In eighteen years of working as a speech-language pathologist (SLP), I have had the opportunity to work directly with a young man with agenesis of the corpus callosum (ACC) over a twelve-year period. Through my association with the ACC Network, I also have had the opportunity to consult with many other speech-language pathologists concerning individuals with ACC. I have been impressed with the wide range of communication issues that arise with individuals with ACC. Whether your child is nonverbal or displays subtle pragmatic or social problems, it is important for a speech-language pathologist to assess the child's communication skills as early in the education process as possible. The evaluation process at its best is collaborative. Here are some suggestions of what a parent/caregiver can contribute to the evaluation:

· **Bring a list of concerns.** Write down all of your concerns and questions so the SLP can directly address them orally or in the evaluation report.

· **Describe your child's medical condition.** Bring or mail ahead all relevant medical reports. Many SLPs are not familiar with the condition of ACC, so a brief summary of what it is and how it affects your child would be helpful. A copy of a CT scan or MRI and neurological report would also be useful.

· **Describe early experiences concerning feeding.** Since oral structures involved with speech production and feeding are similar, information regarding early feeding experiences is important. Was your child able to breastfeed or suck from a bottle with ease? When did your child manage solid food and feeding independently? Was feeding a pleasant experience for you and your baby? How does your child eat now? Are there any foods or liquids that are avoided? Does your child ever choke or cough when eating?

· **Describe early communication experiences.** Developmental milestones such as when the first word and word combinations were spoken are important as well as descriptions of early play styles and preferences and interactions with siblings and others. What were some of your child’s first words and word approximations (for example, sounds your child made consistently to represent an object like “ba” for ball)? Did he or she have preferences for certain words and sounds? When your child acquired new words, did they remain in his or her vocabulary or disappear not to be heard again? If your child is not speaking, focus on describing how he or she communicates nonverbally such as by eye contact, body motion, and gesture. Any videotapes of your child at play or audiotapes of your child talking would be very useful.

· **Describe a typical day at home or school for your child.** What kinds of communicative opportunities exist? With whom does your child appear most comfortable communicating? Does he or she have opportunities to communicate in formal contexts such as a classroom or church in addition to the informal context of home?
The nature of the speech-language or communication evaluation will depend on the particular needs of your child. For the child who is nonverbal, the SLP will help to determine why the child is not speaking and help you develop an effective communication system with your child, building upon what is already working for you both. The Hanen Early Language program {252 Bloor Street West, Suite 3-390, Toronto, Ontario, Canada M5S1V5, (416) 921-1073} is a wonderful resource for SLPs and parents to use with preschool children who are not yet verbal or are struggling with developing early speech and language skills. It focuses on language stimulation techniques that can be used by families in everyday contexts at home and preschool.

If your child is nonverbal or significantly delayed in acquiring verbal skills, your SLP may encourage the use of another form of communication such as sign language or a picture board. Usually these forms of nonverbal communication are used in addition to other language stimulation techniques to augment the child’s communication system. Often their use decreases communicative frustration and in some cases actually stimulates oral language development.

My review of several case studies involving individuals with ACC indicates that your child with ACC is “at risk” for certain specific communication problems. These areas include developmental apraxia of speech, delays in the acquisition of phonological skills, and difficulties in the acquisition of pragmatic or social communication skill.

**Developmental Apraxia of Speech**

This is a speech disorder that occurs because there is a break-down in the motor programming for speech. The child is hearing and perceiving sounds accurately but cannot make the articulators consistently produce the sounds. Some clues that your child may have developmental apraxia of speech include generally poor speech intelligibility (you can understand very little of what your child says), many moments of pausing when he or she is talking and groping behaviors with the mouth when words are attempted, an overall monotone quality to speech production, and an overall inconsistency with speech errors (instead of always saying w/ r as in wed/ red she produces the word in a different way with each attempt). Developmental apraxia of speech is a serious communication problem involving both speech and language; however, most children respond to frequent, consistent speech therapy which should begin as early as possible.

**Phonological Awareness**

Phonological awareness refers to the conscious awareness of the sound structure of language including knowledge that words are composed of syllables and sounds. In the past two decades, research in many educational fields has supported a strong correlation between phonological awareness skills and reading success. The acquisition of phonological awareness skills begins in the preschool years and continues as the child progresses through school. Many schools now include a screening of phonological awareness skills as part of the kindergarten screening process. Since your child with ACC may be “at risk” for difficulties in this area, a speech-language evaluation should include a test of these skills. If your child is having difficulty with reading, writing, and/ or spelling, an evaluation of phonological awareness skills should occur. Appropriate tests of phonological awareness include The Phonological Awareness Test (Robertson and Salter), Lindamood Auditory Conceptualization Test (Lindamood and Lindamood), or The comprehensive Test of Phonological Process in Reading (Wagner and Torgersen).
In reviewing case studies of children and young adults with ACC, the most commonly reported communication difficulty was in the area of pragmatics/social skills. These problems may be apparent in the toddler/preschool years or may not surface until the language of socialization becomes more abstract and complex in the early adolescent years. If your child is experiencing difficulty with peer relationships, it is important to have a social skills assessment by an SLP.

