

Synchronous Teledermatology : the KwaZulu-Natal Experience

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Dermatology lends itself to telemedicine. Synchronous teledermatology is well established in the developed world but its use in the developing world has been limited. This study reports the experience of setting up and maintaining an ISDN line based videoconference teledermatology service between a district hospital and an academic hospital, 120 km away, in KwaZulu-Natal South Africa and investigates patient and staff satisfaction with synchronous teledermatology.

Method: Videoconferenced teledermatology sessions were made between Port Shepstone Hospital and the Nelson R Mandela School of Medicine in Durban, between 2003 and 2005. Polycom videoconference units with 80 cm colour monitors were used at the send and receive sites, communicating via ISDN lines at 128 kbs⁻¹. This was increased to 384 kbs⁻¹ for the final consultation. The doctor at the referral site presented the patient to the dermatologist. No special diagnostic equipment was available and the videoconference camera was used to show the dermatological lesion. If warranted, still images were frozen on the screen for the dermatologist to review. Inclusion criteria were i) that the patients had a dermatological problem, ii) the clinic doctor was uncertain of the diagnosis and management of the condition, iii) the patient would normally be transferred to Durban for a dermatological consult and iv) the patient was willing to take part in a teleconsultation.

Results: 69 patients were seen during 12 videoconference teledermatology sessions that were conducted over the two and a half year period, 4 in 2003, 1 in 2004 and 7 in 2005. No patient refused to participate. 17 patients (24.6%) were subsequently referred to the academic hospital: in one patient no diagnosis was made, in 8 patients a differential diagnosis was made and the patients were referred for conventional consultation and in 8 patients a definitive diagnosis was made and they were transferred for specialist management. 12 Patients (17.4%) were given either advice or treatment and discharged after the consultation. 40 patients (58%) were prescribed treatment and were followed up at Port Shepstone Hospital. The patients' and referring doctors' satisfaction with the consultation was 80.3% and 82.1% respectively while the dermatologists were satisfied 67.6% of the time. The dermatologists were dissatisfied with 14.7% of the consultations and this was related to difficulties in making a definitive diagnosis. The referring doctors found 85.9% of the consultations to be of educational value. No problems were noted in diagnosing lesions in dark skinned patients. The programme was curtailed in 2004 because of ongoing problems with the ISDN lines at the peripheral site.

Conclusions: The main findings of this audit of these pilot sessions are that 52 of the 69 patients (75.4%) were saved a 240 km round trip to see the specialist dermatologist. In only one instance (1.4%) was the dermatologist not confident enough to make a diagnosis and in 8 cases (11.6%) a differential rather than a definitive diagnosis was made. Patients were accepting of this approach to their management as were the referring doctors who also found the majority of sessions to be educational.

Teledermatology, videoconference, user satisfaction