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MEDICARE SEVERE WOUND CARE

Spending Declines May Reflect Site of Care Changes; Limited Information Is Available on Quality

GAO-21-92

GAO@100 Highlights

Highlights of GAO-21-92, a report to congressional committees

January 2021

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Spending Declines May Reflect Site of Care Changes; Limited Information Is Available on Quality

Why GAO Did This Study

Medicare beneficiaries with serious health conditions, such as strokes, are prone to developing severe wounds due to complications that often lead to immobility and prolonged pressure on the skin. These beneficiaries may require a long-term inpatient stay at an ACH or a post-acute care facility, such as an LTCH. LTCHs treat patients who require care for longer than 25 days, on average. In 2018, LTCHs represented about $4.2 billion in Medicare expenditures.

Prior to fiscal year 2016, LTCHs received a higher payment rate for treating Medicare beneficiaries than ACHs. Beginning in fiscal year 2016, a dual payment system was phased in that paid LTCHs a rate similar to ACHs for some beneficiaries and a higher rate for beneficiaries that met certain criteria. As this payment system has moved from partial to full implementation, lawmakers had questions about how it may affect beneficiaries' severe wound care.

The 21st Century Cures Act included a provision for GAO to review severe wound care provided to Medicare beneficiaries. This report describes facilities where Medicare beneficiaries received severe wound care, Medicare severe wound care spending, and what is known about the dual payment system's effect on access and quality. GAO analyzed Medicare severe wound care access and spending data for fiscal years 2016 and 2018 (the most recent data available); reviewed reports; and interviewed CMS officials, researchers, and national wound care stakeholders.

HHS provided technical comments on a draft of this report, which were incorporated as appropriate.

View GAO-21-92. For more information, contact James Cosgrove at (202) 512-7114 or cosgrovej@gao.gov.

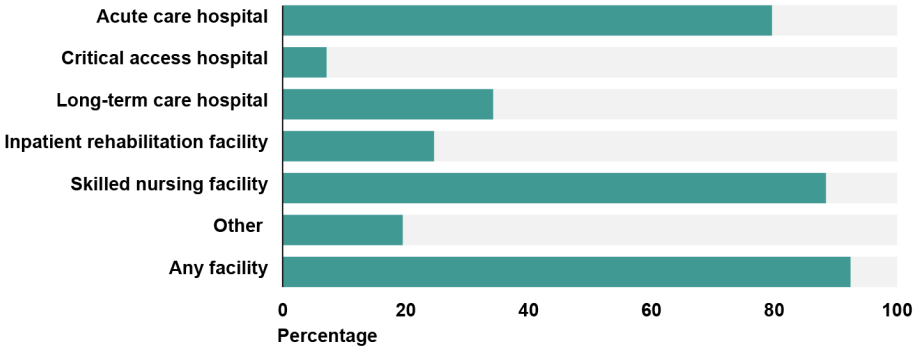
What GAO Found

GAO's analysis of Department of Health and Human Services (HHS) Centers for Medicare & Medicaid Services (CMS) data show that in fiscal year 2018, 287,547 Medicare fee-for-service beneficiaries had inpatient stays that included care for severe wounds. These wounds include those where the base of the wound is covered by dead tissue or non-healing surgical wounds. About 73 percent of the inpatient stays occurred in acute care hospitals (ACH), and a smaller percentage of stays occurred in post-acute care facilities. Specifically, about 16 percent of stays were at skilled nursing facilities (SNF), and about 7 percent were at long-term care hospitals (LTCH).

CMS data show that Medicare spending on stays for severe wound care was $2.01 billion in fiscal year 2018, representing a decline of about 2 percent from fiscal year 2016, when spending was about $2.06 billion. Spending declined as a result of decreases in both the total number of these stays, as well as spending per stay, which both decreased by about 1 percent. The decrease in per stay spending was likely driven, in part, by a change in where beneficiaries received care. CMS data show fewer severe wound care stays in LTCHs, which tend to be paid higher payment rates. At the same time, more severe wound care stays were at two other types of facilities that tend to be paid lower payment rates: ACHs and inpatient rehabilitation facilities.

GAO's analysis of CMS data also show that, while the number of LTCHs that billed Medicare for severe wound care decreased by about 7 percent from fiscal years 2016 to 2018, Medicare beneficiaries continued to have access to other severe wound care providers. For example, CMS data show that most beneficiaries resided within 10 miles of an ACH or SNF that provided severe wound care in fiscal year 2018.

Figure: Percentage of Medicare Fee-for-Service Beneficiaries Residing within 10 Miles of a Health Care Facility That Provided Any Severe Wound Care, by Facility Type, Fiscal Year 2018



Source: GAO analysis of Centers for Medicare & Medicaid Services Medicare Provider Analysis and Review data. | GAO-21-92

Note: The "other" category includes facilities such as psychiatric hospitals or units.

There is limited information on how or whether the decrease in LTCH care for severe wounds may have affected the quality of severe wound care Medicare beneficiaries receive. For example, CMS collects information on the percentage of patients with new or worsened pressure ulcers at post-acute care facilities, but it does not measure the quality of care they receive.

Contents

Abbreviations

ACH	acute care hospital
CAH	critical access hospital
CMS	Centers for Medicare & Medicaid Services
COVID-19	Coronavirus Disease 2019
CPG	clinical practice guideline
Cures Act	21st Century Cures Act
DRG	diagnosis-related group
ICD-10	International Statistical Classification of Diseases and Related Health Problems, 10th Revision
IRF	inpatient rehabilitation facility
LTCH	long-term care hospital
LTCH PPS	long-term care hospital prospective payment system
MedPAC	Medicare Payment Advisory Commission
MEDPAR	Medicare Provider Analysis and Review
MS-LTC-DRG	Medicare severity long-term care diagnosis-related group
SNF	skilled nursing facility

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January 4, 2021

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House of Representatives

Because they are often immobile and bed-ridden, Medicare beneficiaries with serious health conditions, such as strokes or spinal cord injury, are prone to developing severe wounds that require specialized treatment. Severe wounds, as defined by the 21st Century Cures Act (Cures Act), include non-healing surgical wounds, stage 3 wounds (i.e., those where skin tissue is lost), and stage 4 wounds (i.e., those where bone or muscle is exposed).[1] Treatment for beneficiaries with severe wounds and other serious health conditions may require a long period of inpatient care. These beneficiaries may receive extended inpatient care at an acute care hospital (ACH) or a post-acute care facility, such as a long-term care hospital (LTCH).

LTCHs focus on treating patients who require inpatient hospital-level care, such as ventilator care for respiratory support, for longer than 25 days, on average. According to the Medicare Payment Advisory Commission (MedPAC), in 2018, they accounted for about $4.2 billion in Medicare expenditures. Until fiscal year 2016, Medicare payment rates for inpatient services provided in LTCHs were generally higher than rates for those in other settings (e.g., ACHs), even if the patients did not require specialized care.

[1]Pub. L. No. 114-255, § 15010(a)(3), 130 Stat. 1033,1323 (2016) (codified in pertinent part at 42 U.S.C. § 1395ww(m)(6)(G)(ii)).

A new dual payment system began to be phased in during the LTCH's 2016 fiscal year cost reporting period that pays LTCHs

- the higher, **standard payment rate** for some beneficiary stays that follow an ACH stay that included 3 or more days of care in an intensive care unit or required at least 96 hours of mechanical ventilation services, and
- a **site neutral rate** similar to ACHs for all other beneficiary stays.[2]

As the dual payment system has moved from partial to full implementation, lawmakers have had questions about how the dual payment system may affect severe wound care for Medicare beneficiaries. The Cures Act includes a provision for us to review the treatment needs, access to care, and spending for Medicare beneficiaries with severe wounds; and to review any effects of the LTCH dual payment system on Medicare providing severe wound care to its beneficiaries.[3]

This report describes

1. where Medicare beneficiaries generally receive severe wound care and the factors that may be considered when selecting the most appropriate treatment setting;
2. how Medicare spending on severe wound care has changed during implementation of the dual payment system; and

[2]The LTCH fiscal year cost reporting period may vary by hospital and may not align with the federal fiscal year, which begins in October and goes through September. Medicare requires submission of annual cost reports generally covering a 12-month period of operations making up the hospital's fiscal year cost reporting period.

The Pathway for SGR Reform Act of 2013 modified the LTCH prospective payment system (PPS) by phasing in site neutral payments for LTCHs. Therefore, discharges in LTCH fiscal year cost reporting periods that began on or after October 1, 2015, through those that began no later than September 30, 2019, that have a principal diagnosis related to a psychiatric condition or rehabilitation and did not meet other requirements to be paid the standard payment rate were paid a "blended" payment rate. The blended payment rate equaled half of the site neutral payment rate plus half of the standard payment rate for services. Pub. L. No. 113-67, div. B, § 1206(a), 127 Stat. 1165, 1195, 1200 (codified as amended at 42 U.S.C. § 1395ww(m)(6)). In subsequent LTCH fiscal year cost reporting periods, LTCH discharges that do not meet standard payment rate criteria are paid only the site neutral rate. The application of the site neutral payment rate is waived for those LTCH admissions that are in response to and occur during the public health emergency due to Coronavirus Disease 2019 (COVID-19). See Pub. L. No. 116-139, § 3711(b)(2), 134 Stat. 281, 423 (2020).

[3]Pub. L. No. 114-255, § 15010(c), 130 Stat. at 1323.

3. what is known about the extent to which implementation of the LTCH dual payment system has affected the availability and quality of severe wound care.

For all three of our reporting objectives, we focused on stays related to severe wound care, which are those with International Statistical Classification of Diseases and Related Health Problems, 10th Revision (ICD-10), codes identified by the Centers for Medicare & Medicaid Services (CMS) as being for severe wounds.[4] We then analyzed Medicare fee-for-service claims using CMS's Medicare Provider Analysis and Review (MEDPAR) claims data to identify Medicare beneficiary inpatient stays with a diagnosis related to severe wound care for fiscal years 2016 and 2018.[5] To assess the reliability of Medicare claims data, we obtained information from knowledgeable CMS officials regarding the accuracy of the data, and we performed checks to identify missing or incorrect data. Based on these steps, we determined that the data were sufficiently reliable for the purposes of our reporting objectives.

