

CHAPTER

# 10

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**Inpatient rehabilitation  
facility services**

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

- 10** The Congress should eliminate the update to the Medicare payment rates for inpatient rehabilitation facilities in fiscal year 2016.

**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 an injury, illness, or surgery. Rehabilitation programs at IRFs are supervised by rehabilitation physicians and include services such as physical and occupational therapy, rehabilitation nursing, and speech–language pathology, as well as prosthetic and orthotic devices. In 2013, Medicare spent \$6.8 billion on fee-for-service IRF care provided in about 1,160 IRFs nationwide. About 338,000 beneficiaries had more than 373,000 IRF stays. On average, Medicare fee-for-service accounts for about 61 percent of IRFs’ discharges.

### Assessment of payment adequacy

Our indicators of Medicare payment adequacy for IRFs are generally positive.

**Beneficiaries’ access to care**—Our analysis of IRF supply and volume of services provided suggests that capacity remains adequate to meet demand.

- **Capacity and supply of providers**—Between 2012 and 2013, the number of IRFs remained fairly steady at just over 1,160 providers. The number of hospital-based and nonprofit IRFs continues to decrease, while the number of freestanding IRFs and for-profit IRFs continues to increase. However, more than half of the new IRFs that opened in 2013 were hospital-based units. The average IRF occupancy rate has hovered around

### In this chapter

- Are Medicare payments adequate in 2015?
- How should Medicare payments change in 2016?

63 percent for the past several years, indicating that capacity is more than adequate to handle current demand for IRF services.

- **Volume of services**—Between 2012 and 2013, the number of Medicare cases treated in IRFs was stable at about 373,000 cases.

**Quality of care**—The Commission tracks three indicators of IRF quality: risk-adjusted facility discharge to the community, risk-adjusted discharge to skilled nursing facilities (SNFs), and potentially avoidable readmissions to acute care hospitals. All measures showed small improvement between 2011 and 2013. We also report on measures of change in patients' motor function and cognition during their IRF stay. These scores also increased slightly from 2011 to 2013, the period we examined.

**Providers' access to capital**—One major freestanding IRF chain that accounted for almost 40 percent of all freestanding IRFs in 2013 and about a quarter of all IRF discharges has very good access to capital. We were not able to determine the ability of other freestanding facilities to raise capital. The parent institutions of hospital-based IRFs have maintained reasonable access to capital.

**Medicare payments and providers' costs**—In 2013, the aggregate Medicare margin remained steady at 11.4 percent, in spite of the sequester. The aggregate margin has risen steadily since 2009. Financial performance continues to vary across IRFs, with margins of freestanding IRFs far exceeding those of hospital-based facilities. Higher margins were largely driven by lower unit costs. The lower costs may stem from greater economies of scale. But freestanding IRFs are also far more likely than hospital-based units to be for profit and therefore may be more focused on controlling costs. There are also notable differences in hospital-based and freestanding IRFs' mix of cases. The difference in the mix of case types across providers raises questions about patient selection and the relative profitability of different case types.

We project that IRFs' aggregate Medicare margin will be 12.6 percent in 2015. This estimate includes the effect of the sequester. If the sequester were not in effect in 2015, our projected margin would be almost 2 percentage points higher.

On the basis of these indicators, the Commission concludes that IRFs can continue to provide Medicare beneficiaries with access to safe and effective care with no update to the payment rates in fiscal year 2016. Our recommendation assumes that site-neutral payments for IRFs and SNFs, which would affect IRF revenues, will not be implemented in fiscal year 2016 (see Chapter 7). ■

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## Background

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After illness, injury, or surgery, some patients need intensive, inpatient rehabilitative care, such as physical, occupational, or speech therapy. Such services are sometimes provided in inpatient rehabilitation facilities (IRFs).<sup>1</sup> To qualify as an IRF, a facility must meet Medicare's conditions of participation for acute care hospitals and must be primarily focused 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 beneficiary must be able to tolerate and benefit from intensive therapy and must have a condition that requires frequent and face-to-face supervision by a rehabilitation physician. Other patient admission criteria also apply. In 2013, Medicare spent \$6.8 billion on IRF care provided in about 1,160 IRFs nationwide. About 338,000 beneficiaries had more than 373,000 IRF stays. On average, Medicare accounts for about 61 percent of IRFs' discharges.

Since January 2002, Medicare has paid IRFs under a per discharge prospective payment system (PPS).<sup>2</sup> Under the IRF PPS, Medicare patients are assigned to case-mix groups (CMGs) based on the patient's primary reason for inpatient rehabilitation, age, and level of functional and cognitive impairment. Within each of these CMGs, patients are further categorized into one of four tiers based on the presence of specific comorbidities that have been found to increase the cost of care. Each CMG tier has a specific weight that reflects the average relative costliness of cases in the group compared with that of the average Medicare IRF case.<sup>3</sup> The CMG weight is multiplied by a base payment rate that has been adjusted to reflect geographic differences in the wages IRFs pay. The payment is further adjusted based on the share of low-income patients treated by the IRF. Additional adjustments are made for IRFs that are teaching facilities and for IRFs located in rural areas. The IRF PPS has outlier payments for patients who are extraordinarily costly.<sup>4</sup>

### Medicare facility requirements for IRFs

To qualify as an IRF for Medicare payment, facilities must meet the Medicare IRF classification criteria. The first criterion is that providers must meet the Medicare conditions of participation for acute care hospitals. 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 provide—through qualified personnel—rehabilitation nursing, physical therapy and occupational therapy, and, as needed, speech–language pathology and psychological (including neuropsychological) services, social services, and orthotic and prosthetic devices;
- 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 approach 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; and
- meet the compliance threshold (described below).

The compliance threshold requires that no less than 60 percent of all patients admitted to an IRF have as a primary diagnosis or comorbidity at least 1 of 13 conditions specified by CMS.<sup>5</sup> 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 prospective payment system rather than the IRF PPS.

The compliance threshold was originally set at 75 percent of an IRF's cases. But analysis of proprietary data from eRehabData<sup>®</sup> for a sample of IRFs suggests that, before implementation of the IRF PPS, many facilities fell short of that threshold. In 2002, the percentage of IRF cases with 1 of the 13 specified conditions was 42 percent. CMS suspended enforcement of the rule in 2002 because of inconsistent enforcement patterns among Medicare's administrative contractors, but it began consistently enforcing compliance in 2004 and enacted restrictions on some of the qualifying conditions.<sup>6</sup> The combination of renewed enforcement of the threshold and additional restrictions resulted in a substantial decline in the volume of Medicare patients treated in IRFs. As volume declined, occupancy rates, the number of rehabilitation beds, and the

number of facilities also fell. Average case-mix severity and cost per case increased as IRFs admitted patients with more complex conditions who counted toward the threshold.

The compliance threshold was permanently capped at 60 percent in 2007 by the Medicare, Medicaid, and SCHIP Extension Act of 2007. Since then, the industry has stabilized. According to eRehabData, 60.3 percent of IRFs' cases counted toward the compliance threshold in 2013. Although IRFs' efforts to meet this compliance threshold had a significant effect on IRF volume, the decline was consistent with the underlying reason for tightening enforcement of the compliance threshold—to ensure that providers receiving higher IRF payments are primarily engaged in furnishing intensive rehabilitation to clinically appropriate cases.

