

# Shaping the future of wound care in Europe



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# Executive Summary

This White Paper by the MedTech Europe Wound Care Sector Group aims to position chronic wounds as a healthcare priority and provides strategic recommendations for EU-wide action. In high-income countries globally, an estimated 1–2% of the population suffers from chronic wounds. Across Europe, this translates to approximately 7.4 million to 14.9 million people, placing a significant burden on patients, caregivers, and healthcare systems<sup>1,2,3</sup>.

Despite their prevalence and severity, chronic wounds remain under-recognised in policy, often treated as secondary conditions rather than a public health priority. The consequences are significant: diabetic foot ulcers alone carry a five-year mortality rate comparable to some cancers<sup>4</sup>.

Chronic wound care places a substantial strain on healthcare budgets, accounting for up to 4% of total expenditure<sup>2</sup>. Costs are driven by prolonged treatment, hospitalisations, complications, and workforce shortages. Fragmented care pathways and insufficient training also contribute to delays in care, leaving vulnerable populations underserved, and care quality uneven across Europe. Yet no wound begins as chronic. Chronicity most often arises from gaps in prevention, delayed intervention, and the lack of integrated, patient-centred care.

This White Paper assesses the barriers affecting wound care and sets out three priority areas for action:

- **Patient-centred care:** prioritising holistic, evidence-based approaches that enhance patient well-being and promote shared decision-making
- **Workforce capacity and training:** investing in multidisciplinary teams, standardised training, and digital tools to make treatment more efficient and improve patient outcomes
- **Policy and system-level coordination:** aligning reimbursement with patient outcomes and quality of care, supporting value-based procurement, and generating real-world evidence to inform better decision-making

To support progress in these areas, the White Paper outlines four recommendations for coordinated action among policymakers, clinicians, payers, patient organisations, and industry:

## 1. Make wound care a strategic priority

- Integrate chronic wound care into EU and national health strategies (NCD, AMR, cardiovascular, resilience and preparedness plans)
- Align definitions, indicators and outcome reporting to enable benchmarking and evidence-based decisions

## 2. Strengthen education and optimise workforce capacity

- Embed wound care in core medical and nursing curricula and continuous professional development
- Expand access to specialist support and multidisciplinary care, including through digital tools and decision-support systems

### **3. Align reimbursement and procurement with value and outcomes**

- Reform reimbursement to reward prevention, timely diagnosis, and the use of clinically effective and cost-efficient therapies based on measurable outcomes, such as reduced infection rates, faster healing, and lower need for complications or hospitalisation
- Promote value-based and sustainable procurement that prioritises clinical effectiveness, infection prevention, and antimicrobial resistance mitigation while also considering efficiency and social and environmental impacts

### **4. Accelerate innovation and scale real-world evidence**

- Modernise testing and evaluation standards to reflect real-world conditions, clinical practice and patient needs, enabling clearer evidence generation and more clinically meaningful assessments of wound care products
- Enable the systematic capture of wound data through routine clinical data collection and/or dedicated wound registries integrated into electronic patient records, with aggregated, anonymised data publicly accessible to the wound care community. Use real-world evidence and patient-reported outcomes to guide policy and investment

By integrating these approaches, Europe can transform wound care into a model of equitable, sustainable, and patient-centred health delivery that improves outcomes, reduces disparities, lowers costs, and strengthens healthcare system resilience.

# Introduction

It is estimated that between 1% and 2% of the population globally in high-income countries are affected by chronic wounds, and in Europe, wound care accounts for 2–4% of total healthcare expenditure<sup>1,2,3</sup>. With Europe's ageing population and rising rates of diabetes, obesity, cancer, hypertension, and vascular disease, the prevalence of chronic wounds is projected to continue increasing in the coming decades. Complex wounds are increasingly recognised as a significant clinical and public health challenge due to their impact on patients' quality of life and their cost burden on healthcare systems<sup>5</sup>.

While definitions vary, chronic wounds are broadly described as wounds that are slow or difficult to heal. Clinically, a wound is often classified as chronic if it does not progress through the normal healing stages within approximately four to six weeks. These wounds often stem from underlying conditions, such as impaired blood flow, neuropathy, or systemic inflammation, and may persist for months or years, often requiring specialised care that goes beyond conventional treatments<sup>6</sup>. Their consequences extend beyond physical health to mental well-being, independence and social participation.

Despite the magnitude of the problem, wound care remains highly fragmented across Europe. Because wound care is not recognised as a medical specialty, generalists or overstretched nursing teams often manage complex cases without consistent training or access to specialist expertise. This leads to variable adoption of guidelines, inconsistent treatment plans, inequitable access to advanced therapies, and inefficiencies that amplify financial pressure on healthcare budgets<sup>7,8</sup>.

As more patients are managed in community settings, gaps in care coordination and workforce capacity become even more visible. Outcome disparities have also been reported within some countries, with certain regions or patient groups experiencing delayed healing or higher complication rates<sup>9</sup>. While access to advanced therapies is generally adequate in the UK<sup>10,11</sup>, inequities persist across Europe, particularly in countries with limited specialist roles or structured pathways<sup>12</sup>.

To frame these challenges clearly, this White Paper examines chronic wound care across three interconnected areas:

## **1. Fragmented Patient Outcomes**

Chronic wounds severely affect quality of life and are linked to significant physical, psychological, and socio-economic consequences. Across Europe, the prevalence of chronic wounds is increasing, with around 4 million new wounds developing each year<sup>3</sup>. Many patients face long healing times, recurrent infections, pain, reduced mobility, and mental health impacts such as anxiety and depression.

