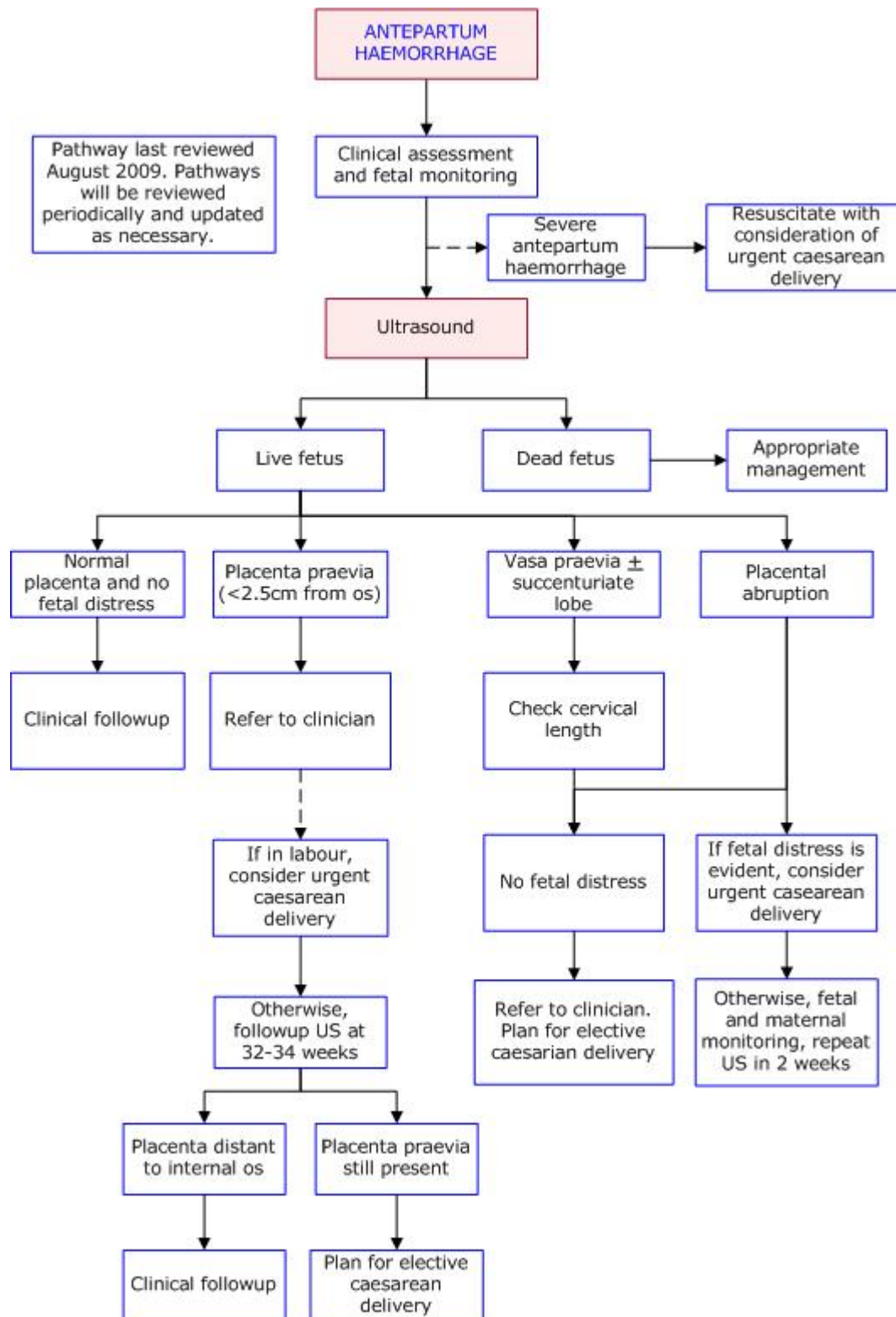




DIAGNOSTIC IMAGING PATHWAYS

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ANTEPARTUM HAEMORRHAGE

- Antepartum haemorrhage refers to vaginal bleeding during the second half of pregnancy. The main causes are: [1,2](#)
 - Normal "bloody show"
 - Placenta previa
 -
 - Placental abruption (Abruptio placentae)
 - Vasa previa
- Placenta previa refers to the implantation of the placenta to the lower segments of the uterus, so that the placenta covers all or part of the internal os. It is seen commonly in the first and second trimesters, but the incidence reduces over the course of pregnancy with development of the lower uterine segment and upwards migration of the placenta. By the end of term, the incidence is around 1 in 200 births. It can be classified as: [1](#)
 - Marginal: the placenta extends to the edge of the internal os.
 - Complete: the placenta covers the entire internal os.
 - Low-lying placenta: the edge of the placenta is within 2-3 centimetres of the internal os.
- Placental abruption refers to the premature separation of a normally located placenta from its attachment to the uterine wall. The incidence is around 6.5 pregnancies per 1000 births, and the bleeding may be confined between the uterine wall and placenta and thus vaginal bleeding may not be present. [2](#)
- Vasa previa is an anatomical variant in which the fetal vessels run through the membranes between the presenting part and the cervix. These vessels are particularly susceptible to compression and tearing with rupture of the membranes. [3](#)

ULTRASOUND

- Transabdominal US is the standard method of evaluating patients with antepartum haemorrhage, but resuscitation takes priority over any form of imaging. [4](#)
- The results of transabdominal US are improved when the patient has a full bladder. However this itself can distort the anatomy of the lower uterine segment, making visualisation of the placenta and the internal os difficult. The shadow cast by the pubic symphysis may also obscure the imaged area. [4,5](#)
- In such cases, transvaginal or transperineal US are indicated as they are more sensitive, specific and accurate than transabdominal US. However, there are no randomised trials that directly compare the different approaches. [6](#)
- With skilled operators, transvaginal US is not associated with an increase in the rate of haemorrhage or adverse outcomes as the focal length of the ultrasound beam is usually between 2 to 7 centimetres. [4](#)
- For placenta previa, the sensitivity and specificity for transabdominal US is 79%-82%, and 38%-97% respectively. If the placenta is noted to be previa early in pregnancy, a repeat ultrasound is recommended between 32 to 34 weeks gestation. [4](#)
- The sensitivity for placental abruption is low and this remains a clinical diagnosis. [1,7](#)

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