Diagnosis: Defining the Patient Problem
A “prerequisite for treatment”

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Session Objectives
1. Appreciate the role of Physical Therapist (PT) diagnosis in clinical practice
2. Compare and contrast “PT Diagnosis” and “Medical Diagnosis”
3. Distinguish diagnostic process from diagnostic classification
4. Explain the Hypothesis-Oriented Algorithm for Clinicians (HOAC) and how it informs diagnostic process
5. Apply a systematic diagnostic process to a patient problem

Why We Need to Diagnose
Patient Case

- 59 year-old industrial worker presents to local outpatient PT clinic with a chief complaint of left shoulder pain and intermittent tingling in L UE
- History of neck pain
- Physical exam findings: negative for shoulder impairments
- Cervical spine exam reveals limited L cervical rotation (35°), + Spurlings test, + Quadrant test
- Referred patient to PCP with report of findings
- Patient lost to follow-up

Outcome

- PT recommendation was not followed
- Patient discontinued treatment
- Several months later, after persistent and worsening symptoms, imaging was obtained
- Diagnosis: Osteomyelitis
- Subsequently underwent Cervical Corpectomy with Fusion

Conventional Radiographs (Several months later)
Consider

- Family practice residents are not confident in their ability to manage MS conditions (Matheny JM, Brinker MR, Elliott MN, et al: Confidence of graduating family practice residents in their management of musculoskeletal conditions. Am J Orthop 2000;29(12):945-952)
PT versus Family Practitioner
Knowledge of LBP Management
• 54 PT’s and 140 FP Physicians serving in US Air Force completed standard MS exam
• PT’s more likely to recommend the correct drug treatment for acute LBP compared to FP (85.2% vs 68.5%)
• PT’s demonstrated significantly greater knowledge of optimal management strategies


Yet
• MS conditions are the primary reason patients seek care from a PCP (Praemer A et al, 1999)
• MS conditions are the most common cause of long-term disability
• Aging population will lead to increased prevalence of MS conditions

Matching Question
(Fill in the Blank)
Cardiologist  Cardiac Surgeon
Neurologist  Neurosurgeon
Orthopedic Surgeon

What profession is best poised to offer conservative, non-surgical management for MS Conditions?
Physiotherapy diagnosis in clinical practice: a survey of orthopaedic certified specialists in the USA

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ABSTRACT Background and Purpose: Diagnosis is a complex process that requires critical decision making among several considerations, including the assignment of a label of a condition based on clinical features. This study aimed to determine the understanding of diagnosis among orthopaedic certified specialists in clinical practice.

Methods: A survey was administered to 100 orthopaedic certified specialists in clinical practice. The survey included questions related to the understanding of diagnosis and its role in clinical practice.

Results: The survey was completed by 87 orthopaedic certified specialists. The majority (80%) of respondents agreed that diagnosis is a critical component of clinical practice. They also agreed that diagnosis is a complex process that requires critical decision making among several considerations.

Discussion: The results of this study highlight the importance of diagnosis in clinical practice and the need for orthopaedic certified specialists to have a clear understanding of the process and its role in guiding clinical decision making.

Themes

PT Diagnosis:

1. May incorporate the medical diagnosis, but moves beyond it

2. Occurs across multiple levels or systems

3. Physiotherapists tend to view diagnosis as being process-oriented; primary purpose is to direct treatment

Diagnosis: Definition

- A label that describes the 'primary dysfunctions toward which the physical therapist directs interventions'. (Guide to Physical Therapist Practice)

- "Diagnosis is both a process and a descriptor. The diagnostic process includes integrating and evaluating the data that are obtained during the examination for the purpose of guiding the prognosis, the plan of care, and intervention strategies. Physical therapists assign diagnostic descriptors that identify a condition or syndrome at the level of the system, especially the human movement system." (Norton BJ. Harnessing our collective professional power: diagnosis dialog. Phys Ther. 2007;87(6), 635-8.)
Functions of Diagnosis