## **2. Gaps in Workforce Capacity and Training**

Wound management is largely nurse-led, yet chronic wounds require specialised skills, coordinated care pathways, and multidisciplinary support. Workforce shortages, limited specialist roles, and inconsistent training already contribute to delays, inefficiencies, and variable outcomes. Europe's population is ageing rapidly: by 2050, nearly 30% of Europeans will be 65 or older. At the same time, the EU faces an anticipated shortfall of 4.1 million healthcare professionals by 2030, intensifying the strain on healthcare systems<sup>13,14</sup>. As demand grows, current staffing models are becoming increasingly untenable.

## **3. System-Level Barriers to Sustainable Care**

Chronic wounds represent a major and rising cost driver, with per-patient expenditure ranging from €6,000 to €10,000 annually and much higher when complications occur. Pressure ulcers alone cost an estimated €25 billion per year in Europe<sup>2,15</sup>. Infected wounds also contribute to antimicrobial resistance (AMR), further increasing complexity and cost<sup>16,17</sup>. Health systems must grapple with rising service demand as more patients require long-term community-based care.

Continuous advancements in wound care, including digital tools, structured care protocols, innovative therapies, and personalised treatment approaches, offer significant opportunities to improve outcomes. However, adoption remains uneven across Europe, and many of the most effective interventions are often delayed until wounds are already classified as chronic, and their full potential underused.

Drawing on literature and expert insights, this paper aims to strengthen knowledge, inform policy, and support Europe-wide alignment on chronic wound care to improve outcomes, reduce prevalence, and mitigate the growing economic and societal burden.

## Information Box

The following definitions are provided for clarity and reference, as these ulcer types are frequently mentioned throughout this White Paper.

**Pressure Ulcer (PU)<sup>18</sup>:** Localised skin and soft tissue injuries that develop due to prolonged pressure or friction on a specific body area. These wounds typically occur over bony prominences such as heels or sacrum of hips. Sustained pressure, along with shear forces, friction, and subepidermal moisture, impairs blood flow to the area, leading to tissue damage<sup>19</sup>. Common risk factors include decreased mobility, poor nutrition, and excessive skin moisture.

**Diabetic Foot Ulcer (DFU)<sup>20</sup>:** Wounds that are a serious complication of diabetes, stemming from high blood sugar, nerve damage, and poor blood circulation. Reduced sensation in the feet can prevent injuries from being noticed early, while poor blood flow slows healing and increases the risk of infection or amputation. These wounds are a major health concern and place a significant burden on healthcare systems.

**Venous Leg Ulcer (VLU)<sup>21</sup>:** A late manifestation of chronic venous insufficiency, these wounds develop after prolonged venous pressure leads to gradual skin breakdown, typically in older adults. They heal slowly, often recur, and carry a high risk of infection. Key risk factors include advanced age, joint disease, family history, obesity, and a sedentary lifestyle. VLUs significantly affect quality of life and require ongoing medical management.

## Transforming Wound Care Pathways: Challenges and Solutions for Patients, Workforce and Health

Against this backdrop, addressing chronic wound care requires more than incremental improvements to individual treatments. It calls for a holistic approach that simultaneously considers the lived experience and well-being of patients, the skills and capacity of the healthcare workforce, and the organisation and financing of health and social care systems. These elements are deeply interdependent: gaps in one area can quickly undermine progress in the others, perpetuating fragmented pathways, delayed healing, inequities, and rising costs.

By examining wound care through the lenses of patient well-being, healthcare workforce, and health systems, this chapter explores the key challenges and outlines evidence-based solutions to redesign pathways of care, improve outcomes for patients, and enhance the sustainability and resilience of Europe's health and social care systems.

# 1. Fragmented Patient Outcomes

## Challenges

Chronic wounds severely impact patients, affecting physical health, daily functioning, and mental well-being. Complications, such as delayed healing, increase the risk of hospitalisation, amputation, and mortality, highlighting the need for targeted interventions and coordinated care.

**Patient outcomes vary across Europe.** In Denmark, a nationwide cohort of 8,394 patients with chronic leg wounds (2007-2012) reported a 5-year major-amputation rate of ~7% and mortality of ~39%<sup>22</sup>; in Catalonia, Spain (2016-2020) patients with pressure injuries experienced longer hospital stays, higher ICU-admission rates, and increased in-hospital mortality compared with other patients<sup>23</sup>. In France, surveys in geriatric and long-term care institutions indicate that many wounds remain unhealed for months, requiring prolonged care and support<sup>24</sup>.

However, these comparisons are limited by differences in study populations, wound definitions, care settings, and follow-up methods, and are largely confined to national-level data. The absence of a standardised, Europe-wide real-world dataset limits cross-country comparability and hampers a clearer understanding of wound care outcomes across different clinical conditions, making the true burden of chronic wounds difficult to quantify.

**Infection is a major driver of poor outcomes.** Up to two-thirds of chronic wounds develop infection, and biofilm is present in 60-80% of cases<sup>25, 26</sup>. These wounds heal slowly, increase hospitalisation and amputation risk, and contribute to antimicrobial resistance<sup>27</sup> (see *Box 1 on AMR*).

## Antimicrobial Resistance

Chronic wounds are at high risk of infection, often complicated by biofilms that protect bacteria from antibiotics and immune defences. Effective infection prevention and control are therefore essential for promoting healing.