[4]The ICD-10 provides a standard coding convention for health diagnoses and is maintained by the World Health Organization. The Department of Health and Human Services' modified version (ICD-10-Clinical Modification) has been adopted for diagnosis coding in the United States. The ICD-10-Clinical Modification codes for severe wounds were identified by CMS for purposes of implementing temporary exemptions from the site neutral payment rate. For this report, we refer to these codes as ICD-10 codes. The file defining severe wound care ICD-10 codes is publicly available on CMS's website; see Centers for Medicare & Medicaid Services, *Other Files For Download*, accessed October 21, 2020, https://www.cms.gov/index.php/Medicare/Medicare-Fee-for-Service-Payment/LongTermCareHospitalPPS/download.

[5]Beneficiaries have two main options for their Medicare health coverage: the Medicare fee-for-service option, also known as "original" Medicare, or Medicare Advantage, the private plan alternative. For this report, we focus on the Medicare fee-for-service option because Medicare Advantage plans do not submit claims to CMS.

CMS's MEDPAR claims data contain information on 100 percent of Medicare beneficiaries using hospital inpatient services. Data are provided by state and then by diagnosis-related group (DRG) for all short stay and inpatient hospitals. We limited our analyses to MEDPAR claims for severe wound care ICD-10 codes billed as (1) a principal diagnosis only; or (2) either a principal or secondary diagnosis to ACHs, critical access hospitals (CAH), LTCHs, skilled nursing facilities (SNF), inpatient rehabilitation facilities (IRF), and home health agencies. Any MEDPAR claims for severe wound care that did not fit into one of these categories is included in an "other" category. For example, "other" categories in the MEDPAR data files include patients discharged or transferred to hospice, a nursing facility certified under Medicaid but not certified under Medicare, or a psychiatric hospital or psychiatric distinct unit of a hospital.

In addition, for all three objectives, we reviewed research articles and other documentation describing the treatment needs and services provided to Medicare beneficiaries with severe wounds, which we obtained through internet and database searches, CMS and other federal agencies, and external stakeholders.[6] We also reviewed relevant laws and regulations related to severe wound care treatment, services, and payments for the Medicare program and its beneficiaries. In addition, we interviewed officials from CMS, the Agency for Healthcare Research and Quality, MedPAC, and The Joint Commission. We reviewed relevant reports and documentation they provided. Finally, to obtain a mix of clinical and economic perspectives on differences in wound care treatments and services provided across a range of acute and post-acute care settings, we interviewed the following external stakeholders:[7]

- representatives from national health care professional organizations, including the Alliance of Wound Care Stakeholders, National Pressure Injury Advisory Panel, and the Wound, Ostomy, and Continence Nurses Society;[8]
- seven researchers—including three physician researchers—who have published studies on economic or clinical effects related to variation in use of different post-acute care facilities;[9] and
- representatives from five health care provider associations that represent ACHs, LTCHs, critical access hospitals (CAH), inpatient rehabilitation facilities (IRF), and skilled nursing facilities (SNF), including their members' hospital and facility administrators and health

[6]The following databases were mined for resources from 2013 to January 2020 as part of our background literature search: ProQuest; EBSCO Information Services, specifically, the AgeLine, the Cumulative Index of Nursing and Allied Health Literature, EconLit, Business Source Corporate Plus, and Business Abstracts databases; ProQuest Dialog Healthcare Content Collection; CQ; and WestEdge. We identified research studies and reports using the terms "Medicare" and "wound care."

[7]In our report, we use the term "several" to refer to a statement made by three or more stakeholders.

[8]We selected these national health care professional organizations based on, among other things, internet searches for organizations that focus on education, prevention, management, or treatment of wounds; and referrals from other external stakeholder groups.

[9]The three researchers that are also physicians are referred to as physician researchers in this report, while the other four researchers are economists.

care providers, such as physicians, certified wound care nurses, registered nurses, and case managers.[10]

To determine where beneficiaries generally receive severe wound care and the factors that may be considered when selecting the most appropriate treatment setting, we analyzed MEDPAR and Provider Specific File data to determine the number of beneficiaries who had principal or secondary diagnoses for severe wound care, how many inpatient stays they had, and the settings in which they received care and to which they were discharged in fiscal year 2018—the most recent fiscal year data available at the time of our review.

To determine how Medicare spending on severe wound care has changed during implementation of the LTCH dual payment system, we analyzed MEDPAR and Provider Specific File data for fiscal years 2016 and 2018 for stays with a principal or secondary diagnosis related to severe wounds.[11] In addition, we estimated changes to fiscal year 2018 spending if utilization remained the same and applicable LTCH discharges were paid the full site neutral payment rate. The full site neutral payment rate was set to replace the blended payment rate beginning in fiscal year 2020, but it was waived due to the Coronavirus Disease 2019 (COVID-19) public health emergency.

To describe what is known about the extent to which the implementation of the LTCH dual payment system has affected the availability and quality of severe wound care, we used MEDPAR data to determine the change in the number of LTCHs that had Medicare fee-for-service stays with a principal or secondary severe wound care diagnosis in fiscal year 2016 as compared to fiscal year 2018. We also used MEDPAR data to calculate (1) the percentage of Medicare fee-for-service-enrolled beneficiaries who resided within 10 miles of a health care facility that provided severe

[10]Specifically, we interviewed representatives from the American Hospital Association, National Association of Long-Term Hospitals, American Medical Rehabilitation Providers Association, American Health Care Association, and the Coalition of Long-Term Acute Care Hospitals.

We analyze CAHs separately from ACHs because CAHs are generally small, rural hospitals that are paid by Medicare through a different payment system than ACHs, which are more prevalent in urban areas. CAHs have 25 or fewer acute care inpatient beds, are located more than 35 miles from another hospital, have patients with an average length of stay of 96 hours or less, and provide around-the-clock emergency care services.

[11]Our analysis of Medicare severe wound care spending includes spending by the Medicare program, Medicare beneficiaries, and third-party payers.

wound care services in fiscal year 2018, and (2) the median distance from residences of Medicare fee-for-service beneficiaries diagnosed as needing severe wound care in fiscal year 2018 to the facilities that provided them such care.[12] Lastly, we reviewed information reported by post-acute care facilities related to CMS's standardized quality reporting measure for pressure ulcers and other quality indicators.[13]

We conducted this performance audit from November 2019 to January 2021 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

Background

Definition of Severe Wounds

As mentioned, the Cures Act identifies the following types of wounds as severe:[14]

- Stage 3 wounds: The deepest layer of skin may be visible in these wounds, but bone, tendon, or muscle are not exposed.
- Stage 4 wounds: The wound exposes underlying bone, tendon, or muscle tissue.
- Unstageable wounds: The base of the wound is covered by dead tissue.

[12]We used beneficiaries' mailing address zip codes when calculating their proximity to facilities. This analysis included beneficiaries who were enrolled in the Medicare fee-for-service program as of January 2018. Therefore, our analysis does not account for beneficiaries who may have enrolled in the Medicare fee-for-service program after January.

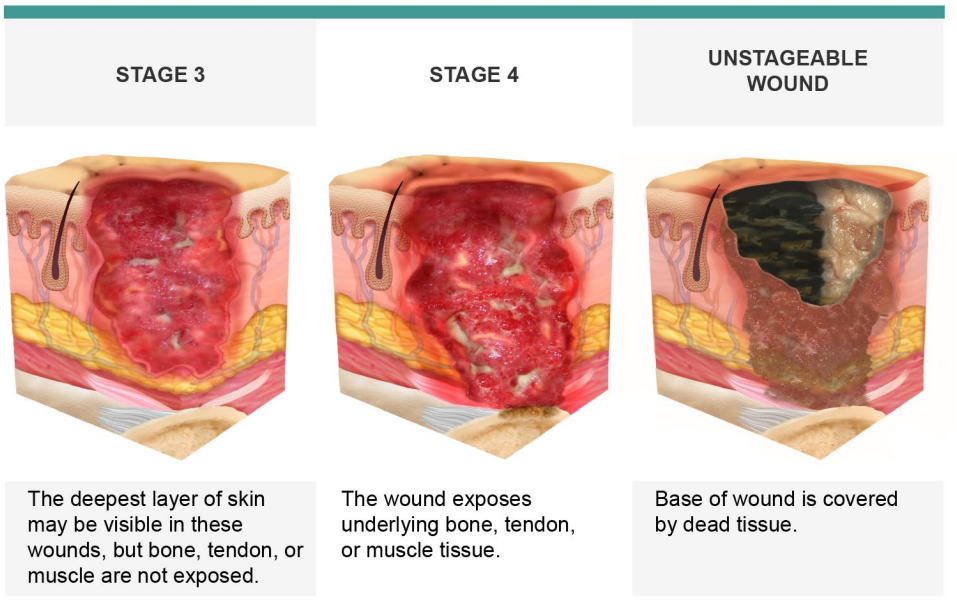
[13]According to CMS, an array of terms can be used to describe alterations in skin integrity due to pressure, including pressure ulcer, pressure injury, pressure sore, bed sore, etc. CMS characterizes pressure ulcers that meet certain conditions as "severe wounds."

[14]The severe wound ICD-10 codes identified by CMS also group third-degree burns with unstageable wounds; non-pressure chronic ulcers with non-healing surgical wounds; and certain infections or defects of the bone, teeth, sacrum, and ear with fistulas. These ICD-10 codes can be found at Centers for Medicare & Medicaid Services, *Severe Wound Diagnosis Codes by Category for Implementation of Section 231 of Public Law 114-113 (ZIP)* accessed August 31, 2020, https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/LongTermCareHospitalPPS/Downloads/FY2017-IPPS-NPRM-CMS-1664-IFC-Table-of-severe-wound-codes.zip.

- Non-healing surgical wounds: Wounds from surgical procedures that have not undergone the normal process of healing.
- Fistulas: A fistula is an abnormal connection between two body parts, such as a connection between the bladder and bowels.

See figure 1 below for illustrated examples of stage 3, stage 4, and unstageable wounds.

Figure 1: Severe Wound Stages and Illustrations



Source: National Pressure Injury Advisory Panel (illustrations). | GAO-21-92

Note: Non-healing surgical wounds and fistulas are not pictured, but are included in the 21st Century Cures Act definition of severe wounds.

