

## Applying the International Classification of Functioning, Disability, and Health (ICF) Model in Athletic Training Clinical Practice

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### Outline

- Benefits of disablement models
- AT Adoption of the ICF
- Nagi's Disablement Model
- International Classification of Functioning, Disability & health Model
- Clinical Application
- Resources - Current & in development

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Activity: a hockey player with a SLAP lesion  
 unable to hit slap shot,  
 Health Condition


Personal Factors: Bubba is...  
 can't afford payments  
 on dental work.  
 complex!

Body Functions/  
 structure: Strength 3+/5, 110 degrees AROM,  
 no longer in the starting line-up,  
 Participation

Environmental: can't get  
 a date,



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**Adoption of the ICF Model by the  
 Athletic Training Profession:  
 Background and Future Directions**  
 Athletic Training Educators' Conference  
 February 17, 2017

**Executive Committee for Education**  
 Carrie Meyer, EdD, ATC  
 Sara Nottingham, EdD, ATC

## What is a Disablement Model?

- Conceptual models that provide a framework for clinical practice and research (Snyder et al, 2008)
- Facilitates:
  - Integration of research into practice
  - Incorporation of patient perspectives into care
  - Effective documentation of clinician and patient-rated outcome measures



## Benefits of Using Disablement Models as Framework

- Organizational tool – provides conceptual structure for clinical practice
- Provide a common language for all healthcare professionals
- Refocus interventions on the unique needs of each patient (patient-centered care)
- Identification of meaningful patient-centered goals leads to patient-centered care

*Snyder et al JAT 2008*

## Background

- *Future Directions in Athletic Training Education* document approved by the NATA BOD in 2012
- Recommendation #10
  - “The NATA and its strategic partners should adopt a model to frame the practice of athletic training using contemporary disablement model language.”



## Identifying the Model

- June 2015: ECE formed work group to begin researching different disablement models
- July-August 2015:
  - Examined existing literature and other healthcare professions
  - Consulted with Athletic Trainers with expertise in disablement models



## Recommendation

- September 2015: The ECE recommended the NATA BOD adopt the World Health Organization's *International Classification of Functioning, Disability, and Health* model
- December 2015: NATA BOD adopts the ICF
- By March 2016: CAATE, BOC, NATA Foundation adopt/endorse the ICF



## Why the ICF?

- Most comprehensive and current model used in healthcare
- Adopted/Endorsed by other healthcare professions
  - World Health Organization (2001)
  - Institute of Medicine (2007)
  - American Physical Therapy Association (2008)
  - American Medical Association (2011)



## Why the ICF?

- Language already incorporated into 5<sup>th</sup> edition competencies (Future Directions, 2012)
- Holistic framework that aligns well with AT
- Used in athletic training outcomes-based research  
(Parsons et al., 2008, Snyder et al., 2008, Valovich McLeod et al., 2008)



## Integration throughout the Athletic Training Profession

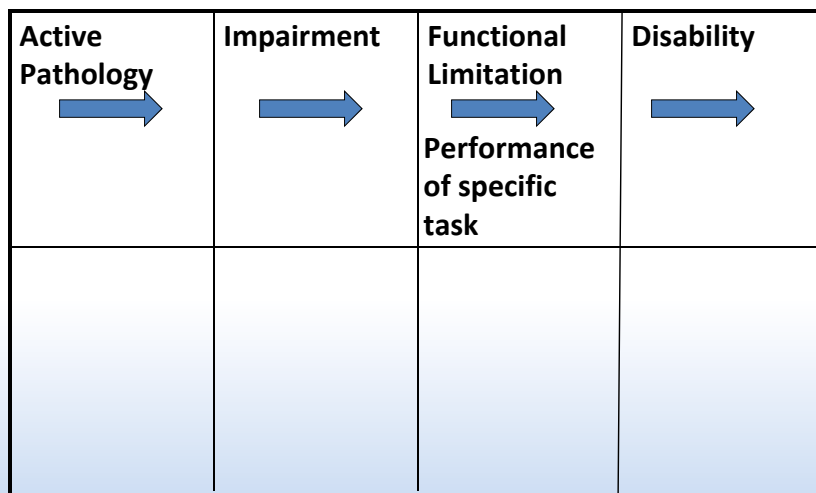
- Need for resources to help ATs learn and use the ICF
  - Clinical practice
  - Education curriculum
  - Research design and outcomes
  - Documentation systems



# Disablement Models

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## Nagi's Disablement Model



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# “Disability”

- The inability of a person to fulfill his or her desired or necessary social or personal roles

