Fostering Fellow/Resident Professional Reasoning and Interprofessional Practice through Case Presentations

(Part 2)

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Learning Objectives

1. Analyze the purpose and benefits of a case presentation as a teaching tool to integrate clinical reasoning and interprofessional clinical practice.

2. Discuss strategies for implementation and assessment of case presentations in residency and fellowship programs or professional curricula.

3. Discuss evaluative components of case presentations for residency and fellowship education.
OT Fellowship & PT Residency Programs at Creighton

- The Creighton University Physical and Occupational Therapy Residency and Fellowship Programs are committed to advancing the profession in specialty areas of practice through the formation of Physical and Occupational Therapists who excel in clinical reasoning, value-centered teaching and patient advocacy.
- The Creighton Residency/Fellowship Program fosters an environment of excellence for the education of mentors and leadership in advancing residency and fellowship practice.

Creighton Residency/Fellowship Programs

**OT Programs (all approved)**
- Pediatric (1)
- Gerontology (2)
- Neurology (1)

**PT Programs (all accredited)**
- Pediatric (1)
- Ortho (3)
- Neuro (1)
- Geriatric (2)
- Women’s Health (1)
Fellowship and Residency Initiatives

• Fellowship is designed to develop “clinical experts and leaders in specific areas of occupational therapy practice.” ([http://www.aota.org/Education-Careers/Advance-Career/Residency/prospective-residents/faq.aspx](http://www.aota.org/Education-Careers/Advance-Career/Residency/prospective-residents/faq.aspx))

• A residency program is a post-professional planned learning experience comprised of a curriculum encompassing the essential knowledge, skills, and responsibilities of an advanced physical therapist within a defined area of practice. When board certification exists through the American Board of Physical Therapist Specialties for that specialty, the residency program prepares the physical therapist with the requisite knowledge and skill set needed to pass the certification examination following graduation. ([http://www.abptrfe.org/ForParticipants/AboutResidencies/](http://www.abptrfe.org/ForParticipants/AboutResidencies/))

• Provide fast-track to specialty certification for residents and fellows.

OT Fellowship Program Goals

• Goals of OT fellowship programs include:
  – Fast track to AOTA Board Certification (becoming exam based)
  – Assistance for logging experiences for selected specialty certificate (e.g., Environmental Modifications)
  – Developing a skilled OT practitioner
  – Introducing academia to continue to develop skilled future faculty members
  – Community outreach and service learning experiences
  – Facilitation of interprofessional practice
  – Research
  – Advocacy
PT Residency Program Goals

• Goals of the PT Residency programs include:
  – Dynamic and innovative curriculum which enables practitioners in both current and future practice environments.
  – Advance our infrastructure and research capacity in rehabilitation science resulting in increased national and international collaboration and dissemination for residency.
  – Emphasis in the theory, development and application of clinical reasoning through residency.
  – Global health initiatives to minimize health disparities and improve clinical practice in diverse environments.
  – Facilitation of interprofessional practice

Fellowship/Residency Focus

- Clinical Practice
- Academic Mentorship
- Curriculum
- Other Residency/Fellowship Learning Opportunities:
  - Service Learning
  - Interprofessional Activities
  - Etc.
Fellowship/Residency Timeline

- August 1st - Resident/Fellow starts
- Any edits to the curriculum and program have to be made and finalized
- July 31st - Completion of program

Common Core Curriculum

- Topics that cross over all specialty areas
  - 2 parts = 1 day focused on content and 1 day focused on application to practice
  - Case studies
  - Clinical narratives

- All PT Residents and OT Fellows participate

- Led by PT and OT faculty and guest speakers
Topics May Include…

• Ignatian Values
• Clinical Reasoning
• Orthotics & Prosthetics
• Medical Imaging
• Education & Teaching
• Evidence Based Practice
• Exercise and the Brain
• Oncology

What is a Case Presentation?
Case Presentations in the Residency/Fellowship Program