Causes of Severe Wounds

In many cases, beneficiaries who develop severe wounds have comorbidities or serious health conditions that, for example, may result in problems with mobility or extended periods of being bedridden. Beneficiaries with severe wounds can include those recovering from surgery or a stroke. These conditions compromise blood flow to their skin and lead to skin breakdown. For example, patients who have, or are at an increased risk of developing, severe wounds may also suffer from

- immobility, such as that caused from spinal cord injury or stroke, which can expose skin tissue on weight-bearing surfaces of the body to prolonged pressure and reduce blood flow to these areas;

- malnutrition, which can inhibit the body's ability to heal and respond to treatment;
- diabetes, which can result in nerve damage, diminished sensation and poor blood circulation;
- cardiovascular disease (diseases of the heart or blood vessels), which can impair blood circulation to skin;
- morbid obesity, which, among other things, can reduce lung function and impair blood circulation to the skin; and
- health conditions associated with multi-organ system failure.

Because most beneficiaries are age 65 years and older, the Medicare population may be particularly susceptible to developing severe wounds. For example, one study estimated that the mean overall age of individuals in inpatient care settings with at least one pressure ulcer—an often severe wound of the skin that results from prolonged, unrelieved pressure—is about 71.[15] This is because, as individuals age, they are more likely to develop the serious health conditions that can result in severe wounds. Further, because the percentage of the U.S. population aged 65 years and older is expected to increase from 17 percent to 23 percent by 2060, the prevalence of individuals at risk of developing severe wounds is also likely to increase.

Treatments for Severe Wounds

Medical interventions for treating severe wounds can range from simple weekly dressing changes to advanced options, such as hyperbaric oxygen therapy, that may require hours of care per treatment session. Medical interventions commonly used to treat severe wounds include

- Dressings: Sterile pads that cover the wound to absorb fluid secretions, promote healing, and prevent wound contamination. Dressings used to treat severe wounds may include or be used with certain topical agents—such as collagens, growth factors, and gels—to promote wound healing. Examples of these dressings include hydrogel dressings, calcium alginate dressings, and foam dressings.
- Hyperbaric oxygen therapy: A chamber is used to expose the wound to 100 percent oxygen to hasten wound healing.
- Wound vacuums (or negative pressure wound therapy): A small, portable vacuum is attached to the patient and used to alleviate a

[15]K. Bauer et al., "Pressure Ulcers in the United States' Inpatient Population From 2008 to 2012: Results of a Retrospective Nationwide Study," *Wound Management & Prevention*, vol. 62, no. 11 (2016): pp. 30—38.

wound's air pressure, drain excess fluid, and increase blood flow at the wound site.

- Debridement: The surgical removal of damaged tissue or foreign objects from a wound using a scalpel or other instrument.
- Intravenous antibiotics: Medication is delivered directly into the patient's bloodstream to treat an infectious wound.
- Specialized low pressure air mattresses: Inflatable bedding redistributes the patient's weight over a larger surface area than a traditional bed, reducing pressure on a wound.
- Other complex treatments, such as stem cell treatment and skin grafting.

There are a variety of factors that affect what type of medical intervention a beneficiary with severe wounds receives. While the most basic factor is wound severity, other factors include Medicare beneficiaries' comorbidities and the size of the wound. For example, severe wound care patients who require respiratory support from a ventilator may need treatment modalities that can help reduce pressure on the patient's wound while the patient also receives respiratory support. Further, wound care providers may need to provide more intensive treatment when treating a large stage 3 wound as compared to a smaller stage 4 wound.

Wound care providers utilize relevant clinical practice guidelines (CPG) to inform the development of treatment regimens for patients with severe wounds. CPGs contain a series of treatment steps determined by the patient's health condition. CPGs used by providers to treat severe wound care patients are specific to the cause of the wound, which helps ensure that a patient with a certain type of wound will receive similar treatment regardless of the health care setting. For example, a wound nurse treating diabetic patients with an ulcer on their foot may reference CPGs specific to lower-extremity diabetic neuropathic disease instead of pressure ulcer guidelines. Health care providers utilize CPGs produced by state-level organizations as well as national organizations including the Wound, Ostomy, and Continence Nurses Society and the National Pressure Injury Advisory Panel.

Medicare Payment for Treatment at LTCHs

To qualify for Medicare payment through the LTCH prospective payment system (LTCH PPS), an LTCH must meet Medicare conditions of participation for ACHs and have an average length of stay greater than 25

days.[16] Until fiscal year 2016, Medicare paid LTCHs generally higher rates than ACHs for treating beneficiaries with severe wounds. Specifically, all LTCHs received payment for treating Medicare beneficiaries with severe wounds based on the LTCH PPS standard rate, whereby Medicare beneficiaries are assigned a Medicare Severity Long-Term Care Diagnosis-Related Group (MS-LTC-DRG) code. MS-LTC-DRGs group together patients based on factors that include their principal and secondary diagnoses, and they assign them a weight relative to the cost of treating the average LTCH patient. LTCHs received payment from the federal government for providing care to Medicare patients based on patients' designated MS-LTC-DRG, as well other factors, such as market area wages for LTCHs.

Although MS-LTC-DRGs utilized the same diagnosis-related group (DRG) codes as ACHs, which are paid under the inpatient prospective payment system, the MS-LTC-DRG weights are specific to LTCH patients. Medicare payments to LTCHs typically resulted in higher payments than under the inpatient prospective payment system for beneficiaries assigned to the same DRG code. In a March 2013 report, MedPAC cited concern regarding the growing number of LTCHs and the extent to which some of their patients are receiving care that could be met adequately in less costly health care settings.[17]

Congress modified the way LTCHs are paid for treating Medicare patients in the Pathway for SGR Reform Act of 2013.[18] Under this law, a dual payment system for LTCHs was established, based on the standard payment rate from the LTCH PPS and a new, generally lower site neutral rate. LTCHs can continue to receive the higher, standard payment rate for treating Medicare beneficiaries with severe wounds only if certain criteria

[16]A prospective payment system is a method of reimbursement in which Medicare payment is made based on a predetermined, fixed amount. The payment amount for a particular service is derived based on the classification system of that service (for example, DRGs for inpatient hospital services). CMS uses separate prospective payment systems for reimbursement to ACHs, home health agencies, hospice, hospital outpatient, inpatient psychiatric facilities, IRFs, LTCHs, and SNFs.

[17]Medicare Payment Advisory Commission, *Report to the Congress: Medicare Payment Policy* (Washington, D.C.: March 2013), p. 239.

[18]Pub. L. No. 113-67, div.B, § 1206, 127 Stat. 1165, 1195, 1200 (codified in pertinent part as amended at 42 U.S.C. § 1395ww(m)(6)).

are met.[19] In general, to qualify, a Medicare patient admitted to the LTCH following a stay at an ACH must have received 3 or more days of care in an intensive care unit at the ACH, or required at least 96 hours of mechanical ventilation services at the LTCH.[20] Between fiscal year 2016 and fiscal year 2020, LTCH patient cases that do not meet these criteria are paid a blended rate equal to 50 percent of the standard payment rate, plus 50 percent of the site neutral rate.

Beginning in fiscal year 2020, LTCH patient cases that do not meet these criteria will be paid at a 100 percent site neutral payment rate. The site neutral rate, defined in statute, is based generally on DRG payment rates used under the inpatient prospective payment system or 100 percent of the estimated cost of the LTCH case, whichever is lower.[21] Beginning in fiscal year 2020, when fewer than half of an LTCH's yearly reported discharges qualify for payment at the higher, standard payment rate, the LTCH will no longer receive any payments at that rate in future cost reporting periods. Instead, the LTCH will receive a rate comparable to the rates paid to ACHs under the IPPS for all future Medicare discharges until eligibility for the standard rate is reinstated through a process established by the Department of Health and Human Services.[22]

The Cures Act temporarily excepted certain LTCH severe wound care discharges occurring within cost reporting periods beginning in fiscal year 2018 from being paid at the site neutral payment rate.[23] Discharges assigned to one of four DRG codes—539, 540, 602, and 603—were instead paid the higher, standard payment rate and were not required to

[19]This two-tiered payment methodology began to be applied to LTCH cost reporting periods beginning in fiscal year 2016. The application of the site neutral payment rate is waived for those LTCH admissions that are in response to and occur during the public health emergency due to COVID-19. See Pub. L. No. 116-139, § 3711(b)(2), 134 Stat. at 423.

[20]Discharges meeting one of these two criteria are nonetheless paid the site neutral rate if the principal diagnosis relates to a psychiatric condition or to rehabilitation. See 42 U.S.C. § 1395ww(m)(6)(ii). Certain Medicare severe wound discharges are also excepted from the two-tiered system for discharges prior to January 1, 2017, and during fiscal year 2018. See 42 U.S.C. § 1395ww(m)(6)(A)(i).

[21]See 42 U.S.C. § 1395ww(m)(6)(B)(ii).

[22]See 42 U.S.C. § 1395ww(m)(6)(C).

[23]Pub. L. No. 114-255, § 15010(a), 130 Stat. at 1323 (codified in pertinent part at 42 U.S.C. § 1395ww(m)(6)(G)). This exception expired at the end of LTCHs' fiscal year 2018 cost reporting period.

meet the criteria established in the Pathway for SGR Reform Act of 2013 for the standard payment rate.[24] According to our analysis of CMS's Provider Specific File data, nine LTCHs received the temporary payment exception from the Cures Act, with seven of the nine LTCHs located in Louisiana or Texas. For more information about these LTCHs, see appendix I.

ACHs Are the Most Common Treatment Setting for Severe Wound Care, and Different Factors May Influence Care Setting

In Fiscal Year 2018, Medicare Beneficiaries Diagnosed as Needing Severe Wound Care Had the Majority of Their Inpatient Stays in ACHs

Our analysis of CMS's MEDPAR data shows that in fiscal year 2018, 287,547 beneficiaries were diagnosed as needing severe wound care, and such diagnoses were associated with 441,676 inpatient stays across acute care and post-acute care settings.[25] The majority of these beneficiaries' inpatient stays for severe wound care were in ACHs. A smaller percentage of beneficiaries' stays were in post-acute care settings, such as SNFs and LTCHs. (See table 1.)

[24]Individuals assigned to these Medicare severity LTCH DRGs may receive treatment for cellulitis with or without major complications or comorbidity, osteomyelitis with complications or comorbidity, or osteomyelitis with major complications or comorbidity.

[25]For this analysis, a "stay" includes a Medicare claim billed by an acute or post-acute care facility for a principal or secondary diagnosis related to a severe wound care ICD-10 code. In fiscal year 2018, 516 unique severe wound care ICD-10 codes were billed to Medicare as a principal or a secondary diagnosis.