Common wound pathogens exhibit varying levels of antibiotic resistance, highlighting the importance of antimicrobial stewardship, including educating clinicians and patients to ensure proper antibiotic use<sup>28</sup>. Infected wounds often require more frequent dressing changes and hospital care, underscoring the importance of timely intervention and appropriate management to prevent complications and limit unnecessary antimicrobial use.

Silver-containing antimicrobial agents, including dressings, are commonly used in wound care and provide broad-spectrum activity while disrupting biofilms, making them an essential tool for infection control, including in cases involving antibiotic-resistant bacteria<sup>29</sup>. However, concerns over silver resistance and prolonged exposure have emerged, and potential policy shifts - such as Germany's recent decision to extend reimbursement for silver dressings only until December 2026 - may limit their use in chronic wounds and highlight the need for alternative antimicrobial strategies to mitigate AMR risks<sup>30</sup>.

**Care is also often fragmented**, with patients receiving services across multiple providers and settings without consistent coordination or continuity. Many countries lack standardised home-care guidelines or minimum quality standards, leaving care dependent on local practices and informal arrangements<sup>31</sup>. In Austria, a study found that a lack of official care pathways and support leads nurses to rely on informal networks to coordinate care, reflecting systemic weaknesses even in high-income health systems<sup>32</sup>. Evidence from a 2018 cross-clinic analysis of 180,336 chronic wounds across 480 clinics shows that greater continuity of care, through more frequent provider and nurse visits and structured interventions, is associated with significantly better healing outcomes<sup>33</sup>.

**Beyond physical health, chronic wounds substantially affect quality of life.** Diabetic foot ulcers precede around 70% of non-traumatic lower-limb amputations globally, and following amputation, the five-year mortality rates range from 40-70%<sup>34</sup>. Yet even before such severe outcomes, patients often experience severe pain and reduced mobility while their mental health needs are frequently overlooked. High levels of exudate and malodour can trigger anxiety, depression, and stress, leading to feelings of isolation and a diminished quality of life<sup>35</sup>. Additionally, limited mobility prevents the ability to work, perform daily tasks, and maintain personal hygiene, impacting significantly the independence and self-esteem<sup>36, 37</sup>.

**At least 30%**

of people with chronic wounds experience symptoms of depression or anxiety<sup>37</sup>

Clinical inertia and systemic barriers, including gaps in wound care pathways, limited mental health support, and unequal access to treatment, further undermine continuity of care and patient outcomes. These issues delay healing, increase strain on the healthcare workforce, and amplify the burden on patients and health and social care systems.

## Solutions

### Finland Example<sup>38</sup>

**Problem:** Delayed diagnosis of chronic wounds significantly worsens patient outcomes. Delays lead to prolonged healing times and increase the risk of complications, including limb amputation.

**Evidence:** A Finnish cohort study of 197 patients demonstrated a clear link between diagnostic delay and wound healing rates:

- **Diagnosis within 4 weeks:** 54.5% wounds healed within 3 months; 69.7% by 6 months
- **Delay of 4–12 weeks:** 17% wounds healed within 3 months; 50% by 6 months
- **Delay beyond 12 weeks:** 0% wounds healed within 3 months; 16.4% by 6 months
- **Median healing time:** 48 days (early diagnosis) vs. 108 days (delay >12 weeks)

**Solution:** Early diagnosis, especially under 4 weeks, substantially improves recovery rates. It can be achieved by ensuring access to specialised care, implementing structured diagnostic protocols and adopting a multidisciplinary approach.

**Implication:** Timely diagnosis reduces healing time, helps prevent complications, and avoids additional healthcare costs. Addressing diagnostic delays can help achieve better outcomes for patients and reduce inefficiencies within healthcare systems.

**Preventing chronic wounds and identifying at-risk individuals is key to any effective wound care strategy.** Early intervention depends on timely risk assessment and coordinated action across care settings. While lifestyle changes such as diet and exercise support healing, strong evidence supports the use of medical technologies designed to reduce risk, such as advanced wound dressings, turning systems, and positioning devices<sup>39</sup>. These interventions, combined with predictive diagnostics, digital and AI-assisted monitoring, and proactive follow-up, improve outcomes and reduce complications. Prevention is not only clinically effective but also far more cost-efficient than treating severe wounds.

This requires a system-wide approach that prioritises early risk detection and better coordination across care settings<sup>40</sup>. Consistent prevention and proactive follow-up in primary care, pharmacies, or via digital tools help health systems intervene earlier and reduce complications. A study shows that treating a severe pressure ulcer can cost from €1.71 up to €470.49 per patient, while prevention typically costs from €2.65 up to €87.57, thereby yielding far greater clinical and economic value<sup>41</sup>. Even when some treatments are cheap, the median (~€236) is much higher than prevention (~€45), demonstrating preventive care's cost-effectiveness.

**Once a wound develops, patient compliance is key.** Digital tools such as telemedicine can support adherence to treatment and track progress. A study from Spain showed that remote monitoring reduced time to wound closure by 35 days, cut hospital consultations by 55%, leading to reductions in costs by approximately €1,666 compared to conventional follow-up<sup>42</sup>.

**Real-world data is also vital to improve care efficiency.** A 2019 UK study of 707 patients with unhealed surgical wounds found wide variation in healing times and resource use. Inconsistent record-keeping and low surgical follow-up contributed to these differences, showing how everyday data can highlight gaps in care and help make better use of nursing time, dressings, and follow-up appointments<sup>43</sup>.

