Physical, Occupational, and Speech Therapy for Medicare Nursing Home Patients
Medical Necessity and Quality of Care Based on Treatment Diagnosis

August 2001

OEI-09-99-00563

Office of Inspector General
Office of Evaluation and Inspections
Region IX
Attached is our final report concerning the relationship between treatment diagnosis and the medical necessity and quality of Part B therapy services for Medicare nursing home patients. This information was requested by CMS staff during our discussions about our reports on medical necessity, cost, and document of these therapy services.

We found indications that the medical necessity of therapy varied by treatment diagnosis. Although we were not able to identify specific diagnoses that were associated consistently with higher rates of medically unnecessary therapy or poor quality of care, we believe that examining the relationships between treatment diagnosis and therapy in skilled nursing facilities is a promising approach. This data could be useful in guiding medical review and ensuring that all patients receive therapy that meets acceptable standards of care.

If you have any questions, please call me or have your staff contact Stuart Wright at (410) 786-3144.

Attachment
EXECUTIVE SUMMARY

PURPOSE

To examine the relationship between treatment diagnosis and the medical necessity and quality of Medicare Part B physical, occupational, and speech therapy for skilled nursing facility patients.

BACKGROUND

Medicare coverage guidelines state that therapy must be reasonable, necessary, specific, and effective treatment for the patient's condition. Therapy must be ordered by a physician or other qualified health care practitioner, require the skills of a qualified therapist, and be dictated by a written treatment plan. The treatment plan must include functional goals and a reasonable estimate of when patients will attain the goals.

The Medicare, Medicaid, and SCHIP Balanced Budget Refinement Act of 1999 requires the Centers for Medicare and Medicaid Services (formerly called known as the Health Care Financing Administration) to (1) recommend a process to assure the appropriate utilization of Medicare outpatient therapy; (2) establish an alternative payment policy based on diagnostic categories, functional status, and prior use of therapy; and (3) conduct focused medical reviews of therapy services, with emphasis on claims for services provided to residents of skilled nursing facilities. To meet the requirement of the law, the Centers for Medicare and Medicaid Services (CMS) staff requested our assistance.

Our national random sample consisted of 320 Medicare patients. We conducted on-site medical and financial reviews at 132 nursing homes, rehabilitation agencies, and hospital outpatient departments nationwide. Several teams of physical and occupational therapists and speech-language pathologists reviewed medical records for the sampled patients.

FINDINGS

By diagnosis, the proportion of therapy that was not medically necessary ranged from 4 percent to 26 percent.

We found an overall difference in the receipt of medically unnecessary therapy by diagnosis. However, because of the relatively small number of episodes associated with each diagnosis, we were not able to state definitively which diagnoses would be more
likely to involve medically unnecessary therapy. Among sampled patients, the proportion of medically unnecessary units, when grouped in the 10 diagnostic categories, ranged from approximately 4 percent for orthopedic and back disorder patients to approximately 25 percent for stroke patients.

**CONCLUSION**

In our sample, we found indications that the medical necessity of therapy varied by treatment diagnosis. Although we were not able to identify specific diagnoses that were associated consistently with higher rates of medically unnecessary therapy or poor quality of care, we believe that examining the relationships between treatment diagnosis and therapy in skilled nursing facilities is a promising approach. Targeting those diagnoses that are most vulnerable may help to guide medical review and ensure that all patients receive therapy that meets acceptable standards of care.

**AGENCY RESPONSE**

We received comments on the three draft reports on therapy services from the CMS. Although this report does not contain any recommendations, CMS concurred with the recommendations offered in the two companion reports. The full text of the Agency’s comments appears in appendix D.
# EXECUTIVE SUMMARY

# INTRODUCTION

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INTRODUCTION

PURPOSE

To examine the relationship between treatment diagnosis and the medical necessity and quality of Medicare Part B physical, occupational, and speech therapy for skilled nursing facility patients.

