

# The Role of Teledermatology in the Delivery of Dermatology Services



## Introduction

Teledermatology has been defined as the practice of dermatology at a distance<sup>1</sup>. With the rapid evolution of communications technology leading to decreasing equipment costs, the field of teledermatology is expanding quickly. Teledermatology may be conducted in real-time, utilizing videoconferencing equipment, or by store-and-forward methods, when transmitted digital images or photographs are submitted with a clinical history.

## When there is considerable risk in the use of teledermatology

The use of store and forward teledermatology has been proposed as a service delivery model to manage capacity demands in the UK. However, there are no rigorous published trials in the UK to show that teledermatology provides a safe or efficient service, and it has been considered less advantageous than a face-to-face consultation with a dermatologist in the assessment of skin lesions of malignant potential<sup>2,3,4</sup>. Although high rates of diagnostic accuracy have recently been reported using teledermoscopy<sup>6</sup> for suspected skin malignancy, studies have reported uncertainty in the diagnosis of melanoma using teledermatology alone<sup>7,8</sup>.

In addition, while real-time teledermatology may have educational value to the referrer, it has been shown not to be cost effective in the UK<sup>9</sup>.

## When teledermatology can be beneficial

Recent studies suggest that high quality images taken by trained personnel (trained general practitioner, a photographer or dermatology specialist nurse), taken together with a good clinical history, can be a highly effective triage tool, allowing patients with suspicious skin lesions to be directed quickly, for example to a skin cancer clinic for face-to-face assessment and management, while other referrals can be sent to more appropriate routine or nurse led clinics<sup>5</sup>. In short, teledermatology may help in the triage of patients such that they are seen by the most appropriate practitioner in the appropriate setting at first appointment.

## The British Association of Dermatologists (BAD) recommendations

The BAD is of the opinion that teledermatology should only be used in the context of a highly integrated primary care / secondary care team, with clinical governance applying to all of those in the team. The BAD considers that there is a need for further research before teledermatology can be recommended as a method for skin cancer triage in which some patients are not subsequently seen by a member of the specialist team<sup>4</sup>. Patients with potential skin malignancy should always be seen in a face-to-face setting which complies with NICE guidance on skin cancer management<sup>10</sup>.

The implementation of teledermatology as a routine service requires a comprehensive understanding of and attention to the interplay between social and technical aspects of teledermatology<sup>11,12</sup> and its limitation. It should not be seen as cheaper alternative or quick fix for

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dermatology waiting lists or targets<sup>11,12</sup> by either primary or secondary care providers. Before the widespread adoption of teledermatology in this context, more research is needed into its efficacy, acceptability, and economic viability<sup>11,12</sup>.

In all circumstances, particular attention must be paid to patient consent for photographic documentation and when these are transmitted by electronic means or placed on a web based system. Information transfer must be by means of secure encrypted pathways. There needs to be strict adherence to European guidelines on information collection, transfer on commercial communications and liability of services providers<sup>13</sup>.

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