**Holistic patient-centred care pathways play a critical role in improving outcomes and well-being<sup>44</sup>.** A multidisciplinary team approach, involving physicians, nurses, podiatrists, dietitians, and other relevant specialists, is critical to coordinate care across settings, share expertise, and ensure consistent treatment<sup>45</sup>. Aligning treatment with recognised clinical pathways and conducting early reassessment within four weeks, using both clinical evaluation and patient-reported outcome measures (PROMs), allows clinicians to escalate stalled wounds and supports healing within 24 weeks for hard-to-heal cases<sup>46</sup>. To support overall patient outcomes, care pathways should also integrate mental health and cognitive screening, addressing the emotional and psychological toll of chronic wounds, offering substantial benefits both for patients' well-being and for broader socioeconomic outcomes<sup>47</sup>.

In short, a patient-centred approach that integrates prevention, timely intervention, and coordinated care can improve healing, enhance quality of life, and reduce the overall burden of chronic wounds.

## 2. Gaps in Workforce Capacity and Training

### Challenges

**Many frontline clinicians lack specialist training and clear pathways, leading to inconsistent wound care.** Chronic wound care depends heavily on frontline clinicians, especially nurses, yet specialist-nurse roles are unevenly recognised and regulated, leaving many countries without formal positions and undermining workforce capacity<sup>48, 49</sup>.

In the case of venous leg ulcers (VLUs) care decisions are often made by generalist community nurses, resulting in wide variability and reduced confidence in clinical judgment<sup>50</sup>. This lack of education and knowledge on chronic wounds often leads to diagnostic delays, compromising timely and effective care. A study revealed that wounds, namely VLUs, had a shorter healing time if they were diagnosed early<sup>51</sup>.

**Clinical inertia and systemic barriers further undermine continuity and outcomes.** Inconsistent data collection, fragmented protocols and workforce turnover undermine quality and continuity of care<sup>52</sup>. Gaps in practical education and limited clinician confidence also delay appropriate treatment. Psychological and system drivers contribute to internal triggers such as cognitive biases, fear of error, burnout, and low confidence. These all interact with external triggers, including time pressure, resource limits, workplace culture, and unclear escalation pathways, all of which exacerbate delays and suboptimal care<sup>52</sup>.

**Chronic wounds place a heavy strain on health systems, largely through staff time rather than materials.** A substantial proportion of wound care costs is driven by healthcare professional workload, with unhealed wounds requiring more visits and significantly increasing overall expenditure<sup>53</sup>. For example, in Spain a study showed that around 76% of total wound care expenditure, between 2015 and 2017, comes from primary-care consultations<sup>54</sup>.

# 2.3M

Projected EU27  
nurse shortage  
by 2030<sup>14</sup>

**These challenges coincide with broader demographic pressures:** an ageing population, workforce shortages, and widening health inequalities. Longer waiting times and growing service demands will continue to increase the strain on an already overburdened health workforce.

In England, for example, the number of district nurses working in NHS hospitals and community services fell by 43% between 2009 and 2024<sup>55</sup>, with other European countries showing a similar trend of a shortage of nurses<sup>13</sup>. This decline impacts the continuity of at-home wound care and disproportionately affects vulnerable and elderly populations, the same groups most impacted by chronic wounds.

These combined challenges, from limited specialist involvement to gaps in care coordination, contribute to inequities and create significant capacity pressures for the healthcare system.

## Solutions

### Belgium Example<sup>56</sup>

**Problem:** Chronic wound care in Belgium is often fragmented, with patients navigating multiple providers including GPs, nurses, and specialists. Among home-care patients, many experienced multiple care transitions across hospital, community, and home settings, increasing the risk of delayed follow-up and inconsistent management.

**Evidence:** A Belgian study of 3,467 home-care patients, stratified patients into six distinct care trajectories, varying by age, care intensity, and provider type. Older adults relied predominantly on generalist care from nurses and GPs, with frequent involvement of multiple providers, revealing gaps in continuity.

**Solution:** To address fragmentation, the study suggests designating a reference care provider, either a coordinating nurse or GP, to promote continuity. Advanced-practice nurses and transitional-care teams can support post-discharge care, while mapping patient trajectories helps identify weak links between hospital and community services.

**Implications:** A coordinated multidisciplinary approach that includes a reference provider and team-based support can reduce care fragmentation, improve continuity, and ensure consistent, high-quality wound management for home-care patients.

### **A skilled and well-informed workforce is fundamental to delivering high-quality wound care.**

Education on wound healing should be embedded in nursing and medical training, supported by clear competency standards. While some countries offer advanced post-qualification programmes - Denmark, for example, offers postgraduate diploma courses for nurses and a structured three-level competence model for physicians that combines theoretical knowledge with practical wound care skills<sup>57,58</sup>, and the United Kingdom has developed the Tissue Viability Nurse role - most wound care is delivered by staff with little formal wound-care training. Strengthening pre-registration education and embedding wound care competencies early in training, alongside recognised career pathways and formal post-qualification programmes, is essential to build capacity, consistency, and quality of care across Europe.

### **Evidence also shows that specialist-led, coordinated care can drive meaningful improvements.**

A nurse-practitioner wound care service pilot showed that specialist-led, coordinated care can improve patient confidence, satisfaction, and reduce emergency department visits<sup>59</sup>. Over 12 weeks, 112 patients attended the clinic, with 54% of reviewed emergency visits being wound-related. Some of the best practices included expert oversight, documented and shared wound care plans, smaller nursing pools for continuity, formal pain assessment and management, and structured upskilling for community staff. While promising, the pilot remained short and received 64 survey responses<sup>59,60</sup>.

