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GAVIN NEWSOM
GOVERNOR

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TO: All California Children's Services County Administrators, Medical Directors, Supervising Therapists, Medical Therapy Units, Medical Therapy Unit Medical Directors, and Therapy Consultants

SUBJECT: Authorization Criteria for Selective Dorsal Rhizotomy

I. PURPOSE

The purpose of this California Children's Services (CCS) Numbered Letter (N.L.) is to provide guidance to CCS counties regarding the authorization of selective dorsal rhizotomy (SDR).

II. BACKGROUND

SDR is a neurosurgical procedure for individuals with severe spasticity due to cerebral palsy or spinal cord injury. In the procedure, select sensory nerve rootlets of the spine are cut to reduce spasticity and improve mobility and quality of life.¹

SDR can lead to improved or maintained ambulatory level, greater range of motion, improved mobility, and increased functional independence for ambulatory children with spastic diplegia.^{2,3,4} Although less-well studied, SDR has also been shown to reduce spasticity and promote ease of care and quality of life in non-ambulatory children with severe spasticity.^{5,6} Studies indicate that the majority of patients who receive SDR experience long-term improvement in spasticity.⁷

SDR is not indicated for individuals who have mixed cerebral palsy with predominant dystonia or ataxia, severe scoliosis, or severe depression.⁸ Following the criteria presented in this policy raises the likelihood of better outcomes following SDR.⁹

III. POLICY

- A. CCS clients may be considered for a SDR procedure if they meet criteria 1 through 6 for ambulatory clients or criteria 1 through 5 for non-ambulatory clients, and the request is submitted by a CCS-paneled neurosurgeon at a CCS-approved tertiary hospital.

1. Client is managed by a Hypertonicity Special Care Center (SCC).
2. Client has all of the following characteristics:
 - a. Diagnosis of spasticity due to congenital or acquired condition (e.g. cerebral palsy or traumatic injury of the brain or spinal cord).
 - b. The client is three to ten years of age for ambulatory clients with spastic diplegia and over three years of age for all other clients.
 - c. The condition is not progressive.
 - d. If the spasticity is caused by a traumatic injury, at least two years have passed since the time of injury.
 - e. There is no dystonia, rigidity, or cerebellar ataxia.
 - f. There are no significant contractures that would limit progress once spasticity is decreased.
 - g. There is no significant scoliosis.
 - h. There is no significant femoral head subluxation, or the rhizotomy is necessary before hip surgery.
 - i. There is significant limitation of function, mobility and/or gait due to spasticity, but there is good trunk control, good lower extremity antigravity strength and at least some degree of ambulation with or without devices, typically Gross Motor Function Classification System (GMFCS) II or III.
3. Client has received all of the following spasticity treatments, if clinically indicated, with little or no improvement based on Gross Motor Function Measure (GMFM) assessment(s) or equivalent:
 - a. Full compliance with active physical and/or occupational therapy or equivalent home program for a minimum of one year as documented by the Medical Therapy Unit (MTU) or other authorized treating therapists.
 - b. Botulinum toxin A injections, maximum recommended frequency and dosage over at least a six-month period.
 - c. Oral baclofen, or other oral antispasticity medications.

4. High resolution magnetic resonance imaging studies confirm that there is no damage to basal ganglia, thalami, or other areas of the brain controlling posture or coordination.
5. The Hypertonicity SCC has completed an assessment of the client and determined/performed the following:
 - a. Client and caregiver(s) have access to inpatient and outpatient rehabilitation facilities either on site or in collaboration with a local rehabilitation unit.
 - b. If the client is a Medical Therapy Program (MTP) client, then:
 - (1) The requesting neurosurgery team will contact the MTU to obtain information on therapy adherence, attendance and participation.
 - (2) The MTU staff is in agreement that SDR is necessary.
 - c. Client has access to care from MTU staff therapists or rehabilitation services, if needed.
 - d. Client and caregiver(s) education about goals of the surgery and if indicated, post-operative therapy.
 - e. SDR will not compromise any functional skills that may rely on increased tone, as determined by the Hypertonicity SCC and Medical Therapy Conference (MTC) team, if applicable.
 - f. A detailed standardized functional assessment (GMFM or equivalent) has been completed by the Hypertonicity SCC within three months of SDR surgery date.
6. The SCC has shared findings and recommendations with the referring MTC, which is in agreement with the treatment plan.
7. For ambulatory patients, in addition to items 1-5 above the SCC team has determined that the following are present:
 - a. Client, with support of caregiver(s), is able to follow directions and participate in therapy.
 - b. Client and caregivers have the ability to participate in an intensive rehabilitation process, including inpatient and outpatient rehabilitation. This includes caregiver availability and access to necessary transportation.

