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Medicare Hospital Inpatient Device-Intensive Payment Policy

Modest Impact on Medicare, Payment Rates, Hospitals, and Device Prices

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EXECUTIVE SUMMARY

Medicare's fee-for-service (FFS) payment system includes payment policies that support providers' use of innovative medical device technologies. The continued evolution of these policies is necessary to keep pace with current and future medical innovation.

This paper focuses on the Medicare FFS inpatient prospective payment system (IPPS) methodology for calculating the relative weights of Medicare severity diagnosis-related groups (MS-DRGs) and how this methodology creates a disincentive for hospitals to provide procedures involving implantable medical devices. Specifically, in calculating the MS-DRG weights, hospitals' implantable devices charges are standardized to remove the effect of labor market variation, despite the fact that prices for many medical devices do not vary consistently with labor costs. As a result, device costs are artificially low in the calculation of total per case costs for some procedures that involve implantable devices are used. This concern is more significant for hospitals in low-wage index areas. For device-intensive MS-DRGs in which device expenses account for a large share of the total cost of the case, this concern is exacerbated.

To address this concern, several stakeholders have suggested modifying the IPPS method for calculating MS-DRG weights by removing standardization from the implantable device cost center for MS-DRGs where implantable device costs account for more than a given threshold of total per case costs. Other important stakeholders with interests in hospital inpatient reimbursement questioned how this policy might affect MS-DRG payments, hospital payments, or prices for medical devices. To evaluate these questions, Health Management Associates, Inc. (HMA), modeled a device-intensive threshold policy to identify changes in MS-DRG and hospital payments and assessed changes in device prices following the implementation of Medicare's existing ambulatory surgical center (ASC) DI policy.

Findings

MS-DRG level: A device-intensive threshold policy will variably and modestly increase payments to a small set of MS-DRGs when device costs exceed the established policy threshold. These increases will be offset by modest and consistent payment decreases across all other MS-DRGs.

- Under a 50 percent device-intensive threshold policy, eight MS-DRGs (cardiac, orthopedic and spine) will receive payment increases of 3−8 percent, amounting to $360 million annually. This increase will be offset by a corresponding 0.3 percent payment decrease to all other MS-DRGs to ensure budget neutrality, ranging from $13 to $654 per MS-DRG.
- Under a 30 percent device-intensive threshold policy, 38 MS-DRGs will qualify for payment increases of 1−8 percent, amounting to $570 million annually. This increase will be offset by a corresponding 0.6 percent payment decrease to all other MS-DRGs to ensure budget neutrality.

Hospital-level: A device-intensive threshold policy will have a modest impact on individual hospitals and across hospitals by category. A small group of hospitals will experience total Medicare FFS inpatient payment increases of 2−4 percent, whereas a large share of hospitals will experience small payment reductions below 1 percent. The variability of the impact on hospitals will be smaller under a 50 percent threshold than a 30 percent threshold.

- Under a 50 percent threshold, 1.5 percent of hospitals will experience payment increases of 2.0 to 3.3 percent of their total Medicare FFS revenues, 20.7 percent will see payment increases of 0.1 to 1.9 percent, and 78 percent will have payment reductions of -0.1 to -0.4.

- Under a 30 percent threshold, 5.3 percent of hospitals will experience payment increases of 2.0 to 4.4 percent, 20 percent will see payment increases of 0.1 to 1.9 percent, and 75 percent will undergo payment reductions of −0.1 to −0.6 percent.

Hospitals by category: Hospitals with relatively high case complexity will experience increases in payments, whereas hospitals with relatively low case complexity will experience payment decreases. As a group, rural hospitals and hospitals in low-wage index areas will experience payment reductions, but several hospitals in these two groups will experience payment increases because they provide device-intensive cases. As a group, small (<25 beds) and large (>400 beds) hospitals will experience the largest payment increases, whereas mid-sized hospitals (50−200 beds) will experience payment reductions. If implemented, we anticipate that the observed variation in individual and categorical impact will change as more hospitals recognize the financial benefit of conducting device-intensive procedures under this policy.

Device prices: Medicare FFS claims data suggest that device manufacturers may not have responded to the Centers for Medicare & Medicaid Services (CMS) decision to lower the ASC device-intensive threshold twice between 2017 and 2019 by increasing their prices. From 2013 to 2022, the annual growth rate in median charges for ASC device-intensive cases increased 4.8 percent, relative to 2.6 percent for non-device-intensive cases and 3.0 percent for the consumer price index. Further, annualized growth rates suggest that in the years immediately following CMS's 2017 and 2019 actions, the growth rate in annual median charges did not increase more rapidly for device-intensive cases relative to non-device-intensive cases, and in some years, charge growth for non-device cases exceeded device-intensive cases.

Discussion and Policy Considerations

Though the redistributive effect of a device-intensive threshold policy may be relatively modest, policymakers will want to consider the impact of the policy on beneficiaries, providers, manufacturers and the Medicare program overall. For beneficiaries, this policy will not increase out-of-pocket costs, but if hospitals respond to the policy by adding device-intensive procedures it might result in expanded access to innovative procedures. For hospitals, this policy might enable new services, such as procedures involving implantable devices. For manufacturers, this policy could lead to engagement with a broader range of hospitals. For the Medicare program, this policy will be budget-neutral but will modestly increase the administrative burden associated with calculating MS-DRG weights.

Based on our analysis, we offer the following four discussion points for policymakers:

1. The threshold chosen for this policy will be critical in determining its impact on stakeholders.
2. A device-intensive policy may be appropriate across all Medicare FFS payment systems.
3. Standardizing cost centers that use the hospital wage index could be removed for all cost centers where labor costs are minimal.
4. Implementation of this policy may dampen hospitals' desire to seek wage index reclassification.

Recommendations for Policy Makers

We recommend that CMS conduct a formal town hall meeting to bring together stakeholders for a live discussion or include a request for information (RFI) in the fiscal year (FY) 2026 IPPS proposed rule to solicit feedback, information and perspectives regarding the potential impact of implementing a device intensive threshold policy for the Medicare inpatient payment system on beneficiary access, program financing, device pricing and other areas that may be impacted. Additionally, we recommend that policymakers at the agency

better understand the redistributive effect of this policy on the IPPS, the impact of this policy on certain beneficiary populations, the potential impact of this policy on the pricing of medical devices and the interactions of this policy with other Medicare payment and quality policies.

