

CHAPTER

9

**Inpatient rehabilitation
facility services**

R E C O M M E N D A T I O N

- 9** For fiscal year 2022, the Congress should reduce the 2021 Medicare base payment rate for inpatient rehabilitation facilities by 5 percent.

COMMISSIONER VOTES: YES 17 • NO 0 • NOT VOTING 0 • ABSENT 0

Inpatient rehabilitation facility services

Chapter summary

Inpatient rehabilitation facilities (IRFs) provide intensive rehabilitation services to patients after illness, injury, or surgery. Rehabilitation programs are supervised by rehabilitation physicians and include services such as physical and occupational therapy, rehabilitation nursing, speech–language pathology, and prosthetic and orthotic services. In 2019, Medicare spent \$8.7 billion on IRF care provided to fee-for-service (FFS) beneficiaries in about 1,150 IRFs nationwide. About 363,000 beneficiaries had about 409,000 IRF stays. On average, the FFS Medicare program accounted for about 58 percent of IRF discharges.

In this chapter, we recommend a payment rate update for 2022. Because of standard data lags, the most recent complete data we have for most payment adequacy indicators is from 2019. Where relevant, we have considered the effects of the 2020 coronavirus public health emergency (PHE) on our indicators and whether those effects are likely to be temporary or permanent. To the extent the effects of the PHE are temporary or vary significantly across IRF providers, they are best addressed through targeted temporary funding policies rather than a permanent change to all IRF provider payment rates in 2022 and future years. Based on information available at the time of

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publication, we do not anticipate any long-term PHE-related effects that would warrant inclusion in the annual update to IRF payments in 2022.

Assessment of payment adequacy

Our indicators of Medicare payment adequacy for IRFs are positive.

Beneficiaries' access to care—Our analysis of IRF supply and volume of services provided and IRFs' marginal profit under Medicare's IRF prospective payment system suggest that access remains adequate.

- **Capacity and supply of providers**—The number of IRFs has been steady since 2014. From 2018 to 2019, the number of IRFs decreased slightly from 1,170 to 1,152. Over time, the number of hospital-based and nonprofit IRFs has fallen, while the number of freestanding and for-profit IRFs has mostly increased. In 2019, the average IRF occupancy rate remained at 67 percent, indicating that capacity is adequate to meet demand for IRF services.
- **Volume of services**—The number of Medicare cases per FFS beneficiary increased by 1.6 percent in 2019.
- **Marginal profit**—The marginal profit, an indicator of whether IRFs with excess capacity have an incentive to treat more Medicare beneficiaries, was 19.4 percent for hospital-based IRFs and 40.2 percent for freestanding IRFs—a very positive indicator of patient access.

Quality of care—This year, the Commission evaluated quality by tracking two quality indicators across all post-acute care (PAC) providers: average risk-adjusted rates of successful discharge to the community and all-condition hospitalizations within the IRF stay. These measures were steady or improved between 2015 and 2019.

Providers' access to capital—The parent institutions of hospital-based IRFs continue to have good access to capital. The major freestanding IRF chain, which accounted for about 31 percent of Medicare IRF discharges, continued expanding, indicating good access to capital. We were not able to determine the ability of other freestanding facilities to raise capital. IRFs' access to capital in large part depends on their total (all-payer) profitability, and in 2019, the total margin for freestanding IRFs averaged 10.4 percent.

Medicare payments and providers' costs—In the five-year period between 2015 and 2019, the IRF Medicare margin remained above 13 percent. Although the Medicare margin decreased slightly in 2019 to 14.3 percent, it remained high. In 2019, Medicare margins in freestanding and hospital-based IRFs also decreased

somewhat to 24.6 percent and 2.1 percent, respectively. Our analysis found that relatively efficient IRFs performed better on quality metrics and had costs 13 percent lower than other IRFs. Relatively efficient IRFs were on average larger and had higher occupancy rates, contributing to greater economies of scale and lower unit costs.

The coronavirus PHE has made 2020 an anomalous year in many respects, and it is impossible to predict with certainty the extent to which these effects will continue into 2021. Nevertheless, we expect IRFs' Medicare margin in 2021 to increase relative to 2019. Under current law, IRF base payment rates are projected to increase by about 2.2 percent in 2022. This amount is substantially higher than in 2019 and prior years because of the expiration of statutory reductions in IRF updates required by the Affordable Care Act in each year from 2010 through 2019. Overall, we expect the increase in revenue will more than offset cost growth over the period. Therefore, for 2021, we project an aggregate Medicare margin of 16 percent.

How should payment rates change in 2022?

Considering these factors, the Commission recommends that for fiscal year 2022, the 2021 IRF base payment rate be reduced by 5 percent. In addition, the Commission reiterates its March 2016 recommendations that (1) the high-cost outlier pool be expanded and (2) the Secretary conduct focused medical record review of IRFs (for a detailed discussion of these additional recommendations, see our March 2016 report to the Congress). ■

Background

After illness, injury, or surgery, some patients need intensive inpatient rehabilitative care, including physical, occupational, and speech therapy. Such services can be provided in inpatient rehabilitation facilities (IRFs).¹ IRFs must be focused primarily on treating conditions that typically require intensive rehabilitation, among other requirements. IRFs can be freestanding facilities or specialized units within acute care hospitals. To qualify for a covered IRF stay, a rehabilitation physician must document that the beneficiary is able to tolerate and benefit from intensive therapy and has a condition that requires frequent and face-to-face supervision by a rehabilitation physician. Other patient admission criteria also apply. In 2019, Medicare spent \$8.7 billion on IRF care provided to fee-for-service (FFS) beneficiaries in about 1,150 IRFs nationwide.² About 363,000 beneficiaries had about 409,000 IRF stays. On average, Medicare FFS beneficiaries accounted for about 58 percent of IRF discharges.

Since January 2002, Medicare has paid IRFs under a per discharge prospective payment system (PPS).³ Under the IRF PPS, each Medicare patient is assigned to a rehabilitation impairment code (RIC) based on the principal diagnosis or impairment and further classified within a RIC to a case-mix group (CMG) based on the patient's age and level of motor and cognitive function. Within each CMG, patients are further classified into one of four tiers based on the presence of certain comorbidities that have been found to increase the cost of care. The IRF PPS also has outlier payments for patients who are extraordinarily costly.

Medicare facility requirements for IRFs

To qualify as an IRF for Medicare payment, facilities must meet the Medicare conditions of participation for acute care hospitals.⁴ They must also:

- have a preadmission screening process to determine that each prospective patient is likely to benefit significantly from an intensive inpatient rehabilitation program;
- ensure that the patient receives close medical supervision and must, at minimum, provide—through qualified personnel—rehabilitation nursing, physical therapy, occupational therapy, and, as needed, speech—language pathology and psychological (including

neuropsychological) services, social services, and orthotic and prosthetic services;

- have a medical director of rehabilitation with training or experience in rehabilitation who provides services in the facility on a full-time basis for freestanding IRFs or at least 20 hours per week for hospital-based IRF units;
- use a coordinated interdisciplinary team led by a rehabilitation physician that includes a rehabilitation nurse, a social worker or case manager, and a licensed therapist from each therapy discipline involved in the patient's treatment;
- have a plan of treatment for each patient that is established, reviewed, and revised as needed by a physician in consultation with other professional personnel who provide services to the patient; and
- meet the compliance threshold, which requires that no less than 60 percent of patients admitted to an IRF have as a primary diagnosis or comorbidity at least 1 of 13 conditions specified by CMS.⁵ IRFs are not, however, limited to treating only patients with these specified conditions. The intent of the compliance threshold is to distinguish IRFs from acute care hospitals. If an IRF does not meet the compliance threshold, Medicare pays for all its cases on the basis of the inpatient hospital PPS rather than the IRF PPS.

Medicare coverage criteria for beneficiaries

Medicare applies additional criteria that govern whether IRF services are covered for an individual Medicare beneficiary. For an IRF claim to be considered reasonable and necessary, the patient must be reasonably expected to meet the following requirements at admission:⁶

- The patient requires active and ongoing therapy in at least two modalities, one of which must be physical or occupational therapy.
- The patient can actively participate in and benefit from intensive therapy that most typically consists of three hours of therapy a day at least five days a week.
- The patient is sufficiently stable at the time of admission to actively participate in the intensive rehabilitation program.
- The patient requires supervision by a rehabilitation physician. This requirement is satisfied by face-

**TABLE
9-1**

Patterns of use in IRFs have changed over time

Condition	Share of IRF Medicare FFS cases			Meets compliance threshold ^a	Percentage point change	
	2009	2018	2019		2009-2018	2018-2019
Stroke	20.5%	20.0%	19.8%	yes	-0.4	-0.3
Other neurological conditions	9.0	14.7	14.4	yes	5.7	-0.4
Debility	9.3	11.6	12.3	no	2.3	0.7
Brain injury	7.3	10.8	11.0	yes	3.5	0.2
Fracture of the lower extremity	15.1	10.3	10.0	yes	-4.8	-0.3
Other orthopedic conditions	6.4	7.9	8.1	no	1.5	0.2
Cardiac conditions	4.9	5.9	6.1	no	0.9	0.2
Spinal cord injury	4.4	4.9	4.9	yes	0.5	-0.1
Major joint replacement of lower extremity	11.7	4.1	3.7	^b	-7.5	-0.5
All other	11.3	9.7	10.0	^c	-1.6	0.2

Note: IRF (inpatient rehabilitation facility), FFS (fee-for-service). "Other neurological conditions" includes multiple sclerosis, Parkinson's disease, polyneuropathy, and neuromuscular disorders. "Fracture of the lower extremity" includes hip, pelvis, and femur fractures. Patients with debility have generalized deconditioning not attributable to other conditions. "Other orthopedic conditions" excludes fractures of the hip, pelvis, and femur, and hip and knee replacements. "All other" includes conditions such as amputations, arthritis, and pain syndrome. "Brain injury" and "spinal cord injury" include both traumatic and nontraumatic injuries. All FFS Medicare IRF cases with valid patient assessment information were included in this analysis. Yearly figures presented in the table are rounded, but figures in the percentage point change columns were calculated using unrounded data.

