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2018 VALUE-BASED PAYMENT MODIFIER PROGRAM EXPERIENCE REPORT

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CONTENTS

TABLES

FIGURE

I. INTRODUCTION AND KEY FINDINGS

This Experience Report highlights characteristics of the practices subject to the Medicare Value-Based Payment Modifier (Value Modifier) in Calendar Year 2018 (2018)[1] and compares program outcomes across Calendar Years 2015, 2016, 2017, and 2018. The Value Modifier is a pay-for-performance program that provides payment adjustments to groups of clinicians and solo practitioners based on the quality and cost of care their patients receive.

In 2018, the Value Modifier applies upward, downward, and neutral payment adjustments at the practice level to Medicare Physician Fee Schedule (PFS) payments to physicians, nurse practitioners (NPs), physician assistants (PAs), clinical nurse specialists (CNSs), and certified registered nurse anesthetists (CRNAs)[2] based on a Calendar Year 2016 (2016) performance period. Practices are identified by their Medicare-enrolled Taxpayer Identification Numbers (TINs).

The Value Modifier provides neutral payment adjustments based on performance to the overwhelming majority of clinicians subject to the Value Modifier in practices that reported quality measures to the Physician Quality Reporting System (PQRS) to avoid that program's downward payment adjustment. The practices that met the minimum quality reporting requirements are referred to as "Category 1" practices under the Value Modifier program. For Category 1 practices, the Value Modifier program adjusts payments upward for statistically significant above-average performance on measures of the quality and cost of care provided to Medicare fee-for-service beneficiaries.

Under the 2018 Value Modifier, Category 1 practices do not receive downward payment adjustments based on performance in order to provide a more seamless transition to the new Merit-based Incentive Payment System (MIPS). The 2018 Value Modifier applies automatic downward payment adjustments only to clinicians subject to the Value Modifier in practices that did not meet quality reporting requirements to avoid the PQRS downward payment adjustment in 2018 (referred to as "Category 2" practices).

The Value Modifier's final payment adjustment year is 2018. The Quality Payment Program, established by the Medicare Access and CHIP Reauthorization Act of 2015 (MACRA), is a new quality payment incentive program for physicians and other eligible clinicians that rewards value and outcomes in one of two ways: through the MIPS or Advanced Alternative Payment Models (APMs). MIPS replaces and streamlines the Value Modifier along with several other quality incentive payment programs. The first performance period of the Quality Payment

[1] The numbers in this report reflect PQRS and Value Modifier Informal Review decisions as of November 29, 2017. These numbers do not reflect Informal Review decisions made after November 29, 2017, for 3,239 groups and solo practices with at least one pending PQRS Informal Review or for 186 groups and solo practices with at least one pending Value Modifier Informal Review.

[2] Physicians, NPs, PAs, CNSs, and CRNAs in practices subject to the 2018 Value Modifier are collectively referred to in this report as "clinicians subject to the Value Modifier" when referring to the 2018 Value Modifier. When referring to the 2015, 2016, or 2017 Value Modifier, this term applies to physicians in practices subject to the Value Modifier. In 2015, 2016, and 2017, only physicians were subject to the Value Modifier. In 2018, physicians, NPs, PAs, CNSs, and CRNAs are subject to the Value Modifier.

Program was Calendar Year 2017 (2017). The first payment adjustment year will be Calendar Year 2019 (2019).

A. Key findings

Number of clinicians subject to the Value Modifier and their performance

1. The number of clinicians subject to the Value Modifier was phased in over four years and increased from 226,000 in Calendar Year 2015 (2015) to 1,151,353 in 2018 (Table 2). Of the 1,151,353 clinicians subject to the 2018 Value Modifier, 854,878 (74.2 percent) billed under Category 1 practices (Figure 1).
2. Of the 854,878 clinicians subject to the 2018 Value Modifier who billed under Category 1 practices in 2016, 20,481 clinicians (2.4 percent) billed under practices receiving upward payment adjustments in 2018, while 834,397 clinicians (97.6 percent) billed under practices receiving neutral payment adjustments, including 87,841 clinicians (10.3 percent) who billed under practices that had below-average performance[3] but are held harmless from downward payment adjustments in 2018 (Figure 1).

Distribution of Value Modifier upward payment adjustments

3. Category 1 practices receiving upward payment adjustments in 2018 performed better on almost every claims-based quality outcome measure (the exception was the 30-day All-Cause Hospital Readmission measure) and every cost measure than other practices (Table 9).
4. For Category 1 practices, the primary driver of performance under the 2018 Value Modifier was quality rather than cost (Table 7).
5. For the 2018 Value Modifier, a practice had to have a Quality Composite Score above the 93rd percentile to be considered high quality and below the 10th percentile to be considered low quality. For the Cost Composite Score, a practice had to score above the 91st percentile to be considered high cost and below the 9th percentile to be considered low cost.[4]
6. Although clinicians in practices of different sizes received upward payment adjustments at similar rates in each year the Value Modifier has been applied (Table 5), clinicians in small practices are projected to receive an average upward payment adjustment of $13,000 per clinician subject to the Value Modifier in 2018 compared to $3,000 per clinician subject to the Value Modifier in practices with 100 or more eligible professionals.

[3] Having above-average performance means having one of the following combinations of quality and cost tiers: high quality and average cost, high quality and low cost, or average quality and low cost. Having below-average performance means having one of the following combinations of quality and cost tiers: low quality and average cost, low quality and high cost, or average quality and high cost.

[4] To be considered either a high or a low performer on quality or cost, a practice's Quality or Cost Composite Score had to be at least one standard deviation above or below, and statistically significantly different from, the mean Quality or Cost Composite Score for the peer group. The percentiles in this finding correspond to one standard deviation above and below the mean Quality and Cost Composite Scores, without consideration of statistical significance.

Beneficiary clinical complexity and Value Modifier performance

7. In 2016, 2017, and 2018, the majority of upward payment adjustment dollars have gone to practices that were attributed the most clinically complex beneficiaries (Table 3).
8. Clinicians in practices that were attributed higher-risk beneficiaries are more commonly receiving upward payment adjustments and more commonly had below-average performance than clinicians in practices that were attributed the lower-risk beneficiaries (Table 8). Clinicians in practices with below-average performance would be receiving downward payment adjustments in 2018, but are instead receiving neutral payment adjustments since all Category 1 practices are held harmless from downward payment adjustments in 2018.