INTRODUCTION

Medicare fee-for-service (FFS) payment systems have various mechanisms to incentivize the use of innovative technologies. These policies encourage providers to offer the best available treatments to Medicare beneficiaries without negative financial incentives. These policies and the underlying payment systems need regular review to ensure they best reflect how care is delivered to Medicare beneficiaries.

In this paper, we consider payment policy related to Medicare inpatient hospital cases in which the cost of implantable devices accounts for a large share of the total costs of the case. Under the current Medicare Inpatient Prospective Payment System (IPPS), these cases may present financial problems for hospitals, despite the fact that these innovative procedures yield improved outcomes for patients and savings for the Medicare program.

Health Management Associates, Inc. (HMA), consultants were asked to assess this complex dynamic and analyze a policy solution, referred to as the device-intensive (DI) threshold policy, which could provide a greater incentive for hospitals to conduct device-intensive procedures. This report provides background on relevant components of the IPPS payment methodology involving the calculation of the relative weights of Medicare severity diagnosis-related groups (MS-DRGs). We describe how the current method of calculating MS-DRG relative weights appears to be disincentivizing some hospitals from providing device-intensive procedures. Finally, we analyze three specific criticisms of the device-intensive threshold policy to understand its potential impact if it were to be implemented, and we offer considerations for policymakers.

BACKGROUND

Medicare's IPPS MS-DRG weight-setting methodology is complex and any changes to this structure should not be considered lightly and without an understanding of how the structure operates. In addition, the pace of medical device innovation in our current environment is rapid and this reality is an important contextual consideration for policymakers with the authority to maintain and modify the IPPS.

Medicare Inpatient MS-DRG Weight Setting Method

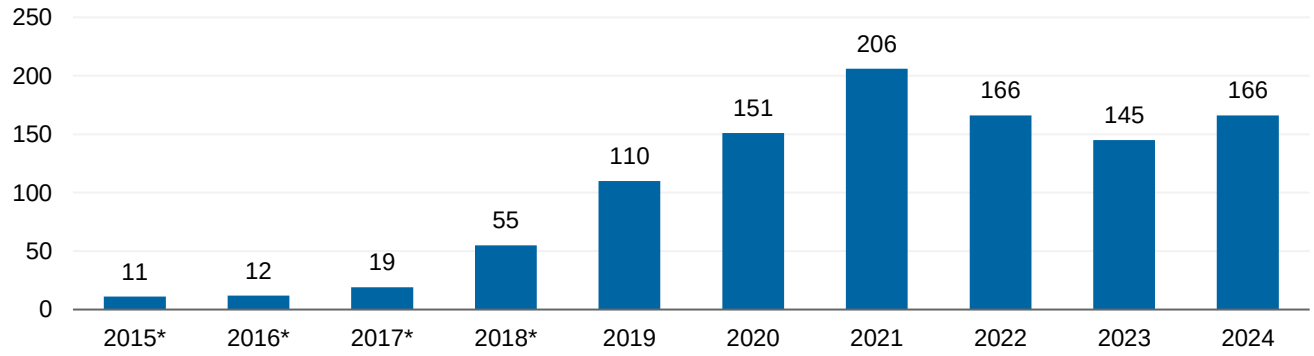
Payment under the IPPS is based on relative weights assigned to each MS-DRG. Weights are calculated through a method that standardizes patient per case charges for each of CMS's 19 cost centers that occur within any given inpatient case, converts the standardized charges to costs using national hospital cost-to-charge ratios, and then rolls the costs of the 19 cost centers into a single per case amount and establishes a relative weight for each MS-DRG based on the average costs of each MS-DRG.[1] The following figure depicts the process applied to each MS-DRG at a high-level.

The standardization referred to in the first step will remove the effects of labor costs that differ by geographic area, as well as eliminate costs associated with indirect medical education (IME) and disproportionate share hospital (DSH) payments. This standardization is applied to the 19 costs centers, regardless of their association with labor costs, IME, or DSH. Essential to this analysis, one of the cost centers is specific to the costs of implantable devices, which means that charges associated specifically with implantable devices are standardized even though the costs that hospitals face when purchasing implantable devices from device manufacturers largely are invariable because of a hospital's location or it receives IME or DSH payments.

Influx of Technological Innovation

As the US Food and Drug Administration (FDA) has transitioned from its expedited access pathway (EAP) for medical device approval to its breakthrough device program (BDP), the number of medical device technologies with FDA approval has grown significantly. Since the inception of the BDP in 2019, the number of devices approved annually increased 51 percent (see Figure 1). As a result, the surgical specialties have seen major developments that have made operations less invasive, have reduced the length of stay for patients, and have improved outcomes.[2]

Figure 1. Number of Products Granted with a Breakthrough Device Designation from the FDA, 2015−2024



Source: US Food and Drug Administration, 2024.

LANDSCAPE FOR DEVICE-INTENSIVE POLICIES

Concerns About Current Medicare Payment Policy

Under CMS's current method of calculating MS-DRG relative weights, the standardization of the implantable device cost center creates a disincentive for hospitals to offer procedures that involve innovative devices. Key to understanding this concern is that the charges hospitals report on Medicare FFS claims to reflect implantable device prices are largely consistent across markets, similar to other costs that may be more dependent on labor than technology. Importantly, device manufacturers tend to sell their implantable devices to hospitals using uniform pricing across markets, and any market-level charge variations seen for implantable devices in claims data instead may reflect hospitals' decisions to report those costs.