**Training generalist clinicians can deliver significant benefit.** In one study, 89 generalist nurses received six hours of training over 10-16 weeks, with pre- and post-training assessments measuring motivation, confidence, critical thinking, and knowledge<sup>58</sup>. After training, correct responses rose from 64.7% to 88.5%, confidence increased by 41%, and motivation by 15%.

Nurses also reported enhanced critical thinking, more holistic wound assessments, greater patient involvement, and improved decision-making regarding specialist referrals. Health systems should also support decentralised delivery models for non-invasive wound therapies, enabling access in primary and community settings under defined clinical protocols and specialist oversight.

**Establishing standardised treatment pathways is essential to ensuring consistent, high-quality care across settings and countries.** These pathways should be informed by best practices and strengthened through knowledge exchange within the wound care field. For example, structured care pathways have been shown to increase clinician confidence and competence, and to enhance care consistency even when delivered by non-specialists<sup>58</sup>. Multidisciplinary teams play a central role in implementing these care pathways. In France, a retrospective study showed that patients with healed diabetic foot ulcers who received regular follow-up by a multidisciplinary team had a significantly lower recurrence rate than those with minimal follow-up<sup>61</sup>. Beyond clinical coordination, teams must also address patients' diverse cultural, social, and linguistic needs. Enhancing cultural competence and health literacy within wound care services is essential to overcoming barriers and ensuring equitable access to care<sup>62, 63</sup>.

**Finally, emerging AI-enabled tools offer new opportunities to strengthen clinical decision-making.** By providing real-time wound assessment, tracking healing progression, and reducing documentation workload for healthcare professionals, these tools can enhance multidisciplinary collaboration and deliver more consistent, personalised care<sup>64</sup>.

Ultimately, a skilled, knowledgeable, and supported workforce is essential to delivering consistent, high-quality chronic wound care across Europe.

### 3. System-Level Barriers to Sustainable Care

#### Challenges

Beyond clinical complexity, structural gaps drive the burden of chronic wounds and limit access, innovation, and sustainability.

**Reimbursement policies remain fragmented across Europe, limiting equitable access to care.**

Coverage often depends on prescriptions and approved product lists, with rates varying by region, product type, and patient condition<sup>65</sup>. Advanced wound care products frequently require prior authorisation, and while home care services may be reimbursed, eligibility and access differ widely. For example, in Norway coverage is broad, most dressings are reimbursed, with patients refunded 90% of costs beyond €190. In Italy, reimbursement is fragmented and region-dependent, with limited access for outpatients and coverage largely restricted to hospitals and certain disability cases<sup>65</sup>. In the UK, the reimbursement for wound care products ensures that patients have access at minimal or no direct cost<sup>65,66,67</sup>. **Innovation also faces structural delays**, as creating new reimbursement categories is complex and time-consuming, delaying patient access to novel therapies<sup>68</sup>.

**Preventive measures are rarely incentivised, reinforcing a reactive approach.**

In the United States, some hospitals are financially penalised to prevent hospital-acquired pressure ulcers since costs are not reimbursed if hospital-acquired<sup>69</sup>. This policy encourages hospitals to invest in preventive interventions such as risk assessments, prophylactic dressings, pressure-relief mattresses, which have been shown to reduce incidence and associated costs<sup>70</sup>. This value-based programme reduces payments to hospitals based on their performance to improve patients' safety and implement best practices to reduce their rates of infections associated with health care. In contrast, many European reimbursement systems primarily pay for treatments delivered, which can inadvertently prioritise ongoing management over proactive healing and prevention, potentially contributing to lower organisational focus on reducing wound recurrence.

**£8.3B**

Cost of wound care  
alone in the UK in  
2017/18<sup>67</sup>

**Data gaps further magnify these challenges.** Without harmonised data and shared practices, even well-intentioned reimbursement policies struggle to deliver equitable, evidence-based outcomes. Many studies report that a significant proportion of patients are excluded from wound trials, meaning the real-world benefit is missed<sup>71</sup>. Surveys of wound care literature show that while evidence exists to guide practice, the proportion derived from high-quality studies varies by wound type, ranging from ~90% for pressure ulcers to ~50% for venous leg ulcers<sup>72</sup>. There is increasing recognition that real-world data and patient perspectives should complement traditional clinical trials, and guide decision making and innovation. Evidence requirements for innovative therapies should be proportional to their risk and mechanism of action, allowing conditional access while real-world data is gathered.

**Procurement practices remain fragmented, inconsistent and often price driven.** While value-based procurement, which rewards quality and long-term outcomes over cost, holds clear potential, its implementation remains limited. Moreover, also environmental and sustainability considerations are gradually shaping procurement, with Nordic countries integrating criteria such as waste management, emissions reduction, and ethical sourcing<sup>73</sup>, and the UK NHS requires carbon reduction plans for major contracts<sup>74</sup>. However, progress in value-based and sustainable procurement remains uneven due to fragmented definitions and methodologies. In practice across several European countries, unit price often dominates awards, sustainability averages 7%, and clinical criteria make up the remainder, with sustainability sometimes reducing the clinical criteria share rather than the price one<sup>75,76</sup>.

**These procurement choices directly influence the environmental footprint of wound care.** Wound care generates substantial waste, including contaminated material that is currently non-recyclable and non-contaminated material that often does not reach recycling facilities. Key products, such as dressings, have measurable environmental impacts across their lifecycle, from raw material sourcing and production through to use and disposal.

Supply-chain vulnerabilities, including storage issues, transport challenges, and stock shortages, can further increase resource use and waste through emergency shipments or disposal of degraded products<sup>77</sup>.

Overall, structural barriers, from fragmented funding and procurement to unequal data systems, reflect systemic challenges that limit both access to care and innovation.