PQRS group practice reporting and the Value Modifier

9. Among the 1,151,353 clinicians subject to the 2018 Value Modifier, 854,878 (74.2 percent) billed under a Category 1 practice. Among those 854,878 clinicians, 507,998 (59.4 percent) were in a practice that reported quality measures to PQRS via a Group Practice Reporting Option (GPRO) and 346,880 (40.6 percent) were in a practice that reported as individuals (Table 11).[5]

Specialty and Value Modifier performance

10. In total, 4.1 percent of rheumatologists billed under practices receiving upward payment adjustments in 2018—the highest percentage among physician specialties. In descending order, the next nine physician specialties that billed most commonly under practices receiving upward adjustments are nephrology, sports medicine, emergency medicine, ophthalmology, gastroenterology, hand surgery, podiatry, endocrinology, and interventional pain management (Table 12).
11. In total, 79.5 percent of physicians specializing in maxillofacial surgery billed under practices receiving automatic downward payment adjustments in 2018 due to Category 2 status—the highest percentage among physician specialties. In descending order, the next nine physician specialties that most commonly billed under practices receiving downward payment adjustments are oral surgery (dentists only), chiropractic, general practice, optometry, psychiatry, podiatry, plastic and reconstructive surgery, allergy/immunology, and physical medicine and rehabilitation (Table 13).
12. In total, 18.5 percent of physicians specializing in emergency medicine billed under practices being held harmless from downward adjustments in 2018—the highest percentage among all physician specialties. In descending order, the next nine physician specialties that most commonly billed under practices being held harmless from downward payment adjustments are medical oncology, hematology/oncology, internal medicine, dermatology, diagnostic radiology, critical care (intensivists), geriatric medicine, hospice and palliative care, and radiation oncology (Table 14).

[5] In this report, "practices that reported as individuals" include practices that registered for a GPRO and did not avoid the 2018 PQRS payment adjustment as a group, but had at least 50 percent of the eligible professionals in the practice avoid the 2018 PQRS payment adjustment as individuals.

II. BACKGROUND

A. How the Value Modifier is determined

The 2018 Value Modifier applies to physician groups and solo practitioners (i.e., practices) if at least one eligible professional subject to the Value Modifier was associated with the practice in 2016.[6] Practices are not subject to the 2018 Value Modifier if one or more eligible professionals in the practice participated in the Pioneer Accountable Care Organization (ACO) Model, the Comprehensive Primary Care initiative, the Next Generation ACO Model, the Oncology Care Model, or the Comprehensive End-Stage Renal Disease Care Model in 2016. Practices that participated in a Medicare Shared Savings Program ACO in 2016 are subject to the 2018 Value Modifier.

CMS classified the practices subject to the 2018 Value Modifier as Category 1 or Category 2 based on their participation in the PQRS during the 2016 performance period. Category 1 practices avoided the PQRS payment adjustment as a group, as a solo practitioner, or by having at least 50 percent of the eligible professionals in the practice avoid the PQRS payment adjustment as individuals. Category 1 practices are eligible to receive upward or neutral payment adjustments based on performance. Category 2 practices are those that did not avoid the PQRS payment adjustment in one of the ways described above.[7] Category 2 practices that consisted of at least 10 eligible professionals and one physician are receiving negative two percent (-2.0%) payment adjustments in 2018, while Category 2 practices that consisted of fewer than 10 eligible professionals or did not have any physicians are receiving negative one percent (-1.0%) payment adjustments. The 2018 Value Modifier applies separately from, and in addition to, the 2018 PQRS payment adjustment, if applicable.

Category 1 practices had their Value Modifier payment adjustments calculated using a quality-tiering methodology in which CMS calculated composite scores for quality and cost to assign practices to low, average, or high quality and cost tiers. To be considered either a high or a low performer on quality or cost, a practice's quality or cost composite score had to be at least one standard deviation above or below, and statistically significantly different from, the mean quality or cost composite score for the peer group. For the application of the 2018 Value

[6] For more information on which practices are subject to the 2018 Value Modifier, please refer to Section II.B. of the document entitled, "Detailed Methodology for the 2018 Value Modifier and the 2016 Quality and Resource Use Report," available at the following URL: https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/PhysicianFeedbackProgram/Downloads/Detailed-Methodology-for-the-2018-Value-Modifier-and-2016-Quality-and-Resource-Use-Report-.pdf.

[7] Practices that participated in a Shared Savings Program ACO in 2016 are subject to the Value Modifier in 2018, but had different criteria for being classified as Category 1 or Category 2. For more information on how the 2018 Value Modifier applies to TINs that participated in a Shared Savings Program ACO in 2016, please see the document entitled, "Medicare Shared Savings Program Interaction with the 2018 Value Modifier: Frequently Asked Questions," available at the following URL: https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/PhysicianFeedbackProgram/Downloads/2018-VM-MSSP-FAQs.pdf.

Modifier based on these requirements, the composite score cutoffs in percentile terms, without consideration of statistical significance, were as follows:

- For the Quality Composite Score, a practice had to score above the 93rd percentile to be considered high quality and below the 10th percentile to be considered low quality.
- For the Cost Composite Score, a practice had to score above the 91st percentile to be considered high cost and below the 9th percentile to be considered low cost.

Because the Value Modifier must be budget neutral, CMS uses an adjustment factor to distribute downward payment adjustments to the practices receiving upward payment adjustments. The adjustment factor is approximately 6.63 percent for the 2018 Value Modifier.[8] This means that in 2018, Medicare PFS payments to Category 1 practices receiving upward payment adjustments as a result of quality-tiering are being adjusted upward by 6.63 percent (+1.0 times the adjustment factor), 13.26 percent (+2.0 times the adjustment factor), or 19.88 percent (+3.0 times the adjustment factor), depending upon each practice's performance and their attributed beneficiaries' average CMS-Hierarchical Condition Category (HCC) risk score (Table 1). Practices that are receiving an upward payment adjustment and have attributed beneficiaries with an average CMS-HCC risk score at or above the 75th percentile of all Medicare beneficiaries nationwide are receiving an additional 6.63 percent (+1.0 times the adjustment factor) upward payment adjustment under the 2018 Value Modifier.

