

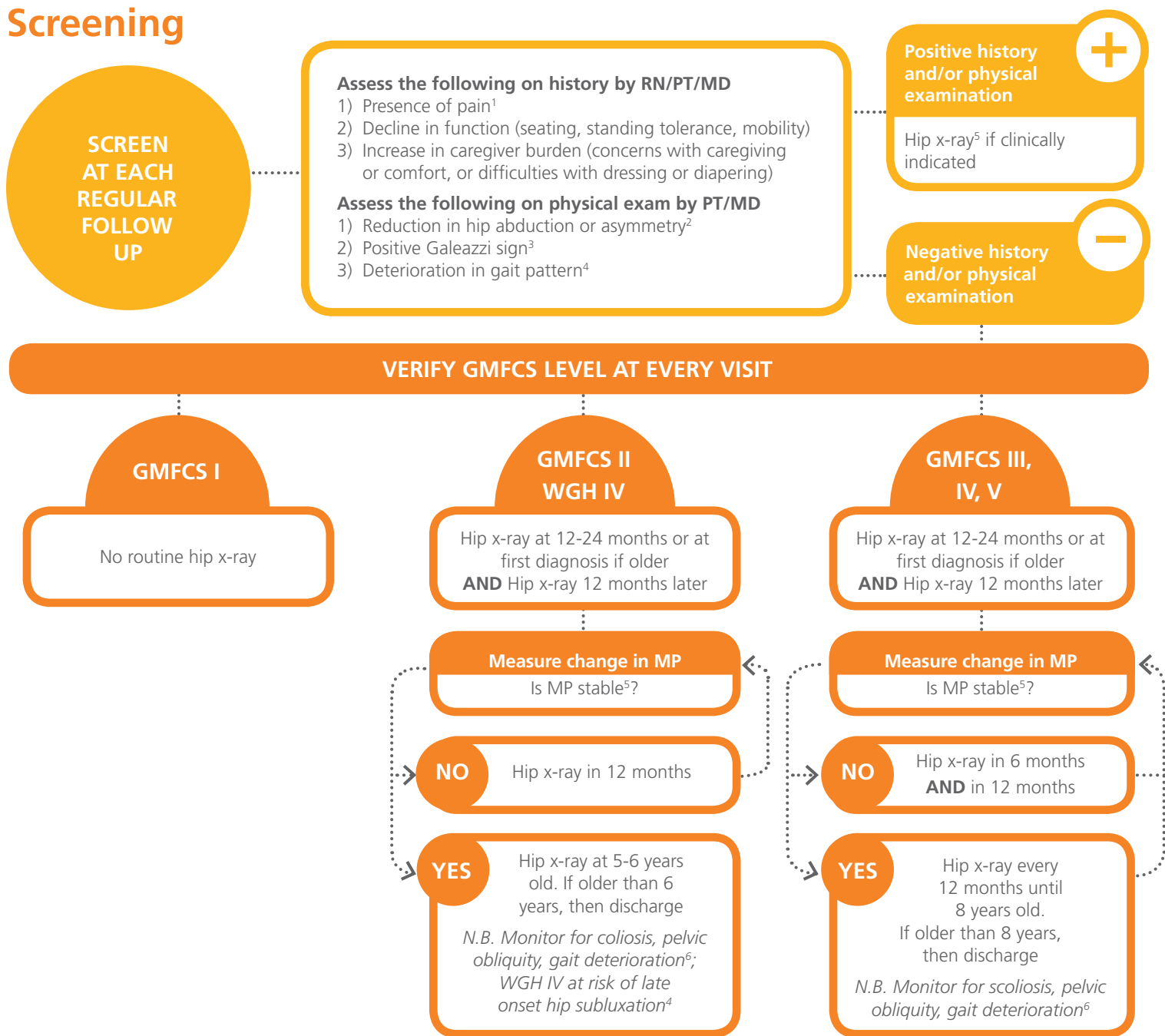
# CP Hip Surveillance Clinical Care Pathway

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## Screening



## Management

Refer to **hypertonia clinic** if there is hypertonia in hip adductors **AND**:

- MP > 30%
- OR Hip pain

Refer to combined **hypertonia-orthopedic clinic** if there is hypertonia in hip adductors **AND**:

