TO: Directors, Exceptional Children Programs
            Speech-Language Pathologists

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SPEECH SOUND DEVELOPMENT

Several recent studies have produced new and consistent normative data on speech sound development. The following information may be helpful to problem-solving teams and/or IEP Teams when answering questions about whether a student is suspected of a disability or is eligible as Speech-Language Impaired when the primary area of concern is speech sounds/articulation.

The current normative data may only be helpful in determining a disability based on the sound development chart below where 90% of children have developed these phonemes at the given ages.

Table 1. - Average English consonant acquisition using the 90% - 100% criteria from McLeod and Crowne (2018) and Crowe and McLeod (2020).		
Average Age (Years; Months)	McLeod and Crowe (2018)	Crowe and McLeod (2020)
Sample	8 studies of 7,369 children from 6 countries[a]	15 studies of 18,907 children from the United States[a]
2;0–2;11	/p/	/p, b, d, m, n, h, w/
3;0–3;11	/b, m, d, n, h, t, k, g, w, ŋ, f, j/	/t, k, g, ŋ, f, j/
4;0–4;11	/l, ʤ, ʧ, s, v, ʃ, z/	/v, s, z, ʃ, l, ʧ, ʤ/
5;0–5;11	/ɹ, ʒ, ð/	/ð, ʒ, ɹ/
6;0–6;11	/θ/	/θ/

[a]That used the 90%–100% criteria.

In order to be determined eligible for special education all three prongs must be present.
A student must:
1. Have a disability;
2. The disability causes an adverse effect on participation in the general curriculum; and

3. The disability requires specially designed instruction and related services, as appropriate.

Documented Disability- Prong 1

Assessment information on the speech sound production may be collected from standardized testing, conversational samples, dynamic assessment, stimulability testing, or intelligibility measures. Normative data, alone, is never enough to determine if a student exhibits a disability. These multiple sources of data must be considered alongside the policy definition of speech-language impairment and be inclusive of the required evaluations for this disability category.

Adverse Effect – Prong 2

The IEP team will then need to consider if the disability has a adverse effect on academic achievement or functional performance. Assessment artifacts may include student, parent and teacher report, story retell activities, phonological skills, spelling, grapheme/phoneme knowledge, and word reading.
Consideration of social /emotional well-being and how the disability affects student performance is an aspect of functional performance and important to consider not only in classroom settings but in other areas of school (playground, cafeteria, physical education etc.) Observations, questionnaires and interviews of the student, parent and teacher may be useful in determining negative impact on functional performance.

Specially Designed Instruction – Prong 3

Finally, the IEP team will determine if the student requires specially designed instruction. Dynamic assessment, stimulability testing and responsiveness to interventions carried out by the speech-language pathologist or teacher are useful assessments for making this determination.

Important Considerations for Suspecting a Speech-Language Disability
Problem-solving teams and/or IEP Teams should carefully consider second language acquisition, dialect, and ensure that the three prongs of IDEA eligibility are clearly related to the disability suspected. If a student is a second language learner, the team should consider if the sounds in question exist in the student's native language. This link has phonemic inventories for different cultures at: https://www.asha.org/practice/multicultural/phono/.Similarly, the team should consider dialectical variations that may be appropriate for the geographic region or culture of the student.

Over and under identification of students for special education is an important consideration. Teams should make sure that only students who meet the three prongs of eligibility are served. Some students who exhibit a mild distortion of single phonemes may be helped through a responsiveness to instruction model where the speech-language pathologist provides interventions specific to the instruction, curriculum, or environment to groups of students for a finite period. The purpose of these interventions is to inform instruction on grapheme/phoneme relationships so that students are successful in reading, spelling, writing, and speech sound production in general education. If at any time a disability is suspected, the student should be referred for assessment under IDEA. As a reminder, intervention groups may not be combined with students receiving specially designed instruction as part of an IEP.

Specially Designed Instruction

A variety of evidence based practices for the remediation of speech sound disorders are available at: https://www.asha.org/practice-portal/clinical-topics/articulation-and-phonology/ Teams should consider a variety of service delivery options including pull out, classroom based and "burst or blast" 5-10-minute sessions, 3-4 times per week.

References:

Crowe K., McLeod S. (2020). Children's English consonant acquisition in the United States: A review. American Journal of Speech-Language Pathology. doi:10.1044/2020_AJSLP-19-00168

Ireland, Marie; McLeod, Sharynne; Farquharson, Kelly; Crowe, Kathryn Evaluating Children in U.S. Public Schools With Speech Sound Disorders, Topics in Language Disorders: October/December 2020 - Volume 40 - Issue 4 - p 326-340. doi: 10.1097/TLD.0000000000000226

McLeod S., Crowe K. (2018). Children's consonant acquisition in 27 languages: A cross-linguistic review. American Journal of Speech-Language Pathology, 27, 1546–1571. https://doi.org/10.1044/2018_AJSLP-17-0100