Table 1. 2018 Value Modifier quality-tiering categories and payment adjustments, with counts of clinicians subject to the 2018 Value Modifier

	Low quality	Average quality		High quality	
Low cost	0.0% (2,526)	6.63% (1,231)	13.26%[a] (4,252)	13.26% (220)	19.88%[a] (53)
Average cost	0.0% (60,634)	0.0% (743,774)		6.63% (10,460)	13.26%[a] (4,265)
High cost	0.0% (7,537)	0.0% (19,670)		0.0% (256)	

Note: The numbers in parentheses represent the number of clinicians subject to the 2018 Value Modifier.

[a] Practices receiving upward payment adjustments that had the most clinically complex attributed beneficiaries are receiving the additional high-risk bonus adjustment of 6.63 percent (equal to +1.0 x adjustment factor).

For more information on the methodology used to calculate the 2018 Value Modifier, please refer to the documentation on the CMS' website, available at the following URL: https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/PhysicianFeedbackProgram/2016-QRUR.html.

[8] For more information on the methodology used to calculate the adjustment factor, please see the document entitled, "Value-Based Payment Modifier 2018 X-Factor Calculation," available at the following URL: https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/PhysicianFeedbackProgram/Downloads/2018-Value-Based-Payment-Modifier-X-Factor-Calculation.pdf.

B. Quality and Resource Use Reports

Under the Value Modifier program, CMS disseminates confidential reports, called Annual Quality and Resource Use Reports (QRURs), to groups of clinicians and solo practitioners nationwide. CMS produced 2016 Annual QRURs for 271,805 groups and solo practitioners with at least one eligible professional who billed Medicare Part B during 2016, regardless of whether they would be subject to the 2018 Value Modifier. The 2016 Annual QRUR includes information about each practice's 2018 Value Modifier payment adjustment and its performance on quality and cost measures in 2016. For more information on the contents of the QRUR, please refer to the document entitled, "How to Understand Your 2016 Annual Quality and Resource Use Report," available at the following URL: https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/PhysicianFeedbackProgram/Downloads/2016-UnderstandingYourAQRUR.pdf.

III. RESULTS OF THE VALUE MODIFIER IN 2015, 2016, 2017, AND 2018

This section of the report examines Value Modifier outcomes in each year of the program. Subsequent sections provide more detailed information on the results corresponding to the 2018 Value Modifier. For more information on the results corresponding to the 2015, 2016, or 2017 Value Modifier, please refer to the Experience Report published for that year, available on CMS' website at the following URL: https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/PhysicianFeedbackProgram/index.html.

A. Payment adjustment status in 2015, 2016, 2017, and 2018

Table 2 displays the number of clinicians subject to the Value Modifier in each year that the Value Modifier has been applied. CMS phased in the Value Modifier gradually over time. CMS applied the Value Modifier in 2015 to physicians in practices with 100 or more eligible professionals. In 2016, the Value Modifier applied to physicians in practices with 10 or more eligible professionals. In 2017, the Value Modifier applied to physicians in practices with 2 or more eligible professionals and physician solo practitioners. In 2018, the Value Modifier applies for the first time to NPs, PAs, CNSs, and CRNAs in groups with 2 or more eligible professionals and solo practitioners, in addition to physicians.

In each of the years the Value Modifier has been applied, a majority of clinicians subject to the Value Modifier received neutral payment adjustments (62.6 percent in 2017 was the minimum) and inadequate PQRS reporting drove downward adjustments (each year, 3.0 percent or less of clinicians subject to the Value Modifier received downward payment adjustments due to performance while at least 23.6 percent of clinicians subject to the Value Modifier received downward payment adjustments due to Category 2 status).

Caution should be exercised in drawing additional conclusions from the distribution of clinicians in each payment adjustment classification across years because policies related to the phase-in and phase-out of the Value Modifier affected the number of practices in each payment adjustment category every year, independent of practices' performance. For example, payment adjustments based on quality-tiering had to be voluntarily elected by large physician groups in the first year of the program. In subsequent years, quality-tiering was mandatory for all Category 1 practices.

Table 2. Clinicians subject to the Value Modifier, by year and payment adjustment status

	2015 Value Modifier		2016 Value Modifier		2017 Value Modifier		2018 Value Modifier	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
All clinicians subject to the Value Modifier	226,000	100.0%	460,201	100.0%	885,108	100.0%	1,151,353	100.0%
Upward payment adjustment	7,247	3.2%	4,302	0.9%	12,176	1.4%	20,481	1.8%
High-risk bonus adjustment	0	0.0%	2,379	0.5%	6,639	0.8%	8,570	0.7%
Neutral payment adjustment due to performance	162,950	72.1%	300,282	65.3%	542,574	61.3%	746,556	64.8%
Held harmless from downward payment adjustment	n/a	n/a	17,466	3.8%	11,555	1.3%	87,841	7.6%
Downward adjustment due to performance	2,403	1.1%	10,067	2.2%	26,973	3.0%	n/a	n/a
Downward adjustment for Category 2 status	53,400	23.6%	128,084	27.8%	291,830	33.0%	296,475	25.8%

Notes: n/a indicates the field is not applicable.

In 2015, 2016, and 2017, physicians were the only clinicians subject to the Value Modifier. In 2018, physicians, NPs, PAs, CNSs, and CRNAs are subject to the Value Modifier. In each year, the Value Modifier applied to progressively smaller practices, starting with groups of at least 100 eligible professionals in 2015 and including groups of any size and solo practitioners in 2017 and 2018.

B. Distribution of upward payment adjustments in 2015, 2016, 2017, and 2018

Table 3 presents the distribution of upward payment adjustments to clinicians subject to the Value Modifier in practices that received the high-risk bonus adjustment for treating a disproportionate share of clinically complex beneficiaries in each year the Value Modifier applied. In every year except 2015, the majority of upward payment adjustment dollars went to practices that received the high-risk bonus adjustment. In 2015, none of the practices that received an upward payment adjustment received the high-risk bonus adjustment. Quality-tiering was optional for Category 1 practices in 2015, and only 14 practices received upward payment adjustments in that year.

