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An Analysis of Inpatient Rehabilitation Approval Among Private Insurance Carriers at a Cancer Center

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Abstract

Background—Acute inpatient rehabilitation is often utilized by cancer patients to assist with discharge home and/or preparation for further treatment. Private insurance patients often require approval before transfer to acute inpatient rehabilitation.

Objective—To analyze the approval rate of private insurance carriers for acute inpatient cancer rehabilitation.

Design—Retrospective Analysis

Setting—Tertiary Referral Based Cancer Center

Patients—Ninety-six consecutive unique patients with private insurance who had acute inpatient rehabilitation authorization requests made between 4/1/2014 and 9/17/2014.

Intervention—Patient cases were assessed by a physiatrist, deemed clinically appropriate for acute inpatient rehabilitation, and submitted to private insurance payers for an approval request.

Results—Eighty seven percent (84/96) of requests for private insurance authorization for inpatient rehabilitation transfer were approved. Of the 96 cases, 14 (14.6%) cases were initially denied. Nine out of 96 (9.4%) progressed to a peer to peer appeal, of which only 2/9 (11.1%) resulted in approval for inpatient rehabilitation transfer ($p=.222$). The insurance carriers represented were Insurance A (46 patients, 48%), Insurance B (18 patients, 19%), Insurance C (12 patients, 13%), and Other Insurances (20, 21%). Two of 46 Insurance A requests were initially denied as compared to 7/18 for Insurance B, 0/12 for Insurance C, and 4/20 for Other Insurances ($p=.001$). Patients with Insurance B ($p=.002$, OR=14) and Other Insurances ($p=.062$, OR=5.50)

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were more likely to get denied inpatient rehabilitation approval compared to Insurance A. No significant difference between mean functional independence measure scores for approved and denied patients were found for transfers ($p=.239$) and mobility ($p=.129$) respectively.

Conclusion—Access to acute inpatient rehabilitation is unfortunately limited by insurers rather than clinical indicators. Future multi-center studies are needed. Universally accepted guidelines regarding inpatient rehabilitation criteria are needed.

INTRODUCTION

Cancer patients have shown statistically significant functional improvement during inpatient rehabilitation.¹ Rehabilitation may have medical implications beyond quality of life and independence.^{2,3}

Requests for acute inpatient rehabilitation (IRF) admissions undergo scrutiny by private medical insurers prior to approval or denial. At our institution, it has been anecdotally observed that the approval rates of inpatient rehabilitation by private insurance companies can vary significantly. The purpose of this retrospective analysis was to better identify variations in private insurer approval of inpatient rehabilitation. This is the first study to analyze private insurer approval for acute inpatient rehabilitation.

METHODS

Subjects This retrospective study included 99 consecutive private insurance authorization requests for acute inpatient rehabilitation at a tertiary referral based cancer center between 4/1/2014 and 9/17/2014. All patients were assessed and deemed clinically appropriate for acute inpatient rehabilitation by a board certified physiatrist.

Procedure

Institutional review board (IRB) approval was obtained. The IRB granted a waiver of informed consent in compliance with federal and institutional guidelines. An experienced rehabilitation nurse and physiatrist, reviewed the medical and case management records to collect data that included demographic information, functional information, and insurance approval for inpatient rehabilitation. Demographic information included age, sex, race, and marital status. Functional information included the most recent transfer and mobility Functional Independence Measure (FIM) scores by the acute care service certified therapists within two days of the insurance authorization request. The FIM transfer score component used was the lowest of the bed/chair transfers, sit to stand transfers, toilet transfer, or shower transfers. The FIM mobility score component was the mobility score for gait or wheelchair mobility (whichever was applicable). Insurance approval information included: the name of insurance company (coded into Insurance A, Insurance B, Insurance C, or Other Insurance), date of initial insurance authorization request, the date of insurance approval, whether the authorization was approved or denied, and whether a peer to peer meeting was requested. If a peer to peer review was requested, whether the insurance company agreed to do a peer to peer meeting and the outcome of the meeting was recorded (approval/denial). The referring medical service was also collected.

RESULTS

Of the 99 private insurance inpatient rehabilitation authorization requests, three of the patients had more than one insurance authorization request during the study time period. Therefore, only one randomly selected insurance authorization request was used for analysis resulting in 96 total authorization requests analyzed.

