Speech and Language Module

Introduction

Welcome! This page is intended to provide information about the Speech-Language Pathology discipline at the CHDD. The information is designed for speech and language graduate trainees, allied health professionals, and parents/caregivers of children with speech, language and/or communication concerns. We trust that this website will prove a useful resource about speech and language development and disorders.

Learning objectives

- Describe the core principles of practice for speech-language pathology.
- Describe the unique role that the speech-language pathologist (SLP) contributes to an interdisciplinary assessment.
- Identify the types of assessment tools and strategies used by SLPs.
- Describe how intervention decisions are made.
- List two intervention strategies that are typically employed by SLPs.
- Describe how his or her own discipline might effectively communicate and collaborate with occupational therapy, physical therapy, social work, nutrition, psychology, audiology, and pediatrics at the CHDD

History

Speech-language pathology is a relatively young profession with links to many other disciplines. Here are some landmarks in the history of speech-language pathology.

Professionals in our field were first known as "speech correctionists" and were concerned chiefly with speech problems such as stuttering. They came to practice speech correction out of established fields including medicine, education, and elocution.

Alexander Melville Bell and his son, Alexander Graham Bell were elocutionists, and both developed new ways of understanding, analyzing, and transmitting speech.

In **1872**, the elder Bell designed a method, called Visible Speech, that provided a visible code indicating the position of the throat, tongue, and lips in the production of various speech sounds. These symbols were used by father and son as a speech treatment technique for teaching speech to those with oral speech difficulties.

Early in the profession's history, several different interest groups formed to promote education and understanding of speech difficulties. One group of speech correctionists, who were originally schoolteachers, called itself the National Society for the Study and Correction of Speech Disorders, began around **1918**.

In **1925**, the group that would eventually become the American Speech-Language Hearing Association (ASHA) was formed. It was originally known as the American Academy of Speech Correction.

Pioneers in the field, including Charles VanRiper, focused on developing a scientific base for research and practice in the field. Their efforts included:

- Creating and forwarding diagnostic taxonomies of the causes and conditions associated with different communication disorders
- Developing diagnostic tests to measure client performance in a variety of areas
- Collecting normative data to be used as standards for differentiating abnormal from normal communication performance.

VanRiper was also instrumental in directing attention to the social implications of communication disorders. He stated (**1939**) "a severe speech defect, because it provokes rejection and other penalties due to its communicative unpleasantness, causes a low in self-esteem, in ego strength. Thus, in all it's various aspects and functions, speech is defective when it calls attention to itself, interferes with communication, or causes its possessor to be maladjusted."

Miller (**1951**) supported VanRiper's ideas and stated "communication, if it is anything at all, it is a social event." Miller was one of the first to present these ideas in print. In fact, when asked to teach a class on communication as a social process, he discovered no text existed from which to teach. As a result, he wrote Language and Communication.

Evolution

Initially, the Handbook of Speech Pathology defined a speech disorder as "any deviation of speech outside of the range of acceptable variation in a given environment" (Travis, 1957, 1971, as cited in Prutting, 1982).

As the profession grew, so did the definition of a speech disorder. As stated previously, the idea of the social impact of a communication disorder became more and more important. In 1957, Backus (as cited in Prutting, 1982) "therapy should be conceived of as including the use of speech in social situations." She felt therapy should include psychological concerns in addition to traditional therapy methods.

Over time, "speech disorder" changed to reflect a more inclusive idea of communicative disorders and difficulties. This also brought about new ideas of assessment. One of the landmark applications was the use of mean length of utterance (MLU) in describing typical language development (Brown, 1973). This measure continues to be a useful description of language development in young children.

The initially somewhat narrowly focused field of "speech correction" grew to include a broad range of communication disorders. The effects of this expansion were evident in university curriculum that drew from psychology, neurology, medical science, genetics, physics, psychology, and education.

Today, the definition of communication disorder has been expanded to include the ability to comprehend or express ideas due to physical, neurological, developmental, and motoric concerns.

References:

www.acsu.buffalo.edu/~duchan/history.html

Prutting, C (1982). Scientific inquiry and communicative disorders: An emerging paradigm across six decades. In T. Gallagher & C. Prutting (Eds.), *Pragmatic assessment and intervention issues in language*. San Diego: College-Hill Press, 1983.