^aThe compliance threshold requires that at least 60 percent of an IRF's patients have 1 of 13 specified diagnoses or have a comorbidity that could cause significant decline in functional ability such that the patient requires intensive rehabilitation. Some FFS cases with conditions that do not meet the compliance threshold could thus be counted toward the threshold if they had certain comorbidities.

^bCases admitted for rehabilitation after major joint replacement of the lower extremity count toward the compliance threshold if joint replacement was bilateral, if the patient had a body mass index of 50 or greater, or if the patient was age 85 or older.

^cConditions in the "all other" category that meet the compliance threshold include congenital deformity, lower-limb amputations, major multiple trauma, burns, and certain arthritis cases.

Source: MedPAC analysis of Inpatient Rehabilitation Facility–Patient Assessment Instrument data from CMS.

to-face physician visits with a patient at least three days a week. Beginning with the second week of admission to the IRF, a nonphysician practitioner who is determined by the IRF to have specialized training and experience in inpatient rehabilitation may conduct one of the three required face-to-face visits with the patient per week, provided that such duties are within the nonphysician practitioner's scope of practice under applicable state law.

- The patient requires an intensive and coordinated interdisciplinary team approach to the delivery of rehabilitative care.

Patterns of use in IRFs

In 2004, CMS began to consistently enforce the IRF compliance threshold and enacted revisions to some of

the qualifying conditions.⁷ The combination of renewed enforcement of the threshold and additional restrictions resulted in changes over time in the distribution of conditions treated by IRFs. Average case-mix severity and cost per case increased as IRFs shifted their mix of cases to conditions that counted toward the threshold, such as stroke, brain injury, and conditions classified as "other neurological" (an impairment group that includes multiple sclerosis, Parkinson's disease, polyneuropathy, and neuromuscular disorders). For example, between 2009 and 2018, the number of IRF discharges with other neurological conditions climbed 75 percent and the number of discharges with brain injuries (traumatic and nontraumatic combined) rose 58 percent. During the same period, the total number of Medicare IRF discharges increased 7 percent. Notably, the number of

**TABLE
9-2**

Mix of Medicare FFS IRF cases differed by provider type, selected conditions, 2019

Condition	Freestanding		Hospital based	
	For profit	Nonprofit	For profit	Nonprofit
Stroke	16%	25%	18%	26%
Other neurological conditions	20	8	12	9
Fracture of the lower extremity	9	8	14	11
Debility	13	11	14	12
Brain injury	10	13	12	11
Other orthopedic conditions	10	6	6	6

Note: FFS (fee-for-service), IRF (inpatient rehabilitation facility). “Other neurological conditions” includes multiple sclerosis, Parkinson’s disease, polyneuropathy, and neuromuscular disorders. “Fracture of the lower extremity” includes hip, pelvis, and femur fractures. Patients with debility have generalized deconditioning not attributable to other conditions. “Other orthopedic conditions” excludes fractures of the hip, pelvis, and femur, and hip and knee replacements. “Brain injury” includes both traumatic and nontraumatic injuries. All FFS Medicare IRF cases with valid patient assessment information were included in this analysis.

Source: MedPAC analysis of Inpatient Rehabilitation Facility–Patient Assessment Instrument data from CMS.

cases with debility, other orthopedic conditions (excluding fractures of the hip, pelvis, and femur, and hip and knee replacements), and cardiac conditions also rose over this period, though a sizable share of these cases do not count toward the compliance threshold.⁸ The number of hip and knee replacement cases admitted to IRFs declined over the period, falling 62 percent. IRFs also saw a large decline in cases of fractures of the lower extremity, which fell 27 percent, even though these conditions count toward the compliance threshold. Although patterns of use were fairly stable between 2018 and 2019, we continue to observe disproportionate growth in the number of cases with debility—from 11.6 percent to 12.3 percent of FFS IRF cases (Table 9-1).

The most common condition treated by IRFs in 2019 was stroke—accounting for about one-fifth of cases—followed by other neurological conditions, debility, and brain injury (Table 9-1).

The distribution of case types differs by type of IRF and ownership (Table 9-2). For example, in 2019, only 16 percent of cases in freestanding for-profit IRFs were admitted for rehabilitation following a stroke, compared with 26 percent of cases in hospital-based nonprofit IRFs. By contrast, 20 percent of cases in freestanding for-profit IRFs were admitted with other neurological conditions,

over twice the share admitted to hospital-based nonprofit IRFs. Cases with other orthopedic conditions made up a higher share of cases in freestanding for-profit facilities than in all other IRFs. The share of cases with brain injury or debility was similar across IRF types.

A previous Commission analysis of differences in the mix of cases across IRFs suggested that patient selection contributes to provider profitability (Medicare Payment Advisory Commission 2016). We found that IRFs with the highest margins in 2013 had a higher share of other neurological cases and a lower share of stroke cases.⁹ Further, we observed differences in the types of stroke and other neurological conditions admitted to high-margin and low-margin IRFs. Stroke cases in the highest margin IRFs were two-and-a-half times more likely than those in the lowest margin IRFs to be coded as having no paralysis. Likewise, other neurological cases in the highest margin IRFs were almost three times more likely than those in the lowest margin IRFs to have a neuromuscular disorder (such as amyotrophic lateral sclerosis or muscular dystrophy) as opposed to neurological conditions such as multiple sclerosis or Parkinson’s disease. As noted in our March 2016 report to the Congress, these findings suggest that, under the IRF PPS, some case types are more profitable than others.

**TABLE
9-3**

Some case types are more profitable than others, 2017

Rehabilitation impairment category	Number of stays	Average per stay:		Payment-to-cost ratio
		Payment	Cost	
All conditions	376,336	\$20,346	\$18,371	1.11
Other neurological	53,419	20,680	17,174	1.20
Other orthopedic	29,485	18,451	15,947	1.16
Major multiple trauma w/o brain/spinal injury	7,322	20,991	18,241	1.15
Major multiple trauma w/ brain/spinal injury	2,164	24,995	21,923	1.14
Traumatic spinal cord injury	2,926	30,455	27,041	1.13
Nontraumatic brain injury	26,463	20,788	18,560	1.12
Pulmonary	7,457	19,982	17,983	1.11
Miscellaneous	44,437	19,416	17,471	1.11
Traumatic brain injury	12,066	21,694	19,879	1.09
Cardiac	20,742	18,298	16,777	1.09
Fracture of lower extremity	37,691	20,625	18,854	1.09
Amputation, lower extremity	9,246	23,034	21,365	1.08
Pain syndrome	1,162	17,337	16,136	1.07
Stroke	73,696	24,221	22,684	1.07
Non-traumatic spinal cord injury	14,867	23,349	21,918	1.07
Replacement of lower extremity joint	15,470	15,376	14,535	1.06

Note: "Other neurological" includes (nonstroke) neurological conditions such as multiple sclerosis, Parkinson's disease, polyneuropathy, and neuromuscular disorders. "Other orthopedic" excludes fractures of the hip, pelvis, and femur, and hip and knee replacements. Case types with less than 1,000 stays, short stays, and expired cases are not presented in the table.

Source: Urban Institute analysis of Medicare cost reports and Medicare fee-for-service claims data for IRF stays that began in 2017.

Using Medicare FFS claims data for IRF stays that began in 2017, we have confirmed this finding by comparing the profitability (i.e., payment-to-cost ratios) of different case types (i.e., case types as grouped under RICs). We found that profitability varies substantially. The average profit across all RICs was \$1,975 per stay, with an average payment-to-cost ratio of 1.11— that is, payments were 11 percent higher than costs for the average IRF stay (Table 9-3). Stroke, the most frequently occurring RIC, had a comparatively low payment-to-cost ratio of 1.07. By contrast, other neurological cases were among the most profitable, with a payment-to-cost ratio of 1.20. Other orthopedic cases (excludes fractures of the hip, pelvis, and femur, and hip and knee replacements) also made up a large number of IRF stays and were relatively profitable with a payment-to-cost ratio of 1.16.

