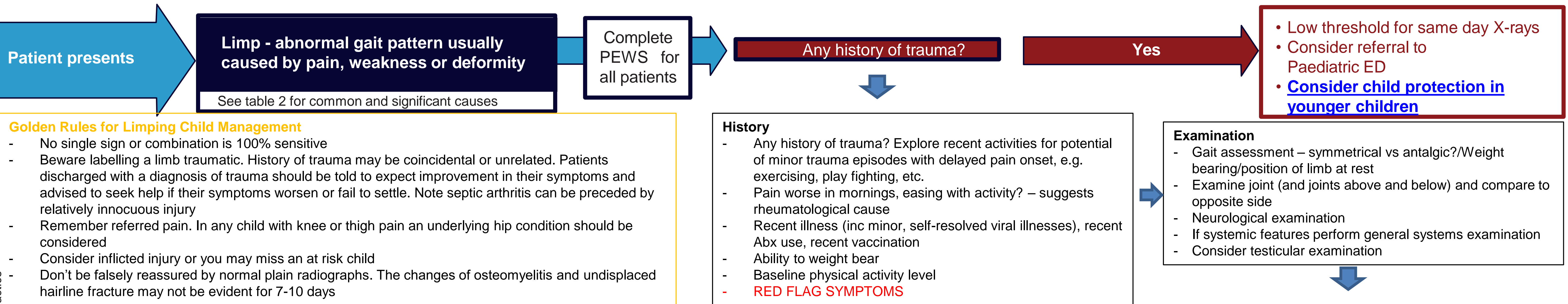
Limping Child Pathway

Clinical Assessment/ Management tool for Children

Management – Combined Acute and Primary Care



GMC Best Practice recommends: Record your findings (See "Good Medical Practice")

Table 1

Green	Amber	Infection (SA/OM) red Flags	Malignancy red flags
Symptoms less than 24 hours or >24 hours and improving	No red flags	Temperature >38.5°C in preceding week Any abnormal neurology Clinical suspicion of NAI	Fatigue, anorexia, weight loss/faltering growth, night sweats Pallor, unexplained bruising
Mobile but limping		Unable to weight bear <1 year of >9 years (transient synovitis no longer most likely diagnosis)	Pain waking child at night Recurrent infections
Well		Pain on moving joint (passive) Clear abnormality on examination	>24 hours and no improvement
No red flags		Hot swollen joints Back pain in all ages	

Green Action

- Provide with advice sheet
- Regular analgesia with ibuprofen and paracetamol
- If any safeguarding concerns (esp infants, non-verbal and additional needs) or concerns about slipped upper femoral epiphysis, low threshold for same day X-rays and senior review
- Review in 48-72 hours if not improving

Amber Action

Refer to PED

Senior review, consider:

- Xrays (2 views only needed if over 8 years or clinical concern on AP view)
- Bloods – FBC & film, CRP, ESR, blood culture (see table 3 for Kocher criteria re: septic arthritis)
- Follow-up

Admit

Urgent Action

- Xrays (2 views: AP & frog-lateral hips)
- Consider USS and MRI
- Bloods – FBC & film, CRP, ESR blood culture (see table 3 for Kocher criteria re: septic arthritis)
- Orthopaedic review
- Further investigation and management as appropriate

Urgent Action

- Paediatric review

Version 1: Oct 2022. Review Date: Oct 2025.

This guidance has been reviewed and adapted by healthcare professionals across SWL with consent from the Hampshire development groups

This document was arrived at after careful consideration of the evidence available including but not exclusively NICE, SIGN, EBM data and NHS evidence, as applicable. Healthcare professionals are expected to take it fully into account when exercising their clinical judgement. The guidance does not, however, override the individual responsibility of healthcare professionals to make decisions appropriate to the circumstances of the individual patient in consultation with the patient and / or carer.

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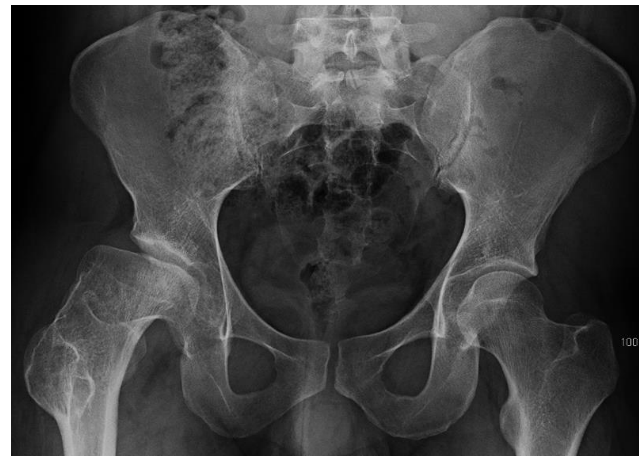
Table 2: Causes of limp by age

