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## 66 – Teledermatology: Application of New Technologies in Primary Care

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### Introduction

In recent years, the development of communication systems and the use of new technologies, has allowed its use and implementation in our work.

World Health Organization defines telemedicine as<sup>1</sup> the use of communication technologies in health care for the exchange of medical information for diagnosis, treatment, prevention, research, evaluation, and education over a distance. Teledermatology is an useful form of telemedicine<sup>2-4</sup>.

In dermatology, the diagnosis and the decision-making process is always based on the clinical information of the anamnesis of the patient (when it appeared, growing rate, locations, itchiness, pain...) and on the morphological description of the skin lesion (shapes, colours, distribution...).

Working as a team with the dermatologist using teledermatology may allow a quick and efficient resolution of the lesions.

Most of the times, there are several months of waiting lists to be attended by the dermatologist.

Using new technologies can provide us a better accessibility to the specialist as well as helping us to solve more cases from primary care.

Most important indication for teledermatology is to make an early diagnosis and a quick treatment of suspicious lesions for malignancy<sup>5</sup>.

Some studies have demonstrated that the use of mail or smartphone teledermoscopy<sup>6</sup> referrals enable a faster and more efficient management of patients with skin cancer as compared to traditional paper referrals.

In our primary care centre, we decided to implement a teledermatology circuit.

### Our Objectives Were

- To improve the diagnosis and clinical decisions in primary care
- To allow the accessibility of our patients to a reliable diagnosis
- To get an early diagnosis of the suspicious lesions for malignancy
- To reduce unnecessary travels and
- To decrease the long waiting lists.

## Method

There are different modalities of teledermatology: Store and forward or real time.

Real time teledermatology is the use of a network to make a videoconference with the dermatologist while we are visiting the patient. It allows the dermatologist to take part during the visit and to get more clinical information. The inconvenience is the difficulty of matching the agendas of both professionals.

We use store and forward teledermatology<sup>7</sup> which consists in a deferred method. The main advantages of this are:

- Cost-effectiveness
- Pictures have higher quality than video
- Dermatologist can review the image as often as needed

The resources that we use are:

- A digital camera, a smartphone or iPhone with a 2-3 Megapixels resolution camera
- A Dermatoscope (if available in our primary care centre)
- A computer

## Circuit

First of all, the general practitioner (GP) takes a picture of the lesion (with the camera or the mobile phone and, if it is required, with a dermatoscope). A verbal or signed patient consent is required to send the clinical information.

The GP uploads the picture and the clinical information (avoiding personal information) into a form and they are sent by mail or by smartphone or text message to the reference dermatologist.

The image is also added into the patient's documents. It can be useful to monitor the lesion later.

The dermatologist writes a little report with the diagnosis or the treatment and he sends it back to the GP.



## Barriers

The most important barriers that we find are:

We don't have an unified system of clinical history of the patient between primary care and the hospital, so we need to use alternative communication systems like mail and smartphone, which are not safe or confidential to send personal information.

Dermatologist has no access to the clinical history of the patients.

There is not a specific dispensary for both professionals to do the teledermatology.

## Results and Conclusions

To implant a circuit of teledermatology may improve the accessibility of the patients to a clinical diagnosis and to the appropriate treatment.

It allows an efficient and quick diagnosis of suspicious lesions for malignancy, which can be attended by the dermatologist 2-3 weeks ahead compared to the long waiting lists in the hospital.

Liability and validity are really high, especially in oncologic and infectious pathologies.

Other important conclusions are:

- This circuit can decrease the waiting list to the specialist, avoiding unnecessary travels to the hospital
- Improves the communication with hospital specialists
- Increases the efficiency and equity in health care and better prognosis
- Allows a continuity of care
- Promotes continuing education of the professionals.

## Take Home Message

- Quality measures regarding transitional care must be shared between hospitals and primary care. Development of a communication systems and the use of new technologies are useful for medicine.
- Working as a team with the dermatologist using teledermatology may allow a quick and efficient resolution of the lesions.
- Teledermatology is really useful to make an early diagnosis and a quick treatment of lesions suspicious of malignancy.
- Having a standardised program between primary care and hospital could make it more safe and confidential.

## Original Abstract

<http://www.woncaeurope.org/content/ab31%C2%A0-%C2%A0-%C2%A0-%C2%A0-teledermatology-rural-family-practice>

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