

Michelle Baass | Director

**DATE:** August 17, 2023 N.L.: 05-0823

Supersedes N.L.: 15-1103 Index: Medical Therapy Program

**TO:** All County California Children's Services Program Administrators and

Medical Consultants, and Integrated Systems of Care Division Staff

**SUBJECT:** Serial Casting in the Medical Therapy Units

### I. PURPOSE

The purpose of this Numbered Letter (NL) is to provide guidelines, including standards of care and professional expertise, for county California Children's Services (CCS) Medical Therapy Programs (MTP) that opt to develop and implement a serial casting program in Medical Therapy Units (MTU).

### II. BACKGROUND

Serial casting is an evidence-based, clinical procedure used by both occupational and physical therapists to improve range of motion (ROM), movement, and physical function in clients with muscle and joint contracture or movement impairment. The procedure involves placement of circumferential casts to provide gradual stretch of the muscles and joints. The casts are changed at frequent intervals as the ROM, or movement, improves. When appropriate ROM has been achieved, the cast is usually replaced by a removable cast, splint, or brace to maintain the gains achieved and supplemented by a home positioning/exercise program (HEP). Serial casting may, at times, allow a client to either postpone or completely avoid surgical intervention. It is standard practice at most medical rehabilitation centers where serial casting is available and usually performed by an occupational therapist or physical therapist, under the direction of a physician. The California Board of Occupational Therapy and the Physical Therapy Board of California both consider serial casting to be within the scope of practice for occupational and physical therapists with appropriate training.

In 2003, Numbered Letter 15-1103 created a Pilot Project allowing approved County CCS MTPs to perform serial casting at select MTUs to address barriers to clients receiving this service and to utilize the expertise of therapists in the MTUs. Currently, the CCS Manual of Procedures, Chapter 4.8.5, limits casting performed by MTU therapy staff to bi-valved (removable) casting. This NL will supersede NL



N.L.: 05-0823 Page 2 of 9 August 17, 2023

15-1103 and provide guidelines and the opportunity statewide for each county to develop a casting program to maximize the availability of this intervention.

## III. POLICY

The local county CCS Medical Director/Consultant, in collaboration with Chief/Lead/Supervising Therapist as available in some counties, who have oversight of the MTP, must be in agreement with the MTU(s) participating in a serial casting program to ensure the safety of clients receiving services in the MTU. The Medical Director/Consultant or designee (i.e., chief, supervising, lead therapist within the MTP) ensures that the MTP therapists are adequately trained, have met competency requirements, and have the appropriate supplies to carry out the serial casting program. It ultimately is the decision of the Medical Director/Consultant to allow or deny the use of this program.

Serial casting may be implemented by qualified MTU staff, under the direction of the prescribing CCS paneled physician, who will provide direct oversight and supervision of the individual client under casting treatment, when the following essential elements have been addressed appropriately by locally defined policy and procedure:

- A. **Liability:** Each county must maintain evidence of current liability coverage for all therapists participating in serial casting procedures performed on MTU clients. Individual therapists may carry their own professional liability insurance in counties that require therapists to provide their own coverage.
- B. **Medical Supervision:** The Chief/Supervising Therapist, or therapist identified as being the lead by the county MTP, will ensure that local policy and procedures are developed and implemented for all essential elements listed in this numbered letter and will be responsible for ensuring compliance.

When a client is identified as a possible candidate for serial casting, the prescribing physician will assess the client and, if deemed to be appropriate for casting, will write a prescription for serial casting. The prescription will include the client's name, CCS number, date of birth, region of body to be casted, type of casting to be used (bivalve, circumferential, etc.), casting materials (plaster, fiberglass, soft, etc.), and frequency/duration of cast applications. All problems/complications requiring discontinuation or a change in the prescribed course of casting will be documented and communicated to the appropriate individual(s) of the team (direct supervisor of the therapist performing the casting, Chief Therapist/Designee, the prescribing physician, and/or County CCS Medical Director/Consultant) and will lead to reassessment of the intervention. The prescribing physician is also responsible for ensuring informed consent is obtained prior to proceeding with serial casting. It is the responsibility of the

N.L.: 05-0823 Page 3 of 9 August 17, 2023

licensed treating therapist to communicate to the prescribing physician and/or Chief Therapist/Designee any problems/complications requiring discontinuation or change in plan. It will be the responsibility of the Chief Therapist/Designee to take the necessary corrective actions, if indicated. The prescribing physician or associate at any point in the course of the casting program will see the client if there is a need for medical consultation. The prescribing physician will examine the client post-casting to document the effects of casting.

