

Term Information

Effective Term Summer 2012

Course Change Information

What change is being proposed? (If more than one, what changes are being proposed?)

The department is requesting to consolidate a four course sequence in neurogenic communication disorders (6761-6764, 12 total semester hours) to a two course sequence (6761 and 6762, for 8 total semester hours).

One requested change affects the content of the two retained courses. The present course, 6762, will consolidate around the theme of motor impairment of speech and/or swallow. The second course, 6761, will consolidate around the theme of cognitive and linguistic impairment.

A second requested change is an increase in credit for 6761 and 6762 to four semester hours for each course.

6763 and 6764 will be withdrawn.

What is the rationale for the proposed change(s)?

This change is part of an overall effort to streamline the MA-SLP curriculum. Our intention is to provide our students with the bulk of essential information in the first two semesters of the six semester program, so that they can participate in more advanced coursework in the remaining 4 terms.

Additionally the conversion to semesters reduces the opportunities to place students into a variety of clinical practicum sites. In the past the neurogenic communication disorders sequence was completed in the summer, enabling placement of students commencing in the Autumn (3 placement opportunities in semesters, but 4 in the former quarter system). Completion of the sequence in the Spring, enables placement of students in the Summer (4 placement opportunities).

What are the programmatic implications of the proposed change(s)?

(e.g. program requirements to be added or removed, changes to be made in available resources, effect on other programs that use the course)?

In the series 6761-6764 at least one and often two of the courses were taught by an instructor recruited from the community. The department continues to envision the need for use of these valuable resources; however, these instructors will be partnered with our faculty who will be directly responsible for the two courses (6761, 6762) in the revised series. Our expectation is that partnership will produce a better connection between theory and clinical practice.

Is approval of the request contingent upon the approval of other course or curricular program request? Yes

Please identify the pending request and explain its relationship to the proposed changes(s) for this course (e.g. cross listed courses, new or revised program)

The request for revision of 6762 is one component of the department's revision/streamlining of the MA-SLP curriculum. A similar request has been made for revising 6761. We are also withdrawing 6763 and 6764.

Is this a request to withdraw the course? No

General Information

Course Bulletin Listing/Subject Area	Speech and Hearing Science
Fiscal Unit/Academic Org	Speech & Hearing - D0799
College/Academic Group	Arts and Sciences
Level/Career	Graduate
Course Number/Catalog	6762
Course Title	Neurogenic Motor Speech & Swallowing Disorders
<i>Previous Value</i>	<i>Aphasia and Related Adult Language Disorders</i>
Transcript Abbreviation	Mtr Sp. Im/Dysphag
<i>Previous Value</i>	<i>Aphasia & Related</i>

Course Description	Speech and swallowing disorders resulting from neurological injury in adults.
Previous Value	Language disorders resulting from brain injury in adults.
Semester Credit Hours/Units	Fixed: 4
Previous Value	Fixed: 3

Offering Information

Length Of Course	14 Week, 7 Week
Flexibly Scheduled Course	Never
Does any section of this course have a distance education component?	No
Grading Basis	Letter Grade
Repeatable	No
Course Components	Lecture
Grade Roster Component	Lecture
Credit Available by Exam	No
Admission Condition Course	No
Off Campus	Never
Campus of Offering	Columbus

Prerequisites and Exclusions

Prerequisites/Corequisites	grad standing, or permission of instructor.
Previous Value	Prereq: SphHrng 5765 or 765 or equiv, and grad standing, or permission of instructor. Must have grade of B- or higher in 5765 or 765.
Exclusions	Not open to students with credit for 761 or 764.
Previous Value	Not open to students with credit for 760.

Cross-Listings

Cross-Listings

Subject/CIP Code

Subject/CIP Code	51.0204
Subsidy Level	Masters Course
Intended Rank	Senior, Masters, Doctoral

Quarters to Semesters

Quarters to Semesters	Semester equivalent of a quarter course (e.g., a 5 credit hour course under quarters which becomes a 3 credit hour course under semesters)
List the number and title of current course being converted	SphHrng 760: Aphasia and Related Adult Language Disorders.