There are very few standardized tests that examine pragmatic skills. Some that may be helpful are The Test of Pragmatic Languages (Phelps-Teraski and Phelps-Gunn) and The Test of Problem Solving (Zachman, Huisingh, Barrett, Orman, and LoGiudice). It is important to remember, however that these tests create artificial contexts for language, and the child should be observed in real social situations with their peers as well.

I recently had a child complete with great accuracy all items on the Test of Pragmatic Language. When I complimented him on his performance, he responded by saying “I know those are the things you’re supposed to say, but those aren’t the things I say with my friends!” In this case, it was very important also to observe him playing and conversing with friends and to take samples of his language in these contexts.

Standardized tests are important instruments to use in assessing language skills and are required in most school districts for Special Education identification purposes; however, they have their limitations, especially when examining social skills. SLPs can also use what are considered informal language samples, in which the SLP records what the child is saying in at least two contexts (for example, conversing with friends in the classroom or conversing with a parent) and a narrative language samples in which the clinician records the child re-telling or creating a story or giving an explanation. These samples are then transcribed and analyzed by the SLP. Both of these measures examine the child’s language skills at the discourse level as opposed to the word or sentence level as with most standardized tests. Languages sampling in particular also provides a sample of language from everyday contexts and may give a more accurate pictures of your child’s language skills. Language sampling and narrative sampling are time consuming and work intensive for the SLP but provide valuable information regarding your child’s expressive language skills and are measures that should be included in a comprehensive speech-language evaluation.

Finally, it is important to share with your SLP your knowledge of your child’s condition and your observations of his or her communication skills as well as the fact that given the diagnosis of ACC your child may be at risk for developmental apraxia of speech, difficulties with phonological awareness skills and/or pragmatic skills. Early identification and treatment of any communication difficulty is critical to academic and social success. The process is enhanced when parents are active participants on their child’s education team.

If you need information to help you locate a qualified SLP in your area, contact the following resources:

Argentina – Asociacion Argentina de Logopedia, Foniatria y Audiologia,
phone: 4815-5997
email: asalfa@ciudad.com.ar
Australia – Speech Pathology Australia  
phone: +61 3 9642 4899  
email: office@speechpathologyaustralia.org.au

Canada – Canadian-Speech-Language-Hearing Association  
phone: 800-259-8519  
url: www.caslpa.ca

Hong Kong – Hong Kong Association of Speech Therapists  
email: hkasts@netvigator.com

Japan – Japanese Association of Speech-Language-Hearing Therapists  
email: ZAJOO@nifty.ne.jp

Korea – Korea Speech and Hearing Association  
phone: +82-53-629-7322  
email: dhkwon@biho.taegu.ac.kr

New Zealand – New Zealand Speech-Language Therapists Associate  
phone: +64 3 235-8257  
email: exec@nzsta-speech.org.nx

Saudi Arabia – Jeddah Institute for Speech and Hearing  
phone: (966-2) 667-5311  
email: info@jish.com

Singapore – Singapore’s Speech, Language and Hearing Association  
phone: 3214549  
email: speech@pacific.net.sq

South Africa – The South African Speech-Language-Hearing Association  
phone: (011) 726 5014  
url: http://www.saslha.co.za/

Taiwan – Professional Association of Speech-Language Pathologists in Taiwan  
email: shchen@vghtpe.gov.tw

United Kingdom – United Kingdom’s Royal College of Speech and Language Therapists  
Switchboard in the UK: 020-7378 1200  
email: postmaster@rcit.org

United States – American Speech Language-Hearing Association  
phone: 301-897-5700  
url: www.asha.org
The Callosal Connection is a newsletter produced by the:

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Fax: 207-581-3120
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Website: http://umaine.edu/edhd/about/research/acc/

Note: please be advised that after many dedicated years of service, the ACC Network suspended operations as of April 15, 2009.*

*However, the University of Maine ACC-L listserv e-mail discussion/support group is still active and operating. The ACC Listserv was created by the co-founders of the ACC Network, Gary and Kathy Schilmoeller, who are parents of a grown son with ACC.

Join (or Leave) the ACC-L Listserv: http://lists.maine.edu/cgi/wa?SUBED1=acc-l&A=1