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## Nagi’s Disablement Model

Active Pathology →	Impairment →	Functional Limitation → Performance of specific task	Disability → Social participation
ACL Tear	+ Lachman’s, 80° Knee Flexion	Inability to run, Inability to jump	Unable to play basketball
Adhesive Capsulitis	ROM deficits, pain	Unable to raise arm above head	Unable to wash hair

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## Nagi's Disablement Model

- Benefits
  - Provided standardized terminology and a framework about which to talk about this
  - Emphasized individualized nature of functional limitations and disabilities
- Limitations
  - Assumes a linear relationship
  - Assumes it starts with a pathology
    - LBP – no pathology identifiable by imaging but yet have impairments (loss of ROM, function, etc.)
  - Assumes a certain amount of functional loss

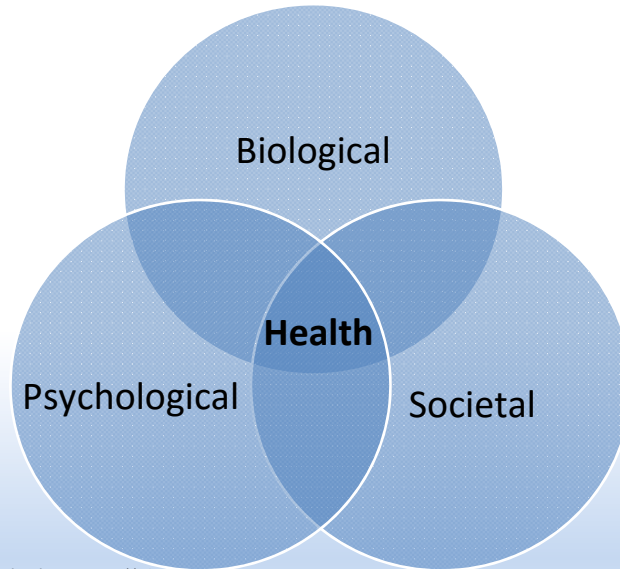
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## Modifications Needed

- Less emphasis on the linear relationship
    - Presence of injury/disease does not predict functional status
    - Diagnosis does not predict course of treatment, require functional limitations
- (Federal Register Nov 2012)*
- Inclusion of contextual factors
    - What other factors account for how pathology and/or impairments are related to functional loss and/or disability?