Determining compliance can be complex. A case is first evaluated for compliance based on the impairment group code (IGC), which describes the primary reason for inpatient rehabilitation.<sup>7</sup> (IGCs are also used to assign cases to case-mix groups for payment purposes.) If compliance cannot be determined based on the IGC, the case is evaluated for compliance based on the patient's International Classification of Diseases, Ninth Revision, Clinical Modification (ICD–9–CM) diagnosis codes. Compliance is evaluated either through medical review or through the “presumptive” method, developed by CMS, in which a computer program compares a facility's Inpatient Rehabilitation Facility–Patient Assessment Instrument (IRF–PAI) assessments from the year with a list of eligible codes. The diagnosis codes included on the list are ones that CMS believes demonstrate either that the patient meets criteria for the medical conditions that may be counted toward an IRF's compliance percentage or that the patient has a comorbidity that could cause significant decline in functional ability such that the patient would require intensive rehabilitation (Centers for Medicare & Medicaid Services 2014).

In fiscal year 2016, CMS is removing a large number of ICD–9–CM codes from the list used to qualify for presumptive compliance with the 60 percent rule because the codes alone do not provide sufficient information that the patient would reasonably require intensive inpatient rehabilitation (Centers for Medicare & Medicaid Services 2014). Examples include nonspecific or miscellaneous diagnosis codes and codes for arthritis conditions that would meet the compliance criteria only if severity and prior treatment criteria are met, which could be determined

only through medical review. The Commission supports this effort and encourages CMS to explore further refinements of the 60 percent rule to ensure that higher IRF payments are made to providers that furnish IRF-level services to beneficiaries who need and can tolerate that level of care.

### **Medicare coverage criteria for beneficiaries**

Medicare applies additional criteria that govern whether IRF services are covered for an individual Medicare beneficiary. In 2010, CMS clarified coverage criteria regarding which patients are appropriate to be treated in an IRF, when therapy must begin, and how and when beneficiaries are evaluated. For an IRF claim to be considered reasonable and necessary, there must be a reasonable expectation that the patient meets the following requirements at admission:

- The patient requires active and ongoing therapy in at least two modalities, one of which must be physical or occupational therapy.
- The patient generally requires and can be reasonably expected to actively participate in and benefit from intensive rehabilitation 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 physician face-to-face visits with a patient at least three days a week.

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### **Are Medicare payments adequate in 2015?**

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To assess whether payments for fiscal year 2015 are adequate to cover the costs providers incur and how much providers' costs are expected to change in the coming year (2016), we examine several indicators of payment adequacy. Specifically, we assess beneficiaries' access to 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.

**TABLE  
10-1**

**The number of for-profit IRFs and freestanding IRFs continues to grow, while the number of nonprofit IRFs and hospital-based IRFs declines**

Type of IRF	Share of Medicare discharges	2004	2006	2008	2010	2012	2013	Average annual change		Annual change
								2004-2006	2006-2012	2012-2013
All IRFs	100%	1,221	1,225	1,202	1,179	1,166	1,161	0.2%	-0.8%	-0.4%
Urban	92	1,024	1,018	1,001	981	973	977	-0.3	-0.8	0.4
Rural	8	197	207	201	198	193	184	2.5	-1.2	-4.7
Freestanding	47	217	217	221	233	239	243	0.0	1.6	1.7
Hospital based	53	1,004	1,008	981	946	927	918	0.2	-1.4	-1.0
Nonprofit	50	768	758	738	729	698	677	-0.7	-1.4	-3.0
For profit	41	292	299	291	294	307	322	1.2	0.4	4.9
Government	9	161	168	173	156	157	155	2.2	-1.1	-1.3

Note: IRF (inpatient rehabilitation facility). Numbers may not sum to totals because of missing data.

Source: MedPAC analysis of Provider of Service files from CMS.

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

We have no direct indicator of beneficiaries’ access to IRF care. There are few clear criteria outlining the need for such care, so we have no way to determine whether IRF care is necessary or beneficial for a given patient or whether another, lower cost post-acute care provider (such as a skilled nursing facility or a home health agency) could provide appropriate care. The absence of IRFs in some areas of the country makes it particularly difficult to assess the need for IRF care since beneficiaries in areas without IRFs presumably receive similar services in other settings. Nevertheless, our analysis of IRF supply and volume of services provided suggests that capacity remains adequate to meet demand.

**Capacity and supply of providers: Number of IRFs and occupancy rates suggest adequate capacity**

In 2013, there were 1,161 IRFs nationwide, with more than 38,000 beds; each state and the District of Columbia had at least one IRF (Table 10-1). In general, IRFs are concentrated in highly populated states that have large Medicare populations. More than two-thirds of beneficiaries live in a county that has at least one IRF. IRFs are not the sole provider of rehabilitation services in communities; though they do not necessarily provide intensive rehabilitation, skilled nursing facilities (SNFs), home health agencies, comprehensive outpatient

rehabilitation facilities, and independent therapy providers also furnish rehabilitation services. Given the number and distribution of these other rehabilitation therapy providers relative to IRFs, it is unlikely that many areas exist where IRFs are the only provider of rehabilitation therapy services available to Medicare beneficiaries.

In 2013, about 79 percent of IRFs were distinct units located in acute care hospitals; the remaining 21 percent were freestanding facilities. However, because hospital-based units tend to have fewer beds, they accounted for only 53 percent of Medicare discharges from IRFs. Overall, 28 percent of IRFs are for-profit entities. Freestanding IRFs are far more likely to be for profit than hospital-based IRFs (68 percent vs. 17 percent). About 41 percent of Medicare IRF discharges in 2013 were from for-profit facilities. Over time, the number of hospital-based and nonprofit IRFs has declined, while the number of freestanding and for-profit IRFs has increased. Between 2006 and 2013, the number of hospital-based IRFs fell by 9 percent, while the number of freestanding IRFs rose 12 percent.

In 2013, about 35 IRFs closed; about 80 percent of these were hospital-based units. However, almost two-thirds of the new IRFs that opened that year were hospital-based units. Acute care hospitals may find that IRF units help reduce inpatient lengths of stay and free up hospital beds for additional admissions. Previous Commission analyses have



**TABLE  
10-2**

**The number of fee-for-service IRF cases is holding steady**

	2004	2006	2008	2010	2011	2012	2013	Average annual change		Annual change
								2004–2008	2008–2012	2012–2013
Number of cases	495,349	404,633	356,312	359,307	371,288	373,284	373,118	-7.9 %	1.2%	0.0%
Cases per 10,000 FFS beneficiaries	135.6	111.9	100.4	99.7	101.7	100.1	99.7	-7.2	-0.1	-0.4
Spending (in billions)	\$6.6	\$6.2	\$5.9	\$6.1	\$6.5	\$6.7	\$6.8	-2.6	3.2	1.4
Payment per case	\$13,290	\$15,380	\$16,646	\$17,085	\$17,398	\$17,995	\$18,258	5.8	2.0	1.5
ALOS (in days)	12.7	13.0	13.3	13.1	13.0	12.9	12.9	1.3	-0.8	-0.4
Users	449,362	369,269	323,897	325,506	336,601	339,087	337,704	-7.9	1.2	-0.4

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.

found that hospitals with IRF units have higher inpatient Medicare margins than hospitals without such units.

The average IRF occupancy rate has hovered around 63 percent for the past several years, indicating that capacity is more than adequate to handle current demand for IRF services. Freestanding IRFs and IRFs located in urban areas had somewhat higher average occupancy rates in 2013 than did their hospital-based and rural counterparts.

**Volume of services: Number of IRF cases holding steady**

The number of Medicare fee-for-service (FFS) IRF cases grew rapidly throughout the 1990s and the early years of the IRF PPS, reaching a peak of about 495,000 in 2004 (Table 10-2). After CMS renewed its enforcement of the compliance threshold in 2004, IRF volume declined substantially, falling almost 8 percent per year from 2004 to 2008. At that point, volume began to increase slowly. Between 2012 and 2013, volume was stable, remaining at about 373,000 cases.