In addition to our finding that some case types are more profitable than others, there may be a coding effect, due to the subjective nature of the assessment of IRF patients, that is playing a key role in IRF provider profitability. We anticipate providing more detail on this payment issue in the future.

Are Medicare payments adequate in 2021?

To assess whether payments for fiscal year (FY) 2021 are adequate to cover the costs providers incur and how much providers' costs are expected to change in the coming year (2022), we examine several indicators of payment adequacy. Specifically, we assess beneficiaries' access to

The coronavirus public health emergency and the Commission's payment adequacy framework

Since early 2020, the coronavirus public health emergency (PHE) has had tragic effects on beneficiaries' health.¹⁰ It is also having material effects on providers' patient volume, revenues, and costs. Publicly traded inpatient rehabilitation facilities (IRFs) reported reductions in volume from March to May 2020 relative to pre-COVID-19 (January to mid-March 2020), largely because of the cancellation of elective surgeries in acute care hospitals (ACHs) (Encompass Health 2020a, Select Medical 2020b). However, as states began to ease restrictions in ACHs and surgery centers resumed performing elective surgeries, the largest publicly traded IRF reported that volume began to slowly recover, reaching at least 95 percent of prepandemic levels by late June 2020 (Encompass Health 2020a). This company attributes the residual lag in volume to the decrease in the number of orthopedic and lower extremity joint replacement cases compared with the same period of 2019 (Encompass Health 2020b). As a result of COVID-19, IRFs also had to use more personal protective equipment and this equipment has reportedly increased in price. Still, some of the negative impact of volume reductions and increased cost have been offset by a concurrent increase in net revenue per discharge because of the temporary suspension of sequestration and higher acuity patient mix resulting from the pandemic. In addition, some IRFs may have maintained higher volume levels by providing needed hospital surge capacity in their communities. While publicly traded IRFs continue to report substantial

recovery through the third quarter of 2020 (Encompass Health 2020b, Select Medical 2020a), it is not yet clear how the PHE has affected other IRFs nor how the pandemic will affect patient care patterns, hospital volume, and hospital financial performance in 2021 and 2022. As applicable, more details about the impact of the coronavirus PHE on IRFs can be found throughout this chapter.

In this chapter, we recommend payment rate updates for 2022. Because of standard data lags, the most recent complete data we have for most payment adequacy indicators is from 2019. We use available data and expected changes in payment policy to project margins for 2021 and make payment recommendations for 2022. To the extent the coronavirus PHE effects are temporary or vary significantly across individual providers, they are best addressed through targeted temporary funding policies rather than a permanent change to all providers' payment rates in 2022 that would also affect payments in future years. For each payment adequacy indicator in this chapter, we discuss whether the effects of the coronavirus PHE on those indicators will most likely be temporary or permanent. Only permanent effects of the pandemic will be factored into recommended permanent changes in Medicare payment rates. (For an overview of how our payment adequacy analysis takes account of the PHE, see Chapter 2.) ■

care by examining the capacity and supply of IRFs and changes over time in the volume of services provided, quality of care, providers' access to capital, and the relationship between Medicare payments and providers' costs.

Although the impact of the coronavirus pandemic on IRFs is evolving (see text box), our indicators of IRF payment adequacy are positive. (For an overview of how our payment adequacy analysis takes account of the PHE, see Chapter 2).

Beneficiaries' access to care: IRF supply and service volume suggest sufficient access

We have no direct indicators of beneficiaries' access to IRF care. Although there are criteria for admission to an IRF, it is not clear when IRF care is necessary or beneficial for a given patient or when another, potentially lower cost post-acute care (PAC) provider (such as a skilled nursing facility (SNF)) could provide appropriate care. The absence of IRFs in some areas of the country implies that beneficiaries in these areas receive similar services in

**TABLE
9-4**

Total IRF count declined, but the number of freestanding IRFs continued to grow in 2019

Type of IRF	Share of Medicare FFS discharges 2019	Number of IRFs						Average annual change	
		2014	2015	2016	2017	2018	2019	2014-2018	2018-2019
All IRFs	100%	1,177	1,182	1,188	1,178	1,170	1,152	-0.1%	-1.5%
Urban	91	1,013	1,020	1,026	1,019	1,014	1,000	0.0	-1.4
Rural	6	164	162	162	159	156	152	-1.2	-2.6
Freestanding	53	251	262	273	279	290	299	3.7	3.1
Hospital based	44	926	920	915	899	880	853	-1.3	-3.1
Nonprofit	35	681	681	676	655	642	634	-1.5	-1.2
For profit	56	338	352	370	392	400	393	4.3	-1.8
Government	6	149	138	133	125	121	116	-5.1	-4.1

Note: IRF (inpatient rehabilitation facility), FFS (fee-for-service). The number of facilities are for the calendar year. Components may not sum to totals due to missing data.

Source: MedPAC analysis of Provider of Services data and Medicare Provider Analysis and Review data from CMS.

other settings. Nevertheless, our analysis of IRF supply and volume of services provided suggests that capacity remains adequate to meet demand. Moreover, the marginal profit, an indicator of whether IRFs with excess capacity have an incentive to treat more Medicare beneficiaries, was robust for both freestanding and hospital-based IRFs, providing a very positive indicator of patient access.

Number of IRFs and occupancy rates suggest adequate capacity and supply

The number of IRFs has been steady since 2014 (Table 9-4). Between 2014 and 2018, the number of hospital-based IRFs and the number of nonprofit IRFs decreased while the number of freestanding IRFs and for-profit IRFs increased. From 2018 to 2019, the total number of IRFs decreased slightly from 1,170 to 1,152. Although IRFs provide a more intense level of therapy, IRFs are not the sole provider of rehabilitation services in communities; SNFs also provide rehabilitation services, and home health agencies, comprehensive outpatient rehabilitation facilities, and independent therapy providers furnish care at home or on an outpatient basis. Given the number and distribution of these other rehabilitation therapy providers, it is unlikely that areas exist where IRFs are the only

provider of rehabilitation therapy services available to Medicare beneficiaries.

In 2019, almost 75 percent of IRFs were distinct units in acute care hospitals; the rest were freestanding facilities. However, because hospital-based units have, on average, fewer beds and a lower share of Medicare discharges, they accounted for only 44 percent of Medicare discharges. Overall, 34 percent of IRFs were for-profit entities. Freestanding IRFs were far more likely to be for profit than were hospital-based IRFs (60 percent vs. 40 percent; data not shown). In 2019, 56 percent of Medicare discharges were from for-profit facilities.

In 2019, 47 IRFs closed; almost all were hospital-based units (43 IRFs). At the same time, 29 new IRFs opened. Slightly more than half of the new IRFs were hospital-based units. Of the new hospital-based units, half were for profit; of the new freestanding facilities, a majority were for profit. Previous Commission analyses have found that hospitals with IRF units have higher inpatient margins than hospitals without such units (Medicare Payment Advisory Commission 2015). This trend continued in 2019 when inpatient Medicare margins for hospitals

**TABLE
9-5**

In 2019, the number of IRF cases and payments increased, while length of stay and users decreased

	2010	2015	2016	2017	2018	2019	Average annual change	
							2010-2019	2018-2019
Number of FFS cases	365,095	393,475	396,247	396,294	408,038	409,059	1.3%	0.3%
Cases per 10,000 FFS beneficiaries	101.3	103.4	103.2	102.7	105.7	106.9	0.6	1.6
Payment per case	\$16,814	\$18,527	\$18,931	\$19,481	\$20,124	\$20,417	2.2	1.5
ALOS (in days)	13.1	12.7	12.7	12.7	12.7	12.6	-0.4	-0.5
Users	330,774	354,343	355,390	354,618	363,753	363,285	1.0	-0.1

Note: IRF (inpatient rehabilitation facility), FFS (fee-for-service), ALOS (average length of stay).

Source: MedPAC analysis of Medicare Provider Analysis and Review data from CMS.

with IRF units averaged 1.0 percentage point higher than margins for hospitals without such units.

In 2019, the average IRF occupancy rate slightly increased to 67 percent. In freestanding IRFs, the average occupancy rate was 70 percent, while the average rate for hospital-based IRFs was 64 percent. These rates suggest that capacity is more than adequate to meet demand for IRF services.

IRF Medicare volume increased in 2019

As discussed above, after CMS renewed its enforcement of the compliance threshold in 2004, IRF volume declined substantially between 2004 to 2008 (Medicare Payment Advisory Commission 2019b). At that point, volume began to increase slowly, rising each year (Table 9-5). After a stagnant period from 2016 to 2017, the number of FFS Medicare cases increased in 2018 and 2019 to about 409,000 cases.

In 2019, the number of IRF cases per 10,000 FFS beneficiaries grew to 106.9, up 1.6 percent from the previous year. Relatively few Medicare beneficiaries use IRF services because, to qualify for Medicare coverage, IRF patients must be able to tolerate and benefit from rehabilitation therapy that is intensive, which is usually

interpreted to mean at least three hours of therapy a day for at least five days a week. Yet, compared with all Medicare beneficiaries, those admitted to IRFs in 2019 were disproportionately over age 85 (data not shown).

