SAFE ABORTION: TECHNICAL AND POLICY GUIDANCE FOR HEALTH SYSTEMS EVIDENCE SUMMARIES AND GRADE TABLES

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Cervical preparation prior to abortion in the first trimester

There are two systematic reviews available assessing cervical preparation for first-trimester abortion (12-14 weeks). Kapp et al. (2010) assessed cervical preparation methods for first-trimester surgical abortion. The following comparisons were included in the review: misoprostol, mifepristone and gemeprost versus placebo; doses of misoprostol; timing of misoprostol; route of administration of misoprostol; misoprostol versus gemeprost; misoprostol versus mifepristone; misoprostol versus laminaria; misoprostol versus other prostaglandins; and doses of mifepristone. The outcomes considered were cervical dilatation, need for further cervical dilatation, procedure time, side-effects, adverse events and patient satisfaction.

A total of fifty-one trials were included in the review. Gestational age ranged from 6 to < 15 weeks, with most trials including women with gestational age < 12 weeks. Quality is rated from very low to moderate; not all trials reported allocation concealment, many trials had small sample sizes, some comparisons were based on one trial only, and significant heterogeneity was present in some analyses.

All drugs were found to have greater cervical preparation and higher rates of side-effects than placebo (see Table 1-3 below). Misoprostol demonstrated greater efficacy in cervical preparation than $PGF_2\alpha$ (Table 10) and gemeprost as well as fewer or no differences in side-effects (see Table 7); however misoprostol demonstrated inferior efficacy to mifepristone (see Table 8 below). Vaginal administration of misoprostol was more effective three hours prior to the procedure compared to two hours prior (Table 5), and vaginal administration was associated with significantly greater cervical dilatation than oral misoprostol (Table 6). However, sublingual administration of misoprostol was shown to be more effective than vaginal administration and associated with more nausea (see Table 6). Misoprostol doses of 400 mcg were more effective at cervical preparation than doses of 200 mcg (Table 4). Laminaria and misoprostol had similar cervical-ripening effects (Table 9). The authors conclude that mifepristone 200mg, laminaria and misoprostol 400mcg (administered vaginally or sublingually) are the most effective methods of cervical preparation. There were few occurrences of adverse events such as uterine perforation or cervical laceration, and thus any differences between treatments in the occurrence of these events could not be determined by this review. Data presented was not disaggregated by age and studies generally did not include women less than 18 years of age; therefore, specific recommendations for treatment by age are not informed by this review. The GRADE tables below (Tables 1 to 11) provide a summary of the comparisons presented in the review.

New data of a large, randomized controlled trial compared placebo with 400 µg misoprostol administered three hours prior to vacuum aspiration among women <12 completed weeks. The study was carried out in 9 countries and randomized 4972 women, 4870 of whom were analysed. Results of the study demonstrated a decrease in cervical lacerations [RR 0.09 (0.01 to 0.71)] and need for uterine re-evacuation [0.28 (0.14 to 0.56)] among parous women who received misoprostol for cervical preparation. The GRADE table 12 provides a summary of these data and outcomes.

The second systematic review, Promsonthi et al (2009), assessed the efficacy and safety of nitric oxide donors for cervical ripening prior to first-trimester surgical abortion (12-14 weeks).

Eight trials were included in the review and most had relatively small sample sizes (less than 20 to less than 50 patients per treatment arm). Quality is rated very low to moderate, with many comparisons based on one or two trials, and those that included more trials often had relatively high heterogeneity (65% to 82%). Gestational age ranged from 9 to 12.5 weeks among included trials, with most including women with gestational age < 12 weeks.

The main outcomes considered were cervical changes in response to cervical preparation and complications. The review compared nitric oxide donors and placebo, finding no difference between nitric oxide donors and placebo in cervical ripening and greater occurrence of nausea and vomiting in women receiving a nitric oxide donor. Comparison of nitric oxide donors and prostaglandins demonstrated that nitric oxide donors were inferior to prostaglandins for cervical ripening (see GRADE Table 12 below). The comparisons presented in the review are summarised in GRADE tables 12-13.

Author(s): P. Whyte
Date: 2009-12-22
Question: Should misoprostol vs. placebo be used for cervical preparation prior to first trimester surgical abortion?
Bibliography: Kapp N et al. Cervical preparation for first trimester surgical abortion. *Cochrane Database of Systematic Reviews*, 2010, (2):CD007207.

Table 1:

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	misoprostol	placebo	Relative (95% CI)	Absolute		Importance
400mcg vaginal - cervical dilatation at procedure start (Better indicated by higher values)												
2[1]	randomized trials	serious[2]	no serious inconsistency	no serious indirectness	serious[3]	none	77	84	-	MD 2.36 higher (1.92 to 2.79 higher)	⊕⊕◯◯ LOW	IMPORTANT
400-600mcg vaginal and 400mcg sublingual - nausea												
4[4]	randomized trials	serious[5]	no serious inconsistency	no serious indirectness	no serious imprecision	none	53/242 (21.9%)	46/297 (15.5%)	OR 1.71 (1.1 to 2.66)	84 more per 1000 (from 13 more to 173 more)	⊕⊕⊕◯ MODERATE	IMPORTANT
vaginal 400mcg - procedure length (minutes) (Better indicated by lower values)												
2[1]	randomized trials	serious[2]	no serious inconsistency	no serious indirectness	serious[3]	none	77	84	-	MD 0.68 lower (1.17 to 0.19 lower)	⊕⊕◯◯ LOW	IMPORTANT
sublingual 400mcg - procedure length (minutes) (Better indicated by lower values)												
1[6]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[7]	none	30	30	-	MD 3.50 lower (4.69 to 2.31 lower)	⊕⊕⊕◯ MODERATE	IMPORTANT
400mcg sublingual - cervical dilatation at procedure start (Better indicated by higher values)												
1[6]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[7]	none	30	30	-	MD 4.30 higher (3.53 to 5.07 higher)	⊕⊕⊕◯ MODERATE	IMPORTANT

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	misoprostol	placebo	Relative (95% CI)	Absolute		Importance
600mcg oral - cervical dilatation at procedure start (Better indicated by higher values)												
1[8]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[7]	none	15	15	-	MD 1.40 higher (0.51 to 2.29 higher)	⊕⊕⊕◯ MODERATE	IMPORTANT
600mcg vaginal - cervical dilatation at procedure start (Better indicated by higher values)												
1[9]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[7]	none	135	143	-	MD 1.60 higher (1.14 to 2.06 higher)	⊕⊕⊕◯ MODERATE	IMPORTANT

1 Cakir 2005; Ngai 1999
2 Allocation concealment is unclear.
3 Small sample size
4 Cakir 2005; Ngai 1999; Vimala 2003; de Jonge 2000
5 Allocation concealment is unclear in two of the trials (Cakir 2005; Ngai 1999).
6 Vimala 2003
7 Based on one trial only with small sample size.
8 Bokstrom 1998
9 de Jonge 2000

Author(s): P. Whyte
Date: 2009-12-22
Question: Should gemeprost 1 mg vs. placebo be used for cervical preparation prior to first trimester surgical abortion?
Bibliography: Kapp N et al. Cervical preparation for first trimester surgical abortion. *Cochrane Database of Systematic Reviews*, 2010, (2):CD007207.

Table 2:

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	gemeprost 1 mg	placebo	Relative (95% CI)	Absolute		Importance
need for additional mechanical dilatation												
3[1]	randomized trials	serious[2]	serious inconsistency[3]	no serious indirectness	no serious imprecision	none	93/178 (52.2%)	164/171 (95.9%)	OR 0.04 (0 to 0.51)	475 fewer per 1000 (from 36 fewer to 959 fewer)	⊕⊕○○ LOW	CRITICAL

1 Christensen 1984; Ho 1983; Rabe 1985
2 Allocation concealment unclear in the Christensen (1984) and Ho (1983) trials.
3 The 12 value is relatively high at 85%, indicating some heterogeneity between trials.

Author(s): P. Whyte
Date: 2009-12-22
Question: Should mifepristone vs. placebo be used for cervical preparation prior to first trimester surgical abortion?
Bibliography: Kapp N et al. Cervical preparation for first trimester surgical abortion. *Cochrane Database of Systematic Reviews*, 2010, (2):CD007207.

Table 3:

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	mifepristone	placebo	Relative (95% CI)	Absolute		Importance
need for additional mechanical dilatation												
3[1]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[2]	none	61/84 (72.6%)	72/84 (85.7%)	OR 0.33 (0.13 to 0.82)	193 fewer per 1000 (from 26 fewer to 419 fewer)	⊕⊕⊕○ MODERATE	CRITICAL
cervical dilatation at procedure start (Better indicated by higher values)												
3[3]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[2]	none	116	116	-	MD 1.82 higher (1.4 to 2.24 higher)	⊕⊕⊕○ MODERATE	IMPORTANT

1 WHO 1990; Bokstrom 1998; Gupta 1990
2 With the exception of the WHO trial, with over 100 subjects, all trials were relatively small or total events < 300.
3 WHO 1990; Bokstrom 1998; Durlot 1988

Author(s): P. Whyte
Date: 2009-12-22
Question: Should 400mcg misoprostol vs. 200mcg misoprostol be used for cervical preparation prior to first trimester surgical abortion?
Bibliography: Kapp N et al. Cervical preparation for first trimester surgical abortion. *Cochrane Database of Systematic Reviews*, 2010, (2):CD007207.

Table 4:

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	400mcg misoprostol	200mcg misoprostol	Relative (95% CI)	Absolute		Importance
oral misoprostol - cervical dilatation at procedure start (Better indicated by higher values)												
2[1]	randomized trials	serious[2]	no serious inconsistency	no serious indirectness	no serious imprecision	none	315	317	-	MD 0.53 higher (0.3 to 0.77 higher)	⊕⊕⊕◯ MODERATE	IMPORTANT
vaginal misoprostol - cervical dilatation at procedure start (Better indicated by higher values)												
2[3]	randomized trials	serious[2]	no serious inconsistency	no serious indirectness	serious[4]	none	67	70	-	MD 0.92 higher (0.53 to 1.31 higher)	⊕⊕◯◯ LOW	IMPORTANT
sublingual misoprostol - cervical dilatation at procedure start (Better indicated by higher values)												
1[5]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[4]	none	60	60	-	MD 2.20 higher (1.61 to 2.79 higher)	⊕⊕⊕◯ MODERATE	IMPORTANT
need for additional mechanical dilatation												
2[6]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[4]	none	8/90 (8.9%)	63/90 (70%)	OR 0.04 (0.02 to 0.1)	615 fewer per 1000 (from 511 fewer to 655 fewer)	⊕⊕⊕◯ MODERATE	CRITICAL
pain with cervical priming												
2[6]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[4]	none	48/90 (53.3%)	30/90 (33.3%)	OR 2.50 (1.31 to 4.75)	222 more per 1000 (from 62 more to 370 more)	⊕⊕⊕◯ MODERATE	IMPORTANT
procedure length (minutes) (Better indicated by lower values)												
2[7]	randomized trials	serious[2]	no serious inconsistency	no serious indirectness	serious[4]	none	97	100	-	MD 1.22 lower (1.72 to 0.71 lower)	⊕⊕◯◯ LOW	IMPORTANT

1 Ngai 1999; Oppegaard 2004. In the Ngai trial patients received misoprostol 3 hours before procedure; in the Oppegaard trial patients received misoprostol the night before the procedure.
2 The Ngai (1999) trial has unclear allocation concealment.
3 Ngai 1999; Singh 1998. In the Ngai trial patients received misoprostol 3 hours before the procedure; in the Singh trial patients received misoprostol 3-4 hours prior to procedure.
4 Small sample sizes or total number of events < 300.
5 Vimala, Mittal 2004. In this trial patients received misoprostol 2-3 hours prior to the procedure.
6 Singh 1998; Vimala, Mittal 2004
7 Ngai 1999; Vimala, Mittal 2004

Author(s): P. Whyte
Date: 2009-12-22
Question: Should misoprostol application 3 hours prior vs. misoprostol application 2 hours prior be used for cervical preparation prior to first trimester surgical abortion?
Bibliography: Kapp N et al. Cervical preparation for first trimester surgical abortion. *Cochrane Database of Systematic Reviews*, 2010, (2):CD007207.

Table 5:

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	misoprostol application 3 hours prior	misoprostol application 2 hours prior	Relative (95% CI)	Absolute		Importance
cervical dilatation at procedure start (Better indicated by higher values)												
1[1]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[2]	none	30	30	-	MD 1.50 higher (1.42 to 1.58 higher)	⊕⊕⊕◯ MODERATE	IMPORTANT
need for additional mechanical dilatation												
1[1]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[2]	none	2/30 (6.7%)	25/30 (83.3%)	OR 0.01 (0 to 0.08)	786 fewer per 1000 (from 548 fewer to 833 fewer)	⊕⊕⊕◯ MODERATE	CRITICAL
pain with cervical priming												
1[1]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[2]	none	3/30 (10%)	16/30 (53.3%)	OR 0.10 (0.02 to 0.39)	431 fewer per 1000 (from 225 fewer to 511 fewer)	⊕⊕⊕◯ MODERATE	IMPORTANT

1 Singh 1999. This trial used 600mcg vaginal misoprostol.
2 Based on one trial with small sample size.

Author(s): P. Whyte
Date: 2009-12-22
Question: Should vaginal or sublingual misoprostol vs. oral or sublingual misoprostol be used for cervical preparation prior to first trimester surgical abortion?
Bibliography: Kapp N et al. Cervical preparation for first trimester surgical abortion. *Cochrane Database of Systematic Reviews*, 2010, (2):CD007207.

Table 6:

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							Importance
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	vaginal or sublingual misoprostol	oral or sublingual misoprostol	Relative (95% CI)	Absolute		
400ug vaginal vs. oral - cervical dilatation at procedure start (Better indicated by higher values)												
2[1]	randomized trials	serious[2]	no serious inconsistency	no serious indirectness	serious[3]	none	80	77	-	MD 0.50 higher (0.13 to 0.87 higher)	⊕⊕◯◯ LOW	IMPORTANT
400ug vaginal vs. sublingual - cervical dilatation at procedure start (Better indicated by higher values)												
3[4]	randomized trials	serious[5]	no serious inconsistency	no serious indirectness	no serious imprecision	none	798	806	-	MD 0.10 lower (0.19 to 0.01 lower)	⊕⊕⊕◯ MODERATE	IMPORTANT
400ug vaginal vs. oral - need for additional mechanical dilatation												
1[6]	randomized trials	serious[2]	no serious inconsistency	no serious indirectness	serious[3]	none	2/40 (5%)	4/40 (10%)	OR 0.47 (0.08 to 2.75)	50 fewer per 1000 (from 91 fewer to 134 more)	⊕⊕◯◯ LOW	CRITICAL
400ug vaginal vs. sublingual - need for additional mechanical dilatation												
2[7]	randomized trials	no serious limitations	serious[8]	no serious indirectness	no serious imprecision	none	471/758 (62.1%)	413/766 (53.9%)	OR 1.41 (1.15 to 1.73)	83 more per 1000 (from 34 more to 130 more)	⊕⊕⊕◯ MODERATE	CRITICAL
nausea - 400ug vaginal vs. oral												
2[1]	randomized trials	serious[2]	no serious inconsistency	no serious indirectness	serious[3]	none	19/77 (24.7%)	25/80 (31.3%)	OR 0.59 (0.26 to 1.37)	101 fewer per 1000 (from 207 fewer to 71 more)	⊕⊕◯◯ LOW	IMPORTANT
nausea - 400ug vaginal vs sublingual												
4[9]	randomized trials	no serious limitations	serious[10]	no serious indirectness	no serious imprecision	none	52/835 (6.2%)	132/843 (15.7%)	OR 0.32 (0.23 to 0.46)	101 fewer per 1000 (from 78 fewer to 116 fewer)	⊕⊕⊕◯ MODERATE	IMPORTANT

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	vaginal or sublingual misoprostol	oral or sublingual misoprostol	Relative (95% CI)	Absolute		Importance
sublingual vs. oral - cervical dilatation at procedure start (Better indicated by lower values)												
1[11]	randomized trials	serious[2]	no serious inconsistency	no serious indirectness	serious[3]	none	15	17	-	MD 0.50 higher (0.55 lower to 1.55 higher)	⊕⊕◯◯ LOW	IMPORTANT
vaginal vs. oral - procedure length (minutes) (Better indicated by lower values)												
2[1]	randomized trials	serious[2]	no serious inconsistency	no serious indirectness	serious[3]	none	77	80	-	MD 0.23 lower (0.61 lower to 0.15 higher)	⊕⊕◯◯ LOW	IMPORTANT
vaginal vs. sublingual - procedure length (minutes) (Better indicated by lower values)												
2[7]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	no serious imprecision	none	758	766	-	MD 0.38 higher (0.11 to 0.65 higher)	⊕⊕⊕◯ HIGH	IMPORTANT
vaginal vs sublingual - patient dissatisfaction												
1[12]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[3]	none	0/36 (0%)	4/37 (10.8%)	OR 0.10 (0.01 to 1.97)	96 fewer per 1000 (from 107 fewer to 85 more)	⊕⊕⊕◯ MODERATE	IMPORTANT

1 Cakir 2005; Ngai 1999. In these two trials the misoprostol was administered 3 hours prior to procedure.
2 Allocation concealment was unclear.
3 Small sample size or total number of events < 300.
4 Esteve 2006; Tang 2004; Vimala 2004. In the Esteve trial, misoprostol was administered 1-3 hours prior to procedure,; in the Tang trial 3 hours before procedure and in the Vimala trial 2 hours before procedure.
5 The Tang (2004) trial was single-blinded and allocation concealment was unclear; however this trial contributes little weight to the meta-analysis.
6 Cakir 2005. In this trial misoprostol was administered 3 hours before the procedure.
7 Esteve 2006; Vimala 2004. In the Esteve trial misoprostol was administered 1-3 hours prior to the procedure and in the Vimala trial, 2 hours prior to the procedure.
8 There is some heterogeneity in the analysis (12=68%).
9 Esteve 2006; Hamoda 2004; Tang 2004; Vimala 2004. In the Esteve trial, misoprostol was administered 1-3 hours prior to procedure; in the Hamoda trial 2-4 hours before procedure; in the Tang trial 3 hours before procedure and in the Vimala trial 2 hours before procedure.
10 There is heterogeneity in the analysis (12=85%).
11 Aronsson 2004. In this trial misoprostol was administered 3 hours prior to procedure.
12 Hamoda 2004. In this trial misoprostol was administered 2-4 hours prior to procedure.

Author(s): P. Whyte
Date: 2009-12-22
Question: Should misoprostol vs. gemeprost be used for cervical preparation prior to first trimester surgical abortion?
Bibliography: Kapp N et al. Cervical preparation for first trimester surgical abortion. *Cochrane Database of Systematic Reviews*, 2010, (2):CD007207.

Table 7:

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	misoprostol	gemeprost	Relative (95% CI)	Absolute		Importance
cervical dilatation at procedure start (Better indicated by higher values)												
3[1]	randomized trials	serious[2]	no serious inconsistency	no serious indirectness	no serious imprecision	none	172	170	-	MD 0.47 higher (0.1 to 0.85 higher)	⊕⊕⊕◯ MODERATE	IMPORTANT
side-effects of 200ug misoprostol vs. gemeprost												
1[3]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[4]	none	13/285 (4.6%)	33/279 (11.8%)	OR 0.35 (0.18 to 0.68)	73 fewer per 1000 (from 35 fewer to 95 fewer)	⊕⊕⊕◯ MODERATE	IMPORTANT
side-effects of 400ug misoprostol vs. gemeprost												
1[5]	randomized trials	serious[6]	no serious inconsistency	no serious indirectness	serious[4]	none	3/64 (4.7%)	6/64 (9.4%)	OR 0.47 (0.11 to 1.98)	47 fewer per 1000 (from 82 fewer to 76 more)	⊕⊕◯◯ LOW	IMPORTANT
procedure length (minutes) (Better indicated by lower values)												
1[5]	randomized trials	serious[6]	no serious inconsistency	no serious indirectness	serious[4]	none	32	32	-	MD 1.50 lower (3 lower to 0 higher)	⊕⊕◯◯ LOW	IMPORTANT

1 Ekerhovd 2003; Ngai Yeung 1995; Henry 1999. In the Ekerhovd trial, misoprostol was administered 3-4 hours prior to procedure; in Ngai Yeung it was administered 12 hours prior to procedure; and in Henry no timing of dose was provided.
2 Allocation concealment was unclear in two of the trials.
3 Henry 1999
4 Small sample size or total number of events < 300
5 Ngai Yeung 1995
6 Allocation concealment was unclear.

Author(s): P. Whyte
Date: 2009-12-22
Question: Should misoprostol vs. mifepristone be used for cervical preparation prior to first trimester surgical abortion?
Bibliography: Kapp N et al. Cervical preparation for first trimester surgical abortion. *Cochrane Database of Systematic Reviews*, 2010, (2):CD007207.

Table 8:

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	misoprostol	mifepristone	Relative (95% CI)	Absolute		Importance
cervical dilatation at procedure start (Better indicated by higher values)												
2[1]	randomized trials	serious[2]	no serious inconsistency	no serious indirectness	serious[3]	none	45	45	-	MD 0.79 lower (1.29 to 0.3 lower)	⊕⊕◯◯ LOW	IMPORTANT
nausea and vomiting												
2[1]	randomized trials	serious[2]	no serious inconsistency	no serious indirectness	serious[3]	none	3/45 (6.7%)	4/45 (8.9%)	OR 0.75 (0.17 to 3.33)	21 fewer per 1000 (from 73 fewer to 156 more)	⊕⊕◯◯ LOW	IMPORTANT

1 Ashok 2000; Bokstrom 1998. In the Ashok trial, 800mcg of misoprostol 24 hours prior to procedure or mifepristone 200mg 24 or 48 hours prior to procedure were administered. In the Bokstrom trial, 600mcg of misoprostol or 200mg of mifepristone were administered 16-20 hours prior to procedure.
2 Allocation concealment unclear in Bokstrom (1998).
3 Small sample size.

Author(s): P. Whyte
Date: 2009-12-22
Question: Should misoprostol vs. laminaria be used for cervical preparation prior to first trimester surgical abortion?
Bibliography: Kapp N et al. Cervical preparation for first trimester surgical abortion. *Cochrane Database of Systematic Reviews*, 2010, (2):CD007207.

Table 9:

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	misoprostol	laminaria	Relative (95% CI)	Absolute		Importance
need for additional mechanical dilatation												
2[1]	randomized trials	serious[2]	no serious inconsistency	no serious indirectness	serious[3]	none	48/84 (57.1%)	29/47 (61.7%)	OR 1.04 (0.48 to 2.26)	9 more per 1000 (from 181 fewer to 168 more)	⊕⊕◯◯ LOW	CRITICAL
procedure length (minutes) (Better indicated by lower values)												
1[4]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[3]	none	37	33	-	MD 0.10 lower (1.09 lower to 0.89 higher)	⊕⊕⊕◯ MODERATE	IMPORTANT
patient dissatisfaction												
1[4]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[3]	none	11/37 (29.7%)	19/33 (57.6%)	OR 0.31 (0.12 to 0.84)	280 fewer per 1000 (from 43 fewer to 436 fewer)	⊕⊕⊕◯ MODERATE	IMPORTANT

1 Burnett 2005; MacIsaac 1999. For the MacIsaac trial, 400mcg vaginal and oral misoprostol or laminaria was administered 4 hours prior to procedure; for the Burnett trial, 200mcg of misoprostol was used, however timing of administration is not provided.
2 Allocation concealment unclear in MacIsaac 1999.
3 Small sample size.
4 Burnett 2005

Author(s): P. Whyte
Date: 2009-12-22
Question: Should sublingual misoprostol 400mcg 2 hours prior vs. prostaglandin F2α125mcg 2 hours prior be used for cervical preparation prior to first trimester surgical abortion?
Bibliography: Kapp N et al. Cervical preparation for first trimester surgical abortion. *Cochrane Database of Systematic Reviews*, 2010, (2):CD007207.

Table 10:

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	sublingual misoprostol 400mcg 2 hours prior	prostaglandin f2alpha 125mcg 2 hours prior	Relative (95% CI)	Absolute		Importance
need for additional mechanical dilatation												
1[1]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[2]	none	8/30 (26.7%)	13/30 (43.3%)	OR 0.48 (0.16 to 1.41)	165 fewer per 1000 (from 324 fewer to 85 more)	⊕⊕⊕○ MODERATE	CRITICAL
cervical dilatation at procedure start (Better indicated by higher values)												
1[1]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[2]	none	30	30	-	MD 1.80 higher (1.04 to 2.56 higher)	⊕⊕⊕○ MODERATE	IMPORTANT
nausea and vomiting												
1[1]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[2]	none	1/30 (3.3%)	6/30 (20%)	OR 0.14 (0.02 to 1.23)	166 fewer per 1000 (from 195 fewer to 35 more)	⊕⊕⊕○ MODERATE	IMPORTANT
procedure length (minutes) (Better indicated by lower values)												
1[1]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[2]	none	30	30	-	MD 0.20 higher (0.76 lower to 1.16 higher)	⊕⊕⊕○ MODERATE	IMPORTANT
patient dissatisfaction												
1[1]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[2]	none	2/30 (6.7%)	7/30 (23.3%)	OR 0.23 (0.04 to 1.24)	168 fewer per 1000 (from 221 fewer to 41 more)	⊕⊕⊕○ MODERATE	IMPORTANT

1 Vimala 2005
2 Small sample size.

Author(s): P. Whyte
Date: 2009-12-26
Question: Should mifepristone 100mg administered 24 and 12 hours prior vs. mifepristone 25mg administered 24 and 12 hours prior be used for cervical preparation prior to first trimester surgical abortion?
Bibliography: Kapp N et al. Cervical preparation for first trimester surgical abortion. *Cochrane Database of Systematic Reviews*, 2010, (2):CD007207.

Table 11:

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	mifepristone 100mg 24 and 12 hours prior	mifepristone 25mg 24 and 12 hours prior	Relative (95% CI)	Absolute		Importance
need for additional mechanical dilatation												
1[1]	randomized trials	serious[2]	no serious inconsistency	no serious indirectness	serious[3]	none	51/54 (94.4%)	46/48 (95.8%)	OR 0.74 (0.12 to 4.62)	14 fewer per 1000 (from 224 fewer to 32 more)	⊕⊕◯◯ LOW	CRITICAL
cervical dilatation at procedure start (Better indicated by higher values)												
1[1]	randomized trials	serious[2]	no serious inconsistency	no serious indirectness	serious[3]	none	54	48	-	MD 0.00 higher (0.74 lower to 0.74 higher)	⊕⊕◯◯ LOW	IMPORTANT

1 WHO 1990
2 Allocation concealment unclear.
3 Small sample size.

Author(s): P. Whyte
Date: 2010-04-03
Question: Should vaginal misoprostol 400mcg vs. placebo be used for cervical preparation for first trimester surgical abortion?
Bibliography: Meirik O et al. Complications of first-trimester abortion by vacuum aspiration after cervical preparation with and without misoprostol: a multicentre randomised trial. *Lancet* 2012 May 12;379(9828):1817-24.

Table 12:

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	vaginal misoprostol 400mcg	placebo	Relative (95% CI)	Absolute		Importance
cervical tear												
1[1]	randomized trials	serious[2]	no serious inconsistency	no serious indirectness	no serious imprecision	none	3/2483 (0.1%)	14/2487 (0.6%)	RR 0.21 (0.06 to 0.75)	4 fewer per 1000 (from 1 fewer to 5 fewer)	⊕⊕⊕◯ MODERATE	CRITICAL
uterine perforation												
1[1]	randomized trials	serious[2]	no serious inconsistency	no serious indirectness	no serious imprecision	none	3/2483 (0.1%)	2/2487 (0.1%)	RR 1.50 (0.25 to 8.98)	0 more per 1000 (from 1 fewer to 6 more)	⊕⊕⊕◯ MODERATE	CRITICAL
uterine re-evacuation												
1[1]	randomized trials	serious[2]	no serious inconsistency	no serious indirectness	no serious imprecision	none	19/2427 (0.8%)	55/2431 (2.3%)	RR 0.35 (0.21 to 0.58)	15 fewer per 1000 (from 10 fewer to 18 fewer)	⊕⊕⊕◯ MODERATE	CRITICAL
pelvic infection												
1[1]	randomized trials	serious[2]	no serious inconsistency	no serious indirectness	no serious imprecision	none	30/2427 (1.2%)	23/2431 (0.9%)	RR 1.31 (0.76 to 2.24)	3 more per 1000 (from 2 fewer to 12 more)	⊕⊕⊕◯ MODERATE	CRITICAL
bleeding requiring blood transfusion												
1[1]	randomized trials	serious[2]	no serious inconsistency	no serious indirectness	no serious imprecision	none	2/2427 (0.1%)	4/2431 (0.2%)	RR 0.50 (0.09 to 2.73)	1 fewer per 1000 (from 1 fewer to 3 more)	⊕⊕⊕◯ MODERATE	CRITICAL
all complications (cervical tears, uterine perforation, uterine re-evacuation, pelvic inflammatory disease, bleeding requiring blood transfusion and/or fluid because of hypovolaemia												
1[1]	randomized trials	serious[2]	no serious inconsistency	no serious indirectness	no serious imprecision	none	52/2427 (2.1%)	84/2431 (3.5%)	RR 0.62 (0.44 to 0.87)	13 fewer per 1000 (from 4 fewer to 19 fewer)	⊕⊕⊕◯ MODERATE	CRITICAL

1 Meirik 2012
2 Although the placebo tablets were of similar shape and colour to the misoprostol tablets, they could be distinguished from the misoprostol tablets as they did not have the brand name as on the misoprostol tablets. Consequently, the trial was not double-blinded.

Author(s):
Date: 2009-12-08
Question: Should nitric oxide donors vs. placebo be used for cervical preparation for abortion?[1]
Bibliography: Promsonthi P, Preechapornprasert D, Chanrachakul B. Nitric oxide donors for cervical ripening in first-trimester surgical abortion. *Cochrane Database of Systematic Reviews*, 2009, (4):CD007444.

Table 13:

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	nitric oxide donors	placebo	Relative (95% CI)	Absolute		Importance
cumulative force required to dilate cervix to 8mm (Better indicated by lower values)												
3[2]	randomized trials	serious[3]	serious[4]	no serious indirectness	serious[5]	none	83	70	-	MD 4.29 lower (9.92 lower to 1.35 higher)	⊕○○○ VERY LOW	IMPORTANT
baseline cervical dilatation before the procedure (Better indicated by higher values)												
2[6]	randomized trials	no serious limitations	serious[4]	no serious indirectness	serious[5]	none	66	54	-	MD 0.21 higher (0.12 lower to 0.53 higher)	⊕⊕○○ LOW	IMPORTANT
side-effects: headache												
2[7]	randomized trials	serious[3]	no serious inconsistency	no serious indirectness	serious[5]	none	16/59 (27.1%)	9/58 (15.5%)	RR 1.73 (0.86 to 3.46)	113 more per 1000 (from 22 fewer to 382 more)	⊕⊕○○ LOW	IMPORTANT
side-effects: abdominal pain												
2[7]	randomized trials	serious[3]	no serious inconsistency	no serious indirectness	serious[5]	none	16/59 (27.1%)	18/58 (31%)	RR 0.87 (0.5 to 1.5)	40 fewer per 1000 (from 155 fewer to 155 more)	⊕⊕○○ LOW	IMPORTANT
side-effects: nausea/vomiting												
2[7]	randomized trials	serious[3]	no serious inconsistency	no serious indirectness	serious[5]	none	14/59 (23.7%)	5/58 (8.6%)	RR 2.62 (1.07 to 6.45)	140 more per 1000 (from 6 more to 470 more)	⊕⊕○○ LOW	IMPORTANT
patient satisfaction												
1[8]	randomized trials	serious[9]	no serious inconsistency	no serious indirectness	serious[5]	none	38/42 (90.5%)	40/42 (95.2%)	RR 0.95 (0.84 to 1.07)	48 fewer per 1000 (from 152 fewer to 67 more)	⊕⊕○○ LOW	IMPORTANT

1 Gestational age ranged from 9 to 12.5 weeks among included trials, with most including women with gestational age <12 weeks.
2 Facchinetti 2000; Li 2003; Thomson 1997
3 Allocation concealment in Facchinetti 2000 was unclear; a sample size of 36 was calculated to reach statistical significance, but 3 subjects dropped out.
4 Heterogeneity was high, with I^2=82%
5 Small sample size or total number of events < 300
6 Li 2003; Thomson 1997
7 Facchinetti 2000; Li 2003
8 Li 2003
9 Placebo group in Li 2003 was not described

Author(s): P. Whyte
Date: 2009-12-08
Question: Should nitric oxide donors vs. prostaglandins be used for cervical preparation for abortion?[1,2,3]
Bibliography: Promsonthi P, Preechapornprasert D, Chanrachakul B. Nitric oxide donors for cervical ripening in first-trimester surgical abortion. *Cochrane Database of Systematic Reviews*, 2009, (4):CD007444.

Table 14:

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	nitric oxide donors	prostaglandins	Relative (95% CI)	Absolute		Importance
cumulative force required to dilate cervix to 8-9mm (Better indicated by lower values)												
5[4]	randomized trials	serious[5]	serious[7]	no serious indirectness	serious[6]	none	232	197	-	MD 13.12 higher (9.72 to 16.52 higher)	⊕○○○ VERY LOW	IMPORTANT
baseline cervical dilatation before procedure (Better indicated by lower values)												
4[8]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[6]	none	210	176	-	MD 0.73 lower (1.01 to 0.45 lower)	⊕⊕⊕○ MODERATE	IMPORTANT
probability of reaching cervical ripening > 8mm in 3 hours												
1[9]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[6]	none	20/30 (66.7%)	3/30 (10%)	RR 6.67 (2.21 to 20.09)	567 more per 1000 (from 121 more to 1909 more)	⊕⊕⊕○ MODERATE	CRITICAL
side effect: headache												
5[11]	randomized trials	serious	no serious inconsistency	no serious indirectness	serious[6]	none	101/255 (39.6%)	19/252 (7.5%)	RR 5.13 (3.29 to 8)	311 more per 1000 (from 173 more to 528 more)	⊕⊕○○ LOW	IMPORTANT
side effect: abdominal pain												
5[11]	randomized trials	serious[5]	no serious inconsistency	no serious indirectness	no serious imprecision	none	43/255 (16.9%)	129/252 (51.2%)	RR 0.33 (0.25 to 0.44)	343 fewer per 1000 (from 287 fewer to 384 fewer)	⊕⊕⊕○ MODERATE	IMPORTANT

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	nitric oxide donors	prostaglandins	Relative (95% CI)	Absolute		Importance
side effect: vaginal bleeding												
4[12]	randomized trials	serious[5]	serious[13]	no serious indirectness	no serious imprecision	none	8/225 (3.6%)	64/222 (28.8%)	RR 0.14 (0.07 to 0.27)	248 fewer per 1000 (from 210 fewer to 268 fewer)	⊕⊕◯◯ LOW	IMPORTANT
side effect: palpitation												
4[12]	randomized trials	serious[5]	no serious inconsistency	no serious indirectness	serious[6]	none	29/225 (12.9%)	8/222 (3.6%)	RR 3.43 (1.64 to 7.15)	88 more per 1000 (from 23 more to 222 more)	⊕⊕◯◯ LOW	IMPORTANT
side effect: dizziness												
3[14]	randomized trials	serious[5]	no serious inconsistency	no serious indirectness	serious[6]	none	23/164 (14%)	7/163 (4.3%)	RR 3.29 (1.46 to 7.41)	98 more per 1000 (from 20 more to 275 more)	⊕⊕◯◯ LOW	IMPORTANT
side effect: nausea/vomiting												
5[11]	randomized trials	serious[5]	serious[15]	no serious indirectness	no serious imprecision	none	93/255 (36.5%)	78/252 (31%)	RR 1.17 (0.94 to 1.46)	53 more per 1000 (from 19 fewer to 142 more)	⊕⊕◯◯ LOW	IMPORTANT
side-effect: intraoperative blood loss (Better indicated by lower values)												
4[16]	randomized trials	no serious limitations	serious[17]	no serious indirectness	no serious imprecision	none	208	185	-	MD 33.59 higher (24.5 to 42.67 higher)	⊕⊕⊕◯ MODERATE	IMPORTANT
patient satisfaction												
1[18]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[10]	none	38/42 (90.5%)	35/42 (83.3%)	RR 1.09 (0.92 to 1.28)	75 more per 1000 (from 67 fewer to 233 more)	⊕⊕⊕◯ MODERATE	IMPORTANT

1 Drugs used were isosorbide mononitrate, isosorbide dinitrate, glyceryl trinitrate and sodium nitroprusside. All types of nitric oxide donors were analysed together.
2 Gemeprost and misoprostol were used and both were analysed together. Doses of misoprostol were 200 and 400mcg by vaginal administration. Timing of dose ranged from 3 to 13 hours prior to surgery. Gemeprost 1mg was used vaginally.
3 Gestational age ranged from 9 to 12.5 weeks among included trials, with most including women with gestational age <12 weeks.
4 Chan 2005; Ledingham 2001; Li 2003; Thomson 1997; Thomson 1998
5 In Ledingham 2001 the first author allocated the treatment and administered the symptom questionnaire; in Chan 2005 the first author performed the operation and supervised the nurse who administered the drug.
6 Wide confidence interval.
7 Heterogeneity relatively high with I^2=67%.
8 Chan 2005; Li 2003; Thomson 1997; Thomson 1998
9 Arteaga-Troncoso 2005
10 Total number of events < 300.
11 Arteaga-Troncoso 2005; Chan 2005; Ledingham 2001; Li 2003; Radulovic 2007
12 Chan 2005; Ledingham 2001; Li 2003; Radulovic 2007
13 Heterogeneity relatively high with I^2=68%.
14 Chan 2005; Ledingham 2001; Li 2003
15 Heterogeneity relatively high with I^2=65%.
16 Chan 2005; Ledingham 2001; Li 2003; Radulovic 2007
17 Heterogeneity relatively high with I^2=73%.
18 Li 2003

Cervical preparation prior to second trimester abortion

Newmann et al. (2010) assessed cervical preparation methods for second-trimester surgical abortion (14-24 weeks). The review compared osmotic dilators and prostaglandins; osmotic dilators and misoprostol; osmotic dilators combined with misoprostol and osmotic dilators alone; one and two day placement of osmotic dilators; and combination of mifepristone and misoprostol. For one comparison, mifepristone administration 48 hours before misoprostol resulted in significantly more abortions by expulsion before the procedure (OR=6.74; 95% CI: 2.76, 16.50).

A total of six trials were included in the review, and as there were differences in the methods compared across all the trials, no meta-analyses could be conducted; therefore, all comparisons were based on single trials. Given these limitations, along with the relatively small sample sizes of most of the trials (usually less than 40 per treatment arm), trial quality was rated very low to moderate and the results of this review should be interpreted with caution.

The main outcomes considered included procedure time, dilatation achieved, need for additional dilatation, complications, side-effects and patient satisfaction. Gestational age ranged from 12 to 20 weeks among included trials. The review found that initial cervical dilatation following overnight use of osmotic dilators was superior to initial cervical dilatation following use of prostaglandins (Table 14) including use of misoprostol (Table 15) without differences in side-effects. There were no differences in initial cervical dilatation with other comparisons, although use of buccal misoprostol in combination with osmotic dilators when compared to osmotic dilators used alone did decrease the number of needed mechanical cervical dilatations which were difficult (Table 17). There were no differences between the methods compared in regard to serious complications of the procedure. Use of multiple laminaria when compared with one lamicel was associated with less need for further mechanical dilatation (Table 18). There was a difference in initial cervical dilatation, but not in surgical procedure time between one and two-day placement of laminaria (Table 19). The GRADE tables below (Tables 14 to 19) provide a summary of the comparisons presented in the review.

Author(s): P. Whyte
Date: 2009-12-18
Question: Should osmotic dilators vs. prostaglandins be used for cervical preparation prior to second trimester surgical abortion?[1,2,3]
Bibliography: Newmann SJ et al. Cervical preparation for second trimester dilatation and evacuation. *Cochrane Database of Systematic Reviews*, 2010, (8):CD007310.

Table 14:

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	osmotic dilators	prostaglandins	Relative (95% CI)	Absolute		Importance
initial dilatation (Better indicated by higher values)												
2[4]	randomized trials	serious[5]	serious[6]	no serious indirectness	serious[7]	none	67	66	-	MD 3.63 higher (2.62 to 4.63 higher)	⊕○○○ VERY LOW	IMPORTANT
difficult dilatation												
2[4]	randomized trials	serious[5]	serious[6]	no serious indirectness	serious[8]	none	12/61 (19.7%)	15/62 (24.2%)	RR 0.82 (0.34 to 1.99)	44 fewer per 1000 (from 160 fewer to 240 more)	⊕○○○ VERY LOW	IMPORTANT

1 Osmotic dilators included 3-6 medium laminaria overnight and Hypan 3x55mm (15-17 weeks GA), 4x65mm (18-20 weeks GA) placed 24 hours pre-procedure
2 Prostaglandins included1mg gemeprost given 4-6 hours pre-operatively, with nulliparous women receiving additional 1mg gemeprost 2-4 hours pre-operatively and 400mcg vaginal misoprostol 3-4 hours prior to surgery.
3 Gestational age ranged from 12 to 20 weeks among included trials.
4 Goldberg 2005; Zamblera 1994
5 The Zamblera (1994) study was only single-blinded (physicians unaware of treatment).
6 There is some indication of heterogeneity (I^2=63%).
7 Small sample size
8 High heterogeneity with I^2=0.93.

Author(s): P. Whyte
Date: 2009-12-18
Question: Should overnight laminaria vs. vaginal misoprostol 400mcg 3-4 hours prior to surgery be used for cervical preparation prior to second trimester abortion?[1]
Bibliography: Newmann SJ et al. Cervical preparation for second trimester dilatation and evacuation. *Cochrane Database of Systematic Reviews*, 2010, (8):CD007310.

Table 15:

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	overnight laminaria	vaginal misoprostol 400mcg 3-4 hours prior to surgery	Relative (95% CI)	Absolute		Importance
procedure time (Better indicated by lower values)												
1[2]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[3]	none	36	33	-	MD 2.31 lower (4.29 to 0.33 lower)	⊕⊕⊕◯ MODERATE	IMPORTANT
need for additional dilatation												
1[2]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[4]	none	6/36 (16.7%)	28/33 (84.8%)	RR 0.07 (0.03 to 0.17)	789 fewer per 1000 (from 704 fewer to 823 fewer)	⊕⊕⊕◯ MODERATE	CRITICAL
nausea												
1[2]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[4]	none	19/36 (52.8%)	19/33 (57.6%)	RR 0.83 (0.32 to 2.12)	98 fewer per 1000 (from 392 fewer to 645 more)	⊕⊕⊕◯ MODERATE	IMPORTANT
vomiting												
1[2]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[4]	none	16/36 (44.4%)	14/33 (42.4%)	RR 1.08 (0.42 to 2.79)	34 more per 1000 (from 246 fewer to 759 more)	⊕⊕⊕◯ MODERATE	IMPORTANT

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	overnight laminaria	vaginal misoprostol 400mcg 3-4 hours prior to surgery	Relative (95% CI)	Absolute		Importance
diarrhoea												
1[2]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[4]	none	6/36 (16.7%)	6/33 (18.2%)	RR 0.90 (0.26 to 3.11)	18 fewer per 1000 (from 135 fewer to 384 more)	⊕⊕⊕◯ MODERATE	IMPORTANT
fevers												
1[2]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[4]	none	1/36 (2.8%)	1/33 (3%)	RR 0.92 (0.06 to 14.98)	2 fewer per 1000 (from 28 fewer to 424 more)	⊕⊕⊕◯ MODERATE	IMPORTANT
chills												
1[2]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[4]	none	6/6 (100%)	1/33 (3%)	RR 0.90 (0.26 to 3.11)	3 fewer per 1000 (from 22 fewer to 64 more)	⊕⊕⊕◯ MODERATE	IMPORTANT

1 Gestational age ranged from 12 to 20 weeks among included trials.
2 Goldberg 2005
3 Based on one trial only with small sample size.
4 Total number of events <300.

Author(s): P. Whyte
Date: 2009-12-18
Question: Should hypan vs. gemeprost be used for cervical preparation prior to second trimester abortion?[1]
Bibliography: Newmann SJ et al. Cervical preparation for second trimester dilatation and evacuation. *Cochrane Database of Systematic Reviews*, 2010, (8):CD007310.

Table 16:

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	hypan	gemeprost	Relative (95% CI)	Absolute		Importance
spotting												
1[2]	randomized trials	serious[3]	no serious inconsistency	no serious indirectness	serious[4]	none	0/25 (0%)	4/25 (16%)	RR 0.12 (0.02 to 0.9)	141 fewer per 1000 (from 16 fewer to 157 fewer)	⊕⊕◯◯ LOW	IMPORTANT
pain												
1[2]	randomized trials	serious[3]	no serious inconsistency	no serious indirectness	serious[4]	none	1/25 (4%)	10/25 (40%)	RR 0.13 (0.03 to 0.48)	348 fewer per 1000 (from 208 fewer to 388 fewer)	⊕⊕◯◯ LOW	IMPORTANT

1 Gestational age ranged from 12 to 20 weeks among included trials.
2 Zamblera 1994
3 The Zamblera (1994) study was only single-blinded (physicians unaware of treatment).
4 Total number of events < 300.

Author(s): P. Whyte
Date: 2009-12-18
Question: Should laminaria (1-2 overnight) +/- buccal misoprostol 400mcg vs. laminaria alone (1-2 overnight) be used for cervical preparation prior to second trimester abortion?[1]
Bibliography: Newmann SJ et al. Cervical preparation for second trimester dilatation and evacuation. *Cochrane Database of Systematic Reviews*, 2010, (8):CD007310.

Table 17:

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	laminaria (1-2 overnight) +/- buccal misoprostol 400mcg	laminaria alone (1-2 overnight)	Relative (95% CI)	Absolute		Importance
procedure time (Better indicated by lower values)												
1[2]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[3]	none	64	61	-	MD 0.05 lower (1.01 lower to 0.91 higher)	⊕⊕⊕◯ MODERATE	IMPORTANT
initial dilatation (mm) (Better indicated by lower values)												
1[2]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[3]	none	61	64	-	MD 1.50 higher (0.63 lower to 3.63 higher)	⊕⊕⊕◯ MODERATE	IMPORTANT
difficult dilatation (% yes)												
1[2]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[4]	none	21/73 (28.8%)	37/81 (45.7%)	RR 0.49 (0.26 to 0.94)	233 fewer per 1000 (from 27 fewer to 338 fewer)	⊕⊕⊕◯ MODERATE	IMPORTANT
cramps after cervical preparation												
1[2]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[4]	none	33/64 (51.6%)	51/62 (82.3%)	RR 0.25 (0.12 to 0.53)	617 fewer per 1000 (from 387 fewer to 724 fewer)	⊕⊕⊕◯ MODERATE	IMPORTANT
need for additional dilatation												
1[2]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[4]	none	48/81 (59.3%)	33/73 (45.2%)	RR 1.75 (0.93 to 3.29)	339 more per 1000 (from 32 fewer to 1035 more)	⊕⊕⊕◯ MODERATE	CRITICAL

1 Gestational age ranged from 12 to 20 weeks among included trials.
2 Edelman 2006
3 Based on one trial only with small sample size.
4 Total number of events <300.

Author(s): P. Whyte
Date: 2009-12-18
Question: Should laminaria (multiple; min 2 hours) vs. lamicel 5mm be used for cervical preparation prior to second trimester surgical abortion?[1]
Bibliography: Newmann SJ et al. Cervical preparation for second trimester dilatation and evacuation. *Cochrane Database of Systematic Reviews*, 2010, (8):CD007310.

Table 18:

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	laminaria (multiple; min 2 hours)	lamicel 5mm	Relative (95% CI)	Absolute		Importance
need for dilatation beyond 37 French units												
1[2]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[3]	none	86/110 (78.2%)	98/109 (89.9%)	RR 0.42 (0.2 to 0.86)	521 fewer per 1000 (from 126 fewer to 719 fewer)	⊕⊕⊕◯ MODERATE	CRITICAL
adequate initial dilatation (> or = 37 French units)												
1[2]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[3]	none	52/110 (47.3%)	52/109 (47.7%)	RR 0.98 (0.58 to 1.67)	10 fewer per 1000 (from 200 fewer to 320 more)	⊕⊕⊕◯ MODERATE	CRITICAL

1 Gestational age ranged from 12 to 20 weeks among included trials.
2 Grimes 1987.
3 Total number of events < 300.

Author(s): P. Whyte
Date: 2009-12-18
Question: Should one-day laminaria placement vs. two-day laminaria placement be used for second trimester abortion?[1]
Bibliography: Newmann SJ et al. Cervical preparation for second trimester dilatation and evacuation. *Cochrane Database of Systematic Reviews*, 2010, (8):CD007310.

Table 19:

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	one-day laminaria placement	two-day laminaria placement	Relative (95% CI)	Absolute		Importance
procedure time (Better indicated by lower values)												
1[2]	randomized trials	serious[3]	no serious inconsistency	no serious indirectness	serious[4]	none	28	32	-	MD 0.30 lower (1.93 lower to 1.33 higher)	⊕⊕◯◯ LOW	IMPORTANT
initial dilatation (Better indicated by lower values)												
1[2]	randomized trials	serious[3]	no serious inconsistency	no serious indirectness	serious[4]	none	28	32	-	MD 4.20 higher (2.81 to 5.59 higher)	⊕⊕◯◯ LOW	IMPORTANT

1 Gestational age ranged from 12 to 20 weeks among included trials.
2 Stubblefield 1984.
3 Trial was not blinded and allocation concealment was unclear.
4 Based on one trial only with small sample size.

Incomplete abortion

There are no systematic reviews exclusively addressing incomplete abortion following induced abortion. As a consequence, incomplete miscarriage is used as a proxy for incomplete abortion. A systematic review by Neilson et al (2009) assessed medical management of incomplete miscarriage at less than 24 weeks gestation compared to surgery or expectant care. This review compared misoprostol and expectant care, misoprostol and surgery, vaginal and oral misoprostol as well as dosing of misoprostol. The outcomes assessed were complete miscarriage, surgical evacuation, death or serious complications and side-effects.

A total of 15 trials were included, with none including women with over 13 weeks' gestation. The quality of the trials ranges from low to moderate, with the review author stating that for a number of trials it was not clear if trials were free from selective reporting. In addition, a number of trials had a relatively small sample size and many comparisons were based on a small number of trials.

The review found that there were no statistically significant differences between misoprostol treatment and expectant care in regards to the need for surgical evacuation (Table 20). The comparisons of misoprostol and surgical evacuation found no significant differences in complete miscarriage, although there were significantly more episodes of vomiting and days of bleeding associated with misoprostol treatment (mean difference= 2.12; 95% CI: 1.18, 3.07; Table 20). Vaginal and oral administration of misoprostol have similar efficacy to complete miscarriage; however episodes of diarrhoea were more common with oral administration. The indirect nature of this evidence (trials assessing incomplete miscarriage) should be considered when interpreting the results and applying them to incomplete abortion. Tables 20 to 27 below summarise the comparisons presented in the Neilson (2009) review of incomplete miscarriage.

There are two additional trials assessing the use of misoprostol for incomplete abortion. Diop et al. (2009), which is awaiting classification for inclusion in the Nielson review, compares oral and sublingual misoprostol and Phupong et al (2004) compares single and repeated doses of oral misoprostol for the treatment of incomplete abortion (Tables 28-29). The Diop trial found no differences between oral and sublingual misoprostol while Phupong found no difference between single and repeated misoprostol doses for complete abortion, however there was significantly less diarrhoea associated with single dose misoprostol.

Author(s): P. Whyte
Date: 2009-12-15
Question: Should vaginal misoprostol 400-800mcg vs. expectant care be used for incomplete abortion?[1]
Bibliography: Neilson JP et al. Medical treatments for incomplete miscarriage (less than 24 weeks). *Cochrane Database of Systematic Reviews*, 2010, (1):CD007223.

Table 20:

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	vaginal misoprostol 400-800mcg	expectant care	Relative (95% CI)	Absolute		Importance
complete miscarriage												
2[2]	randomized trials	no serious limitations	no serious inconsistency	serious[3]	serious[4]	none[5]	60/74 (81.1%)	44/74 (59.5%)	RR 1.23 (0.72 to 2.1)	137 more per 1000 (from 166 fewer to 654 more)	⊕⊕◯◯ LOW	CRITICAL
surgical evacuation												
2[6]	randomized trials	serious[7]	no serious inconsistency	serious[3]	serious[4]	none[5]	34/154 (22.1%)	48/154 (31.2%)	RR 0.62 (0.17 to 2.26)	118 fewer per 1000 (from 259 fewer to 393 more)	⊕◯◯◯ VERY LOW	CRITICAL
death or serious complication												
1[8]	randomized trials	no serious limitations	no serious inconsistency	serious[3]	serious[4]	none[9]	1/64 (1.6%)	0/62 (0%)	RR 2.91 (0.12 to 70.05)	0 more per 1000 (from 0 fewer to 0 more)	⊕⊕◯◯ LOW	IMPORTANT
unplanned surgical intervention												
2[6]	randomized trials	no serious limitations	no serious inconsistency	serious[3]	serious[4]	none[5]	34/154 (22.1%)	48/154 (31.2%)	RR 0.62 (0.17 to 2.26)	118 fewer per 1000 (from 259 fewer to 393 more)	⊕⊕◯◯ LOW	CRITICAL

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	vaginal misoprostol 400-800mcg	expectant care	Relative (95% CI)	Absolute		Importance
blood transfusion												
3[10]	randomized trials	serious[11]	no serious inconsistency	serious[3]	serious[12]	none[5]	1/164 (0.6%)	0/168 (0%)	RR 3.07 (0.13 to 74.28)	0 more per 1000 (from 0 fewer to 0 more)	⊕○○○ VERY LOW	IMPORTANT
pain relief												
2[6]	randomized trials	no serious limitations	no serious inconsistency	serious[3]	serious[4]	none[5]	70/154 (45.5%)	59/154 (38.3%)	RR 1.12 (0.67 to 1.88)	46 more per 1000 (from 126 fewer to 337 more)	⊕⊕○○ LOW	IMPORTANT
pelvic infection < 14 days												
3[10]	randomized trials	serious[11]	no serious inconsistency	serious[3]	serious[4]	none[5]	7/155 (4.5%)	2/168 (1.2%)	RR 2.42 (0.59 to 9.98)	17 more per 1000 (from 5 fewer to 107 more)	⊕○○○ VERY LOW	IMPORTANT

1 Gestational age <13 weeks for all trials.
2 Blohm 2005 (vaginal misoprostol 400mcg); Shelley 2005 (vaginal misoprostol 400mcg with repeat dose 4-6 hours later if needed)
3 Trial(s) assessing patients with incomplete miscarriage.
4 Total events < 300
5 Neilson (2009) reports that it is unclear if trials are free of selective reporting.
6 Blohm 2005 (vaginal misoprostol 400mcg); Trinder 2006 (vaginal misoprostol 800mcg)
7 Cannot be blinded.
8 Blohm 2005 (vaginal misoprostol 400mcg)
9 Unclear if the trial is free of selective reporting.
10 Blohm 2005 (vaginal misoprostol 400mcg); Shelley 2005 (vaginal misoprostol 400mcg with repeat dose 4-6 hours later if needed); Trinder 2006 (vaginal misoprostol 800mcg)
11 Two of the trials not blinded as blinding was not possible.
12 Wide confidence interval

Author(s): P. Whyte
Date: 2009-12-15
Question: Should misoprostol vs. surgery be used for incomplete abortion?[1]
Bibliography: Neilson JP et al. Medical treatments for incomplete miscarriage (less than 24 weeks). *Cochrane Database of Systematic Reviews*, 2010, (1):CD007223.