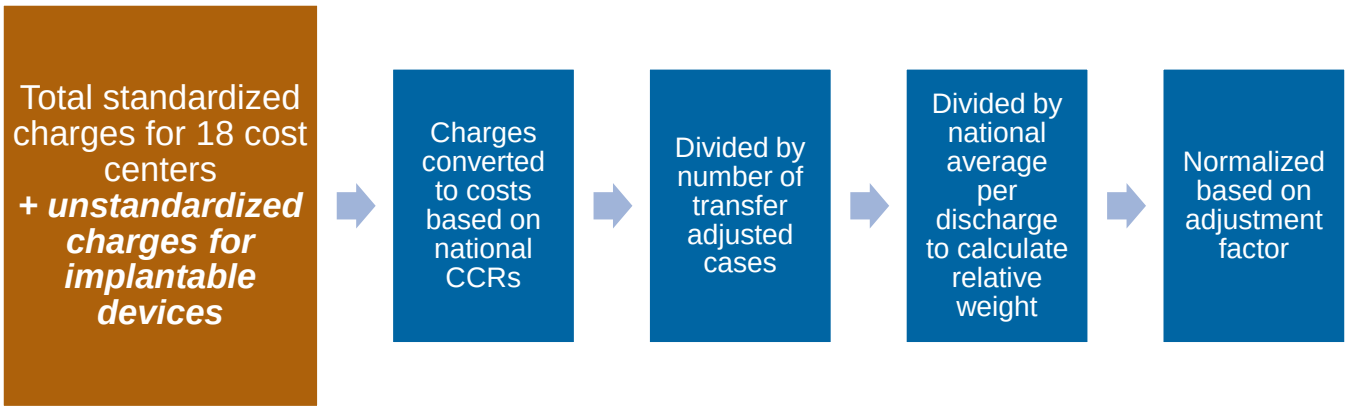
HMA explored this dynamic by assessing the variation in charges across Medicare's 19 inpatient cost centers and found that the variability of charges for routine bed days (a cost center with significant labor-related costs) nearly tripled the variability of charges for implantable devices (a cost center with minimal labor-related costs).[3]

The device-intensive disincentive is more problematic for hospitals in low-wage index areas, and the concern is that these facilities may be less inclined to adopt new implantable device technologies. Under the current DRG weight method, hospitals in low-wage index areas that provide device-intensive services experience lower per case margins than hospitals in high-wage index areas. The reason for this situation is that the standardization of the implantable device cost center artificially deflates the costs of device-intensive cases within the MS-DRG weight. As a result, when Medicare inpatient payments are adjusted for the hospital's low-wage index value, the hospital is underpaid for providing treatment for these cases.

Furthermore, hospitals appear to be responding to the device-intensive disincentive. In a March 2022 study in the American Journal of Managed Care, the authors demonstrated that, from 2013 to 2018, the growth rate for a common device-intensive procedure was more rapid at hospitals in higher-wage index areas than at hospitals in low-wage index areas. Specifically, hospitals in areas with a wage index 0.5 times lower than the national mean provided 35 percent fewer device-intensive procedures, or 2.4 fewer transcatheter aortic valve replacements (TAVR) per 100,000 beneficiaries. In contrast, hospitals in areas with a wage index 1.5 times higher than the national mean provided 53 percent more device-intensive procedures, or 3.3 more TAVR procedures per 100,000 beneficiaries.[4]

Device-Intensive Threshold Policy Solution

To address this disincentive, stakeholders have proposed a policy solution that will modify the IPPS MS-DRG weight-setting method by removing standardization from the implantable device cost center for any MS-DRG with implantable device costs that account for more than a given threshold. Hence, for MS-DRGs that have implantable device costs above a given policy threshold, charges for the implantable device cost center will not be standardized but will remain uniform for the 18 other Medicare IPPS cost centers. To implement this policy, policymakers will need to determine an appropriate device-intensive threshold. For this analysis, we considered both 50 percent and 30 percent thresholds.[5]



Relative weights for all other DRGs recalibrated to incorporate the revised national average discharge amount.

Device-Intensive Policy Precedent Within the Ambulatory Surgery Center Payment System

Since 2008, the Medicare ambulatory surgery center (ASC) payment system has included a device-intensive policy. Acting on its own authority, CMS implemented the ASC device-intensive policy with the intention of alleviating disincentives that providers may have to conduct procedures in which device costs account for a high share of the procedure's total cost. Having established ASC payment rates to reflect Medicare's hospital outpatient prospective payment system (OPPS) rates reduced by approximately 39 percent, policymakers were concerned that the ASC rates, absent a device-intensive policy, would result in financial losses for cases with high device costs.

Under the present policy for procedures that qualify as device-intensive, ASCs are paid using a unique two-part formula. Providers are paid for the service-related component of the procedures equal to roughly 39 percent of the OPPS rates and are then paid separately for devices equal to the same amount the device is paid in the hospital outpatient setting. In addition, for procedures to be considered device-intensive, CMS requires device costs to equal 30 percent or more of the total cost of the operation.[6]

The ASC device-intensive policy has broadened since its original implementation to include more procedures. Originally set at 50 percent in 2008, in 2017, CMS lowered the device-intensive threshold to 40 percent, and in 2019, the agency lowered the threshold again to 30 percent.[7] Furthermore, in 2019, CMS removed the requirement that to qualify as device-intensive the item had to remain in the patient's body. As a result of these incremental changes, the number of procedures eligible for the device-intensive policy increased from 45 procedures in 2008 to more than 500 procedures in 2024.[8,9] Procedures eligible for the ASC device-intensive policy tend to be orthopedic procedures, such as hip, knee, and spine procedures.

The ASC device-intensive policy may be a corollary for a potential inpatient device-intensive threshold policy. A 2024 paper from the National Bureau of Economic Research showed that before the 2008 ASC device-intensive policy was implemented, Medicare pricing policy led the ASC industry to avoid device-intensive cases, contributing to capacity constraints for physicians in outpatient settings. However, implementation of the 2008 ASC device-intensive policy resulted in a nearly 13-fold increase in the provision of device-intensive procedures, making innovative new procedures more accessible to patients in geographic areas where they previously were unavailable.[10]

Stakeholder Reaction to the Device-Intensive Threshold Policy Solution

HMA participated in discussions with stakeholders throughout 2024 about the disincentive to provide device-intensive procedures and the threshold policy solution. These organizations have raised the following questions about applying the device-intensive threshold in the inpatient setting:

- To what extent would a device-intensive threshold policy result in payment reductions for MS-DRGs that do not qualify for the device-intensive threshold policy, assuming budget neutrality is maintained?
- To what extent would a device-intensive threshold policy affect individual hospitals? Will there be clear winners and losers, and how would the impact vary by type of hospital?
- Will the device-intensive threshold policy incentivize device manufacturers to inflate the prices they charge to hospitals for their products?

FINDINGS

To assess the impact of the device-intensive threshold policy on individual DRGs, hospitals, and manufacturers, we conducted three separate analyses.