Table 1: Number and Percentage of Medicare Beneficiaries' Inpatient Stays for Severe Wound Care, by Facility Type, Fiscal Year 2018

Facility type	Number of stays	Percentage of stays
Acute care hospital	321,382	72.8
Skilled nursing facility	69,805	15.8
Long-term care hospital	31,399	7.1
Inpatient rehabilitation facility	10,678	2.4
Critical access hospital	7,870	1.8
Other[a]	542	0.1
Total	**441,676**	**100**

Source: GAO analysis of Centers for Medicare & Medicaid Services Medicare Provider Analysis and Review data. I GAO-21-92

Note: This analysis includes Medicare inpatient stays in which severe wound International Statistical Classification of Diseases and Related Health Problems, 10th Revision, codes were listed as a principal or secondary diagnosis. A unique beneficiary could have had one or more inpatient stays at one or more different facility types.

[a]Includes inpatient stays that are not associated with one of the acute or post-acute facilities in the table. For example, these could include inpatient stays in psychiatric hospitals or psychiatric distinct units of a hospital.

CMS's MEDPAR data show that about 42 percent of inpatient stays in ACHs for beneficiaries who were diagnosed as needing severe wound care in fiscal year 2018 resulted in discharges to the home without orders for additional services, with orders for outpatient services, or with orders for home health care (e.g., nursing services to provide wound care, education, therapy, etc.).[26] In addition, about 40 percent of inpatient stays resulted in beneficiary discharges to one of the following post-acute care facilities for additional care: SNFs (about 32 percent), LTCHs (5 percent), or IRFs (about 4 percent).[27]

[26]Home health care is a wide range of health care services that can be given in a beneficiary's home for an illness or injury. According to CMS, home health care is usually less expensive, more convenient, and for some patients as effective as the care that is provided in other settings.

[27]About 3 percent of the inpatient stays in ACHs for beneficiaries who were diagnosed as needing severe wound care in fiscal year 2018 resulted in discharges to another ACH or CAH, and the remainder were associated with discharges to an "other" category. "Other" categories could include beneficiaries who died or were discharged or transferred to hospice, a nursing facility certified under Medicaid but not certified under Medicare, or a psychiatric hospital or psychiatric distinct unit of a hospital.

Stakeholders We Interviewed Suggest Both Clinical and Non-clinical Factors, Including Payment Factors, May Influence Where Medicare Beneficiaries Receive Severe Wound Care

Researchers and representatives from both national health care professional organizations and provider associations with whom we spoke indicated that a variety of both clinical and non-clinical factors may influence where beneficiaries receive severe wound care.

Clinical factors

Beneficiaries' comorbidities and treatment needs, variation in services and treatment capabilities among different facility types, and variation in services and treatment capabilities within the same facility type are clinical factors that influence where beneficiaries may receive severe wound care.

- **Beneficiaries' comorbidities and treatment needs.** Several stakeholders we interviewed said that beneficiaries' comorbidities are taken into consideration when determining the most appropriate setting for them to receive severe wound care, which could affect their specific treatment needs. For example, two physician researchers, several representatives from two national health care professional organizations that specialize in wound care prevention and management, and representatives from a provider association representing LTCHs told us that comorbidities could affect whether the patient requires a ventilator; tracheotomy; frequent and extensive medical care, such as intravenous medications; or surgical procedures, such as skin debridement.
- **Variation in services and treatment capabilities among different facility types.** Several stakeholders we interviewed told us that different acute care and post-acute care facilities provide different levels of wound care services and treatment capabilities, which influences where Medicare beneficiaries receive care. For example, two physician researchers and representatives from two provider associations representing LTCHs and a provider association representing ACHs told us that, although there is no set criteria to determine the most appropriate place to treat patients with severe wounds, LTCHs and ACHs are generally more equipped to provide ventilator services for beneficiaries with complex and severe health conditions as compared to SNFs, IRFs, and home health settings. See figure 2 for examples of the types of severe wound care patients

who may receive care at different types of acute care and post-acute care settings.

Figure 2: Examples of Types of Severe Wound Patients Who May Receive Care in Different Types of Health Care Settings

Acute care settings		Post-acute care settings			
Acute care hospital (ACH)	Critical access hospital (CAH)	Long-term care hospital (LTCH)	Inpatient rehabilitation facility (IRF)	Skilled nursing facility (SNF)	Home health setting
A patient with a stage 3 or 4 severe wound and one or more comorbidities who requires diagnostic services, surgical procedures, or daily intravenous antibiotics and debridement from a wound specialist for an acute health problem may receive care at an ACH or CAH.		A medically stable but critically ill patient with a stage 3 or 4 severe wound and one or more serious comorbidities who requires a ventilator, complex wound vacuum treatment, intravenous antibiotics, daily monitoring by a clinician, or laboratory tests for an extended period may receive care at an LTCH, if available nearby.	A medically stable patient with a severe wound who is recovering from a spinal injury or stroke and who requires intensive rehabilitation services may receive care at an IRF. IRFs generally require patients to undergo 3 hours of intense therapy 5 days a week, which is a requirement that Medicare beneficiaries with severe wounds may not be able to meet.	A medically stable patient with a severe wound that requires dressing changes or simple wound vacuums a few times a week may receive care at a SNF. According to several stakeholders we interviewed, many of the approximately 15,000 SNFs nationwide do not have the resources or staff needed to care for critically ill patients that need expensive or frequent wound care treatments.	A medically stable patient with a severe wound who has access to an outpatient wound care center and capable caregiver support may use home health services.

Source: GAO analysis of stakeholder interviews. | GAO-21-92

Note: Information in this figure is summarized from interviews with stakeholders that were conducted to obtain a mix of clinical and economic perspectives on differences in wound care treatments and services provided across a range of acute and post-acute care settings. These include representatives from three national health care professional organizations that focus on education, prevention, management, or treatment of wounds; three physician researchers who have published studies on economic or clinical effects related to variation in use of different post-acute care facilities; and representatives from five heath care provider associations representing ACHs, CAHs, LTCHs, IRFs, and SNFs.

- **Variation in services and treatment capabilities within the same facility type.** Several stakeholders we interviewed told us that post-acute care facilities may provide different levels of wound care services and treatment capabilities within the same type of facility. For example, representatives from a provider association representing SNFs told us that the range of wound care varies significantly between SNFs. They also said, although all SNFs should be able to provide a basic level of care for treatment of severe wounds, such as wound dressings, some SNFs collaborate with external wound care groups and offer more complex care, such as stem cell treatment and grafting procedures. Similarly, representatives from a provider association representing IRFs told us that many IRFs are competent

in treating and managing the development of wounds, but there is some variability among IRFs in treating severe wounds depending on the resources available. In addition, they told us that IRF networks may also have different resources available depending on the individual location, so they may prioritize which patients with severe wounds are served at different locations depending on the specific patients' needs.

Non-Clinical Factors

Non-clinical factors that may influence where a severe wound care beneficiary receives care include payment factors, such as the Medicare dual payment system; physician and patient preferences; and proximity to a post-acute care facility.

- **Payment factors.** Representatives with whom we spoke from two provider associations representing LTCHs and SNFs told us that certain post-acute care facilities' decisions to admit or discharge Medicare beneficiaries may be based on payment factors. For example, under the implementation of the LTCH dual payment system, LTCHs would receive the standard payment rate only for stays where severe wound care beneficiaries had a prior 3-day intensive care unit stay or were on a ventilator. Representatives from another provider association representing LTCHs told us the cost of providing wound care generally exceeds the site neutral payment rate, and severe wound patients often represent LTCHs' most expensive patients with the longest lengths of stay. As such, seven LTCH representatives with whom we spoke from a provider association representing LTCHs told us that the dual payment system has discouraged them from admitting severe wound care beneficiaries who do not meet the standard payment rate criteria because they would be paid the lower, site neutral payment rate for these patients.

  According to CMS, SNFs are not required to accept all patients. Similarly, four SNF representatives from a provider association representing SNFs told us that they may not admit certain patients because they do not have the resources or staff available to meet their needs by providing some of the more expensive treatment interventions, such as hyperbaric oxygen therapy or certain wound dressings. For example, the SNF representatives told us that one topical gel used to treat severe wounds costs about $1,000 per tube, which lasts for 1 week. As such, they said that providing some expensive wound treatments could exceed the set daily amount SNFs receive that covers beneficiaries' total level of care (including their beds, nursing services, and treatments for all conditions). In addition, these representatives told us that because Medicare only covers up to 100 days of care in a SNF each benefit period, some beneficiaries

with severe wounds are discharged once they reach that limit because they cannot afford to pay out-of-pocket costs; therefore, they must receive care at another setting such as an outpatient wound care center.

- **Patient and physician preferences.** Several stakeholders we interviewed said that preferences of beneficiaries and their physicians may help determine the most appropriate setting to receive severe wound care. Representatives from one provider association with whom we spoke that represents ACHs, CAHs, and LTCHs, and another provider association that represents IRFs told us that some beneficiaries are able to receive severe wound care in a home health setting if they can receive appropriate care at home. Other beneficiaries with similar conditions may need to be discharged to a SNF because they do not have the same resources available to them at home. In addition, four researchers with whom we spoke told us that physicians may refer patients to specific post-acute care facilities in which they have already established personal or professional relationships. Another physician researcher told us that she factors in the quality of the individual post-acute care facilities in the area before making decisions as to where to send her severe wound care patients. For example, she told us that if a SNF in her area employs a specialized wound care licensed practical nurse or wound care registered nurse, she might send a patient there as opposed to an LTCH without this resource.
- **Proximity to post-acute care facilities.** According to CMS and MedPAC reports we reviewed and several stakeholders we interviewed, the proximity of patients to post-acute care facilities may factor into where they receive severe wound care.[28] For example, as of 2018, the approximately 400 LTCHs nationwide were primarily concentrated in certain geographical areas, so beneficiaries residing in those areas may be more likely to receive care in an LTCH than those residing in areas where LTCHs are not available. In cases where beneficiaries do not have access to LTCHs, beneficiaries generally remain in the ACH for a longer period of time prior to being discharged home, to one of the approximately 15,000 SNFs nationwide (as of 2018), or another post-acute care facility, according

[28]Centers for Medicare & Medicaid Services, *Report on Acute and Post-Acute Care Utilization for Medicare Beneficiaries with Severe Wounds* (2017), Medicare Payment Advisory Commission, *Report to the Congress: Medicare Payment Policy*, Chapter 11: Long-term care hospital services (Washington, D.C.: March 2019), and Medicare Payment Advisory Commission, *Report to the Congress: Medicare Payment Policy*, Chapter 11: Long-term care hospital services (Washington, D.C.: March 2020).

to three physician researchers and several representatives from one national health care professional organization and two provider associations we interviewed.