BACKGROUND

Medicare Coverage Guidelines for Part B Physical, Occupational, and Speech Therapy

Medicare guidelines state that all therapy must be reasonable, necessary, specific, and effective treatment for the patient’s condition. Policies developed by the Centers for Medicare and Medicaid Services (formerly known as the Health Care Financing Administration or HCFA), the federal agency that administers the Medicare program, require that therapy (1) is ordered by a physician or other qualified health care practitioner, (2) requires the skills of a qualified therapist rather than nonskilled nursing home staff, (3) is provided either by or under the direct supervision of a certified therapist (as defined in State law), and (4) is dictated by a written treatment plan.

Medicare coverage also requires that the therapy meet the following conditions:  

- the written treatment plan includes specific and measurable treatment goals related to the patient’s condition along with a reasonable time estimate of when those goals will be achieved;
- the treatment plan describes the specific therapeutic interventions that will be used to restore the patient’s levels of function that has been lost or reduced by illness or injury;
- the amount, frequency, and duration of therapy must be reasonable and necessary for the patient’s condition;
- therapy must be provided with the expectation, based on the assessment made by the therapist, physician, or non-physician staff member (nurse practitioner, physician assistant, or clinical nurse specialist) of the patient’s restoration potential, that the

1Throughout this report, we will refer to speech-language pathology as speech therapy.

2Health Care Financing Administration, Skilled Nursing Facility Manual, Sections 214, 230, 230.3(c), and 271.
patient's condition will improve substantially in a reasonable and generally predictable period of time, or the therapy must be necessary for the establishment of a safe and effective maintenance program. Therapy only will be covered until the physician and/or therapist concludes that the patient is not going to improve; and the patient is seen by the physician or non-physician staff member at least every 30 days.

The Therapy Caps

Section 4541(c) of the Balanced Budget Act of 1997 changed skilled nursing facility (SNF) reimbursement for physical, occupational, and speech therapy by setting an annual cap for Medicare Part B patients. Effective January 1, 1999, occupational therapy was limited to $1,500 annually, while physical and speech therapy shared the same $1,500 annual cap.

Section 221 of the Medicare, Medicaid, and SCHIP Balanced Budget Refinement Act of 1999, passed in November 1999, suspended the cap for 2 years effective January 1, 2000. Section 221(c)(2) of the legislation requires the Centers for Medicare and Medicaid Services (CMS) to (1) recommend a mechanism to assure the appropriate utilization of Medicare outpatient therapy and (2) establish an alternative payment policy based on diagnostic categories, functional status, and prior use of therapy.  

Focused Medical Review

The law also mandated that the Secretary conduct focused medical reviews of Part B therapy claims, with an emphasis on SNF claims in calendar years 2000 and 2001. In October 2000, CMS launched a Program Safeguard Contract for therapy to (1) analyze current national and local medical review policies; (2) conduct extensive literature review, analysis, and abstraction; (3) interview fiscal intermediaries and therapy providers; and (4) develop medical review protocol for the fiscal intermediaries.

Section 421 of the Medicare, Medicaid, and SCHIP Benefits Improvement and Protection Act of 2000, passed in November 2000, extended the moratorium on the therapy caps for another year, through calendar year 2002. The law also extended the requirement for focused review of SNF therapy claims until year 2003.

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3 State Children’s Health Insurance Program.

4 The Social Security Act, Section 1833(g) as amended.
The Office of Inspector General released a memorandum report in October 1999 concerning physical, occupational, and speech therapy provided to Medicare patients in skilled nursing facilities. This report examined estimated physical, occupational, and speech therapy reimbursement per SNF stay during calendar year 1998. The report also examined the relationship between therapy reimbursement and patient diagnosis before the transition from cost-based reimbursement to the Part B fee schedule. Members of the therapy community had expressed concerns that SNF patients who are hospitalized for strokes or hip fractures may require significantly more therapy than others. According to the report, preliminary analysis indicated that patients with these diagnoses were slightly more likely to receive at least $1500 in occupational therapy or combined physical and speech therapy in calendar year 1998.

