item, 6 point Likert scale (0 to 5). Higher scores indicate more worry. Range 0-50. Prenatal scores (before the programme): Intervention: 5.66 (SD 3.2) Control: 5.99 (SD 3.23) Postnatal scores (8 weeks after birth): Intervention: 2.04 (SD 2.49) Control: 2.14 (SD 2.51) **Increase in knowledge:** Assessment of knowledge developed by researcher. 11 topics. Each topic rated on a 6 point Likert scale (0-5). Higher score indicates increased knowledge. Scores were summed to give a total. Range 0-55. Pre-programme - mean (SD): Intervention: 12.41 (2.78) Control: 13.21 (2.95) p=0.068	**Limitations** Cochrane risk of bias tool V2: Randomisation process: Low risk of bias. (Allocation concealed. Allocation sequence generated by drawing lots type of process. No baseline imbalances). Deviations from intended interventions (assignment): Some concern. (Participants aware of assignment. No information on deviations. No information on whether there was an intention-to-treat analysis). Missing outcome data: Some concerns. (Outcome data not available for all randomised participants. Possible that missingness could depend on the true value). Measurement of the outcome: Anxiety and Self efficacy: Some concerns. (Appropriate method of measurement. Possibility that the assessment was influenced by knowledge of intervention - self-reported). Increase in knowledge: Low risk (Appropriate method of measurement. Unlikely the assessment

Study details	Participants	Interventions	Methods	Outcomes and Results	Comments
programme on women's self-efficacy, knowledge and baby worry. **Study dates** January to December 2002 **Source of funding** No information provided		Relaxation strategies were presented as life skills. Take home activities provided at the end of each session - included resources in your community for a new parent, roles and responsibilities of parents. Less lecture and video based learning, and more group learning and discussions than the control. Experiential activities are reality based (for example a bath of a 1-day old baby, and discussions with mother and parents). Control: 7, 2hour sessions before birth. Labour, birth and early weeks with the baby were pre-set topics		Post-programme (before birth) - mean (SD): Intervention: 16.79 (2.06) Control: 16.07 (2.31) Post-natal (8 weeks post birth) - mean (SD): Intervention: 13.20 (3.60) Control: 12.38 (3.9) Important outcomes: **Self-efficacy:** 25 item self-report pre and postnatal parent expectations survey (PES). 11 point Likert scale (0-10). Higher score indicates increased self-efficacy. Range 0-250 Pre-programme - mean (SD): Intervention: 172 (32.46) Control: 174 (29.13) p=0.596 Post-natal (8 weeks after birth) - mean (SD): Intervention: 206 (21.02) Control: 190 (22.28) p<0.001	was influenced by knowledge of intervention). Selection of the reported result: Some concern. (No information on pre-specified plan. Results unlikely to have been selected from multiple outcomes). Overall: Some concern