Requirement/Elective Designation

Required for this unit's degrees, majors, and/or minors

Course Details

Course goals or learning objectives/outcomes

- Be able to design and implement assessment and intervention programs appropriate to various forms of aphasia
- Be able to discuss the various theories for adult neurolinguistic processes and how these are affected in brain injury

Content Topic List

- Aphasia
- Dementia
- Cognition

Attachments

- Syllabus Semester SHS 6762 Neuro II.doc

(Syllabus. Owner: Trudeau,Michael David)

Comments

Workflow Information

Status	User(s)	Date/Time	Step
Submitted	Trudeau,Michael David	05/15/2012 11:40 AM	Submitted for Approval
Approved	Trudeau,Michael David	05/15/2012 11:56 AM	Unit Approval
Approved	Haddad,Deborah Moore	05/15/2012 12:36 PM	College Approval
Pending Approval	Hanlin,Deborah Kay Hogle,Danielle Nicole Vankeerbergen,Bernadette Chantal Meyers,Catherine Anne Jenkins,Mary Ellen Bigler Nolen,Dawn	05/15/2012 12:36 PM	ASCCAO Approval

Neurogenic Motor Speech & Swallowing Disorders
SHS 6762
Semester Course Syllabus

Instructor: Michelle Bourgeois, Ph.D., CCC-SLP
Office Hours: T. 11-12 & Th. 4-5
Office Address: 134c Pressey Hall
Class Website: Carmen

Class Location: Pressey Hall Rm. 35
Time: TTH 9:00 – 10:50

LEARNING OBJECTIVES

Knowledge:

1. Describe behavioral and physiological methods used to investigate speech processing (Standard III-B)
2. Describe the anatomy and neurobiology of normal & impaired speech processing (Standard III-C)
3. Summarize the etiology, nosology, and characteristics of neuromotor speech disorders (Standard III-D)
4. Give examples of standardized tests and measures used to assess neuromotor speech disorders (Standard III-E)
5. Give examples of methods used to treat neuromotor speech disorders (Standard III-E)
6. Demonstrate knowledge of the anatomy, physiology, neurology and respiratory functions of the normal swallow in adults and children (Standard III-C)
7. Demonstrate knowledge of the difference between neurologically and mechanically based swallowing disorders in adults (Standard III-D)
8. Demonstrate knowledge of evaluation methods and interpretation of results (Standard III-E).
9. Demonstrate knowledge of appropriate treatment paradigms based on evaluation results (Standard III-E).
10. Demonstrate knowledge of evaluation and management in special populations including tracheostomized and ventilator dependent adults (Standard III-D).

Skills:

1. Demonstrate basic clinical problem solving skills, including accurate diagnosis of disorders, and selection of appropriate assessment and intervention procedures (Standard III-E)
2. Critically evaluate research in the field and integrate this research into evidence-based clinical practice (Standard III-G)
3. Perform clinical evaluation of swallowing and make appropriate management recommendations (Standard III-E)
4. Interpret the results of instrumental procedures (MBS) at a basic level and make appropriate management recommendations, including dietary modifications (Standard III-E).
5. Write evaluation results on a variety of report formats (Standard III-E).
6. Plan, implement, and evaluate effective treatment (Standard III-E).

Values:

1. Describe how speech and associated motor deficits impact individuals in their everyday life (Standard III-F)
2. Explain how interdisciplinary perspectives contribute to assessment, treatment, and research (Standard III-H)
3. Identify and describe unique aspects of SLP practice in the medical setting (Standard III-H)
4. Describe the role of the speech pathologist in minimizing medical complications due to dysphagia
5. Explain the social and psychological consequences of dysphagia
6. Describe ethical decision-making related to evaluation and management of dysphagia

COURSE REQUIREMENTS AND GRADING

Students are expected to attend lecture, participate in class discussions, and complete assigned readings. Please dress in appropriate clinic attire when class is conducted outside of Pressey Hall.

Tests: Midterm, Technical skills exam, and Final (80% of grade)

There are two tests (Midterm & Final; each worth 30% of your grade), and one technical skills exam (worth 20%). Tests will consist of multiple choice and short answer questions that test your knowledge of content covered in

lectures *and* assigned readings, and will emphasize critical thinking, synthesis of information, and clinical application. The technical skills exam will include demonstrations of a variety of assessment and treatment skills.