## Solutions

### Sweden Example<sup>78</sup>

**Problem:** Hard-to-heal ulcers place a substantial burden on healthcare systems due to long recovery times and high treatment costs. Inefficient or unstructured management can prolong healing unnecessarily, increasing resource use and patient suffering.

**Evidence:** A Swedish study using data from the national Registry for Ulcer Treatment calculated the costs of treating healed ulcers and demonstrated that structured, registry-based management can improve cost-efficiency:

- **Total healing time** decreased by 38%
- **Per-patient treatment costs** dropped from SEK 38,223 in 2009 to SEK 20,496 in 2012

**Solution:** Implementing structured, registry-based protocols for managing hard-to-heal ulcers can substantially improve efficiency. Standardised documentation, systematic follow-up, and data-driven decision-making enable earlier identification of effective treatments and reduce unnecessary delays in care.

**Implications:** Faster healing and lower treatment costs ease the overall burden on healthcare systems, reducing both financial pressure and workload demands on the clinical workforce.

Addressing these challenges requires more than changes to reimbursement alone and calls for coordinated action across care delivery models, workforce capabilities, data and outcomes frameworks, and system-level incentives. Preparing health systems for the future of wound care therefore requires a shift toward value-based approaches that balance efficiency, equity, and innovation.

**Health systems should focus on recognising and reimbursing interventions based on clinical outcome.** This includes prevention, timely assessment, infection management, and the use of advanced dressings adapted to individual wounds. Evidence shows that earlier diagnosis and appropriate interventions reduce overall treatment duration and free up healthcare capacity and reduce costs<sup>79</sup>. Advanced dressings alone have been shown to cut overall wound care costs by up to 25%, largely by reducing nursing time, accelerating healing, and lowering hospitalisation rates.

In the UK, the availability of advanced dressings in the community is supported through reimbursement listings and supply via pharmacies, alongside direct purchase arrangements with manufacturers or through central NHS logistics. In secondary care, advanced wound products are procured through the NHS Advanced Wound Care Framework<sup>80</sup>.

**Effective funding structures enable clinicians to deliver timely, high-quality wound care while optimising resource utilisation.** This approach avoids incentives tied to visit-based payments and can involve a combination of pathway funding (assessment, prevention, nursing care) and product reimbursement (dressings, diagnostics, devices), giving clinicians flexibility while ensuring that payments reflect clinical value and effectiveness<sup>81</sup>. A 2024 review of reimbursement systems found that value-based reimbursement, bundled payments (which combine payments for multiple clinical services over a single encounter or episode), and pay-for-performance models tend to have more favourable effects on resource use and patient care<sup>82</sup>. Ultimately, earlier and better wound management leads to faster recovery, supports people in staying active, and prevents long-term disability, improving both individual well-being and broader social participation<sup>83</sup>.

**Real-world data strengthens patient-centred care and informs decision-making.** Data collection at facility and patient levels enables early identification of high-risk patients, supports tailored interventions, and informs pathway improvements. For example, the Tampere Wound Registry in Finland collected data for 923 chronic ulcer patients (2018-2020) and demonstrated high completeness (81%) and accuracy (93%) compared with medical records, showing that such data can be reliably used in clinical practice to monitor patient progress, guide care decisions, and optimise wound management pathways<sup>84</sup>.

**Optimising procurement practices ensures investments in wound care deliver both clinical and economic benefits.** Higher-performance wound dressings have the potential to generate substantial cost savings and efficiency gains. One illustrative example, based on in-vitro performance comparisons between advanced dressings, suggests that selecting a dressing with superior performance could reduce total weekly treatment costs from approximately £8,155 to £6,524 per 100 wounds, equating to over £27,000 in annual savings<sup>85</sup>. In the same model, fewer dressing changes were associated with reduced material use and an estimated saving of around 1,300 nursing hours, per year, per 100 patients. While these figures highlight the potential system-level impact of improved dressing performance, they are conceptual projections rather than observed real-world outcomes and should be interpreted with caution. Adopting value-based procurement, which prioritises clinical effectiveness and long-term outcomes over price alone, ensures that investments in advanced products deliver measurable benefits for both patients and healthcare systems.

Together, these measures create a more resilient and efficient wound care practices that delivers better outcomes for patients and healthcare system.

# Policy Recommendations

Transforming wound care pathways is possible. The evidence and case studies in the previous chapter show that earlier diagnosis, coordinated multidisciplinary care, empowered clinicians, and value-based system design can significantly improve outcomes and efficiency. Yet without clear policy direction and aligned incentives, these solutions will remain fragmented, localised, and vulnerable to budget and workforce pressures. At the same time, policy action must be proportionate and designed to support, rather than burden, healthcare systems and professionals.

Turning good practice into standard practice requires coordinated action across these three pillars: policies that put patient well-being and prevention at the centre; investment in a skilled, well-supported healthcare workforce; and system reforms that reward quality, continuity, and effective use of data and innovation. These efforts should build on existing frameworks and practices wherever possible, avoiding unnecessary duplication and administrative complexity.

Strategic choices on reimbursement, procurement, workforce planning, and data infrastructure will determine whether Europe can sustainably meet the rising burden of chronic wounds. Ensuring that these choices enable streamlined implementation and real-world impact will be critical to their success. Building on the challenges and solutions outlined above, this chapter sets out concrete, stakeholder-specific policy recommendations to scale what works, close persistent gaps, and make resilient, person-centred wound care the norm rather than the exception.