**METHODOLOGY**

**Selection of Sampled SNF Part B Therapy Patients**

From the Medicare Common Working File, we extracted all Part B physical, occupational, and speech therapy claims processed by Medicare fiscal intermediaries for services provided to nursing home patients. We identified beneficiaries as nursing home patients if (1) the nursing home submitted the therapy claims or (2) beneficiaries were identified as residents in the CMS minimum data set. These claims were submitted to fiscal intermediaries by nursing homes, rehabilitation agencies, and hospital outpatient departments for therapy initiated between January 1 and June 30, 1999. We limited the extract to the continental United States.

We used a multi-stage stratified cluster sampling approach to select 320 nursing home patients who received Part B therapy during the first 6 months of calendar year 1999. We reviewed 318 of 320 medical records. Two records were missing because the nursing home closed before our review, and the corporate owner could not retrieve the records from storage.

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5 Fiscal intermediaries are the insurance companies that pay Medicare claims for hospitals, skilled nursing facilities, and home health agencies.

On-Site Medical Review

Several teams of certified and/or licensed physical and occupational therapists and speech-language pathologists conducted on-site review of the medical records for the national random sample. Reviewers assessed the medical necessity, underutilization, overutilization, and quality of care of therapy provided in calendar year 1999.

Claims Analysis

We analyzed the Part B physical, occupational, and speech therapy claims submitted for the sampled patients. For each patient, we extracted claims that were submitted for therapy initiated between January 1 and June 30, 1999.

We analyzed the claims by individual therapy units and clusters of therapy units. An individual “unit” of physical, occupational, or speech therapy constitutes one 15-minute session of therapy. Clusters of therapy units were grouped into “episodes of therapy.” An episode of therapy consists of a series of continuous therapy units tied to a physician order, specific diagnosis, treatment plan, and set of patient goals. An episode of therapy may last a few days or a few months.

Medical Necessity and Quality of Care

Using structured review instruments, medical reviewers determined the medical necessity and quality of therapy care received by SNF patients. Reviewers examined medical records and treatment logs to determine which of the therapy units provided to patients were either medically necessary or unnecessary. Within each episode of therapy, medical reviewers assessed the quality of care received by patients according to four criteria. Reviewers determined whether or not:

- therapy was provided when needed;
- therapy was provided with the appropriate frequency and duration;
- therapy was administered by providers with the appropriate skill level; and
- the patient reached treatment goals, defined as what the therapist or physician expects the patient to achieve as a result of therapy.

Treatment Diagnosis

Medical reviewers examined patients’ records to identify treatment diagnoses for each episode of therapy. Reviewers used information contained in physicians’ therapy orders,

7Also referred to as “episodes of care.”

8Health Care Financing Administration, Medicare Intermediary Guidelines, Section A3 3904C5 under Medical Review of Part B Intermediary Outpatient Bills.
notes written by physicians and nurses, and therapy evaluations to determine the primary
diagnosis indicating the need for physical, occupational, or speech therapy. Patients who
received therapy during more than one episode of care may have had a different primary
treatment diagnosis for each episode.

We grouped primary treatment diagnoses into 1 of 11 diagnostic categories. Among
others, the categories include “stroke,” “neurologic disorders,” and “hip fractures.” An
eleventh category includes all other diagnoses that are not included in 1 of the 10 major
categories. These categories were created to differentiate patients according to expected
rehabilitation requirements. We conducted all analyses involving patient diagnosis using
this classification system.

This report is one in a series of reports on physical, occupational, and speech therapy for
Medicare SNF patients. The first report, *Physical, Occupational, and Speech Therapy for
Medicare Nursing Home Patients: Medical Necessity and Cost under the $1500 Therapy
Caps* (OEI-09-99-00560), focuses on the medical necessity and cost of Medicare Part B
therapy while the $1500 annual caps were in place. A companion report, *Physical,
Occupational, and Speech Therapy for Nursing Home Patients: Medical Record
Documentation and Billing* (OEI-09-99-00562), details medical record documentation
and Part B billing practices identified in our sample.

Our review was conducted in accordance with the *Quality Standards for Inspections*
issued by the President’s Council on Integrity and Efficiency.