Article Review (10% of grade)

You will be asked to select an article on a topic of interest related to Neuromotor Speech Disorders and write a summary of the article.

Model of the Larynx (10%)

You will be asked to make a 3-D model of the LARYNX/HYPOPHARYNX.

Grading Scale (%)

A	93-100	B	83-86	C+	77-79	D	63-66
A-	90-92	B-	80-82	C-	70-72	E	<63
B+	87-89	C	73-76	D+	67-69		

Readings

Required

a) Texts:

Duffy, J.R. (2005). *Motor Speech Disorders*. St Louis, Missouri: Elsevier-Mosby.

Murray, T. & Carrau, R. (2012). *Clinical Management of Swallowing Disorders (3rd Ed.)*. Plural Publishers.

Recommended Supplemental Texts (available at the library):

Freed, D. (2000). *Motor Speech Disorders: Diagnosis and Treatment*. San Diego: CA: Singular.

Yorkston, K. M, Beukelman, D.R, Strand, E.A. & Bell, K.R. (1999) *Management of Motor Speech Disorders in Children and Adults (2nd Ed)*. Austin, TX: Pro-Ed.

McNeil, M.R. (1997). *Clinical Management of Sensorimotor Speech Disorders*. New York: Thieme Medical Publishers, Inc.

Available on Carmen via eReserves:

Darley, F.L., Aronson, A.E. & Brown, J.R. (1975). *Motor Speech Disorders* – **Audio Seminar Transcript**

Available at Thompson Library:

Darley, F.L., Aronson, A.E. & Brown, J.R. (1975). *Motor Speech Disorders* – **Audio Seminar in CD format**

Duffy, J., *ASHA's Identification of Motor Speech Disorders* - **DVD**

SCHEDULE OF LECTURES AND ASSIGNMENTS:

<i>Date</i>	<i>Topic</i>	<i>Reading</i>
<u>Week 1</u>	Introduction to Medical SLP & Review of Physiology & Neuroanatomy Introduction to motor speech disorders Examination of MSD	Duffy Ch. 1-3
<u>Week 2</u>	Flaccid and Spastic Dysarthrias Ataxic and Hypokinetic Dysarthria	Duffy Ch. 4-5 Duffy Ch. 6-7

<u>Week 3</u>	Hyperkinetic Dysarthria Unilateral Upper Motor Neuron Dysarthria & Mixed Dysarthrias	Duffy Ch. 8 Duffy Ch. 9 & 10
<u>Week 4</u>	Apraxia Neurogenic Mutism Other Neurogenic, Psychogenic, & & Related Nonorganic Speech Disorders	Duffy Ch. 11 Duffy Ch. 12 Duffy Ch. 13 & 14
<u>Week 5</u>	Differential Diagnosis Introduction to Management Managing the Dysarthrias	Duffy Ch. 15 Duffy Ch. 16 & 17
<u>Week 6</u>	Managing Apraxia & Other Neurogenic Speech Disturbances Managing Psychogenic & Nonorganic Speech Disorders	Duffy Ch. 18 & 19 Duffy Ch. 20
<u>Week 7</u>	Midterm Exam Historical perspectives of dysphagia, Evidenced-Based Practice in Dysphagia, Anatomy/ Physiology of the Normal Adult Swallow	Murray & Carrau
<u>Week 8</u>	Disorders of swallowing/ MBSImp Component 1 Disorders of Swallowing in Adults Free water Protocols MBSImp Component 2	Murray & Carrau Murray & Carrau
<u>Week 9</u>	Compensatory Strategies MBSImp Component 3 Rehabilitation Techniques MBSImp Component 4	Murray & Carrau Murray & Carrau
<u>Week 10</u>	Rehabilitation Techniques (Cont) MBSImp Component 5 Clinical Evaluation of Swallowing MBSImp Component 6	Murray & Carrau Review supplemental articles Speechpathology.com Course #3166 “Performing and Interpreting a Bedside/Clinical Evaluation of Swallowing”
<u>Week 11</u>	Documentation of Swallowing Disorders MBSImp Component 7	

