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

IPRO 309
H.O.P.E

Research
Development

IPRO 309: Educational and Technical Support of Orthotics and Prosthetics Training Programs in Latin America and the US
Research

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Definition: Birth to 18yrs of age

Causes of amputation: Emergency, Congenital, Elective

ADL affected: psychological (dependencies on others), physical

Device Considerations: easily modifiable

Problem using device: Improper fit, 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 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

- 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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