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5See appendix A for a detailed description of the diagnostic classification system. This system
was developed by the Rand research team that developed the Functional Related Groups classification
system. See Joan L. Buchanan, J. David Rumpel & Helen Hoenig, *Outpatient Institutional
Rehabilitation Services 1987-1990: Who provides them and how do they compare?* Supported by CMS.
FINDINGS

By diagnosis, the proportion of therapy that was not medically necessary ranged from 4 percent to 26 percent

Primary treatment diagnoses were identified and grouped according major diagnostic categories. During on-site SNF visits, medical reviewers identified patients' primary treatment diagnoses\(^\text{10}\) for each episode of therapy.\(^\text{11}\) We then classified these treatment diagnoses into 11 diagnostic categories.\(^\text{12}\)

Among others, the diagnostic categories include "stroke," "neurological disorders," and "hip fractures." An eleventh category includes all other diagnoses that are not included in any of the 10 major categories. Sampled patients who were in this category had diagnoses such as general debility, decreased functional mobility, and muscle wasting.

Among sampled patients, approximately 52 percent of their therapy episodes fell into the "neurological disorders" category.\(^\text{13}\) This category includes such primary treatment diagnoses as dysphagia, abnormality of gait, and Parkinson's Disease. With the exception of the "musculoskeletal" (11.4 percent) and the "other" (13.6 percent) categories, each of the remaining categories accounted for less than 10 percent of the therapy episodes in our sample. The categories of "back" and "cardiovascular" were the least common, with only 2.4 percent each.

In approximately 40 percent of the therapy episodes, a secondary diagnosis contributed to the patients' need for therapy. For example, some patients received therapy related to a stroke or a musculoskeletal or cardiovascular disorder even when this condition was not their primary treatment diagnosis. While stroke was the primary treatment diagnosis in approximately 7.1 percent of episodes, patients received some therapy related to a stroke approximately 11.5 percent of the time. Similarly, a musculoskeletal disorder contributed

\(^{10}\)Diagnosis or treatment diagnosis refers to patients' primary treatment diagnosis for a particular episode of therapy.

\(^{11}\)An episode of therapy or episode of care consists of a series of continuous therapy units tied to a physician order, specific diagnosis, treatment plan, and set of patient goals.

\(^{12}\)See appendix A for a detailed description of the diagnostic classification system. We excluded diagnoses that comprised less than 2 percent of all therapy episodes from our analyses. These diagnoses include spinal cord injury (1.7 percent), amputation and deformities (0 percent), and rehabilitation (0 percent).

\(^{13}\)Appendix B lists the number of therapy episodes for sampled patients by diagnosis.
to patients' need for therapy in approximately 21.9 percent of all episodes although it was patients' primary diagnosis only 11.4 percent of the time.

We identified a relationship between diagnosis and medical necessity; however, because of the relatively small number of episodes associated with each diagnosis, we were not able to state definitively which diagnoses would be more likely to involve medically unnecessary therapy. As noted in the following chart, the proportion of medically unnecessary units, when grouped in the 10 diagnostic categories, ranged from approximately 3.9 percent for orthopedic and back disorder patients to approximately 24.4 percent for stroke patients.

![Medical Necessity Varied by Diagnosis](chart)

Source: Office of Evaluation and Inspections, 2001

14 This is based on a chi-square test for differences among diagnostic categories in the percent of units medically unnecessary. The difference was significant at the 95 percent confidence level (p-value = 0.027).

15 An orthopedic diagnosis includes bone fractures (other than hip), joint replacement, and dislocations.
Stroke patients frequently received unnecessary therapy

Stroke patients often received therapy that was not medically necessary. Medical reviewers found that stroke patients received medically unnecessary therapy for several reasons:

- Some stroke patients simply received too much therapy. They received therapy more frequently than was required in the same day or in the course of a week. One patient repeatedly received more than four physical therapy units each day. According to medical reviewers, this was unnecessary and excessive.

- In other situations, stroke patients did not require the skilled care that therapists provided. For example, following an initial evaluation one patient received an additional 32 units of therapy from a speech therapist over the course of 2 weeks. Medical reviewers indicated that this patient needed care only from the SNF staff.

- Therapists often failed to adjust stroke patients’ treatment plans even when they no longer benefitted from additional therapy. For example, one stroke patient received 2 weeks of medically necessary physical therapy. He continued to receive therapy according to his original plan of care for another 4 months, despite the fact that he received no objective re-evaluations and showed no significant progress during this time.

