Cochrane New Zealand
Department Obstetrics and Gynaecology
University of Auckland, Private Bag 92019
Auckland, 1142
New Zealand

T (+64) 09 9239490
E v.jordan@auckland.ac.nz

New and updated Cochrane summaries for Midwifery

From the Cochrane Library free for all New Zealanders at:
www.cochranelibrary.com

[Click on the title to hyperlink to abstract]

Vaginal cleansing with antiseptic solution before cesarean delivery to reduce post-cesarean infections

Authors: Haas DM, Morgan S, Contreras K, Enders S

What is the issue?

We set out to determine if cleansing the vagina with an antiseptic solution before a cesarean delivery decreases the risk of maternal infections, including infection of the lining of the uterus and wound complications. Cleansing the vagina before the cesarean delivery can reduce the number of bacteria in the vagina. Bacteria are naturally present in the vagina and cervix and can move up to infect the uterus during the procedure. Antibiotics are routinely given before or during the surgery to reduce the risk of infections, but some women still suffer from these complications. Some antibiotics do not consistently eradicate all bacteria and antibiotic-resistant bacteria may also be present.

Funding statement Funding statement Funding statement Funding statement Funding statement

Cochrane New Zealand
Department Obstetrics and Gynaecology
University of Auckland, Private Bag 92019
Auckland, 1142
New Zealand

T (+64) 09 9239490
E v.jordan@auckland.ac.nz

Why is this important?

Cesarean deliveries are common, with almost one in three babies born by cesarean in some countries such as the USA. Between one in four and one in 10 women having a cesarean delivery develop an infection of the uterus (endometritis) or a problem with their skin incision, respectively. The risk of infection is greater if a woman's waters have already broken or she is in labor before the cesarean section. These complications slow a woman's recovery from the surgery and may affect her ability to take care of her baby. This is a Cochrane Review first published in 2010 and then subsequently updated in 2012 and twice in 2014.

What evidence did we find?

We searched for evidence on July 10, 2017. In this update, we have included 11 randomized controlled studies, involving a total of 3403 women undergoing cesarean section. Eight studies used povidone-iodine for vaginal cleansing, two chlorhexidine, and one benzalkonium chloride. The quality of the evidence using GRADE was moderate for the reported outcomes.

We found that cleansing the vagina with an antiseptic solution compared to not cleansing or using saline or water immediately before the cesarean delivery more than halved the risk of post-cesarean infection of the uterus from a rate of 8.7% down to a rate of 3.8% (10 studies, 3283 women). While we should be cautious about results found for women in certain groups, we did also find that the benefit was also seen if the woman's waters had already broken (from 17.9% to 4.3% with vaginal cleansing; three studies, 272 women) and if women were already in labor at the time of the cesarean delivery (from a rate of 11.1% down to 4.7% with vaginal cleansing; four studies, 960 women women). The benefits were similar using both povidone-iodine and chlorhexidine.

The risk of experiencing a fever (eight studies, 3109 women) or wound infection (eight studies, 2839 women) after the cesarean delivery may be slightly lowered by antiseptic preparation, but the results were not entirely clear. Only the composite outcome of wound complication or endometritis was reduced overall for women receiving preoperative vaginal cleansing (two studies, 499 women).

None of the reports mentioned that any women had adverse events such as an allergic reaction to the cleansing solution or irritation.

What does this mean?

Cleansing the vagina immediately before a cesarean delivery with either an iodine-based or chlorhexidine-based solution probably reduces the risk of infection of the uterus after a cesarean section. This benefit may be greater for women who have their cesarean delivery after their membranes have already ruptured or they are already in labor. This is a generally simple, well-tolerated way to lower the chances of developing an infection after having a baby by cesarean.

Funding statement Funding statement Funding statement Funding statement Funding statement

Cochrane New Zealand
Department Obstetrics and Gynaecology
University of Auckland, Private Bag 92019
Auckland, 1142
New Zealand

T (+64) 09 9239490
E v.jordan@auckland.ac.nz

Metformin for women with obesity or who are overweight during pregnancy for improving health for women and their babies

Authors: Dodd JM, Grivell RM, Deussen AR, Hague WM

What is the issue?

We examined whether metformin has a role in improving health outcomes for pregnant women with obesity or who are overweight, and their babies. We considered possible benefits, adverse effects and healthcare system costs.