Additional resources on the history of speech-language pathology can be found through the American Speech-Language Hearing Association at www.asha.org.

Description

Scope of practice

Since its beginnings in the early 1900's speech-language pathology has grown to encompass the study and facilitation of communication in individuals across the lifespan. Speech-language pathologists work in many different settings providing services for individuals with communication disorders including, but not limited to:

- Aphasia
- Voice
- Articulation and phonology
- Stuttering
- Child language disorders
- Those needing augmentative and alternative communication (AAC)
- Dysphagia

Settings

Speech-language pathologists work in many different settings including:

- Schools
- Hospitals
- Clinics
- Private practice
- Universities

Knowledge

- Speech-language pathologists must obtain a graduate education. This is mandated by the Council For Clinical Certification (CFCC) of ASHA.
- Following the receipt of a graduate degree, SLPs are eligible to apply for certification which involves:
    - a supervised Clinical Fellowship (CF).
    - a passing score on a national examination.
    - In most states, speech-language pathologists also must comply with state regulatory (licensure) standards to practice and/or have state education certification
    - Many SLPs choose to acquire and maintain ASHA's Certificate of Clinical Competence, also known as the CCCs.

Examples of Practice

- A school speech-language pathologist works with children age 3 through 22 in public and private schools. The school SLP often works on an interdisciplinary team including the social worker, special education staff, school psychologist, occupational therapist, physical therapist, general education staff, and administrators. School SLPs are responsible for diagnosing and treating communication disorders which often include articulation, fluency (stuttering), and language concerns.

- An SLP in a hospital setting may work with many different age groups. SLPs diagnose and treat problems with feeding, swallowing, voice, acquired speech and language disorders from traumatic brain injury or stroke.
- SLPs may also work in private practice with all different ages for myriad communication difficulties.
- Some SLPs choose to work at a university as a professor, clinical supervisor, and/or researcher. This typically requires a PhD

Clinical Practice

At the CHDD, the goals of speech-language pathologists include:

- Diagnosing communication impairments
- Making treatment recommendations
- Providing guidance to parents and professionals on educational placement

Roles

- Perform testing for children with suspected communication impairments
- Provide follow-up assessments for children with confirmed communication impairments
- Consult with other professionals at the CHDD and in the community
- Work as part of an interdisciplinary team including but not limited to OT, PT, social work, audiology, pediatrics, and nutrition.

Assessment

SLPs conduct a case history for each child scheduled for assessment at the CHDD. Based on the details of the case history, the SLP may choose to assess the child, or that an assessment is not warranted.

Assessment is different for every child at the CHDD, depending on the concerns for that child. Most testing sessions include measures of:

- Language
- Articulation
- Social language use

Testing is done in a variety of ways including:

- standardized tests
- language samples
- parent/caregiver interview
- observation of interactions with parents/caregivers

Intervention

Direct intervention services are not provided within the CTU at the CHDD. SLPs often provide treatment recommendations following an assessment and meeting with the interdisciplinary team and caregivers. Recommendations may include:

- Specific goals for increasing speech and/or language skills

- Referral to private clinics
- Recommendation for appropriate school placement
- Referral for assistance with augmentative and alternative communication devices
- Parent/caregiver education programs

Challenges

The diagnosis of communication disorders is a complicated practice that often must be completed in one or two hour-long sessions. Due to the limited interaction with the child, the SLP relies on much collaboration with the parents and members of the interdisciplinary team in order to make the most informed clinical decisions.

Relationships with Other Disciplines

At the CHDD, the SLP has the unique opportunity to collaborate with a broad range of on-site professionals. The SLP works closely with occupational therapy, physical therapy, nutrition, psychology, and pediatrics on a regular basis when diagnosing and providing treatment recommendations for children.

Examples

- Consulting with the nutritionist for appropriate food choices for a child with a swallowing disorder following a traumatic brain injury
- Working with the occupational therapist to develop goals for co-treatment at school. For example, a young child may work on fine motor activities while targeting new vocabulary by cutting out and then categorizing pictures of new vocabulary items.
- Psychology and speech-language pathology often work closely together when determining a child's diagnosis. Though they use different tests, psychologists and SLPs are often measuring many domains including working memory, nonverbal skill, social relationships, and verbal processing.

