

**USE OF AN ELECTRONIC, HAND-HELD WOUND MEASUREMENT AND DOCUMENTATION SYSTEM IN PRIMARY PRACTICE, FOR THE MEASUREMENT, DOCUMENTATION AND MONITORING OF DIABETIC FOOT ULCERS: A PRELIMINARY STUDY**

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**Aim:** To assess the usability, ease of integration, and reliability of an electronic, hand-held wound measurement and documentation system for measuring diabetic foot ulcers in a primary care (podiatry) facility.

**Methods:** The device was used to measure diabetic foot ulcers of four patients. The ulcers were located at various sites on the foot, including the dorsum of toes, plantar aspect of the metatarsal heads, and the heel. The surface area of each ulcer was obtained five times in order to obtain a measure of intra-user variability. Additionally one ulcer was followed up for several weeks.

**Results:** The device was very easy to use, with training consisting of a one hour tutorial. PDF reports were generated automatically by the system for insertion into the patient notes, and a useful aid for specialist consultation. The changes over time graphs aided with the monitoring of wound progress, and were useful for both the clinician and the patient. The system exhibited good intra-user variability, to within 5% at all locations.

**Discussion:** Previous reports have documented usage of the system on vascular wounds, and the aim of this study was to assess the suitability of the device for measuring diabetic foot ulcers. These wounds provide a particular challenge for measurement, because of the varying nature of the topology of the foot.

**Conclusions:** The electronic, hand-held wound measurement and documentation system was found to be easy to use, could obtain measurements quickly and with precision. It generated reports automatically that were concise and clinically meaningful.