With the increase in the number of IRF cases per FFS beneficiary, FFS Medicare’s share of IRF discharges in 2019 remains strong at 58 percent of total discharges.

The coronavirus PHE undoubtedly affected IRF volume among Medicare beneficiaries in 2020, but data limitations prevent us from providing an estimate of this effect on all IRF types. Information from publicly traded IRF companies’ earnings through the third quarter of 2020 gives us some indication of how freestanding, for-profit IRFs performed at the time this report was written. These companies reported that IRF volume decreased from mid-March to May 2020, largely as a result of fewer referrals stemming from suspension of elective surgeries in the acute care hospital setting, but that volume began to recover soon after, as states began to ease restrictions in acute care hospitals and surgery centers resumed performing elective surgeries (Encompass Health 2020a, Select Medical 2020b). According to the largest publicly traded IRF company, volume had recovered to at least 95 percent of prepandemic levels by late June 2020

**TABLE
9-6**

Risk-adjusted quality indicators for IRFs held steady or improved slightly from 2015 to 2019

	2015	2016	2017	2018	2019
All-condition hospitalizations within an IRF stay (all IRFs)	7.9%	7.7%	7.9%	7.7%	7.8%
Nonprofit	7.8	7.6	7.8	7.7	7.7
For profit	7.9	7.7	7.9	7.7	7.9
Hospital based	7.8	7.6	7.8	7.7	7.7
Freestanding	8.1	7.9	8.0	7.8	7.8
Successful discharge to community (all IRFs)	64.6%	64.6%	64.8%	65.1%	65.5%
Nonprofit	64.9	64.7	64.9	65.1	65.6
For profit	64.2	64.5	64.7	65.1	65.3
Hospital based	65.0	65.1	65.2	65.5	66.0
Freestanding	63.4	63.3	63.6	64.0	64.2

Note: IRF (inpatient rehabilitation facility). Successful discharge to the community includes beneficiaries discharged to the community (including those discharged to the same nursing home) who did not have an unplanned hospitalization or die in the 30 days after discharge. The all-condition hospitalization measure captures all unplanned hospital admissions and readmissions and outpatient observation stays that occur during the stay. Both measures are uniformly defined and risk-adjusted across the four PAC settings. Providers with at least 60 stays in the year (the minimum count to meet a reliability of 0.7) were included in calculating the average facility rate. High rates of successful discharge to the community indicate better quality. High rates of hospitalizations within a stay indicate worse quality.

Source: MedPAC analysis of Inpatient Rehabilitation Facility–Patient Assessment Instrument data from CMS.

(Encompass Health 2020a). However, the company also reported that the remaining lag in volume was largely a result of COVID-19-related challenges in certain geographic markets and of the drop in the number of orthopedic and lower extremity joint replacement cases compared with the same period in 2019 (Encompass Health 2020b).

Marginal profit provides incentive to treat more Medicare beneficiaries

Another measure of access is whether providers have a financial incentive to expand the number of Medicare beneficiaries they serve. In considering whether to treat a patient, a provider with excess capacity compares the marginal revenue it will receive (i.e., the Medicare payment) with its marginal costs—that is, the costs that vary with volume. If Medicare payments are larger than the marginal costs of treating an additional beneficiary, a provider has a financial incentive to increase its volume of Medicare patients. In contrast, if payments do not cover the marginal costs, the provider could have a disincentive to care for Medicare beneficiaries.

We examined freestanding and hospital-based IRFs’ marginal profit to assess whether both types of providers have a financial incentive to increase the number of Medicare beneficiaries they serve.¹¹ We found that Medicare payments in 2019 exceeded marginal costs by a substantial amount—19 percent for hospital-based IRFs and 40 percent for freestanding IRFs—suggesting that IRFs with available beds have a strong incentive to admit Medicare patients.

Quality of care: Steady or improved for most measures

This year, the Commission examined two broad categories of IRF quality indicators: average risk-adjusted rates of successful discharge to the community and all-condition hospitalizations within an IRF stay.¹² Both measures are uniformly defined and risk-adjusted across the four PAC settings—thus taking one step closer to a unified payment system and evaluation of outcomes across PAC settings.¹³ Providers with least 60 stays in the year were included in calculating the average facility rate (60 stays in the year

**TABLE
9-7**

Performance on risk-adjusted quality measures varied across IRFs in 2019

Measure	Risk-adjusted rate		
	Mean	Worst performing quartile	Best performing quartile
All-condition hospitalizations within an IRF stay	7.8%	9.1%	6.2%
Successful discharge to community	65.5%	62.4%	68.9%

Note: IRF (inpatient rehabilitation facility). High rates of successful discharge to the community indicate better quality. High rates of hospitalizations during a stay indicate worse quality. Mean rates are calculated for all facilities with 60 or more Medicare fee-for-service stays.

Source: MedPAC analysis of Inpatient Rehabilitation Facility–Patient Assessment Instrument data from CMS.

is the minimum count to meet a reliability threshold of 0.7). From 2015 through 2019, the two quality measures we examined were steady or improved.

Risk-adjusted rates of successful discharge to the community and all-condition hospitalizations within the IRF stay

Rehospitalizations expose beneficiaries to hospital-acquired infections, increase the number of transitions between settings (which are disruptive to patients), and can result in medical errors (such as medication errors). In addition, they unnecessarily increase Medicare spending. The all-condition hospitalizations measure captures all unplanned hospitalizations (admissions and readmissions) and outpatient observation stays that occur during the stay (a lower rate of hospitalizations is better). Because IRFs are also hospitals, the rate of rehospitalizations is low. In 2019, the national average rate of risk-adjusted all-condition hospitalizations for IRFs remained steady at about 7.8 percent (Table 9-6). There were not large differences by type of IRF; however, nonprofit IRFs had a slightly lower rate of all-condition hospitalizations within the stay relative to for-profit IRFs (7.7 percent vs. 7.9 percent; data not shown).

We also examined average risk-adjusted rates of successful discharge to the community, which includes beneficiaries discharged to the community who did not have an unplanned hospitalization and did not die in the next 30 days (a higher rate of successful discharge to

the community is better). In 2019, the rate of successful discharge to the community was 65.5 percent (Table 9-6). There were not large differences by ownership, but hospital-based IRFs had a slightly higher rate of successful discharge to the community than freestanding IRFs (66.0 percent vs. 64.2 percent).

Variation in quality measures across IRFs

IRFs varied somewhat in their performance on Medicare’s quality measures (Table 9-7). In 2019, the best performing quartile of IRFs had a risk-adjusted rate of successful discharge to the community that was 68.9 percent or higher, 6 percentage points higher than the worst performing quartile. Hospitalization rates within a stay also varied: the best performing quartile had risk-adjusted rates of all-condition hospitalizations within an IRF stay that were 3 percentage points lower than the rate of the worst performing quartile, with a rate of 6.2 percent or below. The variation in performance among IRF providers suggests that quality of care is an area that needs improvement, even for measures with low rates. IRF providers should continue to prioritize the quality of care to improve outcomes for all beneficiaries.

This year we did not assess measures of provider-reported functional improvement. While the Commission contends that maintaining and improving functional status is a key outcome of PAC, over time we have become so concerned about the integrity of this information that we no longer believe it is a reliable indicator of provider quality (for a

detailed discussion of functional assessment data, see our June 2019 report to the Congress). Because functional assessments are used in the case-mix system to establish payments, it is difficult to separate this information from payment incentives. Yet, because functional outcomes are critically important to patients, improving the reporting of assessment data such that these outcomes can be adequately assessed is desirable. In its June 2019 report to the Congress, the Commission discussed possible strategies to improve the assessment data, the importance of monitoring the reporting of these data, and alternative measures of function (such as patient-reported surveys) that do not rely on provider-completed assessments (Medicare Payment Advisory Commission 2019a).

Providers' access to capital: IRFs appear to have adequate access to capital

Almost three-quarters of IRF providers are hospital-based units that would access any necessary capital through their parent institutions. Overall, as detailed in the hospital chapter of this report, hospitals' access to capital remained strong in 2019. Hospitals issued \$23 billion in bonds in calendar year 2019, including \$16 billion in new financing and \$7 billion in refinancing (Thomson Reuters 2019). This 2019 activity was a decline from 2018, corresponding with an increase in interest rates, but similar to the level in 2016 and higher than bond issuances in 2015 (Cain Brothers 2019). In 2019, hospital construction spending was \$26 billion, similar to prior years' spending. Hospital construction spending has been relatively stable since 2014 when the health care industry began to see a decrease in spending on inpatient hospital capacity (Census Bureau 2020). This trend is in part due to health systems focusing on lower cost outpatient facilities and renovations to existing facilities (Conn 2017). The coronavirus PHE affected hospitals' access to capital in 2020, with different effects on different groups of hospitals. However, in aggregate, the additional federal support hospitals received—as well as advanced Medicare payments—increased hospitals' access to capital in 2020.