Training and Certification

Certified speech-language pathologists are held to a high professional standard that includes:

- Completion of a graduate degree
- A supervised Clinical Fellowship (CF)
- A passing score on a national examination.
- In most states, speech-language pathologists also must comply with state regulatory (licensure) standards to practice and/or have state education certification
- Many SLPs choose to acquire and maintain ASHA's Certificate of Clinical Competence, also known as the CCCs.

Case Studies

Case 1: Olivia

Olivia is a 6-year-old who was late in talking and mostly unintelligible until nearly age 4. She is still often mistaken for a younger child because of her limited vocabulary and frequent grammatical errors. She recently moved to a new school and is having difficulty making friends. She has become very quiet around her peers and teachers.

Assessment: Based on this profile the following concerns were noted and assessment recommendations made:

- **Receptive and expressive language**:*Clinical Evaluation of Language Fundamentals-4th edition (CELF-4)* or the *Comprehensive Assessment of Spoken Language (CASL)*.
- **Vocabulary**: *Peabody Picture Vocabulary Test-3rd edition (PPVT-III)*
- **Articulation**: *Goldman-Fristoe Test of Articulation-2nd edition (GFTA-2)*

Nonstandardized measures would also be employed to help the assessment team get a clearer picture of Olivia's performance in different contexts. The SLP may observe interactions with one or more caregivers while assessing her abilities to use speech and language in conversation.

Diagnosis: After conferring with the interdisciplinary team, it was found that Olivia scored broadly within the average range on cognitive measures. Thus, it seems that Olivia presents with a communication and developmental profile consistent of a child with Specific Language Impairment. This was determined by performance on the *CELF-4*, *PPVT-III*, and marked difficulties in communication with her parents during the observation.

Case 2: William

William is a 2 ½ -year-old who rarely initiates communication with others. While he seems to know words when prompted, he does not often spontaneously produce words in sentences to engage others. William does not play with other children of his age at the daycare center, though he may play in the same space as them. He is often observed stacking blocks or organizing toys, but does not play imaginatively.

Assessment: Based on this profile the following concerns were noted and assessment recommendations made:

- **Receptive and expressive language**
  - Since William has noted difficulty using language, the SLP may choose to forego standardized testing and use observation of William's interactions with his

parents instead. During this time, the SLP will record the ways in which William is communicating and why he is communicating in those situations.
        - The SLP will perform several short tasks with William to get a better understanding of what words and grammatical structures he understands.
        - Parent report is very informative in an assessment like this one. The SLP may ask the parents to complete a questionnaire such as the *MacArthur Communication Development Inventory* (CDI).
    - **Social interaction**
        - The SLP would assess William's turn-taking social connectedness (sharing items of interest, maintaining eye contact, maintaining joint attention) during parent-child interaction and in structured play activities.
    - **Play behaviors**
        - These are also best assessed through observation. William's manipulation of toys would be observed to determine whether or not he is playing symbolically, as would be expected of a child his age.

Diagnosis: After discussing results of assessments from the rest of the interdisciplinary team, William meets the criteria for Autism Spectrum Disorder. This is due to his language delay, restricted/repetitive interests, and lack of social connectedness with others. His skills in these areas fall below those of his peers and negatively impact his ability to communicate with others.

Resources

In this section, you will find:

- Resources for Speech and Language Trainees including:
    - Supervisors
    - Assessment procedures
    - Sample reports
    - Links to other resources
- Resources for Allied Health Professionals
    - ASHA and evidence-based practice
    - Materials
- Resources for Parents/Caregivers
    - Community resources
- Glossary of Terms

SPL Trainees

Speech-language trainees at the CHDD may find information on their roles and responsibilities as part of the interdisciplinary diagnostic team. Resources include listings of the current supervisors, a guideline for assessments, sample reports, suggested readings/references and recommended websites.

