

Tissue Engineering Requirements for Dermal Wounds

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INTRODUCTION: Wound healing is a complex biological process. In clinical practice patients with wounds have a range of diseases and disorders that can influence this process. The problems of wound healing cost the NHS at least £1 billion a year. Problems associated with diabetic foot disease are the most expensive component of managing diabetics in the health service. Pressure ulcers are often seen as quality indicators of health care provision and at the present time around £250,000 can be awarded to each patient who develops a pressure ulcer that is deemed preventable. Managing leg ulcers in the community consumes up to 75% of nurses time and despite advances in prophylactic antibiotic regimes and surgical techniques around, 10% of clean surgical procedures still become infected. This diverse and challenging clinical problem requires a comprehensive range of therapeutic strategies to both treat and prevent recurrence in as many patients as possible. Tissue engineering has great potential in this area even if in the short term it is only used for hard to heal or complex problems. Close integration between laboratory scientists and clinicians working in this area is required for maximising the potential of tissue engineering and improving the standards of care provided to patients.