

# **H**uman **O**rthotics and **P**rosthesis **E**ducation



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# Orthosis vs. Prosthesis

## What is an Orthosis?

*A device applied to a human limb to control or enhance movement or to prevent bone movement or deformity, for example, a splint or an arch support.*



## What is a Prosthesis?

*An artificial replacement of a body part. It may be an internal replacement such as an artificial joint or an external replacement such as an artificial limb.*

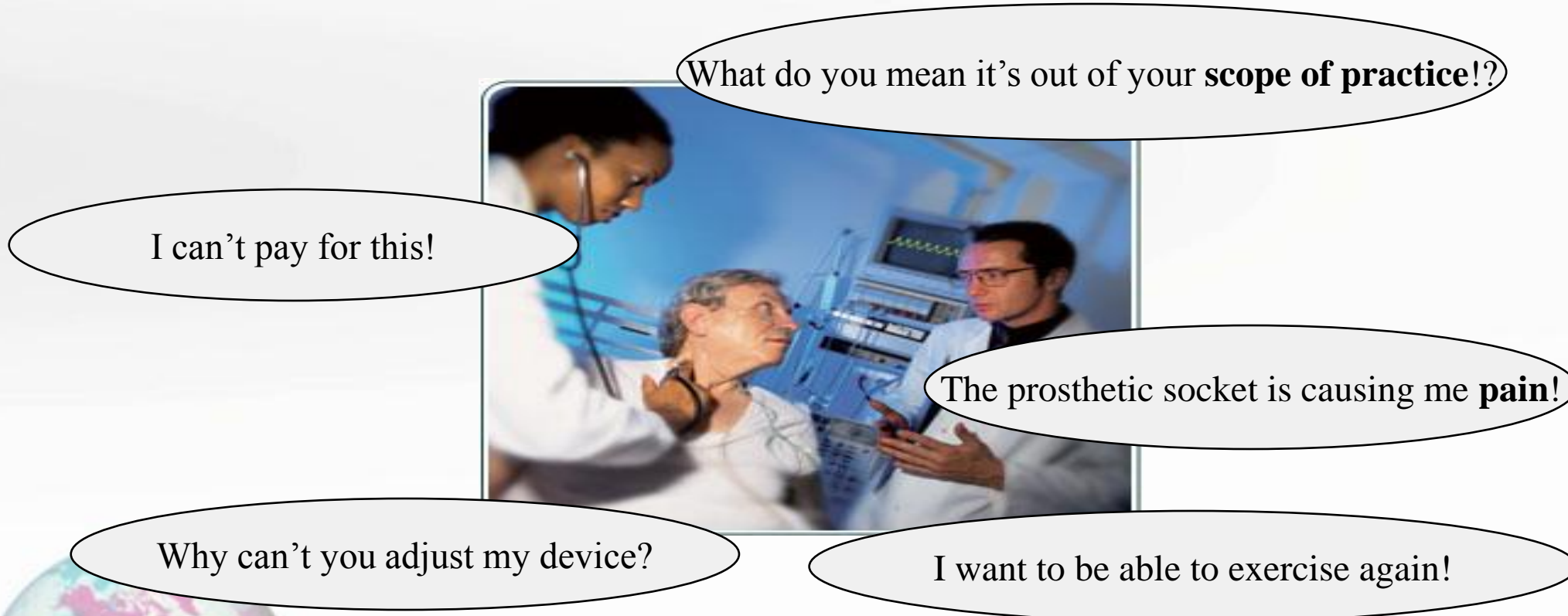


# Problem Definition

- Latin America has over 500 million people
- Over 2.5 million people need O&P treatment
- Only 50 ISPO certified & 1500 uncertified practitioners
- Limited educational opportunities in O&P
- Developing teamwork education modules for Centro Don Bosco and Joliet Junior College technician programs
- Improved communication between clinicians can lead to appropriate and effective patient care