1. We modeled the impact of the inpatient device-intensive threshold policy on individual DRGs using 2023 claims data (100 percent claims data files) and 2025 Medicare IPPS payment policy. We modeled both a 50 and a 30 percent device-intensive threshold.
2. We modeled the impact of the inpatient device-intensive threshold policy on individual hospitals and several different types of facilities using 2023 claims data (100% claims data files) and 2025 Medicare FFS IPPS policy. Modeling included both the 50 percent and 30 percent thresholds.
3. We assessed the growth rate in ASC procedure charges (a proxy for prices) from 2013 to 2022 for procedures that CMS has designated as device-intensive and for non-device-intensive procedures using Medicare FFS claims data and compared these trends to inflection points in time when the ASC device-intensive threshold was lowered and the policy was expanded to include new procedures.

DRG Level Impact Analysis

We estimate that the device-intensive threshold policy will increase the weights of a small number of MS-DRGs with implantable device costs that exceed the threshold; however, the number of MS-DRGs classified as device-intensive will vary with the level at which the device-intensive threshold is set. A higher threshold (50%) will result in fewer MS-DRGs being considered device-intensive, and a lower threshold (30%) will result in more MS-DRGs deemed device-intensive. Because the weights of the nearly 800 MS-DRGs are all relative to one another, the increase in weights resulting from the device-intensive threshold policy will result in corresponding reductions in the weights for all non-device-intensive MS-DRGs, and these reductions will be of a limited magnitude.

Device-Intensive Policy at the 50 Percent Threshold

If the device-intensive threshold policy were set at 50 percent, eight MS-DRGs will be deemed device-intensive. These MS-DRGs include cardiac, spine, and knee/hip surgery MS-DRGs (see Table 1). The share of the costs for these eight MS-DRGs attributed to implantable devices in 2023 ranged from 53 percent to 64 percent. Under a device-intensive threshold policy set at a 50 percent threshold, these MS-DRGs will result in 3.2 to 8.4 percent payment increases, ranging from $689 to $3,521 per case on average.

Offsetting the increases for these eight MS-DRGs, all remaining MS-DRGs will experience a uniform decline of 0.3 percent. The average reduction in 2025 payments for these MS-DRGs will be $67 per case, and reductions will range from $13 to $654 per case.

Table 1. MS-DRGs Deemed Device-Intensive Under a Device-Intensive Threshold Policy Set at a 50 Percent Threshold and Resultant Change in 2025 Payments

MS-DRG	Description	Number of cases (2023)	Implant-able device cost as percent of total cost (2023)	Change in payments (%) per case at 50 percent threshold	Change in payments ($) per case at 50 percent threshold
267	Endovascular cardiac valve replacement w/o major complication or comorbidity (MCC)	39,566	64.4%	8.4%	$3,521
269	Aortic and heart assist procedures w/o MCC	11,330	56.7%	4.8%	$1,722
428	Multiple level combo anterior & posterior spinal fusion except cervical w/o complication or comorbidity (CC)/ MCC	8,314	56.6%	3.4%	$1,587
427	Multiple level combined anterior and posterior spinal fusion except cervical w/CC	13,256	54.6%	5.3%	$3,417
274	Percutaneous & other intracardiac procs w/o MCC	50,336	54.3%	4.2%	$1,103
458	Spinal fusion except cervical w/o CC/MCC	1,315	53.4%	3.7%	$1,387
266	Endovascular cardiac valve replacement w/MCC	21,556	53.4%	6.3%	$3,489
468	Revision of hip or knee replace w/o CC/MCC	14,602	53.2%	3.2%	$689

Source: HMA analysis of Medicare FFS claims (2023) and Medicare IPPS policy (2025).

Device-Intensive Threshold Policy at the 30 Percent Threshold

If the device-intensive threshold policy were lowered to 30 percent, 30 additional MS-DRGs will be designated as device-intensive. These MS-DRGs include cardiac, spine, and knee/hip surgery MS-DRGs. The share of the costs for these 38 MS-DRGs attributed to implantable devices ranged in 2023 from 32 percent to 64 percent. Under a device-intensive threshold policy set at 30 percent, these MS-DRGs will see a 1.0 to 8.1 percent payment increase ranging from $243 to $6,378 per case.

Offsetting the increases to these 38 MS-DRGs, all remaining MS-DRGs will experience a uniform decline of 0.6 percent. The average reduction in 2025 payments for these MS-DRGs will be $109 per case, and reductions will range from $22 to $1,107 per case.

Impact on Medicare Program Spending

We estimate that a device-intensive threshold policy set at the 50 percent threshold will result in roughly a $360 million offset within the device-intensive and non-device-intensive sets of MS-DRGs (see Table 2). The payment increases for the eight MS-DRGs deemed device-intensive will collectively equal $360 million, and all other MS-DRGs will see roughly the equivalent reduction in payment. Approximately 2 percent of all cases will experience an increase in payments, and 98 percent will experience a decrease. In addition, in 2023, 35 percent of hospitals had at least one case among the eight MS-DRGs.

A device-intensive threshold policy set at the 30 percent threshold will result in roughly a $570 million offset within the device-intensive and non-device-intensive sets of MS-DRGs. The increase in payments to the 38 MS-DRGs classified as device-intensive will experience a collective increase in payments equal to $570 million, and all other MS-DRGs will see roughly the equivalent reduction in payment. Approximately 6 percent of all cases will experience an increase in payments, and 94 percent will experience a decrease. In addition, in 2023, 35 percent of hospitals had at least one case that was among the 38 MS-DRGs.

Table 2. Estimated Impact of the Device-Intensive Threshold Policy at the 50 Percent and 30 Percent Level If Implemented for 2025 Payments

Impact Variable	50 Percent Threshold	30 Percent Threshold
Device-Intensive MS-DRGs		
Number of MS-DRGs affected	8	38
Change in payments	$357m	$568m
Number of cases affected	160k	412k
Number of hospitals with affected device-intensive cases	1.1k	1.1k
Non-Device-Intensive MS-DRGs		
Number of MS-DRGs affected	757	727
Change in payments	−$358M	−$569m
Number of cases affected	6.7m	6.5m
Number of hospitals with affected device-intensive cases	3.1k	3.1k

Source: HMA analysis of Medicare FFS 100 percent claims (2023).