Study details	Participants	Interventions	Methods	Outcomes and Results	Comments
		taught with little integration between them. Relaxation strategies were taught as labour skills. More lecture and video based learning, and less group learning than the intervention. Discussions and demonstrations with models (for example bath with a doll).			
Full citation Yee, L. M., Wolf, M., Mullen, R., Bergeron, A. R., Cooper Bailey, S., Levine, R., Grobman, W. A., A randomized trial of a prenatal genetic testing interactive computerized information aid, Prenatal Diagnosis 34, 552-557, 2014 **Ref Id**	**Sample size** N=150 (123 analysed) Intervention: 75 (59 analysed) Control: 75 (64 analysed) **Characteristics** Maternal age - mean years (SD): Intervention: 26.0 (5.0) Control: 27.3 (5.5) p=0.13 Primigravida: Intervention: 16% Control: 14.7% p=0.82	**Interventions** Interactive education tool: Standard care counselling - meet with a genetic counsellor. Interactive education tool that enables users to view 3D models of the internal body. Guides covering prenatal testing, anatomy, common genetic abnormalities,	**Details** Power analysis: Sample size of 150 required to detect at least 7% improvement in the questionnaire with 80% power and significance of 0.05. Statistical analysis: Student t-tests used for group comparisons. All tests were two-tailed. p<0.05 defined as statistically significant.	**Results** Outcomes: Critical outcomes: **Increase in knowledge** - mean % (SD) of questions answered correctly: 23 item questionnaire designed to test knowledge of prenatal screening and testing. Immediately after intervention: Intervention: 69.4% (±14.2%) 15.96 questions answered correctly (3.27) Control: 46.0% (±15.2%) 10.58 (3.50) p<0.001 23 days after intervention (n=123): Intervention: 60.6% (± 16.0%) 13.94 questions answered correctly (3.68)	**Limitations** Cochrane risk of bias tool V2: Randomisation process: Some concerns. (No information on allocation concealment. No baseline imbalances). Deviations from intended interventions (assignment): High risk. (Participants aware of assignment. 48% of participants received additional counselling as part of prenatal care. No information if this is balanced between groups. Likely to affect outcomes. No information on whether analysis was on intention to treat). Missing outcome data: Some concerns. (Outcome data not

Study details	Participants	Interventions	Methods	Outcomes and Results	Comments
1188347 **Country/ies where the study was carried out** US **Study type** Randomised controlled trial **Aim of the study** To find out if the use of an interactive tool for prenatal screening and diagnosis would improve women's understanding **Study dates** August 2010 to March 2011. **Source of funding** Not industry funded.	**Inclusion criteria** • Gestational age between 6 and 26 weeks. • Not yet had any prenatal testing. • Able to speak English. **Exclusion criteria** • Women carrying multiple gestations.	invasive and non-invasive testing. Section for writing notes which could be discussed later. Standard care: Standard care counselling - meet with a genetic counsellor.		Control: 49.7% (± 18.9%) 11.43 (4.35) p=0.001	available for all randomised participants. Possible that missingness could depend on the true value). Measurement of the outcome: Low risk. (Appropriate method of measurement. Assessment could not have been influenced by knowledge of intervention). Selection of the reported result: Low risk. (Data reported as mentioned in the pre-specified plan. Results not selected from multiple outcomes). Overall: High risk

CI: confidence interval; CUB: combined ultrasound and biochemical; OR: odds ratio; PES: parent expectation survey; PSS; perceived stress scale; SD: standard deviation

Appendix E - Forest plots

Forest plots for review question: What approach to information giving during antenatal care is effective (including timing and mode of provision)?

No meta-analysis was conducted for this review question and so there are no forest plots.

Appendix F - GRADE tables

GRADE tables for review question: What approach to information giving during antenatal care is effective (including timing and mode of provision)?

Table 5: Clinical evidence profile for comparison group based vs individual based information provision

