



New study documents cost and impact of chronic wounds; Demonstrates imperative for wound-specific quality measures, payment models and Federal research funding

Chronic wounds impact 15% of Medicare beneficiaries at estimated annual cost of \$28-\$32 billion

October 4, 2017 - A new study published online in the International Society For Pharmacoeconomics and Outcomes Research's (ISPOR) *Value in Health* journal demonstrates the economic impact of chronic nonhealing wounds in Medicare patients. The findings highlight the need for Federal research funding, quality measures and reimbursement models that are relevant to wound care. Such measures are not currently included under Centers for Medicare and Medicaid Services (CMS) payment policies, including the Medicare Access and CHIP Reauthorization Act (MACRA).

The study, "[An Economic Evaluation of the Impact, Cost, and Medicare Policy Implications of Chronic Nonhealing Wounds](#)," analyzed the Medicare 5% Limited Data Set for calendar year 2014 and determined that chronic nonhealing wounds impact nearly **15% (8.2 million) of Medicare beneficiaries**, far more than suggested by previous studies. Furthermore, conservative estimates for total Medicare annual spending for all wound types ranged from **\$28.1 billion to \$31.7 billion**. Treatment and management of infected or re-opened (dehiscid) surgical wounds account for the highest per-wound costs. Hospital outpatient care drove the highest site-of-service costs, demonstrating the shift from hospital inpatient to outpatient services in the wound care space.

Policy implications: Research funding and MACRA payment models

"The true burden of wound care to Medicare has remained relatively hidden. Similarly, the morbidity and associated costs of chronic wounds, including amputation and death, have not been a focus from a public policy standpoint in the US. We are hopeful that documenting the significant economic cost and impact of chronic wounds can influence priorities for Federal research funding in this space and for innovative payment approaches by the CMS, including quality and performance measures within MACRA," noted lead study author Dr. Samuel Nussbaum, Senior Fellow, Schaeffer Center for Health Policy and Economics, University of Southern California and former CMO of WellPoint/Anthem.

Key findings

The first comprehensive study of Medicare spending on wound care, the study analyzed and calculated the cost of chronic wound care for Medicare beneficiaries by wound type, and by care setting:

- Chronic wounds impact nearly **15% of Medicare beneficiaries (8.2 million)**.
- A conservative estimate of the annual cost is **\$28 billion** when the wound is the primary diagnosis on the claim. When the analysis included wounds as a secondary diagnosis, the cost for wounds is conservatively estimated at **\$31.7 billion**.
 - **Surgical wounds** and **diabetic foot ulcers** drove the highest total wound care costs (including cost of infections).
 - On an individual wound basis, the most expensive mean Medicare spending per beneficiary was for **arterial ulcers** followed by **pressure ulcers**.
 - In regard to site of service, **hospital outpatient settings** drove the greatest proportion of costs – demonstrating a **major shift in costs from hospital inpatient to outpatient settings**.
 - **Surgical infections** were the largest prevalence category, followed by **diabetic wound infections**.

Findings demonstrate need for wound-relevant quality measures, reimbursement models

“One reason the burden of nonhealing wounds has been hard to identify is that they tend to be a symptom of another disease such as diabetes. National quality measures have not been developed for use under MACRA’s Merit-based Incentive Payment System (MIPS) that are relevant or appropriate to the broad spectrum of wound care. With value-based care and quality measure-based payment models driving Medicare reimbursement under MACRA, this is a problem for both practitioners and patients. Wound care practitioners have been raising the alarm about the epidemic of wounds, and this study confirms that CMS needs to recognize the cost and prevalence of chronic wounds in the development of chronic care models and episodes of care. Chronic wounds can’t be forgotten about if we want to drive better health outcomes and smarter wound care spending,” said study co-author Caroline Fife, MD, Medical Director, CHI St. Luke's Hospital (The Woodlands, Texas) and Executive Director, U.S. Wound Registry.

“CMS has targeted the conditions it believes to be the most expensive for the creation of episode of care measures, such as certain cardiovascular and gastrointestinal conditions. None of the measures address wound care and all are predicated on an inpatient hospital event. The construction of these episode groups reveals two important misconceptions. The first is that chronic nonhealing wounds represent a less significant burden to the Medicare trust fund compared with other conditions, and the second is that the primary driver of cost is the hospital inpatient stay. Our data dispute both assertions. Not only does chronic wound care represent a large portion of the Medicare budget, but our data also suggest there has been a major shift of costs from hospital inpatient to outpatient settings. The policy implications of these findings are compelling,” said study co-author Marcia Nusgart, R.Ph., Executive Director of the Alliance of Wound Care Stakeholders.

The prevalence and incidence of chronic wounds is likely to continue to increase - due in part to the increase in average age of the population, along with increases in the prevalence of obesity, diabetes and lower extremity arterial disease.

Methodology: Unique in comprehensiveness

The retrospective analysis is unique in its comprehensiveness: researchers searched the primary and up to 24 secondary wound-related diagnosis codes (ICD-9) on Medicare claims data, as well as Common Procedural Terminology (CPT) codes, and Evaluation and Management (E/M) codes across inpatient and outpatient settings, skilled nursing facilities, home health agencies and hospice service, as well as included Medicare Part B Carrier and durable medical equipment claims. The analysis included Medicare beneficiaries treated for one or more of the following: arterial ulcers, chronic ulcers, diabetic foot ulcers, diabetic infections, pressure ulcers, skin disorders, skin infections, surgical wounds, surgical infections, traumatic wounds, venous ulcers, or venous infections. Researchers calculated wound prevalence, Medicare expenditure for each wound type and aggregate, and expenditure by type of service.

The study was funded by the [Alliance of Wound Care Stakeholders](#). The full-text of the study is available on the [Value in Health website](#) and is scheduled to publish in the December issue.

The Alliance of Wound Care Stakeholders

The Alliance is a nonprofit multidisciplinary trade association of physician medical societies and clinical associations whose mission is to promote quality care and access to products and services for people with wounds through effective advocacy and educational outreach in the regulatory, legislative, and public arenas. Learn more at www.woundcarestakeholders.org.

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