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

Allison Bagby, Elise French, David Gracia, Peter Maksimowicz, Kevin Meade, Michael Morley, Christopher Pellico, Vinit Prabhu, Carolanne Rife, Karen Sedacki, Nil Valls
Antonio - 5 years old - Congenital Scoliosis

Baby J - Club Foot
Problem:

- In Latin America 2.5 million people have unmet orthotic and prosthetic needs.
- No accredited Category III programs exist.
  - Category III practitioners fabricate the devices.
- Only 50 certified (10 in Colombia) and 1500 uncertified practitioners exist.
- In Colombia alone over 250,000 people are waiting for treatment.
Solution:

- An accredited Category III program will be developed at Centro Don Bosco in Bogotá, Colombia.
- IPRO 309 will assist in this effort by creating several educational modules regarding the biomechanics of O&P.
Previous IPRO Subgroup Breakdown

- **IPRO 309 Spring 2006** (http://www.iit.edu/~ipro309s06)
  - Five subgroups following the Northwestern University Prosthetic and Orthotic Center (NUPOC) educational structure
    - Biomechanics
    - Upper Limb O&P
    - Lower Limb O&P
    - Spine Orthotics
    - Materials

- **IPRO 309 Fall 2006** (http://www.iit.edu/~ipro309f06)
  - Five subgroups following a clinical biomechanics structure:
    - Anatomical Landmarks and Orthometry Measurements
    - Range of Motion and Manual Muscle Testing
    - Dermatomes, Myotomes and Spinal Cord Injury
    - Evaluation of Standing and Seated Posture
    - Observational Gait Analysis and Crutches, Canes and Walkers
Objectives:

- Develop educational modules
- Develop demonstrations and handouts to compliment the educational modules
- Translate all material to Spanish
- Create a four hour presentation for the O&P conference in Bogotá
- Work with educators in Colombia to develop a sister IPRO
Work Breakdown

IPRO 309  
Spring 2007  
Prof. Kevin Meade

Project Management  
Chris Pellico

Administration  
Vinit Prabhu

- External Affairs  
  Carolanne Rife

- Sponsor Relations  
  Karen Sedacki

- Website  
  Peter Maksimowicz  
  Nil Valls

- Translations  
  David Gracia  
  Michael Morley  
  Nil Valls

- ISPO Accreditation  
  David Gracia

- Trip to Colombia  
  Allison Bagby

Educational Modules  
Elise French

- Cerebral Palsy  
  Elise French  
  Chris Pellico  
  Nil Valls

- Osteoporosis  
  David Gracia  
  Karen Sedacki  
  Allison Bagby

- Diabetes  
  Peter Maksimowicz  
  Carolanne Rife  
  Vinit Prabhu  
  Michael Morley
Team Management

- Ice Breakers
- Survey
  - Measured Communication Levels
  - Suggestions for Improvement
- Post Survey
  - Team Communicated More Effectively
Ethics

- Hippocratic Oath
  - DO NO HARM
- Evidence Based Medicine
- Provide All Necessary Information
  - Some background
  - Physical effects and their orthotic treatment
  - Manufacturing of each device
Accomplishments

• Three educational modules

• Website that allows users to download all educational materials (http://www.iit.edu/~ipro309s07)
Collaborating Organizations

- Universidad de los Andes; Bogotá, Colombia
- La Escuela Colombiana de Rehabiltación; Bogotá, Colombia
- Centro Don Bosco, Bogotá; Colombia
- Laboratorio Gilette, Bogotá; Colombia
- Bioconcepts, Inc.; Burr Ridge, IL
- Dynamic Orthotics and Prosthetics; Houston, TX
- Children’s Memorial Hospital; Chicago, IL
- Joliet Junior College Tech Prep Program; Joliet, IL (JJC)
- Northwestern University Prosthetics and Orthotics Center; Chicago, IL (NUPOC)
- Illinois Institute of Technology; Chicago, IL
• Continued support comes from the faculty at NUPOC
• NUPOC’s faculty has reviewed the educational modules and provided constructive feedback
• NUPOC has allowed the group to visit its facilities to experience first hand the processes of fabricating orthotics and prosthetics
Joliet Junior College (JJC)

- Currently the educational modules are being used by JJC faculty to teach their introductory courses
- The faculty continues to provide feedback and suggest changes to the modules as they feel necessary
Overall Impact

• A Category III technician has the opportunity to advance and become a Category II technician

• A Category II technician can see patients on their own

• The program creates a career path not just a job
Impact in Colombia

- Category III O&P Technician x 250 patients/year x 20 years = 5000 patients/technician

- Each Graduating Class: 15 students x 5000 patients = 75000 patients helped during their careers

- Total cost per student to complete the program = $3000

- Cost of Training per patient: $3000/5000 = $0.60

* Actual Results
Se Habla Español

• By translating all of the information to Spanish the program can help many more people
  • In Colombia all courses are taught in Spanish
  • At JJC several of the students speak Spanish
  • Although the course may be taught in English the materials will be available for review in Spanish
Impact in the US

- The JJC will be officially beginning their O&P program in the fall of 2008
- The modules are already being used and will continue to be used as the program advances
- The same numbers apply from Colombia: The first graduating class at JJC will have the opportunity to help over 75000 patients in their career
Trip to Colombia

- The O&P conference will be held in Bogotá, Colombia from May 14th-May 17th
- Participants include Michael, Allison, Karen, Eduardo (F06) and Jared (F06)
- The group members will have a chance to present the educational modules
Bogotá Conference

Mayo 14 – 17, 2007
A Realizarse en La Escuela Colombiana de Rehabilitación
Cra. 31 No. 151-68, Barrio Cedritos, Bogotá

ECR  Institución Universitaria
     Fundación Escuela Colombiana de Rehabilitación

LABORATORIO GILETE
Centro de Rehabilitación en Ortesis y Prótesis

UNIVERSIDAD DE LOS ANDES
Centro Don Bosco

- The team will have a chance to visit Centro Don Bosco and talk with faculty and students who are enrolled in the program.
In Villavicencio the team sees first hand how an O&P clinic functions.
Future Work

• IPRO 309 Fall 2007
  • Club Foot
  • Stroke
  • Spine Trauma
• Starting Colombia IPRO
  • Los Andes University
    • Goals: Bring Los Andes IPRO Team to IIT IPRO Day (May ‘08)
• Continued collaboration with JJC and NUPOC
Questions?
¿Preguntas?