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Group based	Individual based	Relative (95% CI)	Absolute		
Increase in knowledge (follow-up 1 months; measured with: Mean % of correct answers; range of scores: 0-100; Better indicated by higher values)												
1 (Chi 2016)	randomised trials	no serious risk of bias	no serious inconsistency	no serious indirectness	no serious imprecision	none	50	50	-	MD 3.63 higher (3.59 to 3.67 higher)	⊕⊕⊕⊕ HIGH	CRITICAL
Increase in knowledge (follow-up 2 months; measured with: Mean % of correct answers; range of scores: 0-100; Better indicated by higher values)												
1 (Chi 2016)	randomised trials	no serious risk of bias	no serious inconsistency	no serious indirectness	no serious imprecision	none	50	50	-	MD 2.43 higher (2.41 to 2.45 higher)	⊕⊕⊕⊕ HIGH	CRITICAL
Satisfaction with information (follow-up 6 months; assessed with: Number of women reporting 'satisfied')												
1 (Andersson 2013)	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	very serious[2]	none	187/228 (82%)	156/179 (87.2%)	OR 0.75 (0.4 to 1.4)	36 fewer per 1000 (from 141 fewer to 33 more)	⊕OOO VERY LOW	CRITICAL
Preparedness for birth (follow-up 6 months; assessed with: Number of women reporting they felt prepared for birth)												
1 (Andersson 2013)	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	serious[3]	none	152/228 (66.7%)	112/179 (62.6%)	OR 0.73 (0.47 to 1.13)	76 fewer per 1000 (from 186 fewer to 28 more)	⊕OOO VERY LOW	IMPORTANT
Self-efficacy (follow-up 1 months; measured with: Likert type questionnaire; range of scores: 8-40; Better indicated by higher values)												
1 (Chi 2016)	randomised trials	serious[4]	no serious inconsistency	no serious indirectness	serious[5]	none	50	50	-	MD 1.38 higher (0.81 lower to 3.57 higher)	⊕⊕OO LOW	IMPORTANT
Self-efficacy (follow-up 2 months; measured with: Likert type questionnaire; range of scores: 8-40; Better indicated by higher values)												

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Group based	Individual based	Relative (95% CI)	Absolute		
1 (Chi 2016)	randomised trials	serious[4]	no serious inconsistency	no serious indirectness	serious[5]	none	50	50	-	MD 4.16 higher (2.46 to 5.86 higher)	⊕⊕OO LOW	IMPORTANT

ANC: antenatal care; CI: confidence interval; MD: mean difference; OR: odds ratio.

[1] Evidence downgraded by 2 levels due to high risk of randomisation and measurement of the outcome bias in 1 study
[2] Evidence downgraded by 2 levels because 95% CI cross 2 MIDs for dichotomous outcomes (0.8 or 1.25)
[3] Evidence downgraded by 1 level because 95% CI cross 1 MID for dichotomous outcomes (0.8 or 1.25)
[4] Evidence downgraded by 1 levels due to measurement of the outcome bias in 1 study
[5] Evidence downgraded by 1 level because 95% CI cross 1 MID for continuous outcomes (0.5 x control group SD, for self-efficacy 1mo = 2.80, for self-efficacy 2mo = 2.61)

Table 6: Clinical evidence profile for comparison digital in addition to face-to-face vs face-to-face alone information provision

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Digital + face-to-face	Face-to-face alone	Relative (95% CI)	Absolute		
Anxiety (follow-up 15 weeks; measured with: Spielberger state-trait anxiety inventory, state subscale; range of scores: 20-80; Better indicated by lower values)												
1 (Bjorklund 2013)	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	no serious imprecision	none	177	191	-	MD 0.4 lower (2.35 lower to 1.55 higher)	⊕⊕⊕O MODERATE	CRITICAL
Anxiety - Worry about baby (follow-up 15 weeks; measured with: adapted Cambridge worry scale; range of scores: 0-5; Better indicated by lower values)												
1 (Bjorklund 2013)	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	no serious imprecision	none	184	203	-	MD 0.04 lower (0.28 lower to 0.2 higher)	⊕⊕⊕O MODERATE	CRITICAL
Anxiety - Worry about birth (follow-up 15 weeks; measured with: adapted Cambridge worry scale; range of scores: 0-5; Better indicated by lower values)												
1 (Bjorklund 2013)	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	no serious imprecision	none	184	205	-	MD 0.07 lower (0.34 lower to 0.2 higher)	⊕⊕⊕O MODERATE	CRITICAL

