

Wound care by the numbers: Medicare cost and utilization of patients with chronic wounds

Key takeaways

- Individuals with chronic wounds are an under-recognized, small but costly segment of the high-need patient population.
- Patients hospitalized with a concurrent chronic wound face higher average length of stay and increased risk of readmission.
- Individuals with chronic wounds are among the sickest of the high-need patient population, and yet their connection to these chronic diseases and other conditions are overlooked.
- Outpatient wound care services may be underutilized by chronically ill Medicare beneficiaries.

Introduction

The remarkably high costs associated with care delivery for a fairly small but growing number of individuals disproportionately drives the rising cost of healthcare in the U.S. This population of high-need individuals includes those with multiple chronic diseases who are over the age of 65 and require a high degree of specialty care from numerous providers. Their needs extend beyond strictly clinical to social and behavioral services. They are more likely to be publicly (Medicare) insured and not surprisingly, susceptible to lack of coordination within the healthcare system.^{1,2} Today, this 1 percent of patients account for more than 20 percent of the nation's healthcare expenses, and the top 5 percent account for nearly half.³ Strategic attention and active collaboration from a broad range of stakeholders could have a positive impact on outcomes and healthcare system costs.

One of the lesser known segments within this high-need patient population are individuals who suffer from chronic wounds. In the U.S., chronic wounds affect approximately 6.7 million individuals and an excess of \$50 billion is spent annually on treatment.⁴ The prevalence of chronic wounds are increasing in tandem with the growing aging population and incidences of chronic diseases more common in older adults such as, diabetes and peripheral artery disease (PAD). According to the U.S. Census Bureau, in 20 years the percent of the total U.S. population age 65 or older is expected to increase to 21 percent.⁵ PAD for example, a circulatory disease commonly associated with non-healing wounds, affects about 8 million Americans and 12-20 percent of Americans age 65 and older.⁶

It is in this context that Healogics, the nation's largest provider of advanced chronic wound care services, has created the Wound Science Initiative – a collaborative effort to educate and engage key stakeholders in government and across the healthcare system on the poorly understood and underserved needs of patients with chronic wounds. With over 700 hospital affiliated outpatient Wound Care Centers® that treat more than 300,000 patients and heal more than two million wounds, Healogics has the largest repository of chronic wound-specific patient data in the industry. The Healogics Wound Science Initiative recognizes the value and relevance of these data to build the evidence-base, advance and standardize best practices and ultimately, guide healthcare decision-making and resources.

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Background

Chronic wounds are those that have failed to proceed through an orderly and timely reparative process to produce anatomic and functional integrity of the injured site.⁷ Clinically chronic wounds are not viewed a disease category, and wound care is not a recognized medical specialty. Chronic wounds are generally seen as a complication or comorbidity of a separate chronic condition, i.e. foot ulcers as a complication of diabetes or pressure ulcers as a complication of spinal cord injuries. Patients with chronic wounds also have complicated social support needs that impact the success of their treatment. For example, wound-healing can be compromised by variables such as obesity, smoking and malnutrition.⁸ As a result, the true impact of chronic wounds is underappreciated. There's less research funding for clinical trials that explore the treatment of chronic wounds, specifically chronic wounds in older adults. This leaves providers with limited evidence to guide optimal treatment and management of chronic wounds. Although there are evidence-based guidelines and care delivery models, there are no agreed upon treatment standards.

To advance insights and perspectives on how to better manage the care of patients with chronic wounds and to stimulate potential solutions for improving outcomes and reducing costs for this vulnerable, majority 65+ population, Healogics analyzed 2014 Centers for Medicare & Medicaid Services (CMS) Part A and B standard analytic files for care utilization and cost trends. This white paper synthesizes information and insights gleaned from the analysis, keeping in mind potential areas of opportunity to improve care and outcomes.

Data and methods

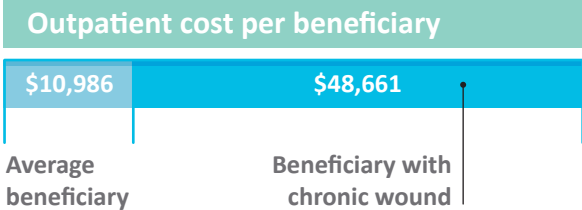
The data for this analysis came from the 2014 Centers for Medicare & Medicaid Services Part A and B standard analytic files. In order to identify wounded patients, Healogics researchers utilized wound care specific CPT and ICD-9 codes. Beneficiaries were defined as a chronic wound patient if they had any claims with a wound care code in an outpatient setting within the 12-month study period. Patients identified via inpatient setting are likely clinically distinct and represent a more severe patient population. As such, we limit the current analysis to chronic wound patients identified based on outpatient utilization and present findings on a cohort of inpatient identified wound care patients elsewhere.



Key insight

Individuals with chronic wounds are an underappreciated, small but costly segment of the high-need patient population.

- In 2014 Medicare payments totaled \$533 billion.⁹ Chronic wound patients had an overall Medicare spend of \$15.5 billion. Despite representing only slightly more than 0.5 percent of Medicare beneficiaries, chronic wound patients accounted for 3 percent of total Medicare payments in 2014.
- Per outpatient Medicare beneficiary average spend in 2014 was \$10,986, as opposed to the same year per Medicare beneficiary with a chronic wound spend which was an estimated \$48,661. This is a four-fold increase in outpatient alone and still does not take into consideration the costs associated with the inpatient setting, when a wound is present.



Other key findings

Patients hospitalized with a concurrent chronic wound face higher average length of stay and increased risk of readmission.

