

Subject Topic	
Framework Profile	Intraosseous Insertion & Fluid Resuscitation
Associated E-Learning or Webinar tutorials	<ul style="list-style-type: none"> Resus4kids – IO module
Simulation learning objectives	<ul style="list-style-type: none"> Indications & contraindications for insertion of an intraosseous needle Selection & preparation of IV fluids for resuscitation Rehearsal of skills in a simulated environment
Target Group	<p>Nursing and Medical students</p> <p>Junior nursing and medical staff</p>
Delivery method	Facilitated discussion and Simulated learning event
Timeframe	60 minutes
Resources for session	<p>EdWISE paediatric box</p> <p>Audiovisual equipment</p> <p>Zara manikin</p> <p>EZ-IO and needles</p> <p>Training bones for EZIO practice</p> <p>Normal saline and giving sets</p> <p>Local paperwork for paediatric patients</p>

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Session Structure - EdWISE PROGRAM – P3 Intraosseous Insertion & Fluid Resuscitation		
Timing	Welcome and Introduction	Resource
5 mins	<p><i>Welcome and Introduction</i></p> <ul style="list-style-type: none"> • Provide Housekeeping – Fire Exits, mobile phones on vibrate • Provide a summary of what the workshop will involve and the expectations from the participants • Introduce yourselves - facilitation team, host team and participants. Include experience of cardiac patients <p>If this is not the first module run on that day, the participants are the same and this has been covered previously, then this section can be missed out.</p>	<p>Video conferencing unit</p> <p>Enough seats for the participants and arranged in a horseshoe facing the VC unit and camera.</p> <p>Led by the team over VC but with host team supplying information on the fire exits/toilets/etc.</p>
Timing	Main Topic Presentation	
15 mins	<ul style="list-style-type: none"> • Indications & contraindications for insertion of an intraosseous needle • Selection & preparation of IV fluids for resuscitation • Rehearsal of skills in a simulated environment 	PowerPoint presentation
Timing	Familiarisation to Mannequin & equipment	
5 mins	<p>Introduce students to mannequin & capabilities</p> <p>Include intra-osseous insertion sites</p>	<p>Local faculty to familiarise the students to the environment/ mannequin/actors. Can use the familiarisation video, to guide the local faculty, if needed.</p>

Timing	Simulation
15 mins	<p>Participant Briefing From Triage nurse “This is Zara, a 12 month old girl, Mum stated she has had vomiting and diarrhoea for last 3 days, and hasn’t had held anything down for the last 5 hours. She’s has been sleeping and has had dirty nappies since yesterday. She looks unwell to me.”</p> <p>Scenario outline 12 month old girl, presents at triage with vomiting & diarrhoea for past 3 days, pale, floppy & very drowsy, taken into resus & given a cat 1 She needs urgent fluid resuscitation and IV access cannot be obtained. An intraosseous line will need to be inserted and an appropriate fluid bolus given.</p>
Timing	Debrief
15 mins	<ul style="list-style-type: none"> • Recognition and early structured assessment of the unwell child. • Skill – insertion of intraosseous access • Skill – setting up and administering fluids to a child
Timing	Summary
5 mins	<ul style="list-style-type: none"> • Consider IO insertion when immediate access required & IV unsuccessful after 90 secs • All fluids & drugs can be given via IO • Laboratory tests can be sent, but tell the lab it’s marrow • Insertion site is the antero-medial surface of the tibia, approximately 1-3 cms below the tibial tuberosity • Bolus fluids N/S with an age appropriate set up