Approximately 26 percent of therapy units billed for patients in the catchall diagnostic category labeled “other” were medically unnecessary

According to medical reviewers, patients in the “other” category received unnecessary therapy for reasons similar to stroke patients:

- Some patients received more therapy than they needed. Two patients received too much physical therapy in a given day, whereas another patient received too much physical therapy for her particular treatment goals. One patient with decreased functional ability received 64 units of unnecessary physical therapy, almost twice the number of necessary units that this patient received.

- Other patients received therapy that was inappropriate for their treatment goals or progress rate. One patient received occupational therapy that was not sufficiently planned. As a result, this patient was not able to progress towards stated treatment goals.
Across all diagnoses, the majority of patients benefitted from appropriate therapy without exceeding the caps.

Regardless of diagnosis, the majority of patients reached their goals.

Medicare coverage guidelines require that therapy is provided with the expectation that the patient’s condition will improve substantially in a reasonable period of time. To meet this requirement, therapists, physicians, or non-physician staff members (nurse practitioners, physician assistants, or clinical nurse specialists) conduct an assessment to determine what improvements can be expected as a result of therapy. Based on the assessment, a written treatment plan is developed which is incorporated in the patient’s record. This plan must include specific and measurable treatment goals related to the patient’s condition and an estimate of when the goals will be achieved.

During SNF visits, medical reviewers examined treatment plans for each episode of therapy to determine whether or not patients reached their treatment goals. Reviewers found that the majority of patients achieved their treatment goals by the end of their therapy episodes. In our sample, the proportion of episodes in which patients reached treatment goals ranged from approximately 90 percent for orthopedic patients to approximately 57 percent for stroke patients.\(^\text{16}\)

The duration and frequency of therapy was appropriate for most patients regardless of diagnosis.

According to medical reviewers, patients received therapy for the length of time that was appropriate for their medical condition and treatment goals. On average, patients required no additional therapy by the end of approximately 82 percent of therapy episodes. The proportion of episodes in which patients required no additional therapy ranged from 99 percent for back patients to 75 percent for orthopedic patients.\(^\text{17}\)

Although patients received enough therapy in most episodes, medical reviewers identified some episodes in which patients did not. In some cases, it was a matter of frequency rather than duration. For example, one patient received occupational therapy three times a week although, according to medical reviewers, he should have received therapy five times a week (with a 2 week rest) until all treatment goals were met.

\(^\text{16}\)Among episodes in which medical reviewers were able to determine whether or not patients reached their goals.

\(^\text{17}\)Among episodes in which medical reviewers were able to determine whether or not patients required additional therapy.
In other episodes, therapists prematurely discontinued therapy. They terminated therapy, sometimes without providing a clear reason in patient records, even though it continued to benefit patients’ functional performance.

**Few patients of any diagnosis exceeded the $1500 therapy caps**

Regardless of diagnosis, patients rarely reached or exceeded the therapy caps during the first 6 months of 1999. As noted in the report *Physical, Occupational, and Speech Therapy for Nursing Home Patients: Medical Necessity and Cost under the $1500 Therapy Caps* (OEI-09-99-00560), approximately 0.5 percent of all patients reached or exceeded the $1500 occupational therapy cap, and approximately 1.7 percent of all patients reached or exceeded the shared $1500 physical and speech therapy cap. Similarly, within individual diagnostic categories, relatively few patients reached or exceeded either of the therapy caps. As noted in the following table, within each diagnostic category fewer than 6 percent of patients reached the occupational therapy cap and fewer than 7 percent of patients reached the shared physical and speech therapy cap.

