

# Design Requirements for a TeleDermatology Scale-up Framework

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## Abstract

The value proposition of full-scale teledermatology to enhance the effectiveness and efficiency of the dermatology referral pathway is evidenced in the literature. Teledermatology, although planned, was not implemented as part of the South African government's 1999 National Telemedicine Programme. In 2003 the public health sector of one of the country's nine provinces, KwaZulu-Natal, began synchronous teledermatology, followed by spontaneous mobile teledermatology in 2013. Since that time no scale-up has been planned. This paper establishes design requirements that will inform the identification or development of a teledermatology scale-up framework.

**Methods:** This qualitative study used a requirements definition process with inductive reasoning approaches. The study took place from 2014 to 2016. Analysis of semi-structured key stakeholder interviews and observations from two teledermatology programmes, informed by lessons learnt from literature, led to identification of Themes, and iterative reflection gave rise to Categories and specific User Design Requirements for a teledermatology scale-up framework.

**Results:** Teledermatology scale-up framework content emerged comprised of themes (4), categories (12) and specific requirements (30).

**Discussion:** The findings are evidence-based, being informed by stakeholder opinions, and are experience-based, being informed through lessons learned from prior scale-up attempts and literature.

**Conclusion:** This paper describes a process and resulting User Design Requirements to inform the identification and adoption / adaptation or de novo development of a teledermatology scale-up framework for KwaZulu-Natal's public health sector. The proposed approach is based on an iterative analysis of available evidence, and is recommended as a pre-requisite for scaling, including in other settings and for other telehealth applications.

**Keywords:** Teledermatology, scale-up framework, requirements definition, requirements elicitation, South Africa