Since 2008, the number of IRF cases per 10,000 FFS beneficiaries has held steady at about 100. Relatively few Medicare beneficiaries use IRF services because, to

qualify for Medicare coverage, IRF patients must be able both to tolerate and benefit from intensive rehabilitation therapy, which typically consists of at least three hours of therapy a day for at least five days a week. Still, compared with all Medicare beneficiaries, those admitted to IRFs are disproportionately over age 85. Almost a quarter of IRFs' Medicare cases were for beneficiaries aged 85 or older. The use rate of IRFs among Medicare's FFS population continues to be more than twice that of the Medicare Advantage population (see text box, pp. 246–247).

Beginning in 2004, after CMS's renewed enforcement of the compliance threshold and restrictions on some of the qualifying conditions, the total number of IRF cases fell and the mix of cases treated by IRFs shifted markedly. IRFs began to admit a higher share of patients with diagnoses that met the revised compliance threshold, such as stroke, brain injury, and neurological disorders. The growth in cases with neurological disorders—which include multiple sclerosis, Parkinson's disease, and polyneuropathy—has been particularly striking. Between 2004 and 2013, the number of IRF cases with neurological disorders grew 82 percent, even as the total number of Medicare IRF cases declined 24 percent. The number of cases with brain injuries rose 58 percent over



**TABLE 10-3**

**IRF patient mix is stable after period of rapid change**

Condition	Percent of IRF Medicare FFS cases				Meets compliance threshold	Percentage point change		
	2004	2009	2012	2013		2004-2009	2009-2012	2012-2013
Stroke	16.6%	20.5%	19.4%	19.4%	yes	3.9	-1.1	0.0
Fracture of the lower extremity	13.1	15.1	13.0	12.5	yes	2.0	-2.1	-0.5
Neurological disorders	5.2	9.0	11.6	12.4	yes	3.8	2.6	0.9
Debility	6.2	9.3	10.0	10.2	no	3.1	0.7	0.3
Major joint replacement of the lower extremity	24.1	11.7	10.1	9.0	*	-12.4	-1.6	-1.1
Brain injury	3.9	7.3	7.9	8.2	yes	3.4	0.6	0.2
Other orthopedic conditions	5.2	6.4	7.5	7.7	no	1.3	1.1	0.2
Cardiac conditions	5.3	4.9	5.3	5.4	no	-0.3	0.4	0.1
Spinal cord injury	4.2	4.4	4.6	4.6	yes	0.2	0.2	0.0
All other	16.3	11.3	10.6	10.5	**	-5.0	-0.6	-0.1

Note: IRF (inpatient rehabilitation facility), FFS (fee-for-service). "Fracture of the lower extremity" includes hip, pelvis, and femur fractures. "Neurological disorders" includes multiple sclerosis, Parkinson's disease, and polyneuropathy. 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. "Meets compliance threshold" indicates whether the condition counts toward the compliance threshold, which requires that 60 percent of all patients have 1 of 13 specified diagnoses. Numbers may not sum to totals due to rounding.  
 \*Cases admitted for rehabilitation following 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.  
 \*\*Case types in this category that meet the compliance threshold include congenital deformity, amputation, major multiple trauma, burns, and certain arthritis cases.

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

the same period. (Notably, we also observe growth in the number of debility cases and cases with other orthopedic conditions, neither of which is among the 13 conditions that count toward the compliance threshold.) As a result, neurological disorders now make up 12.4 percent of all IRF cases compared with 5.2 percent in 2004 (Table 10-3). Beneficiaries with brain injuries now make up 8.2 percent of all IRF cases, up from 3.9 percent in 2004.

In 2013, the most common case type in IRFs was stroke, accounting for 19.4 percent of Medicare cases (Table 10-3). The next most common case types are fracture of the lower extremity (12.5 percent of all Medicare cases) and neurological disorders (12.4 percent). However, the distribution of case types differs by type of IRF. For example, freestanding for-profit IRFs have a lower share of stroke cases (14 percent) and a higher share of cases with neurological disorders (19 percent) (Table 10-4).

**TABLE 10-4**

**IRF patient mix differs by provider type, 2013**

Condition	All IRFs	Freestanding		Hospital based	
		For profit	Nonprofit	For profit	Nonprofit
Stroke	19%	14%	22%	19%	24%
Fracture of the lower extremity	14	13	12	17	14
Neurological disorders	12	19	7	10	8
Other orthopedic conditions	8	11	7	5	6

Note: IRF (inpatient rehabilitation facility). "Neurological disorders" includes multiple sclerosis, Parkinson's disease, and polyneuropathy. "Fracture of the lower extremity" includes hip, pelvis, and femur fractures. "Other orthopedic conditions" excludes fractures of the hip, pelvis, and femur, and hip and knee replacements.

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

## Comparison of Medicare Advantage and Medicare fee-for-service patients' use of inpatient rehabilitation facility services

Patients who reside in areas with inpatient rehabilitation facilities (IRFs) typically have alternatives for rehabilitation care, including skilled nursing facilities and home health agencies. Alternative post-acute care settings are generally less costly but offer less intensive rehabilitation and medical services. For many patients, any number of settings could provide appropriate care for their conditions. Because Medicare Advantage (MA) plans have incentives to manage care for beneficiaries in a cost-efficient manner, we examined how the population characteristics and use rates of the higher cost IRF services in the MA population compared with use in the fee-for-service (FFS) population.

Medicare requires IRFs to submit patient assessment data for both FFS and MA patients. We examined 2013 data from the IRF–Patient Assessment Instrument and found that the use rate of IRFs among the FFS population in 2013 was more than double the rate of MA patients (Table 10-5). MA enrollees who used IRFs were more likely than FFS beneficiaries to have

*(continued next page)*

**TABLE  
10-5**

**FFS beneficiaries have higher IRF use rate, lower severity than MA enrollees, 2013**

	FFS patients	MA patients
Cases per 1,000 enrollees	10.1	3.8
Admitted from acute unit of same facility	37.8%	43.0%
Case-mix weight	1.31	1.38
Average LOS (in days)	12.8	13.7
Percent:		
Discharged home	69.9%	72.8%
Discharged home with home health	52.5	53.1
Discharged to SNF	10.9	8.1

Note: FFS (fee-for-service), IRF (inpatient rehabilitation facility), MA (Medicare Advantage), LOS (length of stay), SNF (skilled nursing facility). Discharge destinations do not total 100 percent because patients in the discharged home category also appear in the discharged home with home health category. Some discharge destinations are not shown.

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

### Quality of care: Small improvements in risk-adjusted measures between 2011 and 2013

This year, to assess the quality of care provided in IRFs, the Commission developed and examined risk-adjusted facility rates of improvement in patients' functional and cognitive abilities, discharge to the community and discharge to SNFs, and potentially avoidable readmissions to acute care hospitals. We use these measures because they reflect the preferences of beneficiaries, the goals of inpatient rehabilitation care, and the objectives of the Medicare program. Beneficiaries who use IRF services are seeking to regain or improve physical and cognitive function after an acute event, surgery, or debilitating medical problem. Community discharge—return to the home—is the goal for many. Rates of discharge to a SNF reflect the extent to which patients continue to need institutional care after the IRF stay. Avoiding costly and harmful hospital readmissions is beneficial for both beneficiaries and the Medicare program.

