



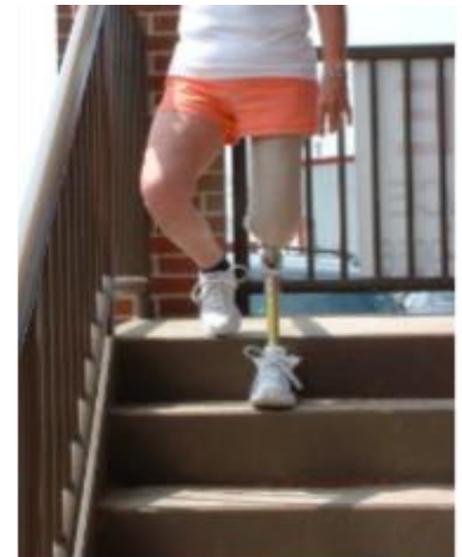
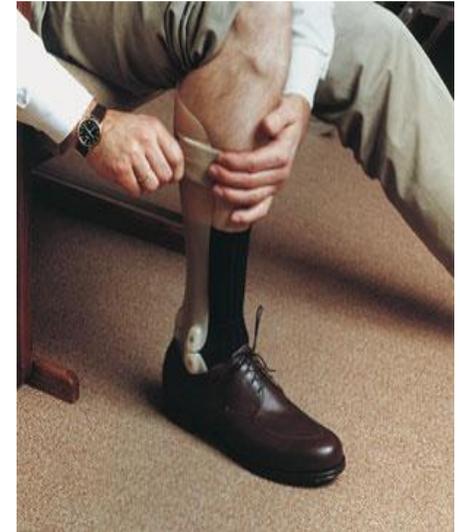
Orthotics and Prosthetics Education
in Latin America and the
United States
IPRO 309



Definitions and Terminology

Orthotics & Prosthetics (O&P)

- What is an Orthosis?
 - External device applied to control or enhance movement or to prevent movement or reduce deformity
 - Example: ankle foot orthosis (AFO)
- What is a Prosthesis?
 - Artificial replacement of a body part
 - May be internal or external
 - Example: above the knee (AK) prosthesis



International Society for Prosthetics and Orthotics (ISPO) Categories

- Category I: Orthotist/Prosthetist, Orthopaedic Engineer
- Category II: Orthopaedic Technologist
- Category III: Orthopaedic Technician

ISPO Categories

		Fabrication	Direct Patient Care	Research and Development
4-5 year university degree	Category I	III	II	I
3-year college level - nondegree program	Category II	III	II	
High School or Junior College	Category III	III		



The Problem

Latin America – Relevant Facts

- Latin America has over 500 million people
- Estimated 2.5 million people need O&P treatment
- Approx. 50 ISPO certified & 1500 uncertified practitioners
- Limited educational opportunities in O&P



The Need in Colombia

Colombia

- Population of 40+ million
- Land mines still being planted
- Affects soldiers and civilians alike
- Bogotá is one of few cities where programs for all 3 categories reside



Category I	Category II	Category III
6	210	900

The Solution

Project History

- Spring 2010
 - **Student-Centered Learning**
- 2009
 - **Interdisciplinary Patient Care**
 - **Business Model**
- 2008
 - **Age Relations**
 - **Pathologies and Orthotics Fabrication**
- 2007
 - **Pathologies**
- 2006
 - **Biomechanics**
 - **Anatomy Measurements**

Fall 2010: Interdisciplinary Capstone Course



Problem Definition

- Current lack of integration of different members of patient care team during their education
- Patients often not considered part of the care team, and thus not well-informed during treatment

Objective

- Design an interdisciplinary **team-based capstone course** that can be integrated within an existing O&P program
- Improve patient care by instructing the O&P students in new methods of **patient education.**



Team Organization

CATEGORY I Prosthetist/Orthotist

Olivia Rovegno

Soha Zahir

*Matthew Song

Michael Muller

CATEGORY II Orthopaedic Technologist

*Wen Chan

Sydney Williams

Rafael Sosa

Katherine Garczek

CATEGORY III Prosthetic/Orthotic Technician

Alex Luttinen

*Jessica Shaw

Krystian Link

Christopher Fistek

16 Week Capstone Course

Milestone	GOALS
1	<ul style="list-style-type: none">● <u>Team building</u> exercises● Understand individual professional roles● Introduce <u>Patient Education</u>
2	<ul style="list-style-type: none">● <u>Patient-Practitioner Interaction Videos</u>● Practice developing treatment plans
3	<ul style="list-style-type: none">● <u>Simulated Patient</u> treatment● Practice interviewing patient, documentation, patient education, and follow-up treatments.

