Human Orthotics and Prosthetics Education

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http://www.iit.edu/ipro309s09

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

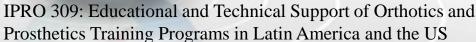
-Improved communication between clinicians can lead to

appropriate and effective patient care





COLOMBIA



Problem Definition

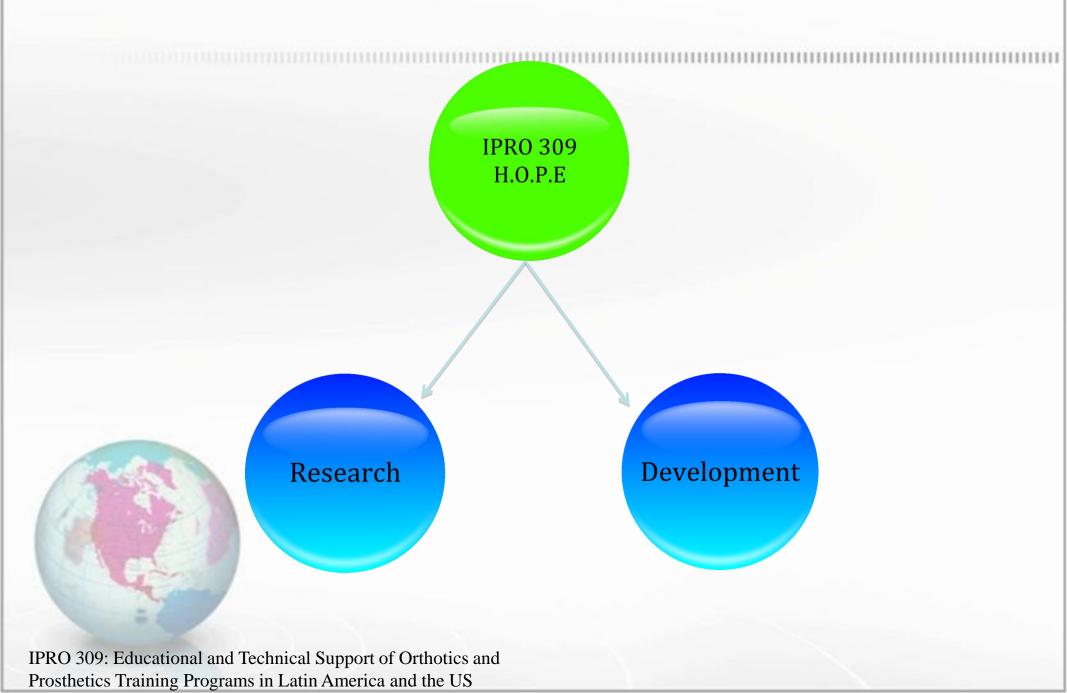
What do you mean it's out of your **scope of practice**!? The prosthetic socket is causing me **pain!** Why can't you adjust my device? I want to be able to exercise again!

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

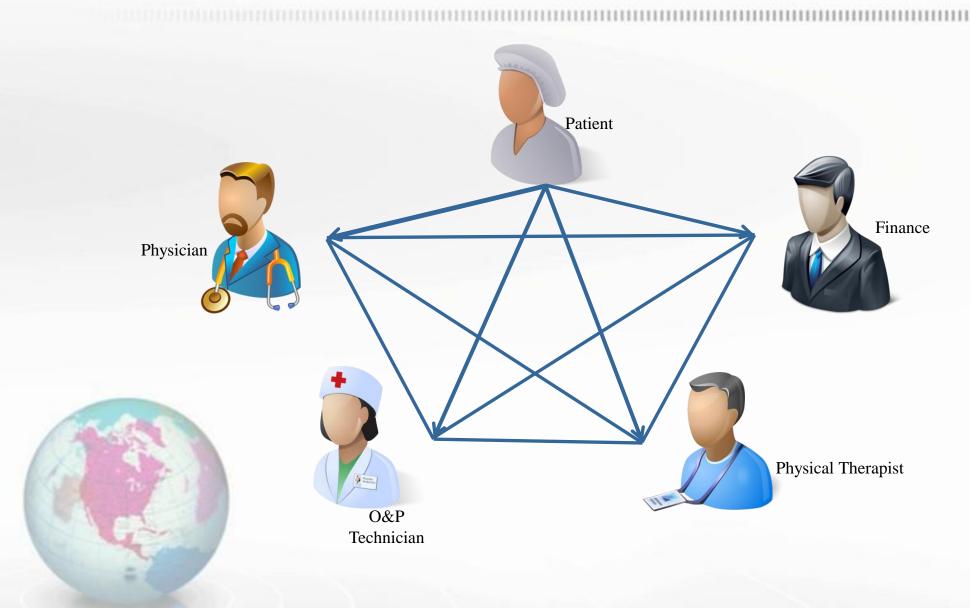
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I can't pay for this!

Team Structure



Research



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Development



Causes of amputation: Emergency, Congenital, Elective

ADL affected: psychological (dependencies on others), physical

Device Considerations: easily modifiable

Problem using device: Improper fit, Geriatric psychological mental adjustments, rehab. Issue (apply to all other age groups)





Definition: 18 - 39: Young Adults

40 – 65: Middle Age Adults

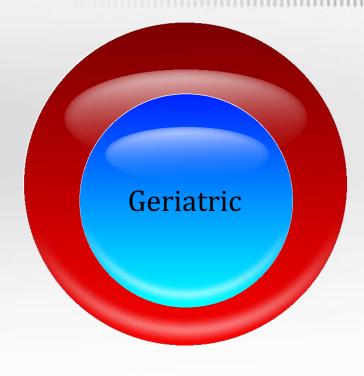
Causes of amputation: Emergency,

Elective (diabetes)

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

Device Considerationst clevel 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

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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.



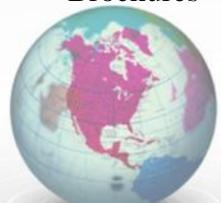


Desired Outcome

- 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









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