Hospital Impact Analyses

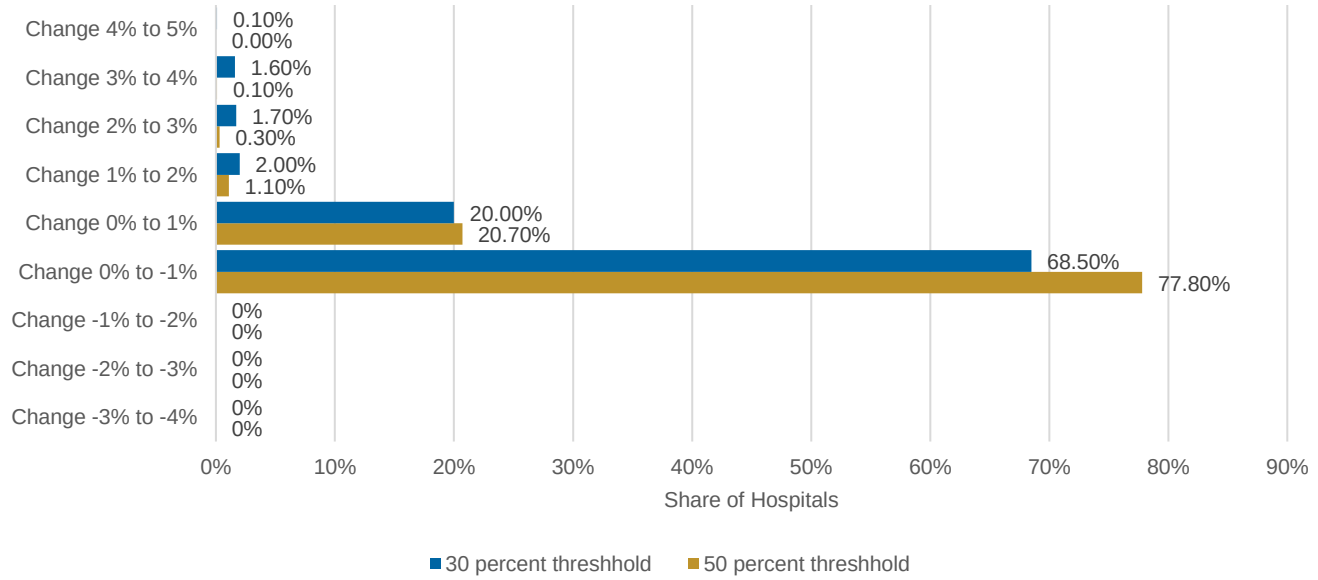
We estimate the device-intensive threshold policy will have a modest impact on individual hospitals and across hospitals by category; however, the policy will increase payments at hospitals conducting device-intensive procedures and decrease payments at hospitals that do not conduct device-intensive procedures. The policy's relatively modest impact stems from the fact that most hospitals perform a wide range of MS-DRGs in any given year, balancing device-intensive cases and non-device-intensive cases. If implemented, we anticipate that the observed variation in individual and categorical impact will change as more hospitals recognize the financial benefit of conducting device-intensive procedures under this policy.

Individual Hospital Analysis

Under either a 50 or 30 percent device-intensive threshold policy, a small share of the 3,115 hospitals will experience a payment increase exceeding 1 percent of their annual Medicare FFS inpatient revenues. Hospitals experiencing payment reductions will see their inpatient revenues decline by less than 0.6 percent (see Figure 2).

- Under a 50 percent device-intensive threshold policy, 50 hospitals (1.5%) will experience payment increases of 2.0 to 3.3 percent of their total Medicare FFS revenues. Another 650 hospitals (20.7%) will experience payment increases of 0.1 to 1.9 percent. In contrast, roughly 2,400 hospitals (78%) will experience modest payment reductions of −0.1 to −0.36 percent.
- Under a 30 percent device-intensive threshold policy, 170 hospitals (5.3%) will experience payment increases of 2.0 to 4.4 percent of their total Medicare FFS inpatient revenues. Another 620 hospitals (20%) will experience payment increases of 0.1 to 1.9 percent. In contrast, roughly 2,300 hospitals (75%) will experience payment reductions of −0.1 to −0.6 percent.

Figure 2. Estimated Share of Hospitals by Percent Change in Total Medicare FFS Inpatient Payments Under Device-Intensive Threshold Policy at 50 percent and 30 percent



Source: HMA analysis of Medicare FFS 100 percent claims, 2023.

Among the top 20 individual hospitals by percentage increase in payments, 75 percent are small hospitals (fewer than 50 beds), 85 percent are non-teaching, all are urban, and all are in the highest quartile by hospital case mix severity. Therefore, hospitals benefiting most from this policy are small urban hospitals that focus on complex cases. In contrast, among of the top 20 hospitals by percentage decrease in payments, 40 percent are small hospitals, 85 percent are non-teaching, none are urban (100% rural), and 5 percent are in the highest quartile by hospital case mix severity.

Among the 100 hospitals that will experience the largest increase in payments by dollar amount per year under the 50 percent threshold policy, payments will increase on average $680,000 per year, with increases ranging from $390,000 to $3.4 million (see Table 3). In contrast, among the 100 hospitals that will experience the largest decrease in payments under the 50 percent threshold policy, payments will decline on average $240,000, with decreases ranging from $170,000 to $720,000.

Among the 100 hospitals that will experience the largest increase in payments by dollar amount per year under the 30 percent threshold policy, payments will increase an average of $850,000 per year, with increases ranging from $440,000 to $4.0 million. Conversely, among the 100 hospitals that will experience the largest reduction in payments under the 30 percent threshold policy, payments will decline on average $340,000, with decreases ranging from $230,000 to $880,000.

Table 3. Top 100 Hospitals by Change in Medicare FFS Payment Increase and Decrease, Assuming Device-Intensive Threshold Policy at 50 Percent and 30 Percent Thresholds

Device-Intensive Threshold	Mean Increase	Range of Increases	Mean Decrease	Range of Decreases
50% Threshold	$680,000	$390,000 to $3,400,000	- $240,000	-$170,000 to -$720,000
30% Threshold	$850,000	$440,000 to $4,000,000	- $340,000	-$230,000 to -$880,000

Source: HMA analysis of Medicare FFS 100 percent claims, 2023.

Categorical Hospital Analysis

The device-intensive threshold policy will have a modest impact in terms of the variation in payment changes across key hospital categories. Overall increases and decreases are modest for each categorical group when these hospitals were assessed as a group. Small hospitals and those with relatively high case complexity will experience the largest increases in payments. In contrast, hospitals with relatively low case complexity and rural hospitals will experience the largest decreases. These effects are generally consistent for the 50 percent and 30 percent threshold policies, with the variation slightly larger under a 30 percent threshold. Increases and decreases are generally smaller when hospitals are grouped by wage index quartile, ownership status, and teaching status.