CLINICAL EVALUATION OF SWALLOWING- SKILLS
PRACTICE (non-grade activity) (Please bring pudding or applesauce,
canned fruit, a cookie, a plastic spoon, and a juice box or bottled water
to class

Week 12

CLASS TO MEET AT DODD HALL 5:30 (Green Room)
MBSImP Component 8
Instrumental Evaluation/FEES

Murray & Carrau

FIELD TRIP TO RADIOLOGY- (Please meet outside of Rhodes Hall
no later than 5:30. Please wear clinic appropriate attire).

REVIEW MBS LECTURE NOTES PRIOR TO LECTURE Cichero Ch 8, 191-212

Week 13

MBS interpretation-Video Review and Interpretation Practice-
Finish MBSImP Components.

TECHNICAL SKILLS EXAM/ 3-D LARYNX PROJECTS DUE

Week 14

**Ethics/ Former Patient Panel Discussion- Quality of Life Issues
CLASS TO MEET AT DODD HALL GREEN ROOM AT 5:30**

**Artificial Airways
Diagnosis of Pediatric Dysphagia**

Murray & Carrau

Finals Week

FINAL EXAM

CLASS POLICIES

1. Lecture topics scheduled in this syllabus are subject to change. Any changes will be announced in class.
2. Exams: If you have to miss an exam due to a University recognized excuse, you must contact the instructor prior to the exam in order to arrange a make-up exam. Failure to do so will result in a zero on the exam. Documentation from a Student Health Center or private physician is required to receive a make-up exam if you are ill on the day of a test.
3. Late assignments will **not** be accepted for credit without **prior** permission from the instructor.
4. Regular attendance is expected, although it is not recorded. Class lectures follow the textbook; however, additional information is covered during lecture that may not be covered in the textbook. You are encouraged to attend class on a regular basis.
5. Cell Phones: The use of cell phones or pagers during class is prohibited. Please extend the courtesy to your classmates and the instructor by turning off your cell phone during class time.

Students with Disabilities

Students with disabilities that have been certified by the Office for Disability Services will be appropriately accommodated and should inform the instructor as soon as possible about their needs. The Office for Disability Services is located in 150 Pomerene Hall, 1760 Neil Avenue; telephone 292 3307, TDD 292 0901; on the web at <http://www.ods.ohio-state.edu>

Academic Misconduct:

Academic misconduct refers to any activity that compromises the academic integrity of the university or undermines the educational process. Academic misconduct will not be tolerated. Instances believed to constitute misconduct will be reported to the committee on academic misconduct. Examples include but are not limited to: plagiarism, cheating on examinations, violation of course rules outlined in this syllabus. Additional examples of academic misconduct are outlined below. Further information can be found in your student handbook and at the office of student affairs http://studentaffairs.osu.edu/resource_csc.asp

Examples of academic misconduct include, but are not limited to:

1. Violation of course rules as contained in the course syllabus or other information provided to the student; violation of program regulations as established by departmental committees and made available to students;
2. Knowingly providing or receiving information during examinations such as course examinations and candidacy examinations; or the possession and/or use of unauthorized materials during those examinations;
3. Knowingly providing or using assistance in the laboratory, on field work, in scholarship or on a course assignment;
4. Submitting plagiarized work for an academic requirement. Plagiarism is the representation of another's work or ideas as one's own; it includes the unacknowledged word-for-word use and/or paraphrasing of another person's work, and/or the inappropriate unacknowledged use of another person's ideas;
5. Submitting substantially the same work to satisfy requirements for one course or academic requirement that has been submitted in satisfaction of requirements for another course or academic requirement, without permission of the instructor of the course for which the work is being submitted or supervising authority for the academic requirement;
6. Falsification, fabrication, or dishonesty in creating or reporting laboratory results, research results, and/or any other assignments;
7. Serving as, or enlisting the assistance of a substitute for a student in the taking of examinations;
8. Alteration of grades or marks by the student in an effort to change the earned grade or credit;
9. Alteration of academically-related university forms or records, or unauthorized use of those forms or records; and
10. Engaging in activities that unfairly place other students at a disadvantage, such as taking, hiding or altering resource material, or manipulating a grading system.