Quality assessment							No of patients		Effect			
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Digital + face-to-face	Face-to-face alone	Relative (95% CI)	Absolute	Quality	Importance
Increase in knowledge (measured with: Mean % of questions answered correctly; range of scores: 0-100; Better indicated by higher values)												
1 (Yee 2014)	randomised trials	serious[2]	no serious inconsistency	no serious indirectness	no serious imprecision	none	59	64	-	MD 23.4 higher (18.2 to 28.6 higher)	⊕⊕⊕O MODERATE	CRITICAL
Increase in knowledge (follow-up 23 days; measured with: Mean % of questions answered correctly; range of scores: 0-100; Better indicated by higher values)												
1 (Yee 2014)	randomised trials	serious[2]	no serious inconsistency	no serious indirectness	serious[3]	none	59	64	-	MD 10.9 higher (4.73 to 17.07 higher)	⊕⊕OO LOW	CRITICAL
Increase in knowledge (measured with: 7 question test on the information provided; range of scores: 1-7; Better indicated by higher values)												
1 (de Leeuw 2019)	randomised trials	serious[4]	no serious inconsistency	no serious indirectness	serious[3]	none	74	67	-	MD 1.16 higher (0.38 to 1.94 higher)	⊕⊕OO LOW	CRITICAL
Satisfaction with information (measured with: genetic counselling satisfaction scale; range of scores: 6-30; Better indicated by higher values)												
1 (de Leeuw 2019)	randomised trials	very serious[5]	no serious inconsistency	no serious indirectness	no serious imprecision	none	74	67	-	MD 0 higher (0.15 lower to 0.15 higher)	⊕⊕OO LOW	CRITICAL

ANC: antenatal care; CI: confidence interval; MD: mean difference.

[1] *Evidence downgraded by 1 level due to risk of measurement of the outcome bias in 1 study*
[2] *Evidence downgraded by 1 levels due to high risk of deviation from intended interventions bias in 1 study*
[3] *Evidence downgraded by 1 level because 95% CI cross 1 MID for continuous outcomes (0.5 x control group SD, for increase in knowledge mean% = 9.45, for increase in knowledge 7 questions = 1.18)*
[4] *Evidence downgraded by 1 levels due to high risk of randomisation process bias in 1 study*
[5] *Evidence downgraded by 2 levels due to high risk of randomisation process and measurement of the outcome bias in 1 study*

Table 7: Clinical evidence profile for comparison digital in addition to leaflet vs leaflet alone format of ANC information

Quality assessment							No of patients		Effect			
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Digital + leaflet	Leaflet alone	Relative (95% CI)	Absolute	Quality	Importance
Change in anxiety after intervention (follow-up 20 weeks; measured with: Measured with Spielberger state-trait anxiety inventory, state subscale; range of scores: 20-80; Better indicated by lower values)												
1 (Graham 2000)	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	no serious imprecision	none	332	317	-	MD 1.9 higher (0.56 to 3.24 higher)	⊕⊕⊕O MODERATE	CRITICAL
Knowledge of anomaly scan (follow-up 20 weeks; assessed with: Number of women reporting they had knowledge)												
1 (Graham 2000)	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	no serious imprecision	none	357/374 (95.5%)	347/361 (96.1%)	RR 0.99 (0.96 to 1.02)	10 fewer per 1000 (from 38 fewer to 19 more)	⊕⊕⊕O MODERATE	CRITICAL
Knowledge of blood test (follow-up 20 weeks; assessed with: Number of women reporting they had knowledge)												
1 (Graham 2000)	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	no serious imprecision	none	293/374 (78.3%)	267/361 (74%)	RR 1.06 (0.98 to 1.15)	44 more per 1000 (from 15 fewer to 111 more)	⊕⊕⊕O MODERATE	CRITICAL
Knowledge of amniocentesis (follow-up 20 weeks; assessed with: Number of women reporting they had knowledge)												
1 (Graham 2000)	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	no serious imprecision	none	251/374 (67.1%)	231/361 (64%)	RR 1.05 (0.94 to 1.16)	32 more per 1000 (from 38 fewer to 102 more)	⊕⊕⊕O MODERATE	CRITICAL
Knowledge of chorionic villus sampling (follow-up 20 weeks; assessed with: Number of women they had knowledge)												
1 (Graham 2000)	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	150/374 (40.1%)	135/361 (37.4%)	RR 1.07 (0.89 to 1.29)	26 more per 1000 (from 41 fewer to 108 more)	⊕⊕OO LOW	CRITICAL

ANC: antenatal care; CI: confidence interval; MD: mean difference; RR: risk ratio.

