

NRP Case Scenario 3: Term Newborn/ Prolonged Rupture of Membranes/Suspicion of Infection/Precipitous delivery

Teams: all centers

Learning points:

1. Four questions: delayed clamping after 30 seconds of drying and stimulation on abdomen
2. Plan: full team for depressed newborn possibly requiring PPV, compressions, IV access and medications
3. Pre-brief: leader assigns all roles and tasks
4. Pre-brief: risk factor for infection: plan for labs and antibiotics
5. Pre-brief: who/when/how to get additional help +/- transfer depending on center
6. Skills: PPV
7. Skills: LMA placement including troubleshooting
8. Skills: Chest compressions
9. Skills: Emergency low UVC placement
10. Skills: Epinephrine dosing

Scenario: 19-year-old G1P0 at 36 and 2/7 weeks of gestation has been leaking clear fluid for three days. She thought it was urine, but fluid is now green and foul-smelling. She is cramping badly and has severe back pain so came in for evaluation. On exam, she is completely dilated and delivery is imminent.

Please prepare your team and supplies.

Pre-brief: OB history obtained and cord clamping plan made; leader designated; all roles and tasks assigned; equipment readied including lab supplies; plan discussed with family.

TIME	SCENARIO	EXPECTED ACTION
Birth	<ul style="list-style-type: none"> ▪ Delivery ▪ Baby on abdomen ▪ Foul odor noted ▪ Green fluid 	<input type="checkbox"/> Start Apgar timer when body delivered
30 seconds	<ul style="list-style-type: none"> ▪ Pale, floppy, no respiratory effort ▪ No response to drying/stimulation ▪ Cord clamped/cut 	<input type="checkbox"/> Dry, position, stimulate <input type="checkbox"/> Baby taken to warmer/resuscitation area
60-90 seconds	<ul style="list-style-type: none"> ▪ No breath sounds heard ▪ No chest rise seen 	<input type="checkbox"/> Suction <input type="checkbox"/> Initiate PPV with room air, infant sized mask

	<ul style="list-style-type: none"> ▪ MR SOPA in process- no improvement ▪ HR 40s CR monitor ▪ HR 40 auscultation ▪ Pulse ox not picking up 	<ul style="list-style-type: none"> <input type="checkbox"/> Auscultate breath sounds <input type="checkbox"/> Begin MR SOPA <input type="checkbox"/> Apply CR leads (if avail) <input type="checkbox"/> Apply pulse ox
90 seconds	<ul style="list-style-type: none"> ▪ LMA placed ▪ Breath sounds heard ▪ Chest rise seen 	<ul style="list-style-type: none"> <input type="checkbox"/> Begin 30 seconds of effective ventilation <input type="checkbox"/> Monitor heart rate
90 seconds- 120 seconds	<ul style="list-style-type: none"> ▪ 30 seconds of effective ventilation 	<ul style="list-style-type: none"> <input type="checkbox"/> PPV 40-60/minute <input type="checkbox"/> Pace: breathe, 2, 3
1.5 minutes	<ul style="list-style-type: none"> ▪ Heart rate 40s ▪ No spontaneous respiratory effort ▪ Pulse ox not picking up 	<ul style="list-style-type: none"> <input type="checkbox"/> Begin compressions interposing breaths <input type="checkbox"/> “One and two and three and breathe” <input type="checkbox"/> Oxygen at 100% <input type="checkbox"/> Call for additional help
1.5-3 minutes 3		<ul style="list-style-type: none"> <input type="checkbox"/> UVC set up/insertion <input type="checkbox"/> Team changes position as needed <input type="checkbox"/> Epinephrine dosing discussed; weight estimated by team <input type="checkbox"/> Epinephrine dose drawn up based on weight guesstimate of 2 kg
3-4 minutes	<ul style="list-style-type: none"> ▪ HR 30s ▪ No resp effort ▪ No tone ▪ Pale/mottled ▪ Limp 	<ul style="list-style-type: none"> <input type="checkbox"/> Closed loop communication re: epinephrine dose ready <input type="checkbox"/> 0.4 mL epinephrine given IV push; 3 mL NS flush <input type="checkbox"/> Epinephrine dose/time stated out loud
5 minutes	<ul style="list-style-type: none"> ▪ HR 80 ▪ No resp effort ▪ No tone ▪ Pale/mottled ▪ Limp 	<ul style="list-style-type: none"> <input type="checkbox"/> Stop compressions <input type="checkbox"/> PPV 40-60/ min <input type="checkbox"/> Pace: breathe, two, three <input type="checkbox"/> Secure UVC <input type="checkbox"/> Monitor HR and signs of respiratory effort
10 minutes	<ul style="list-style-type: none"> ▪ HR 180 ▪ Central pinking ▪ Acrocyanosis 	<ul style="list-style-type: none"> <input type="checkbox"/> Apgar scoring <input type="checkbox"/> Titrate oxygen based on targeted sat range

	<ul style="list-style-type: none"> ▪ Pulse ox within targeted sat range ▪ Gaspings breaths (can discuss entrance criteria for neuroprotective cooling and passive cooling) 	<ul style="list-style-type: none"> <input type="checkbox"/> Initiate transfer process <input type="checkbox"/> Discussion with family about events/transfer/neuroprotective cooling
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Debrief:

- What was happening here?
- How did it go?
- What went well?
- What might we do differently next time?
- Did you have everyone you needed?
- Did you have everything that you needed?
- How was your communication?

[Apgar scores 1,1, 4)