Table 3. Upward payment adjustments in millions of dollars (with percentage of total), by eligibility for high-risk bonus adjustment and year

	Total upward payment adjustment paid in year:			
	2015	2016	2017*	2018*
Practices that treated a disproportionate share of high-risk beneficiaries	$0M (0.0%)	$46M (63.9%)	$192M (64.0%)	$78M (56.1%)
All practices receiving upward payment adjustments	$15M (100.0%)	$72M (100.0%)	$300M (100.0%)	$139M (100.0%)

Notes: In 2015, 2016, and 2017, physicians were the only clinicians subject to the Value Modifier. In 2018, physicians, NPs, PAs, CNSs, and CRNAs are subject to the Value Modifier. In each year, the Value Modifier applied to progressively smaller practices, starting with groups of at least 100 eligible professionals in 2015 and including groups of any size and solo practitioners in 2017 and 2018.

*While upward payment adjustments for 2015 and 2016 are obtained from actual claims payment data, upward payment adjustments for 2017 and 2018 are based on projected billings for practices receiving upward adjustments, calculated by CMS' Office of the Actuary (OACT). Data on observed upward payment adjustments in those years are not yet available.

Table 4 shows the number of upward payment adjustment dollars, per clinician subject to the Value Modifier, going to practices of different sizes. In general, more upward payment adjustment dollars per clinician are paid to clinicians in smaller practices than to clinicians in larger practices. For example, $13,000 in upward payment adjustments per clinician subject to the Value Modifier are projected to go to solo practitioners in 2018. By comparison, only $3,000 in upward payment adjustments per clinician subject to the Value Modifier are projected to go to practices with at least 100 eligible professionals.

Table 4. Upward payment adjustments per clinician subject to the Value Modifier in millions of dollars, by practice size and year

Practice Size	Total upward payment adjustment per clinician subject to the Value Modifier paid in year: 2015	2016	2017*	2018*
Solo practitioners	n/a	n/a	$23,000	$13,000
Practices with 2-9 eligible professionals	n/a	n/a	$25,000	$11,000
Practices with 10-99 eligible professionals	n/a	$22,512	$17,000	$6,000
Practices with 100+ eligible professionals	$2,123	$10,567	$12,000	$3,000
All practices	$2,123	$17,210	$18,000	$6,000

Notes: n/a indicates the field is not applicable

In 2015, 2016, and 2017, physicians were the only clinicians subject to the Value Modifier. In 2018, physicians, NPs, PAs, CNSs, and CRNAs are subject to the Value Modifier. In each year, the Value Modifier applied to progressively smaller practices, starting with groups of at least 100 eligible professionals in 2015 and including groups of any size and solo practitioners in 2017 and 2018.

*While upward payment adjustments for 2015 and 2016 are obtained from actual claims payment data, upward payment adjustments for 2017 and 2018 are based on projected billings for practices receiving upward adjustments, calculated by CMS' Office of the Actuary (OACT). Data on observed upward payment adjustments in those years are not yet available.

Table 5 displays the percentage of clinicians subject to the Value Modifier that billed under practices receiving upward payment adjustments in each year of the program. Comparable percentages of clinicians in practices of different sizes—generally between one and two percent—received upward payment adjustments within any given year. For example, 1.6 percent of solo practitioners billed under practices receiving upward payment adjustments in 2018. By comparison, 2.0 percent of clinicians billing under practices with 100 or more eligible professionals are receiving upward payment adjustments in 2018 (Table 6).

Table 5. Percentage of clinicians subject to the Value Modifier in practices receiving upward payment adjustments, by practice size and year

Practice Size	Percent of clinicians in practices receiving an upward payment adjustment in year: 2015	2016	2017	2018
Solo practitioners	n/a	n/a	1.0%	1.6%
Practices with 2-9 eligible professional	n/a	n/a	1.5%	2.0%
Practices with 10-99 eligible professionals	n/a	1.0%	1.8%	1.5%
Practices with 100+ eligible professionals	3.2%	0.9%	1.1%	2.0%
All practices	3.2%	0.9%	1.4%	1.8%

Notes: n/a indicates the field is not applicable.

In 2015, 2016, and 2017, physicians were the only clinicians subject to the Value Modifier. In 2018, physicians, NPs, PAs, CNSs, and CRNAs are subject to the Value Modifier. In each year, the Value Modifier applied to progressively smaller practices, starting with groups of at least 100 eligible professionals in 2015 and including groups of any size and solo practitioners in 2017 and 2018.

IV. THE 2018 VALUE MODIFIER: PRACTICE CHARACTERISTICS

A. Eligible professionals and attributed beneficiaries

Table 6 describes the characteristics of practices that are subject to the 2018 Value Modifier, the eligible professionals who billed under those practices, and the characteristics of their attributed beneficiaries. Practices with 10 or more eligible professionals were attributed beneficiaries with a higher average CMS-HCC risk score (1.42) than practices with 2 to 9 eligible professionals (1.16) and solo practitioners (1.18). Additionally, practices with 10 or more eligible professionals were comprised of a larger share of non-physician clinicians (26.3 percent) than practices with 2 to 9 eligible professionals (16.4 percent).

Table 6. Characteristics of practices subject to the 2018 Value Modifier

	All practices	Practices with 10 or more eligible professionals	Practices with 2 to 9 eligible professionals	Solo practitioners [a]
Number of practices	207,151	15,569	51,181	140,401
Number of practices with no physicians	6,718	450	1,765	4,503
All clinicians subject to Value Modifier	1,151,353	810,599	191,716	149,038
Number of physicians	874,848	583,113	151,304	140,431
Number of NPs, PAs, CNSs, and CRNAs	276,505	227,486	40,412	8,607
Practice characteristics: eligible professionals				
Average number of eligible professionals	5.9	55.3	3.9	1.1
Percentage of practices that are solo practices	65.2%	0.0%	0.0%	96.2%
Predominantly single specialty: Percentage of practices with more than 50 percent of eligible professionals with same specialty	88.4%	56.0%	71.7%	98.1%
Predominantly primary care providers (PCPs): Percentage of practices with more than 50 percent of eligible professionals who are PCPs	27.1%	31.3%	27.5%	26.5%
Average percentage of eligible professionals who are physicians	89.6%	66.4%	79.8%	95.8%
Average percentage of eligible professionals who are NPs, PAs, CNSs, or CRNAs	8.8%	26.3%	16.4%	4.1%
Practice characteristics: Attributed beneficiaries[b]				
Average number of attributed beneficiaries	120.2	897.1	107.8	38.5
Average percentage of beneficiaries attributed on the basis of primary care services provided by PCPs	44.7%	66.0%	45.1%	41.8%
Average practice-level CMS-HCC score	1.19	1.42	1.16	1.18

[a] There are more eligible professionals than practices in the solo practitioner column because practice size was determined by the minimum of the number of clinicians who billed under the practice in 2016 and the number in the Provider Enrollment, Chain, and Ownership System (PECOS) whereas only the number of clinicians who billed under the practice in 2016 was used to calculate the number of clinicians and practice characteristics of eligible professionals (e.g., counts, averages, and percentages).