SUGGESTED ARTICLES FOR ARTICLE SUMMARY

Article Summary Rubric

Criteria	Value
Introduction Summary of background knowledge known prior to study Specify research question & variables to be examined Information content	2
Methods Specify what was done to what population Specify how data were analyzed Report on Reliability of Dependent variables Information content	3
Results Specify statistical (numeric)/descriptive results Differentiate significant vs. nonsignificant effects Evaluate level of evidence Information content	3
Conclusions Relate results to original research question Summarize clinical/theoretical importance of research Information content	2

I. BEHAVIORAL INTERVENTIONS

[Comparison of two forms of intensive speech treatment for Parkinson disease.](#) (eng; includes abstract) By *Ramig* LO, Journal Of *Speech* And Hearing Research [J *Speech* Hear Res], 1995 Dec; Vol. 38 (6), pp. 1232-51; PMID: 8747817

This study investigated the effect of two forms of intensive *speech* treatment, (a) respiration (R) and (b) voice and respiration (Lee Silverman Voice Treatment [LSVT]), on the *speech* and voice deficits associated with idiopathic Parkinson disease.

[The effect of rate control on the intelligibility and naturalness of dysarthric speech.](#) (eng; includes abstract) By Yorkston KM, The Journal Of *Speech* And Hearing Disorders [J *Speech* Hear Disord], 1990 Aug; Vol. 55 (3), pp. 550-60; PMID: 2381196

Speaking rates of individuals with severe ataxic dysarthria (n = 4) and severe hypokinetic dysarthria (n = 4) were reduced to 60% and 80% of habitual rates using four different pacing strategies (Additive Metered, Additive Rhythmic, Cued Metered, and Cued Rhythmic).

[Hypophonia in Parkinson's disease: neural correlates of voice treatment revealed by PET.](#) (eng; includes abstract) By Liotti M, Neurology [Neurology], 2003 Feb 11; Vol. 60 (3), pp. 432-40; PMID: 12578924

This study investigated the neural correlates of hypophonia in individuals with idiopathic PD (IPD) before and after voice treatment with the Lee Silverman Voice Treatment method (VT) using (15)O-H(2)O PET.

II. BIOLOGICAL INTERVENTIONS

[Preliminary voice and speech analysis following fetal dopamine transplants in 5 individuals with Parkinson disease.](#) (eng; includes abstract) By Baker KK, Journal Of *Speech*, Language, And Hearing Research: JSLHR [J *Speech* Lang Hear Res], 1997 Jun; Vol. 40 (3), pp. 615-26; PMID: 9210118

A surgical procedure involving transplantation of fetal dopamine cells into the striatum of persons with advanced Parkinson disease (PD) has recently been performed in an attempt to alleviate Parkinsonian and drug-dose related symptoms (e.g., the "on-off" phenomena).

[Stem cell-based therapy for Parkinson's disease.](#) (eng; includes abstract) By Correia AS, Annals Of Medicine [Ann Med], 2005; Vol. 37 (7), pp. 487-98; PMID: 16278162

Motor dysfunctions in **Parkinson's disease** are considered to be primarily due to the degeneration of dopaminergic neurons in the substantia nigra pars compacta. Pharmacological therapies based on the principle of dopamine replacement are extremely valuable, but suffer from two main drawbacks: troubling side effects (e.g. dyskinesia) and loss of efficacy with **disease** progression.

[The Psychosocial Consequences of BOTOX Injections for Spasmodic Dysphonia: A Qualitative Study of Patients' Experiences.](#) (eng; includes abstract) By Baylor CR, Journal Of Voice: Official Journal Of The Voice Foundation [J Voice], 2007 Mar; Vol. 21 (2), pp. 231-47; PMID: 16564675

The purpose of this study is to examine the psychosocial consequences of BOTOX(R) (Allergan, Inc. Irvine, CA) treatment for spasmodic dysphonia (SD).