Market analysts indicate that the IRF industry's largest chain, Encompass Health (formerly HealthSouth)—which owned over 40 percent of freestanding IRFs in 2019 and accounted for over 31 percent of all Medicare IRF discharges—has good access to capital. This assessment is reflected in the chain's continued expansion. Analysts note that Encompass Health traditionally has prioritized building new facilities over acquiring existing facilities,

which allows the company to maintain control over facility size, layout, and amenities. In 2019, the company opened three new facilities, two of which were joint ventures with other medical centers. In 2020, the company opened three additional facilities and made plans to open a total of eight new facilities in 2021 (Encompass Health 2020a). As part of a vertical integration strategy, the company has acquired home health agencies and hospice providers to expand its PAC business and drive more effective collaboration between its rehabilitation facilities and home health agencies.

Most other freestanding IRFs are independent or local chains with a limited number of facilities. The extent to which these providers have access to capital is less clear.

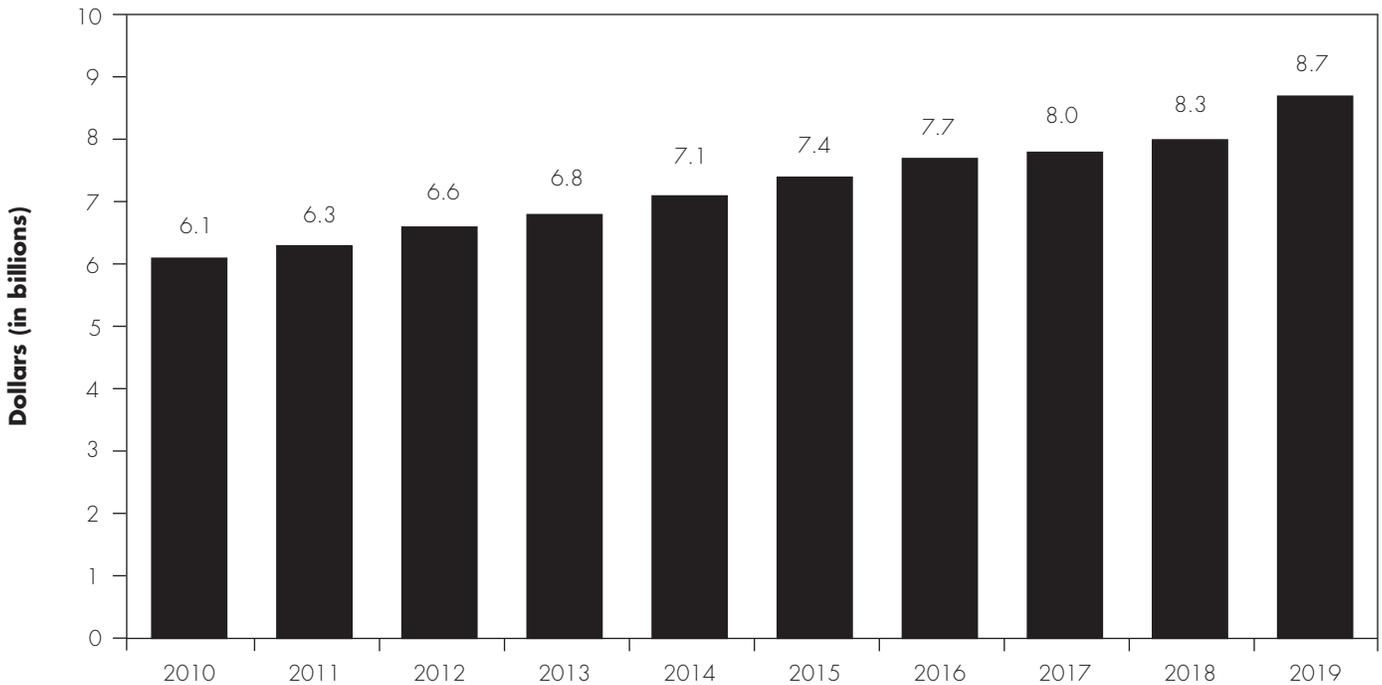
IRFs' access to capital depends in large part on their total (all-payer) profitability. In 2019, total margins for freestanding IRFs remained strong, with an aggregate margin of 10.4 percent. Profitability varied by ownership. In 2019, for-profit freestanding IRFs had an aggregate total margin of 14.0 percent compared with 1.6 percent for nonprofit freestanding IRFs. Data are not available to calculate total margins for hospital-based IRFs. However, in 2019, hospitals' aggregate total margins across all lines of service were slightly higher in hospitals with IRF units compared with those without such units (8.1 percent vs. 7.3 percent).

Beginning in FY 2010, IRFs are required to submit patient assessment instruments on Medicare Advantage (MA) beneficiaries for use in the 60 percent rule calculation (Centers for Medicare & Medicaid Services 2009). In 2019, the share of total IRF cases represented by MA enrollees was about 18 percent, despite the fact that over 40 percent of all Medicare beneficiaries with both Part A and Part B coverage are enrolled in MA. The average number of MA cases in IRFs was 7,700 cases per month compared with about 34,000 cases per month for beneficiaries in traditional FFS Medicare. At the time this report was written, the largest publicly traded IRF company reported that MA's share of revenues was approximately 16 percent, an increase of almost 5 percentage points compared with the same period in 2019, largely due to the reported temporary suspension of the private plans' prior authorization requirements during the PHE.

It is not clear why MA utilization is lower than Medicare FFS in the IRF setting. Previous research has highlighted

**FIGURE
9-1**

Program spending for IRF services has grown steadily since 2010



Note: IRF (inpatient rehabilitation facility).

Source: Office of the Actuary 2020.

that, in comparison with FFS, MA beneficiaries tend to have lower utilization of PAC overall, have longer acute care hospital stays that potentially mitigate the need for intensive PAC use, and have a greater likelihood of being discharged home or to lower cost PAC settings such as SNFs or home health care (Bentley 2017, Biniek et al. 2019, Huckfeldt et al. 2017, Xu et al. 2020). In a previous report to the Congress, we emphasized that some utilization management strategies used by MA plans, such as requiring prior authorization and recertification, may contribute to differences in utilization of various PAC settings (Medicare Payment Advisory Commission 2015).

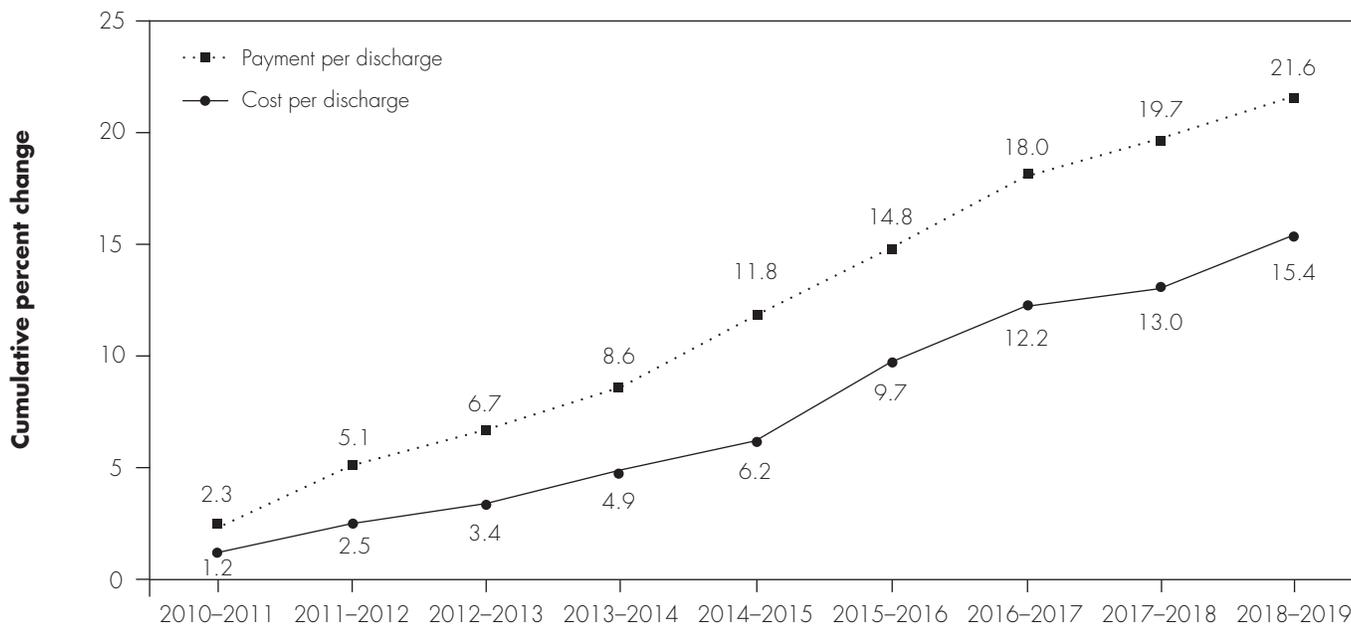
Medicare payments and providers' costs: Medicare margins remained high in 2019

Since 2012, aggregate Medicare margins have been above 11 percent. Although the aggregate margin decreased slightly in 2019, it remained high at 14.3

percent.¹⁴ Between 2015 and 2019, Medicare margins in freestanding IRFs fell slightly from a peak of 26.6 percent to 24.6 percent. Hospital-based IRF margins were comparatively low at 2.1 percent; however, one-quarter of hospital-based IRFs had Medicare margins greater than 12 percent, indicating that many hospitals can manage their IRF units profitably.