[b] The term “attributed beneficiaries” refers to beneficiaries attributed to a practice via a two-step process for the per capita cost measures and claims-based quality outcome measures; a different attribution method was used for the PQRS and Medicare Spending per Beneficiary (MSPB) measures. In the first step, each beneficiary was attributed to

Table 6 *(continued)*

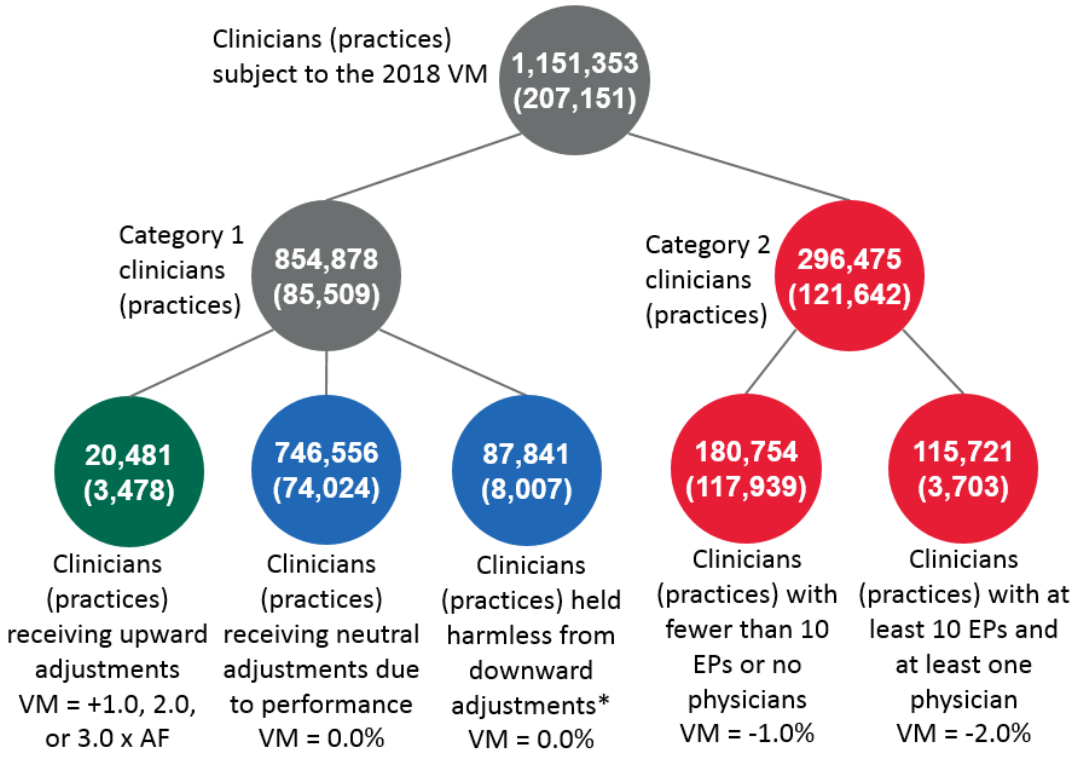
a practice if the PCPs in that practice collectively provided more primary care services to that beneficiary than the PCPs in any other practice. Beneficiaries that were not attributed in the first step are attributed in the second step to the practice whose non-PCP physicians provided them the most primary care services.

V. THE 2018 VALUE MODIFIER: QUALITY-TIERING AND PERFORMANCE

Figure 1 shows the number of clinicians subject to the 2018 Value Modifier who billed under practices that were classified as Category 1 and Category 2. It also breaks out the number of clinicians who billed under practices in each payment adjustment category.

In 2016, 1,151,353 physicians, NPs, PAs, CNSs, and CRNAs billed under the practices subject to the 2018 Value Modifier. Of these, 854,878 clinicians (74.2 percent) billed under practices that were classified as Category 1 and 296,475 clinicians (25.8 percent) billed under practices that were classified as Category 2. Of the clinicians who billed under Category 1 practices in 2016, 20,481 clinicians (2.4 percent) billed under practices receiving upward payment adjustments in 2018, while 834,397 clinicians (97.6 percent) billed under practices receiving neutral payment adjustments, including 87,841 clinicians (10.3 percent) who billed under practices that had below-average performance but are held harmless from downward payment adjustments under quality-tiering in 2018.

Figure 1. Clinicians and practices subject to the 2018 Value Modifier



Note: The numbers in parentheses in this figure indicate the number of practices in the associated bubble. "VM" in this figure stands for 2018 Value Modifier payment adjustment amount. "EPs" in this figure stands for eligible professionals. "AF" in this figure stands for the adjustment factor.

* Practices in this category had below-average performance, but are held harmless from downward payment adjustments under the 2018 Value Modifier.