- Residents and fellows each give two 15-minute case presentations – spring and fall
- Graded by peers and/or faculty

Benefits of Case Presentations

- Reflect on action
- Think aloud
- Gain feedback to implement change
- Engage in professional and interprofessional socialization with other novices and experts
CASE PRESENTATION
TEMPLATE
CU PT Resident
Date

Patient History

- Guidelines:
  - Keep anonymous
  - Tell basic demographic information
  - General clinical problem

- Example:
  - 30-year-old female field hockey player presents with right knee pain of insidious onset has been symptomatic for 2 weeks

CASE PRESENTATION
TEMPLATE
CU OT Fellow
Date

Occupational Profile

- Guidelines:
  - Adhere to HIPAA and maintain client anonymity
  - Complete AOTA Occupational Profile Template (found at: https://www.aota.org/Practice/Manager/Reimbursement/occupational-profile-document-value-of.aspx) and select key aspects to report

- Examples:
  - Examples can be found at: https://www.aota.org/Practice/Manager/Reimbursement/occupational-profile-document-value-of/How-to-Write-Client-Occupational-Profile-Examples-of-Actual-Data.aspx

Patient Presentation

- Guidelines:
  - Give most essential findings from interview history & physical exam

- Example 1:
  - Frequent complaints of clicking with knee flexion during running and squatting
  - Diffuse tenderness over superior-medial patellar retinaculum
  - No effusion
  - Pain with passive flexion over patellar tendon
  - MMT: Knee flex: 5/5, Knee ext: 4/5
  - Lachman (-), Post drawer (-), Varus (-), Valgus (-)

- Example 2:
  - 7 yo child with cerebral palsy
  - sp Tendon lengthening procedure
  - Difficulty with ambulation and stair climbing
  - Alignment issues/measurements:

Analysis of Occupational Performance

- Guidelines:
  - Present most essential findings from assessments of body functions and structures, activity, and participation measures

- Example:
  - No c/o pain
  - Cognitive and vision screen WFL
  - LUE, LLI, and RUE WFL for strength and AROM
  - RUE, WFL for AROM, RUE strength 4/5 for shoulder and elbow flexion, elbow extension, R grip 30 lbs.
  - RUE coordination impaired for serial opposition
  - Pt. with impaired, not absent, light touch on RUE; c/o numbness in R elbow region
  - Pt. with supine to sit to stand and I with bed to chair stand step transfer performed functional mobility around hospital room to gather personal items from lower drawers to upper closet shelf independently
  - I with buttoning shirt, donning socks and shoes; I with all aspects of toileting
  - Patient health Questionnaire (PHQ) -2 score of 4
**Differential Diagnosis / Clinical Reasoning**

- Guidelines:
  - Provide working diagnosis and other diagnoses being considered
  - Cover key clinical findings impacting patient function

- Example
  - Working Diagnosis: Plica Syndrome
  - Differential Diagnoses:
    - Quadriceps tendonitis/tendinosis
    - Patellar femoral pain syndrome
    - Medial meniscus tear

**Clinical/Professional Reasoning**

- Guidelines:
  - Discuss key findings impacting client’s occupational performance, highlighting your thinking and judgement used to make client-related decisions
  - Type of clinical reasoning include: scientific, diagnostic, procedural, narrative, pragmatic, ethical, interactive, and conditional

- Example:
  - Client is acute care after a stroke at a high level of functioning and independence safe to discharge home
  - Client’s primary concerns are his RUE weakness, numbness, and incoordination, which can be addressed in an outpatient setting
  - PHQ-2 score indicated need for further evaluation for depression

**Plan of Care**

- Guidelines:
  - Tell what has been done, what has worked, and what has not

- Example
  - Week 1:
    - Pre-practice: ice, cross friction massage, quad sets
    - Rest practice: ice
  - Week 2:
    - Pre-practice: Continuous US, cross friction massage, WB quad exercises, modified weight room activities
    - Rest practice: ice
    - NSAIDs: Naprosyn 500 mg BID
  - Current Status: Patient is not Improving and is limited in practice and weight room