Table 21:

Quality assessment							Summary of findings					
	No of patients		Effect		Quality	Other considerations	misoprostol	surgery	Relative (95% CI)	Absolute		Importance
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision							
complete miscarriage												
8[2]	randomized trials	serious[3]	no serious inconsistency	serious[4]	no serious imprecision	none[6]	673/713 (94.4%)	654/664 (98.5%)	RR 0.96 (0.92 to 1)	39 fewer per 1000 (from 79 fewer to 0 more)	⊕⊕◯◯ LOW	CRITICAL
surgical evacuation												
8[7]	randomized trials	serious[3]	no serious inconsistency	serious[4]	no serious imprecision	none[6]	62/793 (7.8%)	723/745 (97%)	RR 0.07 (0.03 to 0.18)	903 fewer per 1000 (from 796 fewer to 941 fewer)	⊕◯◯◯ VERY LOW	CRITICAL
death or serious complication												
2[8]	randomized trials	serious[3]	no serious inconsistency	serious[4]	serious[5]	none[6]	1/76 (1.3%)	0/56 (0%)	RR 1.00 (0.04 to 22.64)	0 fewer per 1000 (from 0 fewer to 0 more)	⊕◯◯◯ VERY LOW	IMPORTANT
unplanned surgical intervention												
7[10]	randomized trials	serious[3]	no serious inconsistency	serious[4]	serious[5]	none[6]	60/603 (10%)	6/555 (1.1%)	RR 6.32 (2.9 to 13.77)	58 more per 1000 (from 21 more to 138 more)	⊕◯◯◯ VERY LOW	CRITICAL
blood transfusion												
4[11]	randomized trials	serious[3]	no serious inconsistency	serious[4]	serious[5]	none	2/236 (0.8%)	0/194 (0%)	RR 1.73 (0.19 to 16.08)	0 more per 1000 (from 0 fewer to 0 more)	⊕◯◯◯ VERY LOW	IMPORTANT
anaemia												
1[12]	randomized trials	serious[3]	no serious inconsistency	serious[4]	very serious[9,21]	none	6/28 (21.4%)	1/8 (12.5%)	RR 1.71 (0.24 to 12.24)	89 more per 1000 (from 95 fewer to 1405 more)	⊕◯◯◯ VERY LOW	IMPORTANT
days of bleeding (Better indicated by lower values)												
3[13]	randomized trials	serious[3]	no serious inconsistency	serious[4]	serious[9]	none[6]	115	96	-	MD 2.12 higher (1.18 to 3.07 higher)	⊕◯◯◯ VERY LOW	IMPORTANT
pelvic infection < 14 days												
7[14]	randomized trials	serious[3]	no serious inconsistency	serious[4]	no serious imprecision	none[6]	157/7475 (2.1%)	8/432 (1.9%)	RR 0.70 (0.25 to 1.99)	6 fewer per 1000 (from 14 fewer to 18 more)	⊕⊕◯◯ LOW	IMPORTANT

Quality assessment							Summary of findings					
	No of patients		Effect		Quality	Other con-siderations	misoprostol	surgery	Relative (95% CI)	Absolute		Importance
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision							
cervical damage												
1[15]	randomized trials	serious[3]	no serious inconsistency	serious[4]	serious[9]	none	0/107 (0%)	5/82 (6.1%)	RR 0.70 (0 to 1.25)	18 fewer per 1000 (from 61 fewer to 15 more)	⊕○○○ VERY LOW	IMPORTANT
Women's views / satisfaction												
4[16]	randomized trials	serious[3]	no serious inconsistency	no serious indirectness	no serious imprecision	none[6]	565/584 (96.7%)	537/550 (97.6%)	RR 0.99 (0.98 to 1.01)	10 fewer per 1000 (from 20 fewer to 10 more)	⊕⊕⊕○ MODERATE	[17]
Women's views / satisfaction continuous data (Better indicated by lower values)												
2[8]	randomized trials	serious[3]	no serious inconsistency	serious[4]	serious[9]	none[6]	75	56	-	MD 1.01 higher (0.01 to 2 higher)	⊕○○○ VERY LOW	[17]
nausea												
6[18]	randomized trials	serious[3]	no serious inconsistency	serious[4]	serious[5]	none[6]	80/572 (14%)	18/543 (3.3%)	RR 3.18 (1.78 to 5.7)	72 more per 1000 (from 26 more to 156 more)	⊕○○○ VERY LOW	IMPORTANT
vomiting												
5[19]	randomized trials	serious[3]	no serious inconsistency	serious[4]	serious[5]	none[6]	32/559 (5.7%)	11/531 (2.1%)	RR 2.25 (1.14 to 4.43)	26 more per 1000 (from 3 more to 71 more)	⊕○○○ VERY LOW	IMPORTANT
diarrhoea												
3[20]	randomized trials	serious[3]	no serious inconsistency	serious[4]	serious[5]	none[6]	10/234 (4.3%)	0/203 (0%)	RR 4.25 (0.76 to 23.73)	0 more per 1000 (from 0 fewer to 0 more)	⊕○○○ VERY LOW	IMPORTANT

1 Gestational age <13 weeks for all trials.
2 Moodliar 2005 (vaginal misoprostol 600mcg vs. sharp curettage); Shelley 2005 (vaginal misoprostol 400mcg with repeat dose 4-6 hours later if needed vs. aspiration curettage or D&C); Zhang 2005 (vaginal misoprostol 800mcg vs. vacuum aspiration); Bique 2007 (oral misoprostol 600mcg vs. manual vacuum aspiration); Dao 2007 (oral misoprostol 600mcg vs. vacuum aspiration); Shwekerela 2007 (oral misoprostol 600mcg vs. manual vacuum aspiration); Weeks 2005 (oral misoprostol 600mcg vs. manual vacuum aspiration); Sahin 2001 (vaginal misoprostol 200mcg 4 times/day after application of 200mcg intravaginal misoprostol for 5 days vs. curettage).
3 Trials were not blinded.
4 Trial(s) assessing patients with incomplete miscarriage.
5 Wide confidence interval.
6 It is unclear if the trials are free of selective reporting.
7 Moodliar 2005; Trindler 2005; Zhang 2005; Bique 2007; Dao 2007; Shwekerela 2007; Weeks 2005; Sahin 2001.
8 Moodliar 2005; Zhang 2005.
9 Total number of events <300.
10 Moodliar 2005; Trinder 2006; Zhang 2005; Bique 2007; Dao 2007; Weeks 2005.
11 Shelley 2005; Trinder 2006; Zhang 2005; Weeks 2005.
12 Zhang 2005.

13 Moodliar 2005; Zhang 2005; Sahin 2001.
14 Moodliar 2005; Shelley 2005; Trinder 2006; Zhang 2005; Shwekerela 2007; Weeks 2005; Sahin 2001.
15 Weeks 2005.
16 Bique 2007; Dao 2007; Shwekerela 2007; Weeks 2005.
17 Outcome ranking not provided.
18 Moodliar 2005; Shelley 2005; Zhang 2005; Bique 2007; Dao 2007; Shwekerela 2007.
19 Moodliar 2005; Zhang 2005; Bique 2007; Dao 2007; Shwekerela 2007.
20 Moodliar 2005; Zhang 2005; Weeks 2005.
21 Based on one trial with very small sample size.

Author(s): P. Whyte
Date: 2009-12-15
Question: Should vaginal misoprostol vs expectant care be used for incomplete miscarriage?[1]
Bibliography: Neilson JP et al. Medical treatments for incomplete miscarriage (less than 24 weeks). *Cochrane Database of Systematic Reviews*, 2010, (1):CD007223.

Table 22:

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	vaginal misoprostol - gestation <13 weeks	expectant care - gestation <13 weeks	Relative (95% CI)	Absolute		Importance
complete miscarriage												
2[2]	randomized trials	no serious limitations	no serious inconsistency	serious[3]	serious[4]	none[5]	60/74 (81.1%)	44/76 (57.9%)	RR 1.23 (0.72 to 2.1)	133 more per 1000 (from 162 fewer to 637 more)	⊕⊕◯◯ LOW	CRITICAL
surgical evacuation												
2[6]	randomized trials	no serious limitations	no serious inconsistency	serious[3]	serious[4]	none[5]	34/154 (22.1%)	48/154 (31.2%)	RR 0.62 (0.17 to 2.26)	118 fewer per 1000 (from 259 fewer to 393 more)	⊕⊕◯◯ LOW	CRITICAL
death or serious complication												
1[7]	randomized trials	no serious limitations	no serious inconsistency	serious[3]	serious[8]	none[5]	1/64 (1.6%)	0/62 (0%)	RR 2.91 (0.12 to 70.05)	0 more per 1000 (from 0 fewer to 0 more)	⊕⊕◯◯ LOW	IMPORTANT
unplanned surgical intervention												
2[6]	randomized trials	no serious limitations	no serious inconsistency	serious[3]	serious[4]	none[5]	34/154 (22.1%)	48/154 (31.2%)	RR 0.62 (0.17 to 2.26)	118 fewer per 1000 (from 259 fewer to 393 more)	⊕⊕◯◯ LOW	CRITICAL

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	vaginal misoprostol - gestation <13 weeks	expectant care - gestation <13 weeks	Relative (95% CI)	Absolute		Importance
blood transfusion												
3[9]	randomized trials	no serious limitations	no serious inconsistency	serious[3]	serious[8]	none[5]	1/164 (0.6%)	0/168 (0%)	RR 3.07 (0.13 to 74.28)	0 more per 1000 (from 0 fewer to 0 more)	⊕⊕◯◯ LOW	IMPORTANT
pelvic infection < 14 days												
3[9]	randomized trials	no serious limitations	no serious inconsistency	serious[3]	serious[8]	none[5]	7/165 (4.2%)	2/168 (1.2%)	RR 2.81 (0.77 to 10.33)	22 more per 1000 (from 3 fewer to 111 more)	⊕⊕◯◯ LOW	IMPORTANT

1 Gestational age <13 weeks for all trials.
2 Blohm 2005; Shelley 2005
3 Trial(s) assessing patients with incomplete miscarriage.
4 Total number of events <300.
5 Neilson (2009) reports that it is unclear if trials are free of selective reporting.
6 Blohm 2005; Trinder 2006
7 Blohm 2005
8 Wide confidence interval.
9 Blohm 2005; Shelley 2005; Trinder 2006

Author(s):
Date: 2009-12-15
Question: Should vaginal misoprostol vs. surgery be used for incomplete miscarriage?[1]
Bibliography: Neilson JP et al. Medical treatments for incomplete miscarriage (less than 24 weeks). *Cochrane Database of Systematic Reviews*, 2010, (1):CD007223.

Table 23:

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	vaginal misoprostol - gestation <13 weeks	surgery - gestation <13 weeks	Relative (95% CI)	Absolute		Importance
complete miscarriage												
3[2]	randomized trials	serious[3]	no serious inconsistency	serious[4]	serious[5]	none[6]	76/87 (87.4%)	66/67 (98.5%)	RR 0.90 (0.82 to 0.99)	99 fewer per 1000 (from 10 fewer to 177 fewer)	⊕○○○ VERY LOW	CRITICAL
surgical evacuation												
3[7]	randomized trials	serious[3]	no serious inconsistency	serious[4]	serious[5]	none[6]	34/167 (20.4%)	134/148 (90.5%)	RR 0.18 (0.08 to 0.44)	742 fewer per 1000 (from 507 fewer to 833 fewer)	⊕○○○ VERY LOW	CRITICAL
death or serious complication												
2[8]	randomized trials	serious[3]	no serious inconsistency	serious[4]	serious[5]	none[6]	1/76 (1.3%)	0/56 (0%)	RR 1.00 (0.04 to 22.64)	0 fewer per 1000 (from 0 fewer to 0 more)	⊕○○○ VERY LOW	IMPORTANT
unplanned surgical intervention												
3[7]	randomized trials	serious[3]	no serious inconsistency	serious[4]	serious[13]	none[6]	34/167 (20.4%)	3/148 (2%)	RR 5.56 (1.11 to 27.9)	92 more per 1000 (from 2 more to 545 more)	⊕○○○ VERY LOW	IMPORTANT

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	vaginal misoprostol - gestation <13 weeks	surgery - gestation <13 weeks	Relative (95% CI)	Absolute		Importance
blood transfusion												
3[9]	randomized trials	serious[3]	no serious inconsistency	serious[4]	serious[5]	none[6]	2/129 (1.6%)	0/112 (0%)	RR 1.82 (0.21 to 15.7)	0 more per 1000 (from 0 fewer to 0 more)	⊕◯◯◯ VERY LOW	IMPORTANT
anaemia												
1[10]	randomized trials	serious[3]	no serious inconsistency	serious[4]	serious[5]	none	6/28 (21.4%)	1/8 (12.5%)	RR 1.71 (0.24 to 12.24)	89 more per 1000 (from 95 fewer to 1405 more)	⊕◯◯◯ VERY LOW	IMPORTANT
days of bleeding (Better indicated by higher values)												
2[8]	randomized trials	serious[3]	no serious inconsistency	serious[4]	serious[5]	none[6]	75	56	-	MD 2.76 higher (1.55 to 3.97 higher)	⊕◯◯◯ VERY LOW	IMPORTANT
pelvic infection < 14 days												
4[11]	randomized trials	serious[3]	no serious inconsistency	serious[4]	serious[13]	none[6]	5/178 (2.8%)	3/160 (1.9%)	RR 1.27 (0.37 to 4.42)	5 more per 1000 (from 12 fewer to 64 more)	⊕◯◯◯ VERY LOW	CRITICAL
women's views /satisfaction - continuous data (Better indicated by higher values)												
2[8]	randomized trials	serious[3]	no serious inconsistency	serious[4]	serious[5]	none[6]	75	56	-	MD 1.01 higher (0.01 to 2 higher)	⊕◯◯◯ VERY LOW	[12]

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	vaginal misoprostol - gestation <13 weeks	surgery - gestation <13 weeks	Relative (95% CI)	Absolute		Importance
nausea												
3[2]	randomized trials	serious[3]	no serious inconsistency	serious[4]	serious[5]	none[6]	17/88 (19.3%)	5/68 (7.4%)	RR 1.37 (0.58 to 3.22)	27 more per 1000 (from 31 fewer to 163 more)	⊕○○○ VERY LOW	IMPORTANT
vomiting												
2[8]	randomized trials	serious[3]	no serious inconsistency	serious[4]	serious[5]	none[6]	5/75 (6.7%)	1/56 (1.8%)	RR 1.48 (0.25 to 8.93)	9 more per 1000 (from 13 fewer to 142 more)	⊕○○○ VERY LOW	IMPORTANT
diarrhoea												
2[8]	randomized trials	serious[3]	no serious inconsistency	serious[4]	serious[5]	none[6]	8/75 (10.7%)	0/56 (0%)	RR 4.30 (0.52 to 35.36)	0 more per 1000 (from 0 fewer to 0 more)	⊕○○○ VERY LOW	IMPORTANT

1 Gestational age <13 weeks for all trials.
2 Moodliar 2005; Shelley 2005; Zhang 2005.
3 Trial(s) could not be blinded.
4 Trial(s) assessing patients with incomplete miscarriage.
5 Total events < 300.
6 It is unclear if the trials are free of selective reporting.
7 Moodliar 2005; Trinder 2006; Zhang 2005.
8 Moodliar 2005; Zhang 2005.
9 Shelley 2005; Trinder 2006; Zhang 2005.
10 Zhang 2005.
11 Moodliar 2005; Shelley 2005; Trinder 2006; Zhang 2005.
12 Outcome ranking not provided.

Author(s):
Date: 2009-12-17
Question: Should oral misoprostol 600mcg vs. surgery (manual vacuum aspiration) be used for incomplete abortion?[1]
Bibliography: Neilson JP et al. Medical treatments for incomplete miscarriage (less than 24 weeks). *Cochrane Database of Systematic Reviews*, 2010, (1):CD007223.

Table 24:

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	oral misoprostol 600mcg	surgery (manual vacuum aspiration)	Relative (95% CI)	Absolute		Importance
complete miscarriage												
4[2]	randomized trials	serious[3]	no serious inconsistency	serious[4]	no serious imprecision	none[5]	559/586 (95.4%)	548/557 (98.4%)	RR 0.97 (0.93 to 1.02)	30 fewer per 1000 (from 69 fewer to 20 more)	⊕⊕◯◯ LOW	CRITICAL
surgical evacuation												
4[2]	randomized trials	serious[3]	no serious inconsistency	serious[4]	no serious imprecision	none[5]	27/586 (4.6%)	549/557 (98.6%)	RR 0.05 (0.02 to 0.1)	936 fewer per 1000 (from 887 fewer to 966 fewer)	⊕⊕◯◯ LOW	CRITICAL
unplanned surgical intervention												
3[6]	randomized trials	serious[3]	no serious inconsistency	serious[4]	serious[7]	none[5]	26/436 (6%)	3/407 (0.7%)	RR 7.07 (2.34 to 21.3)	45 more per 1000 (from 10 more to 150 more)	⊕◯◯◯ VERY LOW	CRITICAL
pelvic infection												
2[9]	randomized trials	serious[3]	no serious inconsistency	serious[4]	no serious imprecision	none[5]	1/257 (0.4%)	3/232 (1.3%)	RR 0.26 (0.03 to 2.41)	10 fewer per 1000 (from 13 fewer to 18 more)	⊕⊕◯◯ LOW	IMPORTANT
cervical damage												
1[10]	randomized trials	serious[3]	no serious inconsistency	serious[4]	serious[8]	none	0/107 (0%)	5/82 (6.1%)	RR 0.07 (0 to 1.25)	57 fewer per 1000 (from 61 fewer to 15 more)	⊕◯◯◯ VERY LOW	IMPORTANT

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	oral misoprostol 600mcg	surgery (manual vacuum aspiration)	Relative (95% CI)	Absolute		Importance
women's views / satisfaction												
4[2]	randomized trials	serious[3]	no serious inconsistency	serious[4]	no serious imprecision	none[5]	565/584 (96.7%)	537/550 (97.6%)	RR 0.99 (0.97 to 1.01)	10 fewer per 1000 (from 29 fewer to 10 more)	⊕⊕◯◯ LOW	[11]
nausea												
3[12]	randomized trials	serious[3]	no serious inconsistency	serious[4]	serious[7]	none[5]	63/484 (13%)	13/475 (2.7%)	RR 4.77 (2.68 to 8.49)	103 more per 1000 (from 46 more to 205 more)	⊕◯◯◯ VERY LOW	IMPORTANT
vomiting												
3[12]	randomized trials	serious[3]	no serious inconsistency	serious[4]	no serious imprecision	none[5]	27/484 (5.6%)	10/475 (2.1%)	RR 2.59 (1.29 to 5.21)	33 more per 1000 (from 6 more to 89 more)	⊕⊕◯◯ LOW	IMPORTANT
diarrhoea												
1[10]	randomized trials	serious[3]	no serious inconsistency	serious[4]	serious[7]	none	2/159 (1.3%)	0/147 (0%)	RR 4.63 (0.22 to 95.55)	0 more per 1000 (from 0 fewer to 0 more)	⊕◯◯◯ VERY LOW	IMPORTANT

1 Gestational age <13 weeks for all trials.
2 Bique 2007; Dao 2007; Shwekerela 2007; Weeks 2005.
3 Trial(s) could not be blinded.
4 Trial(s) assessing patients with incomplete miscarriage.
5 It is not clear if the trials are free of selective reporting.
6 Bique 2007; Dao 2007; Weeks 2005.
7 Wide confidence interval.
8 Total number of events <300.
9 Shwekerela 2007; Weeks 2005.
10 Weeks 2005.
11 Outcome ranking not provided.
12 Bique 2007; Dao 2007; Shwekerela 2007.

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Author(s): P. Whyte
Date: 2009-12-17
Question: Should vaginal + oral misoprostol (200mcg 4 times/day intravaginal for 5 days) vs. surgery (curettage) be used for incomplete abortion?[1]
Bibliography: Neilson JP et al. Medical treatments for incomplete miscarriage (less than 24 weeks). *Cochrane Database of Systematic Reviews*, 2010, (1):CD007223.

Table 25:

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	vaginal + oral misoprostol (200mcg 4 times/day after intravaginal for 5 days	surgery (curettage)	Relative (95% CI)	Absolute		Importance
complete miscarriage												
1[2]	randomized trials	serious[3]	no serious inconsistency	serious[4]	serious[5]	none	38/40 (95%)	40/40 (100%)	RR 0.95 (0.87 to 1.04)	50 fewer per 1000 (from 130 fewer to 40 more)	⊕○○○ VERY LOW	CRITICAL
surgical evacuation												
1[2]	randomized trials	serious[3]	no serious inconsistency	serious[4]	serious[5]	none	1/40 (2.5%)	40/40 (100%)	RR 0.04 (0.01 to 0.18)	960 fewer per 1000 (from 820 fewer to 990 fewer)	⊕○○○ VERY LOW	CRITICAL
days of bleeding (Better indicated by lower values)												
1[2]	randomized trials	serious[3]	no serious inconsistency	serious[4]	serious[6]	none	40	40	-	MD 1.55 higher (0.58 to 2.52 higher)	⊕○○○ VERY LOW	IMPORTANT
pelvic infection												
1[2]	randomized trials	serious[3]	no serious inconsistency	serious[4]	serious[5]	none	1/40 (2.5%)	2/40 (5%)	RR 0.50 (0.05 to 5.3)	25 fewer per 1000 (from 47 fewer to 215 more)	⊕○○○ VERY LOW	IMPORTANT

1 Gestational age <13 weeks for all trials.
2 Sahin 2001
3 Trial(s) could not be blinded.
4 Trial(s) assessing patients with incomplete miscarriage.
5 Total number of events <300.
6 Based on one trial with small sample size

Author(s): P. Whyte
Date: 2009-12-17
Question: Should vaginal misoprostol 800mcg vs. oral misoprostol 800mcg be used for incomplete abortion?[1]
Bibliography: Neilson JP et al. Medical treatments for incomplete miscarriage (less than 24 weeks). *Cochrane Database of Systematic Reviews*, 2010, (1):CD007223.

Table 26:

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	vaginal misoprostol 800mcg	oral misoprostol 800mcg	Relative (95% CI)	Absolute		Importance
complete miscarriage												
1[2]	randomized trials	serious[3]	no serious inconsistency	serious[4]	serious[5]	none	58/95 (61.1%)	67/103 (65%)	RR 0.94 (0.76 to 1.16)	39 fewer per 1000 (from 156 fewer to 104 more)	⊕○○○ VERY LOW	CRITICAL
surgical evacuation												
1[2]	randomized trials	serious[3]	no serious inconsistency	serious[4]	serious[5]	none	37/95 (38.9%)	36/103 (35%)	RR 1.11 (0.77 to 1.6)	38 more per 1000 (from 80 fewer to 210 more)	⊕○○○ VERY LOW	CRITICAL
unplanned surgical evacuation												
1[2]	randomized trials	serious[3]	no serious inconsistency	serious[4]	serious[5]	none	0/89 (0%)	1/97 (1%)	RR 0.36 (0.01 to 8.8)	7 fewer per 1000 (from 10 fewer to 80 more)	⊕○○○ VERY LOW	CRITICAL
nausea												
1[2]	randomized trials	serious[3]	no serious inconsistency	serious[4]	serious[5]	none	1/95 (1.1%)	12/103 (11.7%)	RR 0.63 (0.26 to 1.54)	43 fewer per 1000 (from 86 fewer to 63 more)	⊕○○○ VERY LOW	IMPORTANT
vomiting												
1[2]	randomized trials	serious[3]	no serious inconsistency	serious[4]	serious[5]	none	2/95 (2.1%)	6/103 (5.8%)	RR 0.36 (0.07 to 1.75)	37 fewer per 1000 (from 54 fewer to 44 more)	⊕○○○ VERY LOW	IMPORTANT
diarrhoea												
1[2]	randomized trials	serious[3]	no serious inconsistency	serious[4]	serious[5]	none	12/95 (12.6%)	62/103 (60.2%)	RR 0.21 (0.12 to 0.36)	476 fewer per 1000 (from 385 fewer to 530 fewer)	⊕○○○ VERY LOW	IMPORTANT

1 Gestational age <13 weeks for all trials.
2 Pang 2001
3 No information given on blinding and unclear whether ITT analysis was used.
4 Trial(s) assessing patients with incomplete miscarriage.
5 Total number of events <300.

Author(s): P. Whyte
Date: 2009-12-17
Question: Should oral misoprostol 600mcg vs. oral misoprostol 1200mcg be used for incomplete abortion?[1]
Bibliography: Neilson JP et al. Medical treatments for incomplete miscarriage (less than 24 weeks). *Cochrane Database of Systematic Reviews*, 2010, (1):CD007223.

Table 27:

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	oral misoprostol 600mcg	oral misoprostol 1200mcg	Relative (95% CI)	Absolute		Importance
complete miscarriage												
2[2]	randomized trials	serious[3]	no serious inconsistency	serious[4]	no serious imprecision	none[5]	199/235 (84.7%)	195/229 (85.2%)	RR 1.00 (0.93 to 1.07)	0 fewer per 1000 (from 60 fewer to 60 more)	⊕⊕◯◯ LOW	CRITICAL
surgical evacuation												
1[6]	randomized trials	serious[3]	no serious inconsistency	serious[4]	serious[7]	none	7/149 (4.7%)	9/146 (6.2%)	RR 0.76 (0.29 to 1.99)	15 fewer per 1000 (from 44 fewer to 61 more)	⊕◯◯◯ VERY LOW	CRITICAL
unplanned surgical intervention												
1[6]	randomized trials	serious[3]	no serious inconsistency	serious[4]	serious[7]	none	7/149 (4.7%)	9/146 (6.2%)	RR 0.76 (0.29 to 1.99)	15 fewer per 1000 (from 44 fewer to 61 more)	⊕◯◯◯ VERY LOW	CRITICAL
women's views / satisfaction												
2[2]	randomized trials	serious[3]	no serious inconsistency	serious[4]	no serious imprecision	none[5]	211/234 (90.2%)	199/226 (88.1%)	RR 1.02 (0.96 to 1.09)	18 more per 1000 (from 35 fewer to 79 more)	⊕⊕◯◯ LOW	[8]

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	oral misoprostol 600mcg	oral misoprostol 1200mcg	Relative (95% CI)	Absolute		Importance
nausea												
2[2]	randomized trials	serious[3]	no serious inconsistency	serious[4]	no serious imprecision	none[5]	48/235 (20.4%)	37/228 (16.2%)	RR 1.19 (0.57 to 2.46)	31 more per 1000 (from 70 fewer to 237 more)	⊕⊕◯◯ LOW	IMPORTANT
vomiting												
2[2]	randomized trials	serious[3]	no serious inconsistency	serious[4]	no serious imprecision	none[5]	25/235 (10.6%)	24/228 (10.5%)	RR 1.01 (0.6 to 1.72)	1 more per 1000 (from 42 fewer to 76 more)	⊕⊕◯◯ LOW	IMPORTANT
diarrhoea												
1[6]	randomized trials	serious[3]	no serious inconsistency	serious[4]	serious[7]	none	51/149 (34.2%)	68/145 (46.9%)	RR 0.73 (0.55 to 0.97)	127 fewer per 1000 (from 14 fewer to 211 fewer)	⊕◯◯◯ VERY LOW	IMPORTANT

1 Gestational age <13 weeks for all trials.
2 Blanchard 2004; Ngoc 2005
3 Trial(s) were not blinded.
4 Trial(s) assessing patients with incomplete miscarriage.
5 It is not clear if trials are free of selective reporting.
6 Ngoc 2005
7 Total number of events <300.
8 Outcome ranking not provided.

Author(s): P. Whyte
Date: 2010-03-24
Question: Should single dose 600mcg oral misoprostol vs. repeated dose (2 doses) 600mcg oral misoprostol be used for incomplete abortion?
Bibliography: Phupong et al. Comparative study between single dose 600 micrograms and repeated dose of oral misoprostol for treatment of incomplete abortion. Contraception. 2004 Oct;70(4):307-11.

Table 28:

Quality assessment							Summary of findings					
	No of patients		Effect									
No of studies	Design	Limitations	Inconsistency	Indirectness	Quality Imprecision	Other considerations	single dose 600mcg oral misoprostol	repeated dose (2 doses) 600mcg oral misoprostol	Relative (95% CI)	Absolute		Importance
complete abortion												
1[1]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[2]	none	40/49 (81.6%)[3]	46/50 (92%)[4,5]	RR 0 (0 to 0)	920 fewer per 1000 (from 920 fewer to 920 fewer)	⊕⊕⊕◯ MODERATE	CRITICAL
heavy bleeding												
1[1]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[2]	none	11/49 (22.4%)	10/50 (20%)[5]	RR 0 (0 to 0)	200 fewer per 1000 (from 200 fewer to 200 fewer)	⊕⊕⊕◯ MODERATE	IMPORTANT
nausea												
1[1]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[2]	none	1/49 (2%)	2/50 (4%)[5]	RR 0 (0 to 0)	40 fewer per 1000 (from 40 fewer to 40 fewer)	⊕⊕⊕◯ MODERATE	IMPORTANT
vomiting												
1[1]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[2]	none	2/49 (4.1%)	3/50 (6%)[5]	RR 0 (0 to 0)	60 fewer per 1000 (from 60 fewer to 60 fewer)	⊕⊕⊕◯ MODERATE	IMPORTANT
diarrhoea												
1[1]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[2]	none	9/49 (18.4%)	20/50 (40%)[6]	RR 0 (0 to 0)	400 fewer per 1000 (from 400 fewer to 400 fewer)	⊕⊕⊕◯ MODERATE	IMPORTANT

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	single dose 600mcg oral misoprostol	repeated dose (2 doses) 600mcg oral misoprostol	Relative (95% CI)	Absolute		Importance
satisfied with treatment												
1[1]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[2]	none	43/49 (87.8%)	45/50 (90%)[5]	RR 0 (0 to 0)	900 fewer per 1000 (from 900 fewer to 900 fewer)	⊕⊕⊕◯ MODERATE	[7]

1 Phupong 2004
2 Total number of events is <300.
3 95% CI: 68.0, 91.2
4 95% CI: 80.8, 97.8
5 Not statistically significantly different.
6 $p<0.05$
7 Outcome ranking not provided.

Author(s): P. Whyte
Date: 2010-03-24
Question: Should oral misoprostol 600mcg vs. sublingual misoprostol 400mcg be used for incomplete abortion?
Bibliography: Diop et al. Two routes of administration for misoprostol in the treatment of incomplete abortion: a randomized controlled clinical trial. *Contraception*. 2009 Jun;79(6):456-62.

Table 29:

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	oral misoprostol 600mcg	sublingual misoprostol 400mcg	Relative (95% CI)	Absolute		Importance
overall success rate												
1[1]	randomized trials	serious[2]	no serious inconsistency	no serious indirectness	serious[3]	none	140/148 (94.6%)	138/146 (94.5%)	RR 1.00 (0.95 to 1.06)	0 fewer per 1000 (from 47 fewer to 57 more)	⊕⊕○○ LOW	CRITICAL
heavy bleeding												
1[1]	randomized trials	serious[2]	no serious inconsistency	no serious indirectness	serious[3]	none	36/150 (24%)	39/150 (26%)[4]	RR 0 (0 to 0)	260 fewer per 1000 (from 260 fewer to 260 fewer)	⊕⊕○○ LOW	IMPORTANT
nausea												
1[1]	randomized trials	serious[2]	no serious inconsistency	no serious indirectness	serious[3]	none	28/150 (18.7%)	20/150 (13.3%)[5]	RR 0 (0 to 0)	133 fewer per 1000 (from 133 fewer to 133 fewer)	⊕⊕○○ LOW	IMPORTANT
vomiting												
1[1]	randomized trials	serious[2]	no serious inconsistency	no serious indirectness	serious[3]	none	2/150 (1.3%)	2/150 (1.3%)[6]	RR 0 (0 to 0)	13 fewer per 1000 (from 13 fewer to 13 fewer)	⊕⊕○○ LOW	IMPORTANT

1 Diop 2009.
2 Open-label trial.
3 Total number of events <300.
4 p=0.69
5 p=0.21
6 p=1.00

Medical vs. surgical methods for first trimester abortion

One systematic review (Say et al., 2010) compared medical and surgical methods for first-trimester abortion (12- 14 weeks). This review is an update from 2002. Four comparisons were made: prostaglandins versus vacuum aspiration; mifepristone versus vacuum aspiration; mifepristone plus prostaglandin versus vacuum aspiration and methotrexate and prostaglandin versus vacuum aspiration. Outcomes assessed included completion of abortion, ongoing pregnancy, side-effects and adverse events.

A total of six trials were included in the review. Gestational age ranged from 7 to 13 weeks among included trials. The trial quality ranged from low to high, with many comparisons including only one trial, and most of the trials having small sample sizes.

The comparison of prostaglandin (9-methylene-PGE_2 or PGE_2 methyl sulfonylamide) versus vacuum aspiration demonstrated higher rates of complete abortion and shorter duration of bleeding with use of vacuum aspiration (Table 30). There were no statistically significant differences observed between use of 600mg mifepristone alone and vacuum aspiration, although these results were based on only one small trial of 50 women (Table 31). One trial comparing mifepristone and prostaglandin (misoprostol or gemeprost) to vacuum aspiration found similar efficacy in completing abortion, but significantly longer bleeding and significantly more pain, vomiting and diarrhoea in patients receiving medical methods (Table 32). The GRADE tables below (Tables 30 to 32) provide a summary of the comparisons presented in the review.

Medical vs. surgical methods for second trimester abortion

Lohr et al. (2008) compared dilatation and evacuation (D&E) to medical methods of abortion in the second trimester (≥ 13 weeks), specifically intra-amniotic installation of prostaglandin $F_2\alpha$ and mifepristone and misoprostol. The outcomes considered were complications, side-effects, completion of abortion and patient satisfaction. Although this review is from 2008, it is considered up-to-date as a recent literature review revealed no additional studies which would meet inclusion criteria.

Only two trials were included, one addressing each comparison. Gestational age ranged from 13 to 20 weeks among included trials. The trial quality is rated as low, given only one trial is included in each comparison and for the D&E versus mifepristone and misoprostol comparison the trial was very small (n=18) and had a primary outcome (feasibility of randomising US women to one of two methods of abortion) differing from the outcomes assessed in the review.

The review found that the incidence of combined minor and major complications was lower with D&E compared with installation of prostaglandin $F_2\alpha$ (Table 33). Fewer women experienced adverse events with D&E compared with mifepristone combined with misoprostol, although there were no differences in efficacy between the two groups. These results should be interpreted with caution given they are based on one small trial (n=18). The authors conclude that D&E is superior to installation of prostaglandin $F_2\alpha$ and that the limited available evidence also favours D&E over mifepristone and misoprostol for decreased rates of adverse events. The GRADE Tables 33 to 34 provide a summary of the comparisons presented in the review.

Author(s): P. Whyte
Date: 2009-12-22
Question: Should prostaglandins alone vs. vacuum aspiration be used for first trimester abortion?[1,2]
Bibliography: Say L et al. Medical versus surgical methods for first trimester termination of pregnancy. *Cochrane Database of Systematic Reviews*, 2005, (1):CD003037 updated 2010.

Table 30:

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	prostaglandin	vacuum aspiration	Relative (95% CI)	Absolute		Importance
abortion not completed with intended method												
2[3]	randomized trials	serious[4]	no serious inconsistency	no serious indirectness	serious[5]	none	16/238 (6.7%)	6/234 (2.6%)	RR 2.67 (1.06 to 6.75)	43 more per 1000 (from 2 more to 147 more)	⊕⊕◯◯ LOW	CRITICAL
ongoing pregnancy												
2[3]	randomized trials	serious[4]	no serious inconsistency	no serious indirectness	serious[5]	none	4/238 (1.7%)	7/234 (3%)	RR 0.55 (0.16 to 1.84)	13 fewer per 1000 (from 25 fewer to 25 more)	⊕⊕◯◯ LOW	CRITICAL
pelvic infection												
1[6]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[5]	none	8/203 (3.9%)	4/216 (1.9%)	RR 2.17 (0.64 to 7.33)	22 more per 1000 (from 7 fewer to 117 more)	⊕⊕⊕◯ MODERATE	CRITICAL
duration of bleeding (Better indicated by lower values)												
1[6]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	no serious imprecision	none	203	216	-	MD 5.20 higher (4.98 to 5.42 higher)	⊕⊕⊕◯ HIGH	IMPORTANT

1 Prostaglandins were two vaginal suppositories containing either 50 or 60mg of 9-methylene-PGE_2 administered at 6-h intervals at home or administered in hospital or intramuscular injections of 0.5 mg PGE_2methyl sulfonylamide three times at 3-h intervals.
2 Gestational age ranged from 7 to 13 weeks among included trials.
3 Rosen 1984; WHO 1987
4 Allocation concealment is unclear in Rosen (1984).
5 Wide confidence interval.
6 WHO 1987

Author(s): P. Whyte
Date: 2009-12-22
Question: Should mifepristone 600mg alone vs. vacuum aspiration be used for first trimester abortion?[1]
Bibliography: Say L et al. Medical versus surgical methods for first trimester termination of pregnancy. *Cochrane Database of Systematic Reviews*, 2005, (1):CD003037 updated 2010.

Table 31:

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	mifepristone 600mg alone	vacuum aspiration	Relative (95% CI)	Absolute		Importance
abortion not completed with intended method												
1[2]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[3]	none	6/25 (24%)	2/25 (8%)	RR 3.63 (0.66 to 20.11)	210 more per 1000 (from 27 fewer to 1529 more)	⊕⊕⊕◯ MODERATE	CRITICAL
pelvic infection												
1[2]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[3]	none	0/25 (0%)	3/25 (12%)	RR 0.13 (0.01 to 2.58)	104 fewer per 1000 (from 119 fewer to 190 more)	⊕⊕⊕◯ MODERATE	CRITICAL
uterine perforation												
1[2]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[3]	none	0/25 (0%)	1/25 (4%)	RR 0.32 (0.01 to 8.25)	27 fewer per 1000 (from 40 fewer to 290 more)	⊕⊕⊕◯ MODERATE	CRITICAL

1 Gestational age ranged from 7 to 13 weeks among included trials.
2 Legarth 1991
3 Total number of events < 300.

Author(s): P. Whyte
Date: 2009-12-22
Question: Should mifepristone + prostaglandin vs. vacuum aspiration be used for first trimester abortion?[1]
Bibliography: Say L et al. Medical versus surgical methods for first trimester termination of pregnancy. *Cochrane Database of Systematic Reviews*, 2005, (1):CD003037 updated 2010.

Table 32:

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	mifepristone and prostaglandin	vacuum aspiration	Relative (95% CI)	Absolute		Importance
abortion not completed with intended method												
1[2]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[3]	none	4/55 (7.3%)	2/56 (3.6%)	RR 2.12 (0.37 to 12.06)	40 more per 1000 (from 23 fewer to 395 more)	⊕⊕⊕◯ MODERATE	CRITICAL
blood loss (Better indicated by lower values)												
1[4]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[5]	none	99	96	-	MD 1.90 higher (0.05 to 3.75 higher)	⊕⊕⊕◯ MODERATE	IMPORTANT
duration of bleeding (Better indicated by lower values)												
2[6]	randomized trials	serious[7]	no serious inconsistency	no serious indirectness	no serious imprecision	none	217	207	-	MD 2.94 higher (2.1 to 3.78 higher)	⊕⊕⊕◯ MODERATE	IMPORTANT
pain resulting from procedure												
1[8]	randomized trials	serious[7]	no serious inconsistency	no serious indirectness	serious [3]	none	182/186 (97.8%)	163/180 (90.6%)	RR 4.75 (1.56 to 14.39)	3396 more per 1000 (from 507 more to 12125 more)	⊕⊕◯◯ LOW	IMPORTANT

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	mifepristone and prostaglandin	vacuum aspiration	Relative (95% CI)	Absolute		Importance
vomiting												
1[8]	randomized trials	serious[7]	no serious inconsistency	no serious indirectness	serious [3]	none	91/186 (48.9%)	15/180 (8.3%)	RR 10.54 (5.77 to 19.23)	795 more per 1000 (from 397 more to 1519 more)	⊕⊕◯◯ LOW	IMPORTANT
diarrhoea												
1[8]	randomized trials	serious[7]	no serious inconsistency	no serious indirectness	serious [3]	none	79/186 (42.5%)	8/180 (4.4%)	RR 15.87 (7.38 to 34.15)	661 more per 1000 (from 284 more to 1473 more)	⊕⊕◯◯ LOW	IMPORTANT

1 Gestational age ranged from 7 to 13 weeks among included trials.
2 Rorbye 2004 (600 mg mifepristone and 1 mg gemeprost)
3 Wide confidence interval.
4 Henshaw 1994. Oral mifepristone 600mg followed by gemeprost 1mg 48 hours later.
5 Based on one trial with a small sample size.
6 Henshaw 1994; Ashok 2002
7 The Ashok (2002) trial only randomized those patients who did not have a preference for either surgical or medical methods.
8 Ashok 2002. Oral mifepristone 200mg followed by vaginal misoprostol 800 mcg 36-48 h later, if no products passed, a further two doses of misoprostol (400mcg) were given either orally or vaginally at 3 hourly intervals.

Author(s): P. Whyte
Date: 2009-12-07
Question: Should dilatation and evacuation vs. intraamniotic PG F2-alpha be used for second trimester abortion?[1]
Bibliography: Lohr PA, Hayes JL, Gemzell-Danielsson K. Surgical versus medical methods for second trimester induced abortion. *Cochrane Database of Systematic Reviews*, 2008, (1):CD006714.

Table 33:

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	dilatation and evacuation	intraamniotic PG F2-alpha	Relative (95% CI)	Absolute		Importance
febrile morbidity												
1[2]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	very serious[3]	none	1/50 (2%)	4/44 (9.1%)	OR 0.20 (0.02 to 1.9)	71 fewer per 1000 (from 89 fewer to 69 more)	⊕⊕◯◯ LOW	CRITICAL
requirement for additional curettage												
1[2]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	very serious[3]	none	1/50 (2%)	1/44 (2.3%)	OR 0.88 (0.05 to 14.46)	3 fewer per 1000 (from 22 fewer to 229 more)	⊕⊕◯◯ LOW	CRITICAL
haemorrhage (requiring transfusion)												
1[2]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	very serious[3]	none	0/50 (0%)	2/44 (4.5%)	OR 0.17 (0.01 to 3.6)	37 fewer per 1000 (from 45 fewer to 101 more)	⊕⊕◯◯ LOW	CRITICAL
haemorrhage (not requiring transfusion)												
1[2]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	very serious[3]	none	0/50 (0%)	5/44 (11.4%)	OR 0.07 (0 to 1.32)	105 fewer per 1000 (from 114 fewer to 31 more)	⊕⊕◯◯ LOW	CRITICAL
cervico-vaginal injury												
1[2]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	very serious[3]	none	2/50 (4%)	2/44 (4.5%)	OR 0.88 (0.12 to 6.49)	5 fewer per 1000 (from 40 fewer to 191 more)	⊕⊕◯◯ LOW	CRITICAL

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	dilatation and evacuation	intraamniotic PG F2-alpha	Relative (95% CI)	Absolute		Importance
prostaglandin reaction												
1[2]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	very serious[3]	none	0/50 (0%)	1/44 (2.3%)	OR 0.29 (0.01 to 7.23)	16 fewer per 1000 (from 22 fewer to 121 more)	⊕⊕◯◯ LOW	IMPORTANT
abortion completed by assigned treatment												
1[2]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	very serious[3]	none	50/50 (100%)	43/50 (86%)	OR 17.41 (0.97 to 313.73)	131 more per 1000 (from 4 fewer to 139 more)	⊕⊕◯◯ LOW	CRITICAL
requirement for overnight hospitalization												
1[2]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	very serious[3]	none	2/50 (4%)	44/44 (100%)	OR 0.00 (0 to 0.01)	-	⊕⊕◯◯ LOW	CRITICAL
readmission to hospital												
1[2]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	very serious[3]	none	1/50 (2%)	1/44 (2.3%)	OR 0.88 (0.05 to 14.46)	3 fewer per 1000 (from 22 fewer to 229 more)	⊕⊕◯◯ LOW	CRITICAL
combined major complications (e.g. haemorrhage requiring blood transfusion, any complication requiring unintended major surgery)												
1[2]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	very serious[3]	none	0/50 (0%)	3/44 (6.8%)	OR 0.12 (0.01 to 2.34)	59 fewer per 1000 (from 67 fewer to 78 more)	⊕⊕◯◯ LOW	CRITICAL
combined minor complications (e.g. haemorrhage not requiring transfusion, requirement for additional curettage)												
1[2]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	very serious[3]	none	3/50 (6%)	12/44 (27.3%)	OR 0.17 (0.04 to 0.65)	213 fewer per 1000 (from 77 fewer to 258 fewer)	⊕⊕◯◯ LOW	CRITICAL

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	dilatation and evacuation	intraamniotic PG F2-alpha	Relative (95% CI)	Absolute		Importance
combined major and minor complications												
1[2]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	very serious[3]	none	3/50 (6%)	15/44 (34.1%)	OR 0.12 (0.03 to 0.46)	282 fewer per 1000 (from 149 fewer to 326 fewer)	⊕⊕◯◯ LOW	CRITICAL

1 Gestational age ranged from 13 to 20 weeks in the two included trials.
2 Grimes 1980
3 Six subjects in the prostaglandin arm discontinued while awaiting treatment and were excluded from analysis. Small sample size.

Author(s): P. Whyte
Date: 2009-12-07
Question: Should dilatation and evacuation vs. mifepristone + misoprostol be used for second trimester abortion?[1]
Bibliography: Lohr PA, Hayes JL, Gemzell-Danielsson K. Surgical versus medical methods for second trimester induced abortion. *Cochrane Database of Systematic Reviews*, 2008, (1):CD006714.

Table 34:

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	dilatation and evacuation	mifepristone + misoprostol	Relative (95% CI)	Absolute		Importance
fever (> 38C)												
1[2]	randomized trials	serious[3]	no serious inconsistency	no serious indirectness	serious[4]	none	0/9 (0%)	3/9 (33.3%)	OR 0.10 (0 to 2.23)	286 fewer per 1000 (from 333 fewer to 194 more)	⊕⊕◯◯ LOW	IMPORTANT
requirement for additional curettage												
1[2]	randomized trials	serious[3]	no serious inconsistency	no serious indirectness	serious[4]	none	0/9 (0%)	4/9 (44.4%)	OR 0.06 (0 to 1.43)	399 fewer per 1000 (from 444 fewer to 89 more)	⊕⊕◯◯ LOW	CRITICAL
number of women experiencing adverse events (e.g. fever > 38C, unintended surgical intervention, extraction retained placenta, superficial burns)												
1[2]	randomized trials	serious[3]	no serious inconsistency	no serious indirectness	serious[4]	none	1/9 (11.1%)	6/9 (66.7%)	OR 0.06 (0.01 to 0.76)	560 fewer per 1000 (from 63 fewer to 647 fewer)	⊕⊕◯◯ LOW	CRITICAL
nausea												
1[2]	randomized trials	serious[3]	no serious inconsistency	no serious indirectness	serious[4]	none	3/9 (33.3%)	5/9 (55.6%)	OR 0.40 (0.06 to 2.7)	222 fewer per 1000 (from 486 fewer to 216 more)	⊕⊕◯◯ LOW	IMPORTANT
vomiting												
1[2]	randomized trials	serious[3]	no serious inconsistency	no serious indirectness	serious[4]	none	2/9 (22.2%)	4/9 (44.4%)	OR 0.36 (0.05 to 2.77)	221 fewer per 1000 (from 406 fewer to 245 more)	⊕⊕◯◯ LOW	IMPORTANT

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	dilatation and evacuation	mifepristone + misoprostol	Relative (95% CI)	Absolute		Importance
diarrhoea												
1[2]	randomized trials	serious[3]	no serious inconsistency	no serious indirectness	serious[4]	none	0/9 (0%)	0/9 (0%)	Not estimable	0 fewer per 1000 (from 0 fewer to 0 fewer)	⊕⊕◯◯ LOW	IMPORTANT
dizziness												
1[2]	randomized trials	serious[3]	no serious inconsistency	no serious indirectness	serious[4]	none	1/9 (11.1%)	4/9 (44.4%)	OR 0.16 (0.01 to 1.83)	331 fewer per 1000 (from 437 fewer to 150 more)	⊕⊕◯◯ LOW	IMPORTANT
fatigue												
1[2]	randomized trials	serious[3]	no serious inconsistency	no serious indirectness	serious[4]	none	3/9 (33.3%)	6/9 (66.7%)	OR 0.25 (0.04 to 1.77)	333 fewer per 1000 (from 593 fewer to 113 more)	⊕⊕◯◯ LOW	IMPORTANT
breast tenderness												
1[2]	randomized trials	serious[3]	no serious inconsistency	no serious indirectness	serious[4]	none	0/9 (0%)	2/9 (22.2%)	OR 0.16 (0.01 to 3.81)	179 fewer per 1000 (from 219 fewer to 299 more)	⊕⊕◯◯ LOW	IMPORTANT
headache												
1[2]	randomized trials	serious[3]	no serious inconsistency	no serious indirectness	serious[4]	none	1/9 (11.1%)	4/9 (44.4%)	OR 0.16 (0.01 to 1.83)	331 fewer per 1000 (from 437 fewer to 150 more)	⊕⊕◯◯ LOW	IMPORTANT
abortion completed by assigned treatment												
1[2]	randomized trials	serious[3]	no serious inconsistency	no serious indirectness	serious[4]	none	8/9 (88.9%)	9/9 (100%)	OR 0.30 (0.01 to 8.35)	0 fewer per 1000 (from 0 fewer to 0 more)	⊕⊕◯◯ LOW	CRITICAL

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	dilatation and evacuation	mifepristone + misoprostol	Relative (95% CI)	Absolute		Importance
requirement for overnight hospitalization												
1[2]	randomized trials	serious[3]	no serious inconsistency	no serious indirectness	serious[4]	none	0/9 (0%)	5/9 (55.6%)	OR 0.04 (0 to 0.96)	508 fewer per 1000 (from 10 fewer to 556 fewer)	⊕⊕◯◯ LOW	CRITICAL

1 Gestational age ranged from 13 to 20 weeks.
2 Grimes 2004
3 The primary outcome of the trial was the feasibility of randomizing US women to one of two methods of abortion. Recruitment was stopped after one year due to slow enrolment.
4 Small sample size or total events < 300.

Surgical methods for first-trimester abortion

A systematic review by Kulier et al. (2009) assessed surgical methods for first-trimester abortion (≤ 12 weeks). The review compared vacuum aspiration to dilatation and curettage; flexible versus rigid vacuum aspiration and manual vacuum aspiration versus electrical vacuum aspiration. Outcomes assessed included adverse events, febrile morbidity, incomplete or repeat uterine evacuation procedures and duration of operation.

Eleven trials were included in the review, with the gestational age ranging from 6 to 12 weeks. The quality of the trials is low to moderate, with allocation concealment not clear in some trials, and a small number of trials (one or two) included in most comparisons.

For vacuum aspiration compared to dilatation and curettage there were no statistically significant differences for blood loss, blood transfusion, febrile morbidity, incomplete or repeat uterine evacuation, re-hospitalization, post-operative abdominal pain and infection requiring antibiotics, from two, small trials. The duration of the procedure was significantly shorter with vacuum aspiration; however, this result is based on one trial only (Table 35). There were no statistically significant differences across all outcomes for flexible versus rigid vacuum aspiration; however, these results were based on one trial in which blinding was not possible (Table 36). For the comparison of manual versus electrical vacuum aspiration, there were no statistically significant differences between the two methods for cervical injury, blood loss, blood transfusion, febrile morbidity, repeat uterine evacuation, duration of operation and women's preference. There was significantly less pain reported with manual vacuum aspiration compared with electrical vacuum aspiration, although difficulty performing the procedure was reported more frequently with manual vacuum aspiration, based on two trials (Table 37). The GRADE tables 35 - 37 provide a summary of the comparisons presented in the review.

Author(s): P. Whyte
Date: 2009-12-08
Question: Should vacuum aspiration vs. dilatation and curettage be used for first trimester abortion?[1]
Bibliography: Kulier R et al. Surgical methods for first trimester termination of pregnancy. *Cochrane Database of Systematic Reviews*, 2001, (4):CD002900.

Table 35:

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	vacuum aspiration	dilatation and curettage	Relative (95% CI)	Absolute		Importance
excessive blood loss as defined by trial authors												
2[2]	randomized trials	serious[3,4]	no serious inconsistency	no serious indirectness	no serious imprecision	none	3/128 (2.3%)	3/129 (2.3%)	RR 1.02 (0.21 to 4.95)	0 more per 1000 (from 18 fewer to 92 more)	⊕⊕⊕◯ MODERATE	CRITICAL
febrile morbidity as defined by trial authors												
2[2]	randomized trials	serious[3,4]	no serious inconsistency	no serious indirectness	no serious imprecision	none	5/233 (2.1%)	6/234 (2.6%)	RR 0.84 (0.26 to 2.71)	4 fewer per 1000 (from 19 fewer to 44 more)	⊕⊕⊕◯ MODERATE	CRITICAL
duration of operation (Better indicated by lower values)												
1[7]	randomized trials	serious[4]	no serious inconsistency	no serious indirectness	no serious imprecision	none	210	210	-	MD 1.09 lower (1.53 to 0.65 lower)	⊕⊕⊕◯ MODERATE	IMPORTANT
blood transfusion												
2[2]	randomized trials	serious[3,4]	no serious inconsistency	no serious indirectness	no serious imprecision	none	0/233 (0%)	2/234 (0.9%)	RR 0.21 (0.01 to 4.12)	7 fewer per 1000 (from 8 fewer to 27 more)	⊕⊕⊕◯ MODERATE	CRITICAL
abdominal pain postoperatively												
2[2]	randomized trials	serious[3,4]	no serious inconsistency	no serious indirectness	serious[5]	none	3/233 (1.3%)	1/234 (0.4%)	RR 2.03 (0.38 to 10.97)	4 more per 1000 (from 3 fewer to 43 more)	⊕⊕◯◯ LOW	IMPORTANT

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	vacuum aspiration	dilatation and curettage	Relative (95% CI)	Absolute		Importance
non-routine antibiotic use postoperatively												
1[7]	randomized trials	serious[4,8]	no serious inconsistency	no serious indirectness	serious[5]	none	4/210 (1.9%)	5/210 (2.4%)	RR 0.80 (0.22 to 2.94)	5 fewer per 1000 (from 19 fewer to 46 more)	⊕⊕◯◯ LOW	CRITICAL
incomplete evacuation												
2[2]	randomized trials	serious[3,4]	no serious inconsistency	no serious indirectness	no serious imprecision	none	2/233 (0.9%)	3/234 (1.3%)	RR 0.67 (0.11 to 3.95)	4 fewer per 1000 (from 11 fewer to 38 more)	⊕⊕⊕◯ MODERATE	CRITICAL
repeat uterine evacuation procedure												
1[7]	randomized trials	serious[4,8]	no serious inconsistency	no serious indirectness	serious[6]	none	2/210 (1%)	3/210 (1.4%)	RR 0.67 (0.11 to 3.95)	5 fewer per 1000 (from 13 fewer to 42 more)	⊕⊕◯◯ LOW	CRITICAL
Re-hospitalization												
2[2]	randomized trials	serious[3,4]	no serious inconsistency	no serious indirectness	no serious imprecision	none	9/233 (3.9%)	8/234 (3.4%)	RR 1.13 (0.44 to 2.86)	4 more per 1000 (from 19 fewer to 64 more)	⊕⊕⊕◯ MODERATE	CRITICAL

1 Gestational age ranged from 6 to 12 weeks.
2 Lean 1976; Schweppe 1980
3 Although both trials were randomized, little detail is provided and the review authors (Kulier et al., 2009) indicate that allocation concealment is unclear.
4 Blinding to the intervention was not possible for the operator due to the type of intervention.
5 Wide confidence interval
6 Based on one trial only.
7 Lean 1976
8 Allocation concealment is unclear.

Author(s): P. Whyte
Date: 2009-12-08
Question: Should flexible vs. rigid vacuum aspiration cannulae be used for first trimester abortion?[1]
Bibliography: Kulier R et al. Surgical methods for first trimester termination of pregnancy. *Cochrane Database of Systematic Reviews*, 2001, (4):CD002900.