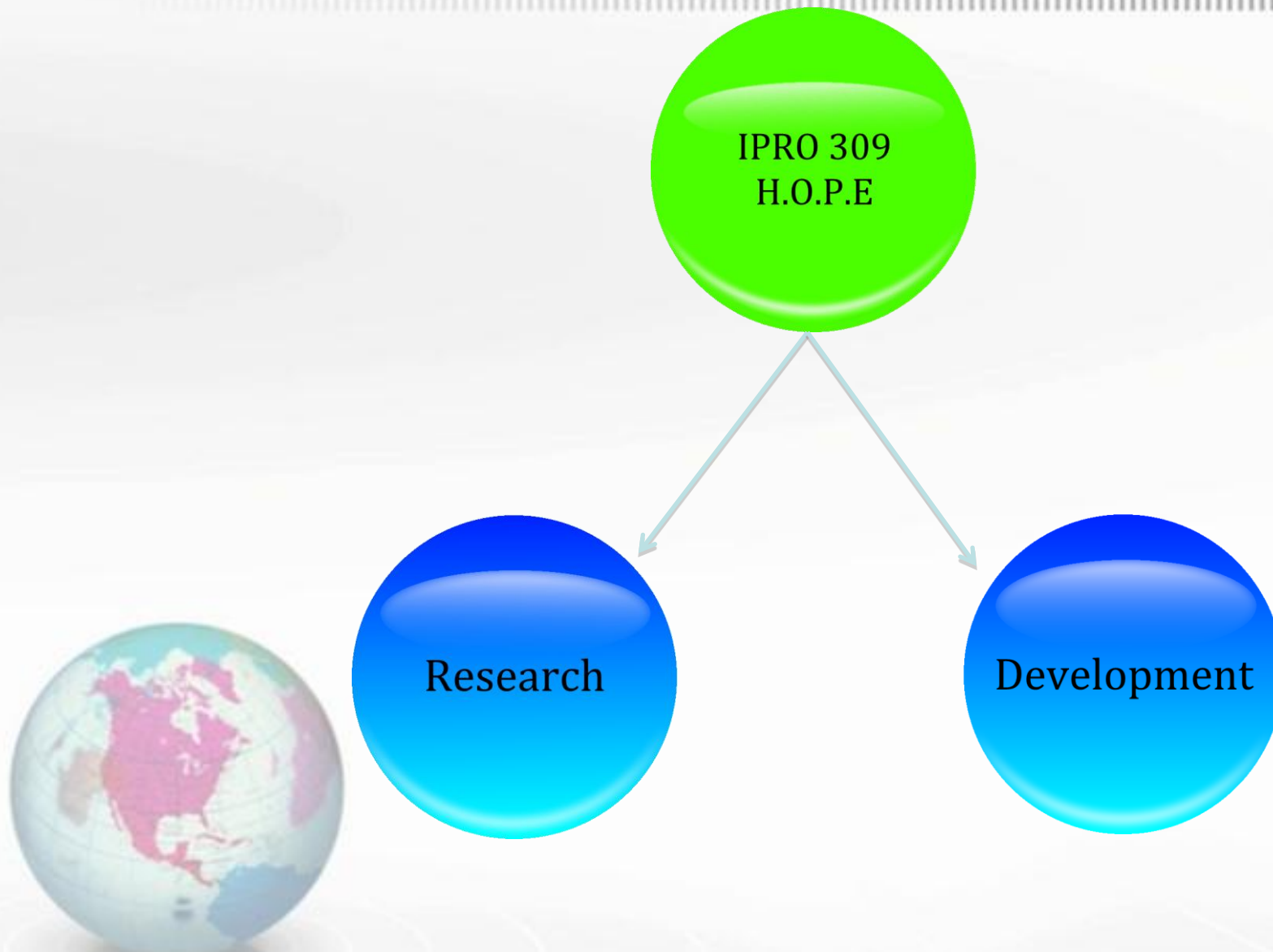


# Problem Definition

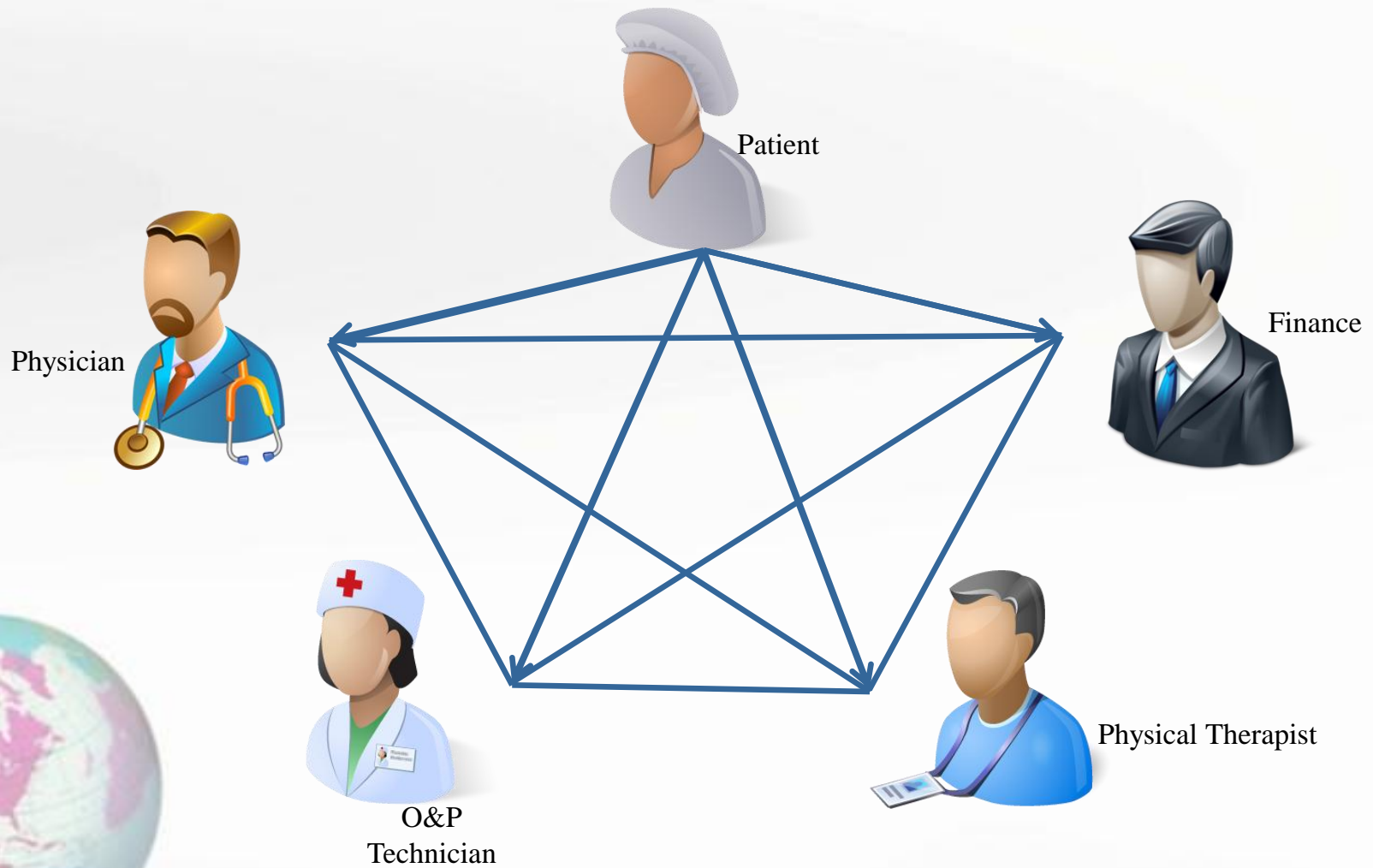


Improved communication, understanding,  
and teamwork guarantees the best treatment.

