

IPRO 309: ORTHOTIC AND PROSTHETIC EDUCATION IN LATIN AMERICA AND THE UNITED STATES

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PURPOSE

To support the development of the first Category III International Society for Prosthetics and Orthotics program (fabrication of O&P devices) for Latin America in Bogotá, Colombia.
Also to support development of the orthotics and prosthetics technician program at Joliet Junior College (similar to the program in Colombia).

WHY

Latin America has 2.5 million people with disabilities and unmet needs.
Currently there is only one accredited O&P educational program in Latin America.
There are fewer than 50 certified category III practitioners and 1,500 uncertified practitioners.

HOW

Supporting the curriculum at Centro Don Bosco by researching multiple pathologies that are treated with the use of orthotic or prosthetic devices and then developing educational modules to be used by faculty to aid students.

STRUCTURE

Our team has divided into three subgroups. Each subgroup researched the many pathologies that benefit from orthotic or prosthetic treatment within a particular age bracket. The groups were as follows: Pediatric, Adult, and Geriatric.

SUB-GROUP: PEDIATRIC (PRENATAL TO 20 YEARS OF AGE)

Congenital Limb Deficiency: while developing in the womb an occurrence prevents a limb or limbs on a fetus from forming.

Treatment: prosthesis

Cerebral Palsy: premature birth, bacterial infections of the mother, prolonged labor, stroke while in the womb or lack of oxygen to the baby's brain cause physical disability.

Treatment: orthotics (Ankle Foot Orthotic (AFO) or wrist splint)



SUB-GROUP: ADULT (20 YEARS TO 50 YEARS OF AGE)

Severe Burns: Nerves in the tissue at the burn site are usually destroyed, leaving the burn area numb, but surrounding areas in severe pain. This can be caused by heat, chemicals, electricity, or radiation.

Treatment: orthotic device (pressure garments)



Trauma: The leading causes of trauma are accidents involving industrial machinery, powered tools and appliances, firearms, motor vehicle crashes, and landmines.

Treatment: upper and lower limb prosthetic devices



FABRICATION (AFO)



SUB-GROUP: GERIATRIC (50+ YEARS OF AGE)

Arthritis: inflammation of the joints that leads to intense pain.

Treatment: orthotic device (wrist splint)

Diabetes: a condition in which the body either makes too little insulin or cannot properly use the insulin it makes to convert blood glucose to energy. May cause ulcers in the feet or lack of circulation to the legs, leading to amputation.

Treatment: prosthesis



BENEFITS

Orthotics and prosthetics treatment is an effective way to assist disabled or impaired individuals in the common activities of daily living and improve a person's overall quality of life. The primary benefit of these educational modules is the assistance provided to the training and accreditation of Category III Orthotic and Prosthetic technicians in Colombia and the United States. These modules are currently in use both at Joliet Junior College and Centro Don Bosco.