Medicare Spending for Severe Wound Care Declined Slightly During Implementation of the Dual Payment System from Fiscal Years 2016 to 2018

Medicare Spending for Principal Severe Wound Care Decreased by 2 Percent during Implementation of the Dual Payment System

Our analysis of CMS MEDPAR data shows that total Medicare spending on principal severe wound care stays—that is, stays where a severe wound ICD-10 code was the principal diagnosis—decreased about 2 percent during implementation of the dual payment system, from about $2.06 billion in fiscal year 2016 to about $2.01 billion in fiscal year 2018.[29] The 2 percent decrease in Medicare severe wound care spending was similar in both rural and urban areas. (See table 2.)

[29]This represents total spending for Medicare fee-for-service inpatient care during these stays, including spending on care related to other diagnoses the beneficiary may have had. In fiscal year 2019 dollars, and accounting for inflation, the decrease in severe wound care spending is even greater and drops by 6 percent for principal severe wound stays. For stays where severe wound ICD-10 codes were a secondary diagnosis, the Medicare program, beneficiaries, and third parties increased their spending from $7.4 billion in fiscal year 2016 to $8.0 billion in fiscal year 2018. Our analysis of Medicare severe wound care spending includes spending by the Medicare program, Medicare beneficiaries (including the required Medicare blood deductible), and third-party payers.

Because the spending associated with each DRG accounts for spending for all of the principal and secondary diagnoses for which care is received during the stay, it is difficult to determine the costs of providing care for a specific diagnosis. Most of the data in this finding focus on principal severe wound care spending—that is, Medicare spending on stays where treatment for a severe wound was the main purpose for the stay—to make our estimates of Medicare spending as specific to spending for severe wound care as possible.

Table 2: Medicare Severe Wound Care Spending, by Geography, in Dollars, Fiscal Years (FY) 2016 and 2018

	Rural			Urban		
	FY 2016	FY 2018	Percentage difference	FY 2016	FY2018	Percentage difference
Total	**$158,592,429**	**$155,253,428**	**-2.1%**	**$1,900,134,790**	**$1,854,737,075**	**-2.4%**

Source: GAO analysis of Centers for Medicare & Medicaid Services (CMS) data. I GAO-21-92

Notes: This analysis includes Medicare stays in which severe wound International Statistical Classification of Diseases and Related Health Problems, 10th Revision, codes were listed as a principal diagnosis for Medicare fee-for-service beneficiaries. Our analysis of Medicare severe wound care spending includes spending by the Medicare program, Medicare beneficiaries, and third-party payers. We identified stays as urban or rural based on the Core Based Statistical Area Urban Rural Indicator variable in the CMS Provider of Service file. Urban stays are stays located in a metropolitan statistical area—that is, a core urban area of 50,000 or more. The location of all other stays are identified as rural. Spending measures are not inflation-adjusted and reflect dollars for the respective fiscal year.

The decrease in Medicare spending on principal severe wound care stays can be attributed to a decrease in the number of stays as well as a decrease in Medicare spending per stay from fiscal years 2016 to 2018. Our analysis of CMS data shows that the number of principal severe wound care stays decreased by about 1 percent during the same time period, from about 102,000 in fiscal year 2016 to about 101,000 in fiscal year 2018.[30] During this same period, Medicare spending per principal severe wound care stay decreased by about 1.4 percent (from $20,197 in fiscal year 2016 to $19,915 in fiscal year 2018). This decrease was likely driven, in part, by changes in where patients received care. CMS's data show that most facility types experienced a decrease in severe wound care stays from fiscal years 2016 to 2018. The largest decrease was a 31 percent drop in severe wound care stays at LTCHs, which also had a relatively high average Medicare spending per stay ($37,161 in fiscal year 2018). The number of severe wound care stays increased at only two facility types—ACHs (4.6 percent increase) and IRFs (3.7 percent increase). Compared to LTCHs, ACHs and IRFs had lower average Medicare spending per stay at $18,561 and $21,441, respectively, in fiscal year 2018.

[30]CMS data show that the utilization of inpatient hospital services has also steadily decreased since 2015. Two stakeholders we interviewed said that a decrease in the prevalence and frequency of severe wounds, specifically, may be attributed to increased severe wound prevention efforts and better severe wound care being made available at health care facilities. Other stakeholders said severe wound diagnoses are increasing, and they attribute this increase to an increase in the prevalence of comorbidities or better access to care.

LTCH Severe Wound Care Stays Decreased during Implementation of the Dual Payment System, Contributing to a Decrease in Medicare Spending on Severe Wound Care

The large decrease in LTCH severe wound care stays from fiscal years 2016 to 2018 corresponds with the implementation of the dual payment system and the payment incentive that it created for LTCHs to focus their admissions on those beneficiaries meeting the higher standard payment rate criteria.[31] Our analysis of CMS MEDPAR data also shows that the number of principal LTCH severe wound care stays decreased between fiscal years 2016 and 2018. Further, an increasing share of stays received the higher, standard payment rate during this period. (See table 3.)

Table 3: Percentage of Long-Term Care Hospital Severe Wound Care Stays, by Payment Type, Fiscal Years (FY) 2016 and 2018

	Principal severe wound care stays		Any severe wound care stay	
	Standard	Site neutral	Standard	Site neutral
FY 2016	44.2	55.8	60.2	39.8
FY 2018	51.1	48.9	69.6	30.4

Source: GAO analysis of Centers for Medicare & Medicaid Services data. I GAO-21-92

Note: Principal severe wound stays reflect stays where severe wound International Statistical Classification of Diseases and Related Health Problems, 10th Revision, (ICD-10) codes were listed as a principal diagnosis. Any severe wound care stay reflects stays where severe wound ICD-10 codes were listed as a principal or secondary diagnosis. This analysis includes Medicare fee-for-service beneficiaries. The analysis does not account for stays that were not classified as standard payment rate or site neutral stays at the time of our analysis. Standard principal severe wound care stays include stays paid the higher standard payment rate. Site neutral principal severe wound care stays include stays paid the site neutral payment rate.

Representatives from three provider associations representing LTCHs we interviewed attributed the change in the pattern of admissions to the introduction of the dual payment system. Specifically, these representatives attested that LTCHs changed their overall admissions, in part, by decreasing their acceptance of severe wound care stays that would be paid the site neutral payment rate to increase their share of standard payment rate stays. For example, representatives from one of

[31]Nine LTCHs were excepted from receiving the site neutral payment provisions for certain discharges with severe wounds in cost reporting periods that began during fiscal year 2018. For more information on Medicare severe wound care spending for these LTCHs, see appendix I.

[32]The example is based on an LTCH stay with an inpatient prospective payment system site neutral payment of $3,949 and a standard payment of $13,632, the average inpatient prospective payment system and standard payment amounts for LTCH principal severe wound care stays with a DRG 592 in fiscal year 2018, per our analysis of CMS MEDPAR data. The application of the site neutral payment rate is waived for those LTCH admissions that are in response to and occur during the public health emergency due to COVID-19. See Pub. L. No. 116-139, § 3711(b)(2), 134 Stat. 281, 423 (2020).

the provider associations representing LTCHs said that, of the groups they serve (i.e., patients with complex pulmonary disease or multi-organ failure), wound care patients generally do not meet the standard payment rate criteria and are less likely, if at all, to be accepted. Representatives from another provider association representing LTCHs said that, because of the new dual payment rate, they only admit patients with a severe wound care diagnosis as a secondary condition. Further, according to representatives we interviewed from a provider association representing IRFs, the volume of inpatient rehabilitation stays has grown. They recognized that there could be a small percentage of volume increase as a result of the implementation of the dual payment system, which may be shifting beneficiaries who would have been admitted to an LTCH prior to implementation to an IRF instead.

As the number of LTCH severe wound care stays decreased, our analysis of CMS MEDPAR data shows that total Medicare spending for LTCH severe wound care stays decreased by about 37 percent during this period from $481.7 million in fiscal year 2016 to $304.8 million in fiscal year 2018. Furthermore, assuming utilization remains unchanged, under the full site neutral payment, Medicare severe wound care spending for LTCHs may continue to decrease in fiscal year 2020. While LTCH stays that did not meet the standard payment rate criteria in fiscal years 2016 and 2018 were subject to the blended payment rate, under the fiscal year 2020 payment rules, these stays would be paid the full site neutral rate. We estimate that this may result in the share of LTCH spending for stays that do not meet the standard payment criteria to further decrease. For example, an LTCH discharge in fiscal year 2018 for DRG 592 (for skin ulcers with major complication or comorbidity), which did not meet the criteria for the standard payment rate, is paid a blended payment of $8,791 for a stay. Under the fiscal year 2020 payment rules, this discharge would be paid the full site neutral payment rate, which, for this estimate, would amount to $3,949, a 55 percent decrease in payment.[32]

[32]The example is based on an LTCH stay with an inpatient prospective payment system site neutral payment of $3,949 and a standard payment of $13,632, the average inpatient prospective payment system and standard payment amounts for LTCH principal severe wound care stays with a DRG 592 in fiscal year 2018, per our analysis of CMS MEDPAR data. The application of the site neutral payment rate is waived for those LTCH admissions that are in response to and occur during the public health emergency due to COVID-19. See Pub. L. No. 116-139, § 3711(b)(2), 134 Stat. 281, 423 (2020).