- Of the more than 175,000 chronic wound Medicare patients who had an inpatient hospitalization, 59 percent already had a wound present during their inpatient stay.
- In 2014, inpatient hospitalizations accounted for just under 40 percent of chronic wound patient Medicare spend. However, only 55 percent of patients had any inpatient utilization (Figure 2).
- Medicare patients hospitalized with a concurrent chronic wound had a length of stay 3.6 days longer than the average Medicare beneficiary. This means that patients with chronic wounds, in addition to the reason they were admitted, stayed in the hospital 8.6 days, as compared to the 2014 Medicare average 5.0 days.¹⁰
- When wound care patients were admitted with an ulcer, their average length of stay (LOS) was higher than if they were admitted without a chronic ulcer (Figure 3).¹¹

Fig. 1 Total medicare spend

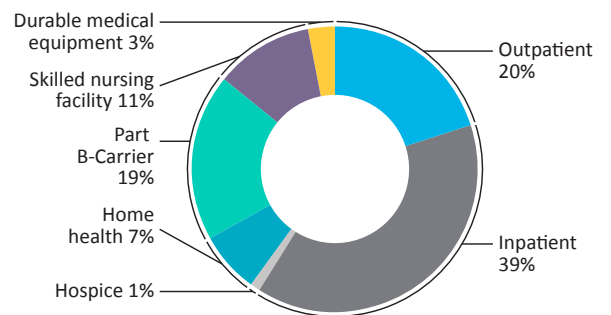


Fig. 2 Utilization of services

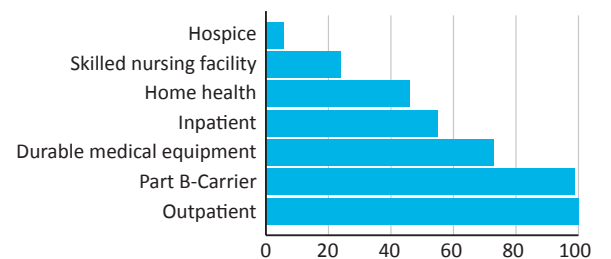
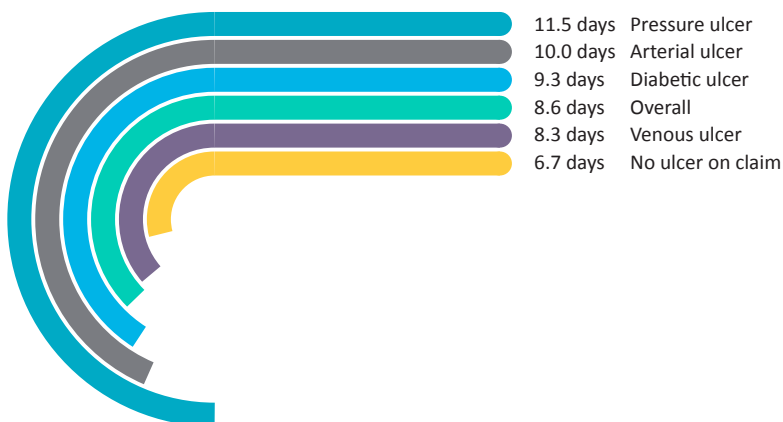


Fig. 3 Average length of stay



Medicare beneficiaries with chronic wounds are admitted in connection with some of the costliest diseases, making them among the sickest of the high-need population to Medicare (Table 1).

- Using Healthcare Cost and Utilization Project (HCUP) data, septicemia was identified as the number one most expensive condition billed to Medicare in 2013, with aggregate hospital costs of \$14.5 billion dollars.¹²
- Additionally, congestive heart failure, rehabilitation, renal failure and pneumonia are among the other most expensive conditions billed to Medicare.

Table 1. Top ten most frequent chronic wound patient inpatient hospitalizations

Septicemia w/o MV 96+ hours w MCC

Rehabilitation w CC/MCC

Major joint replacement or reattachment of lower extremity w/o MCC

Heart failure & shock w CC & MCC

Heart failure & shock w MCC

Renal failure w CC

Kidney & urinary tract infections w/o MCC

Simple pneumonia & pleurisy w CC

Simple pneumonia & pleurisy w MCC

Esophagitis, gastroent & misc digest disorders w/o MCC

Outpatient wound care services may be an underutilized resource in the treatment of chronic wounds.

- Of the 51.7 million Medicare beneficiaries in 2014, only 0.6 percent or 319,543 patients utilized outpatient chronic wound care services.
- Of the total \$15.5 billion spent in 2014 on Medicare beneficiaries with chronic wounds, only 5 percent (\$805 million) was spent on outpatient wound care services.

Conclusion

As our nation once again debates healthcare financing and care delivery approaches, there is growing recognition that cost reduction and care management strategies targeted at the high-need patient population should be prioritized. One of the most expensive and challenging segments of the high-need patient population are older adults with chronic wounds. Because the management of chronic wounds crosses many clinical specialties and extends into social and behavioral services, the development and integration of research that includes clinical, behavioral and social data, along with improved data sharing, is paramount to improving care for this high-need segment. Current models of care offer the opportunity for best practice sharing and learning. Medicare cost and utilization data insights can start to build the important infrastructure of understanding, inform the development of future care plans and the allocation of resources.

Footnotes

1. Part D payments excluded from current analysis
2. CPT specific spend, does not include professional fees

Healogics Wound Science Initiative is a strategic effort that aims to accelerate data-driven improvements in the management and treatment of chronic wounds.

Additional resources

- Rice et al. 2014
<http://care.diabetesjournals.org/content/37/9/2660.1>
- Sen et al. 2010
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Endnotes

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