Table 36:

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	flexible	rigid vacuum aspiration cannula	Relative (95% CI)	Absolute		Importance
cervical injury												
1[2]	randomized trials	serious[3,4]	no serious inconsistency	no serious indirectness	serious[5]	none	1/150 (0.7%)	0/146 (0%)	RR 2.92 (0.12 to 71.12)	0 more per 1000 (from 0 fewer to 0 more)	⊕⊕◯◯ LOW	CRITICAL
febrile morbidity as defined by trial authors												
1[2]	randomized trials	serious[3,4]	no serious inconsistency	no serious indirectness	serious[5]	none	8/150 (5.3%)	5/146 (3.4%)	RR 1.56 (0.52 to 4.65)	19 more per 1000 (from 16 fewer to 125 more)	⊕⊕◯◯ LOW	CRITICAL
blood transfusion												
1[2]	randomized trials	serious[3,4]	no serious inconsistency	no serious indirectness	serious[5]	none	0/150 (0%)	1/146 (0.7%)	RR 0.32 (0.01 to 7.9)	5 fewer per 1000 (from 7 fewer to 47 more)	⊕⊕◯◯ LOW	CRITICAL
non-routine antibiotic use postoperatively												
1[2]	randomized trials	serious[3,4]	no serious inconsistency	no serious indirectness	serious[5]	none	2/150 (1.3%)	2/146 (1.4%)	RR 0.97 (0.14 to 6.82)	0 fewer per 1000 (from 12 fewer to 80 more)	⊕⊕◯◯ LOW	CRITICAL

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	flexible	rigid vacuum aspiration cannula	Relative (95% CI)	Absolute		Importance
incomplete evacuation												
1[2]	randomized trials	serious[3,4]	no serious inconsistency	no serious indirectness	serious[5]	none	5/150 (3.3%)	2/146 (1.4%)	RR 2.43 (0.48 to 12.34)	20 more per 1000 (from 7 fewer to 155 more)	⊕⊕◯◯ LOW	CRITICAL
repeat uterine evacuation procedure												
1[2]	randomized trials	serious[3,4]	no serious inconsistency	no serious indirectness	serious[5]	none	7/150 (4.7%)	5/146 (3.4%)	RR 1.36 (0.44 to 4.2)	12 more per 1000 (from 19 fewer to 110 more)	⊕⊕◯◯ LOW	CRITICAL

1 Gestational age ranged from 6 to 12 weeks.
2 Borko 1975
3 Blinding to the intervention was not possible for the operator due to the type of intervention.
4 Allocation concealment unclear.
5 Total number of events < 300.

Author(s): P. Whyte
Date: 2009-12-08
Question: Should manual evacuation aspiration vs. electrical vacuum aspiration be used for abortion?[1]
Bibliography: Kulier R et al. Surgical methods for first trimester termination of pregnancy. *Cochrane Database of Systematic Reviews*, 2001, (4):CD002900.

Table 37:

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	manual evacuation aspiration	electrical vacuum aspiration	Relative (95% CI)	Absolute		Importance
uterine perforation												
5[2]	randomized trials	serious[3,4]	no serious inconsistency	no serious indirectness	no serious imprecision	none	0/541 (0%)	8/538 (1.5%)	RR 0.06 (0 to 1.01)	14 fewer per 1000 (from 15 fewer to 0 more)	⊕⊕⊕◯ MODERATE	CRITICAL
febrile morbidity as defined by trial authors												
1[5]	randomized trials	serious[3,4]	no serious inconsistency	no serious indirectness	serious[6]	none	2/91 (2.2%)	2/88 (2.3%)	RR 0.97 (0.14 to 6.72)	1 fewer per 1000 (from 20 fewer to 130 more)	⊕⊕◯◯ LOW	CRITICAL
duration of operation (Better indicated by lower values)												
1[7]	randomized trials	serious[3]	no serious inconsistency	no serious indirectness	serious[6]	none	41	42	-	MD 0.53 higher (0.72 lower to 1.78 higher)	⊕⊕◯◯ LOW	IMPORTANT
repeat uterine evacuation procedure												
6[8]	randomized trials	serious[3,9]	no serious inconsistency	no serious indirectness	no serious imprecision	none	10/582 (1.7%)	10/580 (1.7%)	RR 1.00 (0.42 to 2.37)	0 fewer per 1000 (from 10 fewer to 24 more)	⊕⊕⊕◯ MODERATE	CRITICAL

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	manual evacuation aspiration	electrical vacuum aspiration	Relative (95% CI)	Absolute		Importance
severe pain												
4[10]	randomized trials	serious[3,9]	no serious inconsistency	no serious indirectness	no serious imprecision	none	27/191 (14.1%)	37/192 (19.3%)	RR 0.73 (0.47 to 1.16)	52 fewer per 1000 (from 102 fewer to 31 more)	⊕⊕⊕◯ MODERATE	IMPORTANT
procedure perceived difficult by the provider												
2[11]	randomized trials	serious[3,9]	no serious inconsistency	no serious indirectness	serious[12]	none	34/191 (17.8%)	6/192 (3.1%)	RR 5.70 (2.45 to 13.28)	147 more per 1000 (from 45 more to 384 more)	⊕⊕◯◯ LOW	IMPORTANT

1 Gestational age ranged from 6 to 12 weeks.
2 Gan 2001 (mean gestational age 31-42 days); Hemlin 2001 (mean gestational age <=56 days); Yin 2004 (mean gestational age 42-49 days); Yin 2005 (mean gestational age 42-50 days); Fang 2004 (mean gestational age <=10 weeks)
3 Blinding to the intervention for the operator was not possible due to type of intervention.
4 Allocation concealment was unclear.
5 Hemlin 2001
6 Total number of events < 300 or small sample size.
7 Dean 2003 (mean gestational age < 10 weeks)
8 Gan 2001; Hemlin 2001; Yin 2004; Yin 2005; Dean 2003; Fang 2004
9 With the exception of the Dean (2003) trial, which used sequentially sealed opaque envelopes, allocation concealment was unclear in the trials.
10 Gan 2001; Yin 2004; Dean 2003; Fang 2004
11 Dean 2003; Fang 2004
12 Wide confidence interval.

Pain control in first-trimester surgical abortion

A systematic review (Renner et al., 2009) assessed different methods of pain control during first-trimester surgical abortion (< 14 weeks). The methods assessed included paracervical block, paracervical block with NSAID or anxiolytic premedication, analgesia, conscious sedation, general anaesthesia, general anaesthesia with NSAID or opiate premedication and non-pharmacological interventions. The outcomes assessed included intra- and postoperative pain, side-effects and complications of pain control methods.

A total of 40 trials were included in the review, divided into the seven methods listed above. Gestational age ranged from 5 to 14 weeks among included trials, with most including women with gestational age up to 12 weeks. The quality of the trials was very low to moderate. Many comparisons were based on one trial only, and a number of the trials had relatively small patient numbers and were conducted in the 1980s or early 1990s.

The review found that the data was insufficient to show a benefit with paracervical block (PCB) compared to no PCB or PCB with bacteriostatic saline based on one small trial (Table 38), although deep injection of the PCB decreased procedural pain when compared to superficial injection (Table 43). Premedication with ibuprofen decreased procedural and post-procedural pain in one trial (Table 49). The addition of intravenous sedation to PCB decreased procedural pain. General anaesthesia decreased intra-operative and postoperative pain when compared with conscious sedation. Non-pharmacologic interventions (hypnosis and listening to music) decreased procedural pain, each based on one trial. The GRADE tables below (Tables 38 to 60) provide a summary of the comparisons presented in the review.

Author(s): P. Whyte
Date: 2009-11-11
Question: Should PCB with14ml 1% chloroprocaine vs. bacteriostatic saline 14ml be used for pain management in first trimester surgical abortion?[1]
Bibliography: Renner RM et al. Pain control in first trimester surgical abortion. *Cochrane Database of Systematic Reviews*, 2009, (2):CD006712.

Table 38:

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	PCB with14ml 1% chloroprocaine	bacteriostatic saline 14ml	Relative (95% CI)	Absolute		Importance
paracervical pain using 2 sites (4-8 o'clock) (measured with: 10 point box scale; range of scores: 0-10; Better indicated by lower values)												
1[2]	randomized trials	no serious limitations[3]	no serious inconsistency	no serious indirectness	serious[4]	none	18	20	-	MD 0.50 lower (1.84 lower to 0.84 higher)	⊕⊕⊕◯ MODERATE	CRITICAL
paracervical pain using 4 sites (3-5-7-9 o'clock) (measured with: 10 point box scale; range of scores: 0-10; Better indicated by lower values)												
1[2]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[5]	none	20	21	-	MD 1.30 lower (2.52 to 0.08 lower)	⊕⊕⊕◯ MODERATE	CRITICAL
paracervical pain with site groups combined (measured with: 10 point box scale; range of scores: 0-10; Better indicated by lower values)												
1[2]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[6]	none	38	41	-	MD 0.90 lower (1.78 to 0.02 lower)	⊕⊕⊕◯ MODERATE	CRITICAL
aspiration pain using 2 sites (4-8 o'clock) (measured with: 10 point box scale; range of scores: 0-10; Better indicated by lower values)												
1[2]	randomized trials	no serious limitations[3]	no serious inconsistency	no serious indirectness	serious[4]	none	18	20	-	MD 1.50 lower (3.06 lower to 0.06 higher)	⊕⊕⊕◯ MODERATE	CRITICAL
aspiration pain using 4 sites (3-5-7-9 o'clock) (measured with: 10 point box scale; range of scores: 0-10; Better indicated by lower values)												
1[2]	randomized trials	no serious limitations[3]	no serious inconsistency	no serious indirectness	serious[5]	none	20	21	-	MD 1.70 higher (2.88 to 0.52 lower)	⊕⊕⊕◯ MODERATE	CRITICAL

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	PCB with14ml 1% chloroprocaine	bacteriostatic saline 14ml	Relative (95% CI)	Absolute		Importance
aspiration pain with site groups combined (measured with: 10 point box scale; range of scores: 0-10; Better indicated by lower values)												
1[2]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[6]	none	38	41	-	MD 1.50 lower (2.45 to 0.55 lower)	⊕⊕⊕◯ MODERATE	CRITICAL

1 Gestational age ranged from 5 to 14 weeks among included trials, with most including women with gestational age up to 12 weeks.
2 This is based on Glantz 2001, a randomized controlled trial comparing paracervical block using 1% chloroprocaine or bacteriostatic saline at 2 and 4 locations. Trial was double-blind regarding solution injected but not blinded for injection technique.
3 The solution (chloroprocaine or bacteriostatic saline) was double-blinded however physicians were not blinded to number of injection sites.
4 This analysis has only 38 patients, thus results should be interpreted with caution.
5 This analysis has only 41 patients, thus results should be interpreted with caution.
6 The trial has relatively small n (79 patients total analysed) thus results should be interpreted with caution.

Author(s): P. Whyte
Date: 2009-12-06
Question: Should PCB with 2% buffered lidocaine vs. 2% plain lidocaine be used for pain management in first trimester surgical abortion?[1]
Bibliography: Renner RM et al. Pain control in first trimester surgical abortion. *Cochrane Database of Systematic Reviews*, 2009, (2):CD006712.

Table 39:

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	PCB with 2% buffered lidocaine	2% plain lidocaine	Relative (95% CI)	Absolute		Importance
pain with dilatation (measured with: 11 point verbal pain scale; range of scores: 0-10; Better indicated by lower values)												
1[2]	randomized trials[3]	serious[4]	no serious inconsistency	no serious indirectness	serious[5]	none	86	81	-	MD 0.80 lower (0.89 to 0.71 lower)	⊕⊕◯◯ LOW	CRITICAL
pain at end of procedure (measured with: 11 point verbal pain scale; range of scores: 0-10; Better indicated by lower values)												
1[2]	randomized trials[3]	serious[4]	no serious inconsistency	no serious indirectness	serious[5]	none	86	81	-	MD 0.40 lower (0.49 to 0.31 lower)	⊕⊕◯◯ LOW	CRITICAL

1 Gestational age ranged from 5 to 14 weeks among included trials, with most including women with gestational age up to 12 weeks.
2 Based on Wiebe 1992. PCB injected at 3 to 6 sites (12, 3, 6 or 12, 2, 4, 6, 8, 10 o'clock).
3 There is no information available on the number of patients randomized or the number discontinued.
4 Nurse drawing up syringes was not blinded but the doctor, counsellor and patient were. The Renner 2009 review considered allocation concealment to be inadequate.
5 Based on only one trial with small sample size.

Author(s): P. Whyte
Date: 2009-12-06
Question: Should PCB with 1% buffered lidocaine 20ml vs. 1% plain lidocaine 20ml be used for pain management in first trimester surgical abortion?[1]
Bibliography: Renner RM et al. Pain control in first trimester surgical abortion. *Cochrane Database of Systematic Reviews*, 2009, (2):CD006712.

Table 40:

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	PCB with 1% buffered lidocaine 20ml	1% plain lidocaine 20ml	Relative (95% CI)	Absolute		Importance
pain with aspiration (measured with: 11 point verbal pain scale; range of scores: 0-10; Better indicated by lower values)												
1[2]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[3]	none	57	67	-	MD 0.96 lower (1.67 to 0.25 lower)	⊕⊕⊕◯ MODERATE	CRITICAL
pain at end of procedure (measured with: 11 point verbal pain scale; range of scores: 0-10; Better indicated by lower values)												
1[2]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[3]	none	57	67	-	MD 0.05 lower (1.03 lower to 0.93 higher)	⊕⊕⊕◯ MODERATE	CRITICAL

1 Gestational age ranged from 5 to 14 weeks among included trials, with most including women with gestational age up to 12 weeks.
2 Based on Wiebe 1995, a randomized double-blind trial.
3 Based on one trial only with small sample size.

Author(s): P. Whyte
Date: 2009-12-06
Question: Should PCB with 0.5% lidocaine 20ml vs. 1% lidocaine 20ml be used for pain management in first trimester surgical abortion?[1]
Bibliography: Renner RM et al. Pain control in first trimester surgical abortion. *Cochrane Database of Systematic Reviews*, 2009, (2):CD006712.

Table 41:

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	PCB with 0.5% lidocaine 20ml	1% lidocaine 20ml	Relative (95% CI)	Absolute		Importance
pain with aspiration (measured with: 11 point verbal pain scale; range of scores: 0-10; Better indicated by lower values)												
1[2]	randomized trials	serious[3]	no serious inconsistency	no serious indirectness	serious[4]	none	103	106	-	MD 0.20 higher (0.45 lower to 0.85 higher)	⊕⊕◯◯ LOW	CRITICAL

1 Gestational age ranged from 5 to 14 weeks among included trials, with most including women with gestational age up to 12 weeks.
2 Based on Wiebe 1996, a randomized double-blind trial.
3 Allocation concealment considered inadequate and no information available on number of patients randomized and number of patients discontinued.
4 Based one trial only with small sample size.

Author(s): P. Whyte
Date: 2009-12-06
Question: Should PCB with 1% lidocaine 20ml vs. 0.25% bupivacaine 20ml be used for pain management in first trimester surgical abortion?[1]
Bibliography: Renner RM et al. Pain control in first trimester surgical abortion. *Cochrane Database of Systematic Reviews*, 2009, (2):CD006712.

Table 42:

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	PCB with 1% lidocaine 20ml	0.25% bupivacaine 20ml	Relative (95% CI)	Absolute		Importance
pain with aspiration (measured with: 11 point verbal pain scale; range of scores: 0-10; Better indicated by lower values)												
1[2]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[3]	none	67	76	-	MD 0.24 lower (0.95 lower to 0.47 higher)	⊕⊕⊕◯ MODERATE	CRITICAL

1 Gestational age ranged from 5 to 14 weeks among included trials, with most including women with gestational age up to 12 weeks.
2 Based on Wiebe 1995, a randomized double-blind trial
3 Based on one trial only with small sample size.

Author(s): P. Whyte
Date: 2009-12-07
Question: Should deep PCB vs. regular injection technique be used for pain management in first trimester surgical abortion?[1,2,3]
Bibliography: Renner RM et al. Pain control in first trimester surgical abortion. *Cochrane Database of Systematic Reviews*, 2009, (2):CD006712.

Table 43:

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	deep PCB	regular injection technique	Relative (95% CI)	Absolute		Importance
pain with dilatation (measured with: verbal analogue scale and verbal pain scale[4]; range of scores: 0-10; Better indicated by lower values)												
2[5]	randomized trials	serious[6]	serious[5]	no serious indirectness	no serious imprecision	none	113	116	-	MD 1.64 lower (3.21 to 0.08 lower)	⊕⊕◯◯ LOW	CRITICAL
pain with aspiration (measured with: verbal analogue scale and verbal pain scale[4]; range of scores: 0-10; Better indicated by lower values)												
2[5]	randomized trials	serious[6]	serious[5]	no serious indirectness	no serious imprecision	none	113	116	-	MD 1.00 lower (1.09 to 0.91 lower)	⊕⊕◯◯ LOW	CRITICAL

1 1mL superficial, 3mL 3cm deep or 1mL superficial 3-4mL 1-1.5inches deep
2 1.5cm deep or 0.5 inches deep
3 Gestational age ranged from 5 to 14 weeks among included trials, with most including women with gestational age up to 12 weeks.
4 The pain scales used in both trials were scored 0 to 10.
5 Meta-analysis of Cetin 1997 and Wiebe 1992. Tests for heterogeneity indicated high heterogeneity, however these tests are underpowered when there are very few trials in the meta-analysis (in this case only two).
6 The Wiebe 1992 trial was considered by the Renner 2009 review to have inadequate concealment of randomization while the Cetin 1997 trial had unclear concealment of randomization. As such there is potential for bias in the trials.

Author(s): P. Whyte
Date: 2009-12-07
Question: Should 4 site PCB (3-5-7-9 o'clock) vs. 2 site PCB (4-8 o'clock) be used for pain management in first trimester surgical abortion?[1]
Bibliography: Renner RM et al. Pain control in first trimester surgical abortion. *Cochrane Database of Systematic Reviews*, 2009, (2):CD006712.

Table 44:

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	4 site PCB (3-5-7-9 o'clock)	2 site PCB (4-8 o'clock)	Relative (95% CI)	Absolute		Importance
pain with PCB placement using bacteriostatic saline (measured with: 10 point box scale; range of scores: 0-10; Better indicated by lower values)												
1[2]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[3]	none	21	20	-	MD 0.80 higher (0.46 lower to 2.06 higher)	⊕⊕⊕◯ MODERATE	CRITICAL
pain with PCB placement using 1% chloroprocaine (measured with: 10 point box scale; range of scores: 0-10; Better indicated by lower values)												
1[2]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[3]	none	21	20	-	MD 0.0 higher (1.31 lower to 1.31 higher)	⊕⊕⊕◯ MODERATE	CRITICAL
pain with aspiration using bacteriostatic saline (measured with: 10 point box scale; range of scores: 0-10; Better indicated by lower values)												
1[2]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[3]	none	21	20	-	MD 0.10 higher (1.15 lower to 1.35 higher)	⊕⊕⊕◯ MODERATE	CRITICAL
pain with aspiration using 1% chloroprocaine (measured with: 10 point box scale; range of scores: 0-10; Better indicated by lower values)												
1[2]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[3]	none	21	20	-	MD 0.10 higher (0.16 lower to 1.4 higher)	⊕⊕⊕◯ MODERATE	CRITICAL

1 Gestational age ranged from 5 to 14 weeks among included trials, with most including women with gestational age up to 12 weeks.
2 This is based on Glantz 2001, a randomized controlled trial comparing paracervical block using 1% chloroprocaine or bacteriostatic saline at 2 and 4 locations. Trial was double-blind regarding solution injected but not blinded for injection technique.
3 Based on only one trial with small sample size.

Author(s): P. Whyte
Date: 2009-12-07
Question: Should 3-5 minute delay vs. no delay following PCB be used for pain management in first trimester surgical abortion?[1,2]
Bibliography: Renner RM et al. Pain control in first trimester surgical abortion. *Cochrane Database of Systematic Reviews*, 2009, (2):CD006712.

Table 45:

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	3-5 minute delay	no delay following PCB	Relative (95% CI)	Absolute		Importance
pain with dilatation (measured with: 10cm visual analogue scale; Better indicated by lower values)												
1[3]	randomized trials	serious[3]	no serious inconsistency	no serious indirectness	serious[4]	none	101	93	-	MD 0.70 lower (1.37 to 0.03 lower)	⊕⊕◯◯ LOW	CRITICAL
pain with aspiration (measured with: 10cm visual analogue scale; Better indicated by lower values)												
1[3]	randomized trials	serious[3]	no serious inconsistency	no serious indirectness	serious[4]	none	101	93	-	MD 0.20 lower (0.84 lower to 0.44 higher)	⊕⊕◯◯ LOW	CRITICAL

1 Both groups received PCB of 12ml 1% buffered lidocaine.
2 Gestational age ranged from 5 to 14 weeks among included trials, with most including women with gestational age up to 12 weeks.
3 Based on Phair 2002 a randomized unblinded trial. Although it was not possible to blind waiting and not waiting, there is potential for bias given the lack of blinding.
4 Based on one trial only with small sample size.

Author(s): P. Whyte
Date: 2009-12-07
Question: Should fast injection vs. slow injection of PCB be used for pain management in first trimester surgical abortion?[1,2,3]
Bibliography: Renner RM et al. Pain control in first trimester surgical abortion. *Cochrane Database of Systematic Reviews*, 2009, (2):CD006712.

Table 46:

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	fast injection	slow injection of PCB	Relative (95% CI)	Absolute		Importance
pain with injection (measured with: 11 point verbal scale; range of scores: 0-10; Better indicated by lower values)												
1[4]	randomized trials	serious[4]	no serious inconsistency	no serious indirectness	serious[5]	none	87	87	-	MD 0.62 higher (0.1 lower to 1.34 higher)	⊕⊕◯◯ LOW	CRITICAL

1 30 seconds
2 60 seconds
3 Gestational age ranged from 5 to 14 weeks among included trials, with most including women with gestational age up to 12 weeks.
4 Based on Wiebe 1995. This was a randomized controlled trial; however there was no blinding of this phase of the trial.
5 Based on one trial only with small sample size.

Author(s): P. Whyte
Date: 2009-12-07
Question: Should intrauterine lidocaine vs. placebo be used for pain management in first trimester surgical abortion?[1]
Bibliography: Renner RM et al. Pain control in first trimester surgical abortion. *Cochrane Database of Systematic Reviews*, 2009, (2):CD006712.

Table 47:

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	intrauterine lidocaine	placebo	Relative (95% CI)	Absolute		Importance
pain with dilatation 1% lidocaine (measured with: 100 point visual analogue scale; range of scores: 0-100; Better indicated by lower values)												
1[2]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[3]	none	40	39	-	MD 0.30 lower (1.47 lower to 0.87 higher)	⊕⊕⊕◯ MODERATE	CRITICAL
pain with dilatation 4% lidocaine (measured with: 100 point visual analogue scale; range of scores: 0-100; Better indicated by lower values)												
1[2]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[3]	none	37	39	-	MD 2.00 lower (3.29 to 0.71 lower)	⊕⊕⊕◯ MODERATE	CRITICAL
pain with aspiration 1% lidocaine (measured with: 100 point visual analogue scale; range of scores: 0-100; Better indicated by lower values)												
1[2]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[3]	none	40	40	-	MD 0.40 lower (1.58 lower to 0.78 higher)	⊕⊕⊕◯ MODERATE	IMPORTANT
pain with aspiration 4% lidocaine (measured with: 100 point visual analogue scale; range of scores: 0-100; Better indicated by lower values)												
1[2]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[3]	none	37	39	-	MD 2.80 lower (3.95 to 1.65 lower)	⊕⊕⊕◯ MODERATE	CRITICAL

1 Gestational age ranged from 5 to 14 weeks among included trials, with most including women with gestational age up to 12 weeks.
2 Based on Edelman 2006, a randomized controlled trial.
3 Based on one trial only with small sample size.

Author(s): P. Whyte
Date: 2010-03-10
Question: Should 2% lidocaine gel 10mL vs. KY jelly 10mL be used for pain management in first trimester surgical abortion?[1]
Bibliography: Renner RM et al. Pain control in first trimester surgical abortion. *Cochrane Database of Systematic Reviews*, 2009, (2):CD006712.

Table 48:

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	2% lidocaine gel 10mL	KY jelly 10mL	Relative (95% CI)	Absolute		Importance
pain with dilatation (measured with: 11 point verbal analogue scale; range of scores: 0-10; Better indicated by lower values)												
1[2]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[3]	none	64	67	-	MD 0.42 lower (1.24 lower to 0.4 higher)	⊕⊕⊕◯ MODERATE	CRITICAL
pain with aspiration (measured with: 11 point verbal analogue scale; range of scores: 0-10; Better indicated by lower values)												
1[2]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[3]	none	64	67	-	MD 0.87 lower (1.6 to 0.14 lower)	⊕⊕⊕◯ MODERATE	CRITICAL

1 Gestational age ranged from 5 to 14 weeks among included trials, with most including women with gestational age up to 12 weeks.
2 Li 2006
3 Based on one trial only with small sample size.

Author(s): P. Whyte
Date: 2010-03-11
Question: Should PCB with premedication (600mg ibuprofen) vs. PCB with placebo be used for pain management in first trimester surgical abortion?[1]
Bibliography: Renner RM et al. Pain control in first trimester surgical abortion. *Cochrane Database of Systematic Reviews*, 2009, (2):CD006712.

Table 49:

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	PCB with premedication (600mg ibuprofen)	PCB with placebo	Relative (95% CI)	Absolute		Importance
pain with aspiration (measured with: 11 point verbal pain scale; range of scores: 0-10; Better indicated by lower values)												
1[2]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[3]	none	96	97	-	MD 0.78 lower (1.52 to 0.04 lower)	⊕⊕⊕◯ MODERATE	CRITICAL

1 Gestational age ranged from 5 to 14 weeks among included trials, with most including women with gestational age up to 12 weeks.
2 Wiebe 1995
3 Based on one trial only with small sample size.

Author(s): P. Whyte
Date: 2010-03-11
Question: Should PCB with premedication (1mg oral lorazepam) vs. PCB with placebo be used for pain management in first trimester surgical abortion?[1]
Bibliography: Renner RM et al. Pain control in first trimester surgical abortion. *Cochrane Database of Systematic Reviews*, 2009, (2):CD006712.

Table 50:

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	PCB with premedication (1mg oral lorazepam)	PCB with placebo	Relative (95% CI)	Absolute		Importance
pain with aspiration (measured with: 11 point verbal pain scale; range of scores: 0-10; Better indicated by lower values)												
1[2]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[3]	none	52	52	-	MD 0.30 higher (0.74 lower to 1.34 higher)	⊕⊕⊕◯ MODERATE	CRITICAL

1 Gestational age ranged from 5 to 14 weeks among included trials, with most including women with gestational age up to 12 weeks.
2 Wiebe 2003
3 Based on one trial only with small sample size.

Author(s): P. Whyte
Date: 2010-03-11
Question: Should diclofenac 50mg + misoprostol 200mcg vs. misoprostol 200mcg be used for pain management in first trimester surgical abortion?[1]
Bibliography: Renner RM et al. Pain control in first trimester surgical abortion. *Cochrane Database of Systematic Reviews*, 2009, (2):CD006712.

Table 51:

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	diclofenac 50mg + misoprostol 200mcg	misoprostol 200mcg	Relative (95% CI)	Absolute		Importance
pain with aspiration (measured with: 100mm linear visual analogue scale; range of scores: 0-100; Better indicated by lower values)												
1[2]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[3]	none	49	50	-	MD 0.70 lower (1.76 lower to 0.36 higher)	⊕⊕⊕◯ MODERATE	CRITICAL

1 Gestational age ranged from 5 to 14 weeks among included trials, with most including women with gestational age up to 12 weeks.
2 Li 2003
3 Based on one trial only.

Author(s): P. Whyte
Date: 2010-03-11
Question: Should general anaesthesia be used for pain management in first trimester surgical abortion?[1]
Bibliography: Renner RM et al. Pain control in first trimester surgical abortion. *Cochrane Database of Systematic Reviews*, 2009, (2):CD006712.

Table 52:

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	general anaesthesia	control	Relative (95% CI)	Absolute		Importance
halothane vs. alfentanil - postoperative pain												
1[2]	randomized trials	serious[3]	no serious inconsistency	no serious indirectness	serious[4]	none	12/33 (36.4%)	9/33 (27.3%)	OR 1.51 (0.54 to 4.22)	89 more per 1000 (from 104 fewer to 340 more)	⊕⊕○○ LOW	[5]
halothane vs. alfentanil - anaesthetic complications												
1[2]	randomized trials	serious[3]	no serious inconsistency	no serious indirectness	serious[4]	none	18/33 (54.5%)	12/33 (36.4%)	OR 2.06 (0.79 to 5.39)	177 more per 1000 (from 53 fewer to 391 more)	⊕⊕○○ LOW	IMPORTANT
thiopental+fentanyl vs. thiopental+halothane - post operative pain												
1[6]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[4]	none	2/15 (13.3%)	1/15 (6.7%)	OR 2.05 (0.2 to 21.36)	61 more per 1000 (from 53 fewer to 537 more)	⊕⊕⊕○ MODERATE	[5]
thiopental+fentanyl vs. thiopental+enflurane - post operative pain												
1[6]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[4]	none	0/15 (0%)	1/15 (6.7%)	OR 0.14 (0 to 6.82)	57 fewer per 1000 (from 67 fewer to 261 more)	⊕⊕⊕○ MODERATE	[5]
trichlorethylene vs. total IV (methohexital) anaesthesia - post operative pain												
1[7]	randomized trials	serious[8]	no serious inconsistency	no serious indirectness	serious[4]	none	3/20 (15%)	5/20 (25%)	OR 0.54 (0.12 to 2.51)	97 fewer per 1000 (from 212 fewer to 206 more)	⊕⊕○○ LOW	[5]
enflurane vs. fentanyl - severe anaesthetic complications												
1[9]	randomized trials	serious[8]	no serious inconsistency	no serious indirectness	serious[4]	none	1/43 (2.3%)	3/39 (7.7%)	OR 0.32 (0.04 to 2.36)	51 fewer per 1000 (from 74 fewer to 87 more)	⊕⊕○○ LOW	IMPORTANT
enflurane vs. fentanyl - nausea and vomiting												
1[9]	randomized trials	serious[8]	no serious inconsistency	no serious indirectness	serious[4]	none	3/43 (7%)	10/39 (25.6%)	OR 0.25 (0.08 to 0.82)	177 fewer per 1000 (from 36 fewer to 230 fewer)	⊕⊕○○ LOW	IMPORTANT

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	general anaesthesia	control	Relative (95% CI)	Absolute		Importance
trichloethylene vs. total IV anaesthesia (fentanyl) - lanryngospasm												
1[7]	randomized trials	serious[8]	no serious inconsistency	no serious indirectness	serious[4]	none	1/20 (5%)	0/20 (0%)	OR 7.39 (0.15 to 372.38)	0 more per 1000 (from 0 fewer to 0 more)	⊕⊕○○ LOW	IMPORTANT
trichloethylene vs. total IV anaesthesia (fentanyl) - pain on induction												
1[7]	randomized trials	serious[8]	no serious inconsistency	no serious indirectness	serious[4]	none	2/20 (10%)	0/20 (0%)	OR 7.79 (0.47 to 129.11)	0 more per 1000 (from 0 fewer to 0 more)	⊕⊕○○ LOW	IMPORTANT
trichloethylene vs total IV anaesthesia (fentanyl) - nausea												
1[7]	randomized trials	serious[8]	no serious inconsistency	no serious indirectness	serious[4]	none	3/20 (15%)	7/20 (35%)	OR 0.35 (0.09 to 1.45)	191 fewer per 1000 (from 304 fewer to 88 more)	⊕⊕○○ LOW	IMPORTANT
trichloethylene vs. total IV anaesthesia (fentanyl) - vomiting												
1[7]	randomized trials	serious[8]	no serious inconsistency	no serious indirectness	serious[4]	none	3/20 (15%)	4/20 (20%)	OR 0.71 (0.14 to 3.57)	49 fewer per 1000 (from 166 fewer to 272 more)	⊕⊕○○ LOW	IMPORTANT
halothane vs. alfentanil - recovery time (min) (Better indicated by lower values)												
1[2]	randomized trials	serious[3]	no serious inconsistency	no serious indirectness	serious[4]	none	33	33	-	MD 7.60 higher (5.71 to 9.49 higher)	⊕⊕○○ LOW	IMPORTANT
enflurane vs. fentanyl - recovery time (min) (Better indicated by lower values)												
1[9]	randomized trials	serious[8]	no serious inconsistency	no serious indirectness	serious[4]	none	43	39	-	MD 0.20 higher (1.48 lower to 1.88 higher)	⊕⊕○○ LOW	IMPORTANT
propofol 2.5mg/kg vs. etomidate 0.3mg/kg - postoperative pain												
1[10]	randomized trials	serious[8]	no serious inconsistency	no serious indirectness	serious[4]	none	5/20 (25%)	3/20 (15%)	RR 0 (0 to 0)	150 fewer per 1000 (from 150 fewer to 150 fewer)	⊕⊕○○ LOW	[5]
propofol vs. thiopental - post operative pain												
3[11]	randomized trials	serious[12]	no serious inconsistency	no serious indirectness	serious [4]	none	26/170 (15.3%)	25/180 (13.9%)	OR 1.11 (0.61 to 2.02)	13 more per 1000 (from 49 fewer to 107 more)	⊕⊕○○ LOW	[5]

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	general anaesthesia	control	Relative (95% CI)	Absolute		Importance
propofol vs. thiopental - time to discharge (Better indicated by higher values)												
2[13]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[4]	none	100	100	-	MD 14.69 lower (24.95 to 4.43 lower)	⊕⊕⊕◯ MODERATE	IMPORTANT
propofol vs. methohexital - post operative pain												
2[14]	randomized trials	serious[15]	serious[16]	no serious indirectness	serious[4]	none	6/70 (8.6%)	13/70 (18.6%)	OR 0.42 (0.16 to 1.12)	98 fewer per 1000 (from 151 fewer to 18 more)	⊕◯◯◯ VERY LOW	5
propofol+fentanyl vs. midazolam+fentanyl - post operative pain												
1[17]	randomized trials	serious[8]	no serious inconsistency	no serious indirectness	serious[4]	none	3/40 (7.5%)	2/40 (5%)	OR 1.52 (0.25 to 9.21)	24 more per 1000 (from 37 fewer to 276 more)	⊕⊕◯◯ LOW	5
propofol+fentanyl vs. ketamine 0.5mg/kg+midazolam 0.25mg/kg post-operative pain												
1[18]	randomized trials	serious[8]	no serious inconsistency	no serious indirectness	serious[4]	none	3/50 (6%)	17/50 (34%)	OR 0.18 (0.07 to 0.47)	255 fewer per 1000 (from 145 fewer to 305 fewer)	⊕⊕◯◯ LOW	5
propofol+fentanyl vs. ketamine 1mg/kg+midazolam 0.1mg/kg post-operative pain												
1[18]	randomized trials	serious[8]	no serious inconsistency	no serious indirectness	serious[4]	none	3/50 (6%)	4/50 (8%)	OR 0.74 (0.16 to 3.4)	20 fewer per 1000 (from 66 fewer to 148 more)	⊕⊕◯◯ LOW	5
propofol+ketamine vs. propofol+fentanyl - post operative pain												
2[19]	randomized trials	serious[20]	serious[21]	no serious indirectness	serious[4]	none	27/90 (30%)	7/90 (7.8%)	OR 4.66 (2.16 to 10.06)	204 more per 1000 (from 76 more to 381 more)	⊕◯◯◯ VERY LOW	5
thiopental+fentanyl vs. ketamine +diazepam - post operative pain												
1[22]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[4]	none	4/15 (26.7%)	4/15 (26.7%)	OR 1.00 (0.2 to 4.91)	0 fewer per 1000 (from 199 fewer to 374 more)	⊕⊕⊕◯ MODERATE	5
propofol+alfentanil vs. propofol - post operative pain												
1[18]	randomized trials	serious[8]	no serious inconsistency	no serious indirectness	serious[4]	none	3/50 (6%)	19/50 (38%)	OR 0.16 (0.06 to 0.4)	291 fewer per 1000 (from 183 fewer to 345 fewer)	⊕⊕◯◯ LOW	5
alfentanil vs. placebo - post operative pain												
1[23]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[4]	none	35/60 (58.3%)	30/44 (68.2%)	OR 0.66 (0.3 to 1.47)	96 fewer per 1000 (from 291 fewer to 77 more)	⊕⊕⊕◯ MODERATE	5

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	general anaesthesia	control	Relative (95% CI)	Absolute		Importance
fentanyl vs placebo - post operative pain												
1[23]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[4]	none	19/60 (31.7%)	10/44 (22.7%)	OR 0.23 (0.11 to 0.51)	164 fewer per 1000 (from 97 fewer to 196 fewer)	⊕⊕⊕○ MODERATE	5
alfentail+propofol vs. fentanyl+propofol - postoperative pain												
2[24]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[4]	none	45/110 (40.9%)	26/100 (26%)	OR 1.96 (1.07 to 3.6)	148 more per 1000 (from 13 more to 298 more)	⊕⊕⊕○ MODERATE	5
alfentanil+thiopental vs. fentnyl+thiopental - postoperative pain												
1[25]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[4]	none	6/50 (12%)	6/50 (12%)	OR 1.00 (0.3 to 3.32)	0 fewer per 1000 (from 81 fewer to 192 more)	⊕⊕⊕○ MODERATE	5

1 Gestational age ranged from 5 to 14 weeks among included trials, with most including women with gestational age up to 12 weeks.
2 Collins 1985
3 Allocation concealment unclear.
4 Total number of events < 300.
5 Outcome ranking not provided.
6 Barneschi 1985
7 Ogg 1983
8 Unclear trial length, method of randomization and allocation concealment.
9 Hackett 1982
10 Boysen 1989
11 Boysen 1989; Jakobsson 1993; Jakobsson 1995
12 One trial (Boysen 1989) had unclear trial length, randomization and allocation concealment. This trial also differed from the other two in regard to additional medications used.
13 Jakobsson 1993; Jakobsson 1995
14 Boysen 1990; Jakobsson 1993
15 There was unclear study length, method of randomization and allocation concealment in Boysen (1990). Although the Renner (2009) review indicated this analysis compared propofol and methohexital, there were additional drugs used which differed between the trials in terms of type of drug and time of administration. The Boysen trial administered alfentanil after induction while the Jakobsson trial administered fentanyl prior to induction. It is possible that these differences could bias the analysis results.
16 There was a high degree of heterogeneity, with I^2=79%.
17 Rossi 1995
18 Bonnardot 1987
19 Jakobsson 1993; Rossi 1995
20 In the Rossi (1995) trial, there was unclear study length, method of randomization and allocation concealment. In addition it was unclear if pain was self-reported.
21 High degree of heterogeneity, with I^2=76%.
22 Barneschi 1985
23 Jakobsson 1991
24 Jakobsson 1991; Jakobsson 1995
25 Jakobsson 1995

Author(s): P. Whyte
Date: 2010-03-11
Question: Should general anaesthesia - propofol vs. other sedative hypnotic agents be used for pain management in first trimester surgical abortion?[1,2]
Bibliography: Renner RM et al. Pain control in first trimester surgical abortion. *Cochrane Database of Systematic Reviews*, 2009, (2):CD006712.

Table 53:

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	general anaesthesia - propofol	other sedative hypnotic agents	Relative (95% CI)	Absolute		Importance
pain on injection - propofol vs. etomidate												
1[3]	randomized trials	serious[4]	no serious inconsistency	no serious indirectness	serious[5]	none	9/20 (45%)	9/20 (45%)	OR 1.00 (0.29 to 3.42)	0 fewer per 1000 (from 258 fewer to 287 more)	⊕⊕○○ LOW	IMPORTANT
pain on injection - propofol vs. thiopental												
1[3]	randomized trials	serious[4]	no serious inconsistency	no serious indirectness	serious[5]	none	9/20 (45%)	1/20 (5%)	OR 8.00 (1.95 to 32.9)	246 more per 1000 (from 43 more to 584 more)	⊕⊕○○ LOW	IMPORTANT
pain on injection - etomidate vs. thiopental												
1[3]	randomized trials	serious[4]	no serious inconsistency	no serious indirectness	serious[5]	none	9/20 (45%)	1/20 (5%)	OR 8.00 (1.95 to 32.9)	246 more per 1000 (from 43 more to 584 more)	⊕⊕○○ LOW	IMPORTANT
pain on injection - propofol vs. methohexital												
1[3]	randomized trials	serious[4]	no serious inconsistency	no serious indirectness	serious[5]	none	8/20 (40%)	9/20 (45%)	OR 0.82 (0.24 to 2.83)	48 fewer per 1000 (from 286 fewer to 248 more)	⊕⊕○○ LOW	IMPORTANT
pain on injection - propofol+fentanyl vs. fentanyl+midazolam												
1[6]	randomized trials	serious[4]	no serious inconsistency	no serious indirectness	serious[5]	none	4/40 (10%)	2/40 (5%)	OR 2.04 (0.39 to 10.65)	47 more per 1000 (from 30 fewer to 309 more)	⊕⊕○○ LOW	IMPORTANT
pain on injection - propofol+fentanyl vs. propofol+ketamine												
1[6]	randomized trials	serious[4]	no serious inconsistency	no serious indirectness	serious[5]	none	4/40 (10%)	0/40 (0%)	OR 8.00 (1.08 to 58.98)	0 more per 1000 (from 0 more to 0 more)	⊕⊕○○ LOW	IMPORTANT
pain on injection - propofol+alfentanil vs. ketamine 1mg/kg+midazolam 0.1mg/kg												
1[6]	randomized trials	serious[4]	no serious inconsistency	no serious indirectness	serious[5]	none	7/50 (14%)	2/50 (4%)	OR 3.35 (0.86 to 3.09)	82 more per 1000 (from 5 fewer to 74 more)	⊕⊕○○ LOW	IMPORTANT

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	general anaesthesia - propofol	other sedative hypnotic agents	Relative (95% CI)	Absolute		Importance
pain on injection - propofol vs. ketamine 1mg/kg+midazolam 0.1mg/kg												
1[7]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[5]	none	16/50 (32%)	2/50 (4%)	OR 6.54 (2.37 to 18.05)	174 more per 1000 (from 50 more to 389 more)	⊕⊕⊕◯ MODERATE	IMPORTANT
pain on injection - propofol vs. propofol+alfentanil												
1[7]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[5]	none	16/50 (32%)	7/50 (14%)	OR 2.74 (1.08 to 6.91)	168 more per 1000 (from 10 more to 389 more)	⊕⊕⊕◯ MODERATE	IMPORTANT
apnea - propofol vs. etomidate												
1[3]	randomized trials	serious[4]	no serious inconsistency	no serious indirectness	serious[5]	none	6/20 (30%)	1/20 (5%)	OR 5.41 (1.08 to 27.08)	172 more per 1000 (from 4 more to 538 more)	⊕⊕◯◯ LOW	IMPORTANT
apnea - propofol vs. thiopental												
1[3]	randomized trials	serious[4]	no serious inconsistency	no serious indirectness	serious[5]	none	6/20 (30%)	3/20 (15%)	OR 2.31 (0.53 to 10.02)	140 more per 1000 (from 64 fewer to 489 more)	⊕⊕◯◯ LOW	IMPORTANT
apnea - etomidate vs. thiopental												
1[3]	randomized trials	serious[4]	no serious inconsistency	no serious indirectness	serious[5]	none	1/20 (5%)	3/20 (15%)	OR 0.34 (0.04 to 2.6)	93 fewer per 1000 (from 143 fewer to 165 more)	⊕⊕◯◯ LOW	IMPORTANT
apnea - propofol vs. methohexital												
1[8]	randomized trials	serious[4]	no serious inconsistency	no serious indirectness	serious[5]	none	7/20 (35%)	10/20 (50%)	OR 0.55 (0.16 to 1.9)	145 fewer per 1000 (from 362 fewer to 155 more)	⊕⊕◯◯ LOW	IMPORTANT
nausea - fentanyl vs. thiopental and fentanyl												
1[10]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[5]	none	0/50 (0%)	2/50 (4%)	OR 0.13 (0.01 to 2.15)	35 fewer per 1000 (from 40 fewer to 42 more)	⊕⊕⊕◯ MODERATE	IMPORTANT
nausea - propofol+alfentanil/fentanyl vs. methohexital+alfentanil/fentanyl												
1[8]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[5]	none	1/20 (5%)	4/20 (20%)	OR 0.26 (0.04 to 1.67)	139 fewer per 1000 (from 190 fewer to 95 more)	⊕⊕⊕◯ MODERATE	IMPORTANT

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	general anaesthesia - propofol	other sedative hypnotic agents	Relative (95% CI)	Absolute		Importance
nausea - propofol+alfentanil/fentanyl vs. methohexital+alfentanil/fentanyl												
1[10]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[5]	none	0/50 (0%)	4/50 (8%)	OR 0.13 (0.02 to 0.93)	69 fewer per 1000 (from 5 fewer to 78 fewer)	⊕⊕⊕◯ MODERATE	IMPORTANT
nausea - propofol+fentanyl vs. propofol+ketamine												
1[6]	randomized trials	serious[4]	no serious inconsistency	no serious indirectness	serious[5]	none	7/40 (17.5%)	2/40 (5%)	OR 3.44 (0.87 to 13.66)	103 more per 1000 (from 6 fewer to 368 more)	⊕⊕◯◯ LOW	IMPORTANT
nausea - propofol+fentanyl vs. midazolam+fentanyl												
1[6]	randomized trials	serious[4]	no serious inconsistency	no serious indirectness	serious[5]	none	7/40 (17.5%)	8/40 (20%)	OR 0.85 (0.28 to 2.6)	25 fewer per 1000 (from 135 fewer to 194 more)	⊕⊕◯◯ LOW	IMPORTANT
nausea - thiopental+fentanyl vs. ketamine+diazepam												
1[9]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[5]	none	0/15 (0%)	6/15 (40%)	OR 0.09 (0.02 to 0.52)	343 fewer per 1000 (from 143 fewer to 387 fewer)	⊕⊕⊕◯ MODERATE	IMPORTANT
nausea - thiopental+fentanyl vs. thiopental+enflurane												
1[9]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[5]	none	0/15 (0%)	3/15 (20%)	OR 0.12 (0.01 to 1.22)	171 fewer per 1000 (from 198 fewer to 34 more)	⊕⊕⊕◯ MODERATE	IMPORTANT
nausea - thiopental+fentanyl vs. thiopental+halothane												
1[9]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[5]	none	0/15 (0%)	2/15 (13.3%)	OR 0.13 (0.01 to 2.12)	114 fewer per 1000 (from 132 fewer to 113 more)	⊕⊕⊕◯ MODERATE	IMPORTANT
nausea - ketamine+diazepam vs. thiopental+halothane												
1[9]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[5]	none	6/15 (40%)	2/15 (13.3%)	OR 3.74 (0.76 to 18.35)	232 more per 1000 (from 29 fewer to 605 more)	⊕⊕⊕◯ MODERATE	IMPORTANT
nausea - ketamine+diazepam vs. thiopental+enflurane												
1[9]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[5]	none	6/15 (40%)	3/15 (20%)	OR 2.51 (0.54 to 11.66)	186 more per 1000 (from 81 fewer to 545 more)	⊕⊕⊕◯ MODERATE	IMPORTANT

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	general anaesthesia - propofol	other sedative hypnotic agents	Relative (95% CI)	Absolute		Importance
vomiting - propofol+fentanyl vs. propofol+ketmine												
1[6]	randomized trials	serious[4]	no serious inconsistency	no serious indirectness	serious[5]	none	3/40 (7.5%)	1/40 (2.5%)	OR 2.83 (0.38 to 20.86)	43 more per 1000 (from 15 fewer to 323 more)	⊕⊕◯◯ LOW	IMPORTANT
vomiting - propofol+fentanyl vs midazolam+fentanyl												
1[6]	randomized trials	serious[4]	no serious inconsistency	no serious indirectness	serious[5]	none	3/40 (7.5%)	4/40 (10%)	OR 0.73 (0.16 to 3.43)	25 fewer per 1000 (from 83 fewer to 176 more)	⊕⊕◯◯ LOW	IMPORTANT
vomiting - propofol+alfentanil vs. ketamine 1mg/kg+midazolam 0.1mg/kg												
1[7]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[5]	none	1/50 (2%)	9/50 (18%)	OR 0.17 (0.05 to 0.63)	144 fewer per 1000 (from 59 fewer to 169 fewer)	⊕⊕⊕◯ MODERATE	IMPORTANT
dreams - propofol+ketamine vs. propofol+fentanyl												
1[10]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[5]	none	29/50 (58%)	11/50 (22%)	OR 4.41 (1.99 to 9.79)	334 more per 1000 (from 140 more to 514 more)	⊕⊕⊕◯ MODERATE	IMPORTANT
dreams - propofol+ketamine vs. propofol+thiopental												
1[10]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[5]	none	29/50 (58%)	7/50 (14%)	OR 6.62 (2.94 to 193)	379 more per 1000 (from 184 more to 829 more)	⊕⊕⊕◯ MODERATE	IMPORTANT
dreams - propofol+ketamine vs. propofol+methohexital												
1[10]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[5]	none	29/50 (58%)	4/50 (8%)	OR 9.38 (4.09 to 21.5)	369 more per 1000 (from 182 more to 572 more)	⊕⊕⊕◯ MODERATE	IMPORTANT
hallucinations - propofol+entanyl vs. propofol+ketamine												
1[6]	randomized trials	serious[4]	no serious inconsistency	no serious indirectness	serious[5]	none	0/40 (0%)	2/40 (5%)	OR 0.13 (0.01 to 2.15)	43 fewer per 1000 (from 49 fewer to 52 more)	⊕⊕◯◯ LOW	IMPORTANT
hallucinations - fentanyl and midazolam vs. propofol and ketamine												
1[6]	randomized trials	serious[4]	no serious inconsistency	no serious indirectness	serious[5]	none	0/40 (0%)	2/40 (5%)	OR 0.13 (0.01 to 2.15)	43 fewer per 1000 (from 49 fewer to 52 more)	⊕⊕◯◯ LOW	IMPORTANT

1 The Renner 2009 review identified these comparisons as ‘propofol versus other sedative hypnotic agent’, however a number of comparisons that did not include propofol were presented. These are included here as per Renner 2009.
2 Gestational age ranged from 5 to 14 weeks among included trials, with most including women with gestational age up to 12 weeks.
3 Boysen 1989.
4 Unclear trial length, method of randomization and allocation concealment.
5 Total number of events < 300.
6 Rossi 1995.
7 Bonnardot 1987.
8 Boysen 1990.
9. Barneschi 1985.
10 Jakobsson 1993.

Author(s): P. Whyte
Date: 2010-03-11
Question: Should propofol+placebo vs. propofol + either alfentanyl or fentanyl be used for pain management in first trimester surgical abortion?[1]
Bibliography: Renner RM et al. Pain control in first trimester surgical abortion. *Cochrane Database of Systematic Reviews*, 2009, (2):CD006712.

Table 54:

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	propofol+placebo	propofol + either alfentanyl or fentanyl	Relative (95% CI)	Absolute		Importance
nausea - alfentanil vs. placebo												
1[2]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[3]	none	5/60 (8.3%)	4/44 (9.1%)	OR 0.91 (0.23 to 3.6)	7 fewer per 1000 (from 68 fewer to 174 more)	⊕⊕⊕◯ MODERATE	IMPORTANT
nausea - alfentanil vs. placebo												
1[4]	randomized trials	serious[5]	no serious inconsistency	no serious indirectness	serious[3]	none	8/40 (20%)	5/40 (12.5%)	OR 1.72 (0.53 to 5.61)	72 more per 1000 (from 55 fewer to 320 more)	⊕⊕◯◯ LOW	IMPORTANT
nausea - fentanyl vs. placebo												
1[2]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[3]	none	4/60 (6.7%)	4/44 (9.1%)	OR 0.71 (0.17 to 3.05)	25 fewer per 1000 (from 74 fewer to 143 more)	⊕⊕⊕◯ MODERATE	IMPORTANT
nausea - fentanyl vs. placebo												
1[4]	randomized trials	serious[5]	no serious inconsistency	no serious indirectness	serious[3]	none	10/40 (25%)	5/40 (12.5%)	OR 2.25 (0.74 to 6.86)	118 more per 1000 (from 29 fewer to 370 more)	⊕⊕◯◯ LOW	IMPORTANT
nausea - alfentanil vs. fentanyl												
1[2]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[3]	none	5/60 (8.3%)	4/60 (6.7%)	OR 1.27 (0.33 to 4.91)	17 more per 1000 (from 44 fewer to 193 more)	⊕⊕⊕◯ MODERATE	IMPORTANT

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	propofol+placebo	propofol + either alfentanyl or fentanyl	Relative (95% CI)	Absolute		Importance
nausea - alfentanil vs. fentanyl												
1[4]	randomized trials	serious[5]	no serious inconsistency	no serious indirectness	serious[3]	none	8/40 (20%)	10/40 (25%)	OR 0.75 (0.27 to 2.14)	50 fewer per 1000 (from 167 fewer to 166 more)	⊕⊕◯◯ LOW	IMPORTANT
vomiting - alfentanil vs. placebo												
1[2]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[3]	none	1/60 (1.7%)	3/44 (6.8%)	OR 0.25 (0.03 to 1.88)	50 fewer per 1000 (from 66 fewer to 53 more)	⊕⊕⊕◯ MODERATE	IMPORTANT
vomiting - alfentanil vs. placebo												
1[4]	randomized trials	serious[5]	no serious inconsistency	no serious indirectness	serious[3]	none	5/40 (12.5%)	4/40 (10%)	OR 1.28 (0.32 to 5.08)	25 more per 1000 (from 66 fewer to 261 more)	⊕⊕◯◯ LOW	IMPORTANT
vomiting - fentanyl vs. placebo												
1[2]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[3]	none	5/60 (8.3%)	3/44 (6.8%)	OR 1.24 (0.29 to 5.28)	15 more per 1000 (from 47 fewer to 210 more)	⊕⊕⊕◯ MODERATE	IMPORTANT
vomiting - fentanyl vs. placebo												
1[4]	randomized trials	serious[5]	no serious inconsistency	no serious indirectness	serious[3]	none	2/40 (5%)	4/40 (10%)	OR 0.49 (0.09 to 2.56)	48 fewer per 1000 (from 90 fewer to 121 more)	⊕⊕◯◯ LOW	IMPORTANT
vomiting - alfentanil vs. fentanyl												
1[2]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[3]	none	1/60 (1.7%)	5/60 (8.3%)	OR 0.25 (0.05 to 1.28)	61 fewer per 1000 (from 79 fewer to 21 more)	⊕⊕⊕◯ MODERATE	IMPORTANT

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	propofol+placebo	propofol + either alfentanyl or fentanyl	Relative (95% CI)	Absolute		Importance
vomiting - alfentanil vs. fentanyl												
1[4]	randomized trials	serious[5]	no serious inconsistency	no serious indirectness	serious[3]	none	5/40 (12.5%)	2/40 (5%)	OR 2.53 (0.54 to 11.81)	68 more per 1000 (from 22 fewer to 333 more)	⊕⊕◯◯ LOW	IMPORTANT
no complications - alfentanil vs. placebo												
1[4]	randomized trials	serious[5]	no serious inconsistency	no serious indirectness	serious[3]	none	24/40 (60%)	22/40 (55%)	OR 1.22 (0.51 to 2.95)	49 more per 1000 (from 166 fewer to 233 more)	⊕⊕◯◯ LOW	IMPORTANT
no complications - fentanyl vs. placebo												
1[4]	randomized trials	serious[5]	no serious inconsistency	no serious indirectness	serious[3]	none	26/40 (65%)	22/40 (55%)	OR 1.51 (0.62 to 3.67)	99 more per 1000 (from 119 fewer to 268 more)	⊕⊕◯◯ LOW	IMPORTANT
no complications - alfentanil vs. fentanyl												
1[4]	randomized trials	serious[5]	no serious inconsistency	no serious indirectness	serious[3]	none	24/40 (60%)	26/40 (65%)	OR 0.81 (0.33 to 1.99)	49 fewer per 1000 (from 270 fewer to 137 more)	⊕⊕◯◯ LOW	IMPORTANT
laryngospasm or difficulty ventilating - alfentanil vs. placebo												
1[4]	randomized trials	serious[5]	no serious inconsistency	no serious indirectness	serious[3]	none	0/40 (0%)	1/40 (2.5%)	OR 0.14 (0 to 6.82)	21 fewer per 1000 (from 25 fewer to 124 more)	⊕⊕◯◯ LOW	IMPORTANT
laryngospasm or difficulty ventilating - fentanyl vs. placebo												
1[4]	randomized trials	serious[5]	no serious inconsistency	no serious indirectness	serious[3]	none	1/40 (2.5%)	1/40 (2.5%)	OR 1.00 (0.06 to 16.27)	0 fewer per 1000 (from 23 fewer to 269 more)	⊕⊕◯◯ LOW	IMPORTANT

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	propofol+placebo	propofol + either alfentanyl or fentanyl	Relative (95% CI)	Absolute		Importance
laryngospasm or difficulty ventilating - alfentanil vs. fentanyl												
1[4]	randomized trials	serious[5]	no serious inconsistency	no serious indirectness	serious[3]	none	0/40 (0%)	1/40 (2.5%)	OR 0.14 (0 to 6.82)	21 fewer per 1000 (from 25 fewer to 124 more)	⊕⊕○○ LOW	IMPORTANT
time to discharge - placebo vs. alfentanil (Better indicated by lower values)												
1[2]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[6]	none	60	44	-	MD 9.00 lower (24.87 lower to 6.87 higher)	⊕⊕⊕○ MODERATE	IMPORTANT
time to discharge - placebo vs. fentanyl (Better indicated by lower values)												
1[2]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[6]	none	60	44	-	MD 2.00 higher (16.5 lower to 20.5 higher)	⊕⊕⊕○ MODERATE	IMPORTANT

1 Gestational age ranged from 5 to 14 weeks among included trials, with most including women with gestational age up to 12 weeks.
2 Jakobsson 1991
3 Total number of events < 300.
4 Lindholm 1994
5 Unclear randomization and allocation concealment.
6 Based on one trial only with small sample size.