Beneficiaries Continued to Have Access to Severe Wound Care During Implementation of the Dual Payment System, but Information on the Effect on Quality Is Limited

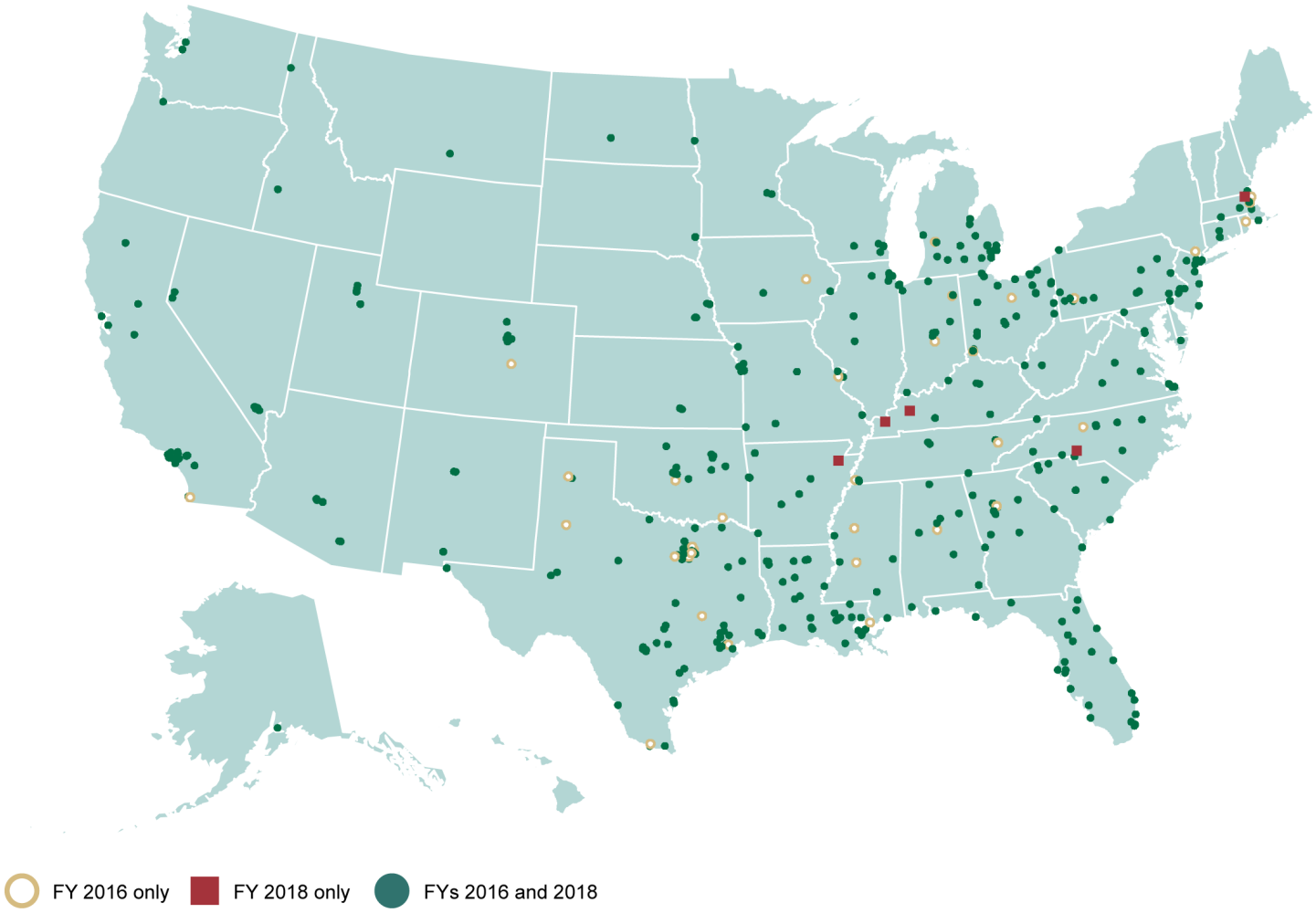
Fewer LTCHs Billed Medicare for Any Severe Wound Care Stay, but Beneficiaries Continued to Have Access to Care

Our analysis of CMS MEDPAR Medicare fee-for-service data shows that during implementation of the dual payment system, the number of LTCHs that billed Medicare for any severe wound care discharges decreased by about 7 percent, from 422 in fiscal year 2016 to 394 in fiscal year 2018.[33] (See figure 3.) However, this decrease does not indicate that beneficiaries did not receive the care they needed because, in general, beneficiaries have access to other settings that provide such care. Unlike other types of acute care and post-acute care facilities, most LTCHs are geographically concentrated in certain areas of the country, and according to research we reviewed and stakeholders we interviewed, medically complex beneficiaries without access to LTCHs can still be treated appropriately in other settings. Furthermore, MedPAC reported in March 2020 that the loss of LTCHs in recent years has had minimal effect

[33]According to MedPAC, other factors aside from implementation of the dual payment system may affect LTCHs, and the number of LTCHs began to decrease in 2013. Medicare Payment Advisory Commission, *Report to the Congress,* Chapter 11 (2019). For example, federal law imposed a limited moratorium on Medicare participation for new LTCHs and new beds in existing LTCHs from December 29, 2007, through December 28, 2012, and again from April 1, 2014, through September 30, 2017, unless they met certain exceptions. See 42 U.S.C. § 1395ww (note). In addition, 35 states currently have Certificate of Need laws, under which states may regulate the establishment or expansion of certain health care facilities and services in a given area. Certificate of Need laws generally require health care providers to establish a community need for and obtain state approval before making certain major capital expenditures that might involve opening a new health care facility, implementing certain new technologies, or, in some cases, before purchasing new equipment. The type of facilities subject to such laws vary by state but can include LTCHs and other types of health care settings.

on beneficiaries because the majority of the losses occurred in geographic areas with at least one other LTCH or within a 2-hour drive of another LTCH.[34]

Figure 3: Changes in the Number of Long-Term Care Hospitals That Billed Medicare for Any Severe Wound Care Discharge, Fiscal Years (FY) 2016 and 2018



Source: GAO analysis of Centers for Medicare & Medicaid Services Medicare Provider Analysis and Review data. | GAO-21-92

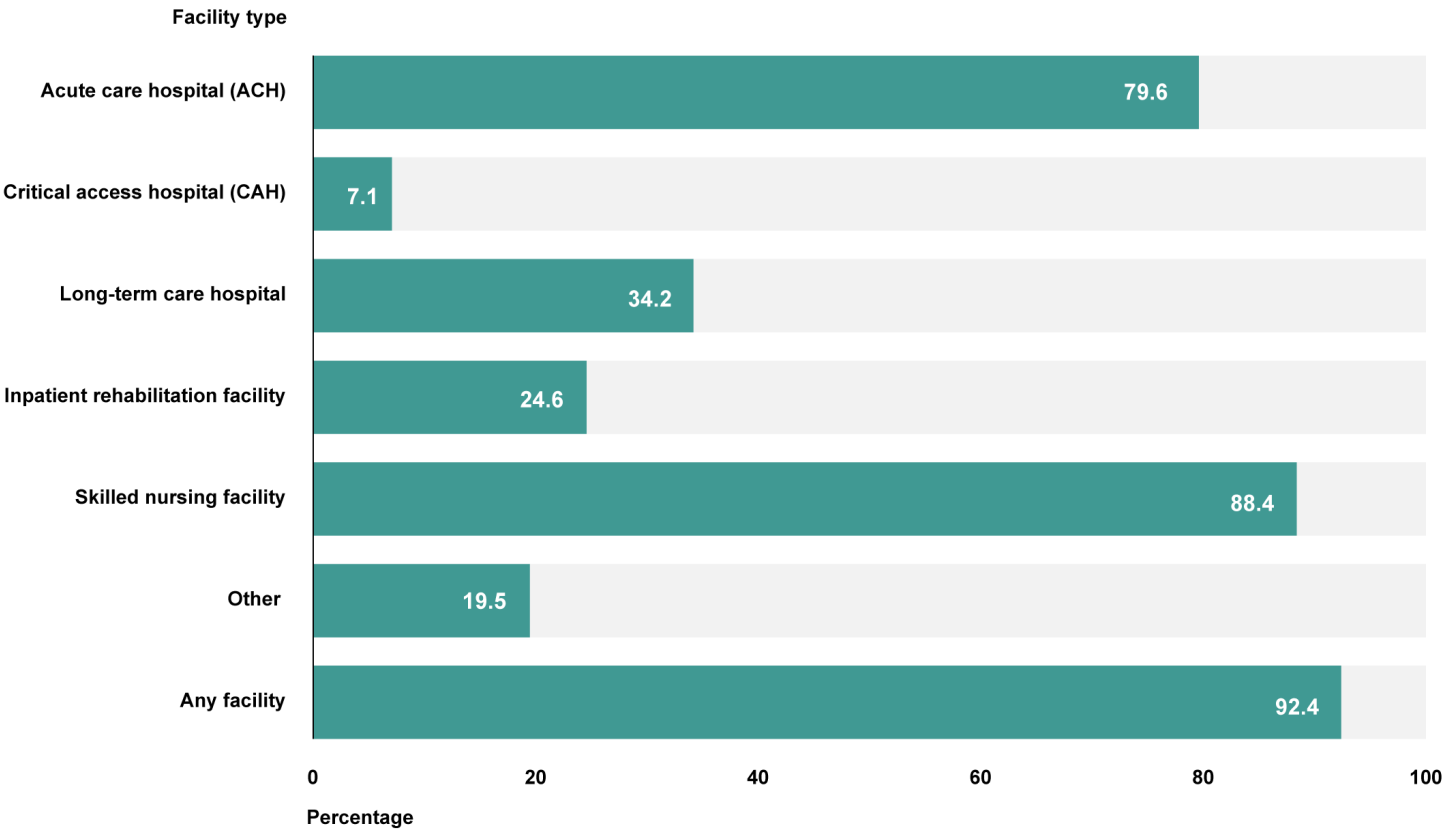
Note: The facilities shown had Medicare fee-for-service inpatient stays in which severe wound International Statistical Classification of Diseases and Related Health Problems, 10th Revision, codes were listed as a principal or secondary diagnosis in FYs 2016 or 2018.

[34]Medicare Payment Advisory Commission, *Report to the Congress,* Chapter 11 (2020).

Despite a decrease in the number of LTCHs billing for severe wound care, Medicare beneficiaries still had access to severe wound care at other health care facilities, with most beneficiaries living within 10 miles of an acute care or post-acute care setting that provided severe wound care in fiscal year 2018. Specifically, we analyzed CMS's MEDPAR claims data and found that in fiscal year 2018, about 92 percent of the approximately 38 million total Medicare beneficiaries resided within 10 miles of an acute or post-acute care facility that provided severe wound care.[35] However, this varied across individual facility types. About 88 percent of beneficiaries resided within 10 miles of a SNF, whereas about 34 percent resided within 10 miles of an LTCH. (See figure 4.)

[35]This analysis included beneficiaries enrolled in the Medicare fee-for-service program as of January 2018.

