

Paediatric Spinal Deformity: A Resource Pack for referring doctors

Scoliosis is a condition, affecting children as the skeleton matures. A typical GP might see 1 or 2 new cases annually depending on practice population. Early detection and timely interventions for scoliosis cases improves patient outcomes and quality of life.

When a child with suspected scoliosis presents to you the following approach is advised;

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| <ul style="list-style-type: none">A. HistoryB. ExaminationC. MeasurementD. Request RadiologyE. Refer to Specialist ServiceF. Advice |
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A. History

Key points to document

1. Age of Onset of Symptoms: Patients who present with symptoms at a younger age (especially <10years) are more likely to experience rapid progression of the spinal curvature
2. Presence or Absence of Red Flags: Certain red flag symptoms may require immediate attention and referral to emergency department. These include:
 - a. Bowel or Bladder Control Issues: Any recent or sudden changes in bowel or bladder function should be addressed promptly.
 - b. Night Pain: Pain that worsens at night or disturbs sleep can be a concerning symptom and requires further evaluation.
 - c. Neurological symptoms: Presence of weakness, numbness, tingling, or other neurological deficits should be investigated urgently.

B. Examination

1. Adam's Forward Bend Test: The forward bend test is a simple screening tool to assess spinal alignment. Ask the patient (with back exposed) to stand straight and bend forward at the waist, allowing their arms to hang loosely. Observe the back for any visible signs of lateral curvature, asymmetry, or humps.
2. Presence or Absence of Kyphosis: Kyphosis is an abnormal forward curvature of the upper spine, which can sometimes be associated with scoliosis. Assess the patient for the presence of kyphosis to identify any additional spinal deformities.

3. Presence or Absence of Sagittal Imbalance: Sagittal imbalance refers to an abnormal front-to-back spinal curvature, which can be associated with scoliosis. Observe the patient's posture to check for any signs of sagittal imbalance, such as an exaggerated or flattened lumbar curve.

C. Measurements

1. Body Mass Index (BMI): BMI is a useful measurement to assess whether a patient is underweight, normal weight, overweight, or obese. It can be a relevant factor to consider in the context of scoliosis management, as weight can influence the progression of the condition. BMI in children is age-related. Record a height and weight.
2. Arm Span Measurement: Ask the patient to stand against a wall with their arms outstretched in a horizontal position at shoulder level. Measurement of the arm span is the maximum distance between the extended middle fingers of the right and left hands, measured across the chest using a tape measure, note any left-right discrepancy. Discrepancies between arm lengths can be associated with scoliosis.

D. Request Radiology

Radiological Investigation: If you suspect a spinal condition or require further evaluation, request "X-ray Whole Spine, AP & Lateral" to confirm the diagnosis of scoliosis, assess the severity of the curvature, and aid in treatment planning. Please specify as "Scoliosis Assessment". Radiology services for under 16 where whole spine x ray is available with NIMIS facility is included in this resource pack (APPENDIX 1) for easy identification of the suitable radiology departments in Ireland.

E. Refer to Specialist Service

If clinically or radiologically abnormal, refer to specialist service: Include the history, examination, measurements and include the details of X ray request in the referral (x ray request date & location) so that the triaging consultant can prioritise appropriately.

F. Advice

Additional information about scoliosis is available on Scoliosis Research Society website. Scoliosis information videos launching soon on the CHI website.