To accurately compare quality across facilities, measures must be risk adjusted to reflect the relative complexity of cases each facility treats. Without risk adjustment, some facilities may appear to provide higher quality care when in fact they treat a less complex mix of cases, while others may appear to have worse quality when in fact they treat a more complex mix of cases. Risk adjustment allows for fair comparisons across facilities.

### Risk-adjusted gains in motor function and cognition

To qualify for coverage of IRF care, beneficiaries must require, be able to participate in, and benefit from intensive rehabilitation therapy. To observe the extent to which IRFs help improve the motor function and cognition of the beneficiaries they treat, we worked with a contractor to develop a risk-adjusted measure of gains in these areas. We wanted measures reflecting the extent to which patients improved their motor skills and cognition during

## Comparison of Medicare Advantage and Medicare fee-for-service patients' use of inpatient rehabilitation facility services (cont.)

been admitted to the IRF from an acute-care unit of the same facility (43 percent vs. about 38 percent).

On average, as measured by the IRF case-mix weight, MA IRF patients were more complex than their FFS counterparts, and their average stay was almost a day longer. At the same time, MA IRF patients were more likely to be discharged home and less likely to be discharged to a SNF.

The mix of case types among MA IRF cases was different from that among FFS IRF cases (Table 10-6). A much larger share of MA IRF patients were admitted for rehabilitation after a stroke—34 percent compared with 19 percent for FFS IRF patients. MA IRF cases were also more likely to be admitted because of a brain injury. By contrast, FFS IRF patients were more likely than MA patients to be admitted for rehabilitation for neurological conditions (12 percent vs. 9 percent) and debility (10 percent vs. 6 percent).

This analysis did not control for the availability of IRFs in areas with high MA market penetration. The use rate could also be affected by potential differences in the need for rehabilitation services in the MA population. However, the disparity in use rates suggests that MA plans are more selective in the patients they authorize to receive care in IRFs. ■

**TABLE  
10-6**

**Mix of case types among FFS IRF cases differs from that of MA IRF cases, 2013**

Type of case	Share of all cases	
	FFS patients	MA patients
Stroke	19%	34%
Fracture of the lower extremity	13	10
Neurological conditions	12	9
Debility	10	6
Major joint replacement of the lower extremity	9	9
Brain injury	8	10
Other orthopedic conditions	8	5
Spinal cord injury	5	6
Cardiac conditions	5	4
Amputation	3	4
All other	8	5

Note: FFS (fee-for-service), IRF (inpatient rehabilitation facility), MA (Medicare Advantage). "Fracture of the lower extremity" includes hip, pelvis, and femur fractures. "Neurological conditions" includes multiple sclerosis, Parkinson's disease, and polyneuropathy. 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 arthritis and pain syndrome. Columns may not sum to 100 percent due to rounding.

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

the IRF stay, given their level of function at admission and how much improvement they would be expected to make. Some patients, such as a relatively healthy 68-year-old recovering from an elective hip replacement, are likely to improve across several activities of daily living (ADLs) during their IRF stay. Other patients, such as those who are 85 years old or older and suffering from debility following a prolonged acute care hospital stay, may be expected to make only modest improvement during their IRF stay.

Functional status at admission and discharge is measured using the motor and cognitive admission scores on the IRF–PAI. The IRF–PAI incorporates the 18-item Functional Independence Measure™ (FIM™) to measure

the level of disability in motor and cognitive functioning and the burden of care for a patient's caregivers (Deutsch et al. 2005). Scores for each of the 18 FIM items range from 1 (complete dependence) to 7 (independence).<sup>8</sup> Scores on the 18 measures can be summed to calculate a motor score (based on 13 FIM items) and a cognitive score (based on 5 FIM items). The motor score at discharge can range from 13 to 91, while the cognitive score can range from 5 to 35, with higher scores indicating more functional independence.

To measure observed improvement in motor function and cognition, we subtracted the respective FIM scores at admission from the FIM scores at discharge to calculate

**TABLE  
10-7****Mean risk-adjusted gains in IRF patients' motor and cognitive function rose slightly between 2011 and 2013**

Measure	Risk-adjusted gain in function		
	2011	2012	2013
Motor FIM™ gain	22.3	22.7	23.1
Cognitive FIM™ gain	3.6	3.7	3.8

Note: IRF (inpatient rehabilitation facility), FIM™ (Functional Independence Measure™). The motor FIM measures the level of disability in motor functioning on a 91-point scale. The cognitive FIM measures the level of cognitive impairment on a 35-point scale. FIM gain is calculated as the FIM score at discharge minus the FIM score at admission. Mean FIM gain averages the change of all facilities with 25 or more stays.

Source: Analysis of Inpatient Rehabilitation Facility–Patient Assessment Instruments from CMS (Kramer et al. 2015).

FIM motor and cognitive gains. A larger number indicates more improvement in functional independence and cognition between admission and discharge. Risk-adjusted rates were calculated by comparing a facility's observed rates with its expected rates and multiplying this ratio by the national rate. A facility that admits patients with worse than average prognoses has a lower than average expected rate of achieving these outcomes, which is reflected in the risk-adjusted rate.

In 2013, across all eligible facilities the mean change (gain) in the motor FIM score during the IRF stay was 23.1, while the mean change (gain) in the cognitive FIM score was 3.8 (Table 10-7). Controlling for ownership and location (urban or rural), we found that freestanding IRFs had an average adjusted motor FIM gain that was 2.3 points higher than that of hospital-based IRFs and an average adjusted cognitive FIM gain that was 0.6 points higher. The average risk-adjusted gain in IRF patients'

motor and cognitive FIM scores increased slightly from 2011 to 2013, though we will need to track these measures over time to observe longer term trends.

Changes in motor function and cognition must be interpreted with caution. Because payment is based in part on patients' functional status at admission—with higher payments associated with lower functional status—providers have a financial incentive to code patients in a manner that gives them a low FIM score at admission. As a result, reported gains in motor function and cognition may be overstated.

**Risk-adjusted rates of potentially avoidable rehospitalization, discharge to community, and discharge to SNF**

Avoidable rehospitalizations of IRF patients expose beneficiaries to hospital-acquired infections and poor care transitions (such as medication errors). At the same

**TABLE  
10-8****Small improvements were made in IRFs' risk-adjusted rates of potentially avoidable rehospitalizations, discharge to SNF, and discharge to the community**

Measure	2011	2012	2013
Potentially avoidable rehospitalizations during IRF stay	2.8%	2.6%	2.5%
Discharged to a SNF	6.9	6.6	6.7
Discharged to the community	74.1	75.3	75.9
Potentially avoidable rehospitalizations during 30 days after discharge from IRF	4.9	4.6	4.5

Note: IRF (inpatient rehabilitation facility), SNF (skilled nursing facility). High rates of discharge to the community indicate better quality. High rates of rehospitalization and discharge to SNF indicate worse quality. Rates are the average of facility rates and calculated for all facilities with 25 or more stays.

Source: Analysis of Inpatient Rehabilitation Facility–Patient Assessment Instruments from CMS (Kramer et al. 2015).