**Intervention Plan**

- Guidelines:
  - Outline the plan of care
  - Link intervention plan to selected theories, frames of reference, and/or evidence
  - Present targeted outcomes

- Example:
  - Client’s primary goal is to “get R arm moving”
  - ELOS in inpatient rehabilitation is 16 days
  - Focus on neuromuscular re-education for RUE
  - ADL training
  - NMES for proximal stability
  - Detailed HEP with education
  - Trial mirror therapy and mental imagery
  - Incorporating the Canadian Model of Occupational Performance to develop a plan based on individuals desire to return to playing cards with friends
Deviation from Expected (if applicable)

- Guidelines:
  - Concisely describe why this case is atypical
  - What is unique about it?

- Example
  - Patient has meniscal-like symptoms but does not have joint line tenderness or positive meniscal tests on physical exam
  - Patient has not responded to conservative treatment and, in fact, has gotten worse in past 7 days

Intervention Implementation and Review

- Guidelines:
  - Describe what has been done (can be in a session by session or weekly format), what has worked and what has not
  - Concisely describe why this case is unique, atypical, or challenging
  - Ask pointed questions to audience asking for their input

- Example: See next slide

How to Proceed

- Guidelines:
  - Concisely state the treatment plan for this patient
  - Ask pointed questions to audience asking for their input

- Example
  - Treatment plan:
    - Continue to treat symptoms
    - Activity modification PRN
    - Do comprehensive assessment of LE alignment, gait, and core stability
  - Questions
    - What other pathologies should I be considering in my evaluation?
    - What treatment alternatives should be considered?

- Week 1:
  - Focus on ADL training and functional transfers and mobility
  - Interventions: ADL’s, toilet, bed, tub/shower, chair, mat transfers and continue to build occupational profile

- Week 2:
  - Increase repetitions of transfer training to increase activity tolerance
  - NMES as tolerated

- Week 3:
  - Work towards mod I transfers and min A for ADL use for increased independence
  - D/C end of the week

- Current Status:
  - Patient does not tolerate NMES or excess transfer training d/t R hemiplegic shoulder pain

- Questions:
  - What should I do to address UE shoulder pain?
  - What treatment alternatives should be considered?
Discussion

- Include any additional questions you would like the group to discuss

Exemplar 1 of Submissions by Former Fellows/Residents
Health Condition / MOI

- 27 yo male experienced traumatic TBI via L frontal lobe gunshot wound through to R frontal lobe with many large bone fragments in brain
- Recent trach D/C with flushing of PEG tube
- L frontal craniotomy 1 week post MOI
- Setting: Bergan-Mercy ICU through to Immanuel IPR
  - Rancho III (Bergan Mercy ICU) – Rancho V-VI (Immanuel IPR)
    - Rancho III (localized response) – responds specifically and inconsistently with delays, but may follow simple commands for motor action
    - Rancho VI (confused, appropriate response) – pt gives context appropriate, goal-directed responses, dependent on external input for direction. There is carry-over for re-learned, but not for new tasks, recent memory problems persist.
### Body Structure/ Function (at IE)

<table>
<thead>
<tr>
<th>B Strength</th>
<th>Sensation &amp; Coordination</th>
<th>Cognition</th>
<th>Balance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hip Flexion 2/5</td>
<td>Difficult to assess due to cognition and</td>
<td>Perception: difficulty with finding midline, demonstrates retropulsion</td>
<td>Sitting balance: Fair: CGA-minA using B UE to stabilize</td>
</tr>
<tr>
<td>Knee Ext 3/5</td>
<td>weakness (coordination)</td>
<td>Comprehension: Able to follow 1-step command with additional time needed for motor planning and executive functioning</td>
<td>(able to reach outside of LOS with support of UE)</td>
</tr>
<tr>
<td>Knee Flexion 2/5</td>
<td></td>
<td>Dual Task: Unable to instigate (limited divided attention)</td>
<td>Standing balance: Fair: minA - Requires B UE in //bars, demonstrates retropulsion with constant VC and TC + mirror fdbk to assist with finding midline (2’ standing tolerance)</td>
</tr>
<tr>
<td>DF 1/5</td>
<td></td>
<td>Memory: LTM progressing, STM: no carryover present</td>
<td></td>
</tr>
<tr>
<td>PF 1/5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Great toe ext 3/5</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Body Structure/ Function (3 weeks post)