Author(s): P. Whyte
Date: 2010-03-11
Question: Should conscious sedation and PCB vs. general anaesthesia be used for pain management in first trimester surgical abortion?[1]
Bibliography: Renner RM et al. Pain control in first trimester surgical abortion. *Cochrane Database of Systematic Reviews*, 2009, (2):CD006712.

Table 55:

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	conscious sedation and PCB	general anaesthesia	Relative (95% CI)	Absolute		Importance
pain with dilatation												
1[2]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[3]	none	18/31 (58.1%)	0/28 (0%)	OR 14.77 (4.91 to 44.38)	0 more per 1000 (from 0 more to 0 more)	⊕⊕⊕○ MODERATE	CRITICAL
pain with aspiration												
1[2]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[3]	none	12/31 (38.7%)	1/28 (3.6%)	OR 7.47 (2.2 to 25.36)	181 more per 1000 (from 40 more to 449 more)	⊕⊕⊕○ MODERATE	CRITICAL
postoperative pain (Better indicated by higher values)												
1[2]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[4]	none	31	28	-	MD 1.00 lower (1.77 to 0.23 lower)	⊕⊕⊕○ MODERATE	[5]
apnea												
1[2]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[3]	none	0/31 (0%)	7/28 (25%)	OR 0.10 (0.02 to 0.46)	218 fewer per 1000 (from 117 fewer to 243 fewer)	⊕⊕⊕○ MODERATE	IMPORTANT
duration of sleep (min) (Better indicated by lower values)												
1[2]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[4]	none	31	28	-	MD 9.50 lower (11.5 to 7.5 lower)	⊕⊕⊕○ MODERATE	IMPORTANT

1 Gestational age ranged from 5 to 14 weeks among included trials, with most including women with gestational age up to 12 weeks.
2 Raeder 1992
3 Total number of events <300.
4 Based on one trial only with small sample size.
5 Outcome ranking not provided.

Author(s): P. Whyte
Date: 2010-03-11
Question: Should paracetamol+codeine suppository vs. placebo be used for pain management in first trimester surgical abortion?[1]
Bibliography: Renner RM et al. Pain control in first trimester surgical abortion. *Cochrane Database of Systematic Reviews*, 2009, (2):CD006712.

Table 56:

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	paracetamol+ codeine suppository	placebo	Relative (95% CI)	Absolute		Importance
nausea at 30 minutes postoperatively												
1[2]	randomized trials	serious[3]	no serious inconsistency	no serious indirectness	serious[4]	none	5/46 (10.9%)	2/44 (4.5%)	OR 2.39 (0.52 to 11.09)	57 more per 1000 (from 21 fewer to 300 more)	⊕⊕◯◯ LOW	IMPORTANT
nausea at 60 minutes postoperatively												
1[2]	randomized trials	serious[3]	no serious inconsistency	no serious indirectness	serious[4]	none	4/46 (8.7%)	2/44 (4.5%)	OR 1.93 (0.37 to 10.05)	39 more per 1000 (from 28 fewer to 278 more)	⊕⊕◯◯ LOW	IMPORTANT
nausea at discharge												
1[2]	randomized trials	serious[3]	no serious inconsistency	no serious indirectness	serious[4]	none	6/46 (13%)	4/44 (9.1%)	OR 1.49 (0.4 to 5.49)	39 more per 1000 (from 52 fewer to 264 more)	⊕⊕◯◯ LOW	IMPORTANT
fully awake at 30 minutes postoperatively												
1[2]	randomized trials	serious[3]	no serious inconsistency	no serious indirectness	serious[4]	none	15/46 (32.6%)	26/44 (59.1%)	OR 0.35 (0.15 to 0.79)	255 fewer per 1000 (from 58 fewer to 413 fewer)	⊕⊕◯◯ LOW	IMPORTANT
fully awake at 60 minutes postoperatively												
1[2]	randomized trials	serious[3]	no serious inconsistency	no serious indirectness	serious[4]	none	29/47 (61.7%)	32/44 (72.7%)	OR 0.61 (0.26 to 1.46)	108 fewer per 1000 (from 318 fewer to 68 more)	⊕⊕◯◯ LOW	IMPORTANT
sleepy at 30 minutes postoperatively												
1[2]	randomized trials	serious[3]	no serious inconsistency	no serious indirectness	serious[4]	none	28/46 (60.9%)	14/44 (31.8%)	OR 3.17 (1.39 to 7.23)	278 more per 1000 (from 75 more to 453 more)	⊕⊕◯◯ LOW	IMPORTANT

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	paracetamol+ codeine suppository	placebo	Relative (95% CI)	Absolute		Importance
sleepy at 60 minutes postoperatively												
1[2]	randomized trials	serious[3]	no serious inconsistency	no serious indirectness	serious[4]	none	15/46 (32.6%)	8/44 (18.2%)	OR 2.12 (0.82 to 5.43)	138 more per 1000 (from 28 fewer to 365 more)	⊕⊕◯◯ LOW	IMPORTANT
asleep but easily arousable at 30 minutes postoperatively												
1[2]	randomized trials	serious[3]	no serious inconsistency	no serious indirectness	serious[4]	none	3/46 (6.5%)	3/44 (6.8%)	OR 0.95 (0.18 to 4.96)	3 fewer per 1000 (from 55 fewer to 198 more)	⊕⊕◯◯ LOW	IMPORTANT
asleep but easily arousable at 60 minutes postoperatively												
1[2]	randomized trials	serious[3]	no serious inconsistency	no serious indirectness	serious[4]	none	1/46 (2.2%)	4/44 (9.1%)	OR 0.27 (0.05 to 1.63)	65 fewer per 1000 (from 86 fewer to 49 more)	⊕⊕◯◯ LOW	IMPORTANT
heavily asleep at 30 minutes postoperatively												
1[2]	randomized trials	serious[3]	no serious inconsistency	no serious indirectness	serious[4]	none	0/46 (0%)	1/44 (2.3%)	OR 0.13 (0 to 6.52)	20 fewer per 1000 (from 23 fewer to 109 more)	⊕⊕◯◯ LOW	IMPORTANT
heavily asleep at 60 minutes postoperatively												
1[2]	randomized trials	serious[3]	no serious inconsistency	no serious indirectness	serious[4]	none	0/46 (0%)	0/44 (0%)	Not estimable	0 fewer per 1000 (from 0 fewer to 0 fewer)	⊕⊕◯◯ LOW	IMPORTANT

1 Gestational age ranged from 5 to 14 weeks among included trials, with most including women with gestational age up to 12 weeks.
2 Dahl 2000
3 Unclear trial length and unclear allocation concealment.
4 Total number of events < 300.

Author(s): P. Whyte
Date: 2010-03-11
Question: Should etoricoxib vs. placebo be used for pain management in first trimester surgical abortion?[1]
Bibliography: Renner RM et al. Pain control in first trimester surgical abortion. *Cochrane Database of Systematic Reviews*, 2009, (2):CD006712.

Table 57:

Quality assessment								Summary of findings						
	No of patients		Effect			Quality								
No of studies		Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	etoricoxib	placebo	Relative (95% CI)		Absolute		Importance
time to discharge (Better indicated by lower values)														
1[2]	randomized trials		serious[3]	no serious inconsistency	no serious indirectness	serious[4]	none	20	20	-	MD 6.00 higher (5.47 lower to 17.47 higher)		⊕⊕◯◯ LOW	IMPORTANT

[1] Gestational age ranged from 5 to 14 weeks among included trials, with most including women with gestational age up to 12 weeks.
[2] Liu 2005
[3] Unclear trial length and randomization method.
[4] Based on one trial only with small sample size.

Author(s): P. Whyte
Date: 2010-03-11
Question: Should COX inhibitors vs. placebo be used for pain management in first trimester surgical abortion?[1]
Bibliography: Renner RM et al. Pain control in first trimester surgical abortion. *Cochrane Database of Systematic Reviews*, 2009, (2):CD006712.

Table 58:

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	COX inhibitors	placebo	Relative (95% CI)	Absolute		Importance
antiemetic requirements - paracetamol suppository vs. placebo												
1[2]	randomized trials	serious[3]	no serious inconsistency	serious[5]	serious[4]	none	3/70 (4.3%)	1/70 (1.4%)	OR 2.78 (0.38 to 20.16)	24 more per 1000 (from 9 fewer to 212 more)	⊕○○○ VERY LOW	IMPORTANT
antiemetic requirements - paracetamol vs. placebo												
1[6]	randomized trials	serious [7]	no serious inconsistency	serious[5]	serious[4]	none	7/70 (10%)	4/70 (5.7%)	OR 1.80 (0.53 to 20.16)	41 more per 1000 (from 26 fewer to 493 more)	⊕○○○ VERY LOW	IMPORTANT
antiemetic requirements - lomoxicam vs. placebo												
1[6]	randomized trials	serious [7]	no serious inconsistency	serious[5]	serious[4]	none	2/70 (2.9%)	4/70 (5.7%)	OR 0.50 (0.1 to 2.56)	28 fewer per 1000 (from 51 fewer to 77 more)	⊕○○○ VERY LOW	IMPORTANT
antiemetic requirements - lomoxicam vs. paracetamol												
1[6]	randomized trials	serious [7]	no serious inconsistency	serious[5]	serious[4]	none	2/70 (2.9%)	7/70 (10%)	OR 0.31 (0.08 to 1.18)	67 fewer per 1000 (from 91 fewer to 16 more)	⊕○○○ VERY LOW	IMPORTANT
nausea – oral diclofenac vs. NaCl												
1[8]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[4]	none	4/50 (8%)	4/50 (8%)	OR 1.00 (0.24 to 4.21)	0 fewer per 1000 (from 60 fewer to 188 more)	⊕⊕⊕○ MODERATE	IMPORTANT

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	COX inhibitors	placebo	Relative (95% CI)	Absolute		Importance
nausea - diclofenac IM vs. NaCl												
1[8]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[4]	none	0/50 (0%)	4/50 (8%)	OR 0.13 (0.02 to 0.93)	69 fewer per 1000 (from 5 fewer to 78 fewer)	⊕⊕⊕◯ MODERATE	IMPORTANT
nausea - ketorolac IM vs. NaCl												
1[8]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[4]	none	2/50 (4%)	4/50 (8%)	OR 0.50 (0.1 to 2.56)	38 fewer per 1000 (from 71 fewer to 102 more)	⊕⊕⊕◯ MODERATE	IMPORTANT
vomiting - oral diclofenac vs. NaCl												
1[8]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[4]	none	4/50 (8%)	2/50 (4%)	OR 2.02 (0.39 to 10.43)	38 more per 1000 (from 24 fewer to 263 more)	⊕⊕⊕◯ MODERATE	IMPORTANT
vomiting - diclofenac IM vs. NaCl												
1[8]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[4]	none	3/50 (6%)	2/50 (4%)	OR 1.52 (0.25 to 9.08)	20 more per 1000 (from 30 fewer to 234 more)	⊕⊕⊕◯ MODERATE	IMPORTANT
vomiting - ketorolac IM vs. NaCl												
1[8]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[4]	none	1/50 (2%)	2/50 (4%)	OR 0.51 (0.05 to 4.98)	19 fewer per 1000 (from 38 fewer to 132 more)	⊕⊕⊕◯ MODERATE	IMPORTANT
time to discharge - oral paracetamol vs. placebo (Better indicated by lower values)												
1[6]	randomized trials	serious [7]	no serious inconsistency	no serious indirectness	serious[9]	none	70	70	-	MD 6.00 higher (3.45 lower to 15.45 higher)	⊕⊕◯◯ LOW	IMPORTANT

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	COX inhibitors	placebo	Relative (95% CI)	Absolute		Importance
time to discharge - lomoxicam vs. placebo (Better indicated by lower values)												
1[6]	randomized trials	serious [7]	no serious inconsistency	no serious indirectness	serious[9]	none	70	70	-	MD 2.00 lower (9.87 lower to 5.87 higher)	⊕⊕◯◯ LOW	IMPORTANT
time to discharge - lomoxicam vs. oral paracetamol (Better indicated by lower values)												
1[6]	randomized trials	serious [7]	no serious inconsistency	no serious indirectness	serious[9]	none	70	70	-	MD 8.00 lower (16.45 lower to 0.45 higher)	⊕⊕◯◯ LOW	IMPORTANT
time to discharge - oral diclofenac vs. NaCl (Better indicated by lower values)												
1[8]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[9]	none	50	50	-	MD 4.00 lower (17.69 lower to 9.69 higher)	⊕⊕⊕◯ MODERATE	IMPORTANT
time to discharge - diclofenac IM vs. NaCl (Better indicated by lower values)												
1[8]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[9]	none	50	50	-	MD 4.00 lower (16.93 lower to 8.93 higher)	⊕⊕⊕◯ MODERATE	IMPORTANT
time to discharge - ketorolac IM vs. NaCl (Better indicated by lower values)												
1[8]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[9]	none	50	50	-	MD 6.00 lower (19.38 lower to 7.38 higher)	⊕⊕⊕◯ MODERATE	IMPORTANT
time to discharge - oral diclofenac vs. ketorolac IM (Better indicated by lower values)												
1[8]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[9]	none	50	50	-	MD 2.00 higher (8.98 lower to 12.98 higher)	⊕⊕⊕◯ MODERATE	IMPORTANT

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	COX inhibitors	placebo	Relative (95% CI)	Absolute		Importance
time to discharge - diclofenac IM vs. ketorolac IM (Better indicated by lower values)												
1[8]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[9]	none	50	50	-	MD 2.00 higher (8.01 lower to 12.01 higher)	⊕⊕⊕◯ MODERATE	IMPORTANT

1 Gestational age ranged from 5 to 14 weeks among included trials, with most including women with gestational age up to 12 weeks.
2 Hein 1999
3 There was no allocation concealment, therefore considered inadequate.
4 Total number of events < 300.
5 Indirect measurement of nausea.
6 Hein 2001
7 Method of randomization was unclear.
8 Jakobsson 1996
9 Based on one trial only with small sample size.

Author(s): P. Whyte
Date: 2010-03-11
Question: Should nalbuphine vs. fentanyl be used for pain management in first trimester surgical abortion?[1]
Bibliography: Renner RM et al. Pain control in first trimester surgical abortion. *Cochrane Database of Systematic Reviews*, 2009, (2):CD006712.

Table 59:

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	nalbuphine	fentanyl	Relative (95% CI)	Absolute		Importance
recovery (reaction time (msec)) 1 hour postoperatively (Better indicated by lower values)												
1[2]	randomized trials	serious[3]	no serious inconsistency	no serious indirectness	serious[4]	none	20	20	-	MD 22.70 higher (4.94 lower to 50.34 higher)	⊕⊕◯◯ LOW	IMPORTANT
recovery (reaction time (msec) 2 hours postoperatively (Better indicated by lower values)												
1[2]	randomized trials	serious[3]	no serious inconsistency	no serious indirectness	serious[4]	none	20	20	-	MD 11.20 higher (14.99 lower to 37.39 higher)	⊕⊕◯◯ LOW	IMPORTANT
recovery (reaction time (msec) 4 hours postoperatively (Better indicated by lower values)												
1[2]	randomized trials	serious[3]	no serious inconsistency	no serious indirectness	serious[4]	none	20	20	-	MD 6.20 higher (16.29 lower to 28.69 higher)	⊕⊕◯◯ LOW	IMPORTANT

1 Gestational age ranged from 5 to 14 weeks among included trials, with most including women with gestational age up to 12 weeks.
2 Bone 1988
3 Unclear trial length, method of randomization and allocation concealment.
4 Based on one trial only with small sample size.

Author(s): P. Whyte
Date: 2010-03-11
Question: Should non-pharmacological interventions be used for pain management in first trimester surgical abortion?[1]
Bibliography: Renner RM et al. Pain control in first trimester surgical abortion. *Cochrane Database of Systematic Reviews*, 2009, (2):CD006712.

Table 60:

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	non-pharmacological interventions	control	Relative (95% CI)	Absolute		Importance
hypnosis vs. control - level of comfort during procedure (measured with: 11 point verbal scale; range of scores: 0-10; Better indicated by lower values)												
1[2]	randomized trials	serious[3]	no serious inconsistency	no serious indirectness	serious[4]	none	14	15	-	MD 0.30 lower (2.34 lower to 1.74 higher)	⊕⊕◯◯ LOW	CRITICAL
hypnosis vs control - N2O request												
1[2]	randomized trials	serious[3]	no serious inconsistency	serious[9]	serious[4]	none	5/14 (35.7%)	13/15 (86.7%)	OR 0.12 (0.03 to 0.54)	428 fewer per 1000 (from 88 fewer to 703 fewer)	⊕◯◯◯ VERY LOW	CRITICAL
music vs. methoxyflurane - pain with aspiration												
1[6]	randomized trials	serious[7,8]	no serious inconsistency	no serious indirectness	serious[4]	none	3/53 (5.7%)	12/45 (26.7%)	OR 0.17 (0.04 to 0.63)	208 fewer per 1000 (from 80 fewer to 252 fewer)	⊕⊕◯◯ LOW	CRITICAL

1 Gestational age ranged from 5 to 14 weeks among included trials, with most including women with gestational age up to 12 weeks.
2 Marc 2007
3 Trial was not blinded due to hypnosis, however this may introduce bias.
4 Total number of events < 300.
5 Outcome ranking not provided.
6 Shapiro 1975
7 Unclear trial length, method of randomization and allocation concealment.
8 Although the Renner (2009) review includes this comparison under 'non-pharmacological interventions' it uses a pharmacological intervention in one of the trial arms.
9 Subsequent use of N2O is an indirect measure of pain.

Surgical methods for incomplete abortion

A systematic review (Tuncalp et al., 2009) compared surgical methods of managing incomplete miscarriage. The review compared vacuum aspiration and dilatation and curettage, with the outcomes assessed including uterine perforation, need for re-evacuation, sepsis, blood loss, duration of procedure and duration of bleeding.

Only two trials were included in the review, one dating from 1969 and the second from the 1990s. Gestational age was <18 weeks in the later trial and not specified in the 1969 trial. Trial quality is very low to moderate, with some comparisons only including one trial and the 1969 trial not mentioning allocation concealment or blinding of outcome assessment.

There were no statistically significant differences in uterine perforation, need for re-evacuation, and occurrence of sepsis and duration of bleeding (see Table 65 below). Vacuum aspiration was associated with less pain and decreased blood loss compared to D&C and had a shorter duration of procedure. The authors conclude that vacuum aspiration is safe, quicker to perform and less painful than D&C. Conclusions of the review are limited by the small number of trials included and the large loss to follow-up rate in one of the trials (greater than 20% in each treatment arm); however, the results are consistent with comparisons of vacuum aspiration compared to D&C for induced abortion in the first trimester.

Author(s): P. Whyte
Date: 2010-03-09
Question: Should vacuum aspiration vs. D&C be used for incomplete abortion?[1]
Bibliography: Tunçalp O, Gülmezoglu AM, Souza JP. Surgical procedures for evacuating incomplete miscarriage. *Cochrane Database of Systematic Reviews*, 2010, (9):CD001993.

Table 65:

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	vacuum aspiration	D&C	Relative (95% CI)	Absolute		Importance
uterine perforation												
2[2]	randomized trials	serious[3]	no serious inconsistency	no serious indirectness	very serious[4,6]	none	0/227 (0%)	1/221 (0.5%)	RR 0.32 (0.01 to 7.76)	3 fewer per 1000 (from 4 fewer to 31 more)	⊕○○○ VERY LOW	CRITICAL
need for re-evacuation of uterus												
2[2]	randomized trials	serious[3]	no serious inconsistency	no serious indirectness	very serious[4,6]	none	3/227 (1.3%)	2/221 (0.9%)	RR 1.50 (0.29 to 7.83)	5 more per 1000 (from 6 fewer to 62 more)	⊕○○○ VERY LOW	CRITICAL
sepsis												
1[5]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	very serious[4,7]	none	2/138 (1.4%)	7/132 (5.3%)	RR 0.27 (0.06 to 1.29)	39 fewer per 1000 (from 50 fewer to 15 more)	⊕⊕○○ LOW	CRITICAL
moderate to severe pain												
1[5]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	very serious[4,7]	none	85/179 (47.5%)	114/178 (64%)	RR 0.74 (0.61 to 0.9)	167 fewer per 1000 (from 64 fewer to 250 fewer)	⊕⊕○○ LOW	IMPORTANT
blood loss >=100mL												
1[5]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	very serious[4,7]	none	5/179 (2.8%)	18/178 (10.1%)	RR 0.28 (0.1 to 0.73)	73 fewer per 1000 (from 27 fewer to 91 fewer)	⊕⊕○○ LOW	IMPORTANT

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	vacuum aspiration	D&C	Relative (95% CI)	Absolute		Importance
blood loss (mls) (Better indicated by lower values)												
1[5]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	very serious[4,7]	none	179	178	-	MD 17.10 lower (24.05 to 10.15 lower)	⊕⊕◯◯ LOW	IMPORTANT
post-op haemoglobin level <10g/dL												
1[5]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	very serious[4,7]	none	20/138 (14.5%)	35/132 (26.5%)	RR 0.55 (0.33 to 0.9)	119 fewer per 1000 (from 27 fewer to 178 fewer)	⊕⊕◯◯ LOW	IMPORTANT
duration of procedure (mins) (Better indicated by lower values)												
1[5]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	very serious[4,7]	none	179	178	-	MD 1.20 lower (0 higher to 0.87 lower)	⊕⊕◯◯ LOW	IMPORTANT
duration of bleeding (days) (Better indicated by lower values)												
1[5]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	very serious[4,7]	none	138	132	-	MD 1.30 lower (0 to 0.7 higher)	⊕⊕◯◯ LOW	IMPORTANT

1 Gestational age was <18 weeks in the later trial and not specified in the 1969 trial.
2 Tan 1969; Verkuyl 1993
3 The Tan (1969) trial does not mention concealment of allocation nor does it indicate if outcome observers were blinded.
4 There was a relatively high rate of lost-to-follow-up in the Verkuyl (1993) trial, with over 20% of patients in each treatment arm being lost to follow-up.
5 Verkuyl 1993
6 Wide confidence interval.
7 Based on one only one trial.

Antibiotics for prevention of infection in first trimester abortion

A systematic review by Low et al (2012) assessed the use of antibiotic prophylaxis for surgical and medical first trimester abortion, although no comparative trials were identified for medical abortion. The outcome considered was the occurrence of post-abortion pelvic inflammatory disease (PID) and the review assessed trial methodology (e.g. double-blind or not), antibiotic administration methods, the type of antibiotic used, and patients' previous history of PID.

The trial quality was generally moderate, with a large number of trials included in most analyses. However the majority of trials (14 of 17) are dated and may not reflect current use of antibiotics. Gestational age was not specified in the review, but all trials were described as including women in the first trimester.

Overall, there was a statistically significant advantage associated with the use of antibiotics to prevent post-abortion PID when compared to placebo (Table 66: RR=0.60; 95% CI: 0.47, 0.77) for surgical abortion. Nitromidazole, penicillin and tetracycline appear to be the most effective antibiotic agents studied (Table 67). Single dose antibiotic administration pre- or peri-operatively was as effective as antibiotics continued over the following few days (Table 68). The GRADE tables below (Tables 66-69) provide a summary of the comparisons presented in the review.

Recent guidelines prepared by the Society of Family Planning in the US (Achilles et al., 2011) address the use of antibiotics for the prevention of infection following abortion. In addition to surgical abortion, the publication assesses infection following medical abortion. Based on six studies, including 21,435 patients, which reported infection as an outcome (Creinin et al., 2004; Creinin et al., 2007; Schaff et al., 1999; Silvestre et al., 1990; Spit et al., 1998; Ulmann et al., 1992) the risk of infection following medical abortion was 0.32% (95% CI: 0.23%, 0.38%).

A retrospective analysis of the rates of serious infection obtained from Planned Parenthood databases in the US (Fjerstad et al., 2009) compared infections from 2005 to 2006 (Period 1) when vaginal misoprostol and standard antiseptic measures when used to three subsequent time periods: April 2006 to June 2007 (Period 2) when buccal misoprostol was used as well as screening for sexually transmitted infections and routine provision of antibiotics, with the latter two measures not used across all Planned Parenthood centres; July 2007 to December 2007 (Period 3) when buccal misoprostol was used through 56 days of gestation and all health centres provided an antibiotic regimen; January 2008 to June 2008 (Period 4) when buccal misoprostol was used through 63 days gestation and all centres provided an antibiotic regimen. The antibiotic regimen used was 100mg of oral doxycycline twice daily for seven days. The analysis population included 227,823 women, for whom 92 serious infections were reported.

The retrospective analyses demonstrated an absolute reduction of 0.86 per 1000 (95% CI: 0.64, 1.12; $p<0.001$) in the rate of serious infection between Periods 1 and 4 (see Table 70). While the reduction in rate of serious infection is considerable, the results of the Fjerstad et al. (2009) analyses should be interpreted with caution, given that the observational, retrospective design of the analyses makes it very low quality evidence as it may be susceptible to bias and does not allow for determination of cause and effect.

Author(s): P. Whyte
Date: 2010-03-08
Question: Should antibiotics vs. control be used to prevent pelvic inflammatory disease following surgical abortion - trial methodology?
Bibliography: Low N et al. Perioperative antibiotics to prevent infection after first-trimester abortion. *Cochrane Database of Systematic Reviews*, 2012, 2012, (3):CD005217.

Table 66:

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	antibiotics	control	Relative (95% CI)	Absolute		Importance
overall PID												
17[1]	randomized trials	serious[2]	no serious inconsistency	no serious indirectness	no serious imprecision	none	208/3801 (5.5%)	335/3834 (8.7%)	RR 0.60 (0.47 to 0.77)	35 fewer per 1000 (from 20 fewer to 46 fewer)	⊕⊕⊕◯ MODERATE	CRITICAL
PID in trials with method of randomization described												
12[3]	randomized trials	serious[4]	no serious inconsistency	no serious indirectness	no serious imprecision	none	101/2567 (3.9%)	183/2585 (7.1%)	RR 0.54 (0.37 to 0.78)	33 fewer per 1000 (from 16 fewer to 45 fewer)	⊕⊕⊕◯ MODERATE	CRITICAL
PID in trials with method of randomization not described												
5[5]	randomized trials	serious[6]	no serious inconsistency	no serious indirectness	no serious imprecision	none	107/1234 (8.7%)	152/1249 (12.2%)	RR 0.71 (0.53 to 0.94)	35 fewer per 1000 (from 7 fewer to 57 fewer)	⊕⊕⊕◯ MODERATE	CRITICAL
PID in trials with concealment of allocation described												
5[7]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	no serious imprecision	none	44/1510 (2.9%)	101/1517 (6.7%)	RR 0.42 (0.23 to 0.79)	39 fewer per 1000 (from 14 fewer to 51 fewer)	⊕⊕⊕◯ HIGH	CRITICAL
PID in trials with concealment of allocation not described												
12[8]	randomized trials	serious[4]	no serious inconsistency	no serious indirectness	no serious imprecision	none	164/2291 (7.2%)	234/2317 (10.1%)	RR 0.70 (0.55 to 0.89)	30 fewer per 1000 (from 11 fewer to 45 fewer)	⊕⊕⊕◯ MODERATE	CRITICAL
PID in double-blind trials												
15[9]	randomized trials	serious[4]	no serious inconsistency	no serious indirectness	no serious imprecision	none	139/3022 (4.6%)	236/3048 (7.7%)	RR 0.57 (0.42 to 0.78)	33 fewer per 1000 (from 17 fewer to 45 fewer)	⊕⊕⊕◯ MODERATE	CRITICAL
PID in trials that were not double-blinded												
2[10]	randomized trials	serious[11]	no serious inconsistency	no serious indirectness	no serious imprecision	none	69/779 (8.9%)	99/786 (12.6%)	RR 0.68 (0.46 to 1.02)	40 fewer per 1000 (from 68 fewer to 3 more)	⊕⊕⊕◯ MODERATE	CRITICAL

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	antibiotics	control	Relative (95% CI)	Absolute		Importance
PID in trials with placebo control arm												
15[12]	randomized trials	serious[4]	no serious inconsistency	no serious indirectness	no serious imprecision	none	199/3501 (5.7%)	330/3523 (9.4%)	RR 0.57 (0.45 to 0.74)	40 fewer per 1000 (from 24 fewer to 52 fewer)	⊕⊕⊕◯ MODERATE	CRITICAL
PID in trials with antibiotic control arm												
2[13]	randomized trials	serious[6]	no serious inconsistency	no serious indirectness	serious[14]	none	9/300 (3%)	5/311 (1.6%)	RR 1.53 (0.57 to 4.06)	9 more per 1000 (from 7 fewer to 49 more)	⊕⊕◯◯ LOW	CRITICAL

1 Crowley 2001; Darj 1987; Heisterberg 1985b; Heisterberg 1985c; Heisterberg 1986; Heisterberg 1987; Heisterberg 1988; Krohn 1981; Krohn 1986; Larsson 1992; Larsson 2000; Levallois 1988; Lichtenberg 2003; Nielsen 1993; Sonne-Holm 1981; Sorensen 1992; Westrom 1981
2 Concealment of allocation not described in 12 of the 17 trials; 2 of the 17 trials were not double-blinded.
3 Crowley 2001; Darj 1987; Heisterberg 1985c; Heisterberg 1986; Heisterberg 1987; Heisterberg 1988; Krohn 1981; Krohn 1986; Larsson 2000; Levallois 1988; Lichtenberg 2003; Sorensen 1992
4 The majority of the trials did not have allocation concealment described.
5 Heisterberg 1985b; Larsson 1992; Nielsen 1993; Sonne-Holm 1981; Westrom 1981
6 Allocation concealment not described.
7 Crowley 2001; Darj 1987; Levallois 1988; Lichtenberg 2003; Sorensen 1992
8 Heisterberg 1985b; Heisterberg 1985c; Heisterberg 1986; Heisterberg 1987; Heisterberg 1988; Krohn 1981; Krohn 1986; Larsson 1992; Larsson 2000; Nielsen 1993; Sonne-Holm 1981; Westrom 1981
9 Crowley 2001; Darj 1987; Heisterberg 1985b; Heisterberg 1985c; Heisterberg 1986; Heisterberg 1987; Heisterberg 1988; Krohn 1981; Krohn 1986; Larsson 1992; Larsson 2000; Levallois 1988; Lichtenberg 2003; Sorensen 1992; Westrom 1981
10 Nielsen 1993; Sonne-Holm 1981
11 trials were not double-blinded and allocation concealment was not described.
12 Crowley 2001; Darj 1987; Heisterberg 1985b; Heisterberg 1985c; Heisterberg 1987; Heisterberg 1988; Krohn 1981; Krohn 1986; Larsson 1992; Larsson 2000; Levallois 1988; Nielsen 1993; Sonne-Holm 1981; Sorensen 1992; Westrom 1981
13 Heisterberg 1986; Lichtenberg 2003
14 Wide confidence interval.

Author(s): P. Whyte
Date: 2010-03-08
Question: Should antibiotics vs. control be used to prevent pelvic inflammatory disease following surgical abortion - type of antibiotic?
Bibliography: Low N et al. Perioperative antibiotics to prevent infection after first-trimester abortion. *Cochrane Database of Systematic Reviews*, 2012, 2012, (3):CD005217.

Table 67:

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	antibiotics	control	Relative (95% CI)	Absolute		Importance
PID in trials comparing nitromidazole and placebo												
6[1]	randomized trials	serious[2]	no serious inconsistency	no serious indirectness	no serious imprecision	none	40/547 (7.3%)	77/540 (14.3%)	RR 0.53 (0.37 to 0.77)	67 fewer per 1000 (from 33 fewer to 90 fewer)	⊕⊕⊕◯ MODERATE	CRITICAL
PID in trials comparing tetracycline and placebo												
4[3]	randomized trials	serious[2]	no serious inconsistency	no serious indirectness	no serious imprecision	none	38/1215 (3.1%)	82/1218 (6.7%)	RR 0.37 (0.14 to 0.98)	42 fewer per 1000 (from 1 fewer to 58 fewer)	⊕⊕⊕◯ MODERATE	CRITICAL
PID in trials comparing penicillin and placebo												
2[4]	randomized trials	serious[2]	no serious inconsistency	no serious indirectness	no serious imprecision	none	18/399 (4.5%)	37/378 (9.8%)	RR 0.46 (0.27 to 0.8)	53 fewer per 1000 (from 20 fewer to 71 fewer)	⊕⊕⊕◯ MODERATE	CRITICAL
PID in trials comparing chinolom and placebo												
1[5]	randomized trials	serious[6]	no serious inconsistency	no serious indirectness	serious[9]	none	55/525 (10.5%)	73/548 (13.3%)	RR 0.79 (0.57 to 1.09)	28 fewer per 1000 (from 57 fewer to 12 more)	⊕⊕◯◯ LOW	CRITICAL
PID in trials comparing macrolide and placebo												
1[8]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[9]	none	20/189 (10.6%)	30/189 (15.9%)	RR 0.67 (0.39 to 1.13)	52 fewer per 1000 (from 97 fewer to 21 more)	⊕⊕⊕◯ MODERATE	CRITICAL

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	antibiotics	control	Relative (95% CI)	Absolute		Importance
PID in trials comparing glycoside and placebo												
1[10]	randomized trials	serious[6]	no serious inconsistency	no serious indirectness	serious[9]	none	28/626 (4.5%)	31/650 (4.8%)	RR 0.94 (0.57 to 1.54)	3 fewer per 1000 (from 21 fewer to 26 more)	⊕⊕◯◯ LOW	CRITICAL
all antibiotics vs. placebo												
15[11]	randomized trials	serious[7]	no serious inconsistency	no serious indirectness	no serious imprecision	none	199/3501 (5.7%)	330/3523 (9.4%)	RR 0.57 (0.45 to 0.74)	40 fewer per 1000 (from 24 fewer to 52 fewer)	⊕⊕⊕◯ MODERATE	CRITICAL

1 Crowley 2001; Heisterberg 1985c; Heisterberg 1987; Krohn 1981; Larsson 1992; Westrom 1981
2 Allocation concealment was not described in the trials.
3 Darj 1987; Heisterberg 1985b; Heisterberg 1988; Levallois 1988
4 Krohn 1986; Sonne-Holm 1981
5 Nielsen 1993
6 Allocation concealment not described.
7 Allocation concealment not described in the majority of trials.
8 Sorensen 1992
9 Total number of events < 300.
10 Larsson 2000
11 Crowley 2001; Heisterberg 1985c; Heisterberg 1987; Krohn 1981; Larsson 1992; Westrom 1981; Darj 1987; Heisterberg 1985b; Heisterberg 1988; Levallois 1988; Krohn 1986; Sonne-Holm 1981; Nielsen 1993; Sorensen 1992; Larsson 2000

Author(s): P. Whyte
Date: 2010-03-08
Question: Should antibiotics vs. control be used to prevent pelvic inflammatory disease following surgical abortion - antibiotic administration methods?
Bibliography: Low N et al. Perioperative antibiotics to prevent infection after first-trimester abortion. *Cochrane Database of Systematic Reviews*, 2012, 2012, (3):CD005217.

Table 68:

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	antibiotics	control	Relative (95% CI)	Absolute		Importance
PID with antibiotics given orally												
11[1]	randomized trials	serious[2]	no serious inconsistency	no serious indirectness	no serious imprecision	none	141/2334 (6%)	241/2364 (10.2%)	RR 0.54 (0.39 to 0.76)	47 fewer per 1000 (from 24 fewer to 62 fewer)	⊕⊕⊕◯ MODERATE	CRITICAL
PID with antibiotics given IV												
1[3]	randomized trials	serious[4]	no serious inconsistency	no serious indirectness	serious[5]	none	4/145 (2.8%)	11/140 (7.9%)	RR 0.35 (0.11 to 1)	51 fewer per 1000 (from 70 fewer to 0 more)	⊕⊕◯◯ LOW	CRITICAL
PID with antibiotics given per rectum												
1[6]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[5]	none	12/142 (8.5%)	21/131 (16%)	RR 0.53 (0.27 to 1.03)	75 fewer per 1000 (from 117 fewer to 5 more)	⊕⊕⊕◯ MODERATE	CRITICAL
PID with antibiotics given intravaginally												
1[7]	randomized trials	serious[8]	no serious inconsistency	no serious indirectness	serious[5]	none	28/626 (4.5%)	31/650 (4.8%)	RR 0.94 (0.5 to 1.54)	3 fewer per 1000 (from 24 fewer to 26 more)	⊕⊕◯◯ LOW	CRITICAL
PID with antibiotics given IV initially and orally subsequently												
1[10]	randomized trials	serious[8]	no serious inconsistency	no serious indirectness	serious[5]	none	14/254 (5.5%)	26/238 (10.9%)	RR 0.50 (0.27 to 0.94)	55 fewer per 1000 (from 7 fewer to 80 fewer)	⊕⊕◯◯ LOW	CRITICAL

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	antibiotics	control	Relative (95% CI)	Absolute		Importance
PID with pre-operative administration of antibiotics												
4[11]	randomized trials	serious[2]	no serious inconsistency	no serious indirectness	no serious imprecision	none	52/1218 (4.3%)	83/1249 (6.6%)	RR 0.62 (0.39 to 0.98)	25 fewer per 1000 (from 1 fewer to 41 fewer)	⊕⊕⊕◯ MODERATE	CRITICAL
PID with perioperative administration of antibiotics												
6[12]	randomized trials	serious[8]	no serious inconsistency	no serious indirectness	no serious imprecision	none	83/1463 (5.7%)	148/1463 (10.1%)	RR 0.44 (0.25 to 0.79)	57 fewer per 1000 (from 21 fewer to 76 fewer)	⊕⊕⊕◯ MODERATE	CRITICAL
PID with peri and post-operative administration of antibiotics												
1[10]	randomized trials	serious[8]	no serious inconsistency	no serious indirectness	serious[5]	none	14/254 (5.5%)	26/238 (10.9%)	RR 0.50 (0.27 to 0.94)	55 fewer per 1000 (from 7 fewer to 80 fewer)	⊕⊕◯◯ LOW	CRITICAL
PID with pre and post-operative administration of antibiotics												
4[13]	randomized trials	serious[2]	no serious inconsistency	no serious indirectness	no serious imprecision	none	50/566 (8.8%)	73/573 (12.7%)	RR 0.50 (0.27 to 0.94)	64 fewer per 1000 (from 8 fewer to 93 fewer)	⊕⊕⊕◯ MODERATE	CRITICAL
PID with single dose antibiotics												
6[14]	randomized trials	serious[2]	no serious inconsistency	no serious indirectness	no serious imprecision	none	95/1404 (6.8%)	157/1418 (11.1%)	RR 0.60 (0.45 to 0.8)	44 fewer per 1000 (from 22 fewer to 61 fewer)	⊕⊕⊕◯ MODERATE	CRITICAL
PID with more than one antibiotic dose on the same day												
3[15]	randomized trials	serious[8]	serious[16]	no serious indirectness	no serious imprecision	none	12/651 (1.8%)	43/644 (6.7%)	RR 0.28 (0.07 to 1.06)	48 fewer per 1000 (from 62 fewer to 4 more)	⊕⊕◯◯ LOW	CRITICAL

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	antibiotics	control	Relative (95% CI)	Absolute		Importance
PID with continuous antibiotic administration over several days												
6[9]	randomized trials	serious[2]	serious	no serious indirectness	serious[5]	none	92/1446 (6.4%)	130/1461 (8.9%)	RR 0.70 (0.52 to 0.96)	27 fewer per 1000 (from 4 fewer to 43 fewer)	⊕○○○ VERY LOW	CRITICAL

1 Darj 1987; Heisterberg 1985b; Heisterberg 1985c; Heisterberg 1987; Heisterberg 1988; Krohn 1981; Larsson 1992; Levallois 1988; Nielsen 1993; Sorensen 1992; Westrom 1981
2 Allocation concealment was not described for the majority of trials.
3 Krohn 1986
4 Method of randomization unclear and allocation concealment not described.
5 Total number of events < 300.
6 Crowley 2001
7 Larsson 2000
8 Allocation concealment not described.
9 Heisterberg 1985b; Heisterberg 1988; Larsson 1992; Larsson 2000; Sonne-Holm 1981; Sorensen 1992
10 Sonne-Holm 1981
11 Darj 1987; Krohn 1981; Larsson 2000; Westrom 1981
12 Crowley 2001; Heisterberg 1985c; Heisterberg 1987; Krohn 1986; Levallois 1988; Nielsen 1993
13 Heisterberg 1985b; Heisterberg 1988; Larsson 1992; Sorensen 1992
14 Crowley 2001; Darj 1987; Krohn 1981; Krohn 1986; Nielsen 1993; Westrom 1981
15 Heisterberg 1985c; Heisterberg 1987; Levallois 1988
16 High heterogeneity in this analysis with I^2=73%.

Author(s): P. Whyte
Date: 2010-03-08
Question: Should antibiotics vs. control be used to prevent pelvic infection disease following surgical abortion with previous history of PID?
Bibliography: Low N et al. Perioperative antibiotics to prevent infection after first-trimester abortion. *Cochrane Database of Systematic Reviews*, 2012, 2012, (3):CD005217.

Table 69:

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	antibiotics	control	Relative (95% CI)	Absolute		Importance
PID in trials where not all women suffered from previous PID - women with previous history of PID												
5[1]	randomized trials	serious[2]	no serious inconsistency	no serious indirectness	no serious imprecision	none	33/339 (9.7%)	61/353 (17.3%)	RR 0.55 (0.32 to 0.96)	78 fewer per 1000 (from 7 fewer to 118 fewer)	⊕⊕⊕◯ MODERATE	CRITICAL
PID in trials where not all women suffered from previous PID - women without previous history of PID												
5[1]	randomized trials	serious[2]	no serious inconsistency	no serious indirectness	no serious imprecision	none	66/1062 (6.2%)	102/1058 (9.6%)	RR 0.66 (0.45 to 0.96)	33 fewer per 1000 (from 4 fewer to 53 fewer)	⊕⊕⊕◯ MODERATE	CRITICAL
PID in trials where all women suffered from previous PID												
3[3]	randomized trials	serious[2]	no serious inconsistency	no serious indirectness	no serious imprecision	none	17/131 (13%)	19/123 (15.4%)	RR 0.80 (0.45 to 1.71)	31 fewer per 1000 (from 85 fewer to 110 more)	⊕⊕⊕◯ MODERATE	CRITICAL
PID in Chlamydia positive women												
2[4]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[5]	none	8/42 (19%)	9/43 (20.9%)	RR 0.84 (0.18 to 3.03)	33 fewer per 1000 (from 172 fewer to 425 more)	⊕⊕⊕◯ MODERATE	CRITICAL
PID in Chlamydia negative women												
2[4]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[5]	none	37/416 (8.9%)	46/419 (11%)	RR 0.84 (0.18 to 3.03)	18 fewer per 1000 (from 90 fewer to 223 more)	⊕⊕⊕◯ MODERATE	CRITICAL

1 Dark 1987; Heisterberg 1985c; Nielsen 1993; Sonne-Holm 1981; Sorensen 1992
2 Allocation concealment was not described for the majority of trials.
3 Heisterberg 1986; Heisterberg 1987; Heisterberg 1988
4 Heisterberg 1985b; Sorensen 1992
5 Total number of events < 300.

Author(s): P. Whyte
Date: 2010-03-24
Question: Should vaginal misoprostol vs. buccal misoprostol with antibiotics to prevent PID be used among women undergoing medical abortion?
Bibliography: Fjerstad M. Rates of serious infection after changes in regimens for medical abortion. *New England Journal of Medicine*, 2009: 9;361(2):145-51.

Table 70:

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	vaginal misoprostol	buccal misoprostol	Relative (95% CI)	Absolute		Importance
rate of serious infection												
1[1]	observational studies[2]	very serious[3]	no serious inconsistency	no serious indirectness	no serious imprecision	none	67/72195 (0.1%)	3/43366 (0%)	0 (0 to 0)	0.86 per 100)[4]	⊕○○○ VERY LOW	CRITICAL

1 Fjerstad 2009
2 Retrospective analysis of Planned Parenthood databases comparing rates of infection when vaginal misoprostol was used to rates when buccal misoprostol was used and all centres used additional infection-reduction measures.
3 Non-randomized, retrospective review.
4 Absolute reduction as presented in article.

Medical methods for second trimester abortion

A systematic review by Wildschut et al. (2011) compares different medical methods of second trimester abortion (12-24 weeks). The following comparisons were included: misoprostol versus gemeprost; vaginal, oral or sublingual misoprostol; mifepristone and misoprostol versus mifepristone and gemeprost; misoprostol versus misoprostol combined with oxytocin; time interval of dosing misoprostol and gemeprost; mifepristone and misoprostol versus misoprostol alone; dry tablet versus gel misoprostol; misoprostol versus ethacridine lactate; misoprostol versus ethacridine lactate and oxytocin; misoprostol and oxytocin versus ethacridine lactate; misoprostol and oxytocin versus ethacridine lactate and oxytocin; ethacridine lactate versus ethacridine lactate plus oxytocin; and prostaglandin F2α (PGF2α) versus hypertonic saline. The primary outcomes assessed included induction to abortion interval and number of complete abortions within 24 hours, with secondary outcomes including need for surgical evacuation, complications, and side-effects.

A total of 38 trials were included in the review and 20 different regimens were compared. Gestational age ranged from 12 to 28 weeks among included trials, with the most common range being 13-24 weeks. The trial quality ranged from very low to moderate, with many comparisons including only one trial, and most trials being unblinded. Some comparisons had very wide confidence intervals indicating their lack of precision. In addition, a number of the comparisons combined trials using different treatment regimens and doses in the same comparator arm. The review did not justify these analyses and it is likely that the results are biased, given the varying treatment regimens used (see Table 76 below).

The result of the review indicated that misoprostol, when used at moderate doses, is the most effective prostaglandin and is associated with the fewest side-effects. Sublingual and vaginal administration are equally effective (Table 75, 77), while oral misoprostol is the least effective of the administration routes (Table 74). Evidence from one trial indicated greater efficacy and shorter time to abortion when misoprostol was combined with mifepristone compared to misoprostol alone (Table 84). Side-effects associated with misoprostol use included diarrhoea, nausea and vomiting, all of which are usually mild and self-limiting.

Vaginal misoprostol when combined with oxytocin is more efficient than ethacridine lactate (Table 95-96). Hypertonic saline is less efficient than PGF2α but associated with lower blood loss (Table 101). Differences in complication rates between methods are not described as a small number of trials are included in each comparison.

The comparisons presented in the review are summarised in GRADE tables 71-98. The results of the review should be interpreted with caution, given the small numbers of trials included in each comparison, lack of blinding, wide confidence intervals and combination of differing treatment regimens in the analyses.

Author(s): P. Whyte
Date: 2010-02-06
Question: Should misoprostol vs. intra-amniotic prostaglandin be used for second trimester abortion?[1]
Bibliography: Wildschut H et al. Medical methods for mid-trimester termination of pregnancy. *Cochrane Database of Systematic Reviews*, 2011, (1):CD005216.

Table 71:

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	misoprostol	intra-amniotic prostaglandin	Relative (95% CI)	Absolute		Importance
vaginal misoprostol 400mcg induction to abortion interval (Better indicated by lower values)												
2[2]	randomized trials	serious[3]	no serious inconsistency	no serious indirectness	no serious imprecision	none	141	142	-	MD 3.61 lower (5.71 to 1.5 lower)	⊕⊕⊕◯ MODERATE	IMPORTANT
oral misoprostol 400mcg induction to abortion interval (Better indicated by lower values)												
1[4]	randomized trials	serious[3]	no serious inconsistency	no serious indirectness	serious[5]	none	52	81	-	MD 9.40 higher (4.9 to 13.9 higher)	⊕⊕◯◯ LOW	IMPORTANT
vaginal misoprostol 400mcg abortion within 24 hours												
1[7]	randomized trials	serious[3]	no serious inconsistency	no serious indirectness	serious[6]	none	45/61 (73.8%)	43/61 (70.5%)	OR 1.18 (0.53 to 2.6)	33 more per 1000 (from 146 fewer to 156 more)	⊕⊕◯◯ LOW	CRITICAL
vaginal or oral misoprostol 400mcg surgical evacuation												
3[8]	randomized trials	serious[3]	no serious inconsistency	no serious indirectness	no serious imprecision	none	64/197 (32.5%)	100/223 (44.8%)	OR 0.61 (0.41 to 0.93)	117 fewer per 1000 (from 18 fewer to 198 fewer)	⊕⊕⊕◯ MODERATE	CRITICAL
vaginal misoprostol 400mcg pain												
1[9]	randomized trials	serious[3]	no serious inconsistency	no serious indirectness	serious[6]	none	54/70 (77.1%)	46/57 (80.7%)	OR 0.81 (0.34 to 1.91)	35 fewer per 1000 (from 220 fewer to 82 more)	⊕⊕◯◯ LOW	CRITICAL
oral misoprostol 400mcg pain												
1[4]	randomized trials	serious[3]	no serious inconsistency	no serious indirectness	serious[6]	none	35/38 (92.1%)	46/57 (80.7%)	OR 2.79 (0.72 to 10.76)	114 more per 1000 (from 56 fewer to 171 more)	⊕⊕◯◯ LOW	CRITICAL
vaginal or oral misoprostol 400mcg nausea												
3[8]	randomized trials	serious[3]	no serious inconsistency	no serious indirectness	no serious imprecision	none	53/165 (32.1%)	79/175 (45.1%)	OR 0.58 (0.37 to 0.92)	128 fewer per 1000 (from 21 fewer to 218 fewer)	⊕⊕⊕◯ MODERATE	CRITICAL

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	misoprostol	intra-amniotic prostaglandin	Relative (95% CI)	Absolute		Importance
vaginal or oral misoprostol 400mcg vomiting												
3[8]	randomized trials	serious[3]	no serious inconsistency	no serious indirectness	no serious imprecision	none	44/165 (26.7%)	72/175 (41.1%)	OR 0.52 (0.33 to 0.84)	145 fewer per 1000 (from 41 fewer to 224 fewer)	⊕⊕⊕◯ MODERATE	CRITICAL
vaginal misoprostol 400mcg diarrhoea												
2[2]	randomized trials	serious[3]	no serious inconsistency	no serious indirectness	serious[6]	none	22/127 (17.3%)	23/118 (19.5%)	OR 0.92 (0.48 to 1.79)	13 fewer per 1000 (from 91 fewer to 107 more)	⊕⊕◯◯ LOW	CRITICAL
oral misoprostol 400mcg diarrhoea												
1[4]	randomized trials	serious[3]	no serious inconsistency	no serious indirectness	serious[6]	none	5/38 (13.2%)	3/57 (5.3%)	OR 2.73 (0.61 to 12.17)	79 more per 1000 (from 20 fewer to 351 fewer)	⊕⊕◯◯ LOW	CRITICAL

1 Gestational age ranged from 12 to 28 weeks among included trials, with most common range being 13 to 24 weeks.
2 Akoury 2004c; Su 2005
3 Trials were not blinded.
4 Akoury 2004b
5 Based on one trial only with relatively small sample size.
6 Small sample size or total number of events < 300.
7 Su 2005
8 Akoury 2004c; Su 2005; Akoury 2004b
9 Akoury 2004c

Author(s): P. Whyte
Date: 2010-02-07
Question: Should vaginal misoprostol vs. gemeprost be used for second trimester abortion?[1]
Bibliography: Wildschut H et al. Medical methods for mid-trimester termination of pregnancy. *Cochrane Database of Systematic Reviews*, 2011, (1):CD005216.

Table 72:

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	vaginal misoprostol	gemeprost	Relative (95% CI)	Absolute		Importance
vaginal misoprostol 100mcg induction to abortion interval (Better indicated by lower values)												
1[2]	randomized trials	serious[3]	no serious inconsistency	no serious indirectness	serious[4]	none	27	28	-	MD 8.60 higher (3.11 to 14.09 higher)	⊕⊕◯◯ LOW	IMPORTANT
vaginal misoprostol 200mcg induction to abortion interval (Better indicated by lower values)												
1[5]	randomized trials	serious[3]	no serious inconsistency	no serious indirectness	serious[4]	none	26	28	-	MD 13.30 higher (7.9 to 18.7 higher)	⊕⊕◯◯ LOW	IMPORTANT
vaginal misoprostol 400mcg induction to abortion interval (Better indicated by lower values)												
1[6]	randomized trials	serious[3]	no serious inconsistency	no serious indirectness	serious[4]	none	70	70	-	MD 8.90 lower (19.65 lower to 1.85 higher)	⊕⊕◯◯ LOW	IMPORTANT
vaginal misoprostol all doses induction to abortion interval (Better indicated by lower values)												
3[7]	randomized trials	serious[3]	no serious inconsistency	no serious indirectness	serious[4]	none	123	126	-	MD 8.73 higher (5.11 to 12.35 higher)[8]	⊕⊕◯◯ LOW	IMPORTANT
vaginal misoprostol 400mcg abortion within 24 hours												
1[6]	randomized trials	serious[3]	no serious inconsistency	no serious indirectness	serious[4]	none	56/70 (80%)	41/70 (58.6%)	OR 2.83 (1.33 to 6.02)	214 more per 1000 (from 67 more to 309 more)	⊕⊕◯◯ LOW	CRITICAL

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	vaginal misoprostol	gemeprost	Relative (95% CI)	Absolute		Importance
vaginal misoprostol 100 mcg blood loss (Better indicated by lower values)												
1[2]	randomized trials	serious[3]	no serious inconsistency	no serious indirectness	serious[4]	none	27	28	-	MD 61.00 lower (145.71 lower to 23.71 higher)	⊕⊕◯◯ LOW	CRITICAL
vaginal misoprostol 200mcg blood loss (Better indicated by lower values)												
1[5]	randomized trials	serious[3]	no serious inconsistency	no serious indirectness	serious[4]	none	26	28	-	MD 146.00 lower (219.02 to 72.98 lower)	⊕⊕◯◯ LOW	CRITICAL
vaginal misoprostol 400mcg blood loss (Better indicated by lower values)												
1[6]	randomized trials	serious[3]	no serious inconsistency	no serious indirectness	serious[4]	none	70	70	-	MD 3.70 lower (30.4 lower to 23 higher)	⊕⊕◯◯ LOW	CRITICAL
vaginal misoprostol all doses blood loss (Better indicated by lower values)												
3[7]	randomized trials	serious[3]	no serious inconsistency	no serious indirectness	serious[4]	none	123	126	-	MD 23.75 lower (47.8 lower to 0.3 higher)[8]	⊕⊕◯◯ LOW	CRITICAL
vaginal misoprostol 400mcg surgical evacuation												
1[6]	randomized trials	serious[3]	no serious inconsistency	no serious indirectness	serious[4]	none	28/70 (40%)	29/70 (41.4%)	OR 0.94 (0.48 to 1.85)	15 fewer per 1000 (from 161 fewer to 153 more)	⊕⊕◯◯ LOW	CRITICAL

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	vaginal misoprostol	gemeprost	Relative (95% CI)	Absolute		Importance
vaginal misoprostol 100mcg pain												
1[2]	randomized trials	serious[3]	no serious inconsistency	no serious indirectness	serious[4]	none	12/27 (44.4%)	22/28 (78.6%)	OR 0.22 (0.07 to 0.71)	339 fewer per 1000 (from 63 fewer to 581 fewer)	⊕⊕◯◯ LOW	CRITICAL
vaginal misoprostol 200mcg pain												
1[5]	randomized trials	serious[3]	no serious inconsistency	no serious indirectness	serious[4]	none	12/26 (46.2%)	22/28 (78.6%)	OR 0.23 (0.07 to 0.77)	328 fewer per 1000 (from 47 fewer to 581 fewer)	⊕⊕◯◯ LOW	CRITICAL
vaginal misoprostol 100 and 200mcg pain												
1[9]	randomized trials	serious[3]	no serious inconsistency	no serious indirectness	serious[4]	none	24/53 (45.3%)	44/56 (78.6%)	OR 0.23 (0.1 to 0.52)	328 fewer per 1000 (from 130 fewer to 517 fewer)	⊕⊕◯◯ LOW	CRITICAL
vaginal misoprostol 400mcg nausea												
1[6]	randomized trials	serious[3]	no serious inconsistency	no serious indirectness	serious[4]	none	17/70 (24.3%)	20/70 (28.6%)	OR 0.80 (0.38 to 1.7)	43 fewer per 1000 (from 154 fewer to 119 more)	⊕⊕◯◯ LOW	CRITICAL

1 Gestational age ranged from 12 to 28 weeks among included trials, with most common range being 13 to 24 weeks.
2 Nuutila 1997a
3 Trials were not blinded.
4 Small sample size or total number of events < 300.
5 Nuutila 1997b
6 Wong 1998
7 Nuutila 1997a; Nuutila 1997b; Wong 1998
8 Results for 100 and 200mcg dose of misoprostol favoured gemeprost and for 400mcg favoured misoprostol.
9 Nuutila 1997a; Nuutila 1997b

Author(s): P. Whyte
Date: 2010-03-07
Question: Should misoprostol and oxytocin vs. ethacridine lactate and oxytocin be used for second trimester abortion?[1,2,3]
Bibliography: Wildschut H et al. Medical methods for mid-trimester termination of pregnancy. *Cochrane Database of Systematic Reviews*, 2011, (1):CD005216.