[1] Evidence downgraded by 1 levels due to risk of measurement of the outcome bias in 1 study
[2] Evidence downgraded by 1 level because 95% CI cross 1 MID for dichotomous outcomes (0.8 or 1.25)

Table 8: Clinical evidence profile for comparison enhanced ANC programme (interactive group based teaching and life skills) vs standard ANC programme (lecture based learning)

Quality assessment							No of patients		Effect			
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Enhanced ANC programme	Standard ANC programme	Relative (95% CI)	Absolute	Quality	Importance
Anxiety (follow-up 8 weeks post-partum; measured with: Cambridge Worry Scale; range of scores: 0-50; Better indicated by lower values)												
1 (Svensson 2009)	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	no serious imprecision	none	91	79	-	MD 0.1 lower (0.85 lower to 0.65 higher)	⊕⊕⊕O MODERATE	CRITICAL
Increase in knowledge (measured with: Assessment developed by researchers; range of scores: 0-55; Better indicated by higher values)												
1 (Svensson 2009)	randomised trials	no serious risk of bias	no serious inconsistency	no serious indirectness	serious[2]	none	91	79	-	MD 0.72 higher (0.06 to 1.38 higher)	⊕⊕⊕O MODERATE	CRITICAL
Increase in knowledge (follow-up 8 weeks post-partum; measured with: Assessment developed by researchers; range of scores: 0-55; Better indicated by higher values)												
1 (Svensson 2009)	randomised trials	no serious risk of bias	no serious inconsistency	no serious indirectness	no serious imprecision	none	91	79	-	MD 0.82 higher (0.31 lower to 1.95 higher)	⊕⊕⊕⊕ HIGH	CRITICAL
Self-efficacy (follow-up 8 weeks post-partum; measured with: Parent expectations survey; range of scores: 0-250; Better indicated by higher values)												
1 (Svensson 2009)	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	91	79	-	MD 16 higher (9.46 to 22.54 higher)	⊕⊕OO LOW	IMPORTANT

ANC: antenatal care; CI: confidence interval; MD: mean difference.

[1] *Evidence downgraded by 1 level due to risk of measurement of the outcome bias in 1 study*
[2] *Evidence downgraded by 1 level because 95% CI cross 1 MID for continuous outcomes (0.5 x control group SD, for increase in knowledge pre-birth =1.16, for self-efficacy = 11.14)*

Table 9: Clinical evidence profile for comparison small group vs large group information provision for ANC

Quality assessment							No of patients		Effect			
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Small group	Large group	Relative (95% CI)	Absolute	Quality	Importance
Anxiety (follow-up 9 weeks post-partum; measured with: Perceived stress scale; range of scores: 0-40; Better indicated by lower values)												
1 (Koushede 2017)	randomised trials	serious[1]	no serious inconsistency	serious[2]	no serious imprecision	none	883	883	-	MD 0.06 lower (0.15 lower to 0.03 higher)	⊕⊕OO LOW	CRITICAL
Anxiety (follow-up 6 months post-partum; measured with: Perceived Stress Scale; range of scores: 0-40; Better indicated by lower values)												
1 (Koushede 2017)	randomised trials	serious[1]	no serious inconsistency	serious[2]	no serious imprecision	none	883	883	-	MD 0.1 lower (0.2 lower to 0 higher)	⊕⊕OO LOW	CRITICAL
Self-efficacy - positive delivery (assessed with: Number reporting totally agree or agree with confident with ability to make delivery a positive experience)												
1 (Brixval 2016)	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	no serious imprecision	none	620/660 (93.9%)	619/675 (91.7%)	RR 1.02 (0.99 to 1.06)	18 more per 1000 (from 9 fewer to 55 more)	⊕⊕⊕O MODERATE	IMPORTANT
Self-efficacy - handle birth process (assessed with: Number reporting totally agree or agree with confident with ability to handle birth process)												
1 (Brixval 2016)	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	no serious imprecision	none	455/661 (68.8%)	458/676 (67.8%)	RR 1.02 (0.94 to 1.09)	14 more per 1000 (from 41 fewer to 61 more)	⊕⊕⊕O MODERATE	IMPORTANT