A. Quality-tiering results for the 2018 Value Modifier

Table 7 shows the quality and cost tier distribution of Category 1 practices. The primary driver behind performance was quality, as practices' quality tiers deviated from average more frequently than their cost tiers. Among 3,478 practices with above-average performance, 3,339 practices (96.0 percent) had high quality and only 159 practices (4.6 percent) had low cost.[9] Of the 8,007 practices with below-average performance, 6,762 practices (84.5 percent) had low quality and 1,762 practices (22.0 percent) had high cost.[10]

Table 7. Distribution of Category 1 practices by quality and cost tiers (N = 85,509 practices)

	Low quality	Average quality	High quality	Total
Low cost	0.0% (21)	0.2% (139)	0.0% (20)	0.2% (180)
Average cost	7.3% (6,245)	86.5% (73,970)	3.9% (3,319)	97.7% (83,534)
High cost	0.6% (517)	1.5% (1,245)	0.0% (33)	2.1% (1,795)
Total	7.9% (6,783)	88.1% (75,354)	3.9% (3,372)	100.0% (85,509)

Note: This table displays the quality and cost tiers of the 85,509 Category 1 practices subject to the 2018 Value Modifier. It excludes Category 2 practices, for which the Value Modifier was not determined through quality-tiering. Some percentages do not sum to the total due to rounding. Values in parentheses represent numbers of practices.

[9] The 3,478 practices with above-average performance are highlighted in Table 7 in green. Of these, 3,339 practices with high quality include 20 practices with low cost and 3,319 practices average cost. The 159 practices with above-average performance and low cost include 139 with average quality and 20 practices with high quality. Because 20 practices have both high quality and low cost, they are counted only once in the total of 3,478 practices with above-average performance.

[10] The 8,007 practices with below-average performance are highlighted in Table 7 in blue. Of these, 6,762 practices with low quality include 517 practices with high cost and 6,245 practices with average cost. The 1,762 practices with below-average performance and high cost include 1,245 practices with average quality and 517 practices with low quality. Because 517 practices have both low quality and high cost, they are counted only once in the total of 3,478 practices with below-average performance.

B. The 2018 Value Modifier by practice performance

The following section of this report examines the relationship between practice characteristics and Value Modifier outcomes, such as payment adjustment, Category 1 or Category 2 classification, and quality and cost tier.

1. Practice payment adjustment categories by beneficiary risk

Table 8 stratifies clinicians subject to the Value Modifier into quartiles based on their practices' attributed beneficiaries' average CMS-HCC risk scores and their 2018 payment adjustments. It shows that 391,403 clinicians subject to the Value Modifier billed under the 43,770 practices with average CMS-HCC risk scores in the top quartile of all Medicare beneficiaries nationwide.

Clinicians in practices in the highest quartile (of beneficiary risk) are receiving upward payment adjustments for having above-average performance at a higher rate than clinicians in the lowest quartile (2.2 percent of clinicians in the highest quartile compared to 1.8 percent of clinicians in the lowest quartile). Of the 20,481 clinicians in practices that are receiving upward payment adjustments in 2018, 8,570 (41.8 percent) were also in practices receiving the high-risk bonus adjustment since their attributed beneficiaries' average CMS-HCC risk scores were in the top quartile of all Medicare beneficiaries nationwide.

Clinicians in practices in the highest quartile also had below-average performance at a higher rate than clinicians in practices in the lowest quartile (16.0 percent of clinicians in the highest quartile compared to 3.3 percent of clinicians in the lowest quartile). These practices would have received downward payment adjustments but, instead, will receive neutral payment adjustments because all Category 1 practices are held harmless from downward payment adjustments under the 2018 Value Modifier.

Table 8. Clinicians subject to the 2018 Value Modifier, by payment adjustment category and average beneficiary CMS-HCC risk score (N= 1,151,353 clinicians)

	No CMS-HCC risk score (64,197 practices)	Lowest quartile (0.12–0.51 CMS-HCC score; 13,120 practices)	Second quartile (0.51–0.77 CMS-HCC score; 24,800 practices)	Third quartile (0.77–1.29 CMS-HCC score; 61,264 practices)	Highest quartile (1.29-12.82 CMS-HCC score; 43,770 practices)	All practices (207,151 practices)
Upward payment adjustment, number (percentage) of clinicians	522 (0.5%)	465 (1.8%)	1,920 (2.5%)	9,004 (1.7%)	8,570 (2.2%)	20,481 (1.8%)
Neutral payment adjustment due to performance, number (percentage) of clinicians	51,153 (44.9%)	9,601 (38.0%)	32,209 (42.3%)	411,570 (75.6%)	242,023 (61.8%)	746,556 (64.8%)
Held harmless from downward payment adjustment, number (percentage) of clinicians	3,082 (2.7%)	8,34 (3.3%)	4,815 (6.3%)	16,371 (3.0%)	62,739 (16.0%)	87,841 (7.6%)
Downward payment adjustment, number (percentage) of clinicians	59,183 (51.9%)	14,336 (56.8%)	37,272 (48.9%)	107,613 (19.8%)	78,071 (19.9%)	296,475 (25.8%)
Total number (percentage) of clinicians	113,940 (100.0%)	25,236 (100.0%)	76,216 (100.0%)	544,558 (100.0%)	391,403 (100.0%)	1,151,353 (100%)

Notes: The CMS-HCC risk score quartiles are based on the distribution of the CMS-HCC risk scores for all beneficiaries nationwide. Each practice's CMS-HCC risk score is based on beneficiaries who were either attributed to the practice for the per capita cost measures and claims-based quality outcomes measures or had at least one MSPB episode attributed to the practice. There were 64,179 practices that did not have a CMS-HCC risk score because they did not have any attributed beneficiaries or episodes, or all of their attributed beneficiaries were missing CMS-HCC risk scores.

2. Payment adjustment–level performance

Table 9 shows average performance on measure scores for Category 1 practices by payment adjustment category. With the exception of the 30-day All-Cause Hospital Readmission measure, Category 1 practices receiving upward payment adjustments performed better on every claims-based quality outcome and cost measure than practices receiving neutral adjustments due to performance and those that had below-average performance but are being held harmless from downward payment adjustments. Practices that had below-average performance performed worse on every claims-based quality outcome and cost measure than practices that are receiving upward or neutral payment adjustments due to performance.