Age Less than 3 Years	Age 3 – 10 years	Older than 10 years	Any Age
Septic arthritis (SA)/ osteomyelitis (OM) • Septic joint until proven otherwise • Usually febrile. • Most commonly occurs under 4 years of age. • Pain + inability to bear weight. • If SA hip, hip often held flexed and abducted. • Child often looks unwell and passive movement of the joint extremely painful. • **Septic arthritis is a medical emergency requiring urgent treatment.** • Femoral osteomyelitis presents similarly to septic arthritis with fever and pain but children have some passive range of motion unless there is extension of the infection into the joint. More indolent with late XR changes **Transient synovitis is less common below 3 years of age.** **Fracture/ soft tissue injury** (# in non-ambulant child must be investigated as NAI until proven otherwise) **Developmental dysplasia of hip** (delayed walking, shortened limb) **Toddler fracture** **Non Accidental Injury**	**Transient synovitis** • Typically acute onset following a viral infection. • No systemic upset. • Peak onset age 5/6 years, more common in boys. • Managed with oral analgesia. • No pain at rest and passive movements are only painful at the extreme range of movement. • Recurs in up to 15% of children. **Septic arthritis (SA) / osteomyelitis (OM)** **Fracture/soft tissue injury** **Perthes disease** • Usually occurs in children aged 4-10 years (peak 5 and 7 years.) • Affects boys more than girls • Bilateral in 10% • Oseonecrosis of femoral epiphysis • Systemically well with limited hip rotation	**Septic arthritis (SA) / osteomyelitis (OM)** **Slipped upper femoral epiphysis** • Usually occurs aged 11-14 years. • More common in obese children and in boys. • Bilateral in 20-40%. • May present as knee pain • **Same day Xray essential** – delayed treatment associated with poor outcome. **Perthes disease** **Fracture/soft tissue injury** **Apophyseal avulsion injuries** - Sudden forceful contraction of apophysis attached to tendon, e.g. Osgood-Schlatter - Particularly athletic	**Septic arthritis (SA) / osteomyelitis (OM)** **Malignancy** including leukaemia **Non-malignant haematological disease** e.g. haemophilia, sickle cell **Metabolic disease** e.g. rickets **Neuromuscular disease** e.g. cerebral palsy, spina bifida **Limb abnormality** e.g. length discrepancy **Inflammatory joint or muscle disease** e.g. JIA, myositis • Affects the hips in 30-50% of cases and is usually bilateral. • Uncommon for hip monoarthritis to be the initial manifestation. • Children typically present with groin pain but may have referred thigh or knee pain. Often have morning stiffness, with gradual resolution of pain with activity. • There is painful or decreased range of motion, especially in internal rotation.
			Infections with referred pain to the lower extremities e.g appendicitis with periappendiceal abscess, discitis, pelvic inflammatory disease, psoas abscess, skeletal tuberculosis, spinal epidural abscess, suppurative iliac fossa adenitis with retroperitoneal iliac fossa abscess, and vertebral body osteomyelitis

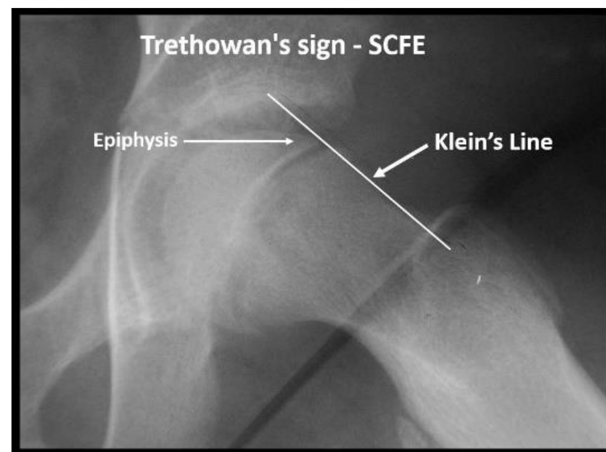
Table 3: Amended Kocher's criteria for septic arthritis

Fever >38.5°C, Unable to weight bear, CRP>20mg/L, WCC >12
(1 criterion = 3% probability for septic arthritis / 2 criteria = 40% probability / 3 criteria = 93% probability / 4 criteria = 99.6% probability)
-see https://www.mdcalc.com/kocher-criteria-septic-arthritis and Caird M et al. J Bone Joint Surg Am. 2006 Jun;88(6):1251-7

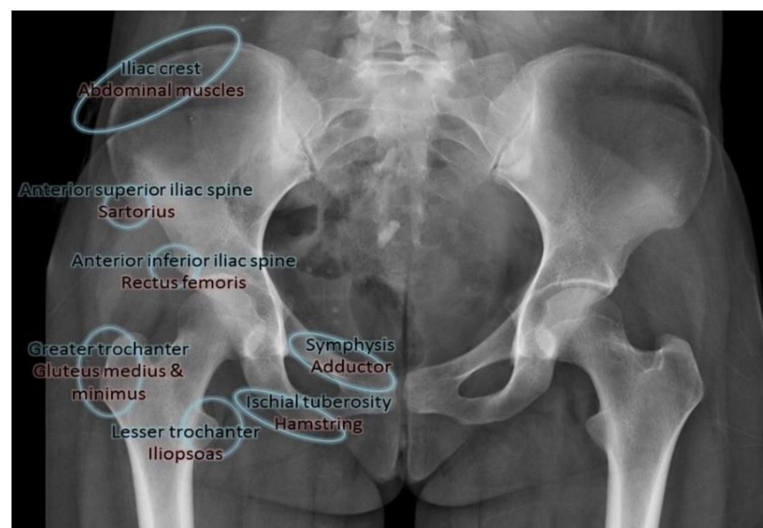
PLEASE NOTE: ESR is an important adjunct to this criteria but clinical suspicion alone should warrant escalation for senior review and Orthopaedic referral. Further investigations may include CK, reticulocyte count and sickle screen



Perthe's disease – note flattening of femoral head on right and widening of joint space



Slipped Upper Femoral Epiphysis



Sites of potential apophyseal avulsion injuries in the pelvis