## 1. Recommendation: Make wound care a strategic priority

Wound care should be recognised as a strategic priority at both European and national levels, to enable a coordinated, system-wide approach. Doing so has clear policy and investment implications, including the need for investment in workforce capacity, structured training, continuous professional development, access to specialist support, and the timely adoption of innovative and clinically effective wound care technologies.

Embedding wound care into health policies will harmonise standards, integrate care pathways, and ensure consistent outcome reporting for evidence-based decisions. Health systems should be supported in developing robust, value-based business cases that capture the full clinical, economic, and societal return of these investments

*Key priorities include:*

### Raising awareness among key stakeholders

- **All healthcare stakeholders** - policymakers, professional associations, patient organisations, and industry - should collaborate to address the limited understanding of the clinical, social, and economic impact of wounds. This can be done through targeted campaigns and engagement initiatives that promote best practices and encourage the adoption of effective prevention and treatment strategies. These efforts should also highlight evidence demonstrating that investment in prevention, early intervention, skills development, and innovation can lead to faster healing, reduced complications and hospitalisation, lower workforce burden, and improved patient quality of life.

### Facilitating Best Practice Adoption and Consistent Outcome Reporting

- **EU institutions** should support voluntary alignment by promoting the collection and exchange of best practices for wound management and facilitating dialogue among healthcare authorities, healthcare providers and professional associations. This could be achieved through European Commission-led research projects and Joint Actions that bring together medical professionals, industry, and patient organisations to develop common definitions, key indicators, and reporting metrics (such as prevalence, healing times, ulcer-free days, microbial

load, and patient-reported measures) for outcome measurement and benchmarking. Aligning these metrics with health-economic data will be critical to support sustainable funding models and value-based investment decisions.

- **All healthcare stakeholders** - including healthcare providers, professional associations, patient organisations and industry - are encouraged to contribute to the development and dissemination of evidence-based clinical guidelines for wound prevention, early detection, and treatment. These efforts could be supported through EU-coordinated working groups, existing research funding instruments such as Horizon Europe and EU4Health, and digital platforms for sharing clinical data and best practices across health systems. The systematic use of real-world evidence and patient-reported outcomes should be encouraged to inform both clinical practice and investment prioritisation.
- **National health authorities and public health agencies** should integrate emerging and up-to-date evidence-based guidelines into national strategies and reporting frameworks, including by leveraging existing resources from leading professional associations such as the *European Wound Management Association* and the *European Pressure Ulcer Advisory Panel*, while remaining adaptable to emerging evidence and innovations. This integration should also support the timely uptake of clinically effective innovations that demonstrate clear value for patients and health systems.

#### Embedding wound care across health frameworks

- **EU institutions** should consider embedding wound management within broader health frameworks and disease-specific initiatives, such as the EU Cardiovascular Plan. Wound care elements could also be integrated into Joint Actions addressing related underlying conditions such as diabetes. It is equally important to reflect wound care within antimicrobial resistance strategies and incorporate it into supply-chain resilience and preparedness measures to ensure forward-looking health system planning and continuity of care.
- **Member States** should consider embedding wound care into non-communicable disease plans and national AMR action plans. Links should also be established between wound care planning and preparedness measures, ensuring procurement and supply continuity strategies reflect the needs of wound management and the accessibility of essential wound care products during crises. Investment decisions in these frameworks should be aligned with real-world evidence, patient-reported outcomes, and health-economic data to justify prioritising wound care within broader health system strategies.

## 2. Recommendation: Strengthen education and optimise workforce capacity

Wound care is often managed by generalists across healthcare and social care settings. Limited training, specialist access, and patient engagement can lead to fragmented care, delayed healing, and complications, placing avoidable pressure on specialist services.

Integrating wound care into early generalist education, continuous professional development, specialist support, and patient and caregiver education is essential to improve standards and optimise the use of the healthcare workforce.

*Key priorities include:*

### Enhancing medical education curricula

- **Member States** should ensure wound care is systematically integrated into early medical and nursing curricula to equip future clinicians with essential competencies for the prevention, early identification and management of wounds as part of holistic patient care. This is particularly important in health systems where formal wound care training for generalist doctors and nurses is limited or absent, contributing to delays in diagnosis and referral.
- **National healthcare and education authorities** should lead these efforts in collaboration with national and European professional networks to ensure a more aligned and evidence-based approach to wound care training, allowing specialist expertise to be focused on complex cases, pathway design, and system-level improvement.

### Expanding Continuous Professional Development programmes

- **Member States** should embed wound care within national continuous professional development (CPD) frameworks, structured systems that set standards, requirements, and accreditation for ongoing training of healthcare professionals, to ensure high standards of care, reflecting the latest advancements and research. CPD programmes should support generalists across healthcare, care home, and social care settings, enabling them to recognise early signs of deterioration, apply appropriate preventive measures, and know when to escalate to specialist care. Training could also cover emerging elements such as antimicrobial stewardship, sustainability in clinical practice, and practical skills delivered through simulation or digital modules. It should also include strategies for educating and engaging patients in the management of their own wounds and overall health, as well as structured approaches to patient and caregiver education to support self-management and timely help-seeking.
- **EU institutions** should support these efforts through funding training grants and cross-border initiatives, leveraging resources such as the European Centre for Disease Prevention and Control (ECDC) antimicrobial stewardship courses and the Horizon Europe Health Cluster funding for digital skills, to strengthen workforce capacity and flexibility across Europe.
- **Healthcare providers** are encouraged to ensure active participation and uptake of CPD programmes to translate knowledge into improved patient outcomes.
- **Professional bodies** should play a key role in accrediting and standardising CPD content across Member States, including guidance on effective patient education and self-management support.