<table>
<thead>
<tr>
<th>B Strength</th>
<th>Sensation &amp; Coordination</th>
<th>Cognition</th>
<th>Balance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hip Flexion 4-/5</td>
<td>Difficult to assess due to cognition, weakness (coordination), and expressive aphasia (word finding)</td>
<td>Perception: consistently at midline; easily distracted to stimulating environment = gait LOB</td>
<td>Sitting Balance: Good</td>
</tr>
<tr>
<td>Knee Ext 4/5</td>
<td></td>
<td>Comprehension: Able to follow &gt;2 step commands consistently, increased time exec functioning</td>
<td>Static Standing balance: Good without UE assist, able maintain &gt;10’</td>
</tr>
<tr>
<td>Knee Flexion 4-/5</td>
<td></td>
<td>Dual Task: Decline in motor function/balance with cognitive task of naming restaurants</td>
<td>Dynamic standing balance: fair +to good- (able to pickup object from floor); diminished reactive balance &amp; limited selective attention to gait with visual scanning</td>
</tr>
<tr>
<td>DF 4-/5</td>
<td></td>
<td>Memory: LTM intact, STM carryover limited</td>
<td></td>
</tr>
<tr>
<td>PF 4-/5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Great toe ext: 4/5</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Activity Limitations

<table>
<thead>
<tr>
<th>Transfers (at IE)</th>
<th>Gait (at IE)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bed mobility: maxAx1</td>
<td>40 ft with Eva Walker with minAx2 for stabilization and mod distributed VC for sequencing</td>
</tr>
<tr>
<td>Sit&lt;&gt;supine: maxAx2</td>
<td>*HR 132-144 bpm with excess diaphoresis</td>
</tr>
<tr>
<td>STS: MaxAx1 in //bars (B UE support)</td>
<td></td>
</tr>
<tr>
<td>Stand&lt;&gt;pivot with sliding board maxAx1</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Transfers (3 weeks post)</th>
<th>Gait (3 weeks post)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Modified independent with all bed mobility, STS, and stand&lt;&gt;pivot</td>
<td>350+ ft with SBA-ModI without AD</td>
</tr>
<tr>
<td>*just made modified independent in his room</td>
<td>*assist depends on dynamic tasks</td>
</tr>
<tr>
<td>10MWT: 2.9 ft/sec</td>
<td>10MWT: 2.9 ft/sec</td>
</tr>
<tr>
<td>• Norm healthy adult: 4.1-4.74 ft/sec</td>
<td>• Norm healthy adult: 4.1-4.74 ft/sec</td>
</tr>
<tr>
<td>6MWT: 1000 ft</td>
<td>6MWT: 1000 ft</td>
</tr>
<tr>
<td>• Norm 60 yo: 1800 ft</td>
<td>• Norm 60 yo: 1800 ft</td>
</tr>
<tr>
<td>FGA: 23/30</td>
<td>FGA: 23/30</td>
</tr>
<tr>
<td>• &lt;22/30 indicative of increased fall risk (geriatric population)</td>
<td>• &lt;22/30 indicative of increased fall risk (geriatric population)</td>
</tr>
</tbody>
</table>

### Participation Restrictions, Personal and Environmental Factors

#### Participation Restrictions
- Driving
- Parenting and caregiving of 2 children (1 yo, 4 yo)
- Occupation
- Leisure activities and sports