Body mass index (BMI), calculated from a person's height and weight, is used to classify someone as having normal weight (BMI less than 25 kg/m^2), being overweight (BMI 24.9 kg/m^2 to 30 kg/m^2) or having obesity (BMI above 30 kg/m^2). Women with obesity or who are overweight are more likely than women of normal weight to experience complications like high blood pressure and gestational diabetes during pregnancy. They are also at increased risk of needing a caesarean or developing infection after birth. Their babies are more likely to experience health problems, requiring admission to the neonatal unit or intensive care, have low blood sugar, or problems breathing immediately after birth.

Women with obesity or who are overweight may have some features of diabetes that may contribute to problems during pregnancy and birth. They may not process dietary carbohydrates and sugars efficiently, and are more likely to be resistant to the hormone insulin, released by the pancreas after eating, helping muscles use blood glucose (sugar) for energy. Glucose circulates in the blood for longer, providing excess energy to the growing baby. There is an increased risk of developing diabetes in pregnancy and women may have low levels of inflammatory hormones and proteins circulating in the body. Improving diet and increasing exercise have had a very small effect on reducing weight gain during pregnancy and no effect on complications.

Metformin, a drug used to treat diabetes, reduces the amount of glucose the liver releases into the blood and makes the body more sensitive to insulin. Metformin may help a woman's body use insulin more effectively and reduce the chance that her baby will grow large-for-gestational age.

What evidence did we find?

We searched for evidence (October 2017) and found three randomised controlled studies (1099 pregnant women) comparing metformin tablets with placebo (dummy) tablets taken by mouth from 10 to 20 weeks of pregnancy until birth. The studies involved women with obesity; we therefore could not assess the effect of metformin in women who are overweight.

Women who were given metformin or placebo during pregnancy had a similar risk of a baby being born large-for-gestational age (measured in weeks since last period). Metformin probably makes little or no difference in

Cochrane New Zealand
Department Obstetrics and Gynaecology
University of Auckland, Private Bag 92019
Auckland, 1142
New Zealand

T (+64) 09 9239490
E v.jordan@auckland.ac.nz

the risk of women developing gestational diabetes. Metformin may also have little or no difference in the risk of women developing gestational hypertension (high blood pressure) or pre-eclampsia.

Women who were given metformin may gain slightly less weight during pregnancy, but are more likely to experience diarrhoea. There were no other important differences identified for other maternal outcomes including, caesarean birth, giving birth before 37 weeks of pregnancy, shoulder dystocia (a birth complication where the baby's shoulder gets stuck), perineal trauma (damage to the area between the woman's vagina and the anus), or heavy bleeding after the baby has been born.

Babies of women who were given metformin had similar birthweight to babies of women who were given placebo. We did not identify any other important differences for other infant outcomes of interest: hypoglycaemia (low blood sugar); hyperbilirubinaemia (jaundice); Apgar score at five minutes (a measure of newborn well-being); or death of the baby before or after being born. One study reported similar rates of admission to neonatal intensive care between groups.

What does this mean?

There is insufficient evidence to support the use of metformin for women with obesity in pregnancy for improving outcomes for the mother and her baby. Metform was associated with increased risk of adverse effects, particularly diarrhoea.

A small number of studies are included in this review and no study included women categorised as 'overweight', or looked at metformin in combination with another treatment.

More research is needed to evaluate the role of metformin in pregnant women with obesity or who are overweight, as a strategy for improving maternal and infant health, either alone or as an additional intervention.

Effect of partograph use on outcomes for women in spontaneous labour at term

Authors: Lavender T, Cuthbert A, Smyth RMD

What is the issue?

Does the use of the partograph during spontaneous labour at term improve the health outcomes for women and babies?

Do different partograph designs make any difference to the health outcomes for women and babies?

Why is this important?

A partograph is usually a pre-printed form, the aim of which is to provide a pictorial overview of labour progress and to alert health professionals to any problems with the mother or baby. It has been unclear whether a partograph should be used and, if so, which design of partograph is better for women and babies.

Cochrane New Zealand
Department Obstetrics and Gynaecology
University of Auckland, Private Bag 92019
Auckland, 1142
New Zealand

T (+64) 09 9239490
E v.jordan@auckland.ac.nz

What evidence did we find?

We searched for evidence in August 2017 and have now included 11 studies involving 9475 women. Three studies looked at using a partograph versus no partograph, seven studies looked at different partograph designs, and one study looked at using a partograph versus a new labour scale.