III. CASE STUDIES OF DYSARTHRIA

[Phonatory and articulatory changes associated with increased vocal intensity in Parkinson disease: a case study.](#) (eng; includes abstract) By Dromey C, Journal Of **Speech** And Hearing Research [J **Speech** Hear Res], 1995 Aug; Vol. 38 (4), pp. 751-64; PMID: 7474969

This study examined changes in voice and **speech** production in a patient with Parkinson disease as he increased vocal intensity following 1 month of intensive voice treatment.

[Stroke with dysarthria: evaluate and treat; garden variety or down the garden path?](#) (eng; includes abstract) By **Duffy** JR, Seminars In Speech And Language [Semin Speech Lang], 1998; Vol. 19 (1), pp. 93-8; quiz 99; PMID: 9519396

The case of a man who initially presented to an emergency room with an isolated **dysarthria** is reviewed in order to demonstrate how the history, clinical context, and clinical observations can lead to accurate or inaccurate diagnosis.

[Speech deterioration in amyotrophic lateral sclerosis: a case study.](#) (eng; includes abstract) By **Kent** RD, Journal Of Speech And Hearing Research [J Speech Hear Res], 1991 Dec; Vol. 34 (6), pp. 1269-75; PMID: 1787708

The subject of this case study is a woman who was diagnosed as having ALS with bulbar signs at the age of 53.

[On the role of quantitative brain imaging in the differential diagnosis of speech disorders.](#) (eng; includes abstract) By Tebartz van Elst LH, Psychiatry And Clinical Neurosciences [Psychiatry Clin Neurosci], 2002 Feb; Vol. 56 (1), pp. 111-5; PMID: 11929580

We present the case of a 71-year-old woman with an 11-year history of slowly progressive decline of motor **speech**.

[A foreign speech accent in a case of conversion disorder.](#) (eng; includes abstract) By Verhoeven J, Behavioural Neurology [Behav Neurol], 2005; Vol. 16 (4), pp. 225-32; PMID: 16518013

The aim of this paper is to report the psychiatric, neuroradiological and linguistic characteristics in a native speaker of Dutch who developed **speech** symptoms which strongly resemble Foreign Accent Syndrome.

IV. CEREBRAL PALSY

[Speech and language therapy to improve the communication skills of children with cerebral palsy.](#) (eng; includes abstract) By Pennington L, Cochrane Database Of Systematic Reviews (Online) [Cochrane Database Syst Rev], 2004 (2); Cochrane AN: CD003466; PMID: 15106204

The purpose of this study was to determine the effectiveness of Speech Language Therapy that focuses on the child or their familiar communication partners, as measured by change in interaction patterns.

Gannotti M (2006). Eco-cultural frameworks and childhood disability: a case study from Puerto Rico. *Physiotherapy Theory and Practice*, 22 (3), 137-51.

The purpose of this case report is to consider the usefulness of scores on the Pediatric Evaluation of Disability Inventory (PEDI) of a child living in Puerto Rico for developing an intervention plan within the context of the child's eco-cultural niche.

Hustad, KC. & Beukelman DR (2001). [Effects of linguistic cues and stimulus cohesion on intelligibility of severely dysarthric speech.](#) *Journal Of Speech, Language, And Hearing Research: JSLHR [J Speech Lang Hear Res]*, 2001 Jun; Vol. 44 (3), pp. 497-510.

This study examined the effects of supplemental cues on the intelligibility of unrelated sentences and related sentences (narratives) produced by 4 women with severe dysarthria secondary to **cerebral palsy**.

Hustad, KC. & Beukelman DR. [Listener comprehension of severely dysarthric speech: effects of linguistic cues and stimulus cohesion.](#) *Journal Of Speech, Language, And Hearing Research: JSLHR [J Speech Lang Hear Res]*, 2002 Jun; Vol. 45 (3), pp. 545-58.

This study is the second in a two-part series examining the effects of linguistic variables on listener processing of dysarthric **speech**.

Pueyo, R. [Neuropsychologic differences between bilateral dyskinetic and spastic cerebral palsy.](#) *Journal Of Child Neurology [J Child Neurol]*, 2003 Dec; Vol. 18 (12), pp. 845-50.