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**FEW PATIENTS EXCEEDED THE THERAPY CAPS**

<table>
<thead>
<tr>
<th>Diagnosis</th>
<th>Percent Who Reached or Exceeded the Therapy Cap</th>
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<tbody>
<tr>
<td></td>
<td>Occupational</td>
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<tr>
<td>Stroke</td>
<td>1.7</td>
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<tr>
<td>Neurologic</td>
<td>0.5</td>
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<tr>
<td>Hip Fracture</td>
<td>1.5</td>
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<tr>
<td>Back</td>
<td>5.8</td>
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<tr>
<td>Cardiovascular</td>
<td>1.3</td>
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<tr>
<td>Musculoskeletal</td>
<td>0</td>
</tr>
<tr>
<td>Orthopedic</td>
<td>0.8</td>
</tr>
<tr>
<td>Other</td>
<td>0.8</td>
</tr>
</tbody>
</table>

Source: Office of Evaluation and Inspections, 2001

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18Due to the small number of individuals in our sample who reached the therapy caps, we were not able to perform the chi-square test to identify differences in the likelihood of reaching the cap by diagnosis. Based on the confidence intervals in appendix C, it does not appear that these differences are statistically significant.
CONCLUSION

Although we found evidence that medical necessity varied by diagnosis, we were not able to identify specific diagnoses that were associated consistently with higher rates of medically unnecessary therapy or poor quality of therapy care. Targeting specific diagnoses for focused medical review could be a cost-effective way of identifying therapy that is not medically necessary or does not meet acceptable standards of care. By isolating those diagnoses that are most vulnerable, CMS could ensure that medical review resources are reserved for situations that are most likely to yield results.

AGENCY RESPONSE

We received comments on the three draft reports on therapy services from CMS. Although this report does not contain any recommendations, the Agency concurred with the recommendations offered in the two companion reports. The full text of the Agency’s comments appears in appendix D.
Diagnosis Categories

Stroke

342  Hemiplegia
430  Subarachnoid hemorrhage
431  Intracerebral hemorrhage
432  Intracranial hemorrhage
433  Occlusion and stenosis of precerebral arteries
434  Occlusion of cerebral arteries
435  Acute, but ill-defined, cerebrovascular disease
436  Other and ill-defined cerebrovascular disease
437  Late effects of cerebrovascular disease
784.3  Aphasia

Spinal Cord Injury

(A) Fractures and injury without fracture

806  Fracture of vertebral column with spinal cord injury
907.2  Late effect of spinal cord injury
952  Spinal cord injury without evidence of spinal bone injury

(B) Nontraumatic and other spinal cord damage

192.2-192.3  Malignant neoplasm of spinal cord and meninges
225.3-225.4  Benign neoplasm of spinal cord and meninges
324.1  Intraspinal abscess
335  Anterior horn cell disease
336  Other diseases of spinal cord
344  Other paralytic syndromes
741  Spina bifida

Neurologic Disorders

(A) Fractures and concussions

800  Fracture of vault of skull
801  Fracture of base of skull
803  Other and unqualified skull fractures
804  Multiple fractures involving skull or face
850  Concussion
851  Cerebral laceration and contusion
852  Subarachnoid, subdural or extradural hemorrhage following injury
853  Other and unspecified Intracranial hemorrhage following injury
854  Intracranial injury of other and unspecified nature
905.0  Late effect of fracture of skull and face bones
907.0  Late effect of Intracranial injury without skull fracture

19 Table modified from Debra A. Dayoff & Victoria Barghout, Comprehensive outpatient rehabilitation facilities data analysis, December 1999, Supported by CMS
Neurologic Disorders (continued)