- Statistical tracking of health conditions
- Identification of cause of health condition
- Explain patient health condition
- Provide a prognosis
- Directs treatment

APTA Position on Diagnosis

- Policies & Bylaws: Practice
  - http://www.apta.org/Policies/Practice/
- Diagnosis by Physical Therapists

HOD P06-12-10-09

- “Physical therapists shall establish a diagnosis for each patient/client”
- “When indicated, physical therapists order appropriate tests, including but not limited to imaging and other studies, that are performed and interpreted by other health professionals. Physical therapists may also perform or interpret selected imaging or other studies... In performing the diagnostic process, physical therapists may need to obtain additional information (including diagnostic labels) from other health professionals.”
Scope of Practice

- “Physical therapists diagnose with respect to physical therapist practice as authorized by state law. In diagnosing a patient’s condition in accord with such law, physical therapists are not in conflict with the diagnosis provisions of state laws governing the practice of medicine. No states prohibit a physical therapist from performing a diagnosis.”

Language in Direct Access Laws

Alabama: “May perform PT services without a prescription…to an individual for a previously diagnosed…for which PT services are appropriate after informing the health care provider rendering the diagnosis.”

Nevada: “Physical therapy does not include the diagnosis of physical disabilities.”

Scope of Practice

Prohibits the diagnosis of disease/medical diagnosis:
- California
- Colorado
- Connecticut
- Idaho
- Maine
- Minnesota
- North Carolina
- Texas
- Utah
Physician groups argue that physical therapists cannot diagnose. How should we respond to such a charge?

Medical Versus PT Diagnosis

**Medical Diagnosis:**
*Duchenne Muscular Dystrophy*

**PT Diagnosis:**
*Lower extremity weakness leading to inability to transition from floor to standing independently.*

**Medical Diagnosis:**
*Rotator Cuff Tendinopathy*

**PT Diagnosis:**
*Shoulder Instability with associated impairments of muscle strength consistent with rotator cuff tendinopathy*

*Note: Caution with use of term "instability"*

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**The Hypothesis-Oriented Algorithm for Clinicians II (HOAC II): A Guide for Patient Management**

In this era of health care accountability, a need exists for a new benchmarking tool to document the care provided to patients. New clinical and research findings have expanded the concept of patient care. The HOAC II for Clinicians is designed to take the guesswork out of clinical decision making for patient care. The HOAC II for Clinicians is not another protocol for care, but it is a tool to interact with the patient and family to see how the patient is doing and how things are progressing. The HOAC II is designed to help the clinician have a clear understanding of what the patient is experiencing and what the patient is experiencing. The HOAC II is designed to be used with the patient and family to make decisions about what the patient is experiencing and what the patient is experiencing. The HOAC II is designed to be used with the patient and family to make decisions about what the patient is experiencing and what the patient is experiencing. The HOAC II is designed to be used with the patient and family to make decisions about what the patient is experiencing and what the patient is experiencing. The HOAC II is designed to be used with the patient and family to make decisions about what the patient is experiencing and what the patient is experiencing. The HOAC II is designed to be used with the patient and family to make decisions about what the patient is experiencing and what the patient is experiencing.
Hypothesis-Oriented Algorithm for Clinicians (HOAC)

- Model of clinical reasoning
- Systematic approach to patient management
- Identifies patient data to be collected and analyzed in clinical decision-making
- Hypothesis is molded through patient interview, physical examination, and other relevant patient data
- Hypothesis links “pathology” to impairments and functional limitations

HOAC

1. Collect initial patient data (includes history)
2. Patient-Identified Problems (PIP’s)
3. Plan physical exam
4. Conduct physical exam
5. Add clinician identified problems
6. Write Goals
7. Administer interventions
8. Assess outcomes (re-evaluate)
Diagnostic Classification

- Classification is a tool to categorize patient data and apply it to clinical decision-making
- Classification (Subgrouping) facilitates intervention planning
- Subgrouping patients with LBP is common (MDT, Treatment-Based Classification, Movement System Classification)

Clinical Practice Guidelines: Non-Specific Neck Pain

**Grade I**: Neck pain with no S&S of structural pathology, no or mild functional limitation

**Grade II**: Neck pain with no S&S of structural pathology; but high level of functional disability

**Grade III**: Neck pain with no S&S of structural pathology; + neurological signs

**Grade IV**: Signs or symptoms of major structural pathology (vertebral fracture, infection, inflammatory disease, etc)


No Universal Classification System in PT Practice
Integrated Diagnostic Process

Diagnosis is both a process and a label.