Partograph versus no partograph (3 studies, 1703 women)

It is uncertain whether using a partograph has any effect on the number of women having a caesarean section or babies born with low Apgar scores (a score which measures the physical condition of the newborn, with a low score indicating poor condition) because the quality of evidence is very low. Using a partograph may make little or no difference to length of labour (low-quality evidence), or the number of women who receive oxytocin to speed up their labour (moderate-quality evidence).

Partograph with different placement of action lines (4 trials, 5051 women)

When compared to a four-hour action line, women in the two-hour action line group were more likely to have their labour speeded up using oxytocin. There was no clear difference between women in the two- and four-hour action line groups in having caesarean sections, the lengths of first stage of labour, maternal experiences of childbirth, or low Apgar scores.

When we compared a two-hour action line with a three-hour action line, fewer women reported negative childbirth experiences in the two-hour action line group. When we compared the three- and four-hour action line groups, the caesarean section rate was higher in the three-hour action line group. There were no clear differences between the two-, three-, or four-hour action line groups in any of the other outcomes measured.

Partograph with alert line only versus partograph with alert and action line (1 trial, 694 women)

The caesarean section rate was lower in the alert line only group. There were no clear differences between groups for oxytocin augmentation, low Apgar score, instrumental vaginal birth, and perinatal death.

Partograph with latent phase versus partograph without latent phase (1 trial, 743 women)

When we compared a partograph with the latent phase (including early stages of labour) and one without the latent phase, the caesarean section and oxytocin augmentation rates were higher in the partograph with a latent phase. There were no clear differences between groups for oxytocin augmentation, and Apgar score less than 7 at 5 minutes.

Partograph with two-hour action line versus partograph with stepped dystocia line (1 trial, 99 women)

When we compared a partograph with a two-hour action line and a stepped dystocia line, fewer women received oxytocin augmentation in the dystocia line group. We did not observe any clear differences in any of the other primary outcomes in this comparison.

Partograph versus labour scale (1 trial, 122 women)

Cochrane New Zealand
Department Obstetrics and Gynaecology
University of Auckland, Private Bag 92019
Auckland, 1142
New Zealand

T (+64) 09 9239490
E v.jordan@auckland.ac.nz

The labour scale compared with the partograph resulted in fewer women receiving oxytocin augmentation, but did not produce any clear difference for any of the other primary outcomes.

What does this mean?

On the basis of the findings of this review, we cannot be certain of the effects of routine use of the partograph as part of standard labour care, or of the different partograph designs. Further trial evidence is required to establish the efficacy of partograph use per se and its optimum design.

Progestogen for treating threatened miscarriage

Authors: Wahabi HA, Fayed AA, Esmaeil SA, Bahkali K

What is the issue?

Spontaneous miscarriage occurs in about 15% to 20% of pregnancies. Threatened miscarriage occurs when a mother might be losing her baby at less than 20 weeks' gestation. The symptoms of threatened miscarriage are vaginal bleeding, with or without abdominal pain, while the cervix of the womb is closed and the baby inside the womb is alive. Progesterone is a hormone that is known to prepare the uterus for implantation of the fertilized egg and suppress uterine contractions until term. Medications that mimic the action of progesterone are known as progestogens. Treatment with progestogens may be effective in reducing the rate of miscarriage in women who have threatened miscarriage. This Cochrane Review examines whether progestogens could reduce miscarriage for women with threatened miscarriage, and also addresses the safety of these medications for mother and baby.

Why is this important?

We were interested to investigate if progestogens are effective and safe in the treatment of threatened miscarriage, which may increase the women's chances of having a successful pregnancy and a live birth.

What evidence did we find?

In this review of the literature, up to August 2017, we identified seven randomised trials involving 696 women that compared the use of progestogens in the treatment of threatened miscarriage with either placebo or no treatment. We found that the use of a progestogen probably reduces the rate of spontaneous miscarriage and this was supported by moderate-quality evidence. Five trials, involving 588 women, reported on the effectiveness of progestogens given for threatened miscarriage in reducing the rate of preterm delivery and showed little or no effect, with low-quality evidence. Two trials, involving 337 women, reported on the effect of treatment with progestogens given for threatened miscarriage on the rate of occurrence of congenital abnormalities in the newborns. The evidence on congenital abnormalities is uncertain, because the quality of

Funding statement Funding statement Funding statement Funding statement Funding statement

Cochrane New Zealand
Department Obstetrics and Gynaecology
University of Auckland, Private Bag 92019
Auckland, 1142
New Zealand

T (+64) 09 9239490
E v.jordan@auckland.ac.nz

the evidence for this outcome was based on only two small trials with very few events and was found to be of very low quality.