ANC: antenatal care; CI: confidence interval; MD: mean difference; RR: risk ratio.

[1] *Evidence downgraded by 1 level due to risk of measurement of the outcome bias in 1 study*
[2] *Perceived stress scale not a direct measure of anxiety*

Appendix G - Economic evidence study selection

Economic evidence study selection for review question: What approach to information giving during antenatal care is effective (including timing and mode of provision)?

A single economic search was undertaken for all topics included in the scope of this guideline. No economic studies were identified which were applicable to this review question. See supplementary material 2 for details.

No economic evidence was identified which was applicable to this review question.

Appendix H - Economic evidence tables

Economic evidence tables for review question: What approach to information giving during antenatal care is effective (including timing and mode of provision)?

No economic evidence was identified which was applicable to this review question.

Appendix I - Economic evidence profiles

Economic evidence profiles for review question: What approach to information giving during antenatal care is effective (including timing and mode of provision)?

No economic evidence was identified which was applicable to this review question.

Appendix J - Economic analysis

Economic analysis for review question: What approach to information giving during antenatal care is effective (including timing and mode of provision)?

No economic analysis was conducted for this review question.

Appendix K- Excluded studies

Excluded studies for review question: What approach to information giving during antenatal care is effective (including timing and mode of provision)?

Clinical studies

Table 10: Excluded studies and reasons for their exclusion

Study	Reason for exclusion
Abdel-Aziz, S. B., Hegazy, I. S., Mohamed, D. A., Abu El Kasem, M. M. A., Hagag, S. S., Effect of dietary counseling on preventing excessive weight gain during pregnancy, Public health, 154, 172-181, 2018	Study conducted in low or middle income country
Ackerman, Ilana N., Ngian, Gene-Siew, Van Doornum, Sharon, Briggs, Andrew M., A systematic review of interventions to improve knowledge and self-management skills concerning contraception, pregnancy and breastfeeding in people with rheumatoid arthritis, Clinical rheumatology, 35, 33-41, 2016	There are no relevant studies in this systematic review.
Aveyard, P., Lawrence, T., Evans, O., Cheng, K. K., The influence of in-pregnancy smoking cessation programmes on partner quitting and women's social support mobilization: a randomized controlled trial, BMC public health, 5, 80, 2005	No relevant outcomes that fit the protocol
Aveyard,P., Lawrence,T., Croghan,E., Evans,O., Cheng,K.K., Is advice to stop smoking from a midwife stressful for pregnant women who smoke? Data from a randomized controlled trial, Preventive Medicine, 40, 575-582, 2005	No relevant outcomes.
Ayling, Laura, Henry, Amanda, Tracy, Sally, Donkin, Chris, Kasparian, Nadine A., Welsh, Alec W., How well do women understand and remember information in labour versus in late pregnancy? A pilot randomised study, Journal of obstetrics and gynaecology : the journal of the Institute of Obstetrics and Gynaecology, 39, 913-921, 2019	No usable outcomes reported due to high attrition
Bergström, M., Kieler, H., Waldenström, U., A randomised controlled multicentre trial of women's and men's satisfaction with two models of antenatal education, Midwifery, 27, e195-200, 2011	Content of information investigated rather than timing or mode. No relevant outcomes.
Bergström, M., Kieler, H., Waldenström, U., Effects of natural childbirth preparation versus standard antenatal education on epidural rates, experience of childbirth and parental stress in mothers and fathers: a randomised controlled multicentre trial, BJOG: An International Journal of Obstetrics & Gynaecology, 116, 1167-1176, 2009	Content of training is different between the two intervention. Does not match this review's study protocol.

