

**University of Colorado
Anschutz Medical Campus
Physical Therapy Program**

**Critical reasoning mapping for students and clinical educators
Patient-Centered Care approach
Developed by Denise Stelzner, PT, MBA**

Mapping is separated into the following sections and contains guidelines for both the Student and the Clinical Instructor:

- 1. Referral**
- 2. History**
- 3. Physical Examination**
- 4. Plan of Care**
- 5. Intervention**

Referral to PT

Student: Patient either comes with medical diagnosis or patient reports medical diagnosis

Student's initial thoughts: Your knowledge of the pathology, histology, mechanism of injury, associated signs and symptoms; consider all the potential systems that could be involved (cardiorespiratory, musculoskeletal, neuromuscular, integument, genitourinary, endocrine, cognitive, psychosocial); your general thoughts on interventions : *let everything you were taught in school come to the forefront*

CI's questions: Let student tell you what they know in general about a certain diagnosis or problem (pathology, examination, intervention)

Student and CI: Bring yourself back to the Patient Centered Care Concept and now let the encounter unfold as it presents itself. Try not to see the patient from a preconceived knowledge or experience base. All your knowledge is going to be tapped into as you deem appropriate based on what the patient contributes to the encounter.

History (the story unfolds)

Student:

1. Begin the discovery of what participation restriction the patient talks about or that you extract from them (always consider domestic, recreational, and work)
2. Consider what activity limitations are related to the participation limitation
3. Consider what body system impairments contribute to the activity limitations
4. Consider what examination measures you have for each participation restriction, activity limitation and body system impairments.
5. Think about what you are thinking.

EXAMPLE

Summarize your thoughts about the patient's difficulties in the following manner

- Referred to PT for LBP
- **Participation restriction**
 - i. Unable to be at work full time
 - ii. Unable to go to the gym and ride bike/lift weights
 - iii. Unable to go a movie or sit and watch a movie at home
- **Activity limitation :**
 - i. Unable to walk greater than 100 feet
 - ii. Unable to sit for greater than 10 minutes
 - iii. Difficulty moving from sit to stand and vice versa
 - iv. Difficulty bending forward
- **Body System Impairments :**
 - i. Pain
 - ii. Faulty sitting and standing posture
 - iii. Limited strength, range, flexibility
 - iv. Faulty movement patterns
 - v. Soft tissue impairments
 - vi. Neuro impairments

Summarize your thoughts about what tests and measures you would be considering

- **Activity limitations**
 - Unable to walk
 - Observe / analyze gait
 - 6 minute walk
 - Unable to sit
 - Sitting posture analysis
 - Sit to stand
 - Sit to stand and vice versa movement analysis
 - Forward bend
 - Forward bend movement analysis

- **Body System Impairments**
 - Pain
 - Visual analogue
 - Oswestry Disability questionnaire
 - Fear Avoidance questionnaire
 - Faulty sitting and standing posture
 - Postural analysis
 - Strength
 - MMT
 - Range
 - Active and Passive range for spine and hips
 - Flexibility
 - Length test for muscles of spine and 2 joint muscles of hip
 - Movement analysis
 - FB, BB, SB, Rotation of spine
 - Any other identified
 - Soft tissue assessment (palpation)
 - Palpate for tenderness, spasm
 - Neurological
 - Neuro exam (DTR, sensation, gross motor)
 - Special tests (associated with LBP)
 - Appropriately identified

ALL OF THE ABOVE HAS OCCURRED PRIOR TO THE PHYSICAL EXAM

CI's questions: Ask the student to articulate these and confirm what the student is thinking about a test and measure for each item under functional limitation and impairment. Ask the student to prioritize what he/she will do in first session. Good time to ask student about any psycho-social-cognitive issues that are apparent and how they will impact their thinking.

Physical Examination

Student: Summarize/paraphrase your thoughts from history gathering to the patient. Saying these out loud helps to solidify your progression of thought. Think about what you are thinking.

Student:

Conduct the physical exam doing those tests and measures you prioritized

Prioritize most relevant findings: activity limitations & body system impairments

Paraphrase your thoughts for the patient

Articulate and write your clinical impression, starting with what participation restriction/activity limitation, how the impairments are contributing (may be not all of them) and whether or not this is consistent with the medical diagnosis

Patient goals

Physical therapist goals

How they can be integrated

Your thoughts on an appropriate outcome survey

Your thoughts on prognosis and evidence to support your prognosis

CI: Talking through the findings, goals, prognosis (based on your experience and what you know of the literature), and your overall clinical impression,. Prognosis should include the positive and negative factors of the following: 1) demographic factors (age, sex, occupation); 2) disease specific factors (stage, severity, and natural history); 3) medical comorbidities (cardiovascular disease, arthritis, diabetes, obesity, etc); and 4) biobehavioral comorbidities (depression, fear avoidance, expectation of recovery, incentives for recovery, self efficacy). Now getting the student to think about the strategy for the plan of care.

Plan of Care

Student

What is most important to patient?

What participation restriction will you be considering as it relates to the activity limitations and body system impairments?

What activity limitations will you remediate? compensate? prevent?

What body system impairments will you remediate? compensate? ? prevent?

Paraphrase your thoughts for the patient

CI: Help the student sort through remediation, compensation and prevention. Does this match what you tested/examined and will it match how you decide to intervene? Does it relate to what the patient came to you for?

Intervention

Student:

How much will be education vs exercise/movement/function prescription vs manual therapy vs modalities?

Make sure your intervention choices match the results from your history and physical examination.

Ask yourself – have I empowered the patient; have I moved beyond a treatment table today and certainly before discharge; have I combined the best of my clinical experience – the evidence – and the patient's values?

Have I summarized for the patient?

Did I follow-up with an outcome survey at discharge?

CI: Summarize with student and help them understand progression or regression of intervention.