Table 73:

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	misoprostol and oxytocin	ethacridine lactate and oxytocin	Relative (95% CI)	Absolute		Importance
abortion within 24 hours												
1[4]	randomized trials	serious[5]	no serious inconsistency	no serious indirectness	serious[6]	none	50/50 (100%)	20/30 (66.7%)	OR 51.73 (2.89 to 924.42)	324 more per 1000 (from 186 more to 333 more)	⊕⊕◯◯ LOW	CRITICAL
blood loss												
1[4]	randomized trials	serious[5]	no serious inconsistency	no serious indirectness	serious[6]	none	7/50 (14%)	0/30 (0%)	OR 10.52 (0.58 to 191.12)	0 more per 1000 (from 0 fewer to 0 more)	⊕⊕◯◯ LOW	CRITICAL
surgical evacuation												
1[4]	randomized trials	serious[5]	no serious inconsistency	no serious indirectness	serious[6]	none	4/50 (8%)	0/30 (0%)	OR 5.90 (0.31 to 113.6)	0 more per 1000 (from 0 fewer to 0 more)	⊕⊕◯◯ LOW	CRITICAL
pain												
1[4]	randomized trials	serious[5]	no serious inconsistency	no serious indirectness	serious[6]	none	20/50 (40%)	9/30 (30%)	OR 1.56 (0.59 to 4.08)	101 more per 1000 (from 98 fewer to 336 more)	⊕⊕◯◯ LOW	CRITICAL

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	misoprostol and oxytocin	ethacridine lactate and oxytocin	Relative (95% CI)	Absolute		Importance
vomiting												
1[4]	randomized trials	serious[5]	no serious inconsistency	no serious indirectness	serious[6]	none	17/50 (34%)	8/30 (26.7%)	OR 1.42 (0.52 to 3.85)	74 more per 1000 (from 108 fewer to 317 more)	⊕⊕◯◯ LOW	CRITICAL
diarrhoea												
1[4]	randomized trials	serious[5]	no serious inconsistency	no serious indirectness	serious[6]	none	1/50 (2%)	0/30 (0%)	OR 1.85 (0.07 to 46.83)	0 more per 1000 (from 0 fewer to 0 more)	⊕⊕◯◯ LOW	CRITICAL

1 Vaginal misoprostol 200mcg followed by oral misoprostol 100mcg every 4 hours for 24 hours. An initial dose of 6 mU/min oxytocin followed by 6mU/min doses every 20min.
2 Ethacridine lactate was given extra-amniotically, 10mL instilled per gestational week to a max of 200mL. Oxytocin was given in similar way to misoprostol group.
3 Gestational ages ranged from 12 to 28 weeks among included trials, with most common range being 13 to 24 weeks.
4 Makhlouf 2003
5 Trial was not blinded.
6 Total number of events < 300.

Author(s): P. Whyte
Date: 2010-03-07
Question: Should vaginal misoprostol vs. oral misoprostol alone be used for second trimester abortion?[1]
Bibliography: Wildschut H et al. Medical methods for mid-trimester termination of pregnancy. *Cochrane Database of Systematic Reviews*, 2011, (1):CD005216.

Table 74:

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	vaginal misoprostol	oral misoprostol	Relative (95% CI)	Absolute		Importance
vaginal misoprostol 400mcg vs. oral misoprostol 400mcg induction to abortion interval (Better indicated by lower values)												
2[2]	randomized trials	serious[3]	no serious inconsistency	no serious indirectness	serious[5]	none	114	82	-	MD 6.04 lower (8.51 to 3.58 lower)	⊕⊕◯◯ LOW	IMPORTANT
vaginal misoprostol 400mcg vs. oral misoprostol 200mcg induction to abortion interval (Better indicated by lower values)												
1[4]	randomized trials	serious[3]	no serious inconsistency	no serious indirectness	serious[5]	none	49	65[6]	-	MD 14.90 lower (23.33 to 6.47 lower)	⊕⊕◯◯ LOW	IMPORTANT

1 Gestational age ranged from 12 to 28 weeks among included trials, with most common range being 13 to 24 weeks.
2 Akoury 2004; Behrashi 2008
3 Trial(s) not blinded.
4 Bebbington 2002
5 Based on one trial only with small sample size.
6 Although the Wildschut (2010) review defines this group as receiving oral misoprostol 200mcg, the trial description states that patients received 200mcg every hour for 3 hours plus 400mcg every 4 hours.

Author(s): P. Whyte
Date: 2010-03-07
Question: Should vaginal misoprostol 400mcg every 3 hours vs. sublingual misoprostol 400mcg every 3 hours be used for second trimester abortion?[1]
Bibliography: Wildschut H et al. Medical methods for mid-trimester termination of pregnancy. *Cochrane Database of Systematic Reviews*, 2011, (1):CD005216.

Table 75:

Quality assessment							Summary of findings					
	No of patients		Effect									
No of studies	Design	Limitations	Inconsistency	Indirectness	Quality Imprecision	Other considerations	vaginal misoprostol 400mcg every 3 hours	sublingual misoprostol 400mcg every 3 hours	Relative (95% CI)	Absolute		Importance
induction to abortion interval (Better indicated by lower values)												
1[2]	randomized trials	serious[3]	no serious inconsistency	no serious indirectness	serious[4]	none	138	139	-	MD 0.40 higher (0 to 0.8 higher)	⊕⊕◯◯ LOW	IMPORTANT
abortion within 24 hours												
2[5]	randomized trials	serious[3]	no serious inconsistency	no serious indirectness	no serious imprecision	none	181/250 (72.4%)	167/247 (67.6%)	OR 1.25 (0.85 to 1.85)	47 more per 1000 (from 37 fewer to 118 more)	⊕⊕⊕◯ MODERATE	CRITICAL
excessive blood loss												
1[2]	randomized trials	serious[3]	no serious inconsistency	no serious indirectness	serious[6]	none	7/138 (5.1%)	4/139 (2.9%)	OR 1.80 (0.52 to 6.31)	22 more per 1000 (from 14 fewer to 129 more)	⊕⊕◯◯ LOW	CRITICAL
pain												
2[5]	randomized trials	serious[3]	no serious inconsistency	no serious indirectness	no serious imprecision	none	67/250 (26.8%)	62/247 (25.1%)	OR 1.09 (0.73 to 1.63)	17 more per 1000 (from 54 fewer to 102 more)	⊕⊕⊕◯ MODERATE	CRITICAL

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	vaginal misoprostol 400mcg every 3 hours	sublingual misoprostol 400mcg every 3 hours	Relative (95% CI)	Absolute		Importance
surgical evacuation												
2[5]	randomized trials	serious[3]	no serious inconsistency	no serious indirectness	no serious imprecision	none	27/250 (10.8%)	29/247 (11.7%)	OR 0.90 (0.52 to 1.58)	10 fewer per 1000 (from 53 fewer to 56 more)	⊕⊕⊕◯ MODERATE	CRITICAL
nausea												
2[5]	randomized trials	serious[3]	no serious inconsistency	no serious indirectness	no serious imprecision	none	63/250 (25.2%)	59/247 (23.9%)	OR 0.90 (0.52 to 1.58)	19 fewer per 1000 (from 99 fewer to 93 more)	⊕⊕⊕◯ MODERATE	CRITICAL
vomiting												
1[2]	randomized trials	serious[3]	no serious inconsistency	no serious indirectness	serious[6]	none	4/138 (2.9%)	8/139 (5.8%)	OR 0.49 (0.14 to 1.66)	28 fewer per 1000 (from 49 fewer to 34 more)	⊕⊕◯◯ LOW	CRITICAL
diarrhoea												
2[5]	randomized trials	serious[3]	no serious inconsistency	no serious indirectness	no serious imprecision	none	41/250 (16.4%)	43/247 (17.4%)	OR 0.91 (0.56 to 1.48)	13 fewer per 1000 (from 69 fewer to 64 more)	⊕⊕⊕◯ MODERATE	CRITICAL

1 Gestational age ranged from 12 to 28 weeks among included trials, with most common range being 13 to 24 weeks.
2 Bhattacharjee 2008
3 Trial(s) were not blinded.
4 Small sample size or total number of events < 300.
5 Bhattacharjee 2008; Tang 2004
6 Wide confidence interval.

Author(s): P. Whyte
Date: 2010-03-07
Question: Should mifepristone 200mg+oral misoprostol 200-400mcg vs. vaginal misoprostol 200-400mcg be used for second trimester abortion?[1]
Bibliography: Wildschut H et al. Medical methods for mid-trimester termination of pregnancy. *Cochrane Database of Systematic Reviews*, 2011, (1):CD005216.

Table 76:

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	mifepristone 200mg+oral misoprostol 200-400mcg	vaginal misoprostol 200-400mcg	Relative (95% CI)	Absolute		Importance
induction to abortion interval (Better indicated by lower values)												
2[2]	randomized trials	serious[3]	no serious inconsistency	no serious indirectness	serious[9]	none	119	118	-	MD 7.03 higher (0.13 lower to 14.2 higher)[4]	⊕⊕◯◯ LOW	IMPORTANT
abortion within 24 hours												
3[5]	randomized trials	serious[6]	no serious inconsistency	no serious indirectness	no serious imprecision	none	124/153 (81%)	136/153 (88.9%)	OR 0.53 (0.28 to 1.02)[7]	80 fewer per 1000 (from 198 fewer to 2 more)	⊕⊕⊕◯ MODERATE	CRITICAL
surgical evacuation												
2[8]	randomized trials	serious[6]	no serious inconsistency	no serious indirectness	serious[10]	none	18/104 (17.3%)	18/104 (17.3%)	OR 0.99 (0.48 to 2.04)	1 fewer per 1000 (from 82 fewer to 126 more)	⊕⊕◯◯ LOW	CRITICAL
pain												
2[8]	randomized trials	serious[6]	no serious inconsistency	no serious indirectness	serious[10]	none	36/104 (34.6%)	32/104 (30.8%)	OR 1.32 (0.66 to 2.62)	62 more per 1000 (from 81 fewer to 230 more)	⊕⊕◯◯ LOW	CRITICAL

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	mifepristone 200mg+oral misoprostol 200-400mcg	vaginal misoprostol 200-400mcg	Relative (95% CI)	Absolute		Importance
nausea												
2[2]	randomized trials	serious[3]	no serious inconsistency	no serious indirectness	serious[10]	none	54/119 (45.4%)	53/118 (44.9%)	OR 1.02 (0.61 to 1.7)	5 more per 1000 (from 117 fewer to 132 more)	⊕⊕◯◯ LOW	CRITICAL
vomiting												
3[5]	randomized trials	serious[6]	no serious inconsistency	no serious indirectness	serious[10]	none	62/153 (40.5%)	63/153 (41.2%)	OR 0.98 (0.61 to 1.56)	5 fewer per 1000 (from 113 fewer to 110 more)	⊕⊕◯◯ LOW	CRITICAL
diarrhoea												
3[5]	randomized trials	serious[6]	no serious inconsistency	no serious indirectness	no serious imprecision	none	56/153 (36.6%)	35/153 (22.9%)	OR 1.95 (1.18 to 3.22)	138 more per 1000 (from 31 more to 260 more)	⊕⊕⊕◯ MODERATE	CRITICAL

1 Gestational age ranged from 12 to 28 weeks among included trials, with most common range being 13 to 24 weeks.
2 Ho 1997 (mifepristone 200mg then 36-48 hours later 200mcg oral or 200mcg vaginal misoprostol); Ngai 2000 (mifepristone 200mg then 36-48 hours later 400mcg oral or 200mcg vaginal misoprostol)
3 The Ho (1997) trial compared 200mcg oral misoprostol to 200mcg vaginal while the Ngai (2000) trial compared 400mcg oral misoprostol to 200mcg vaginal. The combination of these trials, with different doses in the oral arms, may not be appropriate as the Ho trial compared oral and vaginal while the Ngai trial compared oral and vaginal and also compared different doses of each.
4 While there was no statistically significant difference between vaginal and oral misoprostol when the two trials were meta-analysed, there was a statistically significant advantage for vaginal misoprostol in the trial comparing the 200mcg dose of oral and vaginal misoprostol.
5 Ho 1997 (mifepristone 200mg then 36-48 hours later 200mcg oral misoprostol every 3 hours max 5 doses or 200mcg vaginal misoprostol every 3 hours max 5 doses); Ngai 2000 (mifepristone 200mg then 36-48 hours later 400mcg oral misoprostol every 3 hours or 200mcg vaginal misoprostol) every 3 hours; El-Refaey 1995 (mifepristone 600mg+vaginal misoprostol 600mcg as first dose then oral misoprostol 400mcg every 3 hours max 5 doses or vaginal misoprostol 400mcg every 3 hours max 5 doses)
6 The trials included in the analysis uses different dosing regimens, in particular the dose of mifepristone used to prior to misoprostol dosing. Consequently it may not be appropriate to combine the trials, as the results could be biased.
7 As for the induction to abortion interval outcome, there is no statistically significant difference between oral and vaginal misoprostol overall for abortion within 24 hours, however there was a significant advantage for vaginal misoprostol in the Ho (1997) trial comparing 200mcg oral and 200mcg vaginal misoprostol.
8 Ngai 2000 (mifepristone 200mg then 36-48 hours later 400mcg oral misoprostol every 3 hours or 200mcg vaginal misoprostol) every 3 hours; El-Refaey 1995 (mifepristone 600mg+vaginal misoprostol 600mcg as first dose then oral misoprostol 400mcg every 3 hours max 5 doses or vaginal misoprostol 400mcg every 3 hours max 5 doses)
9 Small sample size
10 Total number of events < 300.

Author(s): P. Whyte
Date: 2010-03-07
Question: Should sublingual misoprostol 600mcg and 400mcg every 3 hours vs. vaginal misoprostol 800mcg and 400mcg every 3 hours be used for second trimester abortion?[1,2]
Bibliography: Wildschut H et al. Medical methods for mid-trimester termination of pregnancy. *Cochrane Database of Systematic Reviews*, 2011, (1):CD005216.

Table 77:

Quality assessment							Summary of findings					
	No of patients		Effect									
No of studies	Design	Limitations	Inconsistency	Indirectness	Quality Imprecision	Other considerations	sublingual misoprostol 600mcg and 400mcg every 3 hours	vaginal misoprostol 800mcg and 400mcg every 3 hours	Relative (95% CI)	Absolute		Importance
surgical evacuation												
1[3]	randomized trials	very serious[4]	no serious inconsistency	no serious indirectness	serious[5]	none	3/32 (9.4%)	1/37 (2.7%)	OR 3.72 (0.37 to 37.72)	67 more per 1000 (from 17 fewer to 485 more)	⊕○○○ VERY LOW	CRITICAL
pain												
1[3]	randomized trials	very serious[4]	no serious inconsistency	no serious indirectness	serious[5]	none	25/32 (78.1%)	32/37 (86.5%)	OR 0.56 (0.16 to 1.97)	83 fewer per 1000 (from 359 fewer to 62 more)	⊕○○○ VERY LOW	CRITICAL
nausea												
1[3]	randomized trials	very serious[4]	no serious inconsistency	no serious indirectness	serious[5]	none	26/32 (81.3%)	26/37 (70.3%)	OR 1.83 (0.59 to 5.7)	110 more per 1000 (from 120 fewer to 228 more)	⊕○○○ VERY LOW	CRITICAL
vomiting												
1[3]	randomized trials	very serious[4]	no serious inconsistency	no serious indirectness	serious[5]	none	25/32 (78.1%)	25/37 (67.6%)	OR 1.71 (0.58 to 5.07)	105 more per 1000 (from 129 fewer to 238 more)	⊕○○○ VERY LOW	CRITICAL

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	sublingual misoprostol 600mcg and 400mcg every 3 hours	vaginal misoprostol 800mcg and 400mcg every 3 hours	Relative (95% CI)	Absolute		Importance
diarrhoea												
1[3]	randomized trials	very serious[4]	no serious inconsistency	no serious indirectness	serious[5]	none	19/32 (59.4%)	21/37 (56.8%)	OR 1.11 (0.43 to 2.91)	25 more per 1000 (from 207 fewer to 225 more)	⊕◯◯◯ VERY LOW	CRITICAL

1 A dose of mifepristone 200mg preceded misoprostol dosing by 36-48 hours.
2 Gestational ages ranged from 12 to 28 weeks among included trials, with most common range being 13 to 24 weeks.
3 Hamoda 2005
4 Trial compared different doses of sublingual (800mcg+400mcg) and vaginal misoprostol (600mcg+400mcg). In addition, the trial was not blinded.
5 Total number of events < 300.
6 Based on one trial only.

Author(s): P. Whyte
Date: 2010-03-07
Question: Should mifepristone 200mg combined with oral misoprostol 400mcg every 3 hours max 5 doses vs. sublingual misoprostol 400mcg every 3 hours max 5 doses be used for second trimester abortion?[1,2]
Bibliography: Wildschut H et al. Medical methods for mid-trimester termination of pregnancy. *Cochrane Database of Systematic Reviews*, 2011, (1):CD005216.

Table 78:

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	mifepristone 200m combined with oral misoprostol 400mcg every 3 hours max 5 doses	sublingual misoprostol 400mcg every 3 hours max 5 doses	Relative (95% CI)	Absolute		Importance
abortion within 24 hours												
1[3]	randomized trials	serious[4]	no serious inconsistency	no serious indirectness	serious[5]	none	51/60 (85%)	53/58 (91.4%)	OR 0.53 (0.17 to 1.7)	65 fewer per 1000 (from 271 fewer to 34 more)	⊕⊕○○ LOW	CRITICAL
pain (need for analgesic)												
1[3]	randomized trials	serious[4]	no serious inconsistency	serious[6]	serious[5]	none	17/60 (28.3%)	18/58 (31%)	OR 0.88 (0.4 to 1.94)	27 fewer per 1000 (from 158 fewer to 156 more)	⊕○○○ VERY LOW	CRITICAL
nausea												
1[3]	randomized trials	serious[4]	no serious inconsistency	no serious indirectness	serious[5]	none	26/60 (43.3%)	22/58 (37.9%)	OR 1.25 (0.6 to 2.61)	54 more per 1000 (from 111 fewer to 235 more)	⊕⊕○○ LOW	CRITICAL
diarrhoea												
1[3]	randomized trials	serious[4]	no serious inconsistency	no serious indirectness	serious[5]	none	13/60 (21.7%)	8/58 (13.8%)	OR 1.73 (0.66 to 4.54)	79 more per 1000 (from 42 fewer to 283 more)	⊕⊕○○ LOW	CRITICAL

1 200mg mifepristone preceded misoprostol dosing by 36-48 hours.
2 Gestational ages ranged from 12 to 28 weeks among included trials, with most common range being 13 to 24 weeks.
3 Tang 2005
4 Trial was not blinded.
5 Total number of events < 300.
6 Pain measured by use of analgesics.

Author(s): P. Whyte
Date: 2010-03-07
Question: Should 1mg gemeprost vaginally every 6 hours vs. 0.5mg gemeprost vaginally every 6 hours be used for second trimester abortion?[1]
Bibliography: Wildschut H et al. Medical methods for mid-trimester termination of pregnancy. *Cochrane Database of Systematic Reviews*, 2011, (1):CD005216.

Table 79:

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	1mg gemeprost vaginally every 6 hours	0.5mg gemeprost vaginally every 6 hours	Relative (95% CI)	Absolute		Importance
abortion within 24 hours												
1[2]	randomized trials	serious[3]	no serious inconsistency	no serious indirectness	serious[4]	none	49/50 (98%)	48/50 (96%)	OR 2.04 (0.18 to 23.27)	20 more per 1000 (from 148 fewer to 38 more)	⊕⊕◯◯ LOW	CRITICAL
blood loss												
1[2]	randomized trials	serious[3]	no serious inconsistency	no serious indirectness	serious[4]	none	0/50 (0%)	1/50 (2%)	OR 0.33 (0.01 to 8.21)	13 fewer per 1000 (from 20 fewer to 124 more)	⊕⊕◯◯ LOW	CRITICAL
surgical evacuation												
1[2]	randomized trials	serious[3]	no serious inconsistency	no serious indirectness	serious[4]	none	12/50 (24%)	9/50 (18%)	OR 1.44 (0.55 to 3.8)	60 more per 1000 (from 72 fewer to 275 more)	⊕⊕◯◯ LOW	CRITICAL
vomiting												
1[2]	randomized trials	serious[3]	no serious inconsistency	no serious indirectness	serious[4]	none	14/40 (35%)	8/50 (16%)	OR 2.83 (1.04 to 7.66)	190 more per 1000 (from 5 more to 433 more)	⊕⊕◯◯ LOW	CRITICAL
diarrhoea												
1[2]	randomized trials	serious[3]	no serious inconsistency	no serious indirectness	serious[4]	none	6/50 (12%)	2/50 (4%)	OR 3.27 (0.63 to 17.07)	80 more per 1000 (from 14 fewer to 376 more)	⊕⊕◯◯ LOW	CRITICAL

1 Gestational age ranged from 12 to 28 weeks among included trials, with most common range being 13 to 24 weeks.
2 Thong 1996
3 Trial was not blinded.
4 Total number of events < 300.

Author(s): P. Whyte
Date: 2010-03-07
Question: Should mifepristone combined with misoprostol vs. gemeprost be used for second trimester abortion?[1,2]
Bibliography: Wildschut H et al. Medical methods for mid-trimester termination of pregnancy. *Cochrane Database of Systematic Reviews*, 2011, (1):CD005216.

Table 80:

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	mifepristone combined with misoprostol	gemeprost	Relative (95% CI)	Absolute		Importance
induction to abortion interval (Better indicated by lower values)												
1[3]	randomized trials	serious[4]	no serious inconsistency	no serious indirectness	serious[5]	none	25	25	-	MD 0.40 lower (4.89 lower to 4.09 higher)	⊕⊕◯◯ LOW	IMPORTANT
abortion within 24 hours												
3[6]	randomized trials	very serious[4,7]	no serious inconsistency	no serious indirectness	serious[5]	none	98/105 (93.3%)	100/105 (95.2%)	OR 0.72 (0.23 to 2.24)	17 fewer per 1000 (from 131 fewer to 26 more)	⊕◯◯◯ VERY LOW	CRITICAL
surgical evacuation												
3[6]	randomized trials	very serious[4,7]	no serious inconsistency	no serious indirectness	no serious imprecision	none	12/105 (11.4%)	18/104 (17.3%)	OR 0.60 (0.27 to 1.35)	62 fewer per 1000 (from 120 fewer to 47 more)	⊕⊕◯◯ LOW	CRITICAL
pain												
3[6]	randomized trials	very serious[4,7]	no serious inconsistency	no serious indirectness	serious[5]	none	83/100 (83%)	89/99 (89.9%)	OR 0.47 (0.19 to 1.21)	92 fewer per 1000 (from 271 fewer to 16 more)	⊕◯◯◯ VERY LOW	CRITICAL

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	mifepristone combined with misoprostol	gemeprost	Relative (95% CI)	Absolute		Importance
nausea												
1[3]	randomized trials	serious[4]	no serious inconsistency	no serious indirectness	serious[5]	none	8/25 (32%)	11/25 (44%)	OR 0.60 (0.19 to 1.9)	120 fewer per 1000 (from 310 fewer to 159 more)	⊕⊕◯◯ LOW	CRITICAL
vomiting												
2[8]	randomized trials	serious[9]	no serious inconsistency	no serious indirectness	serious[5]	none	24/55 (43.6%)	24/55 (43.6%)	OR 1.00 (0.47 to 2.13)	0 fewer per 1000 (from 170 fewer to 186 more)	⊕⊕◯◯ LOW	CRITICAL
diarrhoea												
2[8]	randomized trials	serious[9]	no serious inconsistency	no serious indirectness	serious[5]	none	20/55 (36.4%)	13/55 (23.6%)	OR 2.09 (0.83 to 5.23)	156 more per 1000 (from 32 fewer to 382 more)	⊕⊕◯◯ LOW	CRITICAL

1 Two of the trials (Bartley 2000 and Ho 1996) had 200mg mifepristone preceding the misoprostol or gemeprost while El-Refaey (1993) had 600mg mifepristone preceding misoprostol and gemeprost.
2 Gestational ages ranged from 12 to 28 weeks among included trials, with most common range being 13 to 24 weeks.
3 Ho 1996 (200mg mifepristone followed 36-48 hours later by oral misoprostol 400mcg every 3 hours max 5 doses or gemeprost 1mg vaginally every 6 hours, max 4 doses)
4 Trial(s) were not blinded.
5 Small sample size or total number of events < 300.
6 Ho 1996 (200mg mifepristone followed 36-48 hours later by oral misoprostol 400mcg every 3 hours max 5 doses or gemeprost 1mg vaginally every 6 hours, max 4 doses); Bartley 2002 (200mg mifepristone followed 36-48 hours later by vaginal misoprostol 800mcg then oral misoprostol 400mcg every 3 hours for 12 hours or vaginal gemeprost 1mg every 6 hours for 18 hours); El-Refaey 1993 (600mg mifepristone followed 36-48 hours later by oral misoprostol every 3 hours with max 3 doses or vaginal gemeprost 1mg every 3 hours to max 5 doses)
7 The trials included in the meta-analysis use different dosing regimens - Ho compares 400mcg oral misoprostol and gemeprost, Bartley (2002) compares vaginal misoprostol 800mcg followed by oral misoprostol 400mcg and gemeprost while El-Refaey compares oral misoprostol 400mcg and gemeprost. The dose of mifepristone preceding the misoprostol and gemeprost also differs between the trials (200mg in Bartley and Ho while El-Refaey uses 600mg plus vaginal misoprostol 600mcg).
8 Ho 1996 (200mg mifepristone followed 36-48 hours later by oral misoprostol 400mcg every 3 hours max 5 doses or gemeprost 1mg vaginally every 6 hours, max 4 doses); El-Refaey 1993 (600mg mifepristone followed 36-48 hours later by oral misoprostol every 3 hours with max 3 doses or vaginal gemeprost 1mg every 3 hours to max 5 doses).
9 The trials included in the meta-analysis use different dosing regimens - Ho compares 400mcg oral misoprostol and gemeprost, while El-Refaey compares oral misoprostol 400mcg and gemeprost. The dose of mifepristone preceding the misoprostol and gemeprost also differs between the trials (200mg in Ho while El-Refaey uses 600mg plus vaginal misoprostol 600mcg).

Author(s): P. Whyte
Date: 2010-03-08
Question: Should misoprostol vs. oxytocin+misoprostol be used for second trimester abortion?[1]
Bibliography: Wildschut H et al. Medical methods for mid-trimester termination of pregnancy. *Cochrane Database of Systematic Reviews*, 2011, (1):CD005216.

Table 81:

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	misoprostol	oxytocin+ misoprostol	Relative (95% CI)	Absolute		Importance
induction to abortion interval (Better indicated by lower values)												
1[2]	randomized trials	serious[3]	no serious inconsistency	no serious indirectness	serious[4]	none	93	96	-	MD 3.30 higher (2.46 to 4.14 higher)	⊕⊕◯◯ LOW	IMPORTANT
abortion within 24 hours												
2[5]	randomized trials	very serious[3,6]	no serious inconsistency	no serious indirectness	no serious imprecision	none	90/113 (79.6%)	99/114 (86.8%)	OR 0.59 (0.29 to 1.2)	73 fewer per 1000 (from 212 fewer to 19 more)	⊕⊕◯◯ LOW	CRITICAL
blood loss > 500ml												
1[7]	randomized trials	serious[3]	no serious inconsistency	no serious indirectness	very serious[4,8]	none	1/20 (5%)	0/18 (0%)	OR 2.85 (0.11 to 74.38)	0 more per 1000 (from 0 fewer to 0 more)	⊕◯◯◯ VERY LOW	CRITICAL
surgical evacuation												
1[7]	randomized trials	serious[3]	no serious inconsistency	no serious indirectness	serious[4]	none	1/20 (5%)	2/18 (11.1%)	OR 0.42 (0.03 to 5.08)	61 fewer per 1000 (from 107 fewer to 277 more)	⊕⊕◯◯ LOW	CRITICAL
pain												
1[7]	randomized trials	serious[3]	no serious inconsistency	no serious indirectness	serious[4]	none	10/20 (50%)	7/18 (38.9%)	OR 1.57 (0.43 to 5.71)	111 more per 1000 (from 174 fewer to 395 more)	⊕⊕◯◯ LOW	CRITICAL

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	misoprostol	oxytocin+ misoprostol	Relative (95% CI)	Absolute		Importance
nausea												
1[7]	randomized trials	serious[3]	no serious inconsistency	no serious indirectness	serious[4]	none	5/20 (25%)	2/18 (11.1%)	OR 2.67 (0.45 to 15.89)	139 more per 1000 (from 58 fewer to 554 more)	⊕⊕◯◯ LOW	CRITICAL
vomiting												
1[7]	randomized trials	serious[3]	no serious inconsistency	no serious indirectness	serious[4]	none	3/20 (15%)	1/18 (5.6%)	OR 3.00 (0.28 to 31.8)	94 more per 1000 (from 39 fewer to 596 more)	⊕⊕◯◯ LOW	CRITICAL
diarrhoea												
1[7]	randomized trials	serious[3]	no serious inconsistency	no serious indirectness	serious[4]	none	0/20 (0%)	1/18 (5.6%)	OR 0.28 (0.01 to 7.44)	39 fewer per 1000 (from 55 fewer to 249 more)	⊕⊕◯◯ LOW	CRITICAL

1 Gestational age ranged from 12 to 28 weeks among included trials, with most common range being 13 to 24 weeks.
2 Kelekci 2006e (200mcg vaginal misoprostol followed by 100mcg oral misoprostol every 4 hours for 24 hours vs 200mcg vaginal misoprostol followed by 100mcg oral misoprostol every 4 hours for 24 hours plus oxytocin 6mU/min every 20 min)
3 Trial(s) were not blinded.
4 Small sample size or total number of events < 300.
5 Kelekci 2006e (200mcg vaginal misoprostol followed by 100mcg oral misoprostol every 4 hours for 24 hours vs. 200mcg vaginal misoprostol followed by 100mcg oral misoprostol every 4 hours for 24 hours plus oxytocin 6mU/min every 20 min); Nuthalapaty 2005 (600mcg vaginal misoprostol followed by 400mcg vaginal misoprostol every 4 hours for max 5 doses vs. oxytocin IV 277-1667mU/min plus 400mcg vaginal misoprostol followed by 200mcg vaginal misoprostol every 6 hours max 2 doses then 100mcg max 1 dose)
6 Trials included in the meta-analysis used different dosing regimens for both misoprostol and the combined misoprostol+oxytocin arms. Consequently, it may not be appropriate to combine the trials. In addition, there is some degree of heterogeneity, with I^2=64%.
7 Nuthalapaty 2005 (600mcg vaginal misoprostol followed by 400mcg vaginal misoprostol every 4 hours for max 5 doses vs. oxytocin IV 277-1667mU/min plus 400mcg vaginal misoprostol followed by 200mcg vaginal misoprostol every 6 hours max 2 doses then 100mcg max 1 dose)
8 Wide confidence interval.

Author(s): P. Whyte
Date: 2010-03-08
Question: Should misoprostol administered at a shorter time interval vs. misoprostol at a longer time interval be used for second trimester abortion?[1]
Bibliography: Wildschut H et al. Medical methods for mid-trimester termination of pregnancy. *Cochrane Database of Systematic Reviews*, 2011, (1):CD005216.

Table 82:

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	misoprostol administered at a shorter time interval	misoprostol at a longer time interval	Relative (95% CI)	Absolute		Importance
induction to abortion interval (Better indicated by lower values)												
2[2]	randomized trials	very serious[3,4]	no serious inconsistency	no serious indirectness	no serious imprecision	none	101	100	-	MD 6.58 lower (12.63 to 0.52 lower)	⊕⊕◯◯ LOW	IMPORTANT
abortion within 24 hours												
2[5]	randomized trials	very serious[3,4]	no serious inconsistency	no serious indirectness	no serious imprecision	none	157/214 (73.4%)	138/213 (64.8%)	OR 1.50 (0.99 to 2.26)	86 more per 1000 (from 2 fewer to 158 more)	⊕⊕◯◯ LOW	CRITICAL
blood loss (ml) (Better indicated by lower values)												
2[2]	randomized trials	very serious[3,4]	no serious inconsistency	no serious indirectness	no serious imprecision	none	101	100	-	MD 4.62 higher (30.24 lower to 39.47 higher)	⊕⊕◯◯ LOW	CRITICAL
blood loss > 500ml												
1[6]	randomized trials	serious[3]	no serious inconsistency	no serious indirectness	serious[7]	none	4/140 (2.9%)	3/139 (2.2%)	OR 1.33 (0.29 to 6.07)	7 more per 1000 (from 15 fewer to 97 more)	⊕⊕◯◯ LOW	CRITICAL
surgical evacuation												
1[6]	randomized trials	serious[3]	no serious inconsistency	no serious indirectness	serious[7]	none	3/84 (3.6%)	0/71 (0%)	OR 6.14 (0.31 to 120.92)	0 more per 1000 (from 0 fewer to 0 more)	⊕⊕◯◯ LOW	CRITICAL
pain												
3[8]	randomized trials	very serious[3,4]	no serious inconsistency	no serious indirectness	no serious imprecision	none	84/241 (34.9%)	78/239 (32.6%)	OR 1.10 (0.75 to 1.61)	21 more per 1000 (from 60 fewer to 112 more)	⊕⊕◯◯ LOW	CRITICAL

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	misoprostol administered at a shorter time interval	misoprostol at a longer time interval	Relative (95% CI)	Absolute		Importance
nausea												
2[5]	randomized trials	very serious[3,4]	no serious inconsistency	no serious indirectness	no serious imprecision	none	21/214 (9.8%)	17/213 (8%)	OR 1.26 (0.64 to 2.45)	19 more per 1000 (from 27 fewer to 95 more)	⊕⊕◯◯ LOW	CRITICAL
vomiting												
3[8]	randomized trials	very serious[3,4]	no serious inconsistency	no serious indirectness	serious[7]	none	26/241 (10.8%)	17/241 (7.1%)	OR 1.61 (0.85 to 3.06)	38 more per 1000 (from 10 fewer to 118 more)	⊕◯◯◯ VERY LOW	CRITICAL
diarrhoea												
3[8]	randomized trials	very serious[3,4]	no serious inconsistency	no serious indirectness	no serious imprecision	none	59/241 (24.5%)	52/241 (21.6%)	OR 1.20 (0.76 to 1.89)	32 more per 1000 (from 43 fewer to 126 more)	⊕⊕◯◯ LOW	CRITICAL

1 Gestational age ranged from 12 to 28 weeks among included trials, with most common range being 13 to 24 weeks.
2 Nuutila 1997c (100mcg vaginal misoprostol every 6 hours, max 6 doses vs. vaginal misoprostol 200mcg every 12 hours, max 3 doses); Wong 2000 (400mcg vaginal misoprostol every 3 hours vs. 400mcg vaginal misoprostol every 6 hours)
3 Trial(s) were not blinded.
4 The trials included in the meta-analysis used different dosing regimens in terms of both dose and interval length of misoprostol.
5 Wong 2000 (400mcg vaginal misoprostol every 3 hours vs. 400mcg vaginal misoprostol every 6 hours); Herabutya 2005 (600mcg vaginal misoprostol every 6 hours max 9 doses vs. 600mcg vaginal misoprostol every 12 hours max 5 doses)
6 Herabutya 2005 (600mcg vaginal misoprostol every 6 hours max 9 doses vs. 600mcg vaginal misoprostol every 12 hours max 5 doses)
7 Small sample size or total number of events < 300.
8 Nuutila 1997c (100mcg vaginal misoprostol every 6 hours, max 6 doses vs. vaginal misoprostol 200mcg every 12 hours, max 3 doses); Wong 2000 (400mcg vaginal misoprostol every 3 hours vs. 400mcg vaginal misoprostol every 6 hours); Herabutya 2005 (600mcg vaginal misoprostol every 6 hours max 9 doses vs. 600mcg vaginal misoprostol every 12 hours max 5 doses)

Author(s): P. Whyte
Date: 2010-03-08
Question: Should gemeprost every 3 hours max 5 doses vs. gemeprost every 6 hours be used for second trimester abortion?[1]
Bibliography: Wildschut H et al. Medical methods for mid-trimester termination of pregnancy. *Cochrane Database of Systematic Reviews*, 2011, (1):CD005216.

Table 83:

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	gemeprost every 3 hours max 5 doses	gemeprost every 6 hours	Relative (95% CI)	Absolute		Importance
abortion within 24 hours												
1[2]	randomized trials	serious[3]	no serious inconsistency	no serious indirectness	serious[4]	none	37/50 (74%)	36/49 (73.5%)	OR 1.03 (0.42 to 2.52)	6 more per 1000 (from 197 fewer to 140 more)	⊕⊕○○ LOW	CRITICAL
surgical evacuation												
1[2]	randomized trials	serious[3]	no serious inconsistency	no serious indirectness	serious[4]	none	32/50 (64%)	38/49 (77.6%)	OR 0.51 (0.21 to 1.25)	138 fewer per 1000 (from 355 fewer to 36 more)	⊕⊕○○ LOW	CRITICAL
pain												
1[2]	randomized trials	serious[3]	no serious inconsistency	no serious indirectness	serious[4]	none	42/50 (84%)	36/49 (73.5%)	OR 1.90 (0.71 to 5.09)	106 more per 1000 (from 72 fewer to 199 more)	⊕⊕○○ LOW	CRITICAL

1 Gestational age ranged from 12 to 28 weeks among included trials, with most common range being 13 to 24 weeks.
2 Armatage 1996 (gemeprost every 3 hours, max 5 doses vs. gemeprost every 6 hours). Gemeprost dose not specified and no maximum dose for 6 hourly group specified.
3 Trial was not blinded.
4 Total number of events < 300.

Author(s): P. Whyte
Date: 2010-03-08
Question: Should mifepristone 200mg+buccal misoprostol 400mcg followed by 200mcg every 6 hours vs. buccal misoprostol 400mcg followed by 200mcg every 6 hours be used for second trimester abortion?[1]
Bibliography: Wildschut H et al. Medical methods for mid-trimester termination of pregnancy. *Cochrane Database of Systematic Reviews*, 2011, (1):CD005216.

Table 84:

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	mifepristone 200mg+buccal misoprostol 400mcg followed by 200mcg every 6 hours	buccal misoprostol 400mcg followed by 200mcg every 6 hours	Relative (95% CI)	Absolute		Importance
abortion within 24 hours												
1[2]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[3]	none	31/32 (96.9%)	23/32 (71.9%)	OR 12.13 (1.43 to 102.61)	250 more per 1000 (from 66 more to 277 more)	⊕⊕⊕◯ MODERATE	CRITICAL
surgical evacuation												
1[2]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[3]	none	1/32 (3.1%)	4/32 (12.5%)	OR 0.23 (0.02 to 2.14)	93 fewer per 1000 (from 122 fewer to 109 more)	⊕⊕⊕◯ MODERATE	CRITICAL
pain												
1[2]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[3]	none	15/32 (46.9%)	10/32 (31.3%)	OR 1.94 (0.7 to 5.38)	156 more per 1000 (from 71 fewer to 397 more)	⊕⊕⊕◯ MODERATE	CRITICAL
nausea												
1[2]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[3]	none	18/32 (56.3%)	16/32 (50%)	OR 1.29 (0.48 to 3.44)	63 more per 1000 (from 176 fewer to 275 more)	⊕⊕⊕◯ MODERATE	CRITICAL

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	mifepristone 200mg+buccal misoprostol 400mcg followed by 200mcg every 6 hours	buccal misoprostol 400mcg followed by 200mcg every 6 hours	Relative (95% CI)	Absolute		Importance
vomiting												
1[2]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[3]	none	14/32 (43.8%)	13/32 (40.6%)	OR 1.14 (0.42 to 3.07)	32 more per 1000 (from 183 fewer to 271 more)	⊕⊕⊕◯ MODERATE	CRITICAL

1 Gestational age ranged from 12 to 28 weeks among included trials, with most common range being 13 to 24 weeks.
2 Kapp 2007 (200mg mifepristone 20-24 hours after buccal misoprostol induction 400mcg and 200mcg every 6 hours vs. buccal misoprostol induction 400mcg and 200mcg every 6 hours; both groups received intra-amniotic injection of 1.5mg digoxin prior to randomized treatment)
3 Total number of events < 300.

Author(s): P. Whyte
Date: 2010-03-08
Question: Should 400mcg misoprostol dry tablet insertion vs. 400mcg misoprostol gel insertion be used for second trimester abortion?[1]
Bibliography: Wildschut H et al. Medical methods for mid-trimester termination of pregnancy. *Cochrane Database of Systematic Reviews*, 2011, (1):CD005216.

Table 85:

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	400mcg misoprostol dry tablet insertion	400mcg misoprostol gel insertion	Relative (95% CI)	Absolute		Importance
abortion within 24 hours												
1[2]	randomized trials	serious[3]	no serious inconsistency	no serious indirectness	serious[4]	none	45/72 (62.5%)	53/76 (69.7%)	OR 0.72 (0.37 to 1.43)	73 fewer per 1000 (from 237 fewer to 70 more)	⊕⊕◯◯ LOW	CRITICAL
blood loss > 500ml												
1[2]	randomized trials	serious[3]	no serious inconsistency	no serious indirectness	serious[4]	none	1/72 (1.4%)	3/76 (3.9%)	OR 0.34 (0.03 to 3.37)	26 fewer per 1000 (from 38 fewer to 82 more)	⊕⊕◯◯ LOW	CRITICAL
surgical evacuation												
1[2]	randomized trials	serious[3]	no serious inconsistency	no serious indirectness	serious[4]	none	19/72 (26.4%)	15/76 (19.7%)	OR 1.46 (0.67 to 3.15)	67 more per 1000 (from 56 fewer to 239 more)	⊕⊕◯◯ LOW	CRITICAL
pain												
1[2]	randomized trials	serious[3]	no serious inconsistency	no serious indirectness	serious[4]	none	20/72 (27.8%)	22/76 (28.9%)	OR 0.94 (0.46 to 1.93)	13 fewer per 1000 (from 132 fewer to 151 more)	⊕⊕◯◯ LOW	CRITICAL

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	400mcg misoprostol dry tablet insertion	400mcg misoprostol gel insertion	Relative (95% CI)	Absolute		Importance
nausea												
1[2]	randomized trials	serious[3]	no serious inconsistency	no serious indirectness	serious[4]	none	3/72 (4.2%)	2/76 (2.6%)	OR 1.61 (0.26 to 9.92)	15 more per 1000 (from 19 fewer to 185 more)	⊕⊕◯◯ LOW	CRITICAL
vomiting												
1[2]	randomized trials	serious[3]	no serious inconsistency	no serious indirectness	serious[4]	none	3/72 (4.2%)	1/76 (1.3%)	OR 3.26 (0.33 to 32.09)	28 more per 1000 (from 9 fewer to 286 more)	⊕⊕◯◯ LOW	CRITICAL
diarrhoea												
1[2]	randomized trials	serious[3]	no serious inconsistency	no serious indirectness	serious[4]	none	2/72 (2.8%)	12/76 (15.8%)	OR 0.15 (0.03 to 0.71)	131 fewer per 1000 (from 40 fewer to 152 fewer)	⊕⊕◯◯ LOW	CRITICAL

1 Gestational age ranged from 12 to 28 weeks among included trials, with most common range being 13 to 24 weeks.
2 Pongsatha 2008
3 Trial was not blinded.
4 Total number of events < 300 or small sample size.

Author(s): P. Whyte
Date: 2010-03-07
Question: Should vaginal misoprostol 200mcg followed by oral misoprostol 100mcg every 4 hours for 24 hours vs. ethacridine lactate 10mL instilled per gestational week to max 200mL be used for second trimester abortion?[1]
Bibliography: Wildschut H et al. Medical methods for mid-trimester termination of pregnancy. *Cochrane Database of Systematic Reviews*, 2011, (1):CD005216.

Table 86:

Quality assessment							Summary of findings					
	No of patients		Effect									
No of studies	Design	Limitations	Inconsistency	Indirectness	Quality Imprecision	Other considerations	vaginal misoprostol 200mcg followed by oral misoprostol 100mcg every 4 hours for 24 hours	ethacridine lactate 10mL instilled per gestational week to max 200mL	Relative (95% CI)	Absolute		Importance
induction to abortion interval (Better indicated by lower values)												
1[2]	randomized trials	serious[3]	no serious inconsistency	no serious indirectness	serious[4]	none	93	85	-	MD 1.00 lower (2.03 lower to 0.03 higher)	⊕⊕◯◯ LOW	IMPORTANT
abortion within 24 hours												
1[2]	randomized trials	serious[3]	no serious inconsistency	no serious indirectness	serious[5]	none	71/93 (76.3%)	65/85 (76.5%)	OR 0.99 (50 to 1.99)	2 fewer per 1000 (from 101 more to 229 more)	⊕⊕◯◯ LOW	CRITICAL

1 Gestational age ranged from 12 to 28 weeks among included trials, with most common range being 13 to 24 weeks.
2 Kelekci 2006a
3 Allocation concealment was unclear and trial was not blinded.
4 Based on one trial only with small sample size.
5 Total number of events <300.

Author(s): P. Whyte
Date: 2010-03-07
Question: Should vaginal misoprostol 200mcg followed by oral misoprostol 100mcg every 4 hours for 24 hours vs. ethacridine lactate 10mL instilled per gestational week to max 200mL plus oxytocin 6mU/min be used for second trimester abortion?[1]
Bibliography: Wildschut H et al. Medical methods for mid-trimester termination of pregnancy. *Cochrane Database of Systematic Reviews*, 2011, (1):CD005216.

Table 87:

Quality assessment							Summary of findings					
	No of patients		Effect									
No of studies	Design	Limitations	Inconsistency	Indirectness	Quality Imprecision	Other considerations	vaginal misoprostol 200mcg followed by oral misoprostol 100mcg every 4 hours for 24 hours	ethacridine lactate 10mL instilled per gestational week to max 200mL plus oxytocin 6mU/min	Relative (95% CI)	Absolute		Importance
induction to abortion interval (Better indicated by lower values)												
1[2]	randomized trials	serious[3]	no serious inconsistency	no serious indirectness	serious[4]	none	93	102	-	MD 2.40 higher (1.54 to 3.26 higher)	⊕⊕◯◯ LOW	IMPORTANT
abortion within 24 hours												
1[2]	randomized trials	serious[3]	no serious inconsistency	no serious indirectness	serious[4]	none	71/93 (76.3%)	80/102 (78.4%)	OR 0.89 (0.45 to 1.74)	20 fewer per 1000 (from 164 fewer to 79 more)	⊕⊕◯◯ LOW	CRITICAL

1 Gestational age ranged from 12 to 28 weeks among included trials, with most common range being 13 to 24 weeks.
2 Kelekci 2006d
3 Allocation concealment was unclear and trial was not blinded.
4 Small sample size or total number of events < 300.

Author(s): P. Whyte
Date: 2010-03-07
Question: Should vaginal misoprostol 400mcg followed by oral misoprostol 100mcg every 4 hours for 24 hours + oxytocin 6mU/min vs. ethacridine lactate 10mL instilled per gestational week to max 200mL be used for second trimester abortion?[1]
Bibliography: Wildschut H et al. Medical methods for mid-trimester termination of pregnancy. *Cochrane Database of Systematic Reviews*, 2011, (1):CD005216.

Table 88:

Quality assessment							Summary of findings					
	No of patients		Effect									
No of studies	Design	Limitations	Inconsistency	Indirectness	Quality Imprecision	Other considerations	vaginal misoprostol 400mcg followed by oral misoprostol 100mcg every 4 hours for 24 hours + oxytocin 6mU/min	ethacridine lactate 10mL instilled per gestational week to max 200mL	Relative (95% CI)	Absolute		Importance
induction to abortion interval (Better indicated by lower values)												
1[2]	randomized trials	serious[3]	no serious inconsistency	no serious indirectness	serious[4]	none	96	85	-	MD 4.30 lower (5.2 to 3.4 lower)	⊕⊕◯◯ LOW	IMPORTANT
abortion within 24 hours												
1[2]	randomized trials	serious[3]	no serious inconsistency	no serious indirectness	serious[4]	none	84/96 (87.5%)	65/85 (76.5%)	OR 2.15 (0.98 to 4.72)	110 more per 1000 (from 4 fewer to 174 more)	⊕⊕◯◯ LOW	CRITICAL

1 Gestational age ranged from 12 to 28 weeks among included trials, with most common range being 13 to 24 weeks.
2 Kelekci 2006c
3 Allocation concealment was unclear and trial was not blinded.
4 Small sample size or total number of events < 300.

Author(s): P. Whyte
Date: 2010-03-07
Question: Should vaginal misoprostol 200mcg followed by oral misoprostol 100mcg every 4 hours for 24 hours + oxytocin 6mU/min vs. ethacridine lactate 10mL instilled per gestational week to max 200mL plus oxytocin 6mU/min be used for second trimester abortion?[1]
Bibliography: Wildschut H et al. Medical methods for mid-trimester termination of pregnancy. *Cochrane Database of Systematic Reviews*, 2011, (1):CD005216.

Table 89:

Quality assessment							Summary of findings					
	No of patients		Effect									
No of studies	Design	Limitations	Inconsistency	Indirectness	Quality Imprecision	Other considerations	vaginal misoprostol 200mcg followed by oral misoprostol 100mcg every 4 hours for 24 hours + oxytocin 6mU/min	ethacridine lactate 10mL instilled per gestational week to max 200mL plus oxytocin 6mU/min	Relative (95% CI)	Absolute		Importance
induction to abortion interval (Better indicated by lower values)												
1[2]	randomized trials	serious[3]	no serious inconsistency	no serious indirectness	serious[4]	none	96	102	-	MD 0.90 lower (1.6 to 0.2 lower)	⊕⊕◯◯ LOW	IMPORTANT
abortion within 24 hours												
1[2]	randomized trials	serious[3]	no serious inconsistency	no serious indirectness	serious[4]	none	84/96 (87.5%)	80/102 (78.4%)	OR 1.93 (0.89 to 4.15)	91 more per 1000 (from 20 fewer to 154 more)	⊕⊕◯◯ LOW	CRITICAL

1 Gestational age ranged from 12 to 28 weeks among included trials, with most common range being 13 to 24 weeks.
2 Kelekci 2006f
3 Allocation concealment was unclear and trial was not blinded.
4 Small sample size or total number of events < 300.

Author(s): P. Whyte
Date: 2010-03-07
Question: Should ethacridine lactate vs. ethacridine lactate + oxytocin be used for second trimester abortion?[1]
Bibliography: Wildschut H et al. Medical methods for mid-trimester termination of pregnancy. *Cochrane Database of Systematic Reviews*, 2011, (1):CD005216.

Table 90:

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	ethacridine lactate	ethacridine lactate + oxytocin	Relative (95% CI)	Absolute		Importance
induction to abortion interval (Better indicated by lower values)												
1[2]	randomized trials	serious[3]	no serious inconsistency	no serious indirectness	serious[4]	none	85	102	-	MD 3.40 higher (2.48 to 4.32 higher)	⊕⊕◯◯ LOW	IMPORTANT
abortion within 24 hours												
2[5]	randomized trials	very serious[3,6]	no serious inconsistency	no serious indirectness	no serious imprecision	none	103/133 (77.4%)	120/151 (79.5%)	OR 0.88 (0.5 to 1.55)	22 fewer per 1000 (from 135 fewer to 62 more)	⊕⊕◯◯ LOW	CRITICAL
nausea												
1[7]	randomized trials	serious[3]	no serious inconsistency	no serious indirectness	serious[4]	none	2/48 (4.2%)	2/49 (4.1%)	OR 1.02 (0.14 to 7.56)	1 more per 1000 (from 35 fewer to 203 more)	⊕⊕◯◯ LOW	CRITICAL

1 Gestational age ranged from 12 to 28 weeks among included trials, with most common range being 13 to 24 weeks.
2 Kelekci 2006b (ethacridine lactate 10mL instilled per gestational week to max 200mL vs. ethacridine lactate 10mL instilled per gestational week to max 200ml plus oxytocin 6mU/min)
3 Allocation concealment was unclear and trial was not blinded.
4 Small sample size or total number of events < 300.
5 Kelekci 2006b (ethacridine lactate 10mL instilled per gestational week to max 200mL vs. ethacridine lactate 10mL instilled per gestational week to max 200ml plus oxytocin 6mU/min); Inan 1997b (ethacridine lactate 10mL per gestational week vs. ethacridine lactate plus oxytocin 10-20units/5% DW IV induction 2-4 hours following ethacridine lactate instillation)
6 Oxytocin dose differed between the two trials, thus combining the trials may not be appropriate.
7 Inan 1997b (ethacridine lactate 10mL per gestational week vs. ethacridine lactate plus oxytocin 10-20units/5% DW IV induction 2-4 hours following ethacridine lactate instillation)

Author(s): P. Whyte
Date: 2010-03-07
Question: Should ethacridine lactate 150mL 0.1% vs. normal saline 150mL be used for second trimester abortion?[1]
Bibliography: Wildschut H et al. Medical methods for mid-trimester termination of pregnancy. *Cochrane Database of Systematic Reviews*, 2011, (1):CD005216.

Table 91:

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other consid-erations	ethacridine lactate 150mL 0.1%	normal saline 150mL	Relative (95% CI)	Absolute		Importance
induction to abortion interval (Better indicated by lower values)												
1[2]	randomized trials	serious[3]	no serious inconsistency	no serious indirectness	serious[4]	none	19	18	-	MD 0.30 lower (4.02 lower to 3.42 higher)	⊕⊕◯◯ LOW	IMPORTANT
blood loss (with transfusion)												
1[2]	randomized trials	serious[3]	no serious inconsistency	no serious indirectness	serious[4]	none	0/19 (0%)	1/18 (5.6%)	OR 0.30 (0.01 to 7.83)	38 fewer per 1000 (from 55 fewer to 260 more)	⊕⊕◯◯ LOW	CRITICAL
pain (use of analgesics)												
1[2]	randomized trials	serious[3]	no serious inconsistency	serious[5]	serious[4]	none	2/19 (10.5%)	2/18 (11.1%)	OR 0.94 (0.12 to 7.5)	6 fewer per 1000 (from 96 fewer to 373 more)	⊕◯◯◯ VERY LOW	CRITICAL
vomiting (use of anti-emetics)												
1[2]	randomized trials	serious[3]	no serious inconsistency	serious[5]	serious[4]	none	5/19 (26.3%)	1/18 (5.6%)	OR 6.07 (0.63 to 58.22)	208 more per 1000 (from 20 fewer to 718 more)	⊕⊕◯◯ LOW	CRITICAL
uterine rupture												
1[2]	randomized trials	serious[3]	no serious inconsistency	no serious indirectness	serious[4]	none	0/19 (0%)	1/18 (5.6%)	OR 0.30 (0.01 to 7.83)	38 fewer per 1000 (from 55 fewer to 260 more)	⊕⊕◯◯ LOW	CRITICAL

1 Gestational age ranged from 12 to 28 weeks among included trials, with most common range being 13 to 24 weeks.
2 Zauya 1989
3 Allocation concealment was unclear and trial was not blinded.
4 Total number of events < 300.
5 Measured indirectly, through use of subsequent medications.