#### Environmental Factors
- 4 STE with B HR
- Safety with return home (gang related shooting?)

#### Personal Factors
- Supportive family and friends
- Motivated
- Progressing well with recent trach weaning and maintaining SPO2 and PEG weaning
- Young without outstanding comorbidities
### Prioritized Problem List

**Initially from IE:**
- **Activity tolerance**
  - Limited due to prolonged hospital stay
  - Decreased CV endurance (heavy diaphoresis and elevated HR with simple tasks)
- **Bed mobility/transfers**
  - Requires maxA with all bed mobility (strength and poor sequencing) and transfers
- **LE strengthening**
  - Diminished LE strength impacting transfers, standing ability, gait

**3 weeks post:**
- **Activity tolerance**
  - Still shows some diaphoresis and ms fasciculations with exercises that should be easy for his age
- **Dynamic gait**
  - Decreased selective attention to gait in stimulating environments = increased fall risk
- **Cognitive Dual Tasking**
  - Increased difficulty with cognitive + motor task causing motor ability to decline with increased unsteadiness

### Goals

**IE: (all met)**
- Pt will complete bed mobility (rolling, sit<>supine) with minA-CGA to improve ADL completion and decrease caregiver burden.
- Pt will complete STS and stand<>pivot transfer with LRAD, minA-CGA demonstrating improve functional strength and stability needed for ADL completion and decreased caregiver burden.
- Pt will ambulate 50’ with FWW, minAx1 for walker control and or stability to improve functional mobility.

**3 weeks post: (updated goal 1 wk post eval)**
- Pt will demonstrate improved gait fluidity with decreased fall risk, completing 10MWT with 2 ft/sec gait speed over 100 ft. (MET)
- Pt will complete 5xSTS without use of UE in <10” to show improved LE strength and stability with transfers. (IP- 11”)
- Pt will demonstrate improved CV and muscular endurance, being able to complete >500 ft during 6MWT with standing rest breaks as needed. (MET)
Plan of Care

- Part practice gait mechanics followed with over-ground walking (fwd, lat, retro)
- Blocked practice of transfers and bed mobility
- Standing balance of reaching outside of LOS, ball toss, balloon tap
- Step ups ➔ stairs
- Developmental sequences (extremely challenging) focused on core and spinal extensor stability
  - Half ➔ Tall kneeling
  - Quadruped + bird dog
- Dynamic gait and transfer of skills to other environments
- Gym equipment for further strengthening and reintegration into community
- Dual Tasking (cognitive tasks of naming routine objects progressed to numerical sequence)
- Continuously challenging STM throughout session, stressing random practice of tasks, internal feedback, massed practice

Treatment Plan

- D/C home with 24/7 care from mom (caregiver training – deficits, home environment, assistance)
- Continue to address dynamic gait, cognitive dual tasking\(^4\),\(^5\), and higher level balance to increase safety and stability with ambulation and ADL/IADL abilities
- Address any additional pt-specific goals he might have prior to D/C
Went Well/Struggled

Successful:
- Pt continues to progress and make huge bounds, always engaged in session and motivated
- Progressions continued to challenge him (especially trunk stabilization exercises, i.e. developmental postures)
  - Engaging activities, appropriate progressions/regressions of exercises, motor control principles
- Dynamic gait, balance, trunk stability continuing to improve and decrease overall fall risk

Struggled:
- Challenging his cognition the appropriate level – frustration, slowed executive functioning and motor planning

Clinical Question

- Progression of cognitive dual tasking exercises?
- Other ways to challenge his cognition within scope of PT?
References


Small Group Activity

- Examine the Case Presentation you’ve been given in a small group
- Review the grading rubric
- Appraise the case presentation based on the rubric
- Large group discussion on findings

Small Group Activity Case Example
Key Take-Aways for the Day for You

• Clinical reasoning is integral to learner development
• Case presentations allow for:
  – reflection on action
  – thinking aloud
  – professional socialization
  – understanding of thought process and deepen the learning experience

Conclusion…
References