Study	Reason for exclusion
Bergström, M., Rudman, A., Waldenström, U., Kieler, H., Fear of childbirth in expectant fathers, subsequent childbirth experience and impact of antenatal education: subanalysis of results from a randomized controlled trial, Acta Obstetricia et Gynecologica Scandinavica, 92, 967-973, 2013	Looking at the content of antenatal care training and not about how it is provided or the format
Choi, JiWon, Lee, Ji hyeon, Vittinghoff, Eric, Fukuoka, Yoshimi, Bandura, Craig Davies Evenson Evenson Evenson Fjeldsoe Fjeldsoe Fox Fukuoka Fukuoka Harris Marcus Marcus Mudd Mutrie Noah Pearce Radloff Sallis Symons-Downs Taylor-Piliae Wallace Weiss, mHealth physical activity intervention: A randomized pilot study in physically inactive pregnant women, Maternal and child health journal, 20, 1091-1101, 2016	Does not explore information valued by pregnant women.
Cooper,M., Warland,J., Improving women's knowledge of prostaglandin induction of labour through the use of information brochures: A quasi-experimental study, Women and Birth, 24, 156-164, 2011	Does not explore information valued by pregnant women.
Dodd, J. M., Dietary and lifestyle advice for pregnant women who are overweight or obese: the LIMIT randomized trial, Annals of Nutrition & Metabolism, 64, 197-202, 2014	Does not explore information valued by pregnant women.
Dodd, J. M., Louise, J., Cramp, C., Grivell, R. M., Moran, L. J., Deussen, A. R., Evaluation of a smartphone nutrition and physical activity application to provide lifestyle advice to pregnant women: the SNAPP randomised trial, Maternal & Child Nutrition, 14, 2018	Does not explore information valued by pregnant women.
Doyle, O., McGlanaghy, E., Palamaro-Munsell, E., McAuliffe, F. M., Home based educational intervention to improve perinatal outcomes for a disadvantaged community: A randomised control trial, European Journal of Obstetrics & Gynecology and Reproductive Biology, 180, 162-167, 2014	No relevant outcomes.
Franzon, A. C. A., Oliveira-Ciabati, L., Bonifacio, L. P., Vieira, E. M., Andrade, M. S., Sanchez, J. A. C., Braga, G. C., Nogueira-Pileggi, V., Fernandes, M., Souza, J. P., A communication and information strategy in health and preparation for childbirth: a randomized cluster trial (PRENACEL), Cadernos de Saude PublicaCad Saude Publica, 35, e00111218, 2019	Study conducted in a low or middle income country.
Goodman, K., Mossad, S. B., Taksler, G. B., Emery, J., Schramm, S., Rothberg, M. B., Impact of Video Education on Influenza Vaccination in Pregnancy, Journal of reproductive medicine, 60, 471-479, 2015	No relevant outcomes.
Hall, J., Women's and men's satisfaction with two models of antenatal education, Practising Midwife, 15, 35-7, 2012	Article unavailable.