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## Biopsychosocial model

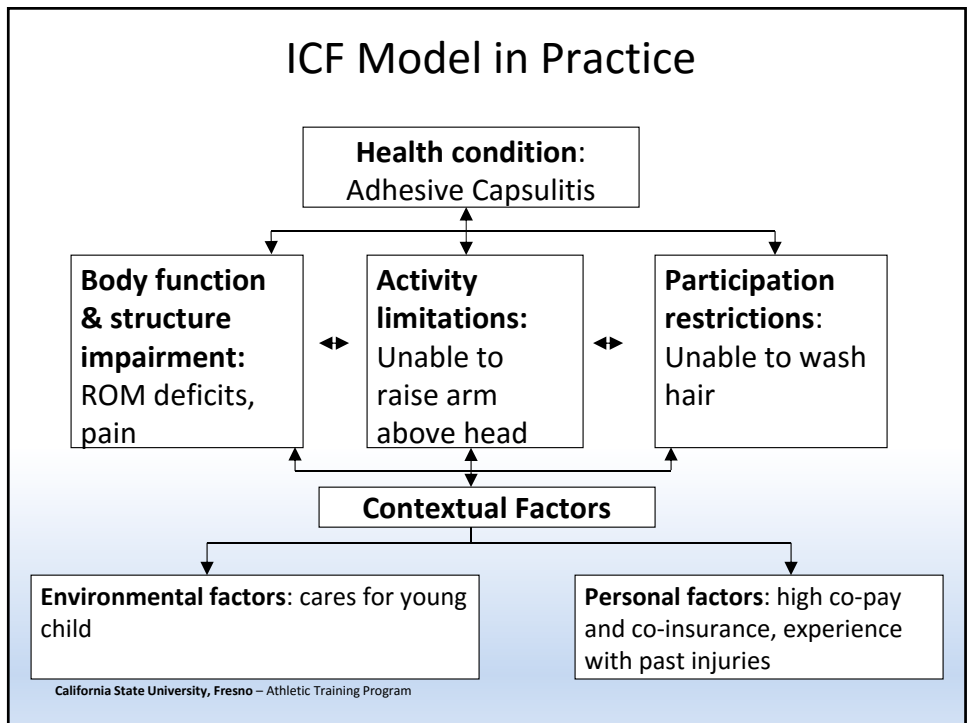
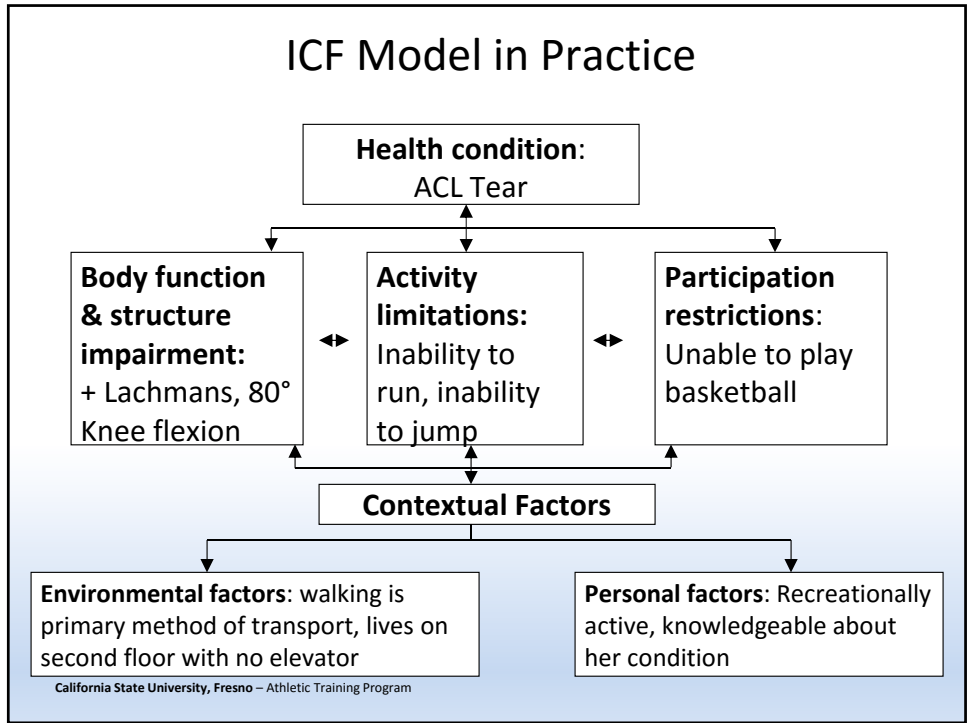


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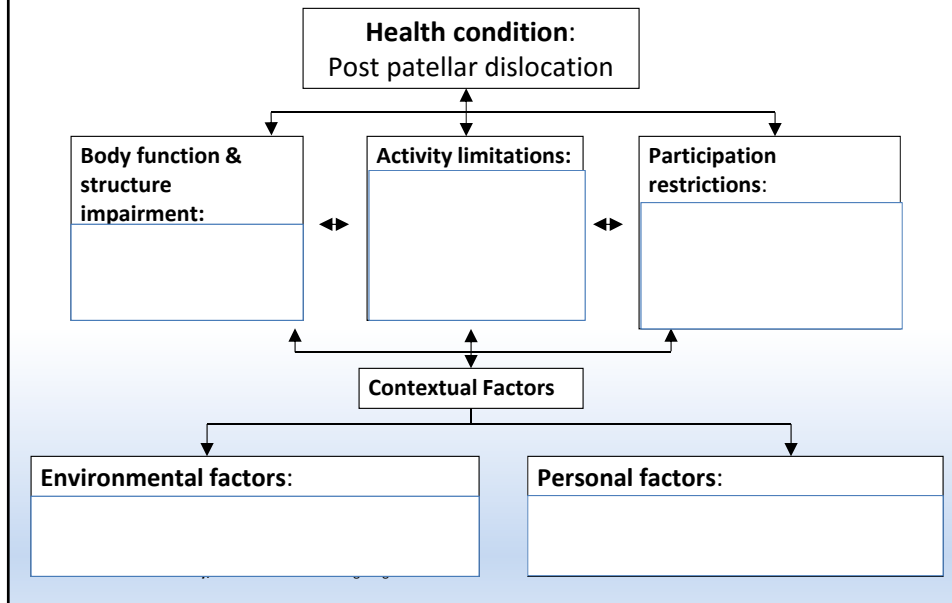
## Nagi's Disablement Model

Pathology	Impairment	Functional Limitation	Disability
→	→	→	→
		Performance of specific task	Social participation
ACL Tear	+ Lachman's, 80° Knee Flexion	Inability to run, Inability to jump	Unable to play basketball

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## ICF Model in Practice: Helgeson & Smith 2008



## Considerations for Application to Clinical Practice: Evaluation

- Consider framework
- Environmental & Personal factors
- Limitations in and out of sport

## Patient Specific Functional Scale (PSFS)

**Initial Assessment:**

I am going to ask you to identify up to three important activities that you are unable to do or are having difficulty with as a result of your shoulder problem. Today, are there any activities that you are unable to do or having difficulty with because of your shoulder problem?