Author(s): P. Whyte
Date: 2010-03-07
Question: Should $PGF_2\alpha$ vs. hypertonic saline be used for second trimester abortion?[1]
Bibliography: Wildschut H et al. Medical methods for mid-trimester termination of pregnancy. *Cochrane Database of Systematic Reviews*, 2011, (1):CD005216.

Table 92:

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	$PGF_2\alpha$	hypertonic saline	Relative (95% CI)	Absolute		Importance
induction to abortion interval (Better indicated by lower values)												
1[2]	randomized trials	serious[3]	no serious inconsistency	no serious indirectness	serious[4]	none	9	16	-	MD 5.3 lower (6.67 to 3.93 lower)	⊕⊕◯◯ LOW	IMPORTANT
abortion within 24 hours - 20% NaCL vs. single dose of 50mg $PGF_2\alpha$												
1[5]	randomized trials	serious[6]	no serious inconsistency	no serious indirectness	serious[4]	none	19/34 (55.9%)	15/33 (45.5%)	OR 1.52 (0.58 to 3.98)	104 more per 1000 (from 129 fewer to 314 more)	⊕⊕◯◯ LOW	CRITICAL
abortion within 24 hours - 20% NaCL versus single dose of 25mg $PGF_2\alpha$												
2[7]	randomized trials	serious[8]	no serious inconsistency	no serious indirectness	no serious imprecision	none	465/750 (62%)	176/829 (21.2%)	OR 6.14 (4.91 to 7.68)	411 more per 1000 (from 357 more to 462 more)	⊕⊕⊕◯ MODERATE	CRITICAL
abortion within 24 hours - 20% NaCL versus single dose of 40mg $PGF_2\alpha$												
1[9]	randomized trials	serious[3]	no serious inconsistency	no serious indirectness	serious[4]	none	16/16 (100%)	11/16 (68.8%)	OR 15.78 (0.79 to 314.27)	285 more per 1000 (from 53 fewer to 311 more)	⊕⊕◯◯ LOW	CRITICAL
blood loss > 100ml												
3[10]	randomized trials	serious[8]	no serious inconsistency	no serious indirectness	serious[4]	none	10/83 (12%)	4/82 (4.9%)	OR 2.50 (0.79 to 7.91)	65 more per 1000 (from 10 fewer to 240 more)	⊕⊕◯◯ LOW	CRITICAL
blood loss > 500ml												
1[11]	randomized trials	serious[6]	no serious inconsistency	no serious indirectness	serious[13]	none	32/717 (4.5%)	12/796 (1.5%)	OR 3.05 (1.56 to 5.97)	30 more per 1000 (from 8 more to 69 more)	⊕⊕◯◯ LOW	CRITICAL
nausea												
1[11]	randomized trials	serious[6]	no serious inconsistency	no serious indirectness	serious[13]	none	16/717 (2.2%)	6/796 (0.8%)	OR 3.01 (1.17 to 7.72)	15 more per 1000 (from 1 more to 48 more)	⊕⊕◯◯ LOW	CRITICAL

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	$PGF_2\alpha$	hypertonic saline	Relative (95% CI)	Absolute		Importance
vomiting												
3[12]	randomized trials	serious[8]	no serious inconsistency	no serious indirectness	no serious imprecision	none	412/784 (52.6%)	155/862 (18%)	OR 5.16 (4.12 to 6.46)	351 more per 1000 (from 295 more to 406 more)	⊕⊕⊕◯ MODERATE	CRITICAL
diarrhoea												
3[12]	randomized trials	serious[8]	no serious inconsistency	no serious indirectness	serious[13]	none	120/784 (15.3%)	14/862 (1.6%)	OR 10.83 (6.17 to 19.02)	135 more per 1000 (from 76 more to 223 more)	⊕⊕◯◯ LOW	CRITICAL
surgical evacuation												
3[12]	randomized trials	serious[8]	no serious inconsistency	no serious indirectness	serious	none	317/784 (40.4%)	259/862 (30%)	OR 1.60 (1.3 to 1.96)	107 more per 1000 (from 58 more to 157 more)	⊕⊕⊕◯ MODERATE	CRITICAL

1 Gestational age ranged from 12 to 28 weeks among included trials, with most common range being 13 to 24 weeks.
2 Faktor 1988 (200 cm^3 of 20% hypertonic saline vs. $PGF_2\alpha$ 40mg)
3 Allocation concealment was unclear and trial was not blinded.
4 Small sample size or total number of events < 300.
5 Mehta 1975a (20% hypertonic saline vs. $PGF_2\alpha$ 50mg)
6 Trial was not blinded.
7 Mehta 1975b (20% hypertonic saline, 200ml vs. $PGF_2\alpha$ 25mg at 0 and 6 hours with similar doses at 24 and 30 hours if necessary); WHO 1976 (200mL 20% saline vs. $PGF_2\alpha$ 25mg 2 injections 6 hours apart).
8 Trials were not blinded.
9 Nielsen 1975 (20% saline with 75mL for 14th week gestation, 100mL for 15th week gestation and 150mL for >16 weeks gestation vs. $PGF_2\alpha$ 40mg; both groups received oxytocin 10IU/h).
10 Mehta 1975a (20% hypertonic saline vs. $PGF_2\alpha$ 50mg); Mehta 1975b (20% hypertonic saline, 200ml vs. $PGF_2\alpha$ 25mg at 0 and 6 hours with similar doses at 24 and 30 hours if necessary); Nielsen 1975 (20% saline with 75mL for 14th week gestation, 100mL for 15th week gestation and 150mL for >16 weeks gestation vs. $PGF_2\alpha$ 40mg; both groups received oxytocin 10IU/h).
11 WHO 1976 (200mL 20% saline vs. $PGF_2\alpha$ 25mg 2 injections 6 hours apart).
12Mehta 1975a (20% hypertonic saline vs. $PGF_2\alpha$ 50mg); Mehta 1975b (20% hypertonic saline, 200ml vs. $PGF_2\alpha$ 25mg at 0 and 6 hours with similar doses at 24 and 30 hours if necessary); WHO 1976 (200mL 20% saline vs. $PGF_2\alpha$ 25mg 2 injections 6 hours apart)
13 Wide confidence interval.

Author(s): P Whyte
Date: 2010-07-19
Question: Should mifepristone 200mg plus 200mcg vaginal misoprostol vs. mifepristone 200mg plus 400mcg vaginal misoprostol be used for second trimester abortion?[1]
Bibliography: Brouns JF et al. Comparison of two dose regimens of misoprostol for second-trimester pregnancy termination. *Contraception*. 2010 Sep;82(3):266-75.

Table 92.1:

Quality assessment							Summary of findings					
	No of patients		Effect									
No of studies	Design	Limitations	Inconsistency	Indirectness	Quality Imprecision	Other considerations	mifepristone 200mg plus 200mcg vaginal misoprostol	mifepristone 200mg plus 400mcg vaginal misoprostol	Relative (95% CI)	Absolute		Importance
abortion within 48 hours (fetus and placenta)												
1[2]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[3]	none	57/86 (66.3%)	66/90 (73.3%)	RR 0.90 (0.74 to 1.1)	73 fewer per 1000 (from 191 fewer to 73 more)	⊕⊕⊕◯ MODERATE	CRITICAL
manual placenta removal												
1[2]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[3]	none	22/86 (25.6%)	17/90 (18.9%)	RR 1.35 (0.77 to 2.37)	66 more per 1000 (from 43 fewer to 259 more)	⊕⊕⊕◯ MODERATE	CRITICAL
surgical evacuation												
1[2]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[3]	none	7/86 (8.1%)	7/90 (7.8%)	RR 1.05 (0.38 to 2.86)	4 more per 1000 (from 48 fewer to 145 more)	⊕⊕⊕◯ MODERATE	CRITICAL
nausea												
1[2]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[3]	none	35/85 (41.2%)	42/86 (48.8%)	RR 0.84 (0.6 to 1.18)	78 fewer per 1000 (from 195 fewer to 88 more)	⊕⊕⊕◯ MODERATE	CRITICAL

Quality assessment							Summary of findings					
	No of patients		Effect									
No of studies	Design	Limitations	Inconsistency	Indirectness	Quality Imprecision	Other considerations	mifepristone 200mg plus 200mcg vaginal misoprostol	mifepristone 200mg plus 400mcg vaginal misoprostol	Relative (95% CI)	Absolute		Importance
vomiting												
1[2]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[3]	none	27/85 (31.8%)	37/86 (43%)	RR 0.74 (0.5 to 1.1)	112 fewer per 1000 (from 215 fewer to 43 more)	⊕⊕⊕◯ MODERATE	CRITICAL
diarrhoea												
1[2]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[3]	none	5/85 (5.9%)	10/86 (11.6%)	RR 0.51 (0.18 to 1.52)	57 fewer per 1000 (from 95 fewer to 60 more)	⊕⊕⊕◯ MODERATE	CRITICAL
pain												
1[2]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[3]	none	7/85 (8.2%)	10/86 (11.6%)	RR 0.71 (0.8 to 1.77)	34 fewer per 1000 (from 23 fewer to 90 more)	⊕⊕⊕◯ MODERATE	CRITICAL

[1] Gestational age between 14 and 24 weeks
[2] Brouns 2010 (mifepristone 200mg followed 36-48 hours later by either 200mcg vaginal misoprostol or 400mcg vaginal misoprostol every 4 hours for a maximum 10 doses in 48 hours)
[3] Total number of events <300

Author(s): P. Whyte
Date: 2010-07-20
Question: Should mifepristone 200mg plus 400mcg buccal misoprostol vs. 400mcg buccal misoprostol be used for second trimester abortion?[1]
Bibliography: Ngoc NT et al. Comparing two early medical abortion regimens; mifepristone + misoprostol vs. misoprostol alone. *Contraception*. 2011 May;83(5):410-7.

Table 92.2:

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	mifepristone 200mg plus 400mcg buccal misoprostol	400mcg buccal misoprostol	Relative (95% CI)	Absolute		Importance
abortion within 24 hours (fetus and placenta)												
1[2]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[3]	none	103/129 (79.8%)	48/130 (36.9%)	RR 2.16 (1.7 to 2.75)	428 more per 1000 (from 258 more to 646 more)	⊕⊕⊕○ MODERATE	CRITICAL
abortion within 24 hours (fetus)												
1[2]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[3]	none	111/129 (86%)	51/130 (39.2%)	RR 2.19 (1.75 to 2.75)	467 more per 1000 (from 294 more to 687 more)	⊕⊕⊕○ MODERATE	CRITICAL
surgical evacuation												
1[2]	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[4]	none	4/129 (3.1%)	1/10 (10%)	RR 1.84 (0.21 to 16.03)	84 more per 1000 (from 79 fewer to 1503 more)	⊕⊕⊕○ MODERATE	CRITICAL

1 Gestational age between 14 and 21 weeks
2 Ngoc 2011 (200mg mifepristone followed 24 hours later by 400mcg buccal misoprostol every 3 hours with a maximum of 5 doses and repeat administration of 5 doses of 400mcg buccal misoprostol as needed vs. 400mcg buccal misoprostol every 3 hours with a maximum of 5 doses and repeat administration of 5 doses of 400mcg buccal misoprostol as needed)
3 Total number of events <300
4 Total number of events <300 and wide 95% confidence interval

Table 92.3: Time to abortion in hours – Brouns 2010

Outcome	Misoprostol 200mcg (n=86)	Misoprostol 400mcg (n=90)	Log rank test (p value)
Delivery of fetus			
Median time in hours (range)	11.6 (9.7-13.5)	9.3 (8.1-10.5)	0.042

Follow-up visits after abortion

A systematic review by Grossman et al. (2009 and 2004) assessed the evidence regarding follow-up visits after medical and surgical abortion. No direct evidence was available for follow-up versus no follow-up after induced abortion. In regards to indirect evidence, the review determined the health and safety of a woman post-abortion is most affected by the ability to detect an ongoing pregnancy, as serious complications such as infection, ectopic or incomplete abortion have symptoms which prompt a woman to seek care outside of a routine follow-up visit.

Therefore, the review focused on the accuracy of follow-up protocols to diagnose ongoing pregnancy following medical abortion. Gestational age ranged from 7 to 9 weeks. The review presented the sensitivity, specificity, positive predictive value (PPV), negative predictive value (NPV) for diagnosing ongoing pregnancy, compared to the gold standard of ultrasound.

A total of nine studies were included in the review, although one study (Harper et al., 2002) did not provide enough data to calculate the sensitivity, specificity, PPV and NPV and thus no results were presented for this trial. Given that the studies assessed a range of follow-up modalities, with varying outcomes presented, the Grossman (2009) review reasonably does not provide any meta-analyses of the trial results. The review did not address complications or cost of follow-up, with the exception of a mention of cost of serum hCG testing in the discussion. Overall, the quality of evidence is low given that all studies except one were non-randomized.

The table below provides a summary of the trials of follow-up after medical abortion and results presented by the review (GRADE tables were not possible for this evidence). The authors conclude that in-person follow-up visits following first-trimester surgical abortion are not necessary. Additionally, the following points were made regarding follow-up after medical abortion:

- Women's self-assessment has varying sensitivity to diagnose ongoing pregnancy. When combined with clinical assessment, such as a telephone call or a urine pregnancy test, the accuracy of self-assessment improves.
- Telephone follow-up was more accurate than urine pregnancy tests after one week, and fewer women would be referred for an in-person clinic visit. However this conclusion is not based on a direct assessment of these two different methodologies.
- Urine pregnancy testing later than one week after abortion, particularly when combined with self or clinician assessment is a promising follow-up modality.
- Serum hCG testing is an accurate modality to detect ongoing pregnancy; however it may add $USD100 to $200 to the cost of a medical abortion.

Table 93: Review of follow-up visits after first trimester abortion (Grossman D, Grindlay K. Alternatives to ultrasound for follow-up after medication abortion: a systematic review. *Contraception,* 2011, 83(6):504–510.)

Trial	Design	Regimen	Modality	N	Ongoing preg (N)	Sensitivity (95% CI)	Specificity (95% CI)	PPV (95% CI)	NPV (95% CI)
Clark 2009	non-randomized study assessing algorithms of care (urine pregnancy testing, women's self-assessment and clinician assessment) following medical abortion.	200mg oral mifepristone followed in 6-72 hours by 800mcg misoprostol either vaginal, oral or buccal	positive LS urine test combined with women's self-assessment (did not experience at least one day of heavy bleeding or still felt pregnant at follow-up), confirmed by ultrasound	3103	22	90.9% (69.3, 98.4)	67.6% (65.9, 69.2)	2.0% (1.2, 3.1)	99.9% (99.6, 100)
			positive LS urine test combined with women's self-assessment (experienced <2 days heavy bleeding or still felt pregnant at follow-up), confirmed by ultrasound	3103	22	100% (81.5, 100)	35.7% (34.0, 37.4)	1.1% (0.7, 1.7)	100% (99.6, 100)
			positive LS urine test combined with women's self-assessment (experienced <2 days heavy bleeding or still felt pregnant at follow-up), combined with clinician assessment, confirmed by ultrasound	2847	22	100% (81.5, 100)	65% (63.2, 66.8)	2.2% (1.4, 3.3)	100% (99.7, 100)
Creinin 1996	non-randomized study assessing safety and efficacy of methotrexate+ misoprostol for abortion	50mg/m2 intramuscular MTX and 800mcg vaginal misoprostol 7 days later	women's assessment on day 9 of whether 'pregnancy passed'	50	27	51.3% (32.4, 70.8)	65.2% (42.8, 82.8)	63.6% (40.8, 82)	53.6% (34.2, 72.0)
Ellertson 1997	non-randomized study assessing safety and efficacy of mifepristone-misoprostol regimen	600mg oral mifepristone followed in 48 hours by 400mcg oral misoprostol	women's assessment of whether abortion was complete at end of study, confirmed by physician's assessment	799	17	100% (77.1, 100)	85.9% (83.3, 88.3)	13.4% (8.2, 20.8)	100% (99.3, 100)
Fiala 2003	non-randomized study assessing use of ultrasound and serum hCG test prior to and following mifepristone-misoprostol in women requesting medical abortion	·600mg oral mifepristone followed in 48 hours by 400mcg oral misoprostol, with second dose of misoprostol given if required	serum hCG measurements on day 1, repeated day 6-18. Ratio of post-treatment hCG to pre-treatment hCG of >20% defined as positive test, confirmed by ultrasound	215	2	100% (19.7, 100)	98.1% (95, 99.4)	33.3% (6.0, 75.9)	100% (97.8, 100)

Trial	Design	Regimen	Modality	N	Ongoing preg (N)	Sensitivity (95% CI)	Specificity (95% CI)	PPV (95% CI)	NPV (95% CI)
Godfrey 2007	diagnostic test evaluation comparing high (HS) and low (LS) sensitivity urine pregnancy assays with ultrasonography as part of randomized trial assessing mifepristone followed by 800mcg misoprostol either 6-8 or 24 hours after mifepristone. clinicians performing ultrasound not blinded to results of urine tests.	200mg oral mifepristone and 800mg vaginal misoprostol 6-8 or 24 hours later	LS urine pregnancy test at 1 week, confirmed by ultrasound	826	14	100% (73.2, 100)	13.3% (11.1, 15.9)	1.9% (1.1, 3.3)	100% (95.7, 100)
			LS urine pregnancy test at 2 weeks, confirmed by ultrasound	609	6	83.3% (36.5, 99.1)	38.6% (34.8, 42.7)	1.3% (0.4, 3.3)	99.6% (97.3, 99.9)
			HS urine pregnancy test at 1 week, confirmed by ultrasound	821	14	85.7% (56.2, 97.5)	6.6% (5.0, 8.6)	1.6% (0.9, 2.8)	9.6% (86.4, 99.4)
			HS urine pregnancy test at 2 weeks, confirmed by ultrasound	606	6	66.7% (24.1, 94.0)	33.5% (29.8, 37.5)	0.9% (0.3, 2.7)	99.0% (97.3, 99.8)
Perriera 2009	non-randomized study assessing use of telephone calls and high sensitivity urine testing as method of follow-up after medical abortion	200mg oral mifepristone followed by 800mcg vaginal or buccal misoprostol	women's and clinician's assessment via telephone, absence or presence of gestational sac confirmed by ultrasound or HS urine pregnancy test	139	4	100% (39.6, 100)	86.7% (79.5, 91.7)	18.2% (6.0, 41.0)	100% (96.0, 100)
Pymar 2001	non-randomized study assessing early delivery of misoprostol following mifepristone for medical abortion	200mg oral mifepristone followed 6-8 hours later by 800mcg vaginal misoprostol	clinician's assessment of passage of gestational sac at 24 hour follow-up, confirmed by ultrasound	40	3	33.3% (1.8, 87.5)	94.6% (80.5, 99.1)	33.3% (1.8, 87.5)	94.6% (80.5, 99.1)
Rossi 2004	non-randomized study assessing ability of women and clinicians to predict pregnancy expulsion after medical abortion using mifepristone and misoprostol	200mg oral mifepristone followed in 6-8 or 23-25 hours by 800mcg vaginal misoprostol	women and clinician's assessment of expulsion of gestational sac 6-8 days after mifepristone, confirmed by ultrasound.	931	16	50% (25.5, 74.5)	95.3% (93.7, 96.5)	15.7% (7.5, 29.1)	99.1% (98.1, 99.6)

HS=high sensitivity; LS=low sensitivity; MTX=methotrexate; PPV=positive predictive value; NPV=negative predictive value

Author(s): R. Kulier
Date: 2009-07-07
Question: Should 400mcg misoprostol/po combined with 600mg mifepristone vs. 400mcg misoprostol/po combined with 200mg mifepristone be used in medical abortion during first trimester?
Settings: multicountry trial; hospital setting
Bibliography: Kulier R, Kapp N, Gülmezoglu AM, Hofmeyr GJ, Cheng L, Campana A. Medical methods for first trimester abortion. *Cochrane Database of Systematic Reviews* [2011].

Table 94

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	400mcg misoprostol/ po combined with 600mg mifepristone	400mcg misoprostol/ po combined with 200mg mifepristone	Relative (95% CI)	Absolute		Importance
failure to achieve abortion with method intended (ultrasound)												
1	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[1]	none	95/797 (11.9%)	85/792 (10.7%) 0%	RR 1.11 (0.84 to 1.46)	12 more per 1000 (from 17 fewer to 49 more) 0 more per 1000 (from 0 fewer to 0 more)	⊕⊕⊕○ MODERATE	CRITICAL
nausea (questioning)												
1	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	no serious imprecision	none	527/794 (66.4%)	531/790 (67.2%) 0%	RR 0.99 (0.92 to 1.06)	7 fewer per 1000 (from 54 fewer to 40 more) 0 fewer per 1000 (from 0 fewer to 0 more)	⊕⊕⊕○ HIGH	IMPORTANT
ongoing pregnancy (ultrasound)												
1	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	very serious[2]	none	15/797 (1.9%)	22/792 (2.8%) 0%	RR 0.68 (0.35 to 1.3)	9 fewer per 1000 (from 18 fewer to 8 more) 0 fewer per 1000 (from 0 fewer to 0 more)	⊕⊕○○ LOW	CRITICAL

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	400mcg misoprostol/ po combined with 600mg mifepristone	400mcg misoprostol/ po combined with 200mg mifepristone	Relative (95% CI)	Absolute		Importance
vomiting (questioning)												
1	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	no serious imprecision	none	224/794 (28.2%)	219/790 (27.7%)	RR 1.02 (0.87 to 1.19)	6 more per 1000 (from 36 fewer to 53 more)	⊕⊕⊕○ HIGH	IMPORTANT
								0%		0 more per 1000 (from 0 fewer to 0 more)		
diarrhoea (questioning)												
1	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[3]	none	65/794 (8.2%)	81/790 (10.3%)	RR 0.80 (0.58 to 1.09)	21 fewer per 1000 (from 43 fewer to 9 more)	⊕⊕⊕○ MODERATE	IMPORTANT
								0%		0 fewer per 1000 (from 0 fewer to 0 more)		

1 large confidence interval
2 large confidence interval; very low number of events
3 large confidence interval

Author(s): R. Kulier
Date: 2009-07-23
Question: Should 1mg gemeprost /PV combined with 600 mg mifepristone vs. 1mg gemeprost/pv combined with 200 mg mifepristone be used for medical abortion during first trimester?
Settings: multicountry trials; hospital based, mostly developed country setting
Bibliography: Kulier R, Kapp N, Gülmezoglu AM, Hofmeyr GJ, Cheng L, Campana A. Medical methods for first trimester abortion. *Cochrane Database of Systematic Reviews* [2011].

Table 95:

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	1mg gemeprost /pv combined with 600 mg mifepristone	1mg gemeprost/ pv combined with 200 mg mifepristone	Relative (95% CI)	Absolute		Importance
failure to achieve complete abortion (ultrasound)												
2	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[1]	none	59/840 (7%)	58/845 (6.9%) 0%	RR 1.02 (0.72 to 1.45)	1 more per 1000 (from 19 fewer to 31 more) 0 more per 1000 (from 0 fewer to 0 more)	⊕⊕⊕○ MODERATE	CRITICAL
ongoing pregnancy (ultrasound)												
1	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	very serious[2]	none	1/393 (0.3%)	2/396 (0.5%) 0%	RR 0.50 (0.05 to 5.53)	3 fewer per 1000 (from 5 fewer to 23 more) 0 fewer per 1000 (from 0 fewer to 0 more)	⊕⊕○○ LOW	CRITICAL
time until passing of conceptus > 3-6 hours (clinical)												
1	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	no serious imprecision	none	121/447 (27.1%)	129/449 (28.7%) 0%	RR 0.94 (0.76 to 1.16)	17 fewer per 1000 (from 69 fewer to 46 more) 0 fewer per 1000 (from 0 fewer to 0 more)	⊕⊕⊕○ HIGH	IMPORTANT

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	1mg gemeprost /pv combined with 600 mg mifepristone	1mg gemeprost/ pv combined with 200 mg mifepristone	Relative (95% CI)	Absolute		Importance
nausea (questioning)												
1	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[3]	none	31/425 (7.3%)	15/423 (3.5%)	RR 2.06 (1.13 to 3.75)	38 more per 1000 (from 5 more to 98 more)	⊕⊕⊕◯ MODERATE	IMPORTANT
								0%		0 more per 1000 (from 0 more to 0 more)		

1 large confidence interval
2 large confidence interval; event rate < 300
3 low number of events

Medical abortion methods up to 12 completed weeks

Summary:

A recently updated Cochrane systematic review (Kulier, et al, 2010) on medical abortion in the first trimester was used to evaluate medical methods of abortion during the first trimester of pregnancy. The review included randomised controlled trials comparing different medical methods for first trimester abortion. The review includes a total of 58 trials. The quality of included trials ranged from very low to high.

The effectiveness and safety of a combined mifepristone/prostaglandin regimen (dose of mifepristone and prostaglandin; type of prostaglandin; timing and route of administration for misoprostol) and the use of a prostaglandin alone (where mifepristone is unavailable) were evaluated.

Two of the authors prepared the relevant GRADE tables (RK, NK). For the purposes of recommendation-making, the following outcomes were ranked as 'critical': failure to achieve complete abortion and ongoing pregnancy. Those ranked as 'important' outcomes were: side- effects, abortion interval, and procedure related complications.

Combined mifepristone/prostaglandin interventions

The comparisons evaluated within the systematic review include the following:

		In combination with
Dose of Mifepristone	600mg vs. 200mg	Misoprostol 400mcg/po
	600mg vs. 200mg	Misoprostol 600mcg/po
	600mg vs. 200mg	Gemeprost 1 mg/pv
	200mg vs100mg	Misoprostol 800mcg/pv
	150mg vs. 75mg	Misoprostol 600mcg/po
	200mg vs. 50mg	Gemeprost0.5/1mg/pv
Type of Prostaglandin	Gemeprost 0.5mg/pv vs. Misoprostol 600mcg/po	Mifepristone 200mg
	Gemeprost 0.5mg/pv vs. Misoprostol 800mcg/pv	Mifepristone 200mg
Dose of Prostaglandin	Gemeprost 0.5mg vs. 1mg	Mifepristone 200/50mg
	Misoprostol 800mcg/pv vs 400mcg/po	Mifepristone 200mg
Route of Misoprostol	800mcg po vs. pv	Mifepristone 200/600mg
	800mcg buccal vs. pv	Mifepristone 200mg
	800mcg sl vs. pv	Mifepristone 200mg
	800mcg buccal vs. po	Mifepristone 200mg
	400mcg sl vs. po	Mifepristone 200mg
Timing of Misoprostol	800mcg/pv misoprostol day 3 vs. day1	Mifepristone 200mg
	800mcg/pv misoprostol day 3 vs. day 2	Mifepristone 200mg
	800mcg/pv misoprostol day 2 vs. day 1	Mifepristone 200mg
	800mcg/pv misoprostol day 2 vs. same day	Mifepristone 200mg
	800mcg/pv misoprostol day 1 vs. same day	Mifepristone 200mg

1.1.1 What dose of mifepristone should be given when using the combined mifepristone/prostaglandin regimen for first trimester abortion?

Six trials were included in the systematic review; five used a different dose, type or route of administration for the prostaglandin. The trials compared different doses of mifepristone: 600mg vs. 200mg, 200mg vs. 100mg, 150mg vs. 75 mg and 200mg vs. 50mg. The systematic review provides a meta-analysis, using five trials (not including 150 vs. 75 mg due to the administration of mifepristone over 2-3 days).

GRADE tables were prepared for each of the different dose regimens separately.

Mifepristone 600mg vs. 200mg in combination with 400mcg/po misoprostol

One trial looked at this comparison, including 1589 women. For the critical and important outcomes, the results were similar between the groups. Critical outcomes were failure: RR 1.11 (95%CI 0.84 to 1.46); ongoing pregnancy: RR 0.68 (95%CI 0.35 to 1.3). Important outcomes: nausea: RR 0.99 (95%CI 0.92 to 1.06); vomiting: RR 1.02 (95%CI 0.87 to 1.19); diarrhoea RR 0.80 (95%CI 0.58 to 1.09).

Mifepristone 600mg vs. 200mg in combination with 600mcg/po misoprostol

One small trial including 220 women looked at this comparison. For the critical outcomes, the rates are similar between the groups: failure: RR1.00 (95%CI 0.36 to 2.76); ongoing pregnancy: RR 0.33 (95%CI 0.01 to 8.01)

Mifepristone 600mg vs. 200mg in combination with 1mg/pv gemeprost

Two trials, including 1685 women, are included. The rates for the critical outcomes are similar between the groups: failure: RR 1.02 (95%CI 0.72 to 1.45); ongoing pregnancy: RR 0.50 (95%CI 0.05 to 5.53); time until passing of conceptus > 3-6 hours: RR 0.94 (95%CI 0.76 to 1.16). There were fewer women with nausea in the 200 mg group compared to 600mg: RR 2.06 (95%CI 1.13 to 3.75).

Mifepristone 200mg vs. 100mg in combination with 800mcg/pv misoprostol

One trial, including 2150 women was included. The rates were similar between the groups: failure: RR 0.85 (95%CI 0.63 to 1.15); ongoing pregnancy: RR 0.62 (95%CI 0.26 to 1.48). These results were similar also when stratifying by gestational age: failure ≤ 49days: RR 0.79 (95%CI 0.47 to 1.33); failure >49days: RR 0.89 (95%CI 0.61 to 1.29).

Mifepristone 150mg vs. 75mg in combination with 600mcg/po misoprostol

One small trial, including 480 women looked at this comparison. The total dose of mifepristone was administered over 3-4 days. The rates were similar between the groups: failure: RR1.22 (95%CI 0.52 to 2.9); ongoing pregnancy: RR 0.94 (95%CI 0.86 to 1.02).

Mifepristone 200mg vs. 50mg in combination with 0.5mg or 1mg/pv gemeprost

One trial, including 1224 women was included. There were four groups: group1) mifepristone 50mg and gemeprost 0.5mg; group 2) mifepristone 50mg and gemeprost 1mg; group 3) mifepristone 200mg and gemeprost 1mg; group 4) mifepristone 200mg and gemeprost 1mg. Group 1 was discontinued as interim analysis showed below predetermined cut-off results.

The failure rates were similar: RR 0.91 (95%CI 0.78 to 1.06). However, there were fewer ongoing pregnancies in the mifepristone 200mg group: RR 0.2 (95%CI 0.07 to 0.58).

1.1.2 What type of prostaglandin should be given when using the combined mifepristone/prostaglandin regimen for first trimester abortion?

Two trials were included in the review, comparing gemeprost 0.5mg/pv to either misoprostol 600mcg/po or 800mcg/pv. GRADE tables were prepared for both comparisons separately.

Gemeprost 0.5mg/pv vs. misoprostol 600mcg/po in combination with 200mg mifepristone

The one trial included had 800 women in the trial (Baird, 1995). The rates were similar for failure: RR 0.61 (95%CI 0.31 to 1.2) and for ongoing pregnancy: RR 0.11 (95%CI 0.01 to 0.86)

Gemeprost 0.5mg/pv vs. misoprostol 800mcg/pv in combination with 200mg mifepristone

Misoprostol seems to be more effective compared to gemeprost 0.5 mg, according to data from the single trial (Bartley, 2001): failure: RR 2.86 (95%CI 1.14 to 7.18). There was no difference for ongoing pregnancy (RR 1.61 95%CI 0.53 to 4.9) and time until passing of conceptus > 3-6 hours RR 0.97 (95%CI 0.77 to 1.23) between the groups. Vomiting and diarrhoea were more common with misoprostol when compared to gemeprost: RR 1.49 (95%CI 1.06 to 2.10); RR 2.66 (95%CI 1.35 to 5.26), respectively.

1.1.3 What dose of prostaglandin should be given when using the combined mifepristone/prostaglandin regimen for first trimester abortion?

There were two comparisons included in the review, one comparing gemeprost 0.5mg to 1mg and one misoprostol 800mcg to 400mcg.

GRADE tables have been prepared for both the comparisons.

Gemeprost 1mg/pv vs. 0.5mg/pv in combination with 200mg mifepristone

The review included 2 trials; one small trial (30 women in each group) used mifepristone 600mg and was not included in the GRADE tables.

The trial included in this comparison (WHO MI200/50) used a factorial design (mifepristone 50/200 mg and gemeprost 1/0.5 mg). The failure rates and ongoing pregnancy rates were similar for both groups: RR 0.82 (95%CI 0.49 to 1.39); and RR 1.00 (95%CI 0.14 to 3.58).

The arm with the smallest dose (mifepristone 50 mg and gemeprost 0.5 mg) was stopped prematurely after 249 women were enrolled, as the effectiveness was below the predetermined cut-off point.

Misoprostol 800mcg/po or pv vs. 400mcg po in combination with 200mg mifepristone

Two trials compared different doses of oral misoprostol after 200 mg of mifepristone (Coyaji 2007, Shannon 2006). Coyaji, et al. compared misoprostol 400mcg to 800mcg (given orally; 800mcg was administered as repeat dose of 400mcg after 3hours). Shannon, et al. used 3 groups, comparing misoprostol 400mcg/po, 600mcg/po and 800mcg/pv. Some women received additional misoprostol. Data from the 400mcg and 800mcg groups were included in the review. Failure rates were similar between the groups: RR 0.83 (95%CI 0.53 to 1.31). There were fewer ongoing pregnancies in the 800mcg compared to the 400mcg group, RR 0.10 (95%CI 0.01 to 0.76). Side-effects were similar between the groups: nausea: RR 1.03 (95%CI 0.85 to 1.25); vomiting RR 1.21 (95%CI 0.9 to 1.64); diarrhoea RR 1.13 (95%CI 0.81 to 1.56)

1.1.4 How should misoprostol be administered when using the combined mifepristone/prostaglandin regimen for first trimester abortion?

There were five comparisons in the review: oral vs. vaginal, buccal vs. vaginal, sublingual vs. vaginal, buccal vs. oral and sublingual vs. oral.

GRADE tables were prepared for each of the comparisons.

Misoprostol 800mcg oral versus vaginal in combination with 200/600mg mifepristone

Six trials are included in the review; 2 trials with a total of 1407 women are included in the meta-analysis. El-Refaey, et al. used mifepristone 600mg and Schaff, et al. used mifepristone 200mg. Both used misoprostol 800mcg orally and vaginally after 48 hours (El-Refaey) and at least 24hours (Schaff) after mifepristone. The rates for failure were higher in the oral misoprostol group: RR 3.05 (95% CI 1.98 to 4.70). Nausea and diarrhoea occurred more often in the group receiving misoprostol orally: RR 1.13 (95% CI 1.02 to1.25); RR 1.80 (95% CI 1.49 to 12.18), respectively. Vomiting occurred more often in the vaginal group in one trial (Schaff M800MI200), and reporting error cannot be excluded. Three trials used different doses orally and vaginally and were therefore not included in the meta-analysis (Creinin 2001 and Shannon 2006, Arvidsson 2005). In one trial (Shannon 2006), some women received additional misoprostol.

Misoprostol 800mcg buccal versus vaginal in combination with 200mg mifepristone

One trial (Middleton, 2005) was included for this comparison. Failure to achieve complete abortion was similar in both groups. More women reported diarrhoea in the buccal compared to the vaginal group, RR 1.51 (95%CI 1.12 to 2.03).

Misoprostol 800mcg sublingual versus vaginal in combination with 200mg mifepristone

One small trial was included (Tang 2003). There was no difference in failure rates: RR 0.29 (95%CI 0.06 to 1.35) or ongoing pregnancy rates: RR 0.14 (95%CI 0.01 to 2.73). More women in the sublingual group reported side-effects: nausea, RR 1.67 (95%CI 1.21 to 2.29), vomiting, RR 2.93 (95% CI 1.69 to 5.06), diarrhoea, RR 2.5 (95%CI 1.55 to 4.04).

Misoprostol 800mcg buccal versus oral in combination with 200mg mifepristone

One trial is included in this comparison (Winikoff 2008). The failure rate was less in the buccal group, RR 0.45 (95%CI 0.25 to 0.79) for all gestational ages and for women with > 49 days of gestation, RR 0.37 (95%CI 0.18 to 0.73). The failure rates were similar between the two groups for women ≤ 49 days, RR0.72 (95%CI 0.25 to 2.04). Overall ongoing pregnancy rate was less in the buccal group, RR 0.27 (95%CI 0.09 to 0.82) and for women > 49 days of gestation, RR 0.18 (95% CI 0.04 to 0.78). Rates were similar for women with ≤49 days, RR 0.64 (95%CI 0.11 to 3.8). Fewer women in the oral group had nausea compared to the buccal group, RR 1.10 (95% CI 1.01 to 1.19).

Misoprostol 400mcg sublingual versus oral in combination with 200mg mifepristone

One trial, including 480 women, was included in this comparison (Raghavan, 2009). Women in the sublingual group were less likely to fail to achieve complete abortion compared with the oral group, RR 0.21(95%CI 0.06 to 0.72). Side-effects were similar among the two groups: nausea: RR 0.87 (95%CI 0.73 to 1.04); vomiting: RR 0.88 (95%CI 0.59 to 1.33).

1.1.5 When should misoprostol be administered when using the combined mifepristone/prostaglandin regimen for first trimester abortion?

There were five comparisons included in the review: misoprostol on day 3 vs. day 1; day 3 vs. day 2; day 2 vs. day 1; day 2 vs. same day; day 1 vs. same day.

GRADE tables were prepared for each of the comparisons separately.

Misoprostol 800mcg/pv on day 3 vs. day 1 after mifepristone 200mg

There was one trial, including 1489 women (Schaff, 2000). The rates for failure were higher in the group receiving misoprostol after 3 days compared to after 1 day after: RR 1.94 (95%CI 1.05 to 3.58). Side-effects were similar between the groups: nausea: RR 1.05 (95%CI 0.96 to 1.14); vomiting: RR 1.01 (95%CI 0.86 to 1.19); diarrhoea: RR 1.21 (95%CI 0.99 to 1.48).

The review determined that there was no difference in women's dissatisfaction with the method between day 3 to day 1, RR 1.00 (95%CI 0.68 to 1.47 – no GRADE tables prepared)

Misoprostol 800mcg/pv on day 3 vs. day 2 after mifepristone 200mg

The same trial also compared day 3 vs. day 2 in 1521 women (Schaff, 2000). The rates for failure and ongoing pregnancy were similar between the groups: failure: RR 1.69 (95%CI 0.95 to 3.01); ongoing pregnancy: RR 2.71 (95%CI 0.72 to 10.16). Side-effects were similar in both groups: nausea: RR 0.98 (95%CI 0.91 to 1.06); vomiting RR 0.97 (95%CI 0.83 to 1.13); diarrhoea: RR 1.16 (95%CI 0.95 to 1.42).

Misoprostol 800mcg/pv on day 2 vs. day 1 after mifepristone 200 or 100mg

There are two trials included, with a total of 3623 women (Schaff, 2000; von Hertzen, 2009). One trial used 200 mg and one included 100mg of mifepristone. GRADE tables were prepared combining the two trials. Rates of failure to achieve complete abortion were similar when combining results for gestational age until 63 days: RR 1.24 (95%CI 0.94 to 1.64) and for ongoing pregnancy rates: RR0.92 (95%CI 0.45 to 1.9). However, failure rates were higher with misoprostol administered on day 2 compared to day 1 in women > 49 days of gestation based on one trial: RR 1.62 (95%CI 1.11 to 2.38). Rates for side-effects were similar for both groups: nausea: RR1.07 (95%CI 0.98 to 1.16); vomiting: RR 1.05 (95%CI 0.9 to 1.22); diarrhoea: RR 1.04 (95%CI 0.85 to 1.28).

Misoprostol 800mcg/pv on day 2 vs. same day after mifepristone 200mg

One trial, including 450 women was included (Guest, 2007). Failure to achieve complete abortion was less likely when misoprostol was administered after a 36 -48 hour interval when compared to 6 hours after mifepristone: RR 0.39 (95%CI 0.24 to 0.65). Rates for side-effects were similar: nausea RR 0.82 (95%CI 0.52 to 1.3); vomiting: RR 0.86 (95%CI 0.55 to 1.34); diarrhoea RR 0.73 (95%CI 0.4 to 1.33).

Misoprostol 800mcg/pv on day 1 vs. same day after mifepristone 200mg

Two trials, with a total of 2156 women were included (Creinin 2004, Creinin 2007).

Vaginal misoprostol, 800mcg, inserted on day 1 was more effective compared to an interval of ≤ 6 hours, RR 0.65 (95%CI 0.46 to 0.92). Ongoing pregnancy rates were similar: RR 0.34 (95%CI 0.07 to 1.66). Side-effects were similar between the groups: nausea: RR 1.01 (95%CI 0.78 to 1.31); vomiting: RR 1.13 (95%CI 0.79 to 1.62).

Author(s): R. Kulier
Date: 2009-07-26
Question: Should 600mcg misoprostol po combined with 600mg mifepristone vs. 600mcg misoprostol/po combined with 200mg mifepristone be used for medical abortion during first trimester?
Settings: Edinburgh, Scotland; hospital based
Bibliography: Kulier R, Kapp N, Gülmezoglu AM, Hofmeyr GJ, Cheng L, Campana A. Medical methods for first trimester abortion. *Cochrane Database of Systematic Reviews* [2011].

Table 96

Quality assessment							Summary of findings					
	No of patients		Effect									
No of studies	Design	Limitations	Inconsistency	Indirectness	Quality Imprecision	Other considerations	600mcg misoprostol p/o combined with 600mg mifepristone	600mcg misoprostol/ po combined with 200mg mifepristone	Relative (95% CI)	Absolute		Importance
failure to achieve complete abortion (ultrasound)												
1	randomized trials	serious[1]	no serious inconsistency	no serious indirectness	very serious[2]	none	7/110 (6.4%)	7/110 (6.4%) 0%	RR 1.00 (0.36 to 2.76)	0 fewer per 1000 (from 41 fewer to 112 more) 0 fewer per 1000 (from 0 fewer to 0 more)	⊕○○○ VERY LOW	CRITICAL
ongoing pregnancy (ultrasound)												
1	randomized trials	serious[3]	no serious inconsistency	no serious indirectness	very serious[4]	none	0/110 (0%)	1/110 (0.9%) 0%	RR 0.33 (0.01 to 8.01)	6 fewer per 1000 (from 9 fewer to 64 more) 0 fewer per 1000 (from 0 fewer to 0 more)	⊕○○○ VERY LOW	CRITICAL

1 allocation concealment unclear
2 very low event rate
3 see footnote 1
4 very low event rate; RR 0.33, 95%CI 0.01 to 8.01

Author(s): R. Kulier
Date: 2009-07-26
Question: Should 800mcg misoprostol/pv combined with 200mg mifepristone vs. 800mcg misoprostol/pv combined with 100mg mifepristone be used for medical abortion during first trimester?
Settings: multicounty trial; centres in developed and developing country settings; hospital based
Bibliography: Kulier R, Kapp N, Gülmezoglu AM, Hofmeyr GJ, Cheng L, Campana A. Medical methods for first trimester abortion. *Cochrane Database of Systematic Reviews* [2011].

Table 97:

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	800mcg misoprostol/pv combined with 200mg mifepristone	800mcg misoprostol/pv combined with 100mg mifepristone	Relative (95% CI)	Absolute		Importance
failure to achieve complete abortion (follow-up mean 2 weeks; ultrasound)												
1	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[1]	none	72/1061 (6.8%)	85/1062 (8%) 0%	RR 0.85 (0.63 to 1.15)	12 fewer per 1000 (from 30 fewer to 12 more) 0 fewer per 1000 (from 0 fewer to 0 more)	⊕⊕⊕○ MODERATE	CRITICAL
ongoing pregnancy (ultrasound)												
1	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[2]	none	8/1089 (0.7%)	13/1092 (1.2%) 0%	RR 0.62 (0.26 to 1.48)	5 fewer per 1000 (from 9 fewer to 6 more) 0 fewer per 1000 (from 0 fewer to 0 more)	⊕⊕⊕○ MODERATE	CRITICAL

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	800mcg misoprostol/pv combined with 200mg mifepristone	800mcg misoprostol/pv combined with 100mg mifepristone	Relative (95% CI)	Absolute		Importance
failure to achieve complete abortion at ≤ 49 days gestation												
1	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[3]	none	25/482 (5.2%)	30/459 (6.5%) 0%	RR 0.79 (0.47 to 1.33)	14 fewer per 1000 (from 35 fewer to 22 more) 0 fewer per 1000 (from 0 fewer to 0 more)	⊕⊕⊕◯ MODERATE	CRITICAL
failure to achieve complete abortion at >49 days (ultrasound)												
1	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[4]	none	47/579 (8.1%)	55/603 (9.1%) 0%	RR 0.89 (0.61 to 1.29)	10 fewer per 1000 (from 36 fewer to 26 more) 0 fewer per 1000 (from 0 fewer to 0 more)	⊕⊕⊕◯ MODERATE	CRITICAL

1 large confidence interval
2 large confidence interval
3 large confidence interval
4 large confidence interval

Author(s): R. Kulier
Date: 2009-07-26
Question: Should 600mcg misoprostol/po combined with 150mg mifepristone vs. 600mcg misoprostol /po combined with 75mg mifepristone be used for medical abortion during first trimester?
Settings: University Hospital, Beijing, China
Bibliography Kulier R, Kapp N, Gülmezoglu AM, Hofmeyr GJ, Cheng L, Campana A. Medical methods for first trimester abortion. *Cochrane Database of Systematic Reviews* [2011].

Table 98:

Quality assessment							Summary of findings					
	No of patients		Effect									
No of studies	Design	Limitations	Inconsistency	Indirectness	Quality Imprecision	Other considerations	600mcg misoprostol/ po combined with 150mg mifepristone	600mcg misoprostol / po combined with 75mg mifepristone	Relative (95% CI)	Absolute		Importance
failure to achieve complete abortion (ultrasound)												
1	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	very serious[1]	none	9/240 (3.8%)	11/240 (4.6%) 0%	RR 1.22 (0.52 to 2.9)	10 more per 1000 (from 22 fewer to 87 more) 0 more per 1000 (from 0 fewer to 0 more)	⊕⊕◯◯ LOW	CRITICAL
ongoing pregnancy (clinically)												
1	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	very serious[2]	none	2/240 (0.8%)	1/240 (0.4%) 85.4%	RR 0.94 (0.86 to 1.02)	0 fewer per 1000 (from 1 fewer to 0 more) 51 fewer per 1000 (from 120 fewer to 17 more)	⊕⊕◯◯ LOW	IMPORTANT

1 low event rate; large confidence interval
2 very low number of events

Author(s): R. Kulier
Date: 2009-07-26
Question: Should 0.5/1mg gemeprost pv combined with 200mg mifepristone vs. 0.5/1mg gemeprost pv combined with 50mg mifepristone be used for medical abortion during first trimester?
Settings: multicountry trial; hospital based
Bibliography: Kulier R, Kapp N, Gülmezoglu AM, Hofmeyr GJ, Cheng L, Campana A. Medical methods for first trimester abortion. *Cochrane Database of Systematic Reviews* [2011].

Table 99:

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	0.5/1mg gemeprost p/v combined with 200mg mifepristone	0.5/1mg gemeprost p/v combined with 50mg mifepristone	Relative (95% CI)	Absolute		Importance
failure to achieve complete abortion (ultrasound)												
1	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[1]	none	51/650 (7.8%)	72/574 (12.5%)	RR 0.91 (0.78 to 1.06)	11 fewer per 1000 (from 28 fewer to 8 more)	⊕⊕⊕◯ MODERATE	CRITICAL
								0%		0 fewer per 1000 (from 0 fewer to 0 more)		
ongoing pregnancy (ultrasound)												
1	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	very serious[2]	none	4/650 (0.6%)	18/574 (3.1%)	RR 0.20 (0.07 to 0.58)	25 fewer per 1000 (from 13 fewer to 29 fewer)	⊕⊕◯◯ LOW	CRITICAL
								0%		0 fewer per 1000 (from 0 fewer to 0 fewer)		

1 small number of events
2 small number of events; large confidence interval

Author(s): R. Kulier
Date: 2009-07-27
Question: Should 800mcg misoprostol po combined with mifepristone (200 or 600mg) vs. 800mcg misoprostol pv combined with mifepristone (200 or 600mg) be used for medical abortion during first trimester?
Settings: Hospital settings; UK and USA
Bibliography: Kulier R, Kapp N, Gülmezoglu AM, Hofmeyr GJ, Cheng L, Campana A. Medical methods for first trimester abortion. *Cochrane Database of Systematic Reviews* [2011].

Table 100:

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	800mcg misoprostol po combined with mifepristone (200 or 600mg)	800mcg misoprostol pv combined with mifepristone (200 or 600mg)	Relative (95% CI)	Absolute		Importance
failure to achieve complete abortion (clinical and ultrasound)												
2	randomized trials	serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	74/678 (10.9%)	26/729 (3.6%) 0%	RR 3.05 (1.98 to 4.7)	73 more per 1000 (from 35 more to 132 more) 0 more per 1000 (from 0 more to 0 more)	⊕⊕◯◯ LOW	CRITICAL
nausea (questioning)												
2	randomized trials	serious3	no serious inconsistency	no serious indirectness	no serious imprecision	none	363/664 (54.7%)	345/716 (48.2%) 0%	RR 1.13 (1.02 to 1.25)	63 more per 1000 (from 10 more to 120 more) 0 more per 1000 (from 0 more to 0 more)	⊕⊕⊕◯ MODERATE	IMPORTANT

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	800mcg misoprostol po combined with mifepristone (200 or 600mg)	800mcg misoprostol pv combined with mifepristone (200 or 600mg)	Relative (95% CI)	Absolute		Importance
vomiting (questioning)												
2	randomized trials	serious[3]	serious[4]	no serious indirectness	no serious imprecision	none	195/663 (29.4%)	198/556 (35.6%) 0%	RR 0.83 (0.71 to 0.98)	61 fewer per 1000 (from 7 fewer to 103 fewer) 0 fewer per 1000 (from 0 fewer to 0 fewer)	⊕⊕◯◯ LOW	IMPORTANT
diarrhoea (questioning)												
2	randomized trials	serious[3]	no serious inconsistency	no serious indirectness	no serious imprecision	none	221/664 (33.3%)	132/715 (18.5%) 0%	RR 1.80 (1.49 to 2.18)	148 more per 1000 (from 90 more to 218 more) 0 more per 1000 (from 0 more to 0 more)	⊕⊕⊕◯ MODERATE	IMPORTANT

1 El-Refaey H, Rajasekar D, Abdalla M, Calder L, Templeton A. Induction of abortion with mifepristone (RU 486) and oral or vaginal misoprostol. New England Journal of Medicine 1995;332:983-987: mifepristone 600mg followed by misoprostol 800mcg either po or pv after 48 hours. No additional misoprostol dose was mentioned. Verification of expulsion of conceptus by clinical examination. Schaff EA, Fielding SL, Westhoff C. Randomized trial of oral versus vaginal misoprostol at one day after mifepristone for early medical abortion. Contraception 2001;64(2):81-85. Trial used mifepristone 200 mg followed by misoprostol 400mcg+400mcg (after 2 hours) po or 800mcg pv 24 hours after mifepristone. Downgrading because of additional misoprostol was given- unclear to how many women per group.

2 small number of events

3 see footnote 1

4 RR 0.83, (95%CI 0.71 to 0.98). Test of heterogeneity: fixed effects model: I_2: 92%. Random effects model: tau^2: 0.21.

Author(s): R. Kulier
Date: 2009-07-27
Question: Should 800mcg misoprostol buccal combined with mifepristone 200mg vs. 800mcg misoprostol pv combined with mifepristone 200mg be used for medical abortion during first trimester?
Settings: University Hospital, Rochester, USA
Bibliography: Kulier R, Kapp N, Gülmezoglu AM, Hofmeyr GJ, Cheng L, Campana A. Medical methods for first trimester abortion. *Cochrane Database of Systematic Reviews* [2011].

Table 101:

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	800mcg misoprostol buccal combined with mifepristone 200mg	800mcg misoprostol pav combined with mifepristone 200mg	Relative (95% CI)	Absolute		Importance
failure to achieve complete abortion (ultrasound)												
1	randomized trials	serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	11/216 (5.1%)	14/213 (6.6%) 0%	RR 0.77 (0.36 to 1.67)	15 fewer per 1000 (from 42 fewer to 44 more) 0 fewer per 1000 (from 0 fewer to 0 more)	⊕⊕◯◯ LOW	CRITICAL
nausea (questioning)												
1	randomized trials	serious[3]	no serious inconsistency	no serious indirectness	no serious imprecision	none	150/216 (69.4%)	132/213 (62%) 0%	RR 1.12 (0.98 to 1.29)	74 more per 1000 (from 12 fewer to 180 more) 0 more per 1000 (from 0 fewer to 0 more)	⊕⊕⊕◯ MODERATE	IMPORTANT

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	800mcg misoprostol buccal combined with mifepristone 200mg	800mcg misoprostol pav combined with mifepristone 200mg	Relative (95% CI)	Absolute		Importance
vomiting (questioning)												
1	randomized trials	serious[3]	no serious inconsistency	no serious indirectness	serious[4]	none	80/216 (37%)	68/213 (31.9%) 0%	RR 1.16 (0.89 to 1.51)	51 more per 1000 (from 35 fewer to 163 more) 0 more per 1000 (from 0 fewer to 0 more)	⊕⊕◯◯ LOW	IMPORTANT
diarrhoea (questioning)												
1	randomized trials	serious[3]	no serious inconsistency	no serious indirectness	serious[5]	none	78/216 (36.1%)	51/213 (23.9%) 0%	RR 1.51 (1.12 to 2.03)	122 more per 1000 (from 29 more to 247 more) 0 more per 1000 (from 0 more to 0 more)	⊕⊕◯◯ LOW	IMPORTANT

1 allocation concealment unclear; open-label
2 large confidence interval
3 see footnote 1
4 large confidence interval
5 small number of events

Author(s): R. Kulier
Date: 2009-07-27
Question: Should 800mcg misoprostol sublingual combined with mifepristone 200mg vs. 800mcg misoprostol pv combined with mifepristone 200mg be used for medical abortion during first trimester?
Settings: University Hospital, Hong Kong
Bibliography: Kulier R, Kapp N, Gülmezoglu AM, Hofmeyr GJ, Cheng L, Campana A. Medical methods for first trimester abortion. *Cochrane Database of Systematic Reviews* [2011].

Table 102:

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	800mcg misoprostol sublingual combined with mifepristone 200mg	800mcg misoprostol pv combined with mifepristone 200mg	Relative (95% CI)	Absolute		Importance
failure to achieve complete abortion (ultrasound)												
1	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	very serious[1]	none	2/112 (1.8%)	7/112 (6.3%) 0%	HR 0.29 (0.06 to 1.35)	44 fewer per 1000 (from 59 fewer to 21 more) 0 fewer per 1000 (from 0 fewer to 0 more)	⊕⊕◯◯ LOW	CRITICAL
ongoing pregnancy (ultrasound)												
1	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	very serious[2]	none	0/112 (0%)	3/112 (2.7%) 0%	RR 0.14 (0.01 to 2.73)	23 fewer per 1000 (from 27 fewer to 46 more) 0 fewer per 1000 (from 0 fewer to 0 more)	⊕⊕◯◯ LOW	CRITICAL
nausea (questioning)												
1	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[3]	none	60/112 (53.6%)	36/112 (32.1%) 0%	RR 1.67 (1.21 to 2.29)	215 more per 1000 (from 68 more to 415 more) 0 more per 1000 (from 0 more to 0 more)	⊕⊕⊕◯ MODERATE	IMPORTANT

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	800mcg misoprostol sublingual combined with mifepristone 200mg	800mcg misoprostol pv combined with mifepristone 200mg	Relative (95% CI)	Absolute		Importance
vomiting (questioning)												
1	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	very serious[4]	none	41/112 (36.6%)	14/112 (12.5%) 0%	RR 2.93 (1.69 to 5.06)	241 more per 1000 (from 86 more to 507 more) 0 more per 1000 (from 0 more to 0 more)	⨁⨁◯◯ LOW	IMPORTANT
diarrhoea (questioning)												
1	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	very serious[5]	none	45/112 (40.2%)	18/112 (16.1%) 0%	RR 2.50 (1.55 to 4.04)	241 more per 1000 (from 88 more to 489 more) 0 more per 1000 (from 0 more to 0 more)	⨁⨁◯◯ LOW	IMPORTANT

1 small number of events; large confidence interval
2 small number of events; large confidence interval
3 small number of events; large confidence interval
4 small number of events; large confidence interval
5 small number of events; large confidence interval

Author(s): R. Kulier
Date: 2009-10-16
Question: Should 800mcg misoprostol buccal combined with mifepristone 200mg vs. 800mcg misoprostol oral combined with mifepristone 200mg be used for medical abortion during first trimester?
Settings: family planning centres; USA
Bibliography: Kulier R, Kapp N, Gülmezoglu AM, Hofmeyr GJ, Cheng L, Campana A. Medical methods for first trimester abortion. *Cochrane Database of Systematic Reviews* [2011].

