



## Scottish Patient Safety Paediatric Programme Peri-Operative Workstream Driver Diagram and Change Package



## Scottish Patient Safety Paediatric Programme

A driver diagram is used to conceptualise an issue and to determine its system components which will then create a pathway to achieve the goal.

Outcome	Primary Drivers (Primary Drivers are system components which will contribute to moving the primary outcome)	Secondary Drivers (Secondary drivers are elements of the associated primary driver. They contain change concepts that can be used to create projects that will affect the primary driver)
<p><b>Improve paediatric peri-operative outcomes (Reduce peri-operative adverse events and infections.)</b></p>	<p>Appropriate, timely and reliable evidence-based surgical management processes.</p>	<p>Prevent paediatric surgical site infections:</p> <ul style="list-style-type: none"> <li>• timely prophylactic antibiotics;</li> <li>• avoid hair removal;</li> <li>• monitor blood glucose levels for known diabetics;</li> <li>• normothermia.</li> </ul> <p>Reduce complications from surgical procedures:</p> <ul style="list-style-type: none"> <li>• DVT prophylaxis (young people).</li> </ul>
	<p>Child and family centred-care</p>	<p>Open communication between team, child and family.</p>
	<p>Effective and collaborative multidisciplinary teams</p>	<p>Reliable care planning, communication and collaboration of a multidisciplinary team:</p> <ul style="list-style-type: none"> <li>• pre &amp; post-op briefings;</li> <li>• surgical time-outs.</li> </ul>
	<p>Infrastructure and culture that promotes safety and quality.</p>	<p>Optimal flow of children and young people through theatres.</p> <p>Infrastructure and leadership to deliver consistent and reliable, evidence based care.</p> <p>Timely, regular feedback to clinicians of quality and safety performance measures.</p> <p>Staff with improvement skills.</p>



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Secondary Drivers	Change concepts and change ideas for PDSA testing <b>Bolded</b> items are required elements of SPSP
Prevent paediatric surgical site infections	<p><b>Prophylactic administration within 60 minutes prior to incision.</b> Prescribe prophylactic antibiotics as per local antibiotic policy/SIGN guideline for paediatric surgery. Reduce administration variability. Weight-based antibiotic dosing. Re-dose lengthy surgeries. Visible reminder or checklist to prompt administration. Deliver antibiotic to theatre with child. Document antibiotic administration in child's record. Discontinue within 24 hours (unless otherwise indicated).</p> <p><b>Avoid hair removal.</b> Remove razors from operating room Remove hair (when necessary) using clippers, immediately prior to surgery.</p> <p><b>Monitor blood glucose level for known diabetic children/young people.</b> Reduce variability between pre-operative, intra-operative and post-operative glucose monitoring. Assign responsibility for blood glucose monitoring and control.</p> <p><b>Monitor body temperature during operation.</b> Assign responsibility for thermoregulation. Reduce variability of intra-operative temperature monitoring. Standardise use of warming devices. Provide surgical staff with cooling gear/devices. Theatre temperature controlled by surgical staff. Limit heat loss in child/young person prior to operation. Increase ambient room temperature in theatre.</p>
Reduce complications from surgical procedures	<p><b>Reliable DVT prophylaxis</b> Perform risk assessment on teenagers. Reduce variability in pre-operative and post-operative DVT prophylaxis care.</p> <p><b>Paediatric Trigger Tool</b> Reduce variability in intra-operative procedures.</p>
Open communication	Educate young people & parents on hair removal Involve children and parents in surgical decision-making.



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between team, child and family	Encourage children, young people and parents to ask questions about the operation. Educate children, young people and parents about surgical site infections.
Reliable care planning, communication and collaboration of a multidisciplinary team.	<p><b>Pre-operative and Post-operative List briefings.</b></p> <p><b>Surgical time out/pause.</b></p> <p>Involve pharmacy staff to ensure timing, selection, and duration of antibiotics. Include antibiotic administration in the surgical “time out”. Undergo team training. Provide training to staff and physicians in high-risk areas (A &amp; E, ICU, Operating Theatre, Obstetrics, etc) using Crew Resource Management concepts and techniques (assertion, critical language, psychological safety). Provide training during orientation and reinforce annually. Provide training on use of structured communication techniques, i.e. SBAR.</p> <p>Staff with improvement skills:</p> <ul style="list-style-type: none"> <li>• SPSPP workstream huddles.</li> <li>• Use measures to view outcomes over time.</li> <li>• Publish timely feedback on progress towards critical care aims.</li> </ul>
Optimal flow of children and young people through theatres	Structured communication techniques for pre-operative and post-operative handovers.
Infrastructure and leadership to deliver consistent and reliable, evidence based care.	<p>Leadership for peri-op workstream Educate theatre staff regarding importance and reasoning of antibiotic timing.</p> <p>Timely, regular feedback to clinicians of quality and safety performance measures:</p> <ul style="list-style-type: none"> <li>• paediatric peri-op learning from paediatric mortality &amp; trigger tool reviews.</li> </ul>
Timely, regular feedback to clinicians of quality and safety performance measures.	<p><b>Feedback from paediatric trigger tool</b></p> <p>Feedback from mortality reviews</p>
Staff with improvement skills	<p>SPSPP workstream huddles Use measures to view outcomes over time. Publish timely feedback on antibiotic prophylaxis compliance and surgical site infections.</p>