Table 9. Select performance measures for Category 1 practices, by payment adjustment category (N = 85,509 practices)

	All Category 1 practices	Upward payment adjustment	Neutral payment adjustment due to performance	Held harmless from downward payment adjustment
Number of practices	85,509	3,478	74,024	8,007
Number of physicians	629,452	15,116	552,446	61,890
Number of NPs, PAs, CNSs and CRNAs	225,426	5,365	194,110	25,951
Select measures included in the Value Modifier				
Average Acute Ambulatory Care Sensitive Conditions (ACSC) Composite rate[a]	5.4	3.4	4.8	11.2
Average Chronic ACSC Composite rate[a]	37.7	30.2	36.1	54.1
Average 30-day All-Cause Hospital Readmission rate[b]	15.1	15.2	15.1	15.6
Average per capita costs				
All attributed beneficiaries	$10,214	$9,358	$9,870	$13,490
Diabetes	$16,945	$15,445	$16,360	$22,208
COPD	$30,074	$26,460	$28,990	$39,927
CAD	$19,468	$17,952	$18,685	$26,383
Heart failure	$30,588	$26,995	$29,484	$40,591
Average Medicare Spending Per Beneficiary (MSPB)	$20,295	$19,985	$20,262	$20,641
Other measures reported in QRUR but not included in the Value Modifier				
Average percentage of attributed beneficiaries who received emergency services not included in a hospital admission	28.5%	25.1%	27.7%	36.4%

Note: Higher scores indicate worse performance for all measures shown in this table.

[a] Hospital admissions per 1,000 beneficiaries.

[b] Per 100 index admissions.

3. Composite-level performance

Table 10 shows the average performance of Category 1 practices on the Quality and Cost Composite Scores, quality and cost domains, and selected quality and cost measures, stratified by quality tier. The Quality Composite Score was based on (1) PQRS measures reported by the practice or by individual eligible professionals within the practice and (2) up to three claims-based quality outcome measures calculated from Medicare fee-for-service claims submitted for Medicare beneficiaries attributed to the practice. A practice could also have elected to have Consumer Assessment of Healthcare Providers and Systems for PQRS survey measures included in their Quality Composite Score.

Category 1 practices classified as high quality performed better, on average, on all quality domains and cost measures than practices classified as average or low quality. Practices classified as high quality also performed better on all but one claims-based quality outcome measure than practices classified as average or low quality. The one exception was the 30-day All-Cause Hospital Readmissions measure. On that measure, practices classified as average quality performed better, on average, than practices classified as high quality (15.1 readmissions per 100 index admissions for practices classified as average quality compared to 15.2 readmissions per 100 index admissions for practices classified as high quality).

Inversely, practices classified as low quality performed worse on all quality domains and all but one cost measure, on average, than practices classified as average quality. The one exception in this case was average MSPB. On this measure, practices classified as low quality performed better than practices classified as average quality ($20,215 for practices classified as low quality compared to $20,312 for practices classified as average quality).

Table 10. Average performance of Category 1 practices, by quality tier (N = 85,509 practices)

	All Category 1 practices	Low quality	Average quality	High quality
Number of practices	85,509	6,783	75,354	3,372
Number of physicians	629,452	51,050	566,638	11,764
Number of NPs, PAs, CNSs, and CRNAs	225,426	19,647	202,289	3,490
Average Quality Composite Score	**0.3**	**-1.1**	**0.4**	**1.2**
Average domain scores:				
Effective clinical care	0.2	-1.0	0.3	1.3
Person- and caregiver-centered experience and outcomes	0.1	-0.9	0.1	0.8
Community/population health	0.5	-0.7	0.6	1.4
Patient safety	0.2	-1.1	0.4	0.7
Communication and care coordination	0.3	-1.1	0.4	1.1
Efficiency and cost reduction	0.0	-0.7	0.1	0.6
Average scores for claims-based quality outcomes measures:				
Acute ACSC Composite rate[a,c]	5.4	9.9	5.1	3.4
Chronic ACSC Composite rate[a,c]	37.7	51.6	36.8	30.9
30-day All-Cause Hospital Readmission rate[b,c]	15.1	15.4	15.1	15.2
Average Cost Composite Score[c]	**-0.3**	**0.3**	**-0.3**	**-0.6**
Average per capita costs:				
All attributed beneficiaries[c]	$10,957	$11,959	$10,903	$10,254
Diabetes[c]	$18,032	$20,070	$17,895	$17,038
COPD[c]	$30,818	$35,749	$30,532	$27,914
CAD[c]	$20,348	$23,320	$20,126	$19,360
Heart failure[c]	$31,575	$36,069	$31,305	$28,870
Average MSPB[c]	$20,295	$20,215	$20,312	$20,117

Note: The measure scores shown in this table are unstandardized performance scores. Domain scores are the equally weighted average of standardized measure scores in the domain. The composite scores are the equally weighted average of non-missing domain scores. Scores shown in this table are based only on non-missing values.

[a] Hospital admissions per 1,000 beneficiaries.

[b] Per 100 index admissions.

[c] Higher scores indicate worse performance.

4. Distribution of clinicians (practices) by reporting mechanism

Table 11 shows the percentage of clinicians subject to the Value Modifier who billed under Category 1 practices, stratified by reporting mechanism. Among the 1,151,353 clinicians subject to the 2018 Value Modifier, 854,878 (74.2 percent) billed under a Category 1 practice. Among those 854,878 clinicians, 507,998 (59.4 percent) were in a practice that reported quality measures to PQRS via a GPRO and 346,880 (40.6 percent) were in a practice that reported as individuals.

Table 11. Distribution of clinicians (practices) subject to the 2018 Value Modifier, by reporting mechanism (N = 1,151,353 Clinicians)

	Number and percentage of clinicians (practices) classified as Category 1		Total number and percentage of clinicians (practices) subject to the 2018 Value Modifier	
All clinicians (practices)	854,878 (85,509)	74.2% (41.3%)	1,151,353 (207,151)	100.0% (100.0%)
Clinicians (practices) that reported via GPRO Web Interface, Registry, Electronic Health Record (EHR), or Qualified Clinical Data Registry (QCDR)	**507,998 (17,133)**	**98.7% (97.2%)**	**514,722 (17,618)**	**100.0% (100.0%)**
Web Interface (non-Shared Savings Program)	80,848 (253)	99.6% (97.7%)	81,201 (259)	100.0% (100.0%)
Web Interface (Shared Savings Program)[a]	226,512 (12,561)[a]	99.9% (99.1%)	226,845 (12,680)	100.0% (100.0%)
Registry	130,071 (2,871)	97.9% (93.3%)	132,822 (3,077)	100.0% (100.0%)
EHR	55,076 (1,172)	96.6% (90.1%)	56,992 (1,301)	100.0% (100.0%)
QCDR	15,491 (276)	91.9% (91.7%)	16,862 (301)	100.0% (100.0%)
Clinicians (practices) reporting as individuals	**346,880 (68,376)**	**54.5% (36.1%)**	**636,631 (189,533)**	**100.0% (100.0%)**

[a] Of the 12,561 Category 1 practices that participated in a Shared Savings Program ACO in 2016, 71 practices were classified as Category 1 because they reported outside their ACO, which did not meet PQRS reporting requirements.

