**Title and Focus of Activity**: Communication and Cognition Lab: Interprofessional Case-Based Lab activity with Communications Sciences and Disorder (CSD) Students and Physical Therapy Students *Patient Management;* *Interprofessional Education*

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**Course Information:**

Neuromuscular Management I; 3 credits of lecture/lab course linked to a 2 credit on-site neuromuscular clinic; Second professional year after neuroscience courses, with exposure to documentation in their clinic based courses throughout the curriculum.

**Learning Experience Description**:

The purpose of this lab is to facilitate integrated thinking in the context of experiential learning across disciplines. PT and CSD students review specific cases commonly seen in our on-campus pro-bono clinic. The cases generate discussion about assessment, goal development and treatment plans for improved communication and function with individuals with neuromuscular deficits. Optimization of outcomes occurs through the cross-disciplinary discourse, and students realize the benefit of interprofessional practice vs sole service delivery. This discussion has resulted in increased student- initiated collaboration within the two clinics, and increased student-initiated co-treatment sessions with clients.

Part I (1 hour 30 minutes)

* Break into 13 groups with 4-5 PT students and 1 CSD student per group. (This was performed with a class of 58 PT students and 13 CSD students.) \*\*If you do not have access to CSD students then utilize an upperclassmen/GA/Faculty to play the role of a CSD student\*\*
* Each group is given one of the three cases presented in Part II. The following questions must be completed for each case:
	+ Therapeutic goal (general focus) using the provided information: 1 PT and 1 CSD goal. These goals should be discipline specific and a general overarching long term goal to provide the opposite discipline insight into their focus.
	+ Provide options to improve communication and cognition given specific scenarios. – answer questions provided for each case
	+ Write a collaborative goal: a goal that would be the focus of PT and CSD working together with the provided client to achieve the patient’s goals.
* Report out recommendations to entire group

Part II (30 minutes)

* Instructors offer feedback and engage students in further discussion to address each of the scenarios presented.

CASE #1: Client is a 68-year old male with right CVA 2 years ago. He is impulsive, inaccurate with information, and produces tangential speech with an inability to stay on task. He presents in a wheelchair with excessive posterior pelvic tilt, sliding forward in the chair, and leaning heavily to the left with his arm hanging off the chair.

1. Therapeutic Goals: Document 1 general PT goal and 1 CSD goal. Share the roles of each discipline.
2. Brainstorm with your fellow students different specific options/ideas to assist your patient in being able to correct his positioning in his wheelchair.
	1. This will require both PT input (proper way to position and facilitate patient movement) and CSD (how to establish understanding, repeatability, and focus).
	2. Make sure to come up with a few different options.
	3. Make suggestions of how to get carryover between both disciplines.
3. Develop a collaborative goal
	1. Write a collaborative goal that would be appropriate for both PT and CSD while performing a co-treatment session with the provided client.

CASE #2: Client is a 75-year old female with left CVA 3 years ago. She has severe expressive aphasia but comprehends single and two step commands. She does not have any active movement in her right upper extremity and notices it hanging down by her side. She requires minimal assist to stand up from a low chair without arm rests.

1. Therapist Goals: Document 1 general PT goal and 1 CSD goal. Share the roles of each discipline.
2. Brainstorm with your fellow students different options to find out the following information given your clients communication limitation:
	1. Do they have any pain? Where? How often?

[PLEASE NOTE: Pain is considered medically necessary information in the hospital and must be documented with every patient/every session to receive reimbursement]

* 1. Have they had any falls? Where? When?
1. Develop a collaborative goal
	1. Write a collaborative goal that would be appropriate for both PT and CSD while working together with the provided client.

CASE #3: Client is an 82-year old male diagnosed with Parkinson’s disease 7 years ago. He speaks with low volume and is unable to be heard even after he is asked to repeat his responses. He ambulates with a rolling walker with short shuffling steps and a kyphotic posture while looking at the ground.

1. Therapist Goals: Document 1 general PT goal and 1 CSD goal. Share the roles of each discipline.
2. Brainstorm with your fellow students different options to reinforce carryover of loud and big movements during the following activities:
	1. Speech
	2. Ambulation
3. Develop a collaborative goal
	1. Write a collaborative goal that would be appropriate for both PT and CSD while working together with the provided client.

Time for student to complete the activity:

1. preparation for activity outside of/before class: ~20 minutes of reading and a 30 minute lecture reviewing basic types of communication issues with individuals with neuromuscular deficits. Including the following videos as examples:

* + 1. Wernicke’s aphasia - [https://www.youtube.com/watch?v=3oef68YabD0](http://www.youtube.com/watch?v=aVhYN7NTIKU)
		2. Broca’s aphasia - <https://www.youtube.com/watch?v=xcm7DvdfU60>
		3. Parkinson’s Disease - https://www.youtube.com/watch?v=gNIdxYjGVV8

2. class time completion of the activity: 2 hour lab

Readings/other preparatory materials:

Sarno MT, Galgano J. Neurogenic disorders of speech and language. In: O’Sullivan SB et al. Physical Rehabilitation. 6th ed. Philadelphia, PA: FA Davis Inc; 2014: 1273-Table 28.2; 1280-Box 28.1; 1277-1278.

Learning Objectives:

1. Use integrative thinking to foster communication pathways between PT and CSD students 2. Identify common PT and CSD goals for varying neurological client populations. 3. Compare and contrast different approaches to improve communication and cognition with varying neurological client populations.

Methods of evaluation of student learning: There is no grade for this lab however the following questions are given to both the CSD and PT students to complete pre/post of the lab.

ASSESSMENT OF COMMUNICATION AND COGNITION LAB

PRE LECTURE/LAB

1. What would you like to get out of this lecture/lab?
2. What is one specific thing you hope to learn from the other discipline?

POST LECTURE/LAB

1. Did you feel this lab was helpful in better understanding how PT and CSD can work together with different client diagnoses?
2. Did you feel the cases were helpful?
3. Was there anything you would have liked added, from what you may have seen during clinical observations or experiences?
4. Any suggestions or general comments?