Table 1 Advantages and disadvantages of different pharmacological treatments for nausea and vomiting in pregnancy

Medicine	Is this licensed for nausea and vomiting in pregnancy?	How effective is it likely to be at treating nausea and vomiting in pregnancy?	Is it associated with an increased chance of birth defects?	Other safety concerns See the BNF and manufacturers' information for full prescribing information
Chlorpromazine	No, but established practice and used for many years. Manufacturers advise it should not be taken during pregnancy unless considered essential.	No randomised controlled trial evidence on nausea and vomiting in pregnancy.	Available evidence does not suggest an increased chance of birth defects.	Use in the third trimester may sometimes cause nervous system side effects in newborn babies such as restlessness, trembling, muscle stiffness or spasm (known as extrapyramidal side effects) or withdrawal symptoms.
Cyclizine	No, but established practice and used for many years. Manufacturers say taking it in pregnancy is not advised because it has not been proven to be safe.	No randomised controlled trial evidence on cyclizine alone for nausea and vomiting in pregnancy. Older, low quality evidence found a combination product of cyclizine with pyridoxine relieved nausea and vomiting (but this is not available in the UK).	Available evidence does not suggest an increased chance of birth defects.	Use towards the end of the third trimester may sometimes cause side effects in newborn babies such as irritability and jitteriness (known as paradoxical excitability) and tremor.

Medicine	Is this licensed for nausea and vomiting in pregnancy?	How effective is it likely to be at treating nausea and vomiting in pregnancy?	Is it associated with an increased chance of birth defects?	Other safety concerns See the BNF and manufacturers' information for full prescribing information
Doxylamine/pyridoxine (combination drug)	The only product specifically licensed in the UK for nausea and vomiting in pregnancy. Not licensed for use by people aged under 18.	Some low or very low quality evidence showed symptom relief compared with placebo. Moderate or low quality evidence from a small study found it is less likely to be effective than ondansetron.	Available evidence does not suggest an increased chance of birth defects.	_
Metoclopramide	No, but established practice as second-line treatment for nausea and vomiting in pregnancy. Manufacturers say that it can be taken during pregnancy if necessary.	High quality evidence found benefits on overall symptom relief, nausea intensity and vomiting intensity compared with placebo.	Available evidence does not suggest an increased chance of birth defects.	Not recommended for more than 5 days' use or for people aged 18 or younger (except for specific conditions not related to nausea and vomiting in pregnancy) because of the risk of nervous system side effects in the woman. These include restlessness, trembling, muscle stiffness or spasm (known as extrapyramidal side effects).

Medicine	Is this licensed for nausea and vomiting in pregnancy?	How effective is it likely to be at treating nausea and vomiting in pregnancy?	Is it associated with an increased chance of birth defects?	Other safety concerns See the BNF and manufacturers' information for full prescribing information
				Use towards the end of the third trimester may sometimes cause extrapyramidal side effects in newborn babies.
Ondansetron	No, but established practice as treatment for severe nausea and vomiting in pregnancy. Manufacturers advise it should not be taken during the first trimester.	Moderate or low quality evidence from a small study found it is more likely to be effective than doxylamine/pyridoxine combination.	Increased chance of the baby being born with a cleft lip or cleft palate. This is an increase of 3 extra cases per 10,000 from 11 in 10,000 to 14 in 10,000, so with ondansetron 9,986 out of 10,000 babies would not have this.	-
			Some evidence suggests ondansetron may cause heart problems in babies but other evidence does not support this.	
Prochlorperazine	No, but established practice and used for many years.	No randomised controlled trial evidence on nausea and vomiting in pregnancy.	Available evidence does not suggest an increased chance of birth defects.	Use in the third trimester may sometimes cause nervous system side effects in newborn babies such as restlessness, trembling, muscle stiffness

Medicine	Is this licensed for nausea and vomiting in pregnancy?	How effective is it likely to be at treating nausea and vomiting in pregnancy?	Is it associated with an increased chance of birth defects?	Other safety concerns See the BNF and manufacturers' information for full prescribing information
	Manufacturers advise it should not be taken during pregnancy unless considered essential. The manufacturers of the Buccastem M brand say it should not be taken in pregnancy at all.			or spasm (known as extrapyramidal side effects) or withdrawal symptoms.
Promethazine	No, but established practice and used for many years. Manufacturers advise it should not be taken during pregnancy unless considered essential.	Limited, moderate quality evidence found similar benefits on vomiting frequency to a combination product of metoclopramide with pyridoxine (not available in the UK).	Available evidence does not suggest an increased chance of birth defects.	Use towards the end of the third trimester may sometimes cause side effects in newborn babies such as irritability and jitteriness (known as paradoxical excitability) and tremor.

Information in this table is based on <u>evidence review R: nausea and vomiting in pregnancy</u>, <u>UK Teratology Information Service</u> monographs, the <u>BNF</u> and manufacturers' <u>summaries of product characteristics</u> (SPCs). See the BNF and SPCs for other possible side effects, cautions, situations when the medicine might be harmful (contraindications), and potential interactions with other medicines.

Note that there is a background rate of birth defects, miscarriage and stillbirth even when no medicines are taken in pregnancy.

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Quality of evidence (based on grading of recommendations, assessment, development and evaluations [GRADE]):

- **High:** Further research is very unlikely to change the level of confidence in the estimate of effect.
- **Moderate:** Further research is likely to have an important impact on the level of confidence in the estimate of effect and may change the estimate.
- Low: Further research is very likely to have an important impact on the level of confidence in the estimate of effect and is likely to change the estimate.
- Very low: The estimate of effect is very uncertain.