**TABLE  
10-9**

**Performance on quality measures varied across IRFs in 2013**

Measure	Risk-adjusted rate		
	Mean	25th percentile	75th percentile
Motor FIM™ gain	23.1	20.7	25.3
Cognitive FIM™ gain	3.8	3.0	4.6
Potentially avoidable rehospitalizations during IRF stay	2.5%	1.5%	3.3%
Discharged to a SNF	6.7	4.3	8.9
Discharged to the community	75.9	72.8	79.1
Potentially avoidable rehospitalizations during 30 days after discharge from IRF	4.5	3.2	5.7

Note: IRF (inpatient rehabilitation facility), FIM™ (Functional Independence Measure™), SNF (skilled nursing facility). High rates of discharge to the community indicate better quality. High rates of rehospitalization and discharge to SNF indicate worse quality. The motor FIM measures the level of disability in motor functioning on a 91-point scale. The cognitive FIM measures the level of cognitive impairment on a 35-point scale. FIM gain is calculated as the FIM score at discharge minus the FIM score at admission. Rates are calculated for all facilities with 25 or more stays.

Source: Analysis of Inpatient Rehabilitation Facility–Patient Assessment Instruments from CMS (Kramer et al. 2015).

time, they unnecessarily raise spending for the Medicare program. There has been relatively little research on rehospitalization of IRF patients in aggregate, though some studies have focused on one or more rehabilitation impairment categories (Dejong et al. 2009, Galloway et al. 2013, Ottenbacher et al. 2014, Schneider et al. 2013, Schneider et al. 2012). However, research regarding rehospitalization of SNF and nursing home patients has identified several contributing factors that may be within a post-acute care facility’s control. These include staffing level, skill mix, and frequency of staff turnover; drug management; and adherence to transitional care protocols, such as discharge counseling, medication reconciliation, patient education regarding self-care, and communication among providers, staff, and patient’s family (Grabowski et al. 2008, Kane et al. 2003, Konetzka et al. 2008a, Konetzka et al. 2008b, Lau et al. 2005, Mustard and Mayer 1997).

This year, the Commission worked with a contractor to refine our measures of hospital readmissions during the IRF stay and in the 30 days after discharge from the IRF. Both measures reflect those readmissions that are potentially avoidable with adequate care in the IRF setting.<sup>9</sup> The measure of readmission in the 30 days after discharge gives information about how well facilities prepare beneficiaries and their caregivers for safe and appropriate transitions to the next health care setting (or home).

Using these refined measures, we found that between 2011 and 2013, the national average rate of risk-adjusted potentially avoidable readmissions directly from the IRF declined slightly, from 2.8 percent to 2.5 percent (Table 10-8). (Lower rates are better.) During that period, the rate of risk-adjusted potentially avoidable readmissions within 30 days after discharge from an IRF also dropped slightly, from 4.9 percent to 4.5 percent.

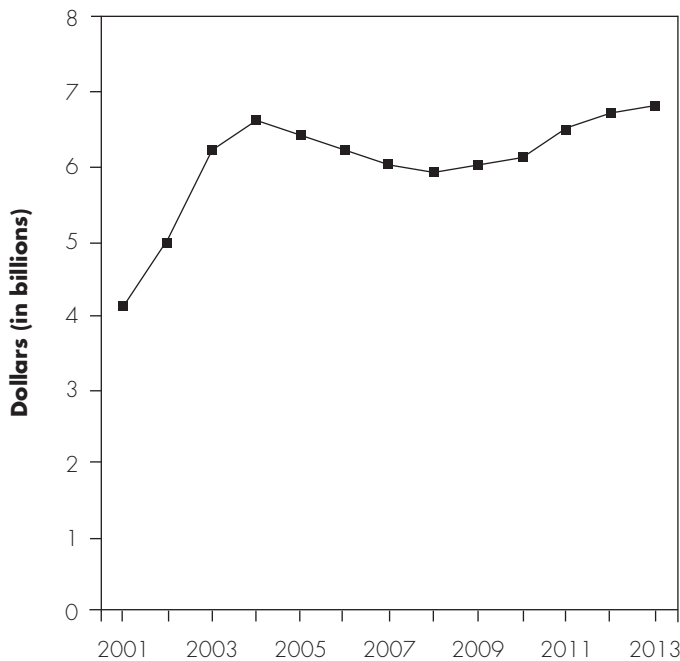
We also examined rates of discharge to the community and to SNFs. Our refined measure of community discharge does not give IRFs credit for discharging a Medicare beneficiary who is subsequently readmitted to an acute care hospital within 30 days of the IRF discharge. We found that between 2011 and 2013, national average risk-adjusted community discharge rates increased from 74.1 percent to 75.9 percent. (Higher rates are better.) The national average risk-adjusted rate of discharge to SNFs fell from 6.9 percent to 6.7 percent, but controlling for facility-level characteristics, this change was not significant.

The IRF measures we examined varied somewhat across providers (Table 10-9). An IRF at the 25th percentile for risk-adjusted rate of discharge to a SNF had a rate that was half that of an IRF at the 75th percentile. (A lower rate of discharge to a SNF is better.) Controlling for facility-level characteristics, we found that the mean adjusted rate of discharge to a SNF was 1 percentage point higher



**FIGURE 10-1**

**Program spending for IRF services has grown steadily since 2009**



Note: IRF (inpatient rehabilitation facility).

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

for hospital-based IRFs than for freestanding IRFs, but differences between hospital-based and freestanding IRFs' adjusted rates of discharge to the community were not significant. The adjusted rates of potentially avoidable rehospitalizations from IRFs were 0.6 percentage point higher for freestanding IRFs than for their hospital-based counterparts.

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

Seventy-nine percent of IRFs are hospital-based units that would access any necessary capital through their parent institutions. Overall, as detailed in Chapter 3 on hospital inpatient and outpatient services, acute care hospitals maintained reasonable access to capital markets in 2013 and 2014. In addition, the share price of publicly traded hospitals increased substantially in 2014, indicating that the capital markets continued to see hospitals as a profitable investment. While respondents to *Modern Healthcare's* 2014 Construction & Design Survey indicated that the majority of hospital construction has now shifted away from inpatient and toward outpatient-

based projects, we note that about 20 new hospital-based IRFs entered the market in 2013 (Moody's Investors Service 2014).

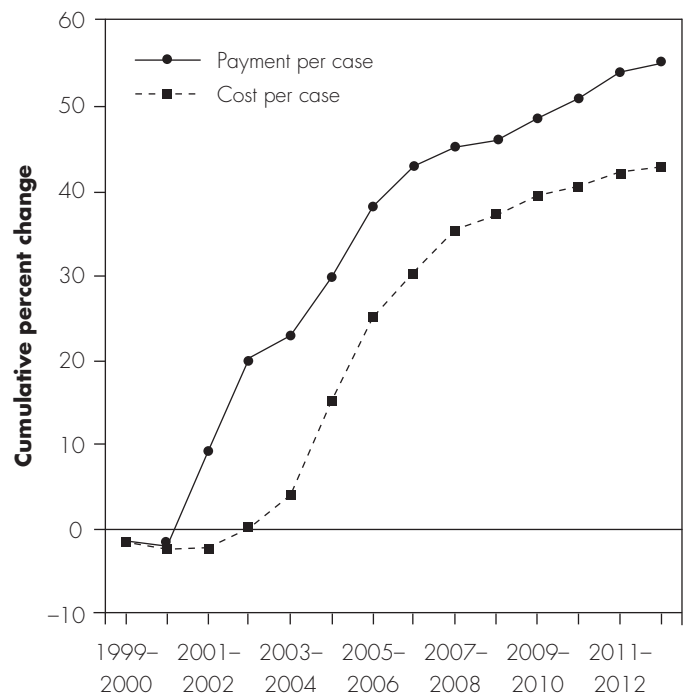
As for freestanding IRFs, market analysts we spoke to continue to rate access to capital for the industry's largest chain, which owned almost 40 percent of all freestanding IRFs in 2013 and accounted for about a quarter of all IRF discharges, as very good. Continued acquisitions of other post-acute care providers and expansion of capacity through construction of new IRFs reflect good access to capital and positive financial health. Most other freestanding IRFs are independent or are local chains with a small number of facilities. The extent to which these providers can access capital is less clear.

