## **Head Injury Pathway**





## **Clinical Assessment/Management Tool for Children**

Suspected/Observed Head Injury Red Flags Consider History **Examination** • When? Mechanism of injury? • Assess conscious level—GCS or AVPU Symptoms or signs suggestive of potential life-threatening Are there **safeguarding concerns** (e.g. delay in injury (see table below) • Loss of consciousness? Vomiting? Fitting? • Confused or repetitive speech? presentation; injury not consistent with history or age/ Clotting or bleeding disorder Persistent dizziness? developmental stage of child)? • Skull integrity (bruises, wounds, boggy swelling) and Safeguarding concerns fontanelle assessment • Amnesia (anterograde /retrograde)? West Yorkshire Assessment of non-mobile babies with • Signs of base of skull fracture Call 999 injuries policy • Worsening or persistent headache Stay with child • Signs of focal neurology Seizure Alert local paediatric / ED team Cervical spine Contact local child protection/social • Irritability / altered behaviour services team • If under 3 years, undress and examine fully • Clotting or bleeding disorder Anticoagulant medication • Previous brain surgery

	GREEN LOW RISK	AMBER MEDIUM RISK	RED HIGH RISK
Nature of injury and conscious level	<ul> <li>Low risk mechanism of injury</li> <li>No loss of consciousness</li> <li>Child cried immediately after injury</li> <li>Alert, interacting with care giver, easily rousable</li> <li>Behaviour considered normal by family</li> </ul>	<ul> <li>Mechanism of injury:</li> <li>fall from a height &gt; 1m or greater than child's own height</li> <li>Alert but irritable and/or altered behaviour</li> <li>Any loss of consciousness</li> </ul>	Mechanism of injury: Considered dangerous (high speed road traffic accident; >3m fall, high speed injury from projectile or object) GCS < 15 / altered level of consciousness (V-P-U on AVPU) Witnessed loss of consciousness lasting > 5mins Persisting abnormal drowsiness Post traumatic seizure
Symptoms & Signs	<ul> <li>No more than 2 episodes of vomiting (&gt;10 minutes apart)</li> <li>Minor bruising or minor cuts to the head</li> </ul>	<ul> <li>3 or more episodes of vomiting (&gt;10 minutes apart)</li> <li>Persistent or worsening headache</li> <li>Amnesia or repetitive speech</li> <li>A bruise, swelling or laceration of any size</li> </ul>	<ul> <li>Skull fracture – open, closed or depressed</li> <li>Penetrating head injury</li> <li>Tense fontanelle (infants)</li> <li>Signs of basal skull fracture (hemotympanum, 'panda' eyes, CSF leakage from ears/ nose; Battle's sign (mastoid bruise)</li> <li>Focal neurological deficit</li> <li>Children &lt;1yr with laceration or swelling more than 5cm</li> </ul>
Other		<ul> <li>Additional family support required</li> <li>Suspicion of non-accidental injury (referrer to contact social care also)</li> </ul>	<ul> <li>Clotting or bleeding disorder</li> <li>On anticoagulant medication</li> <li>Previous brain surgery</li> <li>Drug or alcohol intoxication</li> </ul>
	Action Table		
	Green Action	Amber Action	Red Action
	<ul> <li>Provide written and verbal advice, see our <u>head injury page</u></li> <li>If <u>concussion</u>, provide advice about graded return to normal activities</li> <li>Think "safeguarding" before sending home</li> </ul>	<ul> <li>Send to ED for further assessment</li> <li>If <u>concussion</u>, provide advice about graded return to normal activities</li> </ul>	<ul> <li>Refer immediately to emergency care by 999 if necessary</li> <li>Alert ED team</li> <li>Continuous observation</li> </ul>