Milestone 1 (2 Weeks)

- Form teams
 - Through ***Team Building Exercises***
- Jump start the course
 - Through ***Journal Paper*** discussions
 - ***Scope of Practice*** essay
- Introduce **Patient Education**
 - Through existing techniques
 - Encourage new ideas
 - Quick Response, **QR Code**



Milestone 2 (4 Weeks)

- **Patient-Interaction Videos**
 - Watch how practitioner communicates with patient
 - Determine & implement treatment
- **Group Analysis**
 - O&P teams form *their own* treatment plans
- **Individual Report, Summary, and Reflection**



*Institución Universtaria
Escuela Colombiana de
Rehabilitación*

Milestone 3 (10 Weeks)

- Practice treatment of 12 Simulated Patients
- Subjective Objective Assessment Plan
 - Subjective: *What is the medical history? What are the symptoms?*
 - Objective: *Age? Height? Abnormalities in posture?*
- Final Presentation
 - How was patient education carried out?



Benefits of Interdisciplinary Course

- Wide range of experiences
- Diversified impact
- Solving real-world problems, not theoretical issues
- Experiential learning
- Enriches the academic experience



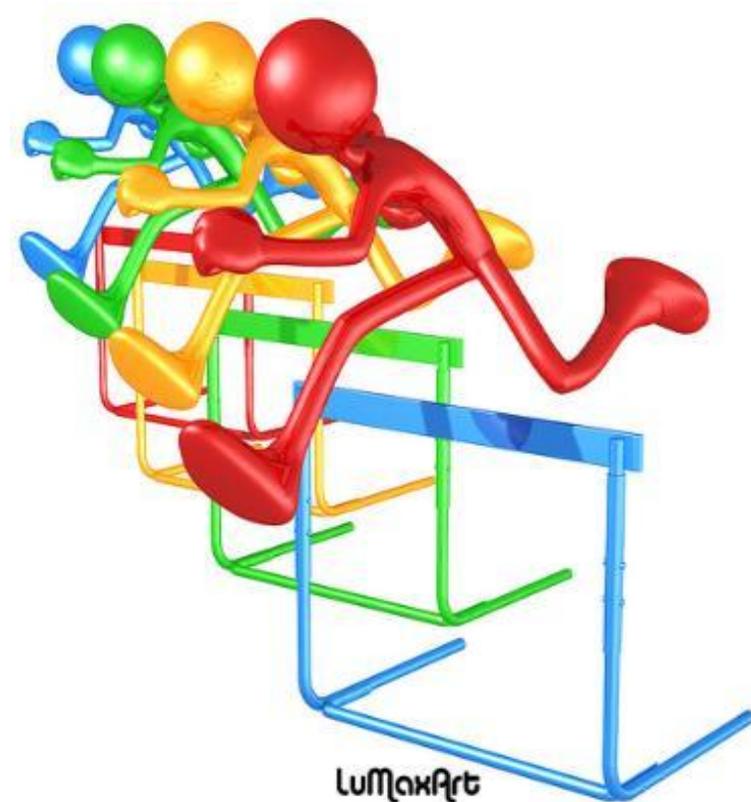
Impact

- Enhances treatment through practical experience
- Eases transition from classroom to work environment
- Increases effectiveness of learning



Obstacles Encountered

- Choosing a focus, i.e., designing a new interdisciplinary team capstone course
- Incorporating each team member's ideas and professional interest



Ethical Obstacles

- **Patient Rights & Privacy**
- **Proper Patient Evaluation**
 - Students monitored by a professional
- **Informed Consent**
- **Institutional Review Board**



Monitoring Team Progress

- Accountability
- Weekly updates in class
- Tasks broken down



Major Accomplishments

- Trip to BioConcepts
- Binder of materials for teaching the capstone course
- Designed exercises



Conclusions

- Patient is a vital part of the treatment team
- Hands-on experience is vital
- Effective communication optimizes treatment

Next Steps

- Test exercises
- Explore QR codes
- Examine incorporation of networking technologies



Questions?



H.  .P.E
Human Orthotic and Prosthetic Education