This study compared the neuropsychologic performance of 30 adolescents and adults with bilateral dyskinetic, mixed, and spastic **cerebral palsy** aged between 16 and 38 years.

[Using electropalatography \(EPG\) to diagnose and treat articulation disorders associated with mild cerebral palsy: a case study.](#) (eng; includes abstract) By Gibbon FE, *Clinical Linguistics & Phonetics [Clin Linguist Phon]*, 2003 Jun-Aug; Vol. 17 (4-5), pp. 365-74

This preliminary study investigated the use of electropalatography (EPG) to diagnose and treat a long-standing articulation disorder that had not responded to conventional **speech** therapy techniques in an 8-year-old boy (D) with a congenital left hemiplegia.

Lund, SK & Light, J. (2003). [The effectiveness of grammar instruction for individuals who use augmentative and alternative communication systems: a preliminary study.](#) *Journal Of Speech, Language, And Hearing Research: JSLHR [J Speech Lang Hear Res]*, 2003 Oct; Vol. 46 (5), pp. 1110-23.

This study examined the effectiveness of an instructional program designed to teach grammar skills to individuals who communicated via augmentative and alternative communication (AAC)

Pirila, S. (2007). [Language and motor speech skills in children with cerebral palsy.](#) *Journal Of Communication Disorders [J Commun Disord]*, 2007 Mar-Apr; Vol. 40 (2), pp. 116-28.

The aim of the study was to investigate associations between the severity of motor limitations, cognitive difficulties, language and motor **speech** problems in children with **cerebral palsy**.

Pennington, L. & McConachie, H. (2001). [Interaction between children with cerebral palsy and their mothers: the effects of speech intelligibility.](#) *International Journal Of Language & Communication Disorders / Royal College Of Speech & Language Therapists [Int J Lang Commun Disord]*, 2001 Jul-Sep; Vol. 36 (3), pp. 371-93.

This paper studies the effects of **speech** intelligibility on interaction between mothers and their children with **cerebral palsy** to examine if similar patterns of child passivity and adult domination are also observed in dyads in which children are physically dependent but naturally intelligible to their parents.

Falkman, KW., Sandberg, ADI, Hjelmquist, E. (2002). [Preferred communication modes: prelinguistic and linguistic communication in non-speaking preschool children with cerebral palsy.](#) (eng; includes abstract) By Falkman KW, *International Journal Of Language & Communication Disorders / Royal*

College Of **Speech** & Language Therapists [Int J Lang Commun Disord], 2002 Jan-Mar; Vol. 37 (1), pp. 59-68

Seven non-speaking preschool children with severe **cerebral palsy**, 5-7 years of age, were studied with respect to the amount of prelinguistic versus linguistic modes of communication used in communicative interaction with a previously unknown adult. An attempt was also made to analyse this in relation to the childrens' physical, cognitive and linguistic capacities.

V. WHO MODEL OF DYSARTHRIA

Yorkston KM, Strand EA & Kennedy MRT, 1996,
'Comprehensibility of dysarthric speech: implications for assessment and treatment planning',
American Journal of Speech Language Pathology 5 (1):55–66.

VI. SPEECH RECOGNITION

Ellis, L.W., Spiegel, B., & Benjamin, B. (2002). [Effects of speakers' augmented characteristics and listeners' sex on intelligibility and acceptability of synthesized speech](#). *Perceptual And Motor Skills* [Percept Mot Skills], 2002 Jun; Vol. 94 (3 Pt 2), pp. 1081-8.
16 women and 16 men as listeners provided magnitude estimation scaling responses for the intelligibility and acceptability of synthesized **speech** transmitted by two different individuals using a voice output communication aid (VOCA).

VII. CROSS-CULTURAL ISSUES

Singhi, P.D., Ray, M., & Suri G. (2002). [Clinical spectrum of cerebral palsy in north India--an analysis of 1,000 cases](#). (eng; includes abstract) By Singhi PD, *Journal Of Tropical Pediatrics* [J Trop Pediatr], 2002 Jun; Vol. 48 (3), pp. 162-6.
One thousand children with **cerebral palsy** (CP) were reviewed to study their clinical profile, etiological factors and associated problems.