What does this mean?

The evidence suggests that progesterone probably reduces the rate of spontaneous miscarriage but may make little or no difference to the number of preterm deliveries. The evidence for congenital abnormalities is uncertain because the quality of the evidence for this outcome was based on only two small trials with very few events and was found to be of very low quality.

Treatments to improve pregnancy outcomes for women who develop diabetes during pregnancy: an overview of Cochrane systematic reviews

Authors: Martis R, Crowther CA, Shepherd E, Alsweiler J, Downie MR, Brown J

What is the issue?

The aim of this Cochrane overview was to provide a summary of the effects of interventions for women who develop diabetes during pregnancy (gestational diabetes mellitus, GDM) and the effects on women's health and the health of their babies. We assessed all relevant Cochrane Reviews (date of last search: January 2018).

Why is this important?

GDM can occur in mid-to-late pregnancy. High blood glucose levels (hyperglycaemia) possibly have negative effects on both the woman and her baby's health in the short- and long-term.

For women, GDM can mean an increased risk of developing high blood pressure and protein in the urine (pre-eclampsia). Women with GDM also have a higher chance of developing type 2 diabetes, heart disease, and stroke later in life. Babies born to mothers with GDM are at increased risk of being large, having low blood glucose (hypoglycaemia) after birth, and yellowing of the skin and eyes (jaundice). As these babies become children, they are at higher risk of being overweight and developing type 2 diabetes.

Several Cochrane Reviews have assessed different interventions for women with GDM. This overview brings these reviews together. We looked at diet, exercise, drugs, supplements, lifestyle changes, and ways GDM is managed or responded to by the healthcare team.

What evidence did we find?

We found 14 Cochrane systematic reviews and included 10 reviews covering 128 studies in our analysis, which included a total of 17,984 women, and their babies. The quality of the evidence ranged from very low to high.

We looked at:

• **Dietary interventions** (including change to low or moderate glycaemic index (GI) diet, calorie restrictions, low carbohydrate diet, high complex carbohydrate diet, high saturated fat diet, high fibre diet, soy-protein enriched diet, etc.)

Cochrane New Zealand
Department Obstetrics and Gynaecology
University of Auckland, Private Bag 92019
Auckland, 1142
New Zealand

T (+64) 09 9239490
E v.jordan@auckland.ac.nz

We found there were not enough data on any one dietary intervention to be able to say whether it helped or not.

• **Exercise programmes** (including brisk walking, cycling, resistance circuit-type training, instruction on active lifestyle, home-based exercise programme, 6-week or 10-week exercise programme, yoga, etc.)
Similarly, there were not enough data on any specific exercise regimen to say if it helped or not.

• **Taking insulin or other drugs to control diabetes** (including insulin and oral glucose lowering drugs).
Insulin probably increases the risk of high blood pressure and its problems in pregnancy (hypertensive disorders of pregnancy) when compared to oral therapy (moderate-quality evidence).

• **Supplements** (myo-inositol given as a water-soluble powder or capsule).
We found there was not enough data to be able to say if myo-inositol was helpful or not.

• **Lifestyle changes** which combine two or more interventions such as: healthy eating, exercise, education, mindfulness eating (focusing the mind on eating), yoga, relaxation, etc.
Lifestyle interventions may be associated with fewer babies being born large (moderate-quality evidence) but may result in an increase in inductions of labour (moderate-quality evidence).

• **Management strategies** (including early birth, methods of blood glucose monitoring).
We found little data for strategies which included planned induction of labour or planned birth by caesarean section, and there was no clear difference in outcomes among these care plans. Similarly, we found no clear difference among outcomes for different methods of blood glucose monitoring.

What does this mean?

There are limited data on the various interventions. Lifestyle changes (including as a minimum healthy eating, physical activity, and self-monitoring of blood sugar levels) was the only intervention that showed possible health improvements for women and their babies. Lifestyle interventions may result in fewer babies being large. Conversely, in terms of harms, lifestyle interventions may also increase the number of inductions. Taking insulin was also associated with an increase in hypertensive disorders, when compared to oral therapy. There was very limited information on long-term health and health services costs. Women may wish to discuss lifestyle changes around their individual needs with their health professional. Further high-quality research is needed.