International Classification of Functioning, Disability & Health

Orthopedic Physical Therapy Clinical Decision Making
Multi-Level Diagnosis

I  Medical Screening & Triage
II  Musculoskeletal Differential Diagnosis
III  Impairment/Function
IV  Psychosocial Dimension

Level I Diagnosis: Medical Screening

Options:

- Referral to Appropriate Healthcare Provider – condition is outside scope of practice
- PT Management with Referral – condition is within scope of practice, but comorbid condition exists that requires consultation/referral
- PT Management – condition falls within scope of practice without need for referral

Level II: MS Differential Diagnosis

- Tissue source of pain
- ICD – 10 Code (Designator)
- Hierarchical System: Use most specific code that can be supported by diagnostic tests
- Must be correlated with clinical findings
- Term “probable” can be used in the absence of confirming evidence
- May lead to need for collaboration with physicians – diagnostic imaging or other diagnostic tests
Level III Diagnosis

• Physical impairments linked to functional limitation
• ROM, Joint Mobility, Muscle Strength, Muscle Length, Muscle Endurance, CV Endurance
• Drives intervention
• Must consider tissue irritability

High Irritability

• High self-report pain level (>7/10)
• Pain at rest; difficulty sleeping
• Pain before end range (ROM testing)
• AROM < PROM
• High levels of disability (ODI/FOTO)
• Interventions focused on controlled loading, pain control, monitoring impairments

Moderate Irritability

• Moderate pain levels (4-6/10)
• Intermittent pain at rest
• Pain at end-range (ROM testing)
• AROM slightly < PROM
• Moderate levels of disability
• Treatment focused on impairments and basic functional restoration
Low Irritability

- Low pain levels (≤ 3/10)
- No pain at rest
- AROM = PROM
- Minimal pain with joint overpressure
- Mild disability
- Treatment focus impairments and high demand functional tasks

Level IV: Psychosocial Dimension

- Yellow-Flag (Screening)
- Psychologically informed practice
- Identification of psychosocial factors that may impact prognosis & outcomes
- Addressed with cognitive/behavioral intervention – including patient education
Biopsychosocial Model

The biopsychosocial (BPS) model of health care recognizes that health conditions involve complex interactions among biological, psychological and sociological factors. The BPS model supersedes the biomedical framework in the diagnosis & treatment of health conditions. No where is this more important than in the management of spine related disorders.

Psych Factors

• Negative Beliefs
• Fear
• Catastrophizing
• Poor self-efficacy
• Depression

• Passive Coping
• Hypervigilance
• Anxiety

Social Factors

• Job satisfaction
• Work Disability
• Home life
• Social interaction
• Relationships
Yellow-Flag Screening

- STarT Back Tool
- Fear-Avoidance Belief Questionnaire
- Pain Castastrophizing Scale
- PHQ-9
- Beck’s Depression Inventory
- Pain Self-Efficacy Scale

Note: A good history is the best tool for screening

Cognitive-Behavioral Interventions

- Educational Interventions
- Neuroscience Pain Education
- Stress Management/Relaxation Techniques
- Cognitive Restructuring
- Confrontation versus avoidance
- Pain coping skills training
- Graded exposure
- Quota-based Exercise

Summary

- Expectations for doctoring profession include ability to diagnose the patient problem
- Diagnosis is the central/pivotal element in patient management
- Diagnosis is both a process and a label; PT labels are currently inconsistent
- Diagnostic classification subgroups patients in ways that inform prognosis and treatment
- Diagnosis defines the patient problem