The Big Spend: The Cost of Non-Healing Wounds to Medicare

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Disclosures

Grant/Research Support:

• Alliance for Wound Care Stakeholders
Rationale for Study

• The true cost of wound care, including chronic wounds, such as venous leg ulcers, diabetic foot ulcers, and pressure ulcers, remains unknown for the Medicare population in the United States.

• This may be largely because research has focused on hospital and long-term care settings.

• The morbidity and associated costs of chronic wounds, including amputation and death, have been largely ignored from a public policy standpoint, perhaps because no specific medical specialty is clearly responsible.
Introduction

• Aim of Study: To determine the cost of chronic wound care for Medicare beneficiaries by wound type and by care setting

• Data Source: Medicare 5-percent Limited Data Set (LDS) for calendar year 2014

• ICD-9CM diagnosis codes for twelve wound types to identify Medicare beneficiaries diagnosed with one or more of the identified wound types in the claims data
ICD-9 Diagnoses Organized into Twelve Wound Type Categories

- Venous
- Pressure ulcer
- Chronic ulcer
- Surgical wound
- Skin disorder
- Traumatic wound

- Surgical infection
- Diabetes infection
- Venous infection
- Skin infection
- Arterial ulcers
- Diabetic foot ulcer
For each beneficiary, we compiled claims across all types of services to determine the presence of each wound type.

Since beneficiaries could have multiple wounds during the year, we created an overall category that counts the number of beneficiaries with any wound type, which does not double count beneficiaries with multiple wound types.

Prevalence rates were computed as the number of beneficiaries receiving wound care during the year divided by the total number of beneficiaries in the sample. Prevalence rates are calculated by age group, gender, and type of wound.
Two Methods:

• The first method counted only Medicare provider payments when a wound was the primary diagnosis on the claim, excluding beneficiary deductible and co-insurance.

• The second method attributed the entire payment of a claim to wound care if a wound diagnosis was the secondary diagnosis, but used attribution methodologies based on number of secondary diagnoses to apportion amount of cost contributed by wounds.

  • For example, if there were 10 secondary diagnoses and one was a wound, the wound was attributed $\frac{1}{10} \times 50\%$ of the total claim payment.
Findings: Over 14.5% of Medicare beneficiaries (8.2 million) had at least 1 type of wound in 2014.
Findings: Cost of Non-Healing Wounds to Medicare (in millions)

<table>
<thead>
<tr>
<th>Type of Wound</th>
<th>Method One: Principal Diagnosis Only</th>
<th>Method Two: Principal Diagnosis and Attributed Portion as Secondary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Venous</td>
<td>$569.0</td>
<td>$605.6</td>
</tr>
<tr>
<td>Pressure Ulcers</td>
<td>$3,870.2</td>
<td>$4,644.5</td>
</tr>
<tr>
<td>Chronic Ulcers</td>
<td>$1,420.7</td>
<td>$1,772.2</td>
</tr>
<tr>
<td>Surgical Wounds</td>
<td>$5,775.6</td>
<td>$6,699.0</td>
</tr>
<tr>
<td>Skin Disorders</td>
<td>$773.3</td>
<td>$922.9</td>
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<tr>
<td>Traumatic Wounds</td>
<td>$1,292.3</td>
<td>$1,430.6</td>
</tr>
<tr>
<td>Surgical Infections</td>
<td>$5,938.8</td>
<td>$6,364.7</td>
</tr>
<tr>
<td>Diabetes Infections</td>
<td>$5,546.6</td>
<td>$6,052.9</td>
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<tr>
<td>Venous Infections</td>
<td>$146.7</td>
<td>$173.1</td>
</tr>
<tr>
<td>Skin Infections</td>
<td>$12.8</td>
<td>$13.3</td>
</tr>
<tr>
<td>Arterial Ulcer</td>
<td>$2,085.0</td>
<td>$2,156.7</td>
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<tr>
<td>Diabetic Foot Ulcer</td>
<td>$631.4</td>
<td>$880.7</td>
</tr>
<tr>
<td>Total All Wounds</td>
<td>$28,062.1</td>
<td>$31,716.1</td>
</tr>
</tbody>
</table>
Distribution of Medicare Spending Associated with Wound Care in 2014 ($31.7 billion)

- Hospital Inpatient: 18%
- SNF: 3%
- HHA: 5%
- Hospice: 0%
- Hospital Outpatient: 36%
- Part B Carrier: 9%
- Medicare Advantage: 28%
- Medical Equip: 1%
- Part B Carrier: 9%
- Medicare Advantage: 28%
This is the first comprehensive study of Medicare spending on wound care. The bottom line findings are very compelling:

- Nearly 15% of Medicare beneficiaries (8.2 million patients) had at least one type of wound or infection (not pneumonia).

- Surgical wound infections were the largest prevalence category (4.0%), followed by diabetic infections (3.4%).

- Estimates of the annual cost range from $28.1 billion to $31.7 billion.
Previous efforts to understand wound care costs have assumed the primary cost drivers to be pressure ulcers, diabetic foot ulcers, and vascular-related leg ulcers. Surprisingly, our data suggest that the most costly category of nonhealing wounds is that related to surgical complications, including infection. Conventional wisdom asserts that the primary driver of cost is the inpatient stay - however our data suggest there has been a major shift of costs from hospital inpatient to outpatient settings.
• “Establish a lump-sum “episode based” payment for a wound care episode. Under this option, a hospital would receive a lump sum payment for all wound care services involving procedures using skin substitutes. The payment would be made for a wound care “episode” (such as 12 weeks) for one wound.” Federal Register / Vol. 83, No. 147 / Tuesday, July 31, 2018 / Proposed Rules.
Conclusions and Next Steps

• Medicare expenditures related to wound care are far greater than previously recognized, with care occurring largely in outpatient settings.

• Medicare beneficiaries rarely have a single wound, and as many as half of wounds are non-healing.

• CMS OPPS Proposed “Episode Payment” for Wound Care is Not Realistic or Clinically Informed
Questions?
Dobson DaVanzo & Associates, LLC (Dobson | DaVanzo) is a health economics and policy consulting firm based in the Washington, DC metropolitan area.

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