Figure 4: Percentage of Medicare Fee-for-Service Beneficiaries Residing within 10 Miles of a Health Care Facility That Provided Severe Wound Care, by Facility Type, Fiscal Year 2018



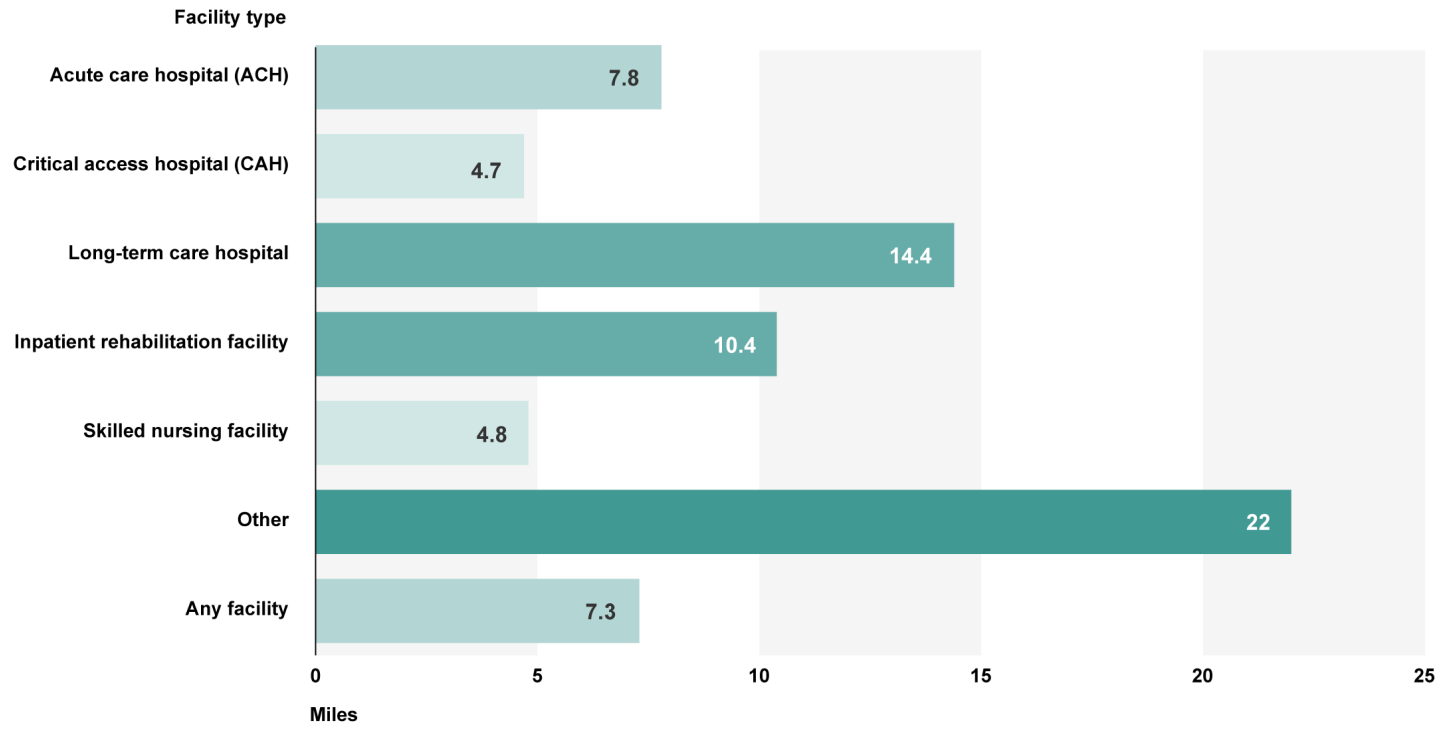
Source: GAO analysis of Centers for Medicare & Medicaid Services Medicare Provider Analysis and Review data. | GAO-21-92

Notes: This analysis includes Medicare inpatient stays in which severe wound International Statistical Classification of Diseases and Related Health Problems, 10th Revision, codes were listed as a principal or secondary diagnosis for beneficiaries enrolled in the Medicare fee-for-service program as of January 2018. We analyzed Medicare beneficiaries' distance to CAHs separately from ACHs because CAHs are generally small, rural hospitals that are paid by Medicare through a different payment system than ACHs, which are more prevalent in urban areas. The "Other" category includes other types of facilities such as, for example, psychiatric hospitals or psychiatric distinct units of a hospital that also billed Medicare for severe wound care stays.

Our analysis of CMS's MEDPAR claims data also showed that the median distance from where Medicare beneficiaries diagnosed as needing severe wound care resided from the ACHs, CAHs, LTCHs, IRFs, or SNFs that provided them such care in fiscal year 2018 was about 14 or fewer miles, depending on the type of facility. Specifically, Medicare beneficiaries resided the farthest away from LTCHs that provided them severe wound care (a median of about 14 miles) and were closest to

CAHs and SNFs that provided them such care (a median of about 5 miles). (See figure 5.)

Figure 5: Median Distance Medicare Fee-for-Service Beneficiaries Resided from the Facilities That Provided Them Severe Wound Care, by Facility Type, in Miles, Fiscal Year 2018

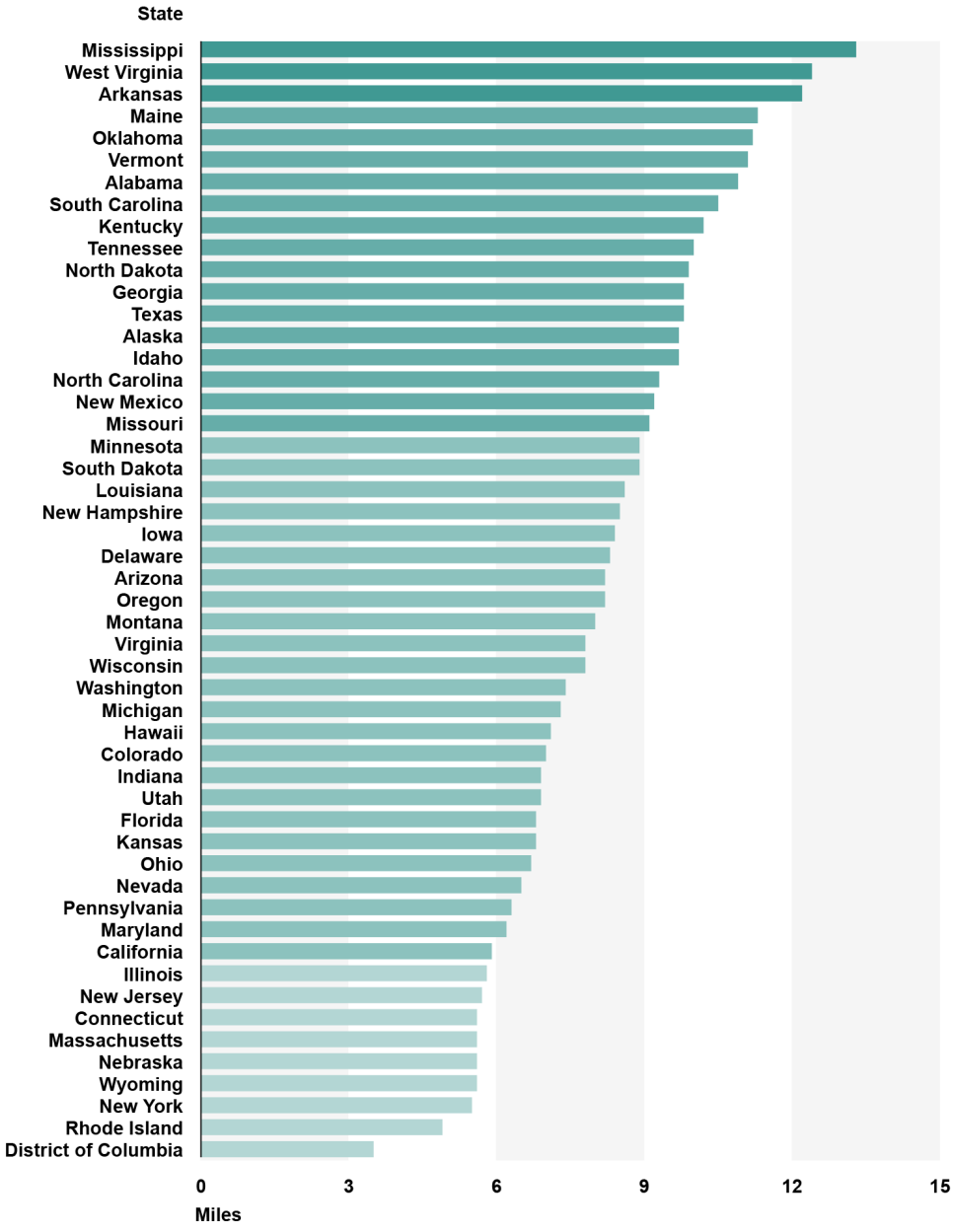


Source: GAO analysis of Centers for Medicare & Medicaid Services Medicare Provider Analysis and Review data. | GAO-21-92

Notes: This analysis includes Medicare inpatient stays in which severe wound International Statistical Classification of Diseases and Related Health Problems, 10th Revision, codes were listed as a principal or secondary diagnosis for beneficiaries enrolled in the Medicare fee-for-service program as of January 2018. Some of these facilities, such as LTCHs and CAHs, are located in certain geographical areas of the country. For example, LTCHs are located primarily in the eastern part of the country, and CAHs are located only in rural areas. As such, Medicare beneficiaries who live in proximity of these facilities may be more likely to use them; as geographic availability may be a factor that influences where beneficiaries receive severe wound care. The "Other" category includes other types of facilities that also billed Medicare for severe wound care stays such as, for example, psychiatric hospitals or psychiatric distinct units of a hospital. These accounted for 0.1 percent (or 542) of the total number (441,676) of Medicare beneficiaries' inpatient stays in fiscal year 2018.

Similarly, CMS's MEDPAR claims data shows that the median distance that beneficiaries diagnosed as needing severe wound care in each state resided from the ACH, CAH, LTCH, IRF, or SNF that provided them such care was fewer than 14 miles in fiscal year 2018. The national median distance beneficiaries resided from these facilities across all states was 7.3 miles. (See figure 6.)