It is the responsibility of the licensed treating therapist to communicate back to the prescribing physician any problems/complications requiring discontinuation or change in plan.

- Initial Training/Competency: The County MTP shall have a method of determining that therapists performing serial casting have skill and proficiency that includes but is not limited to therapists who perform the procedure shall have at least one year of supervised work experience with neurologically impaired children.
  - a. Therapists must have a certificate of completion from a formal serial casting training program or complete a formal mentorship program with documentation of competence and the training received.
  - b. Therapists shall demonstrate clinical proficiency including:
    - i. Identification of appropriate clients for serial casting procedure.
    - ii. Knowledge of and ability to explain to parent/guardian and client the theory and application of serial casting including indications, contraindications, and precautions.
    - Understanding of procedure for casting in the MTU including referral, scheduling, documentation, and therapy services provided during casting.
    - iv. Therapist will have had a cast applied to themselves, participate in a therapeutic activity, and then have the cast removed.
    - v. Placing and removing a cast on a co-worker with guidance.
    - vi. Demonstrating holding an extremity for closed cast including achieving desired cast angle with appropriate joint alignment and posting cast as necessary (for the foot/ankle).

N.L.: 05-0823 Page 4 of 9 August 17, 2023

- vii. Demonstrating wrapping cast material for a closed cast including directing and assisting the holder with alignment as needed, adding appropriate padding, and achieving a smooth cast without indentations or pressure areas.
- viii. Demonstrating safe and effective cast removal on a client.
- ix. Instructing clients in functional skills and home programs while in casts.

Continued competency: Therapists shall maintain serial casting competency by at least one of the following, annually:

- 1. Performing or assisting with at least eight casts per year.
- 2. Having a letter signed by a CCS Paneled physician stating that the therapist has done at least one procedure and has demonstrated competency, per their examination or observation.
- 3. Having a letter signed by a qualified therapist who routinely performs serial casting stating the therapist has demonstrated competency.
- 4. Completing a formal serial casting training program with a certificate of completion.

# 2. Client Selection Criteria: The following criteria will be used:

- a. Client is seen at the MTU with a CCS MTP eligible condition for which serial casting has been determined to be medically necessary by the treating physician. Per Early and Periodic Screening, Diagnostic and Treatment (EPSDT), these medically necessary services must be made available for treatment of all illnesses or conditions discovered by any screening and diagnostic procedures.
- b. Client attendance meets standards for ongoing therapy services.
- c. Client has transportation available or can access reliable transportation to and from appointments.
- d. Client can participate and follow through with a home exercise program as well as additional therapy appointments, as needed, during the casting process.

N.L.: 05-0823 Page 5 of 9 August 17, 2023

- e. No contraindications to casting are present.
- f. Parent/Legal guardian/client has agreed to expectations:
  - i. Know why the cast is being applied.
  - ii. Agrees to commitment of casting.
    - 1. Appointments for casting may be one and one-half to two hours long.
    - 2. Consistent attendance at appointments-contact MTU if unable to make casting appointments.
    - 3. Attend regular therapy appointments in addition to casting appointments.
    - 4. Continued regular therapy appointments after casting is completed/discontinued.
  - iii. Perform HEP consistently at home.
  - iv. Monitor for signs of cast intolerance.
  - v. Maintain communication with MTU staff regarding any questions or concerns.
- g. Client must wear clothing appropriate for casting, allowing for access to body area to be casted and allowing for donning and doffing of clothing following casting (can use blankets/layers as needed pending weather).
- h. Sponge baths will be needed while casting as cast cannot get wet (no baths, showers, swimming, or water play).
- Client/parent/legal guardian/has been provided written informed consent and client (when developmentally appropriate) has agreed to the procedure.
- j. If client does not have Medi-Cal coverage or CCS financial eligibility, a plan should be in place for emergency removal in conjunction with the prescribing physician or Primary Care Physician.