5. Payment adjustment by clinician specialty

Table 12 shows the specialties that had the largest share of clinicians subject to the 2018 Value Modifier that billed under Category 1 practices and received upward payment adjustments. In total, 4.1 percent of rheumatologists billed under practices receiving upward payment adjustments in 2018—the highest percentage among all physician specialties. In descending order, the next nine physician specialties that billed most commonly under practices receiving upward adjustments are nephrology, sports medicine, emergency medicine, ophthalmology, gastroenterology, hand surgery, podiatry, endocrinology, and interventional pain management. Among non-physician specialties, PAs had the largest share of clinicians who billed under practices receiving upward payment adjustments (3.0 percent).

Table 12. Specialties most commonly in practices receiving upward payment adjustments (N = 3,478 practices)

Clinician specialty	Number of clinicians subject to the 2018 Value Modifier	Percentage of clinicians subject to the 2018 Value Modifier in practices receiving upward payment adjustments
Physician specialties	868,606	1.7%
Rheumatology	4,881	4.1%
Nephrology	9,432	4.0%
Sports medicine	1,176	3.9%
Emergency medicine	67,087	3.8%
Ophthalmology	21,498	3.1%
Gastroenterology	14,725	2.9%
Hand surgery	1,506	2.9%
Podiatry	17,667	2.8%
Endocrinology	6,087	2.7%
Interventional pain management	1,985	2.5%
Non-physician specialties	276,505	1.9%
PA	85,515	3.0%
CNS	2,665	2.0%
NP	126,085	1.5%
CRNA	62,240	1.3%

Note: This analysis includes only specialties with at least 1,000 clinicians who billed under practices subject to the 2018 Value Modifier. Clinicians are identified by National Provider Identification (NPI) number. Clinician counts reflect unique TIN-NPI combinations, rather than unique clinicians. Thus, clinicians who billed under multiple TINs are counted multiple times in this analysis.

Table 13 shows the specialties that had the largest share of clinicians subject to the Value Modifier bill under practices receiving automatic downward payment adjustments due to Category 2 status. In total, 79.5 percent of physicians specializing in maxillofacial surgery billed under practices receiving downward payment adjustments in 2018 due to Category 2 status—the highest percentage among all physician specialties. In descending order, the next nine physician specialties that most commonly billed under practices receiving downward payment adjustments are oral surgery (dentists only), chiropractic, general practice, optometry, psychiatry, podiatry, plastic and reconstructive surgery, allergy/immunology, and physical medicine and rehabilitation. Among non-physician specialties, CNSs had the largest share of clinicians who billed under Category 2 practices (45.9 percent).

Table 13. Specialties most commonly in Category 2 practices (N = 121,642 practices)

Clinician specialty	Number of clinicians subject to the 2018 Value Modifier	Percentage of clinicians subject to the 2018 Value Modifier in Category 2 practices
Physician specialties	868,606	28.1%
Maxillofacial surgery	1,161	79.5%
Oral surgery (dentists only)	2,076	73.6%
Chiropractic	42,946	71.5%
General practice	7,536	62.7%
Optometry	35,665	62.0%
Psychiatry	32,441	60.8%
Podiatry	17,667	53.0%
Plastic and reconstructive surgery	5,242	44.3%
Allergy/immunology	3,843	38.4%
Physical medicine and rehabilitation	9,068	37.0%
Non-physician specialties	276,505	18.5%
CNS	2,665	45.9%
NP	126,085	26.3%
PA	85,515	17.6%
CRNA	62,240	2.7%

Notes: This analysis includes only specialties with at least 1,000 clinicians who billed under TINs subject to the 2018 Value Modifier. Clinicians are identified by their NPI. Clinician counts reflect unique TIN–NPI combinations, rather than unique clinicians. Thus, clinicians who billed under multiple TINs are counted multiple times in this analysis.

Table 14 shows the specialties that had the largest share of clinicians subject to the Value Modifier bill under practices being held harmless from downward payment adjustments. In total, 18.5 percent of physicians specializing in emergency medicine billed under practices being held harmless from downward adjustments in 2018—the highest percentage among all physician specialties. In descending order, the next nine physician specialties that most commonly billed under practices being held harmless from downward payment adjustments are medical oncology, hematology/oncology, internal medicine, dermatology, diagnostic radiology, critical care (intensivists), geriatric medicine, hospice and palliative care, and radiation oncology. Among non-physician specialties, PAs had the largest share of clinicians who billed under practices being held harmless from downward payment adjustments (10.7 percent).

Table 14. Specialties most commonly in practices being held harmless from downward payment adjustments (N = 8,007 practices)

Clinician specialty	Number of clinicians subject to the 2018 Value Modifier	Percentage of clinicians subject to the 2018 Value Modifier in practices being held harmless from downward payment adjustments
Physician specialties	868,606	7.1%
Emergency Medicine	67,087	18.5%
Medical Oncology	2,984	12.2%
Hematology/Oncology	8,126	10.5%
Internal Medicine	124,936	9.9%
Dermatology	12,965	9.6%
Diagnostic Radiology	51,081	9.1%
Critical Care (Intensivists)	4,237	9.0%
Geriatric Medicine	2,136	8.9%
Hospice and Palliative Care	1,057	7.8%
Radiation Oncology	5,389	7.5%
Non-physician specialties	276,505	9.4%
PA	85,515	10.7%
NP	126,085	10.0%
CRNA	62,240	6.6%
CNS	2,665	4.5%

Notes: This analysis includes only specialties with at least 1,000 clinicians who billed under TINs subject to the 2018 Value Modifier. Clinicians are identified by their NPI. Clinician counts reflect unique TIN–NPI combinations, rather than unique clinicians. Thus, clinicians who billed under multiple TINs are counted multiple times in this analysis.