Evidence in focus
Symposium highlights
European Wound Management Association (EWMA)
5 June 2019, Gothenburg, Sweden

Applying the T.I.M.E. clinical decision support tool (CDST) to help improve consistency in wound care

In brief: Evolution of the T.I.M.E. CDST approach to wound management

T.I.M.E. was developed in 2003\(^1\) and updated in 2005\(^2\)

T.I.M.E. can be used with a 'step-down, step-up' treatment approach\(^3\)

T.I.M.E. CDST uses a simple 'A,B,C,D,E' approach to wound management\(^4\)

T.I.M.E. CDST improves confidence and clinical decision making\(^5\)

The evolution of T.I.M.E.

The T.I.M.E. (Tissue, Infection or inflammation, Moisture imbalance, Edge of wound) approach to wound management and the development of a novel wound assessment tool – the CDST – was the focus of a Smith & Nephew satellite symposium at the EWMA 2019 annual meeting (Figure 1)\(^6\).

Delegates were given a comprehensive overview of how the T.I.M.E. CDST was developed, as well as insights into the practicalities of implementing the tool in real-world practice\(^6\)-\(^8\).

The T.I.M.E. CDST is available to download from the Smith & Nephew website

Figure 1. T.I.M.E. CDST – a simple framework for assessment and management of chronic wounds including holistic patient assessment and multidisciplinary team involvement\(^4\)

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Evidence in focus (continued)

Wound bed preparation – the birth of T.I.M.E.

Dr Gregory Schultz from the University of Florida, USA, opened the symposium with a review of the history of wound bed preparation using T.I.M.E. He explained that the original concept was developed and published in 2003, with the first update in 2005. The major difference between the original T.I.M.E. concept and the update was a change to the ‘E’ from ‘epidermis’ to ‘edge of wound’ to shift focus away from failure of just the epidermis.

The updated T.I.M.E. concept also put much more focus on the patient and introduced the concept of preventing wound recurrence by using a wound bed preparation care cycle (Figure 2).

Dr Schultz then focused on the ‘I’ of T.I.M.E., specifically the important roles that chronic inflammation and biofilms play in impaired wound healing. He illustrated this by presenting biopsy studies showing that biofilm has been identified in >80% of chronic wounds compared with only 6% of acute wounds. Another study investigating the role of biofilm in chronic wounds showed that sharp debridement opens up a short window during which biofilm can be treated effectively and that a ‘step-down, step-up’ treatment approach for chronic wounds can be applied to achieve complete healing when used in conjunction with T.I.M.E. principles. Multiple therapies are used to start the healing process, followed by optimised, de-escalated therapy, with a step-up to advanced therapies if needed to complete the wound healing process.

Overcoming challenges in wound care

Professor Zena Moore from the School of Nursing and Midwifery at the Royal College of Surgeons in Ireland highlighted gaps in clinical practice that persist despite the availability of wound management tools and clinical guidelines. She presented key findings from a study by Guest et al. which highlighted that wound diagnoses are lacking for many patients, as well as a need to improve use of appropriate dressings and treatments. Suboptimal wound care was shown to have financial implications, as patient care costs for unhealed wounds are 135% greater than for healed wounds (Figure 3). Professor Moore bolstered these findings with results from her own study in Ireland, which revealed inappropriate use of antimicrobial dressings in uninfected wounds and overuse of absorptive dressings (Figure 3).

A wound care practice survey conducted at EWMA 2018 in Krakow, Poland, revealed another challenge. Although T.I.M.E. was the most widely recognised and implemented wound management approach, 40% of respondents did not routinely use a formal assessment tool. The results also showed an underestimation of the incidence of biofilm in chronic wounds and a need to understand the importance of debridement in managing chronic wounds.

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Evidence in focus (continued)

Professor Moore went on to describe how the T.I.M.E. wound bed preparation tool was revisited in October 2018 by a group of ten experts. Their aim was to develop a practical wound assessment tool that:

- Is easy to use by healthcare professionals at every level
- Guides the user consistently through patient wound assessment and reassessment
- Ensures use of the most appropriate interventions

The result of that meeting was the T.I.M.E. CDST, which promotes a holistic approach to the management of chronic wounds based on whether a wound has the ability to heal and whether healing is the ultimate goal of treatment. These management principles centre around a five-point ‘A, B, C, D, E’ approach (Figure 4).

She concluded by explaining how the T.I.M.E. CDST will be able to evolve to reflect changes in wound management practices and reviewed plans by members of the T.I.M.E. expert working group to evaluate the new tool in clinical practice.

Real-world experience with T.I.M.E. CDST

One member of the expert group, Terry Swanson from the Cambourne Clinic, Australia, shared her experience of using the T.I.M.E. CDST in real-world practice. She explained how two non-specialist nurses who were familiar with the concept of T.I.M.E. and its assessment approach, agreed to pilot the new tool in five patients to evaluate whether it provides a systematic approach to clinical decision making. In addition to the T.I.M.E. CDST, the nurses were provided with a patient consent form, clinical evaluation form to document wound information (including photographs), and tools to assess changes in pain levels and quality of life. Terry Swanson reviewed the five patient cases and shared feedback from the nurses on implementation of the new tool on how it improved their confidence and clinical decision making in treating patients with wounds (Figure 5).

Terry Swanson concluded by proposing that the T.I.M.E. CDST is adopted in routine clinical practice alongside staff education on how to implement the tool. She also encouraged the sharing of best practice as part of educational initiatives for healthcare professionals and discussions about how to tailor the T.I.M.E. CDST to work within individual formularies.
The future of T.I.M.E. CDST

The T.I.M.E. satellite symposium highlighted knowledge gaps in wound management such as:

• A lack of differential diagnosis
• A need for improved documentation of wound characteristics and changes during treatment
• Suboptimal use of interventions
• Underestimation of biofilm incidence

Widespread adoption of consistent wound assessment approaches, in addition to implementation of management tools such as the T.I.M.E. CDST, may help to improve wound diagnosis, assessment and treatment, resulting in improved healing outcomes for patients.