

## I CONGRESSO ONLINE DE BIOTECNOLOGIA, INOVAÇÃO E COMUNIDADES DE CONHECIMENTO

# COST-EFFECTIVENESS ANALYSIS OF TREATMENT FOR VENOUS ULCERS: A SIMPLIFIED TOOL

ARON, Suzana<sup>1</sup>; SONG, Elaine, K. H.<sup>2</sup>; BLANES, Leila<sup>3</sup>; FERREIRA, Lydia M.<sup>4</sup>

### ABSTRACT

**Objective:** To develop a simplified, free tool for clinical practitioners to calculate cost-effectiveness of treatments for venous ulcers. **Methods:** A tool was developed using Microsoft Excel to calculate and compare cost-effectiveness of two types of venous ulcer treatments for up to 255 patients in each treatment group. Data forms were created to collect information on the health institution, patients, study characteristics, resources consumed, and treatment outcome. Formulas were incorporated into the tool to calculate cost-effectiveness based on information provided by the user. Cost-effectiveness results were categorized as dominant, dominated, more effective and more costly, and less effective and less costly. For the last two categories, the incremental cost-effectiveness ratio (ICER) is calculated. The applicability of the tool was demonstrated by using published data and comparing cost-effectiveness of elastic bandages (treatment 1) with that of Unna's boots (treatment 2). **Results:** The tool can be downloaded and used for prospective or retrospective analyses. Applicability demonstrated with previously published data showed that for treatments 1 and 2, the mean 13-week total cost per patient was US\$473.85 and US\$1,027.52, respectively, and the mean percent reduction in ulcer area was 31% and 60%, respectively. These results implied that treatment with elastic bandages was less expensive and less effective than Unna's boot therapy. The ICER was US\$1,931.01 per additional percent reduction in ulcer area using treatment 1. **Conclusion:** A simplified and practical tool was created to calculate cost-effectiveness of venous ulcers treatments, under the perspective of the health institution. This tool will be freely available to interested parties.

**Key words:** Cost-benefit analysis; varicose ulcer; cost control; software tools.

<sup>1</sup>Universidade Federal de São Paulo (UNIFESP), Brasil. [suzana.aron@gmail.com](mailto:suzana.aron@gmail.com)

<sup>2</sup>Universidade Federal de São Paulo (UNIFESP/EPM). [elainehoribe@gmail.com](mailto:elainehoribe@gmail.com)

<sup>3</sup>UNIFESP, São Paulo, Brasil. [leilablanes@gmail.com](mailto:leilablanes@gmail.com)

<sup>4</sup>UNIFESP, [lydiamferreira@gmail.com](mailto:lydiamferreira@gmail.com)