Trends in spending and cost growth

The Office of the Actuary estimates that FFS Medicare spending for IRF services in FY 2019 was \$8.7 billion (Figure 9-1). Between 2010 and 2019, growth in spending for these services averaged about 4 percent per year. A combination of increases in the number of Medicare beneficiaries receiving care in IRFs (average growth of 1.0 percent per year) and payment increases averaging 3.5 percent per year contributed to this spending growth.

**FIGURE
9-2****IRFs' payments per discharge increased cumulatively more than costs, 2010-2019**

Note: IRF (inpatient rehabilitation facility). Percent changes are calculated based on consistent two-year cohorts.

Source: MedPAC analysis of Medicare cost report data from CMS.

Since 2010, payments have been growing faster than costs (Figure 9-2). From 2010 to 2015, the cumulative growth in cost per discharge was 6.2 percent, an average of just 1.2 percent per year. The cumulative growth in cost per discharge for freestanding for-profit IRFs was especially slow over this period, at just 1.3 percent (data not shown). In contrast, payments per discharge grew more rapidly than costs, climbing to a cumulative 11.8 percent over this period (an average of 2.4 percent per year) and 11.9 percent for freestanding for-profit IRFs (latter figure not shown). These differences in per case cost and payment growth led to a steady rise between 2010 and 2015 in aggregate Medicare margins, which climbed from 8.6 percent to 13.9 percent (Table 9-8).

Between 2015 and 2016, cost growth outpaced payment growth for the first time since 2009, climbing 3.5 percentage points. However, from 2016 to 2017, payments per discharge again increased faster than costs, growing by 3.2 percentage points compared with 2.5 percentage points for

costs. Per case payments continued to grow faster than costs from 2017 to 2018 (1.7 percentage points compared with 0.8 percentage points). However, from 2018 to 2019, per case cost growth slightly outpaced per case payment growth (2.4 percentage points compared with 1.9 percentage points). As a result, the aggregate margin in 2019 declined 0.4 percentage points to 14.3 percent (Table 9-8).

Medicare margins are high on average but vary widely among individual IRFs

Financial performance varied across IRFs. In 2019, the Medicare margin for freestanding IRFs (which accounted for 53 percent of Medicare discharges from IRFs) averaged 24.6 percent, while hospital-based IRFs' Medicare margin was 2.1 percent (Table 9-8). Margins varied by ownership as well, with for-profit IRFs averaging a substantially higher Medicare margin in 2019 than nonprofit IRFs (24.2 percent vs. 1.2 percent). (Hospital-based IRFs are far more likely than freestanding

**TABLE
9-8**

Aggregate IRF Medicare margins declined in 2019 but remained high

Type of IRF	Share of Medicare discharges, 2019	Margins							
		2010	2012	2014	2015	2016	2017	2018	2019
All IRFs	100%	8.6%	11.2%	12.2%	13.9%	13.3%	13.9%	14.7%	14.3%
Hospital based	44	-0.5	0.76	0.6	2.1	0.9	1.5	2.5	2.1
Freestanding	53	21.4	24.0	25.2	26.6	25.9	25.6	25.4	24.6
Nonprofit	35	2.1	2.1	1.7	3.4	1.6	2.1	2.4	1.2
For profit	56	19.6	23.1	23.9	25.1	24.6	24.3	24.7	24.2
Government	6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Urban	91	9.0	11.6	12.6	14.3	13.6	14.2	15.0	14.7
Rural	6	4.9	6.7	6.5	8.7	9.2	8.4	10.1	8.6
Number of beds									
1 to 10	2	-10.3	-6.9	-11.0	-7.7	-10.1	-10.8	-5.7	-3.8
11 to 24	18	-3.3	-1.2	-0.4	-0.4	-0.4	0.7	2.1	2.1
25 to 64	50	10.6	12.3	14.0	16.0	15.0	15.7	16.9	15.9
65 or more	30	17.5	21.0	20.6	23.0	22.5	21.9	21.2	21.0
Medicare FFS share									
<50%	23	0.3	3.2	2.7	4.5	3.4	3.2	3.8	4.5
50% to 75%	57	9.6	13.4	14.9	16.7	16.1	16.5	17.4	16.4
>75%	20	13.6	20.1	20.0	21.1	20.9	22.5	23.2	22.4

Note: IRF (inpatient rehabilitation facility), FFS (fee-for-service), N/A (not applicable). Government-owned facilities operate in a different financial context from other facilities, so their margins are not necessarily comparable. Their margins are not presented separately here, although they are included in the margins for other groups (e.g., "all IRFs"), where applicable. Percentages may not sum to 100 due to rounding.

Source: MedPAC analysis of cost report data from CMS.

IRFs to be nonprofit.) Among freestanding IRFs, nonprofit facilities (which accounted for 5.4 percent of Medicare discharges from IRFs) had an average Medicare margin of 8.0 percent (data not shown). Freestanding for-profit IRFs (which accounted for 50 percent of Medicare discharges from IRFs) had a Medicare margin of 27.0 percent (data not shown). Among hospital-based IRFs, the Medicare margin for nonprofit units (which accounted for 29.3 percent of Medicare discharges from IRFs) averaged -0.2 percent, compared with 10.3 percent for for-profit units (which accounted for 9.3 percent of Medicare discharges from IRFs; data not shown).

Higher unit costs were the primary driver of differences in financial performance between freestanding and hospital-

based IRFs. In 2019, freestanding IRFs had a median standardized cost per discharge that was 25 percent lower than that of hospital-based IRFs (\$13,066 vs. \$17,506).¹⁵ Hospital-based IRFs are far more likely than freestanding IRFs to be nonprofit, which could contribute to the disparity in unit costs. But even nonprofit freestanding IRFs had a median standardized cost per discharge that was 7.0 percent lower than that of hospital-based IRFs. Previous Commission analysis of underlying cost components found that hospital-based IRFs had higher costs than freestanding IRFs across all cost categories, with the biggest difference manifesting in routine costs (Medicare Payment Advisory Commission 2015).

Nevertheless, one-quarter of hospital-based IRFs had Medicare margins greater than 12 percent, indicating that many hospitals can manage their IRF units profitably. Further, despite comparatively low average margins in hospital-based IRFs, evidence suggests that these units make a positive financial contribution to their parent hospitals. For example, aggregate inpatient Medicare margins have been consistently higher for hospitals with IRF units versus hospitals without (1.0 percentage point higher in 2019).

Margins also varied by facility size. In 2019, the aggregate Medicare margin for IRFs with 10 or fewer beds was -3.8 percent, compared with 21.0 percent for IRFs with 65 or more beds (Table 9-8, p. 267). These differences are in large measure because of differences in economies of scale leading to higher costs in smaller facilities. The median standardized cost for IRFs with fewer than 10 beds was 53 percent higher than for IRFs with 65 or more beds (\$20,041 compared with \$13,113; data not shown). Smaller facilities also tend to have lower occupancy rates than large facilities (55 percent compared with 76 percent in 2019), which contributes to differences in costs.

Medicare margins have tended to rise as the share of Medicare patients increased. The aggregate Medicare margin in 2019 was 4.5 percent for IRFs in which less than half of discharges were covered by FFS Medicare, compared with 22.4 percent for IRFs in which more than three-quarters of discharges were covered by FFS Medicare (Table 9-8, p. 267). The high aggregate Medicare margin in IRFs with high Medicare shares indicates that Medicare payments substantially exceed the costs of caring for beneficiaries.

Numerous factors contribute to lower margins in hospital-based IRFs

Several factors account for the disparity in margins between hospital-based and freestanding IRFs, including differences in economies of scale (as described above), stringency of cost control, service mix, and patient mix. Differences in IRFs' assessment of patients' motor function and cognition likely also play a role.

Hospital-based IRFs may be less stringent in cost control

Hospital-based IRFs appear to be less stringent in their cost control. Between 2010 and 2019, costs per case for hospital-based IRFs grew 21.9 percent, compared with 12.3 percent for freestanding IRFs.

Hospital-based IRFs have a different mix of patients

There are marked differences in hospital-based and freestanding IRFs' mix of cases. In 2019, compared with freestanding IRFs, hospital-based IRFs admitted a larger share of patients with stroke as the primary reason for rehabilitation and smaller shares of cases with certain other neurological conditions and certain other orthopedic conditions (excluding fractures of the hip, pelvis, and femur, and hip and knee replacements). Because the other neurological and other orthopedic impairment groups are broadly defined, freestanding IRFs may selectively admit patients within these groups. Moreover, cases with other neurological conditions also count toward the compliance threshold, so IRFs with higher shares of these cases can more easily meet the requirements of the 60 percent rule while keeping down costs. Further, as discussed earlier, we found that other orthopedic and neurologic case types are more profitable than other cases (Table 9-3, p. 258), which could result in higher margins for facilities that admit larger shares of these cases.

