



## **Advanced Orthopedics: Specialized Area of LPN Practice**

### **Introduction:**

Section 21.2(1) of the SALPN Regulatory Bylaws classifies “Advanced Orthopedics” as a specialized area of practice. Advanced Orthopedics “includes the provision of practical nursing care related to orthopedics for the purpose of applying orthopedic devices or casts.”

Licensed Practical Nurses in the Advanced Orthopedics Specialized Area are prepared with advanced orthopedic assessment skills for children and adults with multiple traumas, orthopedic pathology and complications. The Advanced Orthopedic LPN holds specialized knowledge and skills to care for clients with casts, splints, braces, traction, external fixation, and amputations. The LPN will have the knowledge to perform competently and to utilize critical thinking and clinical judgment in decision-making related to advanced orthopedics.

### **Background:**

Section 21.2 of the SALPN Regulatory Bylaws provides as follows:

21.2(1) In this section, “advanced orthopedics” includes the provision of practical nursing care related to orthopaedics for the purpose of applying orthopedic devices or casts.

(2) No member shall provide advanced orthopedics unless the member:

(a) has successfully completed the formal post-basic education certificate program, known as the “Advanced Education in Orthopedics for LPNs” program from Norquest College in Edmonton, Alberta, or an equivalent program recognized by council;

(b) ) is registered with SALPN as qualified to provide advanced orthopedics; and

(c) practises pursuant to an order of an authorized professional and in collaboration with other members of the health care team, while assisting

an authorized professional under his or her direction with the setting or resetting of a fracture of a bone.

An LPN who performs advanced orthopedics without having acquired the necessary education, being registered as qualified with the SALPN or without the direction or order of an authorized professional, or non-collaboratively would be in breach of the bylaws and therefore guilty of professional misconduct as defined in section 24 of *The Licensed Practical Nurses Act, 2000*.

### **Program Recognition and Registration with the SALPN:**

1. On proof of completion of the “Advanced Education in Orthopedics for LPNs” program from Norquest College in Edmonton, Alberta, the SALPN will register the LPN as educated in the advanced orthopedics specialized area of LPN practice.
2. An LPN who has completed an equivalent educational program that provides the LPN with the competencies required to practice advanced orthopedics can apply to Council for recognition of the program. Once Council recognizes the program, the SALPN will register the LPN as educated in the advanced orthopedics specialized area of LPN practice.

### **Practice Guidelines:**

1. LPNs may provide advanced orthopedics in areas generally known as, but not limited to, “cast clinics” or ambulatory care settings. LPN’s who work in general orthopedic units within health care facilities are **not** required to obtain advanced orthopedics to perform basic orthopedic LPN competencies. This also includes orthopedic competencies that are within LPN scope of practice which require additional informal education; i.e. cast removal. Contact the SALPN regarding individual work environments.
2. The LPN who provides advanced orthopedic care requires an order from an authorized professional in order to implement the medical treatments entailed within this specialty area.
3. The LPN who provides advanced orthopedics will work in collaboration with an authorized professional.
4. The LPN who provides advanced orthopedics will ensure that the appropriate health professionals are consulted when the required care needs of the patient exceeds the competence of the LPN provider.

### **Competencies:**

The SALPN recognizes education that encompasses the following:

1. **Demonstrate knowledge of human anatomy and physiology of:**
  - a) Body systems
  - b) Body planes and directions
  - c) Related terminology
  
2. **Demonstrate knowledge of orthopedic medical conditions and treatment:**
  - Trauma
    - Dislocations
    - Multiple fractures
    - Compartment Syndrome
    - Fat embolism
  - Fractures
    - Spinal
    - Extremities
    - Pelvis
    - Ribs
  - Arthritis:
    - Ankylosing Spondylitis
    - Rheumatoid
    - Degenerative
    - Juvenile
  - Infection:
    - Osteomyelitis
    - Bursitis
    - General
  - Tears:
    - Ligaments
    - Tendons
    - Meniscus
  - Soft tissue injury
  - Other
    - Muscle injuries
    - Osteoporosis
    - Congenital disorders
    - Kyphosis/Scoliosis
    - Contractures/deformities
    - Growths/tumours
  
3. **Demonstrate ability to perform comprehensive assessment of the orthopedic client.**
  
4. **Demonstrate ability to recognize a variety of x-ray views such as:**
  - Anterior/posterior
  - Axilla
  - Lateral

- Mandibular
  - Panorex
  - Posterior/anterior
  - Oblique
  - Transverse
  - Tunnel
5. **Demonstrate the ability to teach the use of orthopedic equipment such as:**
    - Cane
    - Cast removal equipment
    - CPM machine (continued passive motion)
    - Crutches
    - Walker
  6. **Demonstrate knowledge and ability to measure angles of joints using a goniometer.**
  7. **Demonstrate ability to receive verbal and written orders from an authorized prescriber pertaining to orthopedics:**
    - Accept, transcribe, and initiate orders.
  8. **Demonstrate knowledge and ability to assist the authorized prescriber with a variety of treatments such as:**
    - Setting a fracture or bone
    - Inserting or removing orthopedic devices
  9. **Demonstrate ability to teach the application of orthopedic devices, in accordance with agency policy and procedure such as:**
    - Acromioclavicular harness
    - Ankle brace
    - Ankle foot orthosis
    - Back braces
    - Bunion splint
    - Clavicle strap
    - Elastic support stockings
    - Finger splint
    - Fracture brace
    - Gibney boot
    - Hare's Traction
    - Hinged knee brace
    - Humeral fractural brace
    - Iso-ulnar brace

- Jones bandage
- Pavlik harness
- Sager splint
- Shoulder immobilizer/ sling and swath/ velpeau
- Soft/ hard cervical collar, triple ruff
- Stump wrapping
- Tibial /femoral braces
- Tensors / tubigrip
- Zimmer splint / knee immobilizer

**10. Demonstrate knowledge of construction application, removal, and teaching of cast and splint care such as:**

- Anesthesia bag above elbow
- Above knee - walking and non-walking
- Back slabs
- Below elbow
- Below knee - walking and non-walking body casts
- Cylinder casts
- Gutter splints
- Hip spica
- Patella tendon bearing
- Plaster vs fiberglass
- Sugar tong
- Spica casts
- Uni-valve, bi-valve, windowing, trimming
- Volar slabs
- Wedging

**11. Demonstrate ability to set-up, assist in application, and monitor manual, skin and skeletal traction:**

- Balanced suspension
- Balkan frame
- Bryant or Gallows
- Bucks
- Gardner Wells
- Pelvic
- Russells or Split Russells
- Skeletal
- Skin
- Skull
- Steinmen pin insertion

**12. Demonstrate knowledge and application of casts for treatment of fractures, dislocations, and skeletal disorders:**

- Closed reductions under conscious sedation or use

of bier block (ATS Tourniquet).

**13. Demonstrate ability to teach client and family regarding orthopedic treatment and care:**

- Orthopedic condition
- Equipment and devices
- Orthopedic policy and procedure
- Authorized prescriber's orders and treatment plan

## References:

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