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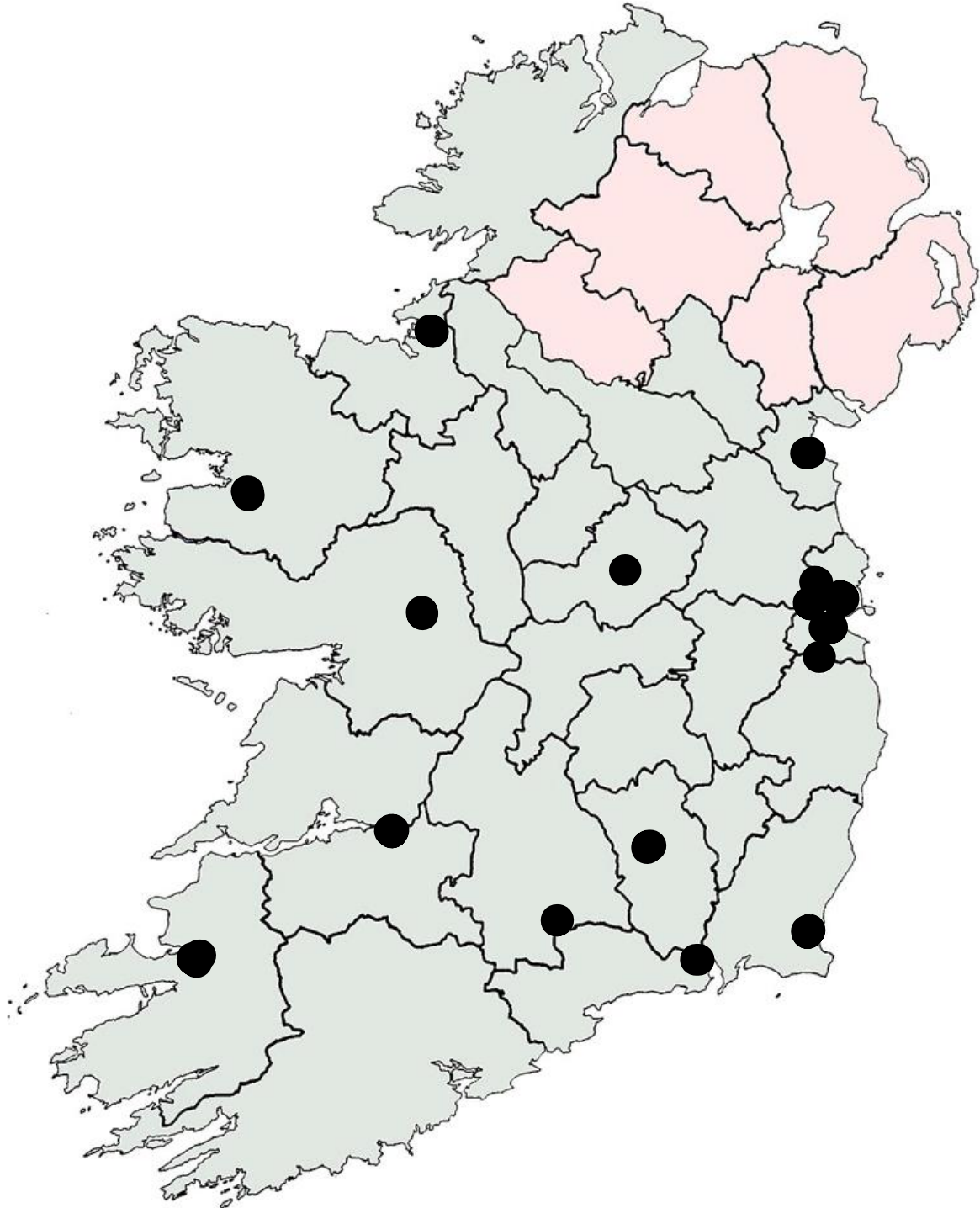
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APPENDIX 1

NATIONAL PAEDIATRIC WHOLE SPINE X-RAY SERVICES





CHI Crumlin

CHI Connolly

CHI Tallaght

CHI Temple Street

Limerick University Hospital

National Orthopaedic Hospital Cappagh

Our Lady of Lourdes Hospital Drogheda

Portiuncula University Hospital

St Luke's General Hospital Kilkenny

Tipperary University Hospital Clonmel

Sligo University Hospital

Mayo University Hospital Castlebar

Wexford General Hospital

Waterford University Hospital

Regional Hospital Mullingar

Midland regional Hospital Tullamore

University Hospital Kerry

South infirmary Victoria University Hospital Cork

**Centres listed accept GP referral as well as integration with NIMIS (National Intergrated medical information system)*

*List is collated through Survey Questionnaire by Lorraine Dowd, Clinical specialist Radiographer, Xray, CHI Crumlin
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