Discontinuation of intravenous oxytocin used to stimulate uterine contractions in the active phase of induced labour

Authors: Boie S, Glavind J, Velu AV, Mol BJ, Uldbjerg N, de Graaf I, Thornton JG, Bor P, Bakker JJH

What is the issue?

Funding statement Funding statement Funding statement Funding statement Funding statement

Cochrane New Zealand
Department Obstetrics and Gynaecology
University of Auckland, Private Bag 92019
Auckland, 1142
New Zealand

T (+64) 09 9239490
E v.jordan@auckland.ac.nz

Oxytocin is a natural hormone, which causes the uterus (womb) to have regular, painful contractions and labour to start. It is available as an intravenous (into a vein (IV)) drug and infused slowly to artificially stimulate labour if doctors or midwives feel that it is necessary to accelerate the birth of the baby, or if the mother requests it. In Western countries, about one in four pregnant women have labour induced, usually with prostaglandin drugs either alone or in combination with oxytocin.

Risks associated with using IV oxytocin to stimulate uterine contractions include the woman having contractions that are too long or too frequent (uterine hyperstimulation), which can lead to changes in the baby's heart rate and the need for emergency caesarean. This review examines whether stopping IV oxytocin once labour is well-established (i.e. the cervix is dilated more than halfway) reduces the associated risks for mother and baby compared to continuing with IV oxytocin.

Why is this important?

Stopping oxytocin infusion once active labour has started could result in a more natural childbirth, particularly if the risk of uterine overstimulation and need for immediate caesarean section is reduced. Also, the overall total dose of oxytocin the mother received would be reduced, which could lead to fewer adverse effects (e.g. maternal nausea, vomiting and headache, or changes to the baby's heart rate).

What evidence did we find?

We searched for evidence (January 2018) and found 10 randomised controlled studies (1888 women and their babies) conducted between February 1998 and January 2016 at hospitals in Denmark, Greece, Turkey, Israel, Iran, USA, Bangladesh, India, and Thailand. We cannot be confident in the results because of study design limitations and how the findings were reported.

Stopping IV oxytocin during active labour may reduce the number of women who have a caesarean section (nine trials, 1784 women). However, when we performed another analysis including only those women who were actually in active labour, we found that there is probably little or no difference between the two groups (four trials, 787 women).

Discontinuing IV oxytocin probably reduces the risk of women having contractions that become too long or too strong resulting in changes to the baby's heart rate (three trials, 486 women). We are uncertain about whether stopping IV oxytocin or not affects the risk of having a bacterial infection of the membranes or sac inside the womb) (one trial, 252 women). Stopping IV oxytocin during labour may have little or no impact on women's use of analgesia and epidural compared to women who continued to receive IV oxytocin (three trials, 556 women). There were probably fewer babies in the discontinued IV oxytocin group with abnormal cardiotocography results (an electronic method of measuring both the women's contractions and the baby's heartbeat) compared to women who continued to receive IV oxytocin (seven trials, 1390 women).

Funding statement Funding statement Funding statement Funding statement Funding statement

Cochrane New Zealand
Department Obstetrics and Gynaecology
University of Auckland, Private Bag 92019
Auckland, 1142
New Zealand

T (+64) 09 9239490
E v.jordan@auckland.ac.nz

Compared to continued IV oxytocin, discontinuing IV oxytocin probably has little or no impact on the number of babies with a low score on a standard test of well-being for newborn babies (Apgar), five minutes after being born (four trials, 893 women), or another other measure of infant well-being involving analysing blood taken from the umbilical cord once (four trials, 873 women).

The included trials did not report on many of this review's outcomes, including death of the mother or her baby.

What does this mean?

Stopping oxytocin after the active phase of labour has started may reduce the number of women with contractions that become too long or too strong resulting in changes to the baby's heart rate, and the risk of having a caesarean. However, the possible reduction in the risk of caesarean may be an artefact of poor study design.

Better quality trials are needed. These could include in the analysis those women who did not reach the active phase of labour because their babies were delivered earlier by caesarean, and those whose labour was so rapid that the oxytocin could not be stopped in time, i.e. analysis should be by 'intention-to-treat".

Future studies could include the outcomes listed in this review, including women's satisfaction.