Table 103:

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	800mcg misoprostol buccal combined with mifepristone 200mg	800mcg misoprostol oral combined with mifepristone 200mg	Relative (95% CI)	Absolute		Importance
failure to achieve complete abortion (all) (ultrasound and hCG)												
1	randomized trials	serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	30/421 (7.1%)	49/426 (11.5%) 0%	RR 0.62 (0.4 to 0.96)	44 fewer per 1000 (from 5 fewer to 69 fewer) 0 fewer per 1000 (from 0 fewer to 0 fewer)	⊕⊕○○ LOW	CRITICAL
failure to achieve complete abortion (≤ 49 days gestation)												
1	randomized trials	serious[3]	no serious inconsistency	no serious indirectness	serious[4]	none	6/213 (2.8%)	8/205 (3.9%) 0%	RR 0.72 (0.25 to 2.04)	11 fewer per 1000 (from 29 fewer to 41 more) 0 fewer per 1000 (from 0 fewer to 0 more)	⊕⊕○○ LOW	CRITICAL
failure to achieve complete abortion > 49 days (ultrasound; hCG.)												
1	randomized trials	serious[5]	no serious inconsistency	no serious indirectness	no serious imprecision	none	10/208 (4.8%)	29/221 (13.1%) 0%	RR 0.37 (0.18 to 0.73)	83 fewer per 1000 (from 35 fewer to 108 fewer) 0 fewer per 1000 (from 0 fewer to 0 fewer)	⊕⊕⊕○ MODERATE	CRITICAL
ongoing pregnancy (≤ 49 days gestation)												
1	randomized trials	serious[5]	no serious inconsistency	no serious indirectness	serious[6]	none	2/213 (0.9%)	3/205 (1.5%) 0%	RR 0.64 (0.11 to 3.8)	5 fewer per 1000 (from 13 fewer to 41 more) 0 fewer per 1000 (from 0 fewer to 0 more)	⊕⊕○○ LOW	

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	800mcg misoprostol buccal combined with mifepristone 200mg	800mcg misoprostol oral combined with mifepristone 200mg	Relative (95% CI)	Absolute		Importance
ongoing pregnancy (> 49 days) (ultrasound)												
1	randomized trials	serious[5]	no serious inconsistency	no serious indirectness	serious[7]	none	2/208 (1%)	12/221 (5.4%) 0%	RR 0.18 (0.04 to 0.78)	45 fewer per 1000 (from 12 fewer to 52 fewer) 0 fewer per 1000 (from 0 fewer to 0 fewer)	⊕⊕◯◯ LOW	CRITICAL
nausea (patient diary)												
1	randomized trials	serious[5]	no serious inconsistency	no serious indirectness	no serious imprecision	none	311/414 (75.1%)	285/416 (68.5%) 0%	RR 1.10 (1.01 to 1.19)	69 more per 1000 (from 7 more to 130 more) 0 more per 1000 (from 0 more to 0 more)	⊕⊕⊕◯ MODERATE	IMPORTANT
vomiting (patient diary)												
1	randomized trials	serious[5]	no serious inconsistency	no serious indirectness	no serious imprecision	none	197/414 (47.6%)	181/416 (43.5%) 0%	RR 1.09 (0.94 to 1.27)	39 more per 1000 (from 26 fewer to 117 more) 0 more per 1000 (from 0 fewer to 0 more)	⊕⊕⊕◯ MODERATE	IMPORTANT
diarrhoea (patient diary)												
1	randomized trials	serious[5]	no serious inconsistency	no serious indirectness	no serious imprecision	none	178/414 (43%)	161/416 (38.7%) 0%	RR 1.11 (0.94 to 1.31)	43 more per 1000 (from 23 fewer to 120 more) 0 more per 1000 (from 0 fewer to 0 more)	⊕⊕⊕◯ MODERATE	IMPORTANT

1 only per protocol analysis, no intention-to-treat analysis.
2 large confidence interval
3 1) only per protocol analysis (no intention to treat analysis). 2) women received additional misoprostol at follow-up (7-14 days later) if products of conception present. Unclear how many women, by gestational age group, received additional misoprostol.
4 large confidence interval
5 see footnote 1
6 large confidence interval
7 large confidence interval

Author(s): R. Kulier
Date: 2009-11-13
Question: Should 400mcg misoprostol sublingual combined with mifepristone 200mg vs. 400mcg misoprostol oral combined with mifepristone 200mg be used for medical abortion in the first trimester?
Settings: University Hospital Chisinau, Moldova
Bibliography: Kulier R, Kapp N, Gülmezoglu AM, Hofmeyr GJ, Cheng L, Campana A. Medical methods for first trimester abortion. *Cochrane Database of Systematic Reviews* [2011].

Table 104:

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	400mcg misoprostol sublingual combined with mifepristone 200mg	400mcg misoprostol oral combined with mifepristone 200mg	Relative (95% CI)	Absolute		Importance
failure to achieve complete abortion (ultrasound)												
1	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	very serious[1]	none	3/238 (1.3%)	14/233 (6%) 0%	RR 0.21 (0.06 to 0.72)	47 fewer per 1000 (from 17 fewer to 56 fewer) 0 fewer per 1000 (from 0 fewer to 0 fewer)	⊕⊕◯◯ LOW	CRITICAL
nausea (questioning)												
1	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	no serious imprecision	none	111/238 (46.6%)	125/233 (53.6%) 0%	RR 0.87 (0.73 to 1.04)	70 fewer per 1000 (from 145 fewer to 21 more) 0 fewer per 1000 (from 0 fewer to 0 more)	⊕⊕⊕◯ HIGH	IMPORTANT
vomiting (questioning)												
1	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[2]	none	37/238 (15.5%)	41/233 (17.6%) 0%	RR 0.88 (0.59 to 1.33)	21 fewer per 1000 (from 72 fewer to 58 more) 0 fewer per 1000 (from 0 fewer to 0 more)	⊕⊕⊕◯ MODERATE	IMPORTANT

1 small number of events; large confidence interval
2 small number of events

Author(s): R. Kulier
Date: 2010-04-10
Question: Should 400mcg misoprostol buccal vs. 400mcg misoprostol sublingual be used for medical abortion during first trimester?
Settings: University Hospital, Moldova
Bibliography: Raghavan S et al. Comparison of 400mcg buccal and 400mcg sublingual misoprostol after mifepristone for medical abortion through 63 days' LMP: a randomized controlled trial. *Contraception*. 2010 Dec;82(6):513-9.

Table 105:

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	400mcg misoprostol buccal	400mcg misoprostol sublingual	Relative (95% CI)	Absolute		Importance
failure to achieve complete abortion (clinical, ultrasound)												
1	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[1]	none	8/277 (2.9%)	4/273 (1.5%) 0%	RR 1.97 (0.6 to 6.47)	14 more per 1000 (from 6 fewer to 80 more) 0 more per 1000 (from 0 fewer to 0 more)	⊕⊕⊕◯ MODERATE	CRITICAL
ongoing pregnancy (ultrasound)												
1	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious	none	4/277 (1.4%)	4/273 (1.5%) 0%	RR 0.99 (0.25 to 3.9)	0 fewer per 1000 (from 11 fewer to 42 more) 0 fewer per 1000 (from 0 fewer to 0 more)	⊕⊕⊕◯ MODERATE	CRITICAL

1 large confidence interval; low number of events

Author(s): R. Kulier
Date: 2009-08-02
Question: Should 800mcg misoprostol pv on day 3 after 200mg mifepristone vs. 800mcg misoprostol pv on day 1 after 200mg mifepristone be used for medical abortion during first trimester?
Settings: multicentre trial; abortion facility centres; USA
Bibliography: Kulier R, Kapp N, Gülmezoglu AM, Hofmeyr GJ, Cheng L, Campana A. Medical methods for first trimester abortion. *Cochrane Database of Systematic Reviews* [2011].

Table 106:

Quality assessment							Summary of findings					
	No of patients		Effect									
No of studies	Design	Limitations	Inconsistency	Indirectness	Quality Imprecision	Other considerations	800mcg misoprostol pv on day 3 after 200mg mifepristone	800mcg misoprostol pv on day 1 after 200mg mifepristone	Relative (95% CI)	Absolute		Importance
failure to achieve complete abortion (ultrasound)												
1	randomized trials	serious[1]	no serious inconsistency	no serious indirectness	no serious imprecision	none	30/755 (4%)	15/734 (2%) 0%	RR 1.94 (1.05 to 3.58)	19 more per 1000 (from 1 more to 53 more) 0 more per 1000 (from 0 more to 0 more)	⊕⊕⊕◯ MODERATE	CRITICAL
nausea (questioning)												
1	randomized trials	serious[1]	no serious inconsistency	no serious indirectness	no serious imprecision	none	414/654 (63.3%)	426/704 (60.5%) 0%	RR 1.05 (0.96 to 1.14)	30 more per 1000 (from 24 fewer to 85 more) 0 more per 1000 (from 0 fewer to 0 more)	⊕⊕⊕◯ MODERATE	IMPORTANT

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	800mcg misoprostol pv on day 3 after 200mg mifepristone	800mcg misoprostol pv on day 1 after 200mg mifepristone	Relative (95% CI)	Absolute		Importance
vomiting (questioning)												
1	randomized trials	serious[1]	no serious inconsistency	no serious indirectness	no serious imprecision	none	205/654 (31.3%)	218/704 (31%) 0%	RR 1.01 (0.86 to 1.19)	3 more per 1000 (from 43 fewer to 59 more) 0 more per 1000 (from 0 fewer to 0 more)	⊕⊕⊕◯ MODERATE	IMPORTANT
diarrhoea (questioning)												
1	randomized trials	serious[1]	no serious inconsistency	no serious indirectness	no serious imprecision	none	155/654 (23.7%)	138/704 (19.6%) 0%	RR 1.21 (0.99 to 1.48)	41 more per 1000 (from 2 fewer to 94 more) 0 more per 1000 (from 0 fewer to 0 more)	⊕⊕⊕◯ MODERATE	IMPORTANT

1 Trial: 53 women received additional dose of misoprostol because gestational sac present at first follow up visit. It is not clear how these were distributed in the groups.
(Schaff EA, Fielding SL, Westhoff C, Ellertson C, Eisinger SH, Stadalius LS, Fuller L. Vaginal misoprostol administered 1,2 or 3 days after mifepristone for early medical abortion. JAMA 2000;284(15):1948 - 1953.)

Author(s): R. Kulier
Date: 2009-08-02
Question: Should 800 mcg misoprostol pv on day 3 after 200 mg mifepristone vs. 800 mcg misoprostol pv on day 2 after 200mg mifepristone be used for medical abortion during first trimester?
Settings: multicentre trial; abortion facility centres; USA
Bibliography: Kulier R, Kapp N, Gülmezoglu AM, Hofmeyr GJ, Cheng L, Campana A. Medical methods for first trimester abortion. *Cochrane Database of Systematic Reviews* [2011].

Table 107:

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considera-tions	800 mcg mis-oprostol pv on day 3 after 200 mg mifepristone	800 mcg mis-oprostol pv on day 2 after 200mg mifepristone	Relative (95% CI)	Absolute		Importance
failure to achieve complete abortion (ultrasound)												
1	randomized trials	serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	30/755 (4%)	18/766 (2.3%) 0%	RR 1.69 (0.95 to 3.01)	16 more per 1000 (from 1 fewer to 47 more) 0 more per 1000 (from 0 fewer to 0 more)	⊕⊕◯◯ LOW	CRITICAL
ongoing pregnancy (ultrasound)												
1	randomized trials	serious[3]	no serious inconsistency	no serious indirectness	serious[4]	none	8/755 (1.1%)	3/766 (0.4%) 0%	RR 2.71 (0.72 to 10.16)	7 more per 1000 (from 1 fewer to 36 more) 0 more per 1000 (from 0 fewer to 0 more)	⊕⊕◯◯ LOW	CRITICAL
nausea (questioning)												
1	randomized trials	serious[5]	no serious inconsistency	no serious indirectness	no serious imprecision	none	414/654 (63.3%)	471/730 (64.5%) 0%	RR 0.98 (0.91 to 1.06)	13 fewer per 1000 (from 58 fewer to 39 more) 0 fewer per 1000 (from 0 fewer to 0 more)	⊕⊕⊕◯ MODERATE	IMPORTANT

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considera-tions	800 mcg mis-oprostol pv on day 3 after 200 mg mifepristone	800 mcg mis-oprostol pv on day 2 after 200mg mifepristone	Relative (95% CI)	Absolute		Importance
vomiting (questioning)												
1	randomized trials	serious[6]	no serious inconsistency	no serious indirectness	no serious imprecision	none	205/654 (31.3%)	237/730 (32.5%) 0%	RR 0.97 (0.83 to 1.13)	10 fewer per 1000 (from 55 fewer to 42 more) 0 fewer per 1000 (from 0 fewer to 0 more)	⊕⊕⊕◯ MODERATE	IMPORTANT
diarrhoea (questioning)												
1	randomized trials	serious[7]	no serious inconsistency	no serious indirectness	no serious imprecision	none	155/654 (23.7%)	149/730 (20.4%) 0%	RR 1.16 (0.95 to 1.42)	33 more per 1000 (from 10 fewer to 86 more) 0 more per 1000 (from 0 fewer to 0 more)	⊕⊕⊕◯ MODERATE	IMPORTANT

1 Trial: Schaff 2000: 53 women received additional dose of misoprostol because gestational sac present at first follow up visit. It is not clear how these were distributed in the groups. (Schaff EA, Fielding SL, Westhoff C, Ellertson C, Eisinger SH, Stadalius LS, Fuller L. Vaginal misoprostol administered 1,2 or 3 days after mifepristone for early medical abortion. JAMA 2000;284(15):1948 - 1953.)
2 small number of events
3 see footnote 1
4 small number of events
5 see footnote 1
6 see footnote 1
7 see footnote 1

Author(s): R. Kulier
Date: 2009-08-02
Question: Should 800 mcg misoprostol pv on day 2 after 200 or 100mg mifepristone vs. 800mcg misoprostol on day 1 after 200 or 100mg mifepristone be used for medical abortion during first trimester?
Settings: one multicountry trial; hospitals in developing and developed country settings; one multicentre trial; abortion facility centres; USA
Bibliography: Kulier R, Kapp N, Gülmezoglu AM, Hofmeyr GJ, Cheng L, Campana A. Medical methods for first trimester abortion. *Cochrane Database of Systematic Reviews* [2011].

Table 108:

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	800 mcg misoprostol pv on day 2 after 200 or 100mg mifepristone	800mcg misoprostol on day 1 after 200 or 100mg mifepristone	Relative (95% CI)	Absolute		Importance
failure to achieve complete abortion (ultrasound)												
2	randomized trials	serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	106/1832 (5.8%)	84/1791 (4.7%) 0%	RR 1.24 (0.94 to 1.64)	11 more per 1000 (from 3 fewer to 30 more) 0 more per 1000 (from 0 fewer to 0 more)	⊕⊕◯◯ LOW	CRITICAL
failure to achieve complete abortion at ≤ 49 days gestation												
1	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[3]	none	25/476 (5.3%)	30/465 (6.5%) 0%	RR 0.81 (0.49 to 1.36)	12 fewer per 1000 (from 33 fewer to 23 more) 0 fewer per 1000 (from 0 fewer to 0 more)	⊕⊕⊕◯ MODERATE	CRITICAL

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	800 mcg misoprostol pv on day 2 after 200 or 100mg mifepristone	800mcg misoprostol on day 1 after 200 or 100mg mifepristone	Relative (95% CI)	Absolute		Importance
failure to achieve complete abortion at > 49 days (ultrasound)												
1	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[4]	none	63/590 (10.7%)	39/592 (6.6%) 0%	RR 1.62 (1.11 to 2.38)	41 more per 1000 (from 7 more to 91 more) 0 more per 1000 (from 0 more to 0 more)	⊕⊕⊕◯ MODERATE	CRITICAL
ongoing pregnancy (ultrasound)												
2	randomized trials	serious[5]	no serious inconsistency	no serious indirectness	serious[6]	none	14/1858 (0.8%)	15/1823 (0.8%) 0%	RR 0.92 (0.45 to 1.9)	1 fewer per 1000 (from 5 fewer to 7 more) 0 fewer per 1000 (from 0 fewer to 0 more)	⊕⊕◯◯ LOW	CRITICAL
nausea (questioning)												
1	randomized trials	serious[7]	no serious inconsistency	no serious indirectness	no serious imprecision	none	471/730 (64.5%)	426/704 (60.5%) 0%	RR 1.07 (0.98 to 1.16)	42 more per 1000 (from 12 fewer to 97 more) 0 more per 1000 (from 0 fewer to 0 more)	⊕⊕⊕◯ MODERATE	IMPORTANT

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	800 mcg misoprostol pv on day 2 after 200 or 100mg mifepristone	800mcg misoprostol on day 1 after 200 or 100mg mifepristone	Relative (95% CI)	Absolute		Importance
vomiting (questioning)												
1	randomized trials	serious[8]	no serious inconsistency	no serious indirectness	no serious imprecision	none	237/730 (32.5%)	218/704 (31%) 0%	RR 1.05 (0.9 to 1.22)	15 more per 1000 (from 31 fewer to 68 more) 0 more per 1000 (from 0 fewer to 0 more)	⊕⊕⊕◯ MODERATE	IMPORTANT
diarrhoea (questioning)												
1	randomized trials	serious[9]	no serious inconsistency	no serious indirectness	no serious imprecision	none	149/730 (20.4%)	138/704 (19.6%) 0%	RR 1.04 (0.85 to 1.28)	8 more per 1000 (from 29 fewer to 55 more) 0 more per 1000 (from 0 fewer to 0 more)	⊕⊕⊕◯ MODERATE	IMPORTANT

1 Trial: Schaff 2000: 53 women received additional dose of misoprostol because gestational sac present at first follow up visit. It is not clear how these were distributed in the groups. (Schaff EA, Fielding SL, Westhoff C, Ellertson C, Eisinger SH, Stadalius LS, Fuller L. Vaginal misoprostol administered 1,2 or 3 days after mifepristone for early medical abortion. JAMA 2000;284(15):1948 - 1953.)
2 small number of events
3 small number of events
4 small number of events
5 see footnote 1
6 small number of events
7 see footnote 1
8 see footnote 1
9 see footnote 1

Author(s): R. Kulier
Date: 2009-08-05
Question: Should 800mcg misoprostol pv on day 2 after 200mg mifepristone vs. 800mcg misoprostol pv same day as 200mg mifepristone be used for medical abortion during the first trimester?
Settings: hospital setting; USA
Bibliography: Kulier R, Kapp N, Gülmezoglu AM, Hofmeyr GJ, Cheng L, Campana A. Medical methods for first trimester abortion. *Cochrane Database of Systematic Reviews* [2011].

Table 109:

Quality assessment							Summary of findings					
	No of patients		Effect									
No of studies	Design	Limitations	Inconsistency	Indirectness	Quality Imprecision	Other considerations	800mcg misoprostol pv on day 2 after 200mg mifepristone	800mcg misoprostol pv same day as 200mg mifepristone	Relative (95% CI)	Absolute		Importance
failure to achieve complete abortion (ultrasound)												
1	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[1]	none	18/215 (8.4%)	45/210 (21.4%) 0%	RR 0.39 (0.24 to 0.65)	131 fewer per 1000 (from 75 fewer to 163 fewer) 0 fewer per 1000 (from 0 fewer to 0 fewer)	⊕⊕⊕◯ MODERATE	CRITICAL
nausea (questioning)												
1	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[2]	none	27/171 (15.8%)	36/188 (19.1%) 0%	RR 0.82 (0.52 to 1.3)	34 fewer per 1000 (from 92 fewer to 57 more) 0 fewer per 1000 (from 0 fewer to 0 more)	⊕⊕⊕◯ MODERATE	IMPORTANT

Quality assessment							Summary of findings					
	No of patients		Effect									
No of studies	Design	Limitations	Inconsistency	Indirectness	Quality Imprecision	Other considerations	800mcg misoprostol pv on day 2 after 200mg mifepristone	800mcg misoprostol pv same day as 200mg mifepristone	Relative (95% CI)	Absolute		Importance
vomiting (questioning)												
1	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[3]	none	28/171 (16.4%)	36/188 (19.1%) 0%	RR 0.86 (0.55 to 1.34)	27 fewer per 1000 (from 86 fewer to 65 more) 0 fewer per 1000 (from 0 fewer to 0 more)	⊕⊕⊕◯ MODERATE	IMPORTANT
diarrhoea (questioning)												
1	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[4]	none	16/171 (9.4%)	24/188 (12.8%) 0%	RR 0.73 (0.4 to 1.33)	34 fewer per 1000 (from 77 fewer to 42 more) 0 fewer per 1000 (from 0 fewer to 0 more)	⊕⊕⊕◯ MODERATE	IMPORTANT

1 small number of events
2 small number of events
3 small number of events
4 small number of events

Author(s): R. Kulier
Date: 2009-08-05
Question: Should 800 mcg misoprostol pv on day 1 after 200mg mifepristone vs. 800mcg misoprostol pv same day as 200mg mifepristone be used for medical abortion during the first trimester?
Settings: University Hospitals; USA
Bibliography: Kulier R, Kapp N, Gülmezoglu AM, Hofmeyr GJ, Cheng L, Campana A. Medical methods for first trimester abortion. *Cochrane Database of Systematic Reviews* [2011].

Table 110:

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	800 mcg misoprostol pv on day 1 after 200mg mifepristone	800mcg misoprostol pv same day as 200mg mifepristone	Relative (95% CI)	Absolute		Importance
failure to achieve complete abortion (ultrasound)												
2	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[1]	none	49/1077 (4.5%)	76/1079 (7%)	RR 0.65 (0.46 to 0.92)	25 fewer per 1000 (from 6 fewer to 38 fewer)	⊕⊕⊕◯ MODERATE	CRITICAL
								0%		0 fewer per 1000 (from 0 fewer to 0 fewer)		
ongoing pregnancy (ultrasound)												
2	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	very serious[2]	none	2/1101 (0.2%)	6/1107 (0.5%)	RR 0.34 (0.07 to 1.66)	4 fewer per 1000 (from 5 fewer to 4 more)	⊕⊕◯◯ LOW	CRITICAL
								0%		0 fewer per 1000 (from 0 fewer to 0 more)		

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	800 mcg misoprostol pv on day 1 after 200mg mifepristone	800mcg misoprostol pv same day as 200mg mifepristone	Relative (95% CI)	Absolute		Importance
nausea (questioning)												
2	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[3]	none	103/1067 (9.7%)	102/1070 (9.5%) 0%	RR 1.01 (0.78 to 1.31)	1 more per 1000 (from 21 fewer to 30 more) 0 more per 1000 (from 0 fewer to 0 more)	⊕⊕⊕◯ MODERATE	IMPORTANT
vomiting (questioning)												
2	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[4]	none	61/1067 (5.7%)	54/1070 (5%) 0%	RR 1.13 (0.79 to 1.62)	7 more per 1000 (from 11 fewer to 31 more) 0 more per 1000 (from 0 fewer to 0 more)	⊕⊕⊕◯ MODERATE	IMPORTANT
diarrhoea (questioning)												
2	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[5]	none	51/1067 (4.8%)	62/1070 (5.8%) 0%	RR 0.83 (0.58 to 1.18)	10 fewer per 1000 (from 24 fewer to 10 more) 0 fewer per 1000 (from 0 fewer to 0 more)	⊕⊕⊕◯ MODERATE	IMPORTANT

1 small number of events
2 very small number of events
3 small number of events
4 small number of events
5 No explanation was provided

Author(s): R. Kulier
Date: 2009-08-06
Question: Should 800mcg misoprostol pv alone vs. any combined regimen be used for medical abortion during first trimester?
Settings: hospitals (China, USA)
Bibliography: Kulier R, Kapp N, Gülmezoglu AM, Hofmeyr GJ, Cheng L, Campana A. Medical methods for first trimester abortion. *Cochrane Database of Systematic Reviews* [2011].

Table 111:

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	800mcg misoprostol pv alone	any combined regime	Relative (95% CI)	Absolute		Importance
failure to achieve complete abortion (ultrasound)												
5	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	no serious imprecision	none	134/342 (39.2%)	60/336 (17.9%) 0%	RR 2.21 (1.7 to 2.87)	216 more per 1000 (from 125 more to 334 more) 0 more per 1000 (from 0 more to 0 more)	⊕⊕⊕◯ HIGH	CRITICAL
nausea (questioning)												
3	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[1]	none	70/191 (36.6%)	96/186 (51.6%) 0%	RR 0.71 (0.56 to 0.88)	150 fewer per 1000 (from 62 fewer to 227 fewer) 0 fewer per 1000 (from 0 fewer to 0 fewer)	⊕⊕⊕◯ MODERATE	IMPORTANT

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	800mcg misoprostol pv alone	any combined regime	Relative (95% CI)	Absolute		Importance
vomiting (questioning)												
3	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[2]	none	53/236 (22.5%)	70/230 (30.4%) 0%	RR 0.74 (0.55 to 1)	79 fewer per 1000 (from 137 fewer to 0 more) 0 fewer per 1000 (from 0 fewer to 0 more)	⊕⊕⊕◯ MODERATE	IMPORTANT
diarrhoea (questioning)												
4	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[3]	none	68/266 (25.6%)	55/261 (21.1%) 0%	RR 1.23 (0.95 to 1.59)	48 more per 1000 (from 11 fewer to 124 more) 0 more per 1000 (from 0 fewer to 0 more)	⊕⊕⊕◯ MODERATE	IMPORTANT

1 large confidence interval
2 large confidence interval
3 large confidence interval

Author(s): R. Kulier
Date: 2009-08-15
Question: Should 800mcg misoprostol pv alone vs. 800mcg misoprostol pv after 200mg mifepristone be used for medical abortion during first trimester?
Settings: Hospital; USA
Bibliography: Kulier R, Kapp N, Gülmezoglu AM, Hofmeyr GJ, Cheng L, Campana A. Medical methods for first trimester abortion. *Cochrane Database of Systematic Reviews* [2011].

Table 112:

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	800mcg misoprostol pv alone	800mcg misoprostol pv after 200mg mifepristone	Relative (95% CI)	Absolute		Importance
failure to achieve complete abortion (all) (ultrasound)												
1	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[1]	none	35/125 (28%)	12/119 (10.1%) 0%	RR 2.78 (1.52 to 5.09)	179 more per 1000 (from 52 more to 412 more) 0 more per 1000 (from 0 more to 0 more)	⊕⊕⊕◯ MODERATE	CRITICAL
failure to achieve complete abortion ≤ 49 days gestation												
1	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	very serious[2]	none	9/80 (11.3%)	3/75 (4%) 0%	RR 2.81 (0.79 to 10)	72 more per 1000 (from 8 fewer to 360 more) 0 more per 1000 (from 0 fewer to 0 more)	⊕⊕◯◯ LOW	CRITICAL
failure to achieve complete abortion > 49 days (ultrasound)												
1	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	very serious[3]	none	6/45 (13.3%)	2/44 (4.5%) 0%	RR 2.93 (0.63 to 13.76)	88 more per 1000 (from 17 fewer to 580 more) 0 more per 1000 (from 0 fewer to 0 more)	⊕⊕◯◯ LOW	CRITICAL

1 small number of events.
2 large confidence interval.
3 large confidence interval; small number of events.

Author(s): R. Kulier
Date: 2009-10-28
Question: Should 800mcg misoprostol sublingual 3 or 12 hourly vs. 800mcg misoprostol vaginal 3 or 12 hourly be used for medical abortion during first trimester?
Bibliography: Kulier R, Kapp N, Gülmezoglu AM, Hofmeyr GJ, Cheng L, Campana A. Medical methods for first trimester abortion. *Cochrane Database of Systematic Reviews* [2011].

Table 113:

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	800mcg misoprostol sublingual 3 or 12 hourly	800mcg misoprostol vaginal 3 or 12 hourly	Relative (95% CI)	Absolute		Importance
failure to achieve complete abortion (ultrasound)												
1	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	no serious imprecision	none	191/1021 (18.7%)	166/1025 (16.2%) 0%	RR 1.16 (0.96 to 1.4)	26 more per 1000 (from 6 fewer to 65 more) 0 more per 1000 (from 0 fewer to 0 more)	⊕⊕⊕○ HIGH	CRITICAL
nausea (questioning)												
1	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	no serious imprecision	none	279/1033 (27%)	268/1033 (25.9%) 0%	RR 1.04 (0.9 to 1.2)	10 more per 1000 (from 26 fewer to 52 more) 0 more per 1000 (from 0 fewer to 0 more)	⊕⊕⊕○ HIGH	IMPORTANT
vomiting (questioning)												
1	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	no serious imprecision	none	100/1033 (9.7%)	65/1033 (6.3%) 0%	RR 1.54 (1.14 to 2.08)	34 more per 1000 (from 9 more to 68 more) 0 more per 1000 (from 0 more to 0 more)	⊕⊕⊕○ HIGH	IMPORTANT
diarrhoea (questioning)												
1	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	no serious imprecision	none	363/1033 (35.1%)	237/1033 (22.9%) 0%	RR 1.53 (1.33 to 1.76)	122 more per 1000 (from 76 more to 174 more) 0 more per 1000 (from 0 more to 0 more)	⊕⊕⊕○ HIGH	IMPORTANT

Author(s): R. Kulier
Date: 2009-08-06
Question: Should 1mg gemeprost in combination with 200mg or 50mg mifepristone vs. 0.5mg gemeprost in combination with 200mg or 50mg mifepristone be used for medical abortion during the first trimester?
Settings: multicountry trial
Bibliography: Kulier R, Kapp N, Gülmezoglu AM, Hofmeyr GJ, Cheng L, Campana A. Medical methods for first trimester abortion. *Cochrane Database of Systematic Reviews* [2011].

Table 114:

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	1mg gemeprost in combination with 200mg or 50mg mifepristone	0.5mg gemeprost in combination with 200mg or 50mg mifepristone	Relative (95% CI)	Absolute		Importance
failure to achieve complete abortion (ultrasound)												
1	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[1]	none	23/325 (7.1%)	27/324 (8.3%)	RR 0.82 (0.49 to 1.39)	15 fewer per 1000 (from 42 fewer to 32 more)	⊕⊕⊕◯ MODERATE	CRITICAL
								0%		0 fewer per 1000 (from 0 fewer to 0 more)		
ongoing pregnancy (ultrasound)												
1	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	very serious[2]	none	2/325 (0.6%)	2/324 (0.6%)	RR 1.00 (0.14 to 3.58)	0 fewer per 1000 (from 5 fewer to 16 more)	⊕⊕◯◯ LOW	CRITICAL
								0%		0 fewer per 1000 (from 0 fewer to 0 more)		

1 large confidence interval
2 large confidence interval; very few events

Author(s): R. Kulier
Date: 2009-08-06
Question: Should 800mcg misoprostol po or pv in combination with 200mg mifepristone vs. 400mcg misoprostol po in combination with 200mg mifepristone be used for medical abortion during the first trimester?
Bibliography: Kulier R, Kapp N, Gülmezoglu AM, Hofmeyr GJ, Cheng L, Campana A. Medical methods for first trimester abortion. *Cochrane Database of Systematic Reviews* [2011].

Table 115:

Quality assessment							Summary of findings					
	No of patients		Effect									
No of studies	Design	Limitations	Inconsistency	Indirectness	Quality Imprecision	Other considerations	800mcg misoprostol po or pv in combination with 200mg mifepristone	400mcg misoprostol po in combination with 200mg mifepristone	Relative (95% CI)	Absolute		Importance
failure to achieve complete abortion (ultrasound)												
2	randomized trials	serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	31/468 (6.6%)	37/466 (7.9%) 0%	RR 0.83 (0.53 to 1.31)	13 fewer per 1000 (from 37 fewer to 25 more) 0 fewer per 1000 (from 0 fewer to 0 more)	⊕⊕○○ LOW	CRITICAL
ongoing pregnancy (ultrasound)												
2	randomized trials	serious[3]	no serious inconsistency	no serious indirectness	serious[4]	none	1/468 (0.2%)	10/465 (2.2%) 0%	RR 0.10 (0.01 to 0.76)	19 fewer per 1000 (from 5 fewer to 21 fewer) 0 fewer per 1000 (from 0 fewer to 0 fewer)	⊕⊕○○ LOW	CRITICAL
nausea (questioning)												
2	randomized trials	serious[5]	no serious inconsistency	no serious indirectness	no serious imprecision	none	130/468 (27.8%)	126/466 (27%) 0%	RR 1.03 (0.85 to 1.25)	8 more per 1000 (from 41 fewer to 68 more) 0 more per 1000 (from 0 fewer to 0 more)	⊕⊕⊕○ MODERATE	IMPORTANT
vomiting (questioning)												
2	randomized trials	serious[6]	no serious inconsistency	no serious indirectness	no serious imprecision	none	75/468 (16%)	62/466 (13.3%) 0%	RR 1.21 (0.9 to 1.64)	28 more per 1000 (from 13 fewer to 85 more) 0 more per 1000 (from 0 fewer to 0 more)	⊕⊕⊕○ MODERATE	IMPORTANT

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	800mcg misoprostol po or pv in combination with 200mg mifepristone	400mcg misoprostol po in combination with 200mg mifepristone	Relative (95% CI)	Absolute		Importance
diarrhoea (questioning)												
2	randomized trials	serious[7]	no serious inconsistency	no serious indirectness	no serious imprecision	none	63/468 (13.5%)	56/466 (12%)	RR 1.13 (0.81 to 1.56)	16 more per 1000 (from 23 fewer to 67 more)	⊕⊕⊕◯ MODERATE	IMPORTANT
								0%		0 more per 1000 (from 0 fewer to 0 more)		

1 Shannon C, Wiebe E, Jacot F, Guilbert E, Dunn S, Sheldon W, Winikoff B.. Regimens of misoprostol with mifepristone for early medical abortion: a randomized trial. BJOG 2006;113:621–628: success rate was defined as abortion without surgical intervention. Women were provided with a second dose of misoprostol to be taken at home. It is unclear how many women classified as treatment success (complete abortion) had received an additional dose of misoprostol in each group.
2 RR 0.83 (0.53 to 1.31).
3 see footnote 1.
4 RR 0.10 (95% CI 0.01 to 0.76).
5 see footnote 1.
6 see footnote 1.
7 see footnote 1.

Author(s): R. Kulier
Date: 2010-04-11
Question: Should 800mcg misoprostol sublingual or pv in combination with 200mg mifepristone vs. 400mcg misoprostol sublingual or pv in combination with 200mg mifepristone be used for medical abortion during first trimester?
Settings: multicountry trial
Bibliography: von Hertzen et al. Misoprostol dose and route after mifepristone for early abortion: a randomized controlled non-inferiority trial. *BJOG*. 2010;117(10):1186-96.

Table 116:

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	800mcg misoprostol sublingual or pv in combination with 200mg mifepristone	400mcg misoprostol sublingual or pv in combination with 200mg mifepristone	Relative (95% CI)	Absolute		Importance
failure to achieve complete abortion (clinical; ultrasound)												
1	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[1]	none	86/1483 (5.8%)	140/1479 (9.5%)	RR 0.61 (0.47 to 0.79)	37 fewer per 1000 (from 20 fewer to 50 fewer)	⊕⊕⊕◯ MODERATE	CRITICAL
								0%		0 fewer per 1000 (from 0 fewer to 0 fewer)		

1 RR 0.61 (95%CI 0.47 to 0.79).

Author(s): R. Kulier
Date: 2010-04-11
Question: Should 800mcg misoprostol sublingual in combination with mifepristone 200mg vs. 400mcg misoprostol in combination with 200mg mifepristone be used for medical abortion during first trimester?
Settings: multicountry trial
Bibliography: von Hertzen et al. Misoprostol dose and route after mifepristone for early abortion: a randomized controlled non-inferiority trial. *BJOG*. 2010;117(10):1186-96.

Table 117:

Quality assessment							Summary of findings					
	No of patients		Effect		Quality	Other considerations	800mcg misoprostol sublingual in combination with mifepristone 200mg	400mcg misoprostol in combination with 200mg mifepristone	Relative (95% CI)	Absolute		Importance
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision							
failure to achieve complete abortion (clinical, ultrasound)												
1	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[1]	none	45/739 (6.1%)	63/741 (8.5%) 0%	RR 0.72 (0.5 to 1.04)	24 fewer per 1000 (from 43 fewer to 3 more) 0 fewer per 1000 (from 0 fewer to 0 more)	⊕⊕⊕◯ MODERATE	CRITICAL
ongoing pregnancy (ultrasound)												
1	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[2]	none	4/739 (0.5%)	14/741 (1.9%) 0%	RR 0.29 (0.09 to 0.87)	13 fewer per 1000 (from 2 fewer to 17 fewer) 0 fewer per 1000 (from 0 fewer to 0 fewer)	⊕⊕⊕◯ MODERATE	CRITICAL
nausea (questioning)												
1	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[3]	none	296/751 (39.4%)	242/750 (32.3%) 0%	RR 1.22 (1.07 to 1.4)	71 more per 1000 (from 23 more to 129 more) 0 more per 1000 (from 0 more to 0 more)	⊕⊕⊕◯ MODERATE	IMPORTANT
vomiting (questioning)												
1	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	no serious imprecision	none	113/751 (15%)	79/750 (10.5%) 0%	RR 1.43 (1.09 to 1.87)	45 more per 1000 (from 9 more to 92 more) 0 more per 1000 (from 0 more to 0 more)	⊕⊕⊕◯ HIGH	IMPORTANT

Quality assessment							Summary of findings					
	No of patients		Effect		Quality	Other considerations	800mcg misoprostol sublingual in combination with mifepristone 200mg	400mcg misoprostol in combination with 200mg mifepristone	Relative (95% CI)	Absolute		Importance
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision							
diarrhoea (questioning)												
1	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	no serious imprecision	none	127/751 (16.9%)	62/750 (8.3%)	RR 2.05 (1.54 to 2.72)	87 more per 1000 (from 45 more to 142 more)	⨁⨁⨁◯ HIGH	IMPORTANT
								0%		0 more per 1000 (from 0 more to 0 more)		

1 RR 0.72 (95%CI 0.50 to 1.04)
2 RR 0.29 (95%CI 0.09 to 0.87)
3 RR 1.22 (95%CI 1.07 to 1.40)

Author(s): R. Kulier
Date: 2010-04-11
Question: Should 800mcg misoprostol pv in combination with 200mg mifepristone vs. 400mcg misoprostol pv in combination with 200mg mifepristone be used for medical abortion during first trimester?
Settings: multicountry trial
Bibliography: von Hertzen et al. Misoprostol dose and route after mifepristone for early abortion: a randomized controlled non-inferiority trial. *BJOG*. 2010;117(10):1186-96.

Table 118:

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	800mcg misoprostol pv in combination with 200mg mifepristone	400mcg misoprostol pv in combination with 200mg mifepristone	Relative (95% CI)	Absolute		Importance
failure to achieve complete abortion (clinical, ultrasound)												
1	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	no serious imprecision	none	41/744 (5.5%)	77/738 (10.4%) 0%	RR 0.53 (0.37 to 0.76)	49 fewer per 1000 (from 25 fewer to 66 fewer) 0 fewer per 1000 (from 0 fewer to 0 fewer)	⊕⊕⊕○ HIGH	CRITICAL
ongoing pregnancy (ultrasound)												
1	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[1]	none	8/744 (1.1%)	18/738 (2.4%) 0%	RR 0.44 (0.19 to 1.01)	14 fewer per 1000 (from 20 fewer to 0 more) 0 fewer per 1000 (from 0 fewer to 0 more)	⊕⊕⊕○ MODERATE	CRITICAL
nausea (questioning)												
1	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	no serious imprecision	none	209/750 (27.9%)	191/749 (25.5%) 0%	RR 1.09 (0.92 to 1.29)	23 more per 1000 (from 20 fewer to 74 more) 0 more per 1000 (from 0 fewer to 0 more)	⊕⊕⊕○ HIGH	IMPORTANT

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	800mcg misoprostol pv in combination with 200mg mifepristone	400mcg misoprostol pv in combination with 200mg mifepristone	Relative (95% CI)	Absolute		Importance
vomiting (questioning)												
1	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[2]	none	63/750 (8.4%)	55/749 (7.3%)	RR 1.14 (0.81 to 1.62)	10 more per 1000 (from 14 fewer to 46 more)	⊕⊕⊕◯ MODERATE	IMPORTANT
								0%		0 more per 1000 (from 0 fewer to 0 more)		
diarrhoea (questioning)												
1	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	no serious imprecision	none	71/750 (9.5%)	35/749 (4.7%)	RR 2.03 (1.37 to 3)	48 more per 1000 (from 17 more to 93 more)	⊕⊕⊕◯ HIGH	IMPORTANT
								0%		0 more per 1000 (from 0 more to 0 more)		

1 RR 0.44 (95%CI 0.19 to 1.01)
2 RR 1,14 (95%CI 0.81 to 1.62)

Author(s): R. Kulier
Date: 2009-08-09
Question: Should 0.5mg gemeprost pv in combination with 200mg mifepristone vs. 600mcg misoprostol po in combination with 200mg mifepristone be used for medical abortion during first trimester?
Settings: University Hospital, Edinburgh
Bibliography: Kulier R, Kapp N, Gülmezoglu AM, Hofmeyr GJ, Cheng L, Campana A. Medical methods for first trimester abortion. *Cochrane Database of Systematic Reviews* [2011].

Table 119:

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	0.5mg gemeprost pv in combination with 200mg mifepristone	600mcg misoprostol po in combination with 200mg mifepristone	Relative (95% CI)	Absolute		Importance
failure to achieve complete abortion (ultrasound)												
1	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	very serious[1]	none	13/391 (3.3%)	21/386 (5.4%)	RR 0.61 (0.31 to 1.2)	21 fewer per 1000 (from 38 fewer to 11 more)	⊕⊕◯◯ LOW	CRITICAL
								0%		0 fewer per 1000 (from 0 fewer to 0 more)		
ongoing pregnancy (ultrasound)												
1	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	very serious[2]	none	1/391 (0.3%)	9/386 (2.3%)	RR 0.11 (0.01 to 0.86)	21 fewer per 1000 (from 3 fewer to 23 fewer)	⊕⊕◯◯ LOW	CRITICAL
								0%		0 fewer per 1000 (from 0 fewer to 0 fewer)		

1 large confidence interval; small number of events
2 large confidence interval; small number of events

Author(s): R. Kulier
Date: 2009-08-09
Question: Should 0.5 mg gemeprost pv in combination with 200mg mifepristone vs. 800mcg misoprostol pv in combination with 200mg mifepristone be used for medical abortion during first trimester?
Settings: University Hospital, Edinburgh
Bibliography: Kulier R, Kapp N, Gülmezoglu AM, Hofmeyr GJ, Cheng L, Campana A. Medical methods for first trimester abortion. *Cochrane Database of Systematic Reviews* [2011].

Table 120:

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	0.5 mg gemeprost pv in combination with 200mg mifepristone	800mcg misoprostol pv in combination with 200mg mifepristone	Relative (95% CI)	Absolute		Importance
failure to achieve complete abortion (ultrasound)												
1	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[1]	none	17/453 (3.8%)	6/457 (1.3%) 0%	RR 2.86 (1.14 to 7.18)	24 more per 1000 (from 2 more to 81 more) 0 more per 1000 (from 0 more to 0 more)	⊕⊕⊕◯ MODERATE	CRITICAL
ongoing pregnancy (ultrasound)												
1	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[2]	none	8/453 (1.8%)	5/457 (1.1%) 0%	RR 1.61 (0.53 to 4.9)	7 more per 1000 (from 5 fewer to 43 more) 0 more per 1000 (from 0 fewer to 0 more)	⊕⊕⊕◯ MODERATE	CRITICAL
time until passing of conceptus > 3-6 hours (physical examination)												
1	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	no serious imprecision	none	107/453 (23.6%)	111/457 (24.3%) 0%	RR 0.97 (0.77 to 1.23)	7 fewer per 1000 (from 56 fewer to 56 more) 0 fewer per 1000 (from 0 fewer to 0 more)	⊕⊕⊕◯ HIGH	IMPORTANT
vomiting (questioning)												
1	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[3]	none	71/453 (15.7%)	48/457 (10.5%) 0%	RR 1.49 (1.06 to 2.1)	51 more per 1000 (from 6 more to 116 more) 0 more per 1000 (from 0 more to 0 more)	⊕⊕⊕◯ MODERATE	IMPORTANT

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	0.5 mg gemeprost pv in combination with 200mg mifepristone	800mcg misoprostol pv in combination with 200mg mifepristone	Relative (95% CI)	Absolute		Importance
diarrhoea (questioning)												
1	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[4]	none	29/453 (6.4%)	11/457 (2.4%)	RR 2.66 (1.35 to 5.26)	40 more per 1000 (from 8 more to 103 more)	⊕⊕⊕◯ MODERATE	IMPORTANT
								0%		0 more per 1000 (from 0 more to 0 more)		

1 RR 2.86 (95% CI 1.14 to 7.18)
2 RR 1.61 (95% CI 0.53 to 4.90)
3 RR 1.94 (95% CI 1.06 to 2.10)
4 RR 2.66 (95% CI 1.35 to 5.26)

Author(s): R. Kulier
Date: 2010-04-14
Question: Should 600mcg misoprostol sublingual in combination with mifepristone 200mg vs. 800mcg misoprostol pv in combination with mifepristone 200mg be used for medical abortion at 9-12 weeks?
Settings: University Hospital. Aberdeen, Scotland
Bibliography: Kulier R, Kapp N, Gülmezoglu AM, Hofmeyr GJ, Cheng L, Campana A. Medical methods for first trimester abortion. *Cochrane Database of Systematic Reviews* [2011].

Table 121:

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	600mcg misoprostol sublingual in combination with mifepristone 200mg	800mcg misoprostol pv in combination with mifepristone 200mg	Relative (95% CI)	Absolute		Importance
surgical intervention (ultrasound)												
1	randomized trials	no serious limitations	no serious inconsistency	serious[1]	very serious[2]	none	4/105 (3.8%)	3/87 (3.4%)	RR 0.83 (0.17 to 4.00)	6 fewer per 1000 (from 29 fewer to 103 more)	⊕◯◯◯ VERY LOW	
								0%		0 fewer per 1000 (from 0 fewer to 0 more)		

1 outcome measure: surgical abortion
2 small number of events; large confidence interval

Pre-abortion ultrasound

Should use of pre-abortion ultrasound be recommended?

One systematic review of the topic (Kulier and Kapp) identified no randomized controlled trials or reports of any comparative studies of the use of pre-procedure ultrasound with no use of ultrasound for either safety or efficacy outcomes.

Indirect evidence reported that trained physicians estimate gestational age generally within two weeks of ultrasound dating, but that inexperience in examination increases the discrepancy between physical exam and diagnostic ultrasound. Detection of uterine anomalies or of ectopic pregnancy by a skilled sonographer, both of which are uncommon, have the potential to affect the success or safety of abortion procedures. GRADE tables for this indirect evidence are presented below.

Author(s): R. Kulier
Date: 2009-09-04
Question: Should visualisation vs. no visualisation of ultrasound image to women be used for before first trimester abortion?
Bibliography: Bamigboye AA, Nikodem VC, Santana MA, Hofmeyr GJ. Should women view the ultrasound image before first-trimester termination of pregnancy? *S Afr Med J.* 2002 Jun;92(6):430-2.

Table 122:

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	visualisation	no visualisation of ultrasound image to women	Relative (95% CI)	Absolute		Importance
future preference visualisation (questioning)												
1	randomized trials	very serious[1]	no serious inconsistency	no serious indirectness	no serious imprecision	none	126/173 (72.8%)	88/163 (54%)	RR 2.78 (2.27 to 3.4)	961 more per 1000 (from 686 more to 1296 more)	⊕⊕◯◯ LOW	IMPORTANT
								0%		0 more per 1000 (from 0 more to 0 more)		

1 authors mentioned the problem of contamination: many women who were randomized into the 'non-visualisation' group could actually see the image.

Author(s): R. Kulier
Date: 2009-09-04
Question: Should ultrasound vs. LMP or pelvic examination be used for first trimester abortion?
Bibliography: Fakih, M. H., E. R. Barnea, et al. The value of real time ultrasonography in first trimester termination. *Contraception* 1986, 33(6): 533-8

Table 123:

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	ultrasound	LMP or pelvic examination	Relative (95% CI)	Absolute		Importance
agreement of gestational age assessment within 2 weeks												
1	observational studies	very serious[1]	no serious inconsistency	no serious indirectness	no serious imprecision	none	104/120 (86.7%)	103/120 (85.8%) 0%	RR 1.01 (0.91 to 1.12)	9 more per 1000 (from 77 fewer to 103 more) 0 more per 1000 (from 0 fewer to 0 more)	⊕○○○ VERY LOW	IMPORTANT

1 consecutive women; no mention how selected

Author(s): R. Kulier
Date: 2009-09-04
Question: Should junior doctors vs. faculty assess gestational age before first trimester abortion?
Bibliography: Nichols M, Morgan E, Jensen JT. Comparing bimanual pelvic examination to ultrasound measurement for assessment of gestational age in the first trimester of pregnancy. *J Reprod Med 2002;47:825–8*

Table 124:

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	junior doctors	faculty	Relative (95% CI)	Absolute		Importance
agreement of bimanual pelvic assessment and ultrasound to assess gestational age to lie within 2 weeks (clinical)												
1	observational studies	very serious[1]	no serious inconsistency	no serious indirectness	no serious imprecision	none	190/245 (77.6%)	226/245 (92.2%) 0%	RR 0.84 (0.78 to 0.91)	148 fewer per 1000 (from 83 fewer to 203 fewer) 0 fewer per 1000 (from 0 fewer to 0 fewer)	⊕◯◯◯ VERY LOW	IMPORTANT

1 consecutive patients, unclear how subjects were selected

Pain control in first trimester medical abortion

A systematic review (Jackson and Kapp, 2010) assessed different methods of pain control included in comparative clinical studies during first trimester medical abortion. The methods assessed included the following oral analgesics: paracetamol, alverine, ibuprofen, and paracetamol with codeine. The outcomes assessed included pain during the abortion, time to abortion and side-effects.

A total of four trials were included; as there were differences in methods of abortion induction and pain control across all trials, no meta-analyses could be conducted, and all comparisons were based on single trials. Women with gestational ages up to 56 days were included in one study, although most trials were limited to women with pregnancies up to 49 days gestation. The quality of the studies ranged from very low to moderate. Trials were typically small, not all trials were randomized, and several utilized indirect measures of pain, such as subsequent analgesia use.

The review found that paracetamol, used alone or in combination with codeine, is not effective in reducing pain associated with medical abortion in the first trimester. Data from one trial indicate that ibuprofen taken at the time of onset of pain during abortion with mifepristone + misoprostol significantly decreases pain when compared to paracetamol. There was little difference in reported side-effects between any of the included regimens. The GRADE tables below provide a summary of the comparisons presented in the review.

Author(s): E. Jackson
Date: 2009-11-26
Question: Should paracetamol 600 mg vs. placebo be used for pain with first trimester medical abortion (</= 49 days gestation, mifepristone/sulprostone)?
Settings: France
Bibliography: Weber B, Fontan JE. Acetaminophen as a pain enhancer during voluntary interruption of pregnancy with mifepristone and sulprostone. Eur J Clin Pharmacol 1990;39(6):609. Weber B, Fontan JE, Scheller E, Debu E, Dufour B, Majorel P, et al. Abortion induced by mifepristone and sulprostone combination: Attempting analgesia with acetaminophen or dipropyline. C*ontracept Fertil Sex* 1990;18(12):1073-6.

Table 125:

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Paracetamol 600 mg	Placebo	Relative (95% CI)	Absolute		Importance
Side-effects - not measured												
0	-	-	-	-	-	none	0	0	-	-		IMPORTANT
Complications - not measured												
0	-	-	-	-	-	none	0	0	-	-		CRITICAL
Time to abortion (measured with: Minutes to abortion following sulprostone injection; Better indicated by lower values)												
1	randomized trials	very serious[1,2,3]	no serious inconsistency	no serious indirectness	serious[4,5]	none	10	14	-	MD 85 higher (21.8 to 148.2 higher)	⊕◯◯◯ VERY LOW	IMPORTANT
Maximal pain (measured with: Centimeters on 10 cm VAS; range of scores: 0-10; Better indicated by lower values)												
1	randomized trials	very serious[1,2,3]	no serious inconsistency	no serious indirectness	serious[4,5]	none	10	14	-	MD 2.4 higher (4.3 lower to 9.1 higher)	⊕◯◯◯ VERY LOW	CRITICAL
Duration of initial pain episode (measured with: Minutes; Better indicated by lower values)												
1	randomized trials	very serious[1,2,3]	no serious inconsistency	no serious indirectness	serious[4,5]	none	10	14	-	MD 44 higher (26.3 to 61.6 higher)	⊕◯◯◯ VERY LOW	CRITICAL

1 7 women excluded after randomization for method failure, expulsion prior to hospitalization, protocol deviations, or time to expulsion > 8 hours.
2 Randomization, allocation, blinding, power calculations not described.
3 Significantly fewer nulliparous women randomized to placebo group.
4 Small sample size particularly in parous/nulliparous subgroups.
5 Unit of time used to measure duration of abortion and duration of pain not clear.

Author(s): E Jackson
Date: 2009-11-26
Question: Should alverine 80 mg vs. placebo be used for pain with first trimester medical abortion (</= 49 days gestation, mifepristone/sulprostone)?
Settings: France
Bibliography: Weber B, Fontan JE. Acetaminophen as a pain enhancer during voluntary interruption of pregnancy with mifepristone and sulprostone. Eur J Clin Pharmacol 1990;39(6):609. Weber B, Fontan JE, Scheller E, Debu E, Dufour B, Majorel P, et al. Abortion induced by mifepristone and sulprostone combination: Attempting analgesia with acetaminophen or dipropyline. *Contracept Fertil Sex* 1990;18(12):1073-6.

Table 126:

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Alverine 80 mg	Placebo	Relative (95% CI)	Absolute		Importance
Side-effects - not measured												
0	-	-	-	-	-	none	0/0 (0%)	0/0 (0%)	-	-		IMPORTANT
Complications - not measured												
0	-	-	-	-	-	none	0/0 (0%)	0/0 (0%)	-	-		CRITICAL
Time to abortion (measured with: Minutes to abortion following sulprostone injection; Better indicated by lower values)												
1	randomized trials	very serious[1,2,3]	no serious inconsistency	no serious indirectness	serious[4,5]	none	14	14	-	MD 2 higher (18.9 lower to 22.9 higher)	⊕○○○ VERY LOW	IMPORTANT
Maximal pain (measured with: Centimeters on 10 cm VAS; range of scores: 0-10; Better indicated by lower values)												
1	randomized trials	very serious[1,2,3]	no serious inconsistency	no serious indirectness	serious[4,5]	none	14	14	-	MD 2.51 higher (3.6 lower to 8.6 higher)	⊕○○○ VERY LOW	CRITICAL
Duration of initial pain episode (measured with: Minutes; Better indicated by lower values)												
1	randomized trials	very serious[1,2,3]	no serious inconsistency	no serious indirectness	serious[4,5]	none	14	14	-	MD 10 lower (26.1 lower to 6.1 higher)	⊕○○○ VERY LOW	CRITICAL

1 7 women excluded after randomization for method failure, expulsion prior to hospitalization, protocol deviations, or time to expulsion > 8 hours.
2 Randomization, allocation, blinding, power calculations not described.
3 Significantly fewer nulliparous women randomized to placebo group.
4 Small sample size particularly in parous/nulliparous subgroups.
5 Unit of time used to measure duration of abortion and duration of pain not clear.