The patients' age ranged from 14 to 85 and the median age was 54.5 (Mean $\pm$ SD: 51.8/ $\pm$ 15.4). Table 1 lists select categorical variables as well as their approval/denial rates. The medical conditions represented in our study cohort were compliant with the 60% rule (67/96, 69.8%). We did not find a relationship between 60% rule diagnosis compliance and private insurance approval ($p=.178$).

Table 2 illustrates the approval and denial of different insurance companies. Patients with Insurance B were more likely to get denied inpatient rehabilitation ($p=.002$) with an odds ratio of 14.00 when compared to Insurance A. Patients with Other Insurances which consisted of 10 different insurers were also at increased likelihood of denial approaching near significance ($p=.062$).

Insurance denials took significantly longer for a decision to be rendered when compared to insurance acceptances with a mean days ($\pm$ SD) of 2.31 ($\pm$ 2.84) and .41 ($\pm$.84) respectively ($p<.001$). Thirteen out of 96 (13.5%) private insurance inpatient rehabilitation authorization requests were denied. A peer to peer discussion was requested of 10/13 denials. One peer to peer discussion request was declined by the primary insurance. Two out of the nine peer to peer discussions resulted in reversal of the initial decision to approval. Of the nine peer to peer discussions, 1/2 Insurance A, 0/4 Insurance B, 1/3 of the other insurance companies were successful reversed. Peer to peer appeal did not significantly increase the final approval rate ($p=.222$). Efforts were made to find out why peer to peer appeals were not performed on three of the initial insurance denials. One of the three cases was due to our IRF not being in-network. No external appeals were attempted. Unfortunately, due to the retrospective nature of this study, we were unable to find documentation or reasoning behind the lack of a peer to peer appeal in the other two cases and why external appeals were not attempted. In all 13 denied cases, the same physiatrist was following the patient from initial consult until denial of admission to rehabilitation.

Of the 13 patients with initial denials, two resulted in successful reversal to approval and eventual transfer to the inpatient rehabilitation unit after peer to peer discussion, one resulted in transfer to the inpatient rehabilitation unit with the cost absorbed by the hospital, and one was transferred to an outside in-network IRF. Of the nine patients who were unable to receive inpatient rehabilitation, three went to a Skilled Nursing Facility (SNF) (1/3 was readmitted to the hospital 3 days later with sepsis) and six went home (2/6 were readmitted to the hospital within one week of which one died in the hospital upon readmission with sepsis).

Table 3 shows select continuous variables and their relationship with insurance approval and denial. A near significant relationship with older age and insurance denial was found ($p=.052$).

Patients who were approved for inpatient rehabilitation had lower mean transfer and mobility component FIM scores compared to those who were denied, however, a statistically significant relationship was not found. Table 4 shows the transfer and mobility component FIM scores of approved and denied patients.

DISCUSSION

This is the first study to analyze the approval by private insurers of acute inpatient rehabilitation for cancer patients. We were also able to show that approvals rates can differ significantly between insurance companies.

There are two reasons that acute inpatient rehabilitation for cancer patients may be preferred over a skilled nursing facility. First is that acute inpatient rehabilitation for cancer patients has shown to result in significant functional improvements in multiple studies.^{4–7} In IRF's in the United States (US), patients are required to participate in at least three hours of therapy per day and are required to be seen at least three times a week by a physician. In comparison, SNF patients in the US often may receive less intense amounts of therapy. Although SNF physician visits can occur as frequently as needed, the requirement is much less. The second reason is that cancer rehabilitation patients often may require a higher level of medical care due to their medical fragility that typically cannot be provided at SNF's. It has also been demonstrated that cancer patients are at higher risk of medical complications often requiring return to the primary acute care service when compared to traditional acute inpatient rehabilitation patients.⁸ Rehabilitation facilities, in particular SNF's, are often free standing and not connected to an acute care hospital making return to the primary acute care service more difficult.

