A thorough history and proper physical examination, with appropriate investigations form the backbone of a complete assessment of the patient.

- Conditions can be:
  - congenital (genetic / part of a syndrome / isolated)
  - acquired (infection, tumour, metabolic, part of systemic illness – JCA, other connective tissue disorders, Ricketts OR Injury / Traumatic.)
- All body sites must be examined:
  - head & neck, thorax & trunk, spine, upper limbs & lower limbs.
- In all conditions consider:
  - bone, joints, ligaments, tendons, muscles, subcutaneous tissue, skin, nerves and blood vessels.
- Management must cover:
  - acute (stabilization & diagnosis), medium- (return to normal) and long-term (follow-up & complications) plans.

What is the Clinical Presentation ?

1) History:
- Pain, swelling, redness, decreased ROM, impairment or loss of function, limp, leg length discrepancy, deformity.
- Acute or chronic, nature of precipitating event, aggravating and relieving factors, athletic / sport participation, any therapy that has been tried.

2) Examination:
- General
- Systemic (newborn examination – eg. Hips – Ortolani’s & Barlow’s tests)
- Orthopaedic – Inspection, Palpation, Movement – passive and active, Special Tests, Neuro-vascular compromise

3) Investigations:
- Blood tests as necessary, eg. Blood culture for osteomyelitis, Hb for fracture with blood loss.
- Imaging: Xrays, ultrasound, CT scan, MRI (if necessary, available)
- Bone scan, densitometry (at tertiary care)
- Arthroscopy, E / MUA.

4) Diagnosis or differential / Assessment:

5) Management:
- **Principles**: PRICE – Pain relief, Rest, Ice / Immobilisation, Elevation, Compression
- **Drugs**: Antibiotics, NSAIDs, simple analgesia – all as required only
- Early referral to Orthopaedic Surgeon
- **Surgical**: Non-invasive – POP & other casts, Minimally invasive – mainly arthroscopic interventions – meniscus, ligament, tendon repair, etc, Invasive – ORIF, Joint replacement, scoliosis correction, osteotomies, spinal fusion – TB spine (late stage), etc.
- **Allied medical professionals** in acute, medium- and long-term: Physiotherapy (modalities heat, cold, massage, ultrasound, interferential, etc.) ; occupational therapy (daily tasks & functional adjustments, appliances, splints, ergonomics); other rehabilitation specialists
- **“Return to full function (play)” guidelines** – depends on condition / injury, severity, management and response, progress in rehabilitation, need to be individualized for patient. Eg. 6 weeks for ulnar fracture healing and rehabilitation, 3 weeks for muscle strain, etc.
- **Follow-up**: as determined by progress and long-term / rehabilitation plans
- **Prevention**: Primary (eg. Monitoring stress loads of young fast bowlers to prevent lower back injuries like spondylolisthesis), Secondary (proper rehabilitation of patient to prevent complications of condition or re-injury)
Some conditions that you might encounter:

**Neonates / infancy:**
1) Congenital Talipes Equinus Varus (Clubfoot)
2) Congenital Dysplasia of the Hip (Congenital Hip Dislocation)
3) Multiple fractures - new and old, healing or healed (Osteogenesis Imperfecta, Shaken Baby Syndrome), fractures, Erb’s palsy, Klumpke’s palsy in birth trauma
4) Dysmorphic with short stature, limb shortening (Achondroplasia, Skeletal Dysplasia – NB. Thanatophoric dwarf is an example of a lethal dysplasia)

**Childhood:**
1) Osteomyelitis / Osteitis / TB spine
2) Legg-Calves-Perthes Disease – ischaemic necrosis of proximal femoral epiphyses
3) Blount’s Disease – “bow-legs” or tibia / genu vara
4) Trauma and injuries – consider growth plate involvement until skeletal maturity (Salter-Harris Classification)

**Adolescents:**
1) Trauma and injuries, including during sport participation – acute vs chronic, site of injury, nature of injury, relationship to sport, other risk-taking behaviour (including alcohol & drugs)
2) Scheuermann Disease – thoracic or thoraco-lumbar kyphosis (anterior-posterior spine curvature) in teenage boys
3) Slipped Capital Femoral Epiphyses (SCFE) – near age of skeletal maturity. E.g. complication to obesity
4) Osgood-Schlatter Disease – tibial tubercle pain during rapid growth spurts
5) Idiopathic Scoliosis (M:F – 1:10) – usually left sided thoracic scoliosis

**At any age:**
1) Bone or Joint manifestations of systemic illness – eg. Juvenile Chronic Arthritis (previously Still’s Disease), deformities in Ricketts, osteopaenia or pathological fracture in chronic renal failure or cerebral palsy
2) Scoliosis – lateral curvature of the spine. (at any age)
3) Short stature and / or short limb – Skeletal Dysplasias, endocrine disorders

**Challenges:**

| Make sure patients with disabilities are managed holistically (social grant, wheelchair, employment) |
| Link with Orthopaedic Surgeons (work on outreach and collaboration) |