N.L.: 05-0823 Page 6 of 9 August 17, 2023

- 3. Client/parent/legal guardian Education: Education will be provided in plain language. If written documents in the primary language of the client/parent/legal guardian are unavailable, it will be interpreted for them in their primary language. Education will be provided in the following areas:
  - a. Reason the client has been referred for serial casting and the goal of the casting process.
  - b. Time and scheduling requirements needed prior to, during, and following the casting process.
  - c. Impact casting will have on the therapy treatment plan.
  - d. Materials used for casting.
  - e. Care for the casts (including alternate bathing plan to prevent casts from getting wet).
  - f. Possible complications related to the casting.
  - g. Instruction on having cast removed if complications arise.
  - h. Contact information for the casting therapist and designated emergency contact who can assist with casting complications, including removal.
  - i. Contact information for the physician managing the serial casting.
  - j. Post cast therapy plan.
  - k. Written informed consent and acknowledgement of above-stated education is obtained.
- 4. Informed Consent: An informed consent form must be obtained by the prescribing CCS paneled physician or delegated by that physician to appropriately trained MTP staff. The informed consent form must be signed by the client/parent/legal guardian before casting and must include all of the following:
  - a. Plain language approximately sixth grade reading level.
  - b. Provided in primary language of client/parent/legal guardian or interpreted for them.

N.L.: 05-0823 Page 7 of 9 August 17, 2023

- c. Client name, birth date, and CCS number.
- d. Purpose of casting.
- e. Requirement for frequent cast applications and removal.
- f. Approximate duration of casting series.
- g. Time needed to apply cast(s).
- h. Activity limitations while wearing cast(s).
- i. Process to remove cast(s) at the end of series or in case of an emergency.
- j. Potential complications.
- k. Indications for termination of casting.
- I. Acknowledgement by client/parent/legal guardian.
- m. Date and signature of client/parent/legal guardian.
- n. Date and signature of witness
- Emergency Removal: Emergency cast removal instructions will be provided to the client/parent/legal guardian on CCS letterhead. Those instructions will include the following:
  - a. Identifying information for the client to include name, date of birth, CCS number, and diagnosis.
  - b. Statement directing the family to contact the MTU during normal business hours.
  - c. Location of facility(s) that are available for emergency removal.
  - d. Name and contact information for the referring physician.
  - e. Location and contact information for the assigned MTU and casting therapist.
  - f. Anatomical location of cast(s) and purpose of cast(s).

N.L.: 05-0823 Page 8 of 9 August 17, 2023

- g. Statement providing information that the cast is not for fracture treatment.
- h. Statement requesting that cast(s) be removed if the client is showing signs of intolerance.
- i. Signature and date of referring physician and treating therapist.
- 6. Quality Assurance (QA)/Follow-Up: Each county will develop a mechanism for QA. This will be completed on every client who undergoes serial casting to ensure the highest level of care. The QA process should ensure that all procedures were appropriately followed, as well as a determination as to whether the casting achieved the desired goal, had a functional impact, and if there were any complications.
- 7. **Casting Equipment and Supplies:** Therapists approved to cast CCS clients are required to:
  - a. Confirm availability of equipment (including scissors, cast cutter, cast spreader, and utility knife) and material supplies (including padding, cast tape, etc.) before scheduling cast application.
  - b. Maintain equipment and supplies together in a dedicated space or a portable kit; all equipment and supplies must be available without requiring the clinician to leave the client during casting. Keeping this kit organized reduces casting time by 15-20 minutes.
  - c. Confirm that all casting tools are in good working condition.
    - i. Scissors are sharp and backup scissors are available in case of breakage.
    - ii. Cast cutter blade is sharp, securely attached, and appropriate for type of casting material.
    - iii. Cast cutter and blade do not heat excessively during use.
    - iv. Spare cast cutter blade is available.
  - d. Prevent use of equipment that is dull, unreliable, or not maintained in good working condition.
  - e. Identify location of back-up equipment in case of equipment failure.

N.L.: 05-0823 Page 9 of 9 August 17, 2023

- f. Clean tools to ensure hygiene and good working condition.
- g. Use only tools/supplies that are in good condition.

## IV. POLICY IMPLEMENTATION

Effective the date of this letter, a county CCS MTP may implement a serial casting program in compliance with the guidelines established in this numbered letter. Cost of casting supplies will be recorded in the MTP Quarterly Report of Expenditures. Include a statement that this is an additional "materials cost" and reference this NL as the authority for the expenditure(s). Documentation of therapist time spent serial casting can be recorded as a treatment procedure using an approved Medi-Cal code.