Older patients had a near significant higher denial rate. The prior published evidence studying age and rehabilitation performance has been mixed.^{9–11} The median age of denied patients was 61, which was relatively young (likely in part due to the exclusion of Medicare patients). More research is necessary to determine if patient age affects insurer decision-making for acute inpatient rehabilitation. Patients who were denied inpatient rehabilitation were at a higher functional level than those who were approved but we were unable to find a statistically significant difference. No specific FIM score criteria are stated in the guidelines by the American Academy of Physical Medicine & Rehabilitation (AAPM&R) or the Centers for Medicare & Medicaid Services (CMS).^{12–14} Inpatient rehabilitation insurance approval/denials were relatively fast with a mean time of .99 days. Gersten et al., similarly, reported a wait of approximately .8 days for private insurance patients (although they included Medicare as a private insurer).¹⁵

The discrepancy in acute rehabilitation approval between insurers deserves discussion. The approval rate for acute inpatient rehabilitation transfer differed significantly ($p=.001$). Board certified consulting physiatrists assessed these patients and deemed them appropriate for inpatient rehabilitation. We were unable to establish why some patients were denied. Our results are concerning because private insurer denial can block access of clinically appropriate patients to acute inpatient rehabilitation. It appears some insurers are more restrictive than others. While not a formal standard, current guidelines for IRF admissions

are published by the AAPM&R Standards for Assessing Medical Appropriateness Criteria for Admitting Patients to Rehabilitation Hospitals or Units.¹² Criteria are also published by CMS.^{13,14} Consensus development between clinical stakeholders and private insurers taking into account cost benefit and outcome analyses would be beneficial. Mutually accepted criteria that results in a more predictable and consistent private insurer approval of acute inpatient rehabilitation are needed. Buyers of health insurance also should be aware of their inpatient rehabilitation benefits, in-network IRF's and IRF approval rates when considering different companies. Unfortunately, IRF approval comparison data for in-network facilities is not collected in an organized macro-scale and thus is not available to consumers. The Healthcare Cost and Utilization Project collects only limited information about individual health insurance providers.¹⁶

There are limitations of this study. First, all of the patients were cancer patients at a tertiary referral based cancer center. A potential bias is that this patient mix is not typical for an inpatient rehabilitation unit. Second, the data from this study was collected at only one institution. This meant that insurance authorization requests were typically handled by one insurance case manager and medical director assigned to our geographical area. These factors affect the generalizability of this data. Third, the total number of cases is limited to 96 in this study. Larger studies would be useful to determine if there is a significant difference in FIM transfer and mobility scores between approved and denied patients. Also an analysis of future outcomes of patients who were approved versus denied inpatient rehabilitation is also needed. Lastly, we had difficulty finding specific reasons for private insurance denial. An attempt was made to discover the reason for insurance denial through case manager notes, unfortunately, only 2/13 had reasons stated in the notes. One patient had a denial because the rehabilitation unit at our institution was not in network. The other was because the patient was "too high level". Different private insurance policies may provide different benefits and if written may not provide IRF level of care. Further research should look at specific coverage terms, unfortunately, we are not able to see all the patients coverage terms in our retrospective study. A more in depth analysis of insurance policies would enable a better understanding of whether denial was based on medical/functional issues or issues of benefits.

CONCLUSION

Requests for insurance authorization of inpatient rehabilitation for cancer patients at our facility are approved in the majority of cases. Despite being deemed clinically appropriate for acute inpatient rehabilitation by board certified physiatrists, approval rates varied significantly among insurance providers. We were unable to determine demographic or clinical characteristics associated with a higher rate of denial to inpatient rehabilitation. Access to acute inpatient rehabilitation was affected by insurer denials. It is also valuable for physiatrists to understand how insurance companies work in their market in reference to providing pre-authorization for certain impairment groups such as cancer patients. Universal guidelines that result in a more predictable and consistent private insurer approval of acute inpatient rehabilitation are needed. Future multi-center studies with larger patient samples are needed.

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Table 1
Select Categorical Variables and Final Approval/Denial Rate for Acute Inpatient Rehabilitation