Study	Reason for exclusion
Kuppermann, M., Pena, S., Bishop, J. T., Nakagawa, S., Gregorich, S. E., Sit, A., Vargas, J., Caughey, A. B., Sykes, S., Pierce, L., et al.,, Effect of enhanced information, values clarification, and removal of financial barriers on use of prenatal genetic testing: a randomized clinical trial, JAMA, 312, 1210-1217, 2014	Does not explore information valued by pregnant women.
Lindgren, Peter, Stadin, Magdalena, Blomberg, Inger, Nordin, Karin, Sahlgren, Hanna, Ingvoldstad Malmgren, Charlotta, Information about first-trimester screening and self-reported distress among pregnant women and partners - comparing two methods of information giving in Sweden, Acta obstetricia ET gynecologica scandinavica, 96, 1243-1250, 2017	This study is not a RCT.
Lonnberg, G., Jonas, W., Unternaehrer, E., Branstrom, R., Nissen, E., Niemi, M., Effects of a mindfulness based childbirth and parenting program on pregnant women's perceived stress and risk of perinatal depression Results from a randomized controlled trial, Journal of Affective Disorders, 262, 133-142, 2020	Irrelevant intervention.
Loughnan, S. A., Sie, A., Hobbs, M. J., Joubert, A. E., Smith, J., Haskelberg, H., Mahoney, A. E. J., Kladnitski, N., Holt, C. J., Milgrom, J., et al.,, A randomized controlled trial of 'MUMentum Pregnancy': internet-delivered cognitive behavioral therapy program for antenatal anxiety and depression, Journal of Affective Disorders, 243, 381-390, 2019	Does not explore information valued by pregnant women.
Lumley,J., Donohue,L., Aiming to increase birth weight: a randomised trial of pre-pregnancy information, advice and counselling in inner-urban Melbourne, BMC Public Health, 6, 299-, 2006	No relevant outcomes.
McCarthy, E. A., Walker, S. P., Ugoni, A., Lappas, M., Leong, O., Shub, A., Self-weighing and simple dietary advice for overweight and obese pregnant women to reduce obstetric complications without impact on quality of life: a randomised controlled trial, BJOG: An International Journal of Obstetrics & Gynaecology, 123, 965-73, 2016	Does not explore information valued by pregnant women.
Moran, L. J., Fraser, L. M., Sundernathan, T., Deussen, A. R., Louise, J., Yelland, L. N., Grivell, R. M., Macpherson, A., Gillman, M. W., Robinson, J. S., et al.,, The effect of an antenatal lifestyle intervention in overweight and obese women on circulating cardiometabolic and inflammatory biomarkers: secondary analyses from the LIMIT randomised trial, BMC Medicine, 15, 32, 2017	No relevant outcomes.
Sanaati, F., Mohammad-Alizadeh Charandabi, S., Farrokh Eslamlo, H., Mirghafourvand, M., Alizadeh Sharajabad, F., The effect of lifestyle-based education to women and their husbands	Study in Iran

Study	Reason for exclusion
on the anxiety and depression during pregnancy: a randomized controlled trial, Journal of Maternal-Fetal & Neonatal Medicine, 30, 870-876, 2017	
Suto, Maiko, Takehara, Kenji, Yamane, Yumina, Ota, Erika, Effects of prenatal childbirth education for partners of pregnant women on paternal postnatal mental health and couple relationship: A systematic review, Journal of Affective Disorders, 210, 115-121, 2017	No relevant outcomes.
Szmeja, M. A., Cramp, C., Grivell, R. M., Deussen, A. R., Yelland, L. N., Dodd, J. M., Use of a DVD to provide dietary and lifestyle information to pregnant women who are overweight or obese: a nested randomised trial, BMC Pregnancy & Childbirth, 14, 409, 2014	Does not explore information valued by pregnant women.
Wilkinson,S.A., McIntyre,H.D., Evaluation of the 'healthy start to pregnancy' early antenatal health promotion workshop: a randomized controlled trial, BMC Pregnancy and Childbirth, 12, 131-, 2012	No relevant outcomes.

Economic studies

A single economic search was undertaken for all topics included in the scope of this guideline. No economic studies were identified which were applicable to this review question. See supplementary material 2 for details.

Appendix L - Research recommendations

Research recommendations for review question: What approach to information giving during antenatal care is effective (including timing and mode of provision)?

No research recommendations were made for this review question.