The greatest impact variation occurred within the categories differentiating hospitals by case mix severity, geographic location, and size (number of beds). Under a 50 percent threshold policy, hospitals with the most complex cases will experience a 0.15 percent increase in payments, compared with a reduction of 0.33 percent at hospitals with the lowest case mix severity. Rural hospitals will experience a 0.21 percent reduction in payments, whereas urban hospitals will experience an increase of 0.1 percent (see Table 4). The smallest and the largest hospitals will experience payment increases, whereas mid-sized hospitals will face reductions. Furthermore, under a 30 percent threshold policy will lead to slightly larger variation by geographic location,

case mix severity, and hospital size. Impact variation was smaller by hospital wage index category, ownership status, and teaching status.

Table 4. Projected Percent Change in Total 2025 Hospital Industry Medicare FFS Payments, Assuming Device-Intensive Threshold Policy at 50 Percent and 30 Percent Thresholds, by Hospital Attribute

Geographic Location		
	50%	30%
Large Urban	0.01%	0.03%
Other Urban	0.01%	0.00%
Rural	−0.21%	−0.29%

Case Mix Severity Quartile		
	50%	30%
76% to 100% (high)	0.15%	0.20%
51% to 75%	−0.10%	−0.12%
26% to 50%	−0.29%	−0.37%
0% to 25% (low)	−0.33%	−0.47%

Number of Beds		
	50%	30%
1-25 beds	0.29%	1.61%
26-50 beds	−0.11%	0.09%
51-100 beds	−0.20%	−0.19%
101-200 beds	−0.17%	−0.20%
201-400 beds	−0.02%	−0.05%
401+ beds	0.09%	0.10%

Wage Index Quartile		
	50%	30%
76% to 100% (high)	0.01%	0.00%
51% to 75%	0.00%	0.01%
26% to 50%	0.00%	0.01%
0% to 25% (low)	−0.04%	−0.05%

Ownership status		
	50%	30%
Voluntary	0.01%	0.00%
Proprietary	−0.01%	0.06%
Government	−0.04%	−0.05%

Teaching status		
	50%	30%
Major Teaching	0.05%	0.06%
Minor Teaching	0.02%	0.01%
Not Teaching	−0.10%	−0.09%

Source: HMA analysis of Medicare FFS 100 percent claims, 2023.

Though our categorical analysis identified rural hospitals and those in low-wage index areas as experiencing overall reductions under the device-intensive threshold policy, some individual facilities in these two groups will experience payment increases. For example, three rural hospitals with 201 to 400 beds will experience 0.3 to 0.5 percent increases in inpatient revenue. In addition, three hospitals in the lowest quartile by wage index with between 100 to 400 beds will experience payment increases of 0.9 to 1.8 percent. The common thread across these six hospitals is that they all fall in the highest quartile by patient case mix and therefore offer more complex inpatient services relative to other hospitals.

The results on the previous page reflect how we estimate a device-intensive threshold policy will affect hospitals by type based on their 2023 inpatient volume; however, we anticipate that in the years following implementation, hospitals may respond to the payment incentives and increase their provision of device-intensive cases. We recognize that a complex mix of reasons beyond Medicare payment could motivate hospitals to offer a particular service. Examples include reimbursement from other payers, hospital capacity, and workforce availability. Therefore, though rural and low case mix hospitals will likely experience modest payment reductions in year one of this policy, we anticipate that a device-intensive threshold policy could offer rural and low case mix hospitals an opportunity to expand services that involve device-intensive or implantable device procedures. Service expansion such as this was observed when the 2008 ASC device-intensive policy was implemented. As noted above, the ASC policy resulted in a nearly 13-fold increase in the provision of device-intensive procedures.[11]

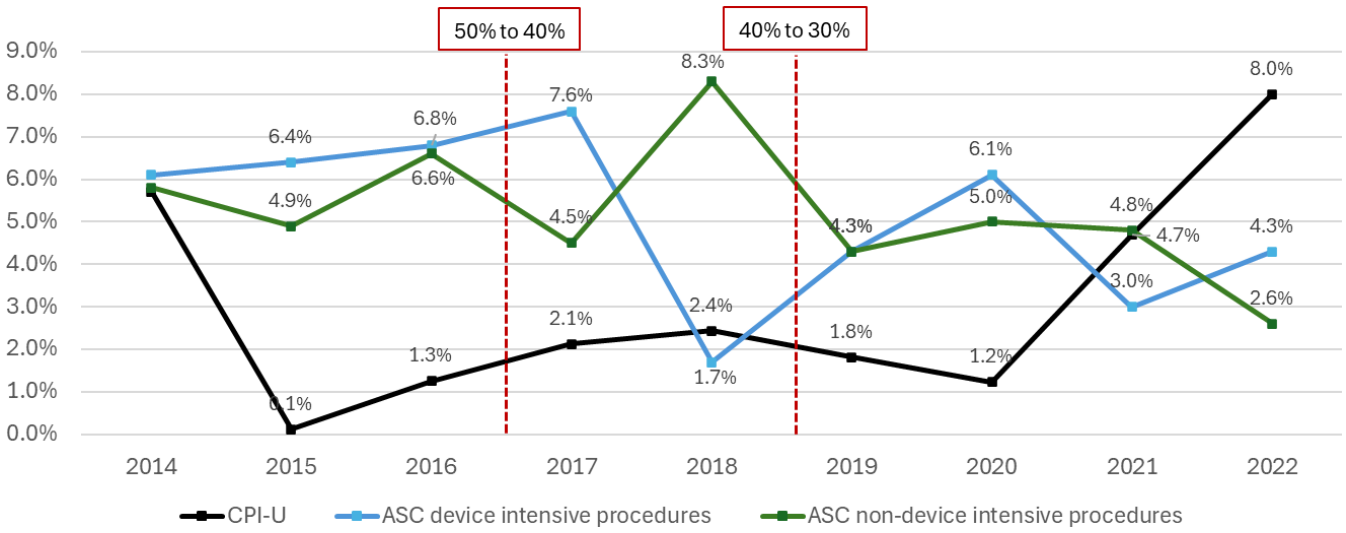
ASC Device-Intensive Policy on Price Inflation

From 2017 to 2019, CMS lowered the ASC device-intensive threshold from 50 percent to 30 percent. We did not find that device manufacturers increased the prices they charge to providers for devices used for device-intensive cases overall. During the 10-year period of 2013 to 2022, the charges reported on ASC claims data for device-intensive cases had a cumulative annual growth rate (CAGR) of 4.8 percent. In contrast, the CAGR of the annual median charges for non-device-intensive cases was 2.6 percent. Both of these rates were reasonably close to the 3.0 percent CAGR for the consumer price index over this period. Nonetheless, we did observe higher CAGR for some ASC device-intensive cases. Specifically, from 2013 to 2022, the CAGR for total hip repair cases was nearly 16 percent, and the CAGR for total knee replacement was nearly 13 percent. Although rates of growth are high for these two procedures, they were newly added to the ASC setting during this period, which may have influenced how charges were reported on claims for these cases.