If you have any questions regarding this N.L., please contact the ISCD Medical Policy team via email at <a href="ISCD-MedicalPolicy@dhcs.ca.gov">ISCD-MedicalPolicy@dhcs.ca.gov</a>.

Sincerely,

## **ORIGINAL SIGNED BY**

Cortney Maslyn, Chief Integrated Systems of Care Division Department of Health Care Services

Attachment:

Attachment 1: References

# References

Autti-Ramo I, Suoranta J, Anttila H, Malmivaara A, Makela M. Effectiveness of upper and lower limb casting and orthoses in children with cerebral palsy: an overview of review articles. *Am J Phys Med Rehabil.* 2006;85(1):89-103.

Balasankar G, Luximon A, Al-Jumaily A. Current conservative management, and classification of club foot: A review. *J Pediatr Rehabil Med.* 2016;9(4):257-264.

Chapter 4, State Department of Health Services, California Children Services, Bulletin 83-100, Section 4.8.5, Issued March 15, 1984.

Cusick, B.D. (1990). Progressive casting and splinting for lower extremity deformities in children with neuromotor dysfunction. Tucson, AZ: Therapy Skill Builders.

Glanzman AM, Flickinger JM, Dholakia KH, Bonnemann CG, Finkel RS. Serial casting for the management of ankle contracture in Duchenne muscular dystrophy. *Pediatr Phys Ther.* 2011;23(3):275-279.

Ho ES, Zuccaro J, Klar K, et al. Effectiveness of non-surgical and surgical interventions for elbow flexion contractures in brachial plexus birth injury: A systematic review. *J Pediatr Rehabil Med.* 2019;12(1):87-100.

Lannin NA, Novak I, Cusick A. A systematic review of upper extremity casting for children and adults with central nervous system motor disorders. *Clin Rehabil*. 2007;21(11):963-976.

Main M, Mercuri E, Haliloglu G, Baker R, Kinali M, Muntoni F. Serial casting of the ankles in Duchenne muscular dystrophy: can it be an alternative to surgery? *Neuromuscul Disord.* 2007;17(3):227-230.

Macias-Merlo L, Bagur-Calafat C, Girabent-Farres M, Stuberg WA. Standing Programs to Promote Hip Flexibility in Children with Spastic Diplegic Cerebral Palsy. *Pediatr Phys Ther.* 2015;27(3):243-249.

McNee AE, Will E, Lin JP, et al. The effect of serial casting on gait in children with cerebral palsy: preliminary results from a crossover trial. *Gait Posture*. 2007;25(3):463-468.

Milne N, Miao M, Beattie E. The effects of serial casting on lower limb function in children with cerebral palsy: a systematic review with meta-analysis. *MBC Pediatr.* 2020;20:324. <a href="https://doi.org/10.1186/s12887-020-02122-9">https://doi.org/10.1186/s12887-020-02122-9</a>.

Novak, I., Morgan, C., Fahey, M. et al. State of the Evidence Traffic Lights 2019: Systematic Review of Interventions for Preventing and Treating Children with Cerebral Palsy. *Curr Neurol Neurosci* Rep. 2020;20, 3. <a href="https://doi.org/10.1007/s11910-020-1022-2">https://doi.org/10.1007/s11910-020-1022-2</a>

Novak I, McIntyre S, Morgan C, Campbell L, Dark L, Morton N, et al. A systematic review of interventions for children with cerebral palsy: state of the evidence. *Dev Med Child Neurol.* 2013;56:885-910.

Ponten E. Management of the knees in arthrogryposis. *Journal of Children's Orthopaedics*. 2015;9(6):465-472.

Renner N, Wirth SH, Osterhoff G, Boni T, Berli M. Outcome after protected full weightbearing treatment in an orthopedic device in diabetic neuropathic arthropathy (Charcot arthropathy): a comparison of unilaterally and bilaterally affected patients. *BMC Musculoskelet Disord*. 2016;17(1):504.

Williams CM, James AM, Tran T. Metatarsus adductus: development of a non-surgical treatment pathway. *J Paediatr Child Health*. 2013;49(9):E428-433.

Yoyos DI. A Four-year Review of Delayed Initial Treatment of Patients with Congenital Talipes equinovarus in a General Hospital. *Malays Orthop J.* 2015;9(1):11-13.