Methods for estimating blood loss after vaginal birth to improve maternal outcomes

Authors: Diaz V, Abalos E, Carroli G

What is the issue?

While postpartum haemorrhage (PPH) is one of the leading causes of maternal death worldwide, it mostly occurs in low-income countries. It frequently occurs during the third stage of labour, the period of time from delivery of the baby to the expulsion of the placenta and membranes. During this period, the birth attendant evaluates how much blood the mother has lost.

Why is this important?

There is always some blood loss after the birth of a baby, but when this loss is excessive, it is called PPH. Severe PPH can lead to poor health for the mother (maternal morbidity), and sometimes even death, particularly in low- and middle-income countries. If excessive blood loss is identified early, interventions to help stem the blood flow can be started sooner, and improve health outcomes for the mother. Therefore, it is important to find the best method to measure blood loss after birth; one that is practical in all birth settings, including those in low- to middle-income countries.

In many instances, the birth attendant assesses blood loss by looking at the amount of blood lost, and estimating its volume (visual estimation). While this method is not very accurate, it is available in all birth

Funding statement Funding statement Funding statement Funding statement Funding statement

Cochrane New Zealand
Department Obstetrics and Gynaecology
University of Auckland, Private Bag 92019
Auckland, 1142
New Zealand

T (+64) 09 9239490
E v.jordan@auckland.ac.nz

settings. In another method, the birth attendant places a shallow bedpan below the mother's buttocks, and then weighs the collected blood, along with blood that has soaked into any pads and material. This is referred to as an indirect method. In one direct method that has been devised, a 'calibrated delivery drape' is placed under the mother's buttocks and tied around her waist, with the calibrated funnel portion (that indicates how much blood she has lost) hanging down between her legs. Other methods are also available, such as dye dilutions and radioactive techniques, but these are not practical in many birth settings.

What evidence did we find?

We searched for evidence in February 2018, and found three randomised controlled trials, involving over 26,000 women. Two trials contributed data to our analyses; one study did not provide data for any of the outcomes of interest in this review. All of the trials took place in hospital settings. Two trials took place in India, the other was conducted in 13 different European countries. The trials examined different methods of estimating blood loss.

One trial (conducted in 13 European countries, involving over 25,000 women) compared the use of a calibrated drape (direct estimation) to visual estimation (indirect estimation). Moderate-quality evidence showed there was probably little or no difference between the methods for the risk of women developing serious conditions (e.g. failure to form clots, poor functioning of the liver, kidneys, and brain, admission to intensive care); their need for blood transfusion; the use of fluids to maintain their blood pressure; or the use of drugs to help their uterus contract to stop the bleeding. The trial did not report the number of women who had anaemia after birth, blood loss of at least 500 mL, or infection.

One trial (conducted in India, involving 900 women) compared the use of a calibrated drape (direct estimation) to weighing and measuring blood and blood-soaked materials (indirect method). High-quality evidence showed that calibrated drapes were better than measuring the blood and blood-soaked materials at detecting blood loss of at least 500 mL. Low-quality evidence showed there may be little or no difference between methods in the need for blood transfusion or fluids to maintain blood pressure. High-quality evidence showed little or no difference in the use of drugs to help the uterus contract in order to stop bleeding. The trial did not report the number of women who had anaemia after birth or infection, or the risk of developing serious conditions (such as failure to form clots, poor functioning of the liver, kidneys, and brain, or being admitted to intensive care).

What does this mean?

There was insufficient evidence to support the use of one method over another to estimate blood loss after vaginal birth. There is a need for high quality trials that measure important outcomes, such as those listed in this review.

Cochrane New Zealand
Department Obstetrics and Gynaecology
University of Auckland, Private Bag 92019
Auckland, 1142
New Zealand

T (+64) 09 9239490
E v.jordan@auckland.ac.nz

If you have any questions or comments with regard to the above document please feel free to contact me.

Kind regards

Dr Vanessa Jordan PhD

New Zealand Cochrane Fellow
Cochrane New Zealand
Academic Co-ordinator: PoplHlth 711: Systematic reviews and Meta Analysis
Department Obstetrics and Gynaecology
Auckland University
Private Bag 92019
Auckland 1142
New Zealand
Ph. +64 9 9239490
Fax +64 9 303 5969
Mobile: 027 540 2212
E-mail: v.jordan@auckland.ac.nz

Funding statement Funding statement Funding statement Funding statement Funding statement