Another factor contributing to differences in margins are outlier cases, cases with extraordinarily high costs. In general, hospital-based IRFs are much more likely than freestanding IRFs to have high-cost outlier cases (13.5 percent of cases compared with 2.5 percent). Indeed, 82 percent of Medicare's IRF outlier payments were made to hospital-based facilities in 2019.

Although these payments diminish losses per outlier case, by design they do not completely cover their costs. It is not clear whether the large number of outlier cases in hospital-based IRFs stems from differences in unit cost, unmeasured clinical complexity that is not fully captured by the case-mix system, or both.

Hospital-based IRFs appear to assess their patients differently

Historically, evidence suggests that assessments of patients' motor and cognitive function are not reliably consistent across IRFs. Some in the industry have postulated that hospital-based IRFs devote less time to training assessment staff and verifying the accuracy of assessments, resulting in less reliable measures of patients' motor and cognitive function in hospital-based IRFs. Others assert that some freestanding IRFs aggressively assess their patients in a way that maximizes payment. To the extent that hospital-based IRFs consistently assess their patients as less disabled than do their freestanding counterparts, for

Identifying relatively efficient inpatient rehabilitation facilities

The Commission is required by the Medicare Prescription Drug, Improvement, and Modernization Act of 2003 to consider the costs associated with an efficient provider. This year, we attempted to identify and examine the financial performance of inpatient rehabilitation facilities (IRFs) that had consistently low costs per discharge and high quality using our new cross-sector quality measures. We calculated the cost per discharge using cost report and claims data and adjusted for differences in area wages; mix of cases; and prevalence of high-cost outliers, short-stay outliers, and transfer cases. For quality measures, we used risk-adjusted rates of successful discharge to the community and all-condition hospitalizations within a stay. To be included in the group of IRFs that furnished relatively low-cost, high-quality care, an IRF had to be (1) in the best performing third of the distribution of adjusted cost per discharge or of one of the quality measures for three consecutive years (2016 through 2018) and (2) not in the worst performing third of the distribution of adjusted cost per discharge or either of the quality measures for three consecutive years. Only IRFs with

at least 60 Medicare fee-for-service discharges were included in the analysis.

The method we used to assess performance attempts to limit drawing incorrect conclusions about performance based on poor data. Using three years (rather than just one year) of data to categorize IRFs as efficient avoids categorizing providers based on random variation or on one “unusual” year. After determining whether an IRF was relatively efficient based on having relatively low costs and good quality care for three years in a row, we calculated performance on several quality and cost measures in 2019. By first assigning an IRF to a group (relatively efficient or other) and then examining the group’s performance in the next year, we avoid having a facility’s poor data affect both its own categorization and the assessment of the group’s performance. Thus, an IRF’s erroneous data in 2016, 2017, or 2018 could result in its inaccurate assignment to a group, but because the group’s performance is assessed with data from 2019, these “bad” data would not directly affect the assessment of the group’s performance. ■

whatever reason, their payments—and margins—will be systematically lower.

Efficient provider analysis

The Commission is required by the Medicare Prescription Drug, Improvement, and Modernization Act of 2003 to consider the costs associated with efficient providers. The Commission follows two principles when selecting a set of efficient providers. First, the providers must do relatively well on a set of cost and quality metrics. Second, the performance has to be consistent, meaning that the provider cannot have poor performance on any metric in any of three consecutive years preceding the year under evaluation. The Commission’s approach is to develop a set of criteria and then examine how many providers meet

them. It does not establish a set share (for example, 10 percent) of providers to be considered efficient and then define criteria to meet that pool size. (For a more detailed discussion of the Commission’s methodology, see text box.)

Our analysis finds that relatively efficient IRFs had lower rates of hospitalization and higher rates of successful discharge to the community than other IRFs. While payment rates to all IRFs were similar, standardized costs per discharge for the relatively efficient group were 13 percent lower, leading to a large difference in the median Medicare margin, which was 15.8 percent for the relatively efficient group compared with 4.6 percent for other IRFs (Table 9-9, p. 270).

**TABLE
9-9**
Characteristics of relatively efficient providers, 2019

Performance in 2019	Type of IRF		Ratio of relatively efficient to other IRFs
	Relatively efficient IRFs	Other IRFs	
Quality measures:			
All-condition hospitalization rate	6.8%	7.7%	0.88
Successful discharge to community rate	69.1%	65.1%	1.06
Cost and payment measures:			
Payment per discharge	\$20,774	\$21,360	0.98
Standardized cost per discharge	\$15,040	\$17,367	0.87
Medicare margin	15.8%	4.6%	N/A
Facility characteristics:			
Facility case-mix index	1.26	1.24	1.02
Length of stay (in days)	12.3	12.5	0.98
Occupancy rate	69.9%	65.3%	1.07
Number of beds	29	24	1.21
Share of discharges for:			
Stroke	18.0%	18.8%	0.96
Other neurological conditions	10.7%	8.2%	1.30
Share of facilities:			
Freestanding	31.4%	25.0%	N/A
For profit	45.0%	35.2%	N/A
Hospital-based nonprofit	46.7%	49.9%	N/A

Note: IRF (inpatient rehabilitation facility), N/A (not applicable). All data are medians unless otherwise indicated. The analysis was conducted on 1,017 IRFs that met the data requirements and minimum case counts (60). IRFs were identified as “relatively efficient” based on a cost measure (costs per discharge) and two quality measures (rates of hospitalizations within the stay and successful discharge to community) between 2016 and 2018. Relatively efficient IRFs were those in the best third of the distribution for one measure and not in the worst third for any measure in each of the three years. Costs per discharge were standardized for differences in area wages, mix of cases, and prevalence of high-cost outliers, short-stay outliers, and transfer cases. Quality measures were calculated for all facilities with 60 or more fee-for-service stays. Successful discharge to the community includes beneficiaries discharged to the community (including those discharged to the same nursing home) who did not have an unplanned hospitalization or die in the 30 days after discharge. The all-condition hospitalization measure captures all unplanned hospital admissions and readmissions and outpatient observation stays that occur during the stay. High rates of hospitalization within the stay indicate worse quality and high rates of successful discharge to community indicate better quality. “Other neurological conditions” includes multiple sclerosis, Parkinson’s disease, polyneuropathy, and neuromuscular disorders.

Source: MedPAC analysis of Medicare cost report data, Medicare Provider Analysis and Review data, and Inpatient Rehabilitation Facility–Patient Assessment Instrument data from CMS for 2016 to 2019.

Relatively efficient IRFs were, on average, larger and had higher occupancy rates compared with other IRFs, leading to greater economies of scale. The mix of cases also differed somewhat between the relatively efficient and other IRFs. Relatively efficient IRFs had a slightly higher average case-mix index and more cases with other neurological conditions, but somewhat smaller shares of stroke cases compared with other IRFs.

Included in this analysis were the 1,017 IRFs that met the data requirements and minimum case counts (60). In total, 174 IRFs were defined as relatively efficient providers. Hospital-based nonprofit IRFs represented 46.7 percent of this group while freestanding IRFs and for-profit IRFs accounted for 31.4 percent and 45.0 percent of this group, respectively (Table 9-9).

Previous Commission analyses suggest that assessment and scoring practices contribute to greater profitability in some IRFs (Medicare Payment Advisory Commission 2016). The results of the efficient provider analysis must therefore be interpreted with caution because of the subjective nature of the function measures used to categorize patients and their direct association with Medicare payment and profitability.

How should Medicare payments change in 2022?

The coronavirus PHE has made 2020 an anomalous year in many respects, and it is impossible to predict with certainty the extent to which these effects will continue into 2021. Our best estimate is that IRFs' Medicare margin in 2021 will increase relative to 2019, driven by substantially higher payment rate updates in 2020 and 2021 than in 2019 and prior years.

To estimate 2021 payments, costs, and margins with 2019 data, the Commission considers policy changes effective in 2020 and 2021. The changes in payments that affect our estimate of the 2021 margin include:

- an update of 2.5 percent in 2020 based on an IRF market basket increase of 2.9 percent and an offsetting multifactor productivity adjustment of 0.4 percent;
- the suspension of the 2 percent Medicare sequestration from May 2020 through March 2021 due to the coronavirus PHE;
- an estimated case-mix growth of 0.5 percent in 2020 because of a higher acuity case mix in IRFs as a result of the PHE;
- an update of 2.4 percent in 2021 based on an IRF market basket increase of 2.4 percent, with no productivity adjustment; and
- changes to the high-cost outlier amount in 2021, which will increase payments by 0.4 percentage point.

This cumulative percentage increase is substantially higher than in prior years because of the expiration of statutory reductions in IRF updates required by the Affordable Care Act in each year from 2010 through 2019.

On the cost side, historically, cost growth in this sector has been at or below market basket levels, though cost growth exceeded the market basket between 2018 and 2019. We used a three-year historical average to estimate cost growth in 2020 and 2021.