Because cumulative 10-year growth rates can mask important annual trends, we also assessed these data in the years immediately following CMS policy interventions. Individual annual growth rates do not demonstrate a broad effort by manufacturers to increase device prices following CMS's 2017 and 2019 actions to broaden the ASC device-intensive policy. Following CMS's lowering of the ASC device-intensive policy from 50 percent to 40 percent in 2017, median charges for device-intensive cases increased by 7.6 percent, higher than for non-device-intensive cases (4.5%) and the consumer price index for all urban consumers (CPI-U) of 2.1 percent. In 2018, however, median charges for non-device-intensive cases increase by 8.3 percent, substantially higher than for device-intensive cases (2.4%) and CPI-U (1.7%).

In addition, after CMS lowered the ASC device-intensive policy from 40 percent to 30 percent in 2019, median charges for device-intensive cases and non-device-intensive cases increased at similar rates in 2019 and 2020. Though median charges for device-intensive cases increased 4.3 percent and 6.1 percent in 2019 and 2020, respectively, median charges for non-device-intensive cases increased 4.3 percent and 5 percent. Had device manufacturers responded aggressively to the perceived incentive to increase their prices following CMS lowering the ASC threshold, we would have anticipated more pronounced increases in the annual growth rates in median charges for device-intensive cases.

Figure 3. Annual Percent Change in Median Charges from 2013 to 2022 for Device-Intensive and Non-Device-Intensive Cases at ASC, Compared with the CPI-U and CMS Policy Reducing the Medicare ASC Device-Intensive Threshold in 2017 and 2019



Source: HMA analysis of Medicare FFS ASC claims, 2013−2022.

Note: In 2017, CMS lowered the ASC device-intensive threshold to 40 percent and in 2019 it lowered the device-intensive threshold to 30 percent. CPI-U – Consumer Price Index-Urban. ASC – Ambulatory Surgery Center.

Though these results suggest no obvious increase in device prices following CMS policy changes, the findings related to hip and knee procedures may suggest that price inflation did occur for some devices during this 10-year period. This finding may warrant further analysis of median charges for specific cases. In addition, it is important to consider that market dynamics other than CMS's policy changes may have influenced device price changes during this 10-year period.

DISCUSSION AND POLICY CONSIDERATIONS

Our three analyses suggest that a Medicare FFS inpatient device-intensive threshold policy will result in modest distributional changes across MS-DRGs and modest payment increases or decreases to individual hospitals. In addition, a similar Medicare device-intensive policy did not demonstrate an obvious price increase in medical devices following its implementation.

- The MS-DRG level impact of a device-intensive threshold policy will likely be modest, increasing payments for a small set of MS-DRGs by 3 to 8 percent, with offsetting payment reductions spread across all other MS-DRGs of 0.3 to 0.6 percent. This policy offset will amount to the redistribution of roughly $360 million to $570 million per year depending on the device-intensive threshold chosen.
- The hospital-level impact of the device-intensive threshold policy is modest for individual hospitals because they tend to provide a range of services, and the policy does not substantially benefit or disadvantage certain groups of facilities. Overall increases and decreases are modest for each categorical group when these hospitals are assessed as a group. Small hospitals and those with relatively high case complexity will experience the largest increases in payments. Conversely, hospitals with relatively low case complexity and rural hospitals will experience the largest decreases.

In the years following implementation, hospitals may respond to the payment incentives of this policy by increasing the provision of device-intensive cases.

- In our analysis of Medicare ASC claims data, we found no evidence of device manufacturers increasing their prices after CMS lowered the ASC device-intensive threshold from 50 percent to 30 percent. Though median charges per case were higher than average for some individual procedures, the 10-year CAGR and annual change in median device charges suggests that charges grew similarly for cases that CMS deems device-intensive and non-device-intensive.

Policy Implications

Though the effect of this policy may be modest, policymakers will need to consider its impact across various stakeholders.

- Beneficiaries: Beneficiary cost sharing will not increase directly because of this policy. If hospitals respond to the policy by adding device-intensive procedures it may result in expanded access to innovative procedures, particularly in rural and low-wage index areas.
- Providers: Hospitals will experience modest changes in reimbursement but will have the incentive to invest in developing departments capable of conducting innovative procedures.
- Manufacturers: This policy could invigorate manufacturers to engage rural and low-wage index hospitals and support their creation of capacity to conduct more innovative procedures.
- Medicare program: This policy is budget-neutral because the IPPS weight setting process redistributes change across all MS-DRG weights. This policy will modestly increase the administrative burden associated with calculating MS-DRG weights but can be implemented through the annual rulemaking process and associated systems updates.

Device-Intensive Threshold Level: In this paper, we assessed the device-intensive thresholds of 50 and 30 percent, because they reflect break points at which a relatively small group of MS-DRGs differ from most other MS-DRGs with regard to the share of per case costs associated with implantable devices. Policymakers and stakeholders could consider the impact of other thresholds.

Wage Index Policy: In recent years, the Medicare Payment Advisory Commission (MedPAC) has assessed the Medicare hospital wage index system for its flaws and highlighted that nearly two-thirds of hospitals request reclassification into alternative and higher paying wage index areas.[12] Among the explanations for why hospitals choose to reclassify is that their current wage index area may result in underpayment of inpatient cases. This policy will remove wage index standardization from the MS-DRG weight-setting process for device-intensive cases and dampen some of the concerns related to underpayment. Therefore, it may be reasonable to assume that this policy could reduce, in part, the incentive hospitals have to reclassify into higher-wage index areas.