## Expanding Specialist Access and Support

- **Member States** should improve access to specialist wound care practitioners while enabling generalists and non-clinical caregivers to deliver appropriate care within clearly defined roles and management pathways. This can be achieved through the adoption of digital technologies, decision-support systems, and standardised care pathways that promote prevention, enable multidisciplinary collaboration, and enhance coordination with specialists managing underlying conditions.
- **EU institutions** should play a role by fostering the development and dissemination of these tools through collaborative platforms for knowledge exchange, supporting task-sharing and efficient use of specialist resources.
- **Healthcare providers** and **regional health authorities** should ensure implementation at the healthcare delivery level, including in care homes and community-based services.

### 3. Recommendation: Align reimbursement and procurement with value and outcomes

Improving equitable access to advanced wound care solutions, such as advanced wound dressings and innovative therapies, is essential to improving patient outcomes. Reimbursement and procurement need to work hand in hand to create a system that incentivises cost-effective care, supports system-level sustainability, and encourages innovation.

*Key priorities include:*

#### Aligning reimbursement with patient outcomes and quality of care

- **National health authorities and payers** (including national health insurance bodies) should reform existing reimbursement systems for wound care, working in close collaboration with **clinical societies** to establish common outcome measures such as healing progress, infection rates, ulcer-free days, and patient-reported outcomes, while recognising the importance of workforce competencies. Reimbursement should also incentivise the delivery of preventive, patient-centred, and holistic wound care.
- **EU bodies** can offer methodological guidance to support the alignment of outcome-based reimbursement approaches across Member States.

#### Optimising procurement practices

- **Hospital procurement bodies** and **national purchasing agencies** should drive value-based approaches, leveraging the EU Public Procurement Directive to embed broader value criteria, such as real-world evidence, patient-reported outcomes and experiences, health economic assessments, and system-level sustainability considerations into purchasing decisions. Procurement processes should support access to appropriate wound care solutions and encourage the uptake of innovations that demonstrate meaningful added value to both patients and healthcare systems.

#### Promoting sustainable wound care products and practices

- **EU and national policymakers** should advance a holistic approach to sustainability in wound care, encompassing patient outcomes, efficient use of resources, waste reduction, and the long-term functioning and resilience of health systems. This includes robust assessments of the environmental, social, and economic impact of products and medical waste based on science and harmonised definitions, methodologies and standards to guide decisions in procurement and clinical practice. System-level sustainability strategies should focus on improving care pathways and appropriate use of wound care products, recognising that suboptimal or incorrect use by practitioners or patients can lead to avoidable waste, higher costs, and poorer outcomes. These strategies should support practices that reduce unnecessary dressing changes, treatment time, and overall resource use, while safeguarding patient safety and quality of care.
- **Healthcare providers and procurement bodies** should integrate these sustainability standards into day-to-day purchasing and practice, applying measures in a way that prioritises patient benefit, supports workforce effectiveness, and promotes value-based use of resources across healthcare systems.

## 4. Recommendation: Accelerate innovation and scale real-world evidence

In today's digital era, technology is transforming healthcare. Wound care must leverage digital tools and harmonised registries to improve access, quality of care and enable data-driven decision-making. At the same time, evidence and evaluation frameworks should be regularly updated to reflect real-world conditions.

*Key priorities include:*

### Modernising testing and evaluation standards

- **National competent authorities** and **national standardisation bodies** should collaborate with **clinicians, researchers and industry** to ensure that testing and evaluation standards reflect real-world conditions, clinical practice and patient needs. Modernisation of testing and evaluation standards would enable clearer evidence generation and support more reliable, clinically meaningful assessments of wound care products and innovations in care delivery.
- **EU-level bodies** could offer methodological guidance and support alignment across Member States.

### Strengthening evidence generation for innovation

- **EU institutions and national health authorities** should reinforce support for wound care innovation in EU funding programmes (EU4Health, Horizon Europe) and national initiatives to drive interdisciplinary research, clinical validation, and technology development, ensuring innovations deliver meaningful improvements in patient outcomes.
- **EU-level bodies and national competent authorities** should ensure that assessments of wound care innovations systematically incorporate real-world evidence, patient-reported outcomes, health-economic data, and sustainability data. This means integrating diverse data sources into decision-making processes for reimbursement, guideline development, and clinical adoption.
- **Industry and clinicians** should play a central role in generating and validating this evidence to demonstrate the practical value of advanced diagnostics, antimicrobial biomaterials, innovations in care, and digital monitoring tools. Emerging innovations, such as sustainable or circular product designs, could also be explored as part of long-term development. **Patient groups** should contribute insights to ensure innovations meet real-world needs.

### Establishing harmonised and interoperable wound registries

- **National health authorities** should set up or adapt wound registries aligned with shared EU-level guidance on data structure and interoperability to generate comparable real-world evidence.
- **EU-level bodies** can provide methodological guidance and support harmonisation, drawing on models from existing disease registries (for example, ENCR for cancer, EU RD Platform for rare diseases).
- **Healthcare providers** should contribute clinical data to these registries, while **researchers and industry** should support data analysis and evidence interpretation.

## About MedTech Europe

MedTech Europe is the European trade association for the medical technology industry including diagnostics, medical devices and digital health. Our members are national, European and multinational companies as well as a network of national medical technology associations who research, develop, manufacture, distribute and supply health-related technologies, services and solutions.

[www.medtecheurope.org](http://www.medtecheurope.org).

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