**Medicare payments and providers' costs: Medicare margins remained high in 2013**

In 2013, the Medicare margin remained steady at 11.4 percent, in spite of the sequester. The aggregate margin

**FIGURE 10-2**

**Under the PPS, IRFs' payments per case have increased cumulatively more than costs, 1999-2013**



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

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

has risen steadily since 2009. Financial performance continues to vary across IRFs, with margins of freestanding IRFs far exceeding those of hospital-based facilities. Higher unit costs were the primary driver of differences in financial performance between hospital-based and freestanding IRFs. We found that IRFs with the lowest costs tended to be larger and to have higher occupancy rates. Since hospital-based units are usually smaller than freestanding facilities and, on average, have lower occupancy rates, their higher costs may stem from fewer economies of scale. Hospital-based units are also far more likely than freestanding IRFs to be nonprofit facilities and therefore may be less focused on reducing costs to maximize returns to investors. But there are also notable differences in hospital-based and freestanding IRFs' mix of cases, with hospital-based IRFs admitting larger shares of stroke patients and freestanding IRFs admitting larger shares of cases with neurological disorders. The difference in the mix of case types across providers raises questions about patient selection and the relative profitability of different case types.

### Trends in spending and cost growth

In the first years of the IRF PPS, Medicare spending for IRF services grew rapidly, climbing an average of 23 percent per year between fiscal year 2001 and fiscal year 2003 (Figure 10-1). (The IRF PPS was implemented in January 2002.) Subsequent legislative and regulatory changes to IRF payment policies slowed and then reduced spending for IRF services. Beginning in 2004, renewed enforcement of the compliance threshold and restrictions of some of the qualifying conditions resulted in a substantial reduction in the number of Medicare patients treated in IRFs. (This reduction was consistent with the underlying reason for the compliance threshold—to direct only the most clinically appropriate cases to this intensive, costly post-acute care setting.) Medicare spending for IRF services also declined from 2004 to 2008, falling 3 percent per year on average.<sup>10</sup> The decline in volume slowed in 2008 and reversed in 2009, after the Congress permanently capped the compliance threshold at 60 percent. Medicare spending for IRF services began to grow again at that point, climbing an average of 3 percent per year between 2008 and 2013. Although IRF volume was almost unchanged between 2012 and 2013, total Medicare payments grew 1.4 percent.

As the IRF patient population shifted to patients with more severe disorders who counted toward the threshold,

**TABLE  
10-10**

### IRFs with fewer beds have much higher standardized costs per case, 2013

Type of IRF	Mean adjusted cost per discharge
All IRFs	\$16,517
Hospital based	17,627
Freestanding	12,474
Nonprofit	17,233
For profit	14,632
Government	18,740
Urban	15,969
Rural	19,431
Number of beds	
1 to 10	20,173
11 to 21	17,676
22 to 59	15,610
60 or more	12,863

Note: IRF (inpatient rehabilitation facility). Cost per discharge is standardized for differences in wages across geographic areas and differences in case mix across providers. Government-owned facilities operate in a different financial context from other facilities, so their costs are not necessarily comparable.

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

case-mix severity and cost per case increased. However, from 1999 to 2013, the cumulative increase in payments per case outpaced the increases in costs per case (Figure 10-2). Costs per case rose 43 percent during this period, while payments grew 55 percent. Between 2012 and 2013, payments per case increased 1 percent, while costs per case increased 0.6 percent.

### Differences in standardized costs suggest economies of scale

Adjusting IRF costs per discharge for differences in wages, case mix, and the number of short-stay cases permits a standardized comparison of costs across different types of IRFs nationwide. The mean adjusted cost per discharge for all IRFs in 2013 was \$16,517 (Table 10-10). IRFs with 10 or fewer beds had an average cost per discharge that was 57 percent higher than that of IRFs with 60 or more beds (\$20,173 vs. \$12,863).

We stratified IRFs into quartiles of standardized costs to compare the characteristics of facilities with the lowest



**TABLE  
10-11**

**Low standardized costs lead to high margins for both hospital-based and freestanding IRFs, 2013**

Characteristic	Quartile	
	Lowest cost	Highest cost
Median cost per discharge		
All	\$11,227	\$21,934
Hospital based	12,127	21,848
Freestanding	10,632	22,514
Median Medicare margin		
All	26.2%	-26.0%
Hospital based	21.6	-26.0
Freestanding	29.5	-23.1
Median		
Number of beds	44	17
Occupancy rate	70%	47%
Case-mix index	1.27	1.22
Share of facilities in quartile that are:		
Hospital based	41%	95%
Freestanding	59	5
Nonprofit	31	63
For profit	65	21
Government	4	16
Urban	93	71
Rural	7	29

Note: IRF (inpatient rehabilitation facility). Cost per discharge is standardized for differences in wages across geographic areas and differences in case mix across providers. Government-owned facilities operate in a different financial context from other facilities, so their costs are not necessarily comparable.

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

and highest costs in 2013 (Table 10-11). IRFs in the lowest cost quartile had a median standardized cost per discharge that was almost half that of the IRFs in the highest cost quartile (\$11,227 vs. \$21,934). The difference in Medicare margins between low-cost and high-cost IRFs was very large. IRFs in the lowest cost quartile had a median Medicare margin of 26.2 percent compared with -26 percent for IRFs in the highest cost quartile.

IRFs with the lowest costs tended to be larger: The median number of beds was 44 compared with 17 in the highest cost quartile. IRFs with the lowest costs also had a higher median occupancy rate (70 percent vs. 47 percent). These results suggest that low-cost IRFs benefit from economies of scale. Low-cost facilities were disproportionately freestanding and for profit. Still, 41 percent of the IRFs in the lowest cost quartile were hospital based, and 31 percent of the IRFs in this group were nonprofit. By contrast, in the highest cost quartile, 95 percent were hospital based, and almost two-thirds were nonprofit.

**Margins vary widely by number of beds**

Between 2012 and 2013, the aggregate IRF Medicare margin remained almost static, rising from 11.3 percent to 11.4 percent, including the effects of the sequester (Table 10-12). Without the sequester, the aggregate Medicare margin in 2013 would have been 12.3 percent. The aggregate margin has risen steadily since 2009, after a period of declining, though healthy, margins.

Financial performance in 2013 varied across IRFs. Medicare margins in freestanding IRFs far exceeded those of hospital-based facilities. In 2013, the aggregate margin for freestanding IRFs (which accounted for 47 percent of IRF discharges) was 24.1 percent, while hospital-based IRFs (53 percent of IRF discharges) had an aggregate margin of 0.3 percent. However, a quarter of hospital-based IRFs had Medicare margins greater than 10 percent, indicating that many hospitals can manage their IRF units profitably. Further, despite the comparatively low average margin in hospital-based IRFs, evidence suggests that these units make a positive financial contribution to their parent hospitals. Commission analysis found that in 2013, the aggregate Medicare margin for inpatient hospitals with IRF units was a percentage point higher than those of hospitals without IRF units. In addition, hospital-based IRFs' contribution margin (a measure of whether Medicare payments cover direct patient care costs) was a healthy 35 percent.

