Research recommendations for review question: What is the effectiveness of prophylactic antibiotics for preventing postnatal infections in assisted vaginal birth?

K.1.1 Research recommendation

What is the effectiveness of prophylactic intravenous (IV) versus oral antibiotics for preventing postnatal infections in assisted vaginal birth?

K.1.2 Why this is important

The administration of antibiotics following assisted vaginal birth has been shown to be safe and effective to reduce endometritis and infection at the site of episiotomy/laceration. The largest trial conducted to date (ANODE; Knight 2019) showed that women who received a single dose of IV co-amoxiclav had a reduction in infections compared to those who received placebo. However, administration of intravenous antibiotics requires an IV line to be in place and requires 2 trained staff to check and administer, and use of oral antibiotics may be less invasive and less expensive. The effectiveness of prophylactic intravenous (IV) compared to oral antibiotics for preventing postnatal infections in assisted vaginal birth has not yet been assessed. Investigating the most appropriate route of administration is important as this could have implications in safety and costs.

K.1.3 Rationale for research recommendation

Table 8: Research recommendation rationale

Importance to 'patients' or the population	Increased options for the administration of prophylactic antibiotics following assisted vaginal birth will mean that women can be given an effective treatment option using the least intrusive method.
Relevance to NICE guidance	Due to limited evidence the committee were only able to recommend the use of prophylactic IV antibiotics. Future research will help to determine whether oral antibiotics could be recommended to reduce the risk of infection following assisted vaginal birth.
Relevance to the NHS	The committee have made recommendations on antibiotic treatment based primarily on the largest trial conducted to date. An increased understanding of whether there is a particular administration route that would most benefit women will help the committee make more specific recommendations in future updates of this guideline
National priorities	Medium
Current evidence base	Minimal long-term data
Equality considerations	All women having an assisted vaginal birth should have equal treatment.

K.1.4 Modified PICO table

Table 9: Research recommendation modified PICO table

Population	• Women in labour who are pregnant with a single baby, who go into labour at term (37 to 42 weeks of pregnancy) and who do not have any pre-existing medical conditions or antenatal conditions that predispose to a higher risk birth • Women in labour whose baby has not been identified before labour to be at high risk of adverse outcome • Singleton babies born at term (37 to 42 weeks of pregnancy) with no previously identified problems (for example congenital malformations, genetic anomalies, intrauterine growth restriction, placental problems) • Women having an assisted vaginal birth (forceps or vacuum/suction birth) without evidence of an active infection or other conditions requiring antibiotics
Intervention	Prophylactic oral antibiotics given immediately before or as soon as possible after an assisted vaginal birth (forceps or vacuum birth)
Comparator	Prophylactic intravenous antibiotics given immediately before or as soon as possible after an assisted vaginal birth (forceps or vacuum birth)
Outcome	• Endometritis • Infection at perineal/vaginal or episiotomy site (up till 6 weeks) • Sepsis following perineum infection or endometritis • Maternal adverse reaction to antibiotics • Long-term neonatal outcomes (asthma, allergies) • Breastfeeding at 6 weeks • Perineal pain at 6 weeks • Antibiotic resistance
Study design	Parallel randomised controlled trial
Timeframe	6 weeks follow-up
Additional information	None