Based on industry reports, we expect that COVID-19-related reductions in volume in the first half of 2020 will return to prepandemic levels and that increased costs for personal protective equipment and other COVID-19-related expenses will be more than offset by a concurrent increase in net revenue per discharge due to the temporary suspension of sequestration and a higher acuity case mix in IRFs as a result of the PHE. Considering these assumptions, we project an aggregate Medicare margin of 16 percent for IRFs in 2021.

For FY 2009 through FY 2017, the Commission recommended a 0 percent update to the IRF payment rate. For FY 2018 through FY 2020, however, as the payment adequacy indicators remained positive and the aggregate Medicare margin neared historic highs, the Commission recommended that the Congress reduce IRF payment rates by 5 percent. Because our recommendations were not enacted and because, in the absence of legislative action, CMS is required by statute to apply an adjusted market basket increase, payments have continued to rise. Aggregate Medicare margins for IRFs have remained above 13 percent since 2015. These high aggregate margins indicate that aggregate Medicare payments continue to substantially exceed the costs of caring for beneficiaries in IRFs. Absent congressional action, payments to IRFs will continue to increase in FY 2022, by an estimated 2.2 percent.

Reducing the payment rate for IRFs would better align Medicare payments with the costs of IRF care. The Commission also continues to believe that the high-cost outlier pool should be expanded, as previously recommended in 2016, to further redistribute payments within the IRF PPS and reduce the impact of potential misalignments between IRF payments and costs. As noted in our March 2016 report to the Congress, expanding the outlier pool could increase payments for providers who are less efficient and for providers whose patients' acuity is not well captured by the case-mix system.¹⁶

The Commission also reiterates its March 2016 recommendation that the Secretary conduct focused medical record review of IRFs that have unusual patterns

of case mix and coding and conduct other research necessary to improve the accuracy of payments and protect program integrity. With the recent shift to using the Quality Reporting Program functional measures to classify cases into case-mix groups, it is important that CMS conduct focused medical reviews to ensure consistency in reporting across providers using the new measures.

RECOMMENDATION 9

For fiscal year 2022, the Congress should reduce the 2021 Medicare base payment rate for inpatient rehabilitation facilities by 5 percent.

RATIONALE 9

The combination of low historical cost growth and increasing average payments has resulted in overpayments to IRFs. The high aggregate margin in 2019 and our projected margin for 2021 indicate that Medicare payments substantially exceed the costs of caring for beneficiaries. This excess contributes to Medicare's long-run sustainability challenges. For every fiscal year since 2009, the Commission has recommended that the update to the IRF payment rate be eliminated or that the payment rate be reduced. However, CMS has been required by statute to apply an adjusted market basket increase each year. Reducing the payment rate for IRFs by 5 percent for FY 2022 would better align Medicare payments with the costs of IRF care.

We do recognize that the coronavirus PHE will affect all payment adequacy indicators in 2020; however, we do not anticipate any long-term changes that will persist past the end of the PHE and therefore warrant inclusion in the annual update to IRF payments in 2022. Instead, to the extent that the coronavirus PHE continues into 2022, any needed additional financial support should be targeted to affected IRFs that are necessary for access.

Furthermore, in 2021, we expect currently positive IRF payment adequacy indicators to remain strong, driven by substantially higher annual updates to IRF payment rates in 2020 and 2021 with the expiration of statutory reductions in IRF updates required by the Affordable Care Act in each year from 2010 through 2019.

IMPLICATIONS 9

Spending

- Relative to current law, this recommendation would decrease Medicare spending by between \$750 million and \$2 billion in 2022 and by between \$5 billion and \$10 billion over five years.

Beneficiary and provider

- We do not expect this combination of recommendations to have an adverse effect on either Medicare beneficiaries' access to care or out-of-pocket spending. This recommendation could increase financial pressure on some providers. We expect relatively efficient providers will continue to be willing and able to care for Medicare beneficiaries. ■

Endnotes

- 1 More frequently, Medicare beneficiaries receive inpatient rehabilitation services in skilled nursing facilities (SNFs), in part because there are many more SNFs than IRFs nationwide.
- 2 Throughout this chapter, we use the term “FFS Medicare” or “traditional Medicare” as equivalents to the CMS term “Original Medicare.” Collectively, we distinguish the payment model represented by these terms from other models such as Medicare Advantage or advanced alternative payment models that may use FFS mechanisms but are designed to create different financial incentives.
- 3 More information about the prospective payment system for IRFs is available at http://medpac.gov/docs/default-source/payment-basics/medpac_payment_basics_20_irf_final_sec.pdf?sfvrsn=0.
- 4 During the public health emergency (PHE), CMS has waived some of Medicare’s IRF requirements to allow IRFs to work with acute care hospitals in their communities to ensure surge capacity. For example, CMS has allowed IRFs to exclude from the calculation used to determine the IRF compliance threshold any patient who has been admitted solely in response to the emergency (Centers for Medicare & Medicaid Services 2020). The IRF compliance threshold normally requires that no less than 60 percent of patients admitted to an IRF have as a primary diagnosis or comorbidity at least 1 of 13 specified conditions.
- 5 The 13 conditions are stroke; spinal cord injury; congenital deformity; amputation of a lower limb; major multiple trauma; hip fracture; brain injury; certain other neurological conditions (multiple sclerosis, Parkinson’s disease, cerebral palsy, and neuromuscular disorders); burns; 3 arthritis conditions for which appropriate, aggressive, and sustained outpatient therapy has failed; and hip or knee replacement when it is bilateral, the patient’s body mass index is greater than or equal to 50, or the patient is age 85 or older.
- 6 During the PHE, some exceptions have been made to Medicare coverage criteria to provide additional hospital beds for surge capacity in communities that need it. For example, the Secretary waived § 412.622(a)(3)(ii), commonly referred to as the “3-hour rule,” the criterion that patients treated in inpatient rehabilitation facilities generally receive at least 15 hours of therapy per week. CMS has specified that IRFs should strive to provide typical IRF levels of care for beneficiaries admitted during the coronavirus PHE who require and can benefit from the IRF levels of care (Centers for Medicare & Medicaid Services 2020).
- 7 CMS’s major revisions to the compliance threshold policy in 2004 were to (1) increase the number of conditions that count toward the threshold from 10 to 13 and (2) revise the qualifying criteria of major joint replacement—a condition that was commonly treated in IRFs at that time—such that only a certain subset of patients with that condition would count toward the compliance threshold.
- 8 Other orthopedic conditions, cardiac conditions, and debility are not among the 13 conditions that count toward the compliance threshold, but such cases may count if they have specified comorbidities.
- 9 This analysis of FFS IRF claims and assessment data from 2013 excluded cases that were not preceded by an acute care hospital stay within 30 days of the IRF admission.
- 10 Under Section 319 of the Public Health Services Act, the Secretary of Health and Human Services may determine that a disease or disorder presents a PHE or that a PHE, including significant outbreaks of infectious disease or bioterrorist attacks, otherwise exists. The Secretary first determined the existence of a coronavirus PHE, based on confirmed cases of COVID-19 in the U.S., on January 31, 2020. At the time of publication, the coronavirus PHE had been renewed four times, most recently on January 7, 2021.
- 11 If we approximate marginal cost as total Medicare cost minus fixed building and equipment cost, then:

$$\text{Marginal profit} = (\text{payments for Medicare services} - (\text{total Medicare costs} - \text{fixed building and equipment costs})) / \text{Medicare payments}.$$
- 12 COVID-19 will also affect our ability to assess and compare quality of care for periods during the PHE. Next year, when we report on quality, it is likely that information for performance during the PHE may be incomplete for at least some portion of 2020 performance. CMS’s guidance on reporting requirements and how the PHE will affect quality payment programs is evolving. To date, CMS has stated it will exclude at least some of the 2020 experience in order to assist IRF providers while they direct their attention toward the health and safety of patients and staff during the pandemic.
- 13 The risk adjustment for the successful discharge to the community measure includes age and sex of the beneficiary, end-stage renal disease (ESRD) and disability status for entitlement, principal diagnosis, comorbidities, the length of stay of the preceding hospital stay (if there was one), and a count of the hospitalizations during the preceding year. Risk

adjusters for the hospitalization measure include primary diagnosis, comorbidities and severity of illness, special conditions (severe wounds, difficulty swallowing, and bowel incontinence), age and sex, disability and ESRD status, hospitalization in the previous month, days in the intensive care unit during a preceding hospitalization (if there was one), a count of the hospitalizations during the preceding year, and the provision of ventilator care during the PAC stay.

14 In this analysis, Medicare margins were calculated as $(\text{Medicare payments} - \text{Medicare costs}) / \text{Medicare payments}$.

15 Standardized for wage index, case-mix index, and outliers.

16 The Commission estimates that reducing the payment rate for IRFs by 5 percent and expanding the outlier pool from 3 percent to 5 percent would decrease total payments to IRFs by 5 percent. We estimate the combined effect of reducing the payment rate for IRFs by 5 percent and expanding the outlier pool would decrease aggregate payments to freestanding IRFs by 6.2 percent, to hospital-based IRFs by 3.7 percent, to for-profit IRFs by 6.0 percent, and to nonprofit IRFs by 3.9 percent.

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