Assessment Procedures

1. Check Scheduled Case
2. Client File
3. Pre-planning
4. Materials
5. The Evaluation
6. Debriefing
7. The Conference
8. Write the Report
9. Other Responsibilities

1. Check Scheduled Case

- Check for your scheduled client *at least one week prior* to an assessment. The long term schedule book is in Gretchen Glass' office (go down hall, east of front desk, turn left, first door).
- The typed weekly schedule is usually available the preceding week. (Found in the files room, the front desk, or in the SP/L office: 380.)
- The day of your eval, check the schedule at the front desk for any last-minute changes; also get the file # (UH#) off this daily schedule, as you'll need to put it on your eval report.
- You will not be notified of cancellations, and are expected at CHDD unless contacted by your supervisor.

2. Client File

- Files for clients that are scheduled to be seen are kept in a cabinet in the files room (near CD 207).
- If you take the file from the files room, put an OUT card in its place. Files may not leave CHDD.
- Closer to the eval, or for some returning clients, the file will be in medical chart form and available for check out at the front desk. Put your supervisor's name on the OUT card.
- Remember to maintain client confidentiality.

3. Pre-planning

- Fill out the Pre-Planning Information Sheet before meeting with your supervisor to pre-plan.
- Make sure to get accurate info about name, DOB, and UH number (when available) as these need to go on the report.
- Make a copy of the summary form to give to your supervisor the day of the eval; use the photocopier at the nurses' station.
- Sketch out a tentative eval plan to bring to your team pre-planning meeting.

4. Materials

- If you need to take home assessment materials to practice giving tests, make sure to sign them out and that you have them back to the clinic room before any other teams might need them.
- Let your supervisor know if there are not enough copies of any tests. The masters are in CHDD 380 and quick copies can be made at the nurses' station.
- All tests and materials are in the yellow cabinets in the assessment room (CHDD 314). Please keep this area neat, and put things back where you found them.
- A list of parent articles is kept in the assessment room cabinet; the articles themselves are kept in CHDD 380. You can take the notebook to the nurses' station to copy things you want to give to families at the case conference or sent with the report. Please don't take our originals!! And put articles back in the right place in the notebook.
- Also in 380 are a set of spiral notebooks containing resources such as: articles on disorders, intervention ideas, information about schools, etc. Feel free to copy anything in these notebooks, but again, please don't take the originals. If there is other information you feel you'd like to have for your practicum experience at CHDD, make a note of it and we will add readings or handouts on that topic.

5. The Evaluation

- The evals last 1.5 hours. You will need to leave the assessment room (CHDD 314) right afterwards if there is another team scheduled to do an eval.
- Make sure you have the UH number written down (sometimes it's not available until the day of the eval when it appears on the daily schedule and on the case file).
- The assessment room is always open, so you can set up before your eval. Office 380 is kept locked, except when one of the supervisors is in.
- Most clients get a hearing screen from Lisa Mancl in the first 5-10 minutes of the SLP eval timeslot. Check with her before going to meet your client, to see whether she's scheduled to do a screen and to make sure that she and her team are ready. They will either meet you in the lobby or as you come out of the elevator. Make a note of the results of the screen, as this goes in our report too!
- When you hear the page, go down to the clinic lobby to meet your clients. Make sure you know the names and relationships of the people coming with the child. Take everyone up in the elevator. (This is a good time to begin interacting with the child: see if he/she wants to push the buttons)
- One trainee will be lead clinician (use the "bug in the ear" in order for your supervisor to be able to communicate with you from the observation room).
- The other trainee will be involved in the evaluation as well, according to how the lead clinician feels his/her effort would best be used (e.g., in the assessment room to help with testing, data collection, etc.; in the observation room to take notes on behavioral observations, to interview the family; to make sure the audio equipment works; etc.).
- There is no video or audio equipment: learn to make on-line judgments! But bring your own audio recorder to back yourself up (especially for narratives or language samples).
- After the eval, walk the clients back to the lobby and check the schedule at the front desk for them. They may be scheduled for another eval (in which case, inform Maureen that our eval is done and the family is ready for the next one), or they may be done for the day or until the case conference that afternoon. You can double check with Maureen or Gretchen if anything is unclear. Basically, we want the clients to know where to go next, or what time to be back for the conference, before we leave them.

6. Debriefing

- Clean up the assessment room if another team needs it. Please put materials back where you found them (including toys), turn off the audio equipment, and take the battery out of the "bug".
- Debrief the case with your team, score tests, come up with conclusions and recommendations.
- Make sure you are prepared to give a 3-5 minute summary of assessment findings and recommendations for both the team, and the family. This summary should "fit" your audience

(i.e., consider the whole child, parents' level of understanding and their readiness to hear diagnosis, etc.).
- Notebooks of parent articles and treatment recommendations are available in office 380.

