GUIDELINE STATEMENT
This guideline outlines the management of members with limb length discrepancy that are being considered for distraction osteogenesis or other lengthening procedure such as the Ilizarov method as required by the Children’s Rehabilitative Services Program, Arizona Health Care Cost Containment System, State of Arizona. The purpose of this guideline is to promote a uniform level of care at CRS MSIC sites for members with need for distraction osteogenesis due to a CRS condition. The relevance to specific situations will depend on individual variations in clinical course and professional judgment. In addition, this document should serve as a tool to assess programs, secure resources needed to enhance patient care and education, and guide the future development for treatment of leg length discrepancy.

PURPOSE
Clinical Practice Guidelines represent the minimum requirements for providing care for individuals with need for distraction osteogenesis. Care and treatment should be provided in a manner that includes adherence to and consistency with the following Guideline.

DEFINITIONS:

Children’s Rehabilitative Services (CRS): An AHCCCS program for children with certain diagnoses which provides services using an integrated family-centered, culturally competent, multispecialty interdisciplinary approach.

Multi Specialty Interdisciplinary Clinic (MSIC): The Specialty Medical Home for the members with diagnoses as designated by the Arizona Administrative Code (AAC) R9-7-202 (R9-22-1303, 10-1-2013).
Distraction Osteogenesis: A surgical technique of deformity correction, where bone and soft tissues are generated through gradual stable distraction. The technique will lengthen two segments or more of bone and soft tissues.

Ilizarov Method: A technique of extremity lengthening and reconstruction, correcting when one limb is shorter or there is a bone defect. The extremity bone is cut with surgery and lengthened gradually. New bone formation (osteogenesis) is observed in lengthening site.

I. Patient Selection
   Criteria:

   A. Established Criteria:
      1. Limb lengthening when limb length (upper or lower) discrepancy is projected to be 5 cm or greater based on finalized growth of the individual. Dependent on the clinical situation exceptions to this anticipated growth discrepancy can be made. Documentation by the orthopedist must demonstrate why that exception should occur.
      2. Angular, multiplanar, and rotational deformities
      3. Foot deformities, including lengthening of the metatarsals. Multi-planar foot deformities or deformities where traditional methods will result in unacceptable shortening or loss of joint function. This should include metatarsal lengthening.
      4. Congenital anomalies of the lower limbs (such as fibular and tibial hemimelia) that require both lengthening and correction of angular or rotational deformities
      5. Joint contractures
      6. Reconstruction of large bone defects secondary to tumors, trauma, infection, or other causes by means of boney transport. Congenital pseudoarthrosis of the tibia is a typical example where the Ilizarov method of Osteogenesis distraction may be indicated
      7. Non-union fracture that has not healed in 6 or more months and infected non-union of fractures
      8. Indications for an acute fracture are periarticular fractures, fractures with severe soft tissue injury, or bone loss and osteopenic bone fractures.
      9. Fusion of joints
      10. Distraction of joints
      11. Amputation stump elongation
      12. Radial club hand or other unstable forearm deformity
      13. Upper extremity growth discrepancy of the radius and ulna not amenable to acute
correction (e.g., multiple osteochondromatosis).

**B. Other Criteria:**

1. Other criteria are considered investigational and not allowed at this time.

**II. Protocol for Treatment:**

All patients who are felt to have the indications for the distraction procedure and together with their family have been appropriately counseled by the involved physicians and desire to undergo this treatment for the above clearly-eligible conditions shall be scheduled for multispecialty interdisciplinary evaluation with the following MSIC clinic specialists interdisciplinary team members:

1. General Pediatric clinic
2. Psychological evaluation
3. Social Service evaluation
4. Physical or Occupational Therapy evaluation
5. Nutrition evaluation (specifically to address calcium and vitamin D intake and avoidance of carbonated beverages which might impede bone healing.)

These evaluations should be completed prior to the procedure being scheduled. A second orthopedic opinion may be needed. Results of these evaluations will be reviewed by the involved orthopedic staff physician. If there are not obvious contraindications to proceeding with the surgery, all information, including the orthopedic surgery consultation, pediatric consultation, psycho-social, and physical therapy evaluations will be included in the prior authorization clinical documentation demonstration for services for prior authorization through UnitedHealthcare Community Plan CRS. Following approval the patient will be scheduled for surgery in a timely manner.

**References:**

6. Burns JK, Sullivan R. Correction of severe residual clubfoot deformity in adolescents with the


23. Kristiansen LP, Steen H, Reikerås O. No difference in tibial lengthening index by use of Taylor spatial technique.


31. Pons JMV. Lengthening in achondroplasia [summary]. IN99003. Barcelona, Spain: Catalan Agency for Health Technology Assessment and Research (CAHTA); April 1999.


