The burden of chronic wounds – Financial impact on the NHS and effects on patients quality of life.

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Content

- The financial burden of chronic wounds in the UK
- The physical and psychological issues for patients living with a chronic wound
- The mechanism of Electroceutical treatment and Accel-Heal®
- The clinical benefits of Accel-Heal®
- The economic impact of using Accel-Heal®
- Summary
The prevalence of wounds in UK and future concerns.

- Estimated to be 2.2 million patients with a wound in the UK: *(Guest et al 2015a)*
  a) Study determined 31% wounds had no differential diagnosis.
  b) Only 16% patients with a leg ulcer had a doppler assessment.
  c) 61% wounds healed within study year.
  d) 39% remained unhealed at end of study year.
  e) 42% (900,000) of wounds were recorded as leg ulcers including DFU.
  f) 64.6% of these remained unhealed within the study year.

- Increasing ageing population *(Parliament 2015)*

- Reducing workforce *(RCN 2014, NHS Digital 2015)*
Causes of non-healing wounds

- Co-morbidities and age
- Inappropriate diagnosis
- Non concordance and lifestyle choices
- Lack of holistic management e.g. treating cause, managing contributory factors.
- Poor continuity of care and MDT working
- Wound related factors
Quality of life

- Pain
- Exudate
- Odour
- Discomfort
- Anxiety
- Frustration
- Infection
- Reduced mobility
- Social isolation
- Disfigurement
- Psycho-social
- Stress
- Sleep deprivation

Costs of wounds in the UK

- Cost of managing wounds and associated co-morbidities is £5.3 billion a year.
- Adjustments were made for co-morbidities determining an estimate of between £4.5 to £5.1 billion a year.
- Comparable to managing obesity.
- Represents 4% of total NHS budget.
- 66% of costs incurred in community.
- Majority of spend is on healthcare professional time. Wound dressings only account for 14% of total spend.
- Costs likely to be an under-estimate.

(Guest et al 2015a and 2016)
Cost of wounds in the UK

- Costs of managing leg ulcers is £2.3 billion a year.
- Cost of treating a healed leg ulcer was a mean cost of £1,875.20 per patient.
- Cost of treating an unhealed leg ulcer was a mean cost of £5,601.60 per patient.
- Mean difference of £3,726.40 per patient between treating a healed and a non-healed leg ulcer.
- £580 million spent on wounds that healed and £1.74 billion on wounds not healed.

(Guest et al 2015a and 2016)
Accel-Heal® - an innovative treatment for leg ulcers
Clinical outcomes and cost effectiveness of using Accel-Heal® in clinical practice in the UK

- Prospective, single arm, non blinded study to determine clinical outcomes and economic evaluation of using Accel-Heal® on VLUs.
- Resource use and associated costs were determined 12 months prior to treatment compared to 12 months following treatment.
- Patients sequentially selected by nurses as they visited either community or hospital clinics and gave informed consent to participate.
- Data collected included age, gender, ulcer duration, ulcer size, pain scores, exudate levels, clinician visits and dressings used.

Findings consistent with previous independent studies

(Guest et al 2015b)
Patient characteristics

- 30 VLUs in the study - 28 patients with 1 VLU and 1 patient with 2 VLUs' were included.
- Mean age of patients was 66 years. 62% male.
- Mean ulcer size of 8.7 cms sq (range 0.5 – 40.0 cms sq)
- Mean duration before commencing treatment of 2.2 years with 23% having their wound for ≤ 3 months and 50% present for > 1 year (range 14 days – 21.5 years)
- 3% patients were diabetic.

(Guest et al 2015b)
Primary outcome was wound closure.

<table>
<thead>
<tr>
<th></th>
<th>Healed</th>
<th>Unhealed</th>
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</thead>
<tbody>
<tr>
<td>Number of venous leg ulcers</td>
<td>23 (77%)</td>
<td>7 (23%)</td>
</tr>
<tr>
<td>Average age of ulcer*</td>
<td>1 Year 1 month</td>
<td>5 years 11 months</td>
</tr>
<tr>
<td>Average size of ulcer*</td>
<td>5.2cm sq</td>
<td>20.1cm sq</td>
</tr>
<tr>
<td>Wound closure in study period</td>
<td>100%</td>
<td>42%</td>
</tr>
<tr>
<td>Average healing rate</td>
<td>80 days</td>
<td>0</td>
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* at start of treatment

Accel-Heal® would significantly reduce the population of leg ulcers. It is recommended that Accel-Heal® is used on leg ulcers that have not progressed satisfactorily after 6 weeks of treatment.
Patients typically experience a marked reduction in pain and exudate during the course of the 12 day treatment and total wound healing within 3 months.