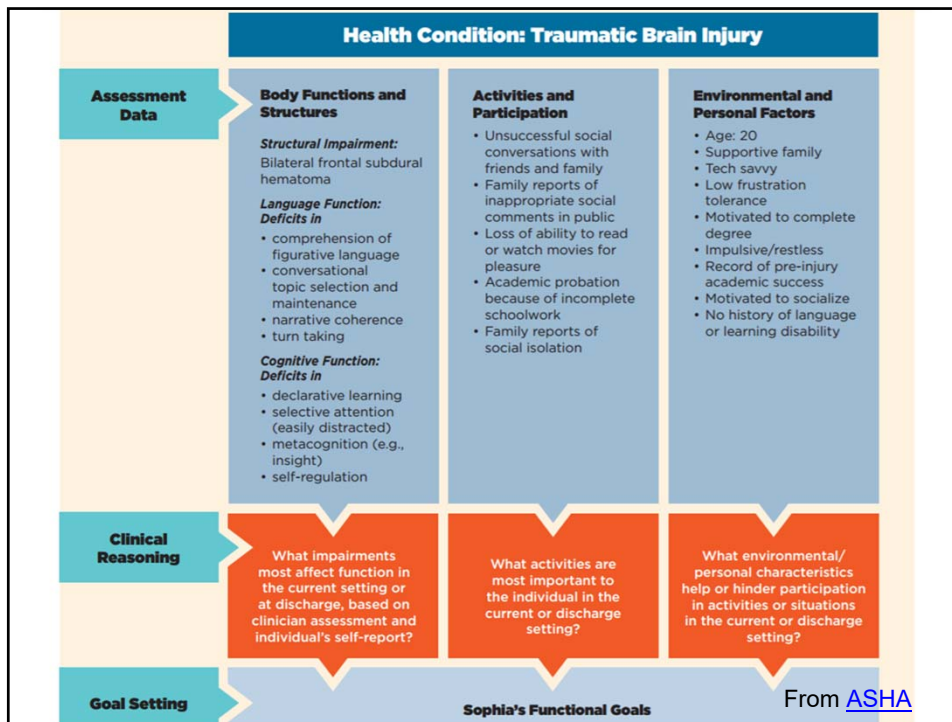
**Patient-specific activity scoring scheme (Point to one number):**

0 1 2 3 4 5 6 7 8 9 10  
 Unable to perform activity    Able to perform activity at the same level as before injury

Activity	Score
1	
2	
3	
4	

## Considerations for Application to Clinical Practice: Rehabilitation

- When developing goals and rehab plan, consider...
  - Personal/environmental factors
    - Psychological factors: Anxiety, Fear Avoidance - how would rehabilitation be staged differently?
  - PSFS activities identified by patient
  - Problem-oriented rehabilitation



## Additional ICF Components

- Classification system
  - Over 1,400 categories
- Modifiers
  - Rate the extent of each problem for body function, structure, activity, and participation
  - Rate the extent of positive or negative impact for environmental and personal factors

Functional Limitations of Patients with Shoulder Pain		
Counts	Title	Includes
43	Sleep functions	
78	Exercise tolerance	
32	Maintain body position	maintain lying position
136	Lifting and carrying	
13	Pulling	
50	Pushing	
77	Reaching	
17	Twisting or turning	
86	Throwing & catching	
16	Driving	
43	Self-care	washing and caring for body and hair, dressing, toileting
58	Domestic life	housework, maintaining home and cars, caring for plants or animals, assisting others
20	Employment	
69	Community, social and civic life	sports, recreation & leisure, hobbies, play

## Resources - WHO

- Online ICF
- ICF Checklist
  - Practical tool used to gather information for an individual
  - Organizes areas and questions
- ICF Core Sets
  - A way to specify functioning for a specific health condition (e.g., LBP)



<http://www.who.int/classifications/icf/en/>

## AT Specific Resources

- Numerous journal articles in JAT
  - Parsons et al., 2008
  - Snyder et al., 2008
  - Valovich McLeod et al., 2008
- April 2016 NATA News & blog article



## AT Specific Resources in Development

- 2018 District Lecture Series
- 2019 NATA Annual Symposium
- Additional materials to be developed





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*Snyder et al JAT 2008*

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Thank you!

Questions?

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