7. The Conference

- Check the weekly and daily schedules for the latest on when the team and family conferences are scheduled.
- Usually, the team meets for 15-30 minutes to discuss the findings of each area (peds, psych, SLP, OT, social work, nutrition, etc.) and come up with a diagnosis, recommendations, etc. Then the family is brought in for the rest of the conference.

8. Write the Report

- The lead clinician is responsible for writing up the report for that eval (use the CHDD Report Template).
- Try to keep it short (about 1 ½ to 2 pages!).
- Make sure you use the format/wording of the template and include the information in the footer.
- See sample reports and list of recommendations for ideas.
- Have the first draft to your supervisor by the Thursday evening after the eval; send it as an email attachment. It is helpful if you give each email a title that will distinguish it from the mass of emails that you and your supervisor will be exchanging over the quarter. Include information like: "CHDD eval report, draft X", client initials, date of eval, etc.
- Your advisor will return the report to you to make edits by the end of the weekend.
- When the edits have been ok-ed, print out two copies of each report and have all team members sign them.

9. Other Responsibilities

- During the quarter, plan to observe each discipline at least once. Make arrangements with the clinician in charge to observe.
- The CORE seminar series meets weekly at 1:00 in CD 246. The seminars cover a range of topics in child development and disability. Attendance at all seminars is mandatory for all trainees.
- In addition to the 1 ½ hour evaluation each week, your supervisor will arrange with you times to pre-plan and debrief each evaluation.
- By the end of the quarter, complete a one-hour observation of a typically-developing child, following the directions on the Guided Observation handout.

Materials

In this section you will find:

- Report Templates
- References that can be included with diagnostic reports
- Suggested Readings
- Recent Articles

Report Templates

Click on the following links to download reports in PDF format.
(In order to view the PDF documents below, you will need Adobe Acrobat Reader installed on your computer. Click here to download it for FREE from the Adobe website.)

- Report Template
  (Note: some of the following reports were written before this exact template was created. Please use templates below as a yardstick for the type of information given, but not as an exhaustive source of information to be contained in a report.)
- Report 1: Example of report written for preschooler on Autism Spectrum
- Report 2: School age child with Primary Language Impairment and second language concerns
- Report 3: Rule out Apraxia of Speech
- Report 4: Early childhood Autism
- Report 5: Early language disorder, rule out autism
- Report 6: Executive functioning
- Report 7: Special case-Epilepsy
- Report 8: Later language disorder, rule out Autism
- Report 9: Special case-Nonverbal

References

- **Visual strategies**
  Hodgdon, L. (2001). *Visual strategies for improving communication: Practical strategies for improving communication*. Troy, MI: QuirkRoberts Publishing.

  This is a great reference for a wide range of ages. It gives lots of ideas on how to aid communication by using visual support (schedules, pictures, organizational strategies).

- **Hanen Program – It Takes Two to Talk**

  The Hanen program is focused on increasing parents' abilities to facilitate communication in the home. This book describes the program, but it is usually recommended that the parent seek out a Hanen-trained speech-language pathologist in order to use this program. Parents should be able to locate this information at www.hanen.org

- **McCauley & Fey Book on Treatment of Language Disorders**
  McCauley, R, Fey, M., eds. (2006) *Treatment of Language Disorders in Children*. Baltimore, MD: Paul H. Brookes Publishing Co.

  This is an excellent tool when giving recommendations to SLPs, teachers, and other allied health professionals. Each chapter describes an empirically based treatment strategy. Treatments include: Responsivity Education/Prelinguistic Milieu Teaching, AAC, Language is Key, It Takes Two to Talk, and Functional Communication.

- **Language Simplification Techniques by Dr. Coggins**

  Click here to download Language Simplication Techniques 

Suggested Readings
(available soon)

Recent Articles
(available soon)

Contacts

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Parents/Caregivers

Why does my child need a speech-language assessment?