- MP > 40%

Refer to **orthopedic clinic** if:

- MP > 40% without hypertonia in hip adductors

Consider other management options including: physiotherapy, orthoses, positioning

## Reference

- 1 Assess for pain using the Pain Diagram (Reference: *Pain Toolbox*)
- 2 Measure hip abduction with hip in neutral and knee extended. Restriction in hip abduction is range of movement less than 30 degrees; Hip asymmetry is a difference in hip abduction range of movement of 15 degrees or more between the right and left
- 3 How to examine for positive Galeazzi test: see diagram below
- 4 Change in gait pattern is particularly important for children with hemiplegia who develop Winters, Gage and Hicks (WGH) IV gait who are at risk of developing late onset hip displacement regardless of GMFCS level. The gait pattern generally presents by 4-5 years of age. (<http://www.udel.edu/PT/rodolph/Rodda2001.pdf>):  
  
Look for increased hip adduction and internal rotation on gait examination.
- 5 Refer to Box A for hip x-ray requirements, calculating change in MP, and determining if MP is stable.
- 6 In the presence of scoliosis, pelvic obliquity, or deteriorating gait, children/youth are at increased risk of hip subluxation. Consider hip x-rays every 12 months starting in pre-puberty (8-10 years) until skeletal maturity (14-16 years)

### Galeazzi Test

Difference in knee height



### Glossary:

**GMFCS** – Gross Motor Functional Classification System

**MD** – medical doctor

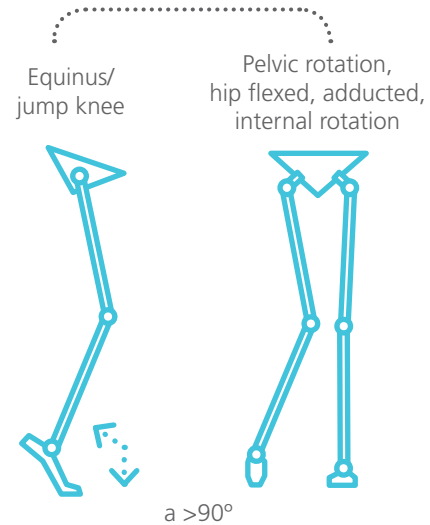
**MP** – migration percentage (see below)

**PT** – physiotherapist

**RN** – registered nurse

**WGH IV** – Winters, Gage and Hicks type IV gait (see previous page)

### Winter Gage and Hicks (WGH) type IV hemiplegia



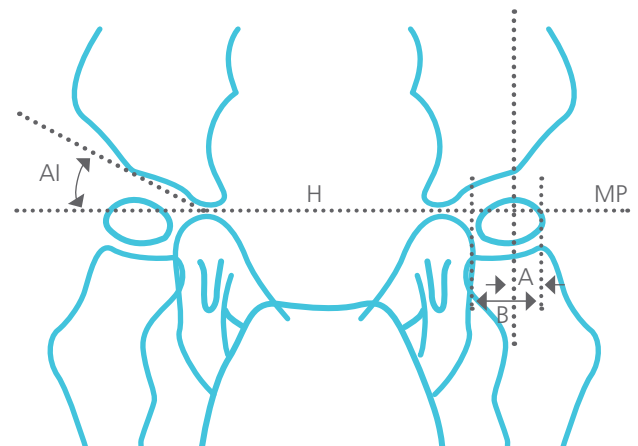
### Box A:

**Hip x-ray** refers to a single anteroposterior (AP) view of the pelvis with hips in neutral abduction.

**Change in MP** =  $MP_{\text{current}} - MP_{\text{last previous}}$   
MP is stable if the change in MP is less than 10%

- H = Hilgenreiner's line (a horizontal line joining the tri-radiate cartilages)
- P = Perkins line (perpendicular to Hilgenreiner's line drawn at the lateral margin of the bony acetabulum)
- AI = Acetabular index (the slope of the acetabulum ie angle is measured between Hilgenreiner's line 'H' and the bony roof of the acetabulum)

### How to calculate the Migration Percentage



**Migration Percentage (MP)** is the proportion of ossified femoral head lateral to Perkin's line 'P' =  $A / B \times 100$