- c. Client and caregiver(s) understand the goals established for the surgery and will be able to follow a rigorous post-surgery rehab program (physical and occupational therapy).
 - d. Three-dimensional (3D) gait analysis demonstrates that ambulation is not dependent on the spasticity, and gives a quantitative measure of the need for and predicted success of the surgery. If 3D gait analysis is not available at the center, then the SCC should refer the client to receive this analysis at another location.
8. If the criteria described above are not met, but the requesting provider has clinical documentation and/or scientific evidence that may be relevant to the request, the provider may submit this additional documentation to the Integrated Systems of Care Division (ISCD) Medical Director or designee for consideration during the eligibility determination.

IV. POLICY IMPLEMENTATION

- A. Providers who request authorization for a client to receive SDR shall submit:
 1. A CCS Service Authorization Request (SAR).
 2. Client-specific goals of SDR.
 3. Documentation indicating that the client has fulfilled the requirements described in section III above.
- B. For all SDR authorizations, requesting providers must submit the documentation in section IV.A.1-3 as follows:
 1. For clients residing in an independent county, requests shall be submitted to the CCS County Office for processing.
 2. For clients residing in a dependent county, requests shall be submitted to the Special Populations Unit by email at CCS_Operations@dhcs.ca.gov or via secure RightFax number, (916) 440-5768.
 3. For clients residing in a county covered by the Whole Child Model, requests shall be submitted to, and processed by, the managed care plan.
- C. CCS shall authorize a gait lab analysis for clients receiving SDR for ambulatory clients no more than six months prior to SDR.
- D. Standard authorization is for laminectomy of one or two segments. Authorization of laminectomy of more than two segments requires additional justification and review by the ISCD Medical Director or designee.

E. The CCS Program may authorize the following post-SDR care:

1. Inpatient stay: the expected length of stay at acute hospital is no more than one week; extensions may be granted when additional time in an acute care setting is medically necessary.
2. Inpatient rehab: when medically necessary, the CCS Program may authorize the client to stay at inpatient rehab for up to two months, with justification based on pre-operative (GMFCS) level and continued achievement of goals set by the treating team.
3. Outpatient rehab: the client may receive medically necessary outpatient rehab services when intensive services are needed. For ambulatory clients, the intensive rehabilitation may include sessions two to five days per week for approximately six months. Return to maximum function may take one year or more. For MTP clients, services should be provided at the MTU up to the capacity of the MTU. If MTU staff cannot provide the medically necessary services at the required frequency then the services shall be authorized to the outpatient rehabilitation center or other facility with qualified staff. For clients who require assistance with hygiene, the CCS Program may authorize short-term outpatient rehab/home health services until the client is stable and can be followed by outpatient services, if necessary.

F. The CCS facility performing SDR shall retain the following documentation and submit to ISCD upon request:

1. Documentation that the client met criteria in Section III.
2. Outcome, specifically whether SDR goals were achieved, and client's functional mobility score improved or maintained.
3. Post-SDR GMFM (or equivalent) scores around three months and one year after SDR.
4. GMFCS level.

If you have any questions regarding this N.L., please contact the ISCD Medical Director or designee, via email at ISCD-MedicalPolicy@dhcs.ca.gov.

Sincerely,

ORIGINAL SIGNED BY

Roy Schutzengel

Medical Director
Integrated Systems of Care Division

¹ Hypertonia Management in Cerebral Palsy: Past ideas and lessons, current practice and outcomes, future innovations and possibilities, AACPDM, October 2018

² Evidence supporting Selective Dorsal Rhizotomy, Park, 2018

³ Long-term outcomes after selective dorsal rhizotomy: a retrospective matched cohort study, Munger, 201

⁴ [https://www.thelancet.com/journals/lanchi/article/PIIS2352-4642\(19\)30119-1/fulltext](https://www.thelancet.com/journals/lanchi/article/PIIS2352-4642(19)30119-1/fulltext)

⁵ Selective dorsal rhizotomy as an alternative to intrathecal baclofen pump replacement in GMFCS grades 4 and 5 children. Childs Nerv Syst. 2016 Feb; 32(2):321-5. doi: 10.1007/s00381-015-2950-9. Epub 2015 Nov 9.

<https://www.ncbi.nlm.nih.gov/pubmed/26552383>

⁶ Selective dorsal rhizotomy for the treatment of severe spastic cerebral palsy: efficacy and therapeutic durability in GMFCS grade IV and V children. Acta Neurochir (Wien). 2018 Apr; 160(4):811-821. doi: 10.1007/s00701-017-3349-z. Epub 2017 Nov 7.

<https://www.ncbi.nlm.nih.gov/pubmed/29116382>

⁷ Ventral and dorsal rhizotomy, Ghany 2016, (1)

⁸ <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5067263/>

⁹ Hypertonia Management in Cerebral Palsy: Past ideas and lessons, current practice and outcomes, future innovations and possibilities, AACPDM, October 2018