- Most children are referred for speech-language assessments by pediatricians, school staff, or other therapists
- Children receive speech and language assessments in order to get a better picture of their communication abilities. Based on the unique profile of each child, SLPs consider abilities across various domains including:
  - receptive and expressive language
  - articulation
  - motor planning associated with speech
  - social interaction o fluency (stuttering)
- The following links provide more information on the typical patterns of speech and language development:
  - www.nidcd.nih.gov/health/voice/speechandlanguage.asp
  - www.asha.org/public/speech/development/

What is a speech-language assessment?

- Speech-language assessments are carried out by speech-language pathologists (or by students supervised closely by a certified speech-language pathologist)

- The assessment will be different for every child depending on the unique concerns for that child. Most evaluations include a combination of standardized tests (using test books/pictures) with informal measures (observation or parent/caregiver report)
- A typical assessment includes:
    - Evaluation of receptive language
    - Evaluation of expressive language
    - Observation of child's language abilities in functional context (play with caregiver or telling a story for example)
        - This also helps the SLP get a clearer picture of the child's social language competency
    - Evaluation of speech production
    - May include parent report (especially for younger children)

Note: For definitions of commonly used speech and language terms, please see the glossary of terms.

Links for more information on assessment and treatment of speech and language disorders:

- American Speech and Language Association: www.asha.org
- ChildTrends (Reviews on child development and family issues): www.childtrends.org
- Disability Solutions (Resource for families of children with disabilities): www.disabilitysolutions.org
- Polyxo.com (Teaching children with autism): www.polyxo.com
- The Hanen Centre: www.hanen.org
- UW Speech and Hearing Clinic: http://depts.washington.edu/sphsc/clinic_about.htm
- UW Speech and Hearing Sciences, Child Language Research Laboratory: http://depts.washington.edu/sphsc/labsites/olswang/research.htm
- WA PAVE (Parents Are Vital in Education): www.washingtonpave.com
- WA DDD (Department of Developmental Disabilities): http://www1.dshs.wa.gov/ddd

Glossary

Articulation: the act of producing words or sounds (an articulation disorder affects the child's ability to plan and physically produce the movements necessary for speech)

Autism Spectrum Disorder: characterized by deficits in language, social interaction, and restricted interests. These deficits are present to varying degrees in children with ASD, hence the "spectrum" of autism. The spectrum includes Pervasive Developmental Disorder (PDD), Rett's disorder, childhood disintegrative disorder, Asperger Syndrome, and Pervasive Developmental Disorder-not otherwise specified (PDD-NOS). Cognitive impairments may or may not be present in children with ASD.

Language: a system for communicating thoughts and ideas which includes verbal, gestural, and written forms.

Language sample: an assessment measure used by SLPs to gain information about a child's language use in different contexts. Language samples are used for many reasons including analysis of linguistic complexity, cohesion, vocabulary, and turn-taking.

Milestone: a time by which a certain skill has typically developed. For example, an early language milestone is usually reached around 12 months, when a child says his or her first word.

Morphology: rules that govern how we put words together (often discussed in terms of grammatical morphemes that children develop such as plural –s or –ing)

Percentile rank: a score that represents where the child performs in relation to peers on a given norm-referenced measure. For example, a percentile rank of 87 indicates that the child performed as well as or better than 87 percent of the children who also completed that measure.

Phonology: the sound system of a language (a phonological disorder is one that disrupts the child's ability to understand and use the sound systems of a language conceptually)

Pragmatics: rules that govern how we use language in social contexts

Semantics: words and their associated meanings (related to vocabulary)

Specific (or primary) Language Impairment (SLI): a disorder characterized by marked deficiency of expressive and/or receptive skills without delays in other domains (e.g. cognitive impairment, Autism Spectrum Disorder)

Speech: the motor component of spoken communication that allows language to be expressed. It includes articulation, strength and coordination of the articulators, voice, and fluency.

Standard deviation: a measure of variance used to describe performance in relation to the mean (average) score. For example, a child who receives a score 2 standard deviations below the mean is performing much lower as compared to his or her peers.

Standardized test: an assessment measure that is designed to be administered in the same way every time it is given. A child's performance on the test is compared to normative data in order to yield descriptive measures like standard scores and percentile ranks.

Syntax: the rules that govern how we form utterances (grammar)

Credits and Acknowledgments

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