(B) Nontraumatic and other brain damage

191 Malignant neoplasm of brain
192.1 Malignant neoplasm of cerebral meninges
198.3-198.4 Secondary malignant neoplasm of brain and meninges
225.0-225.2 Benign neoplasm of brain, cranial nerves, and meninges
237.5-237.6 Neoplasm of uncertain behavior in the brain and meninges
239.6 Neoplasm of un-specific behavior in the brain
310.2 Postconcussion syndrome
997.0 Central nervous system complications (anoxic brain damage)
045 Acute poliomyelitis
053 Herpes zoster
138 Late effects of acute poliomyelitis
290-294 Organic psychotic conditions
310 Specific nonpsychotic mental disorders due to organic brain damage
315 Specific delays
316 Psychiatric factors associated with diseases classified elsewhere
317-319 Mental retardation
320-323 Meningitis, encephalitis, myelitis, encephalomyelitis
324.0 Intracranial abscess
324.9 Extradural or subdural abscess
325 Phlebitis and thrombophlebitis of Intracranial venous sinuses
326 Late effects of Intracranial abscess
330-331 Cerebral degenerations
332 Parkinson’s disease
333 Other extra pyramidal disease and abnormal movement disorders
334 Spinocerebellar disease
337 Disorders of the autonomic nervous system
340 Multiple sclerosis
341 Other demyelinating diseases of the central nervous system
343 Infantile cerebral palsy
345 Epilepsy
346 Migraine
348 Anoxic brain damage and other conditions of the brain
349 Other and unspecified disorders of nervous system
350 Trigeminal nerve disorders
351 Facial nerve disorders
352 Disorders of the cranial nerves
353 Nerve root and plexus disorders
354 Mononeuritis of upper limb and mononeuritis multiplex
355 Mononeuritis of lower limb
356 Heredity and idiopathic peripheral neuropathy
357 Inflammatory and toxic neuropathy
358 Myoneural disorders
359 Muscular dystrophies and other myopathies
386 Vertiginous syndromes and other disorders of vestibular system
742 Other congenital anomalies of nervous system
APPENDIX A

Neurologic Disorders (continued)
780-788 General and specific body systems
907.3-907.9 Late effect of injuries to the nervous system
950-957 Injury to nerves and spinal cord
V45.2 Presence of cerebrospinal fluid drainage device

Hip Fractures
808 Fracture of pelvis
820 Fracture of neck of femur
821 Fracture of other, unspecified part of femur
905.3 Late effect of fracture of neck of femur

Back Disorders
720 Ankylosing spondylitis
721 Spondylosis and allied disorders
722 Intervertebral disc disorders
723 Other disorders of cervical region
724 Other disorders of back
733.0 Osteoporosis
733.1 Pathological fracture
737 Curvature of spine
805 Fracture of vertebral column without spinal cord injury
839 Other, multiple and ill-defined dislocations
846 Sprains and strains of sacroiliac region
847 Sprains and strains of other and unspecified part of back
905.1 Late effect of fracture of spine and trunk

Amputation and Deformities
(A) Traumatic amputation
896 Traumatic amputation of foot (partial)
897 Traumatic amputation of leg(s) (partial)

(B) Acquired deformities
736.3 Acquired deformities of hip
736.6-736.9 Acquired deformities of lower limbs
738.3-738.6 Other acquired deformities
754 Certain congenital musculoskeletal deformities
755.3 Reduction deformities of lower limb
755.6 Other anomalies of lower limb
905.9 Late effect of traumatic amputation
997.6 Late amputation stump complication
V52.1 Fitting and adjustment of artificial leg
Cardiovascular Disorders

(A) Circulatory disorders
402 Hypertensive heart disease
410 Acute myocardial infarction
412 Old myocardial infarction
413 Angina pectoris
414 Other forms of chronic ischemic disease
415.0 Acute cor pulmonale
416 Chronic pulmonary heart disease
420-429 Other forms of heart disease
442.81 Aneurysm of artery of neck
785 Symptoms involving cardiovascular system

(B) Pulmonary disorders
415.1 Pulmonary embolism and infarction
490-496 Chronic obstructive pulmonary disease
500-508 Pneumoconioses and lung diseases from external agents
518 Other diseases of lung
786 Symptoms involving respiratory system and other chest symptoms
799.1 Respiratory failure

Rehabilitation

(A) Therapy for unspecified agents
V57.1 Other physical therapy
V57.2 Occupational therapy and vocation rehabilitation
V57.3 Speech therapy
V57.8 Other specified rehabilitation procedure
V57.9 Unspecified rehabilitation procedure

Musculoskeletal and soft tissues

(A) Arthritis
714 Rheumatoid arthritis and other inflammatory polyarthropathies
715 Osteoarthritis and allied disorders
716 Other and unspecified arthropathies
717 Internal derangement of knee
718 Other derangement of joint
719 Other and unspecified disorder of joints
274 Gout

