

## Evaluating the impact of telemedicine in the Catalanian central region. Research Plan

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### Introduction

Telemedicine provides better access to users in addition to reducing the waiting time between diagnosis in primary care and hospital <sup>1,2</sup>.

Telemedicine was first introduced in the Catalanian central region as a teledermatology pilot project in Manresa in summer 2010. The waiting list in dermatology had been soaring in primary care due to the economic context of generalized cuts in healthcare spending and a quick solution was needed. In 2014 we published a study evaluating the impact of teledermatology in decreasing the waiting list in the Bages region during the period 2009-2012 and we found that due to teledermatology, the waiting times in the dermatology services decreased from a median of 30 days before the implementation of teledermatology to a median of 16 days (confidence interval 95%) after its implementation <sup>3</sup>.

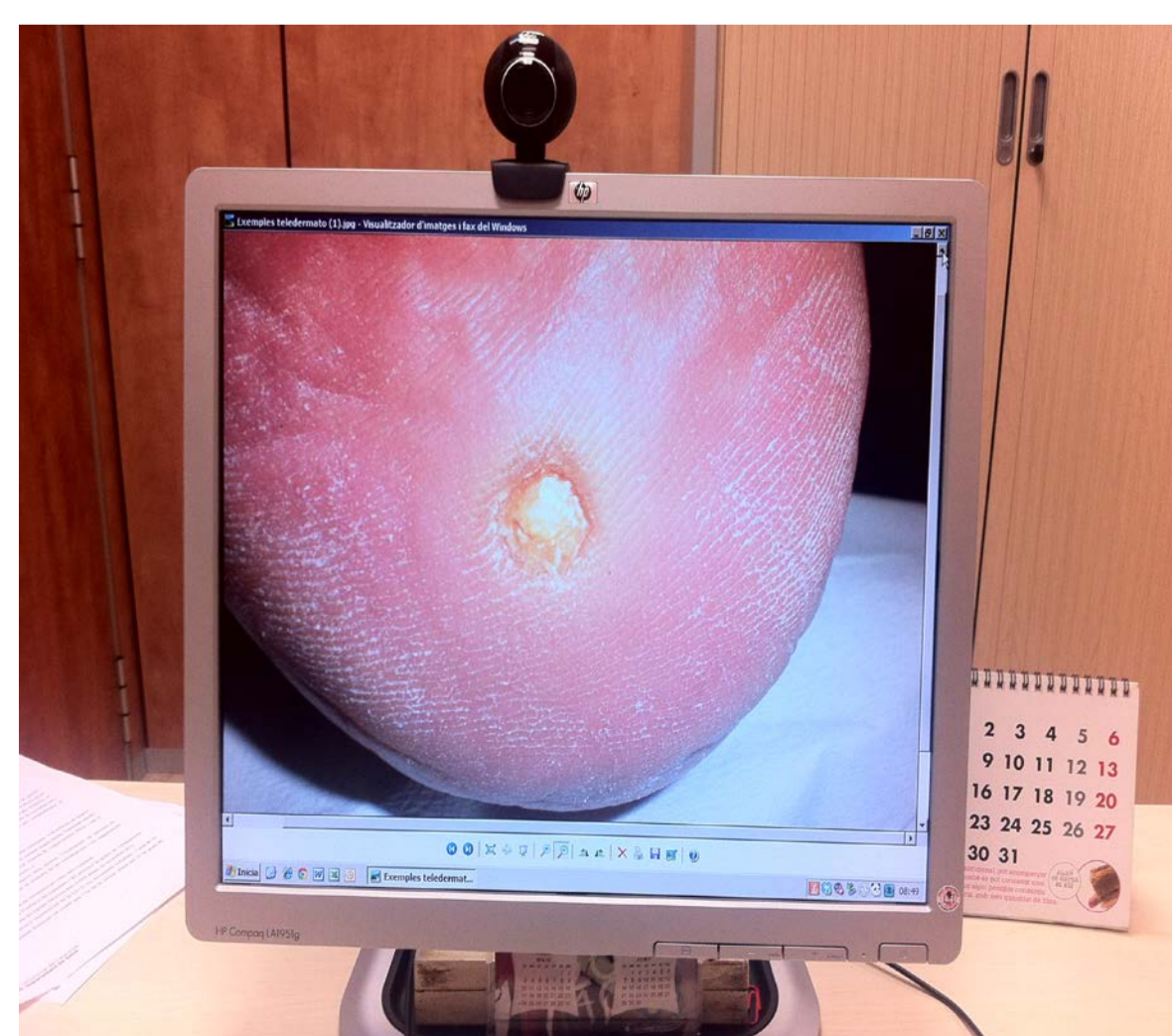
Inspired by the good results of teledermatology, in November 2012 Teleúlcers was introduced in the counties of Bages and Berguedà. Teleúlcers is a project aiming to improve the care of patient with chronic wounds. Expert vascular advice is available for primary care nurses. Three main features define this service: its transversality, a virtual teleconsultation system and the nursing leadership in the care of patients with chronic wounds<sup>4</sup>.

### Objectives

- To assess the economic impact of the telemedicine services in the Catalanian central region.
- To assess the qualitative impact of the telemedicine services among users and health professionals of the Catalanian central region.

### Hypothesis

This study aims to demonstrate that telemedicine services in the Catalanian central region are efficient from the economic point of view and enjoy acceptance among users and health professionals



### Methodology / Materials

The thesis would follow two methodological lines in order to assess the qualitative and quantitative impact of teledermatology and teleúlcers:

- Firstly it will look the quantitative impact of the teledermatology service through an economic analysis comparing the teledermatology service with a conventional dermatology service.
- Secondly, it will measure the degree of satisfaction of users and health professionals with the teleúlcers service through structured qualitative interviews.

To ensure confidentiality, all data will be collected and processed anonymized at all times. Data extraction will be conducted from databases available to the information system department of the Institut Català de la Salut and never by directly accessing the medical records of patients.

The ethical principles of the Helsinki Declaration of 1964 as revised by the World Health Organization in 2000 in Edinburgh will be followed at all times. The Spanish Organic Law 15/1999 of data protection will be met.

This proposal will be submitted to the The IDIAP Jordi Gol Clinical Research Ethics Committee.

### Bibliography

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2. Jennett, P. A. et al. The socio-economic impact of telehealth: a systematic review. *J. Telemed. Telecare* **9**, 311–320 (2003).
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