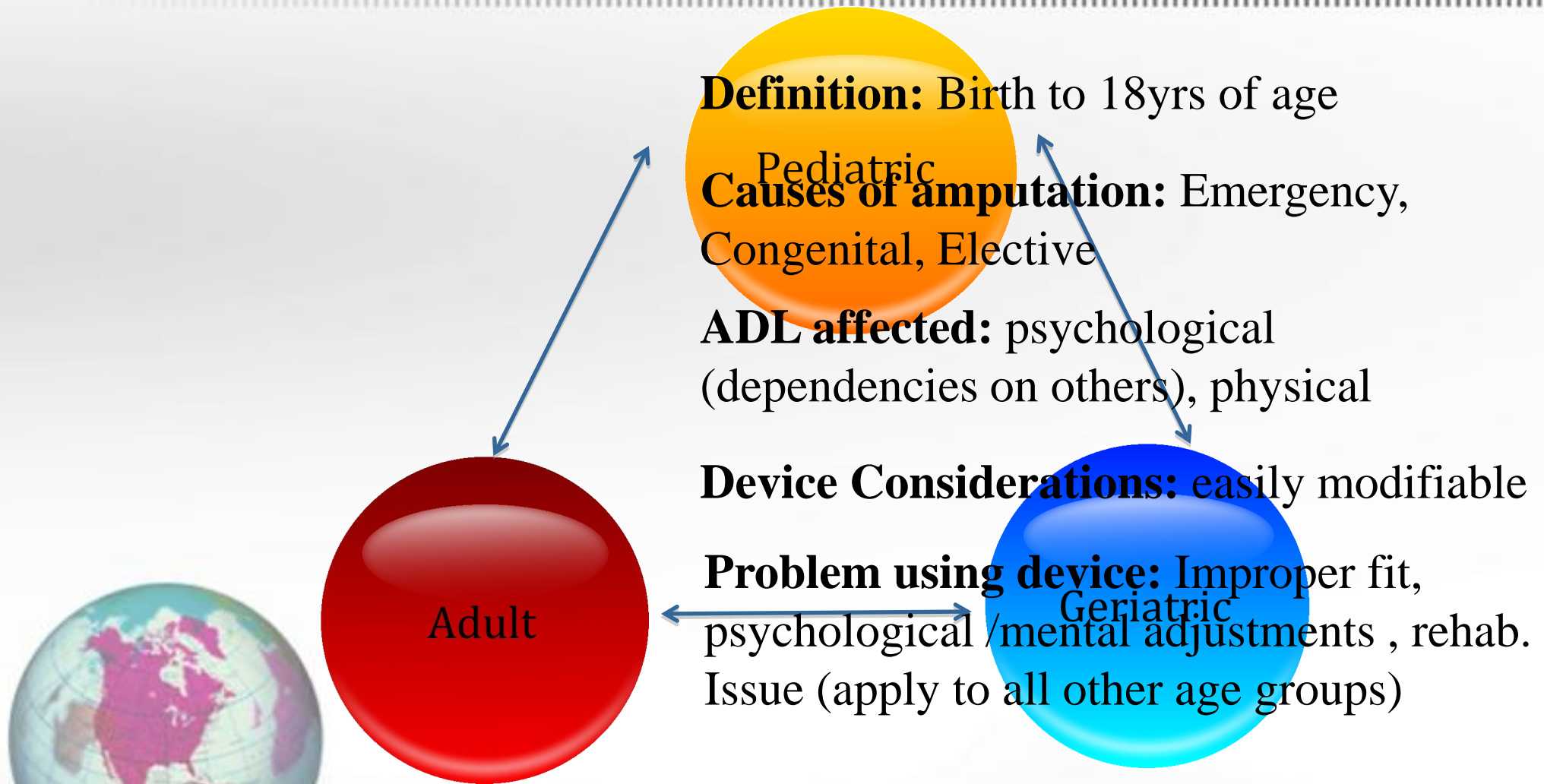
# Team Structure



# Research



# Development





Pediatric



Adult



**Definition:** 18 – 39: Young Adults

40 – 65: Middle Age Adults

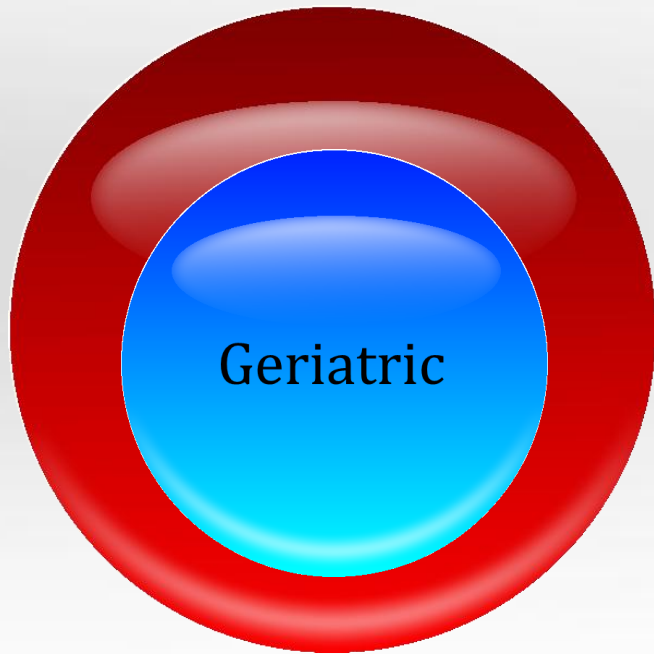
**Causes of amputation:** Emergency, Elective (diabetes)

**ADL's affected:** walking, showering, driving, working, and exercising

**Device Considerations:** level of exercise, daily activities

**Problem using device:** Same as for pediatric, except that energy expenditure becomes an issue





**Definition:** >65 yr; 2 billion by 2050

**Cause of amputation:** Emergency,  
Elective (vascular disease, and diabetes)

**ADL affected:** psychological, physical,  
schedule, financial

**Device Considerations:** prevent muscle  
atrophy

special features regarding:

- *skin/joint concern*
- *Osteoporosis and circulation*

**Problem using device:** Energy expenditure  
becomes more of an issue as the patient  
becomes older

# Challenges

- Broad topic
- Insufficient clinical experience
- Conflict schedule
- Language barrier
- Financing



# Solutions to Challenges

- Conduct specific research (transtibial and transfemoral amputation).
- Contact and interview professionals.
- Consistent communication among team members.



# Desired Outcome

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- To create educational modules that will inform O&P students about the different roles involved in the treatment of a patient.

## Tools used to reach outcome

- Slideshow presentation
- Case Study
- Website
- Brochures



# Q&A

