



# Development of a sclerotherapy simulator for training and propagating medical evidence

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## Clonflict of interest:

- ✓ Project funded by the brazilian National Council for Scientific and Technological Development



- ✓ I have no actual or potential conflict of interest in relation to this presentation

## Introduction:

- Chronic venous disease (CVD) is defined as a venous system dysfunction caused by valve incompetence, associated or not with venous flow obstruction;
- CEAP classification:



Onida S et al. Phlebology. 2016 Mar;31(1 Suppl):74–9

ESVS Wittens et al. Eur J Vasc Endovasc Surg. 2016 Jun;49(6):678–737

## Background:

- Sclerotherapy is a technique used to treat **telangiectasia** as well as **varicose veins** that are subject to non-surgical intervention
- Simulation training can provide **students** and **young doctors** with the chance to **practice their skills** in a **risk-free environment**

## Objective:

- Develop a **reproducible, low-cost, realistic** simulator for sclerotherapy training in order to enable early stages of practising without risk for the patient

## Methods and Material:

- Easily obtainable materials
  - Coloured or transparent silicon
  - Copper wires
  - Blue ink



## Protocol:

- Briefing
- Kit
- Instruction manual
- Table with 10 sessions of training
- After completing the training, **three** examiners **assessed** the student

## Results:

- 50 medical students
  - 10 sessions with 10 catheterization attempts
- 1<sup>st</sup> Session:
  - average of success was 4 (3 to 6)
- 10<sup>th</sup> Session:
  - Average of success was 8.8 (7 to 10)
- Final assessment:
  - All the students catheterized seven or more 'vessels'

## Conclusions:

- The simulator is:
  - Reproducible
  - Low-cost
  - Can be used as an educational tool

Thank you!  
Muchas Gracias !  
Obrigado !