Margins varied by ownership, with for-profit IRFs tending to have higher margins (not shown in table). Among freestanding IRFs, nonprofit facilities (which accounted for 8 percent of all IRF discharges) had an aggregate margin of 12.8 percent. By comparison, freestanding for-profit IRFs (which accounted for 39 percent of all IRF discharges) had an aggregate margin of 27.3 percent. Likewise, among hospital-based IRFs, the aggregate

**TABLE  
10-12**

**IRF Medicare margins remained steady in 2013**

Type of IRF	Share of Medicare discharges, 2013	Margins									
		2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
All IRFs	100%	16.7%	13.4%	12.3%	11.8%	9.3%	8.4%	8.7%	9.9%	11.3%	11.4%
Urban	92	17.0	13.6	12.6	12.0	9.5	8.7	9.0	10.3	11.7	11.8
Rural	8	13.2	11.1	10.1	9.5	6.9	5.6	4.8	5.3	6.5	6.4
Freestanding	47	24.7	20.7	17.4	18.4	18.1	20.3	21.3	23.2	24.0	24.1
Hospital based	53	12.2	9.3	9.6	8.0	3.8	0.3	-0.4	-0.2	0.8	0.3
Nonprofit	50	12.8	10.3	10.6	9.6	5.2	2.4	2.2	2.7	2.4	1.5
For profit	41	24.4	19.7	16.3	16.7	16.8	18.8	19.6	20.8	23.0	23.4
Government	9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Number of beds											
Less than 25	25	9.9	6.0	6.3	5.2	0.6	-3.2	-3.9	-3.3	-1.3	-1.3
25 to 49	29	16.2	13.8	12.9	11.9	8.5	6.9	7.4	8.5	7.9	7.7
50 to 99	34	23.7	18.8	16.4	17.0	17.4	19.0	18.8	19.8	21.8	22.4
100 or more	11	18.7	17.7	17.6	15.9	13.5	14.0	14.6	16.4	17.7	16.1

Note: IRF (inpatient rehabilitation facility), 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.

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

margin for nonprofit units (which accounted for 38 percent of all IRF discharges) was -0.9 percent, while that for for-profit units (18 percent of all IRF discharges) was 8 percent. Between 2012 and 2013, total (all-payer) margins across all lines of business for freestanding facilities rose from 9.6 percent to 10.4 percent.<sup>11</sup>

Higher unit costs were the primary driver of differences in financial performance between hospital-based and freestanding IRFs. Hospital-based IRFs had an average standardized cost per discharge that was 41.3 percent higher than that of freestanding IRFs (Table 10-10, p. 251).<sup>12</sup> Analysis of underlying cost components found that hospital-based IRFs had higher costs across all cost categories, the largest difference being in routine costs. In 2013, routine costs per case (which include the cost of nursing care) were 70 percent higher in hospital-based facilities than in freestanding ones, while ancillary costs per case (such as laboratory and drug costs) were 34 percent higher, and indirect costs per case (which includes

the costs of capital, housekeeping, and administration) were 19 percent higher.

The disparity in costs between hospital-based and freestanding IRFs may be driven by a number of factors. First, hospital-based units are far more likely than freestanding IRFs to be nonprofit and therefore may be less focused on reducing costs so as to maximize returns to investors. In addition, hospital-based IRFs likely achieve fewer economies of scale than their freestanding counterparts. Hospital-based IRFs tend to be smaller and have fewer total cases than freestanding IRFs. In 2013, 67 percent of hospital-based IRFs had fewer than 25 beds compared with 8 percent of freestanding IRFs. Only 7 percent of hospital-based IRFs had 50 or more beds compared with 62 percent of freestanding IRFs. At the same time, occupancy rates were lower in hospital-based IRFs than in their freestanding counterparts (60 percent vs. 67 percent). As a result, hospital-based IRFs had, on average, 480 cases (all-payer) in 2013 compared with almost 1,100 in freestanding IRFs.

In general, hospital-based IRFs tend to have a much larger share of cases with extraordinarily high costs. In 2013, 10 percent of hospital-based IRF cases qualified for high-cost outlier payments compared with just 2 percent of freestanding IRF cases. Indeed, 86 percent of all IRF outlier payments were made to hospital-based facilities. It is not clear whether this disparity stems from differences in efficiency, unmeasured case complexity, or both.

Finally, there are notable differences in hospital-based and freestanding IRFs' mix of cases. A larger share of hospital-based IRFs' patients were admitted with stroke as the primary reason for rehabilitation (23 percent vs. 16 percent in freestanding IRFs), though stroke patients admitted to freestanding IRFs were assessed as having greater motor deficits. Hospital-based IRFs also admitted a larger share of patients needing rehabilitation after fracture of the lower extremity (15 percent vs. 12 percent in freestanding IRFs). Freestanding IRFs admitted larger shares of cases with neurological disorders (17 percent vs. 8 percent in hospital-based IRFs) and other orthopedic conditions (10 percent vs. 6 percent). Notably, the impairment groups of neurological disorders and other orthopedic conditions encompass a broader range of conditions than many of the other groups. That clinical heterogeneity may allow favorable selection of patients within these groups based on their likely cost. Cases with neurological disorders also count toward the compliance threshold, so IRFs with higher shares of these cases may be able to more easily meet the requirements of the 60 percent rule while keeping down costs. The Commission notes that IRF ownership also appears to be correlated with the mix of cases. The differences in the mix of case types across providers may indicate underlying problems in the IRF PPS. The Commission has begun to analyze whether there are systemic biases in Medicare's payments that result in the imbalance in financial performance among provider types.

## How should Medicare payments change in 2016?

To estimate 2015 payments, costs, and margins with 2013 data, the Commission considered policy changes effective in 2014 and 2015. Those that affect our estimate of the 2015 Medicare margin include:

- a market basket increase of 2.6 percent for fiscal year 2014, offset by reductions required by the Patient Protection and Affordable Care Act of 2010 (PPACA)

totaling 0.8 percentage point, for a net update of 1.8 percent;

- a market basket increase of 2.9 percent for fiscal year 2015, offset by PPACA-required reductions totaling 0.7 percentage point, for a net update of 2.2 percent;
- changes to the high-cost outlier fixed loss amount in 2014 and 2015, which will increase payments; and
- the application of the sequester, which will decrease payments.

We estimate that IRFs' aggregate Medicare margin will be 12.6 percent in 2015. Based on historical trends, we expect cost growth to be below market basket levels and lower than payment growth. Though the sequester will decrease payments, we do not expect it to be large enough to reverse the trend of increasing margins that has been observed for the past several years. The 12.6 percent margin includes the effect of the sequester. If the sequester were not in effect for 2015, our projected margin would be almost 2 percentage points higher.

On the basis of our review of payment adequacy for IRFs, the Commission recommends that the Congress eliminate the update to the IRF payment rate. Our recommendation assumes that site-neutral payments for selected IRF cases will not be implemented in fiscal year 2016 (see Chapter 7).

### RECOMMENDATION 10

**The Congress should eliminate the update to the Medicare payment rates for inpatient rehabilitation facilities in fiscal year 2016.**

### RATIONALE 10

Our indicators of Medicare payment adequacy for IRFs are positive. Stable volume, low occupancy rates, and availability of other rehabilitation alternatives suggest that capacity remains adequate to meet demand. Quality trends are stable or improving. Medicare margins for 2013 were positive. We conclude that IRFs should be able to accommodate cost changes in fiscal year 2016 with the base payment rate held at 2015 levels. Therefore, the 2016 IRF base payment rate should be the same as the 2015 rate.