From a baseline - measured at the time Accel-Heal® was applied, on average:

- Pain reduced by 95% after 1 month
- Exudate reduced by 73% after 2 months; and
- Wound size reduced by 72% after 3 months and all wounds healed within 9 months.
The population of un-healed ulcers

- Where ulcers are significantly older and larger, wound healing will typically take longer after one 12-day treatment of Accel-Heal®

From a baseline - measured at the time Accel-Heal® was applied:
- Pain reduced by 37% after 12 months
- Exudate reduced by 38% after 12 months
- Wound size reduced by 42% after 12 months
Reduction in nurse visits for all ulcers

Nurse visits increased prior to the application of Accel-Heal® as more ulcers were included in the study. As ulcers heal, the burden on nurses reduces. Where ulcers healed completely within the study period, nurse visits reduced to zero.

(Guest et al 2015b)
Cost effectiveness

• The real benefit of clinical effectiveness is the reduction in the population of leg ulcers, as each unhealed ulcer costs, on average, some £5,600 a year.

• In the study, for the population of ulcers that healed, total costs post application of Accel-Heal® were 35% lower than costs prior to the application of Accel-Heal®. Consequently, treating ulcers at the optimum point in a care pathway would result in an annual saving of at least 35%.

• For the population of 30 ulcers as a whole, nurse visits were down 34% and the number of dressings was down 26%.

• Accel-Heal® is a 12-day, fixed cost treatment that is available for clinical prescribing with a reimbursable cost of £240.

    Heal an ulcer and the ulcer costs nothing
Delegates are encouraged to read the publication in full. The study concluded:

- **Use of Accel-Heal® affords the NHS a cost effective treatment for managing VLU’s compared to leaving patients on their previous care plan** - is expected to lead to **11% cost reduction in wound management cost**.

- **All patients demonstrated either complete healing or a reduction in wound size:**
  - VLU’s with a duration of > 33 months did not heal within the study period.
  - VLU’s with an area of 12 cms sq did not heal within the study period.

- **Improved symptoms such as reduction in pain and exudate following treatment.**

- **Expected reduction of 34% in nurse visits and 26% reduction in the number of dressings over the first 12 months following therapy.**

- **Findings comparable to a previous study using an electrical stimulation treatment** (Glegg and Guest 2007)

(Guest et al 2015b)
Incorporating Electroceutical treatment into clinical wound care pathways

Assessment on presentation

- Patient related factors
  - Pathology
  - Comorbidity
  - Allergy
  - Medication
  - Pain
  - Consent
  - Psychosocial

- Wound related factors
  - Duration
  - Size
  - Wound bed condition
  - Anatomical site
  - Infection/infection
  - Treatment response

- Healthcare Professional
  - Skill
  - Knowledge

- Resource/Treatment related
  - Healthcare System
    - Availability
    - Suitability
    - Effectiveness
    - Cost

Wound Complexity

Treatment: Apply appropriate standard care for 28 days.

- Treatment progress: Not reduced by 40% despite appropriate standard care within 28 days. Apply Accel-Heal along appropriate standard care to expedite healing and reduce recurrence.

- Treatment progress: Reduced by 40% or more with appropriate standard care within 28 days. Wound follows normal healing trajectory and achieves healing within 12 weeks.

- Yes: Patient discharged and monitored.

No

ACCEL×HEAL®

a Synapse electroceutical technology
Summary

• Prevalence and cost of wounds in the UK is huge with health care professional time accounting for majority of the cost.

• Cost of an unhealed wound estimated to be a mean of 135% more than a healed wound.

• Imperative to ensure accurate diagnosis, wound prevention and improved healing in order to improve clinical outcomes and economic benefits.

• Clinical effectiveness of using Accel-Heal® (Guest et al 2015b, Ovens 2014)

• Cost improvements using Accel-Heal® estimated to be 11% of NHS budget. (Guest et al 2015b)

• Reduction in recurrence of VLU’s due to deposition of Type 1 collagen (Ovens 2014).

• Accel-Heal® is an easy to apply treatment alongside patients’ treatment plan. It is a single use treatment so no on-going costs.

• Earlier treatment intervention increases the probability of healing.
References

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- Royal College of Nursing (2014) District Nurses face “extinction” in 2025.
Thank you and questions