Inpatient and Outpatient Device-Intensive Policies: The ASC device-intensive policy serves as a strong precedent for developing both an inpatient and an outpatient version of this policy. The rationale for creating the ASC policy was to eliminate the hesitancy of ASCs to conduct device-intensive procedures in a lower-cost setting where the device price will account for a significant portion of the total cost of the case. Though we believe similar bias is occurring at some hospitals for inpatient cases, it is conceivable that a device-intensive policy could eliminate similar concerns in the outpatient setting, which may warrant additional research and consideration.

Cost Centers with Minimal Labor Costs: The device-intensive threshold policy removes standardization (based on the hospital wage index) from the implantable device cost center because implantable device costs vary little across markets consistent with labor costs. Other Medicare inpatient cost centers also are less labor-intensive, such as supplies and drugs. To improve payment accuracy, CMS could also consider removing standardization from other non-labor-intensive cost centers in the MS-DRG weight setting process.

RECOMMENDATIONS FOR POLICYMAKERS

We recognize that adopting this IPPS device-intensive policy will have some redistributive effects and other impacts on various stakeholders per discussions earlier in this paper. To implement a device-intensive threshold policy, CMS will need to go through notice and comment rulemaking. Although that process will allow the public to offer feedback on the regulatory proposal, we recommend CMS engage stakeholders ahead of issuing any formal proposal to assess the level of interest in this policy and to fully vet policy and operational considerations. We believe our analysis addresses some of the potential perspectives on this policy; however, gathering information more broadly from stakeholders will strengthen the program and the payment system over the long term. Therefore, we recommend CMS either conduct a formal town hall meeting to bring together stakeholders in one venue or include a request for information (RFI) in the FY2026 IPPS proposed rule. CMS has extensive experience with both vehicles to better understand public sentiment on a range of payment policies.

Town Hall: CMS has used town halls in the past to gather information from a broad set of stakeholders. The agency could hold a meeting dedicated solely to this policy issue, as it did in January 2023 to gather public feedback on specific questions related to changes in payment for skin substitute products paid under the Medicare physician fee schedule.[13]

RFI: CMS could include an RFI on a device-intensive threshold policy in the upcoming FY 2026 inpatient proposed rule. CMS regularly includes RFIs in its payment rules and often develops policy as result of that feedback. Stakeholders know how to use the rulemaking process to find new policy concepts in addition to specific proposals. We believe stakeholders will be prepared to respond to an RFI on device-intensive policy and CMS will receive robust feedback on the areas in which they solicit comments.

Regardless of the vehicle CMS uses to engage the public, we recommend that the agency solicit feedback on the following topics:

- The financial impact of adopting this policy for hospitals and the Medicare program
- The redistributive effect of the policy within the IPPS
- The impact of the policy on certain beneficiary populations (e.g., rural, dual eligibles)
- The external impact of the policy on the pricing of medical devices
- The interactions of this policy with other IPPS, OPPS, ASC payment and quality policies
- The impact the ASC device-intensive policy has made on providers, patients and device pricing

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ABOUT HMA

HMA is a leading independent national research and consulting firm specializing in publicly funded healthcare. Founded in 1985, HMA has more than 700 consultants working in more than 20 states and Washington, DC. Our consultants support clients on Medicare, Medicaid, and commercial insurance policy topics as well as with public health, clinical, and organizational strategy. For this assessment, HMA's authors and analytic team included: Zachary Gaumer (Managing Principal), Amy Bassano (Managing Director - Medicare), Mark Desmarais (Principal), Huai-Che Shih (Principal), Clare Mamerow (Principal), Alessandra Campbell (Senior Consultant), and Mikayla Curtis (Research Associate).

ENDNOTES

[1] The 19 Medicare inpatient cost centers include: Routine bed days, intensive days, drugs and cellular, therapies supplies and equipment, implantable devices, inhalation therapy, therapy services, anesthesia, labor & delivery, operating room, cardiology, cardiac catheterization, laboratory, radiology, MRI, CT scans, emergency rooms, blood and blood products, and other services.

[2] Chen A, Freedman S, Munnich E, Richards M. Pricing Innovation in Surgical Care Markets. May 2024. Available at: https://ssrn.com/abstract=4826046.

[3] Other cost centers without labor-related costs (supplies and drugs) similarly demonstrated minimal charge variability.

[4] David G, Gunnarsson C, Laine L et al. The unintended consequences of Medicare's wage index adjustment on device-intensive hospital procedures. *American Journal of Managed Care*. DOI: 10.37765/ajmc.2022.88842. Available at: https://pubmed.ncbi.nlm.nih.gov/35404553/.

[5] Policymakers might also consider whether other cost centers that are not labor-intensive warrant the removal of standardization.

[6] Centers for Medicare & Medicaid Services. A Revised Payment System for Services Provided in Ambulatory Surgical Centers. July 16, 2007. Available at: https://www.cms.gov/newsroom/fact-sheets/revised-payment-system-services-provided-ambulatory-surgical-centers.

[7] Centers for Medicare & Medicaid Services. CMS Finalizes Hospital Outpatient Prospective Payment Changes for 2017 | CMS. November 1, 2017. Available at: https://www.cms.gov/newsroom/fact-sheets/cms-finalizes-hospital-outpatient-prospective-payment-changes-2017.

[8] Chen A, Freedman S, Munnich E, Richards M. Pricing Innovation in Surgical Care Markets. May 2024. Available at: https://ssrn.com/abstract=4826046.

[9] Centers for Medicare & Medicaid Services. CMS finalizes Medicare Hospital Outpatient Prospective Payment System and Ambulatory Surgical Center Payment System changes for 2019 (CMS-1695-FC). November 2, 2018. Available at: https://www.cms.gov/newsroom/fact-sheets/cms-finalizes-medicare-hospital-outpatient-prospective-payment-system-and-ambulatory-surgical-center.

[10] Chen A, Freedman S, Munnich E, Richards M. Pricing Innovation in Surgical Care Markets. May 2024. Available at: https://ssrn.com/abstract=4826046.

[11] Chen A, Freedman S, Munnich E, Richards M. Pricing Innovation in Surgical Care Markets. May 2024. Available at: https://ssrn.com/abstract=4826046.

[12] Medicare Payment Advisory Commission. Medicare Hospital Wage Index. October 8, 2021. Available at: https://www.medpac.gov/document/medicare-hospital-wage-index/.

[13] Centers for Medicare & Medicaid Services. Skin Substitutes. November 4, 2024. Available at: https://www.cms.gov/medicare/payment/fee-schedules/physician-fee-schedule/skin-substitutes.