Author(s): E Jackson
Date: 2009-11-26
Question: Should paracetamol 600 mg vs. alverine 80 mg be used for pain with first trimester medical abortion (</= 49 days gestation, mifepristone/sulprostone)?
Settings: France
Bibliography: Weber B, Fontan JE. Acetaminophen as a pain enhancer during voluntary interruption of pregnancy with mifepristone and sulprostone. Eur J Clin Pharmacol 1990;39(6):609. Weber B, Fontan JE, Scheller E, Debu E, Dufour B, Majorel P, et al. Abortion induced by mifepristone and sulprostone combination: Attempting analgesia with acetaminophen or dipropyline. *Contracept Fertil Sex* 1990;18(12): 1073-6.

Table 127:

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Paracetamol 600 mg	Alverine 80 mg	Relative (95% CI)	Absolute		Importance
Side-effects - not measured												
0	-	-	-	-	-	none	0/0 (0%)	0/0 (0%)	-	-		IMPORTANT
Complications - not measured												
0	-	-	-	-	-	none	0/0 (0%)	0/0 (0%)	-	-		CRITICAL
Time to abortion (measured with: minutes; Better indicated by lower values)												
1	randomized trials	very serious[1,2,3]	no serious inconsistency	no serious indirectness	serious[4,5]	none	10	14	-	MD 83 higher (17.4 to 148.6 higher)	⊕◯◯◯ VERY LOW	IMPORTANT
Maximal pain (measured with: centimetres on 10 cm VAS; range of scores: 0-10; better indicated by lower values)												
1	randomized trials	very serious[1,2,3]	no serious inconsistency	no serious indirectness	serious[4,5]	none	10	14	-	MD 0.11 lower (7.5 lower to 7.3 higher)	⊕◯◯◯ VERY LOW	CRITICAL
Duration of initial pain episode (measured with: minutes; Better indicated by lower values)												
1	randomized trials	very serious[1,2,3]	no serious inconsistency	no serious indirectness	serious[4,5]	none	10	14	-	MD 54 higher (37.5 to 70.5 higher)	⊕◯◯◯ VERY LOW	CRITICAL

1 7 women excluded after randomization for method failure, expulsion prior to hospitalization, protocol deviations, or time to expulsion > 8 hours.
2 Randomization, allocation, blinding, power calculations not described.
3 Significantly fewer nulliparous women randomized to placebo group.
4 Small sample size particularly in parous/nulliparous subgroups.
5 Unit of time used to measure duration of abortion and duration of pain not clear.

Author(s): E Jackson
Date: 2009-11-26
Question: Should loperamide 4 mg orally and paracetamol 500 mg orally prior to misoprostol administration vs. no prophylactic analgesia medication be used for pain with first trimester medical abortion (</= 56 days gestation, misoprostol only)?
Settings: USA
Bibliography: Jain JK, Harwood B, Meckstroth KR, Mishell DR. Early pregnancy termination with vaginal misoprostol combined with loperamide and acetaminophen prophylaxis. *Contraception* 2001;63(4):217-21.

Table 128:

Quality assessment							Summary of findings					
	No of patients		Effect									
No of studies	Design	Limitations	Inconsistency	Indirectness	Quality Imprecision	Other considerations	Loperamide 4 mg orally and Paracetamol 500 mg orally prior to misoprostol administration	no prophylactic analgesia medication	Relative (95% CI)	Absolute		Importance
Failure of abortion (ultrasound)												
1	observational studies	serious[1,2,3]	no serious inconsistency	no serious indirectness	serious[5]	none	7/100 (7%)	11/100 (11%)	OR 0.61 (0.23 to 1.64)	40 fewer per 1000 (from 82 fewer to 59 more)	⊕⊕◯◯ LOW	CRITICAL
Subsequent analgesia use (Patient report)												
1	observational studies	serious[1,2,3]	no serious inconsistency	serious[4]	serious[5]	none	81/100 (81%)	79/100 (79%)	OR 1.13 (0.57 to 2.27)	20 more per 1000 (from 108 fewer to 105 more)	⊕◯◯◯ VERY LOW	CRITICAL
Subsequent opiate use (paracetamol 500 mg + codeine 30 mg) (Patient report)												
1	observational studies	serious[1,2,3]	no serious inconsistency	serious[4]	serious[5]	none	4/100 (4%)	16/100 (16%) 0%	OR 0.22 (0.06 to 0.73)	120 fewer per 1000 (from 38 fewer to 149 fewer) 0 fewer per 1000 (from 0 fewer to 0 fewer)	⊕◯◯◯ VERY LOW	CRITICAL

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Loperamide 4 mg orally and Paracetamol 500 mg orally prior to misoprostol administration	no prophylactic analgesia medication	Relative (95% CI)	Absolute		Importance
Side-effects: Diarrhoea (Patient report)												
1	observational studies	serious[1,2,3]	no serious inconsistency	no serious indirectness	serious[5]	none	23/100 (23%)	44/100 (44%)	OR 0.38 (0.2 to 0.73)	210 fewer per 1000 (from 75 fewer to 304 fewer)	⊕⊕◯◯ LOW	IMPORTANT
Side-effects: Emesis (Patient report)												
1	observational studies	serious[1,2,3]	no serious inconsistency	no serious indirectness	serious[5]	none	29/100 (29%)	28/100 (28%)	OR 1.05 (0.57 to 14)	10 more per 1000 (from 99 fewer to 565 more)	⊕⊕◯◯ LOW	IMPORTANT
Side-effects: Subjective fever/chills (Patient report)												
1	observational studies	serious[1,2,3]	no serious inconsistency	no serious indirectness	serious[5]	none	77/100 (77%)	64/100 (64%)	OR 1.88 (1.01 to 3.5)	130 more per 1000 (from 2 more to 222 more)	⊕⊕◯◯ LOW	IMPORTANT
Side-effects: Temperature >/= 100.4 (Patient report)												
1	observational studies	serious[1,2,3]	no serious inconsistency	no serious indirectness	serious[5]	none	21/100 (21%)	30/100 (30%)	OR 0.59 (0.31 to 1.12)	98 fewer per 1000 (from 183 fewer to 24 more)	⊕⊕◯◯ LOW	IMPORTANT

1 Data for intervention group collected 1.5 years after control group.
2 Method of enrolment into study not described.
3 Control group with significantly more women with previous elective abortion.
4 Pain measured indirectly.
5 Small sample size and small total number of events.

Author(s): E Jackson
Date: 2009-11-26
Question: Should dimenhydramine and paracetamol 325 mg/codeine 50 mg vs. dymenhydramine and placebo be used for pain with first trimester medical abortion (</= 49 days, methotrexate/misoprostol)?
Settings: Canada
Bibliography: Wiebe, 2001: Pain control in medical abortion. *International Journal of Gynecology and Obstetrics* 2001;74:275-80.

Table 129:

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Dimenhydramine and Paracetamol 325 mg/Codeine 50 mg	Dymenhydramine and Placebo	Relative (95% CI)	Absolute		Importance
Mean pain scores (measured with: centimetres on 10 cm numerical pain scale; range of scores: 0-10; Better indicated by lower values)												
1	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[1]	none	89	94	-	MD 0.5 lower (1.38 lower to 0.38 higher)	⊕⊕⊕◯ MODERATE	CRITICAL
Subsequent analgesia use: Ibuprofen (measured with: doses of medication used; Better indicated by lower values)												
1	randomized trials	no serious limitations	no serious inconsistency	serious[2]	serious[1]	none	89	94	-	MD 0.01 lower (0.3 lower to 0.28 higher)	⊕⊕◯◯ LOW	CRITICAL
Subsequent analgesia use: Paracetamol with Codeine (measured with: doses of medication used; Better indicated by lower values)												
1	randomized trials	no serious limitations	no serious inconsistency	serious[2]	serious[1]	none	89	94	-	MD 0.3 lower (0.8 lower to 0.2 higher)	⊕⊕◯◯ LOW	CRITICAL
Side-effects: Any (patient report)												
1	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[1]	none	66/89 (74.2%)	76/94 (80.9%)	RR 0.92 (0.78 to 1.07)	65 fewer per 1000 (from 178 fewer to 57 more)	⊕⊕⊕◯ MODERATE	IMPORTANT

1 Small sample size and small total number of events.
2 Indirect measurement of pain.

Author(s): E Jackson
Date: 2009-11-26
Question: Should dimenhydramine and paracetamol 325 mg/Codeine 50 mg vs. dimenhydramine and ibuprofen 400 mg be used for pain with first trimester medical abortion (</= 49 days, methotrexate/misoprostol)?
Settings: Canada
Bibliography: Wiebe, 2001: Pain control in medical abortion. *International Journal of Gynecology and Obstetrics* 2001;74:275-80.

Table 130:

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Dimenhydramine and Paracetamol 325 mg/Codeine 50 mg	Dimenhydramine and Ibuprofen 400 mg	Relative (95% CI)	Absolute		Importance
Mean pain scores (measured with: centimetres on 10 cm numerical pain scale; Better indicated by lower values)												
1	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[1]	none	89	97	-	MD 0.2 lower (1.01 lower to 0.61 higher)	⊕⊕⊕◯ MODERATE	CRITICAL
Subsequent analgesia use: Ibuprofen (measured with: doses; Better indicated by lower values)												
1	randomized trials	no serious limitations	no serious inconsistency	serious[2]	serious[1]	none	89	97	-	MD 0.16 lower (0.47 lower to 0.15 higher)	⊕⊕◯◯ LOW	CRITICAL
Subsequent analgesia use: Paracetamol with Codeine (measured with: doses; Better indicated by lower values)												
1	randomized trials	no serious limitations	no serious inconsistency	serious[2]	serious[1]	none	89	97	-	MD 0.3 lower (0.75 lower to 0.15 higher)	⊕⊕◯◯ LOW	CRITICAL
Side-effects: Any (patient report)												
1	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[1]	none	66/89 (74.2%)	76/97 (78.4%)	RR 0.95 (0.81 to 1.11)	39 fewer per 1000 (from 149 fewer to 86 more)	⊕⊕⊕◯ MODERATE	IMPORTANT

1 Small sample size and small number of total events.
2 Indirect measurement of pain.

Author(s): E Jackson
Date: 2009-11-26
Question: Should dimenhydramine and Ibuprofen 400 mg vs. dimenhydramine and placebo be used for pain with first trimester medical abortion (</= 49 days, methotrexate/misoprostol)?
Settings: Canada
Bibliography: Wiebe, 2001: Pain control in medical abortion. *International Journal of Gynecology and Obstetrics* 2001;74:275-80.

Table 131:

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Dimenhydramine and Ibuprofen 400 mg	Dimenhydramine and Placebo	Relative (95% CI)	Absolute		Importance
Pain scores (measured with: centimetres on 10 cm numerical pain scale; Better indicated by lower values)												
1	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[1]	none	97	94	-	MD 0.3 lower (1.1 lower to 0.5 higher)	⊕⊕⊕◯ MODERATE	CRITICAL
Subsequent analgesia use: Ibuprofen (measured with: doses; Better indicated by lower values)												
1	randomized trials	no serious limitations	no serious inconsistency	serious[2]	serious[1]	none	97	94	-	MD 0.14 higher (0.15 lower to 0.45 higher)	⊕⊕◯◯ LOW	CRITICAL
Subsequent analgesia use: Paracetamol with codeine (measured with: doses; Better indicated by lower values)												
1	randomized trials	no serious limitations	no serious inconsistency	serious[2]	serious[1]	none	97	94	-	MD 0 higher (0.5 lower to 0.5 higher)	⊕⊕◯◯ LOW	CRITICAL
Side-effects: Any (patient report)												
1	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[1]	none	76/97 (78.4%)	76/94 (80.9%)	RR 0.97 (0.84 to 1.12)	24 fewer per 1000 (from 129 fewer to 97 more)	⊕⊕⊕◯ MODERATE	IMPORTANT

1 Small sample size and small number of total events.
2 Indirect measurement of pain.

Author(s): E Jackson
Date: 2010-01-12
Question: Should paracetamol 500 mg (4 tablets) vs. ibuprofen 400 mg (4 tablets) be used for pain with first trimester medical abortion (</= 49 days gestation, mifepristone/misoprostol)?
Settings: Israel
Bibliography: Livshits A, R Machtinger, LB David, M Spira, A Moshe-Zahav and DS Seidman. Ibuprofen and paracetamol for pain relief during medical abortion: A double blind randomized controlled study. *Fertility and Sterility* 2009;91(5):1877-1880.

Table 132:

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Paracetamol 500 mg (4 tablets)	Ibuprofen 400 mg (4 tablets)	Relative (95% CI)	Absolute		Importance
Failure of abortion (follow-up 10-14 days; endometrial thickness > 15 mm on ultrasound 10-14 days after abortion)												
1	randomized trials	no serious limitations[2]	no serious inconsistency	no serious indirectness	serious[1]	none	8/49 (16.3%)	5/59 (8.5%)	RR 1.8 (0.62 to 5.18)	68 more per 1000 (from 32 fewer to 354 more)	⊕⊕⊕◯ MODERATE	CRITICAL
Pain scores before analgesia (measured with: points on 11 point numeric scale; Better indicated by lower values)												
1	randomized trials	no serious limitations[2]	no serious inconsistency	no serious indirectness	serious[1]	none	49	59	-	MD 0.15 higher (0.48 lower to 0.78 higher)	⊕⊕⊕◯ MODERATE	CRITICAL
Pain scores after analgesia (measured with: points on 11 point numeric scale; Better indicated by lower values)												
1	randomized trials	no serious limitations[2]	no serious inconsistency	no serious indirectness	serious[1]	none	49	59	-	MD 2.26 higher (1.51 to 3.01 higher)	⊕⊕⊕◯ MODERATE	CRITICAL
Change in pain score after analgesia (Better indicated by lower values)												
1	randomized trials	no serious limitations[2]	no serious inconsistency	no serious indirectness	serious[1]	none	49	59	-	MD 2.13 lower (1.59 to 2.67 lower)	⊕⊕⊕◯ MODERATE	CRITICAL
Subsequent analgesia use (2 tabs metamizole 500 mg) (patient report in controlled setting)												
1	randomized trials	no serious limitations[2]	no serious inconsistency	serious[3]	serious[1]	none	13/49 (26.5%)	4/59 (6.8%)	RR 3.91 (1.36 to 11.24)	197 more per 1000 (from 24 more to 694 more)	⊕⊕◯◯ LOW	CRITICAL

1 Small sample size.
2 Twelve women excluded post-randomization.
3 Indirect measurement of pain.

Pain control in second trimester medical abortion

A systematic review (Jackson and Kapp, 2010) assessed different methods of pain control included in comparative clinical studies during second trimester medical abortion. The pain control methods assessed included patient controlled anaesthesia, and adjuvant treatments such as paracervical block, metoclopramide, and prophylactic paracetamol + codeine or diclofenac. The outcomes assessed included pain during abortion, time to abortion and side-effects.

A total of five trials were included; as there were differences in abortion and pain control methods utilized among the included trials, no meta-analyses could be conducted, and all comparisons were based on single trials. Women with gestational ages from 16 to 23 completed weeks were included, although few data was from women with pregnancies beyond 21 weeks. The quality of the studies ranged from very low to moderate. Trials were typically very small, not all trials were randomized and some utilized retrospective or indirect measurements of pain relief.

The review found that adjuvant pain medications such as diclofenac or metoclopramide may decrease opioid requirements in women at later gestations, or time to abortion, respectively. Paracervical block showed no benefit in relieving pain during fetal expulsion. One trial comparing PCA regimens found no difference in pain relief, as indicated by delivery/demand ratios, although nausea and vomiting were less frequent with longer lock-out intervals in a single comparison. There was little difference in reported side-effects with any regimens. The GRADE tables below provide a summary of the comparisons presented in the review.

Author(s): E Jackson
Date: 2010-01-13
Question: Should morphine PCA with metoclopramide 10 mg IV prior to initiation vs. morphine PCA with control (saline) IV prior to initiation be used for pain with second trimester medical abortion (gestational age range not given, abortion by intrauterine injection of $PGF_2\alpha$)?
Settings: USA
Bibliography: Rosenblatt WH, Cioffi AM, Sinatra R, Saberski LR, Silverman DG. Metoclopramide: An analgesic adjunct to patient-controlled analgesia. *Anesth Analg* 1991;73:553-5.

Table 133:

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Morphine PCA with Metoclopramide 10 mg IV prior to initiation	Morphine PCA with control (saline) IV prior to initiation	Relative (95% CI)	Absolute		Importance
Time to abortion (measured with: hours; Better indicated by lower values)												
1	randomized trials	very serious[1,3,4]	no serious inconsistency	no serious indirectness	serious[2,]	none	7	8	-	MD 7.8 lower (0.09 to 16.11 lower)	⊕○○○ VERY LOW	IMPORTANT
Pain scores before intervention (measured with: points on a 10 point visual analogue scale; range of scores: 0-10; Better indicated by lower values)												
1	randomized trials	very serious[1,3,4]	no serious inconsistency	no serious indirectness	serious[2,5]	none	7	8	-	MD 0.6 lower (3.28 lower to 2.08 higher)[5]	⊕○○○ VERY LOW	CRITICAL
Pain scores 4-6 hours after intervention (measured with: points on a 10 point visual analogue scale; range of scores: 0-10; Better indicated by lower values)												
1	randomized trials	very serious[1,3,4]	no serious inconsistency	no serious indirectness	serious[2,5]	none	7	8	-	MD 1.18 lower (2.55 lower to 0.19 higher)[5,6]	⊕○○○ VERY LOW	CRITICAL
Subsequent analgesia use: Morphine use, first 6 hours (measured with: mg/2h; Better indicated by lower values)												
1	randomized trials	very serious[1,3,4]	no serious inconsistency	serious[7]	serious[2]	none	7	8	-	MD 4.4 lower (0.05 to 8.75 lower)	⊕○○○ VERY LOW	CRITICAL
Subsequent analgesia use: Morphine use, total (measured with: mg; Better indicated by lower values)												
1	randomized trials	very serious[1,3,4]	no serious inconsistency	serious[7]	serious[2]	none	7	8	-	MD 27.9 lower (12.57 to 43.23 lower)	⊕○○○ VERY LOW	CRITICAL

1 Power calculations, method of randomization, allocation and blinding not described.
2 Small sample size.
3 5 participants excluded post-randomization.
4 Gestational weeks at abortion not specified.
5 Pain scores not reported. Numbers estimated from graphical data presented in paper.
6 Authors reported a $p<0.05$. Discrepancy is likely due to margin of error when estimating pain scores from graphical data presented in paper.
7 Indirect measurement of pain.

Author(s): E Jackson
Date: 2010-01-13
Question: Should morphine PCA with metoclopramide 10 mg IV prior to initiation and 4 hours later vs. morphine PCA with control (saline) IV prior to initiation and 4 hours later be used for pain with second trimester medical abortion (gestational age range not given, intrauterine injection of $PGF_2\alpha$/PGE suppositories)?
Settings: USA
Bibliography: Rosenblatt WH, Cioffi AM, Sinatra R, Silverman DG. Metoclopramide-enhanced analgesia for prostaglandin-induced termination of pregnancy. *Anesth Analg* 1992;75(760):763.

Table 134:

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Morphine PCA with Metoclopramide 10 mg IV prior to initiation and 4 hours later	Morphine PCA with control (saline) IV prior to initiation and 4 hours later	Relative (95% CI)	Absolute		Importance
Time to abortion (measured with: hours[1]; Better indicated by lower values)												
1	randomized trials	very serious[2,4,5]	no serious inconsistency	no serious indirectness	serious[3]	none	17	15	-	MD 3.51 lower (0.46 to 6.56 lower)	⊕○○○ VERY LOW	IMPORTANT
Pain scores during the first 45 minutes (measured with: points on a 10 point visual analogue scale; range of scores: 0-10; Better indicated by lower values)												
1	randomized trials	very serious[2,4,5]	no serious inconsistency	no serious indirectness	serious[3,6]	none	17	15	-	MD 1.45 lower (0.45 lower to 3.35 higher)[6]	⊕○○○ VERY LOW	CRITICAL
Pain scores after second injection (measured with: points on a 10 point visual analogue scale; range of scores: 0-10; Better indicated by lower values)												
1	randomized trials	very serious[2,4,5]	no serious inconsistency	no serious indirectness	serious[3,6]	none	17	15	-	MD 0.08 lower (1.82 lower to 1.98 higher)[6]	⊕○○○ VERY LOW	CRITICAL
Subsequent analgesia use: Morphine (measured with: mg; Better indicated by lower values)												
1	randomized trials	very serious[2,4,5]	no serious inconsistency	serious[7]	serious[3]	none	17	15	-	MD 15.4 lower (4.85 to 25.95 lower)	⊕○○○ VERY LOW	CRITICAL

1 Measured from the onset of pain.
2 Power calculations, method of randomization, allocation and blinding not specified.
3 Small sample size.
4 5 participants excluded post-randomization.
5 Number of gestational weeks at abortion not specified.
6 Pain scores not reported. Median data extracted from graphical data presented in paper. Means and standard deviation results calculated from median data according to formulas given in Hozo S, Djulbegovic B and Hozo I. Estimating the mean and variance from the median, range and the size of a sample. BMC Medical Research Methodology 2005;5(13).
7 Indirect measurement of pain.

Author(s): E Jackson
Date: 2010-01-13
Question: Should meperidine 50mg IV/butylscopalamine 10mg PR and paracervical anaesthesia vs. meperidine 50mg IV/butylscopalamine 10mg PR be used for pain with second trimester medical abortion (16-24 weeks gestation, gemeprost/oxytocin)?
Settings: Germany
Bibliography: Winkler M, Wolters S, Funk A, Rath W. Second trimester abortion with vaginal gemeprost-improvement by paracervical anaesthesia? *Zentralblatt für Gynäkologie* 1997;119:621-4.

Table 135:

Quality assessment							Summary of findings					
	No of patients		Effect									
No of studies	Design	Limitations	Inconsistency	Indirectness	Quality Imprecision	Other considerations	Meperidine 50mg IV/Butylscopalamine 10mg PR and paracervical anaesthesia	Meperidine 50mg IV/ Butylscopalamine 10mg PR	Relative (95% CI)	Absolute		Importance
Time to abortion (measured with: Hours; Better indicated by lower values)												
1	observational studies	very serious[1,2,3]	no serious inconsistency	no serious indirectness	serious[4]	none	10	10	-	MD 5.5 lower (14.77 to 3.77 higher)[5]	⊕○○○ VERY LOW	IMPORTANT
Maximal Pain Score (measured with: 11 point visual scale[6]; range of scores: 0-100; Better indicated by lower values)												
1	observational studies	very serious[1,2,3,7]	no serious inconsistency	no serious indirectness	serious[4]	none	10	10	-	MD 17.5 higher (3.41 lower to 38.41 higher)[5]	⊕○○○ VERY LOW	CRITICAL
Subsequent analgesia use: Meperidine (measured with: mg; Better indicated by lower values)												
1	observational studies	very serious[1,2,3,7]	no serious inconsistency	serious[8]	serious[4]	none	10	10	-	MD 25 higher (16.25 lower to 66.25 higher)[5]	⊕○○○ VERY LOW	CRITICAL
Subsequent analgesia use: Butylscopolamine (measured with: mg; Better indicated by lower values)												
1	observational studies	very serious[1,2,3,7]	no serious inconsistency	serious[8]	serious[4]	none	10	10	-	MD 7.5 higher (3.1 to 11.9 higher)[5]	⊕○○○ VERY LOW	CRITICAL

1 Alternate assignment (every other participant), not randomization.
2 Power calculations not described.
3 Patient acceptability not assessed.
4 Small sample size.
5 Means and standard deviation data calculated from median data given in the paper according to formulas given in Hozo S, Djulbegovic B and Hozo I. Estimating the mean and variance form the median, range, and the size of a sample. BMC Medical Research Methodology 2005;5(13).
6 Huskisson's visual scale. Results presented as percentage from 0-100%.
7 Lack of allocation concealment.
8 Indirect measurement of pain.

Author(s): E Jackson
Date: 2010-01-13
Question: Should morphine PCA (2 mg bolus/6 minute lockout) vs. fentanyl PCA (50 mcg bolus/6 minute lockout) be used for pain with second trimester medical abortion (14-24 weeks gestation, intrauterine injection of $PGF_2\alpha$ or vaginal misoprostol)?[1]
Settings: Canada
Bibliography: Castro C, Tharmaratnam U, Brockhurst N, Tureanu L, Tam K, Windrim R. Patient-controlled analgesia with fentanyl provides effective analgesia for second trimester labour: A randomized controlled study. *Canadian Journal of Anesthesia* 2003;50(10):1039-46.

Table 136:

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Morphine PCA (2 mg bolus/6 minute lockout)	Fentanyl PCA (50 mcg bolus/6 minute lockout)	Relative (95% CI)	Absolute		Importance
Analgesia use: PCA delivery/demand ratio (Better indicated by higher values)												
1	randomized trials	serious[1,2]	no serious inconsistency	serious[3]	serious[4,5]	none	13	14	-	MD 0.04 higher (0.15 lower to 0.23 higher)	⊕○○○ VERY LOW	CRITICAL
Satisfaction with pain relief (measured with: millimetres on 100 millimetre visual analogue scale; range of scores: 0-100; Better indicated by higher values)												
1	randomized trials	serious[1,2]	no serious inconsistency	serious[3]	serious[4,5]	none	15	14	-	MD 15.8 lower (1.42 to 30.18 lower)	⊕○○○ VERY LOW	CRITICAL
Pain relief during labour (measured with: millimetres on 100 millimetre visual analogue scale; range of scores: 0-100; Better indicated by higher values)												
1	randomized trials	serious[1,2]	no serious inconsistency	serious[3]	serious[4,5]	none	15	14	-	MD 3.8 lower (20.12 lower to 12.52 higher)	⊕○○○ VERY LOW	CRITICAL
Pain relief during delivery (measured with: millimetres on 100 millimetre visual analogue scale; range of scores: 0-100; Better indicated by higher values)												
1	randomized trials	serious[1,2]	no serious inconsistency	serious[3]	serious[4,5]	none	14	13	-	MD 14.3 lower (41.37 lower to 12.77 higher)	⊕○○○ VERY LOW	CRITICAL
Side-effects: One or more												
1	randomized trials	serious[1,2]	no serious inconsistency	no serious indirectness	serious[4]	none	13/15 (86.7%)	7/15 (46.7%)	RR 1.86 (1.04 to 3.3)	401 more per 1000 (from 19 more to 1073 more)	⊕⊕○○ LOW	IMPORTANT

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Morphine PCA (2 mg bolus/6 minute lockout)	Fentanyl PCA (50 mcg bolus/6 minute lockout)	Relative (95% CI)	Absolute		Importance
Side-effects: Nausea												
1	randomized trials	serious[1,2]	no serious inconsistency	no serious indirectness	serious[4]	none	13/15 (86.7%)	7/15 (46.7%)	RR 1.86 (1.04 to 3.3)	401 more per 1000 (from 19 more to 1073 more)	⊕⊕◯◯ LOW	IMPORTANT
Side-effects: Vomiting												
1	randomized trials	serious[1,2]	no serious inconsistency	no serious indirectness	serious[4]	none	8/15 (53.3%)	1/15 (6.7%)	RR 8 (1.14 to 56.33)	467 more per 1000 (from 9 more to 3689 more)	⊕⊕◯◯ LOW	IMPORTANT
Side-effects: Sedation												
1	randomized trials	serious[1,2]	no serious inconsistency	no serious indirectness	serious[4]	none	6/15 (40%)	2/15 (13.3%)	RR 3 (0.72 to 12.55)	267 more per 1000 (from 37 fewer to 1540 more)	⊕⊕◯◯ LOW	IMPORTANT
Side-effects: Pruritus												
1	randomized trials	serious[1,2]	no serious inconsistency	no serious indirectness	serious[4]	none	8/15 (53.3%)	1/15 (6.7%)	RR 8 (1.14 to 56.33)	467 more per 1000 (from 9 more to 3689 more)	⊕⊕◯◯ LOW	IMPORTANT
Side-effects: Dizziness												
1	randomized trials	serious[1,2]	no serious inconsistency	no serious indirectness	serious[4]	none	4/15 (26.7%)	0/15 (0%)	RR 0 (0 to 0)[6]	0 fewer per 1000 (from 0 fewer to 0 fewer)	⊕⊕◯◯ LOW	IMPORTANT

1 Reasons for differing abortion regimens not specified.
2 Method of abortion not controlled for during analysis.
3 Indirect measurements of pain. VAS scores did not measure pain, but measured pain relief and satisfaction with pain relief. All VAS data collected retrospectively.
4 Small sample size and small total number of events.
5 PCA data collected only for the two hours prior to expulsion.
6 Unable to calculate relative effect because one group had no events.

Author(s): E Jackson
Date: 2010-01-13
Question: Should morphine PCA (2 mg bolus/6 minute lockout) vs. fentanyl PCA (25 mcg bolus/3 minute lockout) be used for pain with second trimester medical abortion (14-24 weeks gestation, intrauterine injection of $PGF_2\alpha$ or vaginal misoprostol)?[1]
Settings: Canada
Bibliography: Castro C, Tharmaratnam U, Brockhurst N, Tureanu L, Tam K, Windrim R. Patient-controlled analgesia with fentanyl provides effective analgesia for second trimester labour: A randomized controlled study. *Canadian Journal of Anesthesia* 2003;50(10):1039-46.

Table 137:

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Morphine PCA (2 mg bolus/6 minute lockout)	Fentanyl PCA (25 mcg bolus/3 minute lockout)	Relative (95% CI)	Absolute		Importance
Analgesia use: PCA delivery/demand ratio (Better indicated by higher values)												
1	randomized trials	serious[1,2]	no serious inconsistency	serious[3]	serious[4,5]	none	13	13	-	MD 0.08 higher (0.12 lower to 0.28 higher)	⊕○○○ VERY LOW	CRITICAL
Satisfaction with pain relief (measured with: millimetres on 100 millimetre visual analogue scale; range of scores: 0-100; Better indicated by higher values)												
1	randomized trials	serious[1,2]	no serious inconsistency	serious[3]	serious[4,5]	none	15	12	-	MD 23.6 higher (0.1 to 46.2 higher)	⊕○○○ VERY LOW	CRITICAL
Pain relief during labour (measured with: millimetres on 100 millimetre visual analogue scale; range of scores: 0-100; Better indicated by higher values)												
1	randomized trials	serious[1,2]	no serious inconsistency	serious[3]	serious[4,5]	none	15	12	-	MD 19.8 higher (1.23 lower to 40.83 higher)	⊕○○○ VERY LOW	CRITICAL
Pain relief during delivery (measured with: millimetres on 100 millimetre visual analogue scale; range of scores: 0-100; Better indicated by higher values)												
1	randomized trials	serious[1,2]	no serious inconsistency	serious[3]	serious[4,5]	none	14	11	-	MD 13.8 higher (13.17 lower to 40.77 higher)	⊕○○○ VERY LOW	CRITICAL
Side-effects: One or more												
1	randomized trials	serious[1,2]	no serious inconsistency	no serious indirectness	serious[4]	none	13/15 (86.7%)	10/14 (71.4%)	RR 1.21 (0.82 to 1.79)	150 more per 1000 (from 129 fewer to 564 more)	⊕⊕○○ LOW	IMPORTANT

Quality assessment							Summary of findings					
	No of patients		Effect									
No of studies	Design	Limitations	Inconsistency	Indirectness	Quality Imprecision	Other considerations	Morphine PCA (2 mg bolus/ 6 minute lockout)	Fentanyl PCA (25 mcg bolus/3 minute lockout)	Relative (95% CI)	Absolute		Importance
Side-effects: Vomiting												
1	randomized trials	serious[1,2]	no serious inconsistency	no serious indirectness	serious[4]	none	8/15 (53.3%)	7/14 (50%)	RR 1.07 (0.53 to 2.16)	35 more per 1000 (from 235 fewer to 580 more)	⊕⊕◯◯ LOW	IMPORTANT
Side-effects: Nausea												
1	randomized trials	serious[1,2]	no serious inconsistency	no serious indirectness	serious[4]	none	11/15 (73.3%)	9/14 (64.3%)	RR 1.14 (0.69 to 1.87)	90 more per 1000 (from 199 fewer to 559 more)	⊕⊕◯◯ LOW	IMPORTANT
Side-effects: Pruritus												
1	randomized trials	serious[1,2]	no serious inconsistency	no serious indirectness	serious[4]	none	8/15 (53.3%)	2/14 (14.3%)	RR 3.73 (0.95 to 14.66)	390 more per 1000 (from 7 fewer to 1951 more)	⊕⊕◯◯ LOW	IMPORTANT
Side Effect: Sedation												
1	randomized trials	serious[1,2]	no serious inconsistency	no serious indirectness	serious[4]	none	6/15 (40%)	2/14 (14.3%)	RR 2.80 (0.67 to 11.64)	257 more per 1000 (from 47 fewer to 1520 more)	⊕⊕◯◯ LOW	IMPORTANT
Side-effects: Dizziness												
1	randomized trials	serious[1,2]	no serious inconsistency	no serious indirectness	serious[4]	none	4/15 (26.7%)	2/14 (14.3%)	RR 1.87 (0.4 to 8.65)	124 more per 1000 (from 86 fewer to 1093 more)	⊕⊕◯◯ LOW	IMPORTANT

1 Reasons for differing abortion regimens not specified.
2 Method of abortion not controlled for during analysis.
3 Indirect measurements of pain. VAS scores did not measure pain, but measured pain relief and satisfaction with pain relief. All VAS data collected retrospectively.
4 Small sample size and small total number of events.
5 PCA data collected only for the two hours prior to expulsion.

Author(s): E Jackson
Date: 2010-01-13
Question: Should morphine PCA (2 mg bolus/6 minute lockout) vs. fentanyl PCA (50 mcg bolus/3 minute lockout) be used for pain with second trimester medical abortion (14-24 weeks gestation, intrauterine injection of $PGF_2\alpha$ or vaginal misoprostol)?[1]
Settings: Canada
Bibliography: Castro C, Tharmaratnam U, Brockhurst N, Tureanu L, Tam K, Windrim R. Patient-controlled analgesia with fentanyl provides effective analgesia for second trimester labour: A randomized controlled study. *Canadian Journal of Anesthesia* 2003;50(10):1039-46.

Table 138:

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Morphine PCA (2 mg bolus/6 minute lockout)	Fentanyl PCA (50 mcg bolus/3 minute lockout)	Relative (95% CI)	Absolute		Importance
Analgesia use: PCA delivery/demand ratio (Better indicated by higher values)												
1	randomized trials	serious[1,2]	no serious inconsistency	serious[3]	serious[4,5]	none	13	14	-	MD 0.10 lower (0.28 lower to 0.08 higher)	⊕○○○ VERY LOW	CRITICAL
Satisfaction with pain relief (measured with: millimetres on 100 millimetre visual analogue scale; range of scores: 0-100; Better indicated by higher values)												
1	randomized trials	serious[1,2]	no serious inconsistency	serious[3]	serious[4,5]	none	15	15	-	MD 12.3 lower (28.39 lower to 3.79 higher)	⊕○○○ VERY LOW	CRITICAL
Pain relief during labour (measured with: millimetres on 100 millimetre visual analogue scale; range of scores: 0-100; Better indicated by higher values)												
1	randomized trials	serious[1,2]	no serious inconsistency	serious[3]	serious[4,5]	none	15	15	-	MD 4.7 lower (20.06 lower to 10.66 higher)	⊕○○○ VERY LOW	CRITICAL
Pain relief during delivery (measured with: millimetres on 100 millimetre visual analogue scale; range of scores: 0-100; Better indicated by higher values)												
1	randomized trials	serious[1,2]	no serious inconsistency	serious[3]	serious[4,5]	none	14	14	-	MD 21.4 lower (45.15 lower to 2.35 higher)	⊕○○○ VERY LOW	CRITICAL
Side-effects: One or more												
1	randomized trials	serious[1,2]	no serious inconsistency	no serious indirectness	serious[4]	none	13/15 (86.7%)	13/15 (86.7%)	RR 1 (0.76 to 1.32)	0 fewer per 1000 (from 208 fewer to 277 more)	⊕⊕○○ LOW	IMPORTANT
Side-effects: Nausea												
1	randomized trials	serious[1,2]	no serious inconsistency	no serious indirectness	serious[4]	none	11/15 (73.3%)	11/15 (73.3%)	RR 1 (0.65 to 1.54)	0 fewer per 1000 (from 257 fewer to 396 more)	⊕⊕○○ LOW	IMPORTANT

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Morphine PCA (2 mg bolus/6 minute lockout)	Fentanyl PCA (50 mcg bolus/3 minute lockout)	Relative (95% CI)	Absolute		Importance
Side-effects: Vomiting												
1	randomized trials	serious[1,2]	no serious inconsistency	no serious indirectness	serious[4]	none	8/15 (53.3%)	6/15 (40%)	RR 1.51 (0.68 to 3.36)	204 more per 1000 (from 128 fewer to 944 more)	⊕⊕◯◯ LOW	IMPORTANT
Side-effects: Pruritus												
1	randomized trials	serious[1,2]	no serious inconsistency	no serious indirectness	serious[4]	none	8/15 (53.3%)	3/15 (20%)	RR 2.67 (0.87 to 8.15)	334 more per 1000 (from 26 fewer to 1430 more)	⊕⊕◯◯ LOW	IMPORTANT
Side-effects: Sedation												
1	randomized trials	serious[1,2]	no serious inconsistency	no serious indirectness	serious[4]	none	6/15 (40%)	2/15 (13.3%)	RR 3 (0.72 to 12.55)	267 more per 1000 (from 37 fewer to 1540 more)	⊕⊕◯◯ LOW	IMPORTANT
Side-effects: Dizziness												
1	randomized trials	serious[1,2]	no serious inconsistency	no serious indirectness	serious[4]	none	4/15 (26.7%)	4/15 (26.7%)	RR 1 (0.31 to 3.28)	0 fewer per 1000 (from 184 fewer to 608 more)	⊕⊕◯◯ LOW	IMPORTANT

1 Reasons for differing abortion regimens not specified.
2 Method of abortion not controlled for during analysis.
3 Indirect measurements of pain. VAS scores did not measure pain, but measured pain relief and satisfaction with pain relief. All VAS data collected retrospectively.
4 Small sample size and small total number of events.
5 PCA data collected only for the two hours prior to expulsion.

Author(s): E Jackson
Date: 2010-01-13
Question: Should fentanyl PCA (50 mcg bolus/6 minute lockout) vs. fentanyl PCA (25 mcg bolus/3 minute lockout) be used for pain with second trimester medical abortion (14-24 weeks gestation, intrauterine injection of $PGF_2\alpha$ or vaginal misoprostol)?[1]
Settings: Canada
Bibliography: Castro C, Tharmaratnam U, Brockhurst N, Tureanu L, Tam K, Windrim R. Patient-controlled analgesia with fentanyl provides effective analgesia for second trimester labour: A randomized controlled study. *Canadian Journal of Anesthesia* 2003;50(10):1039-46.

Table 139:

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Fentanyl PCA (50 mcg bolus/6 minute lockout)	Fentanyl PCA (25 mcg bolus/3 minute lockout)	Relative (95% CI)	Absolute		Importance
Analgesia use: PCA delivery/demand ratio (Better indicated by higher values)												
1	randomized trials	serious[1,2]	no serious inconsistency	serious[3]	serious[4,5]	none	14	13	-	MD 0.05 higher (0.12 lower to 0.21 higher)	⊕○○○ VERY LOW	CRITICAL
Satisfaction with pain relief (measured with: millimetres on 100 millimetre visual analogue scale; range of scores: 0-100; Better indicated by higher values)												
1	randomized trials	serious[1,2]	no serious inconsistency	serious[3]	serious[4,5]	none	14	12	-	MD 39.4 higher (19.73 to 59.07 higher)	⊕○○○ VERY LOW	CRITICAL
Pain relief during labour (measured with: millimetres on 100 millimetre visual analogue scale; range of scores: 0-100; Better indicated by higher values)												
1	randomized trials	serious[1,2]	no serious inconsistency	serious[3]	serious[4,5]	none	14	12	-	MD 23.6 higher (3.44 to 43.76 higher)	⊕○○○ VERY LOW	CRITICAL
Pain relief during delivery (measured with: millimetres on 100 millimetre visual analogue scale; range of scores: 0-100; Better indicated by higher values)												
1	randomized trials	serious[1,2]	no serious inconsistency	serious[3]	serious[4,5]	none	13	11	-	MD 28.1 higher (0.47 lower to 56.67 higher)	⊕○○○ VERY LOW	CRITICAL
Side-effects: One or more												
1	randomized trials	serious[1,2]	no serious inconsistency	no serious indirectness	serious[4]	none	7/15 (46.7%)	10/14 (71.4%)	RR 0.65 (0.35 to 1.23)	250 fewer per 1000 (from 464 fewer to 164 more)	⊕⊕○○ LOW	IMPORTANT

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Fentanyl PCA (50 mcg bolus/6 minute lockout)	Fentanyl PCA (25 mcg bolus/3 minute lockout)	Relative (95% CI)	Absolute		Importance
Side-effects: Nausea												
1	randomized trials	serious[1,2]	no serious inconsistency	no serious indirectness	serious[4]	none	5/15 (33.3%)	9/14 (64.3%)	RR 0.52 (0.23 to 1.17)	309 fewer per 1000 (from 495 fewer to 109 more)	⊕⊕◯◯ LOW	IMPORTANT
Side-effects: Vomiting												
1	randomized trials	serious[1,2]	no serious inconsistency	no serious indirectness	serious[4]	none	1/15 (6.7%)	7/14 (50%)	RR 0.13 (0.02 to 0.95)	435 fewer per 1000 (from 25 fewer to 490 fewer)	⊕⊕◯◯ LOW	IMPORTANT
Side-effects: Pruritus												
1	randomized trials	serious[1,2]	no serious inconsistency	no serious indirectness	serious[4]	none	1/15 (6.7%)	2/14 (14.3%)	RR 0.47 (0.05 to 4.6)	76 fewer per 1000 (from 136 fewer to 514 more)	⊕⊕◯◯ LOW	IMPORTANT
Side-effects: Sedation												
1	randomized trials	serious[1,2]	no serious inconsistency	no serious indirectness	serious[4]	none	2/15 (13.3%)	2/14 (14.3%)	RR 1.07 (0.17 to 6.64)	10 more per 1000 (from 119 fewer to 806 more)	⊕⊕◯◯ LOW	IMPORTANT
Side-effects: Dizziness												
1	randomized trials	serious[1,2]	no serious inconsistency	no serious indirectness	serious[4]	none	0/15 (0%)	2/14 (14.3%)	RR 0 (0 to 0)[6]	143 fewer per 1000 (from 143 fewer to 143 fewer)	⊕⊕◯◯ LOW	IMPORTANT

1 Reasons for differing abortion regimens not specified.
2 Method of abortion not controlled for during analysis.
3 Indirect measurements of pain. VAS scores did not measure pain, but measured pain relief and satisfaction with pain relief. All VAS data collected retrospectively.
4 Small sample size and small total number of events.
5 PCA data collected only for the two hours prior to expulsion.
6 Unable to calculate relative effect because one group had no events.

Author(s): E Jackson
Date: 2010-01-13
Question: Should fentanyl PCA (50 mcg bolus/6 minute lockout) vs. fentanyl PCA (50 mcg/3 minute lockout) be used for pain with second trimester medical abortion (14-24 weeks gestation, intrauterine injection of $PGF_2\alpha$ or vaginal misoprostol)?[1]
Settings: Canada
Bibliography: Castro C, Tharmaratnam U, Brockhurst N, Tureanu L, Tam K, Windrim R. Patient-controlled analgesia with fentanyl provides effective analgesia for second trimester labour: A randomized controlled study. *Canadian Journal of Anesthesia* 2003;50(10):1039-46.

Table 140:

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Fentanyl PCA (50 mcg bolus/6 minute lockout)	Fentanyl PCA (50 mcg 3 minute lockout)	Relative (95% CI)	Absolute		Importance
Analgesia Use: PCA delivery/demand ratio (Better indicated by higher values)												
1	randomized trials	serious[1,2]	no serious inconsistency	serious[3]	serious[4,5]	none	14	14	-	MD 0.14 lower (0.29 lower to 0.01 higher)	⊕○○○ VERY LOW	CRITICAL
Satisfaction with pain relief (measured with: millimetres on 100 millimetre visual analogue scale; range of scores: 0-100; Better indicated by higher values)												
1	randomized trials	serious[1,2]	no serious inconsistency	serious[3]	serious[4,5]	none	14	15	-	MD 3.5 higher (8.75 lower to 15.75 higher)	⊕○○○ VERY LOW	CRITICAL
Pain relief during labour (measured with: millimetres on 100 millimetre visual analogue scale; range of scores: 0-100; Better indicated by lower values)												
1	randomized trials	serious[1,2]	no serious inconsistency	serious[3]	serious[4,5]	none	14	15	-	MD 0.9 lower (14.1 lower to 13.2 higher)	⊕○○○ VERY LOW	CRITICAL
Pain relief during delivery (measured with: millimetres on 100 millimetre visual analogue scale; range of scores: 0-100; Better indicated by higher values)												
1	randomized trials	serious[1,2]	no serious inconsistency	serious[3]	serious[4,5]	none	13	14	-	MD 7.1 lower (32.23 lower to 18.03 higher)	⊕○○○ VERY LOW	CRITICAL
Side-effects: One or more												
1	randomized trials	serious[1,2]	no serious inconsistency	no serious indirectness	serious[4]	none	7/15 (46.7%)	13/15 (86.7%)	RR 0.54 (0.3 to 0.96)	399 fewer per 1000 (from 35 fewer to 607 fewer)	⊕⊕○○ LOW	IMPORTANT

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Fentanyl PCA (50 mcg bolus/6 minute lockout)	Fentanyl PCA (50 mcg 3 minute lockout)	Relative (95% CI)	Absolute		Importance
Side-effects: Nausea												
1	randomized trials	serious[1,2]	no serious inconsistency	no serious indirectness	serious[4]	none	5/15 (33.3%)	11/15 (73.3%)	RR 0.45 (0.21 to 0.99)	403 fewer per 1000 (from 7 fewer to 579 fewer)	⊕⊕◯◯ LOW	IMPORTANT
Side-effects: Vomiting												
1	randomized trials	serious[1,2]	no serious inconsistency	no serious indirectness	serious[4]	none	1/15 (6.7%)	6/15 (40%)	RR 0.17 (0.02 to 1.22)	332 fewer per 1000 (from 392 fewer to 88 more)	⊕⊕◯◯ LOW	IMPORTANT
Side-effects: Pruritus												
1	randomized trials	serious[1,2]	no serious inconsistency	no serious indirectness	serious[4]	none	1/15 (6.7%)	3/15 (20%)	RR 0.33 (0.04 to 2.85)	134 fewer per 1000 (from 192 fewer to 370 more)	⊕⊕◯◯ LOW	IMPORTANT
Side-effects: Sedation												
1	randomized trials	serious[1,2]	no serious inconsistency	no serious indirectness	serious[4]	none	2/15 (13.3%)	2/15 (13.3%)	RR 1 (0.16 to 6.2)	0 fewer per 1000 (from 112 fewer to 693 more)	⊕⊕◯◯ LOW	IMPORTANT
Side-effects: Dizziness												
1	randomized trials	serious[1,2]	no serious inconsistency	no serious indirectness	serious[4]	none	0/15 (0%)	4/15 (26.7%)	RR 0 (0 to 0)[6]	267 fewer per 1000 (from 267 fewer to 267 fewer)	⊕⊕◯◯ LOW	IMPORTANT

1 Reasons for differing abortion regimens not specified.
2 Method of abortion not controlled for during analysis.
3 Indirect measurements of pain. VAS scores did not measure pain, but measured pain relief and satisfaction with pain relief. All VAS data collected retrospectively.
4 Small sample size and small total number of events.
5 PCA data collected only for the two hours prior to expulsion.
6 Unable to calculate relative effect because one group had no events.

Author(s): E Jackson
Date: 2010-01-13
Question: Should fentanyl PCA (25 mcg bolus/3 minute lockout) vs. fentanyl PCA (50 mcg 3 minute lockout) be used for pain with second trimester medical abortion (14-24 weeks gestation, intrauterine injection of $PGF_2\alpha$ or vaginal misoprostol)?[1]
Settings: Canada
Bibliography: Castro C, Tharmaratnam U, Brockhurst N, Tureanu L, Tam K, Windrim R. Patient-controlled analgesia with fentanyl provides effective analgesia for second trimester labour: A randomized controlled study. *Canadian Journal of Anesthesia* 2003;50(10):1039-46.

Table 141:

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Fentanyl PCA (25 mcg bolus/3 minute lockout)	Fentanyl PCA (50 mcg 3 minute lockout)	Relative (95% CI)	Absolute		Importance
Analgesia use: PCA delivery/demand ratio (Better indicated by higher values)												
1	randomized trials	serious[1,2]	no serious inconsistency	serious[3]	serious[4,5]	none	13	14	-	MD 0.18 lower (0.03 to 0.34 lower)	⊕○○○ VERY LOW	CRITICAL
Satisfaction with pain relief (measured with: millimetres on 100 millimetre visual analogue scale; range of scores: 0-100; Better indicated by higher values)												
1	randomized trials	serious[1,2]	no serious inconsistency	serious[3]	serious[4,5]	none	12	15	-	MD 0 higher (56.97 to 14.83 lower)	⊕○○○ VERY LOW	CRITICAL
Pain relief during labour (measured with: millimetres on 100 millimetre visual analogue scale; range of scores: 0-100; Better indicated by higher values)												
1	randomized trials	serious[1,2]	no serious inconsistency	serious[3]	serious[4,5]	none	12	15	-	MD 24.5 lower (43.54 to 5.46 lower)	⊕○○○ VERY LOW	CRITICAL
Pain relief during delivery (measured with: millimetres on 100 millimetre visual analogue scale; range of scores: 0-100; Better indicated by higher values)												
1	randomized trials	serious[1,2]	no serious inconsistency	serious[3]	serious[4,5]	none	11	14	-	MD 35.2 lower (59.81 to 10.59 lower)	⊕○○○ VERY LOW	CRITICAL
Side-effects: One or more												
1	randomized trials	serious[1,2]	no serious inconsistency	no serious indirectness	serious[4]	none	10/14 (71.4%)	13/15 (86.7%)	RR 0.82 (0.56 to 1.21)	156 fewer per 1000 (from 381 fewer to 182 more)	⊕⊕○○ LOW	IMPORTANT

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Fentanyl PCA (25 mcg bolus/3 minute lockout)	Fentanyl PCA (50 mcg 3 minute lockout)	Relative (95% CI)	Absolute		Importance
Side-effects: Nausea												
1	randomized trials	serious[1,2]	no serious inconsistency	no serious indirectness	serious[4]	none	9/14 (64.3%)	11/15 (73.3%)	RR 0.88 (0.53 to 1.44)	88 fewer per 1000 (from 345 fewer to 323 more)	⊕⊕◯◯ LOW	IMPORTANT
Side-effects: Vomiting												
1	randomized trials	serious[1,2]	no serious inconsistency	no serious indirectness	serious[4]	none	7/14 (50%)	6/15 (40%)	RR 1.25 (0.56 to 2.81)	100 more per 1000 (from 176 fewer to 724 more)	⊕⊕◯◯ LOW	IMPORTANT
Side-effects: Pruritus												
1	randomized trials	serious[1,2]	no serious inconsistency	no serious indirectness	serious[4]	none	2/14 (14.3%)	3/15 (20%)	RR 0.71 (0.14 to 3.66)	58 fewer per 1000 (from 172 fewer to 532 more)	⊕⊕◯◯ LOW	IMPORTANT
Side-effects: Sedation												
1	randomized trials	serious[1,2]	no serious inconsistency	no serious indirectness	serious[4]	none	2/14 (14.3%)	2/15 (13.3%)	RR 1.07 (0.17 to 6.61)	9 more per 1000 (from 111 fewer to 748 more)	⊕⊕◯◯ LOW	IMPORTANT
Side-effects: Dizziness												
1	randomized trials	serious[1,2]	no serious inconsistency	no serious indirectness	serious[4]	none	2/14 (14.3%)	4/15 (26.7%)	RR 0.54 (0.12 to 2.48)	123 fewer per 1000 (from 235 fewer to 395 more)	⊕⊕◯◯ LOW	IMPORTANT

1 Reasons for differing abortion regimens not specified.
2 Method of abortion not controlled for during analysis.
3 Indirect measurements of pain. VAS scores did not measure pain, but measured pain relief and satisfaction with pain relief. All VAS data collected retrospectively.
4 Small sample size and small total number of events.
5 PCA data collected only for the two hours prior to expulsion.

Author(s): E Jackson
Date: 2010-01-13
Question: Should diclofenc 50 mg (2 tablets) orally vs. paracetamol 500 mg/codeine 10 mg (2 tablets) orally be used for pain with second trimester medical abortion (13-22 weeks gestation, mifepristone/misoprostol)?[1]
Settings: Sweden
Bibliography: Fiala C, Swahn ML, Stephansson O, Gemzell-Danielsson K. The effect of non-steroidal anti-inflammatory drugs on medical abortion with mifepristone and misoprostol at 13-22 weeks gestation. *Human Reproduction* 2005;20(11):3072-7.

Table 142:

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Diclofenc 50 mg (2 tablets) orally	Paracetamol 500 mg/Codeine 10 mg (2 tablets) orally	Relative (95% CI)	Absolute		Importance
Time to abortion (measured with: hours; range of scores: 2.1-23.2; Better indicated by lower values)												
1	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[2,3]	none	36	38	-	MD 1.1 lower (1.24 lower to 3.44 higher)[4]	⊕⊕⊕◯ MODERATE	IMPORTANT
Pain scores (maximal) (measured with: points on a 10 point VAS; range of scores: 0-10; Better indicated by lower values)												
1	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	serious[2,3]	none	36	38	-	MD 0 higher (0.78 lower to 0.78 higher)[4]	⊕⊕⊕◯ MODERATE	CRITICAL
Subsequent analgesia use: Paracervical block												
1	randomized trials	no serious limitations	no serious inconsistency	serious[5]	serious[2,3]	none	4/36 (11.1%)	2/38 (5.3%)	RR 2.11 (0.41 to 10.83)	58 more per 1000 (from 31 fewer to 517 more)	⊕⊕◯◯ LOW	CRITICAL
Subsequent analgesia use: Paracetamol, codeine												
1	randomized trials	no serious limitations	no serious inconsistency	serious[5]	serious[2,3]	none	9/36 (25%)	16/38 (42.1%)	RR 0.59 (0.3 to 1.17)	173 fewer per 1000 (from 295 fewer to 72 more)	⊕⊕◯◯ LOW	CRITICAL

Quality assessment							Summary of findings					
	No of patients		Effect		Quality							
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	Diclofenc 50 mg (2 tablets) orally	Paracetamol 500 mg/Codeine 10 mg (2 tablets) orally	Relative (95% CI)	Absolute		Importance
Subsequent analgesia use: Intravenous opiates												
1	randomized trials	no serious limitations	no serious inconsistency	serious[5]	serious[2,3]	none	29/36 (80.6%)	31/38 (81.6%)	RR 0.99 (0.72 to 1.23)	8 fewer per 1000 (from 228 fewer to 188 more)	⊕⊕◯◯ LOW	CRITICAL
Subsequent analgesia use: Intravenous opiates, total (measured with: mg; range of scores: 0-53; Better indicated by lower values)												
1	randomized trials	no serious limitations	no serious inconsistency	serious[5]	serious[2,3]	none	36	38	-	MD 3.5 lower (1.35 lower to 8.35 higher)[4]	⊕⊕◯◯ LOW	CRITICAL
Subsequent analgesia use: Intravenous opiates, gestational age > 105 days (measured with: mg; range of scores: 0-53; Better indicated by lower values)												
1	randomized trials	no serious limitations	no serious inconsistency	serious[5]	serious[2,3]	none	16	20	-	MD 10.5 lower (8.3 to 12.5 lower)	⊕⊕◯◯ LOW	CRITICAL

1 Administered with first misoprostol dose.
2 Small sample size and small total number of events.
3 6 women excluded post-randomization (failure to abort within 24 hours or missed abortion at entry).
4 Means and standard deviation data calculated from median data given in the paper according to formulas given in Hozo S, Djulbegovic B and Hozo I. Estimating the mean and variance form the median, range, and the size of a sample. BMC Medical Research Methodology 2005;5(13).
5 Indirect measurement of pain.