Variables	Levels	Total	Insurance Company		p-value
			Approval	Denial	
All Patients		96(100%)	83(86.5%)	13(13.5%)	
Sex	Female	49(51%)	44(89.8%)	5(10.2%)	.382
	Male	47(49%)	39(83%)	8(17%)	
Race	Asian	3(3.1%)	3(100%)	0(0%)	.616
	Black	7(7.3%)	5(71.4%)	2(28.6%)	
	Hispanic	13(13.5%)	12(92.3%)	1(7.7%)	
	White	73(76%)	63(86.3%)	10(13.7%)	
Marital Status	Divorced	13(13.5%)	12(92.3%)	1(7.7%)	.107
	Married	59(61.5%)	52(88.1%)	7(11.9%)	
	Single	21(21.9%)	18(85.7%)	3(14.3%)	
	Widowed	3(3.1%)	1(33.3%)	2(66.7%)	
	Breast Medical Oncology	4(4.2%)	4(100%)	0(0%)	.630
Referring Service	Internal Medicine	1(1%)	1(100%)	0(0%)	
	Gastrointestinal Surgery	4(4.2%)	3(75%)	1(25%)	
	Gynecology Oncology	3(3.1%)	3(100%)	0(0%)	
	Head & Neck Surgery	1(1%)	1(100%)	0(0%)	
	Leukemia	2(2.1%)	1(50%)	1(50%)	
	Lymphoma/Myeloma	7(7.3%)	6(85.7%)	1(14.3%)	
	Neuro Oncology	2(2.1%)	2(100%)	0(0%)	
	Neuro Surgery	41(42.7%)	37(90.2%)	4(9.8%)	
	Orthopedic Surgery	12(12.5%)	10(83.3%)	2(16.7%)	
	Plastic Surgery	3(2.1%)	2(67%)	1(33%)	
	Pediatrics	2(2.1%)	2(100%)	0(0%)	
	Stem Cell Transplant	10(10.4%)	7(70%)	3(30%)	
	Sarcoma Oncology	2(2.1%)	2(100%)	0(0%)	
	Thoracic Medical Oncology	2(2.1%)	2(100%)	0(0%)	
Insurance Company	Insurance A	46(47.9%)	44(95.7%)	2(4.3%)	.001

Variables	Levels	Total	Insurance Company		p-value
			Approval	Denial	
	Insurance B	18(18.8%)	11(61.1%)	7(38.9%)	.
	Insurance C	12(12.5%)	12(100%)	0(0%)	.
	Other	20(20.8%)	16(80%)	4(20%)	.

Insurance Company Initial Denial Univariate Logistic Regression Model Comparison to Insurance A

Table 2

Insurance Company	Total	Approved	Denied	Odds Ratio	95% CI	p-value
Insurance A	46 (47.9%)	44(95.7%)	2(4.3%)	1.00		
Insurance B	18 (18.8%)	11(61.1%)	7(38.9%)	14.00	2.55–77.00	.002
Insurance C	12 (12.5%)	12(100%)	0 (0%)	---	---	---
Other Insurance	20 (20.8%)	16(80%)	4(20%)	5.50	.92–32.98	.062

Abbreviations: CI: Confidence Interval

Select Continuous Variables and Final Approval/Denial Rate for Acute Inpatient Rehabilitation

Table 3

Variables	Decision	N	Median	Range	Mean (SD)	p-value
Age	Approval	83	52	(14, 82)	50.61(14.83)	.055
	Denial	13	61	(30, 85)	59.31(17.33)	.
Transfer FIM	Approval	83	4	(1, 7)	3.87(1.19)	.239
	Denial	13	4	(4, 5)	4.31(0.48)	.
Mobility FIM	Approval	83	4	(1, 6)	3.64(1.27)	.129
	Denial	13	4	(3, 5)	4.23(0.73)	.

Abbreviations: FIM = Functional Independence Measure; SD = Standard Deviation

Table 4
Transfer and Mobility Functional Independence Scores of Approved and Denied Patients

Variables	Insurance Company	Approved				Denied			
		N	Median	Range	Mean (SD)	N	Median	Range	Mean (SD)
Transfer FIM	A	44	4	(1, 6)	4.18 (1.02)	2	4.5	(4, 5)	4.50 (.71)
	B	11	4	(3, 4)	3.55 (.52)	7	4	(4, 5)	4.29 (.49)
	C	12	4	(1, 7)	3.25 (1.71)	0	---	---	---
	Other	16	4	(1, 5)	3.69 (1.30)	4	4	(4, 5)	4.25 (.50)
	Total	83	4	(1, 7)	3.87 (1.19)	13	4	(4, 5)	4.31 (.48)
Mobility FIM	A	44	4	(1, 6)	3.89 (1.15)	2	4.5	(4, 5)	4.50 (.71)
	B	11	4	(1, 5)	3.55 (1.21)	7	4	(3, 5)	4.00 (.82)
	C	12	3	(1, 6)	3.17 (1.64)	0	---	---	---
	Other	16	4	(1, 5)	3.38 (1.31)	4	4.5	(4, 5)	4.50 (.58)
	Total	83	4	(1, 6)	3.64 (1.27)	13	4	(3, 5)	4.23 (.73)

Abbreviations: FIM: Functional Independence Measure; SD: Standard Deviation