Figure 6: Median Distance Medicare Fee-for-Service Beneficiaries Resided from Facilities That Provided Them Severe Wound Care in Each State, by State, in Miles, Fiscal Year 2018



Source: GAO analysis of Centers for Medicare & Medicaid Services Medicare Provider Analysis and Review data. | GAO-21-92

Note: This analysis includes Medicare inpatient stays in which severe wound International Statistical Classification of Diseases and Related Health Problems, 10th Revision, codes were listed as a

principal or secondary diagnosis for beneficiaries enrolled in the Medicare fee-for-service program as of January 2018.

Stakeholders Had Mixed Views on the Effects of the Dual Payment System on Quality of Severe Wound Care, and Limited Information Is Available to Assess the Effects

Representatives from one provider association representing LTCHs with whom we spoke indicated that implementation of the dual payment system has negatively affected the quality of care severe wound care beneficiaries receive. Specifically, they told us that LTCHs are best suited to provide beneficiaries with advanced severe wound care because they have specialized staff and more resources available than other post-acute care facilities, such as SNFs. As such, they asserted that when LTCHs reduced their admissions of severe wound care patients and those patients in turn received care at other settings, it resulted in decreased quality of care.

In contrast, three researchers who studied the overall quality of care provided at LTCHs and other post-acute care facilities told us they do not expect the implementation of the dual payment system to affect the quality of severe wound care beneficiaries receive. Moreover, they said that their analyses have shown that many patients who were treated at LTCHs (at a higher cost) could have received the same quality of care at a different post-acute care facility with lower costs.

A physician researcher told us that the driving factor in utilization of LTCHs is their proximity to ACHs, but given the variation in their geographic concentration, patients who do not have access to LTCHs will stay in an ACH longer before being discharged to a SNF or IRF. He said although LTCHs have more resources and specialized staff, there is potential to get good care at all post-acute care settings; any differences in quality of care across post-acute care facilities are modest, as health outcomes are largely the same. As such, he said that, in his clinical opinion, only the most medically complex beneficiaries should be treated at LTCHs because the cost of care is significantly more expensive than other settings. He said the gain in quality of care for most patients is likely marginal.

Although CMS collects some quality data from post-acute care facilities related to severe wounds, these data focus on the development or prevalence of such wounds rather than the quality of their treatment. Specifically, beginning in 2016, CMS began requiring post-acute care facilities to collect and report certain standardized information on patients

with new or worsened pressure ulcers—a type of severe wound.[36] CMS uses this information to publicly report each individual facility's average percentage of patients who had new or worsening pressure injuries during their stay against the national average across the same type of setting on its Care Compare website.[37] However, this quality measure is tracked for all patients, not just those admitted with severe wounds. Therefore, it is more a measure of prevention than the quality of the treatment provided by post-acute care facilities to patients who are admitted with pre-existing pressure ulcers.

CMS also collects data on other quality indicators, such as hospital readmissions and mortality rates, but such indicators do not necessarily reflect how quality of care provided to patients with severe wounds by LTCHs compares to other post-acute care facilities. Specifically, according to three researchers we interviewed, LTCHs can provide advanced procedures in house to treat severe wounds, whereas SNFs provide less intensive care. As a result, patients in SNFs may need to go to another setting, such as an ACH, to receive the same procedures that can be provided by LTCHs. In such cases, although these would register as "readmissions", they are not necessarily an accurate reflection of the quality of care provided by the SNF or received by the beneficiary compared to treatment of comparable patients by LTCHs. In addition,

[36]The Improving Medicare Post-Acute Care Transformation (IMPACT) Act of 2014 required post-acute care facilities to begin reporting standardized data on quality measures beginning in 2016. Pub. L. No. 113-185, § 2(c)(1), 128 Stat. 1952, 1957 (codified at 42 U.S.C. § 1395lll(c)(1)). Quality measures required to be reported include data pertaining to skin integrity and changes in skin integrity. See 42 U.S.C. § 1395lll(c)(1)(B). Facilities that do not report such information may be subject to a reduction in their annual payment updates. See 42 U.S.C. § 1395ww(m)(5)(A). The original standardized quality reporting measure "Percent of Residents or Patients with Pressure Ulcers that are New or Worsened (Short Stay)" was modified and renamed in 2018 to "Changes in Skin Integrity Post-Acute Care: Pressure Ulcer/Injury."

[37]Post-acute care facilities are required to collect quality measure information upon a patient's admission and discharge, and they report it to CMS on a quarterly basis. CMS then reports this information on its Care Compare website, which provides information on how well individual facilities provide care to their patients. Care Compare is intended to be used by patients and their families to select a particular post-acute care facility and by post-acute care providers in their own quality improvement efforts. CMS officials told us that, while all post-acute care providers are required to report quality measures data, CMS does not publicly report results for any measure for which post-acute care providers had fewer than 20 cases for whom that measure was relevant in the reporting period, and it will note that the number of cases is too small to report. See Centers for Medicare & Medicaid Services, *Care Compare*, accessed October 13, 2020, https://www.medicare.gov/care-compare/.

research we reviewed indicated that, although mortality rates capture the length of life, they do not necessarily capture the quality of life.[38] Based on the information these quality indicators provide—as well as other clinical factors such as beneficiaries' overall conditions and prevalence of other comorbidities that may affect the healing process of severe wounds—the empirical evidence available to assess quality of severe wound care that post-acute care facilities provide is limited.

Agency Comments

We provided a draft of this report to the Department of Health and Human Services for review and comment. The department provided technical comments, which were incorporated as appropriate.

We are sending copies of this report to the appropriate congressional committees, as well as other interested parties. In addition, the report will be available at no charge on the GAO website at http://www.gao.gov. If your staff have any questions about this report, please contact me at (202) 512-7114 or cosgrovej@gao.gov. Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this report. GAO staff who made key contributions to this report are listed in appendix II.

James Cosgrove
Director, Health Care

[38]L. Koenig et al., "The Role of Long-term Acute Care Hospitals in Treating the Critically Ill and Medically Complex," *Medical Care,* vol. 53, no. 7 (2015): pp. 582—590.

Appendix I: Long-Term Care Hospitals (LTCH) That Received the Severe Wound Care Payment Exception

The 21st Century Cures Act (Cures Act) temporarily excepted certain LTCH severe wound care discharges occurring within cost reporting periods that began in fiscal year 2018 from being paid at the site neutral payment rate.[1] This exception expired at the end of LTCHs' fiscal year 2018 cost reporting period. Discharges assigned to one of four diagnosis-related group (DRG) codes—539, 540, 602, and 603—that were also assigned a severe wound ICD-10 code were instead paid the higher, standard payment rate. They were not subject to any other criteria for the standard payment rate—that is, having a preceding intensive care unit stay of at least 3 days or requiring ventilator care.[2]

According to our analysis of CMS's Provider Specific File data, nine LTCHs received the temporary payment exception from the Cures Act, with seven of the nine LTCHs located in Louisiana or Texas. The nine LTCHs were (1) Christus Dubuis Hospital of Alexandria in Alexandria, Louisiana; (2) Cornerstone Hospital Southwest Louisiana in Lake Charles, Louisiana; (3) Specialty Hospital Monroe in Monroe, Louisiana; (4) Ochsner Extended Care Hospital of Kenner in Kenner, Louisiana; (5) McLaren Bay Special Care in Bay City, Michigan; (6) Specialty Hospital of Meridian in Meridian, Mississippi; (7) ContinueCARE Hospital at Hendrick Medical Center in Abilene, Texas; (8) Christus Dubuis Hospital of Beaumont in Beaumont, Texas; and (9) Cornerstone Specialty Hospitals Houston Medical Center in Houston, Texas.

In federal fiscal year 2018, 95 stays assigned to one of the four severe wound care DRGs across these nine LTCHs were paid either the standard or site neutral rate. They totaled about $2 million dollars in Medicare spending. Of these stays, about 30 percent, or 28 stays, were paid the higher, standard payment rate, and average Medicare spending per stay was about $30,534. Medicare per stay spending for stays paid the lower, site neutral payment rate was about $16,639. Stays paid the site neutral payment rate could represent (1) stays that were grouped to one of the four severe wound care DRGs, but were not assigned one of the severe wound ICD-10 codes; or (2) stays that occurred within federal fiscal year 2018, but outside of the LTCHs' individual fiscal year 2018 cost reporting period, according to CMS officials. See table 4 for information

[1]Pub. L. No. 114-255, § 15010(a), 130 Stat. at 1323 (codified in pertinent part at 42 U.S.C. § 1395ww(m)(6)(G)).

[2]Discharges assigned to these four DRGs may have received treatment for cellulitis with or without major complications or comorbidity, osteomyelitis with complications or comorbidity, or osteomyelitis with major complications or comorbidity.

on Medicare spending for the four severe wound care DRGs covered by the Cures Act exception.

Table 4: Medicare Spending at Long-Term Care Hospitals (LTCH) where Some Federal Fiscal Year 2018 Discharges Were Approved for the 21st Century Cures Act Temporary Exception, by Diagnosis-Related Group (DRG) and Payment Type

DRG	539		540		602		603		
Payment type	**Standard**	**Site neutral**	**Standard**	**Site neutral**	**Standard**	**Site neutral**	**Standard**	**Site neutral**	**Total**
Number of stays	8	16	3	3	11	24	6	24	**95**
Total spending	**$363,667**	**$386,103**	**$91,822**	**$63,921**	**$283,843**	**$434,186**	**$115,625**	**$230,626**	**$1,969,793**
Per stay spending	$45,458	$24,131	$30,607	$21,307	$25,804	$18,091	$19,271	$9,609	**$20,735**

Source: GAO analysis of Centers for Medicare & Medicaid Services data. I GAO-21-92

Notes: Our analysis of Medicare severe wound care spending includes spending by the Medicare program, Medicare beneficiaries, and third-party payers. Individuals assigned to these Medicare severity LTCH DRGs may receive treatment for cellulitis with or without major complications or comorbidity (602 and 603, respectively), osteomyelitis with complications or comorbidity (540), or osteomyelitis with major complications or comorbidity (539). Standard stays represent severe wound care stays paid the standard payment rate. Site neutral stays represent severe wound care stays paid the site neutral payment rate. Discharges paid the standard payment rate may represent those that were grouped to one of the four severe wound care DRGs, but were not assigned one of the severe wound International Statistical Classification of Diseases and Related Health Problems, 10th Revision, codes or those outside of the LTCHs' fiscal year 2018 cost reporting period. Spending measures are not inflation adjusted and reflect dollars for the respective fiscal year.

Appendix II: GAO Contact and Staff Acknowledgments

GAO Contact

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Staff Acknowledgments

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