



Optimising NHS Teledermatology: A Quality Improvement Study on Enhancing Imaging Standards for Two-Week Wait Skin Cancer Referrals

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Abstract

Background: A National Health Service teledermatology service was developed to provide rapid assessment for the two-week wait (urgent referral) pathway for suspected cancer referrals from general practitioners. This service utilises static digital images of skin lesions to triage, diagnose, or assess skin conditions, with a focus on early detection of skin cancers.

Methodology: Key parameters identified for improvement included the use of a ruler, an orientation reference point, visual markers, dermatoscope images, and overall image quality. These elements were implemented to enhance diagnostic accuracy, support referral decisions, and optimise consultant care. Initial data from 106 patients in June 2022 was analysed to establish baseline adherence to these parameters. Subsequently, general practitioners in North Staffordshire were asked to include these details in clinical images submitted through the urgent referral pathway at University Hospitals of North Midlands. A second cohort of 100 patients was assessed in February 2023 after the changes were implemented. Patient satisfaction with the service was also explored.

Results: Both cohorts had similar demographic characteristics. After the intervention, there was a significant increase in the use of rulers, visual markers, orientation references, and improvements in overall image quality. Dermatoscope usage rose from 38% in June 2022 to 100% in February 2023. Patient satisfaction, previously reported as high, was not re-audited in the second assessment. However, the quality of macroscopic images remained suboptimal.

Conclusion: Implementing these improvements enhanced the quality and diagnostic utility of teledermatology images, facilitating better skin cancer detection and consultant care. Expanding such initiatives to other urgent referral pathways could yield significant benefits.

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