

Table 17. Responses to specific IA or EFM findings

FHR pattern	Associated/potential causes	Clinical action to consider if IA assessment	Clinical action to consider if EFM assessment
All atypical/abnormal FHR		Initiate EFM	
		Always consider intrauterine resuscitation	Always consider intrauterine resuscitation
Tachycardia >30 minutes Rising baseline Erratic baseline	<u>Maternal</u> • Fever, infection • Dehydration • Hyperthyroidism • Endogenous adrenaline or anxiety • Drug response • Anemia <u>Fetal</u> • Infection • Prolonged activity or stimulation • Chronic hypoxemia • Cardiac abnormalities • Congenital anomalies • Anemia	• Initiate intrauterine resuscitation • Assess maternal temperature, pulse • Review duration of ROM, presence of positive vaginal cultures (e.g., GBS) • Consider ultrasound to assess for arrhythmia • Maternal IV if indicated (e.g., dehydration) • If persists for >30 minutes, initiate EFM	• Initiate intrauterine resuscitation • Assess maternal temperature, pulse • Review duration of ROM, presence of positive vaginal cultures (e.g., GBS) • Consider ultrasound to assess for arrhythmia • Maternal IV if indicated (e.g., dehydration) • If persisting >80 minutes total: ○ FSBS if clinically feasible ○ If the clinical situation and other FHS elements are normal, may consider ongoing vigilant observation ○ Consider expeditious delivery if other elements of FHS are atypical or abnormal or as warranted by the clinical situation
Irregular FHR	• Possible fetal arrhythmia	• Initiate EFM	• Continue EFM and consider etiology and other investigations
Bradycardia	• Hypoxia	• Intrauterine resuscitation • Initiate EFM	• Always consider intrauterine resuscitation • Expedite delivery
Minimal variability of ≤5 bpm for >40 minutes Absent variability for >40 minutes	• Fetal sleep • Prematurity • Medications • Hypoxic acidemia		• Intrauterine resuscitation • Review history of predisposing factors • If possible: ○ apply FSE ○ perform FSBS • Prepare for delivery
Marked variability	• Hypoxia • Fetal gasping movements • Unknown		• Assess cause when >10 minutes: ○ Intrauterine resuscitation ○ If possible FSE, perform FSBS ○ Prepare for delivery if persists
Sinusoidal	• Fetal anemia (Hb <70) • hypoxia/acidosis • Transiently present with healthy fetus		• Consider clinical picture • Scalp stimulation • Intrauterine resuscitation • Attach FSE if possible • Consider Kleihauer Betke • Middle cerebral artery Doppler if available • Prepare for delivery
Accelerations	• Fetal activity • Direct fetal sympathetic stimulation • Occlusion of umbilical vein only • Fetal scalp stimulation • Sympathetic increase following deceleration	• No action	• No action
Absent acceleration with fetal scalp stimulation	• Hypoxic acidemia • Fetal abnormality ⁶⁵	• Initiate EFM	• If possible: ○ apply FSE ○ perform FSBS • Prepare for delivery
Deceleration	• Autonomic response to factors including blood pressure changes, hypoxia and acidosis	• Reposition woman • Listen again or initiate EFM	• Intrauterine resuscitation • Check maternal vital signs • Further actions depending classification and overall clinical picture
Intermittent late decelerations OR Single deceleration >2 but <3 minutes duration	• Decreased uterine blood flow due to maternal position • Fetal vagal/chemoreceptor response • Transient fetal acidemia		• Intrauterine resuscitation • Check maternal vital signs • Continue to observe
Single prolonged deceleration >3 minutes duration	• Fetal baroreceptor response may be related to: ○ tachysystole ○ severe cord compression ○ maternal hypotension/seizure ○ rapid fetal descent		• Vaginal exam to rule out cord prolapse • Intrauterine resuscitation • Prepare for delivery

EFM: electronic fetal monitoring; FSBS: fetal scalp blood sampling; FHR: fetal heart rate; FHS: fetal health surveillance; FSE: fetal scalp electrode; GBS: group B Streptococcus; Hb: hemoglobin; IA: intermittent auscultation; IV: intravenous [infusion]; ROM: rupture of membranes.