### IMPLICATIONS 10

#### Spending

- The payment update for IRFs in fiscal year 2016 consists of a forecasted 2.9 percent market basket update for rehabilitation, psychiatric, and long-term

care hospitals; a forecasted –0.5 percent productivity adjustment of the market basket update; and a –0.2 percent market basket reduction per PPACA.<sup>13</sup> This recommendation would decrease federal program spending relative to the statutory update by between \$50 million and \$250 million in 2016 and by between \$1 billion and \$5 billion over five years.

### **Beneficiary and provider**

- We do not expect this recommendation to have adverse effects on Medicare beneficiaries with respect to access to care or out-of-pocket spending. This recommendation may increase the financial pressure on some providers, but overall we expect a minimal effect on relatively efficient providers' willingness and ability to care for Medicare beneficiaries. ■

## Endnotes

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- 1 More frequently, Medicare beneficiaries receive inpatient rehabilitation services in skilled nursing facilities (SNFs), in part because nationwide there are many more SNFs than IRFs.
- 2 More information about the prospective payment system for IRFs is available at <http://www.medpac.gov/documents/payment-basics/inpatient-rehabilitation-facilities-payment-system-14.pdf?sfvrsn=0>.
- 3 Patients with a length of stay of fewer than four days are assigned to a single CMG, regardless of diagnosis, age, level of impairment, or presence of comorbidities.
- 4 High-cost outlier cases are identified by comparing the costs of treating the case with a threshold that is equal to the PPS payment for the case plus a fixed loss amount (\$8,848 in 2015, adjusted for the wage index and other facility characteristics). Medicare pays 80 percent of the IRF's costs above the threshold. In fiscal year 2013, about 6 percent of IRF cases received high-cost outlier payments. The prevalence of high-cost outlier cases differed by IRF type. About 10 percent of cases in hospital-based IRFs were high-cost outliers compared with 2 percent of cases in freestanding IRFs.
- 5 The 13 conditions are stroke; spinal cord injury; congenital deformity; amputation; major multiple trauma; hip fracture; brain injury; neurological disorders (e.g., multiple sclerosis and Parkinson's disease); burns; three arthritis conditions for which appropriate, aggressive, and sustained outpatient therapy has failed; and hip or knee replacement when bilateral, the patient's body mass index is greater than or equal to 50, or the patient is age 85 or older.
- 6 CMS's major revisions to the compliance threshold policy in 2004 were (1) increasing the number of conditions that count toward the threshold from 10 to 13 (by redefining the arthritis conditions that counted) and (2) revising the qualifying condition of major joint replacement—a condition that was commonly treated in IRFs—such that only a specific subset of patients with that condition would count toward the compliance threshold.
- 7 An impairment group code is not an ICD-9-CM diagnosis code but part of a separate unique set of codes specifically developed for the IRF PPS for assigning the primary reason for admission to an IRF.
- 8 At admission, a patient may score zero on a FIM item if the activity does not occur.
- 9 These potentially avoidable readmissions are identified by the primary diagnosis for the hospital readmission at the time of hospital discharge. The potentially avoidable readmissions we measure are respiratory-related illness (pneumonia, influenza, bronchitis, chronic obstructive pulmonary disease, asthma); sepsis; congestive heart failure; fractures or fall with a major injury; urinary tract or kidney infection; blood pressure management; electrolyte imbalance; anticoagulant therapy complications; diabetes-related complication; cellulitis or wound infection; pressure ulcer; medication error or adverse drug reaction; and delirium.
- 10 Medicare spending for IRF services was also affected when CMS reduced the IRF standard payment conversion factor by 1.9 percent in 2006 and by 2.6 percent in 2007 to adjust for changes in IRF coding practices that CMS determined did not reflect real changes in IRF patients' acuity.
- 11 Because of the structure of the cost report, all-payer overall margins for hospital-based facilities reflect a margin for the entire hospital rather than for the IRF unit alone. Therefore, we present only all-payer overall margins for freestanding IRFs.
- 12 Facility costs were adjusted for differences in case mix, local market input price levels, and the number of short-stay cases.
- 13 The market basket forecast was made in the third quarter of 2014. When setting the update, CMS will use the most recent forecast available, which may differ from the number we report here.

## References

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- Centers for Medicare & Medicaid Services, Department of Health and Human Services. 2014. Medicare program; inpatient rehabilitation facility prospective payment system for federal fiscal year 2015. Final rule. *Federal Register* 79, no. 151 (August 6): 45872–45936.
- Dejong, G., S. D. Horn, R. J. Smout, et al. 2009. Joint replacement rehabilitation outcomes on discharge from skilled nursing facilities and inpatient rehabilitation facilities. *Archives of Physical Medicine and Rehabilitation* 90, no. 8 (August): 1284–1296.
- Deutsch, A., C. V. Granger, R. C. Fiedler, et al. 2005. Outcomes and reimbursement of inpatient rehabilitation facilities and subacute rehabilitation programs for Medicare beneficiaries with hip fracture. *Medical Care* 43, no. 9 (September): 892–901.
- Galloway, R. V., C. V. Granger, A. M. Karmarkar, et al. 2013. The Uniform Data System for Medical Rehabilitation: Report of patients with debility discharged from inpatient rehabilitation programs in 2000–2010. *American Journal of Physical Medicine & Rehabilitation* 92, no. 1 (January): 14–27.
- Grabowski, D. C., K. A. Stewart, S. M. Broderick, et al. 2008. Predictors of nursing home hospitalization: A review of the literature. *Medical Care Research and Review* 65, no. 1 (February): 3–39.
- Kane, R. L., G. Keckhafer, S. Flood, et al. 2003. The effect of Evercare on hospital use. *Journal of the American Geriatrics Society* 51, no. 10 (October): 1427–1434.
- Konetzka, R. T., W. Spector, and M. R. Limcangco. 2008a. Reducing hospitalizations from long-term care settings. *Medical Care Research and Review* 65, no. 1 (February): 40–66.
- Konetzka, R. T., S. C. Stearns, and J. Park. 2008b. The staffing-outcomes relationship in nursing homes. *Health Services Research* 43, no. 3 (June): 1025–1042.
- Kramer, A., M. Lin, R. Fish, et al. 2015. Development of inpatient rehabilitation facility quality measures: Potentially avoidable readmissions, community discharge, and functional improvement. Report prepared for the Medicare Payment Advisory Commission. Washington, DC: MedPAC.
- Lau, D. T., J. D. Kasper, D. E. Potter, et al. 2005. Hospitalization and death associated with potentially inappropriate medication prescriptions among elderly nursing home residents. *Archives of Internal Medicine* 165, no. 1 (January 10): 68–74.
- Moody's Investors Service. 2014. Revenue growth and cash flow margins hit all-time lows in 2013 US non-profit hospital medians. August 27.
- Mustard, C. A., and T. Mayer. 1997. Case-control study of exposure to medication and the risk of injurious falls requiring hospitalization among nursing home residents. *American Journal of Epidemiology* 145, no. 8 (April 15): 738–745.
- Ottenbacher, K. J., A. Karmarkar, J. E. Graham, et al. 2014. Thirty-day hospital readmission following discharge from postacute rehabilitation in fee-for-service Medicare patients. *Journal of the American Medical Association* 311, no. 6 (February 12): 604–614.
- Schneider, J. C., P. Gerrard, R. Goldstein, et al. 2013. The impact of comorbidities and complications on burn injury inpatient rehabilitation outcomes. *Physical Medicine and Rehabilitation* 5, no. 2 (February): 114–121.
- Schneider, J. C., P. Gerrard, R. Goldstein, et al. 2012. Predictors of transfer from rehabilitation to acute care in burn injuries. *Journal of Trauma and Acute Care Surgery* 73, no. 6 (December): 1596–1601.