(B) Burns
941 Burn of face, head and neck
942 Burn of trunk
943-944 Burn of upper limbs, wrists, and hands
945 Burn of lower limbs
946 Burns of multiple specified sites
948 Burns classified according to extent of body surface involved
949 Burn, unspecified
Musculoskeletal and soft tissues (continued)

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<td>Varicose veins of lower extremities</td>
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<td>680-709</td>
<td>Diseases of the skin and subcutaneous tissue</td>
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<td>710-739</td>
<td>Diseases of the musculoskeletal system and connective tissue</td>
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<td>840-848</td>
<td>Sprains and strains of joints and adjacent muscles</td>
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<td>Open wound of upper limb</td>
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<td>890-897</td>
<td>Open wound of lower limb</td>
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<tr>
<td>900-904</td>
<td>Injury to blood vessels</td>
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<td>905</td>
<td>Late effect of musculoskeletal and connective tissue injuries</td>
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<td>912-919</td>
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<td>Contusion with intact skin surface</td>
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<td>Crushing injury</td>
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**Orthopedic**

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<td>Other orthopedic aftercare</td>
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<td>802</td>
<td>Fracture of face bones</td>
</tr>
<tr>
<td>805</td>
<td>Fracture of vertebral column without mention of spinal cord injury</td>
</tr>
<tr>
<td>807</td>
<td>Fracture of ribs, sternum, larynx and trachea</td>
</tr>
<tr>
<td>809</td>
<td>Ill-defined fractures of bones of trunk</td>
</tr>
<tr>
<td>810-819</td>
<td>Fracture of upper limb</td>
</tr>
<tr>
<td>823</td>
<td>Fracture of tibia and fibula</td>
</tr>
<tr>
<td>824</td>
<td>Fracture of ankle</td>
</tr>
<tr>
<td>825</td>
<td>Fracture of one or more tarsal and metatarsal bones</td>
</tr>
<tr>
<td>826</td>
<td>Fracture of one or more phalanges of foot</td>
</tr>
<tr>
<td>827</td>
<td>Other, multiple and ill-defined fractures of lower limb</td>
</tr>
<tr>
<td>828</td>
<td>Multiple fractures involving both lower limbs, lower with upper limb and lower limbs with ribs and sternum</td>
</tr>
<tr>
<td>829</td>
<td>Fracture of unspecified bones</td>
</tr>
<tr>
<td>830-839</td>
<td>Dislocation</td>
</tr>
</tbody>
</table>

**Other**

All codes not elsewhere specified
The following table shows the number of therapy episodes for sampled patients by primary treatment diagnosis.

<table>
<thead>
<tr>
<th>Primary Treatment Diagnosis</th>
<th>Number of Episodes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stroke</td>
<td>46</td>
</tr>
<tr>
<td>Spinal Cord Injury</td>
<td>2</td>
</tr>
<tr>
<td>Neurologic disorder</td>
<td>255</td>
</tr>
<tr>
<td>Hip fracture</td>
<td>31</td>
</tr>
<tr>
<td>Back disorder</td>
<td>14</td>
</tr>
<tr>
<td>Amputation and deformity</td>
<td>0</td>
</tr>
<tr>
<td>Cardiovascular disorder</td>
<td>18</td>
</tr>
<tr>
<td>Rehabilitation</td>
<td>0</td>
</tr>
<tr>
<td>Musculoskeletal and soft tissues</td>
<td>74</td>
</tr>
<tr>
<td>Orthopedic disorder</td>
<td>32</td>
</tr>
<tr>
<td>“Other”</td>
<td>90</td>
</tr>
<tr>
<td>Reviewer could not determine diagnosis</td>
<td>47</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>609</strong></td>
</tr>
</tbody>
</table>

The total number of episodes is greater than the number of sampled patients because patients may have received therapy during more than one episode.
Confidence Intervals for Selected Statistics

The following tables show the point estimates and 95 percent confidence intervals for selected statistics, in the order that they appear in the report. These calculations account for all levels of clustering and stratification as described in the methodology.

<table>
<thead>
<tr>
<th>Statistic</th>
<th>Point Estimate</th>
<th>95 Percent Confidence Interval</th>
</tr>
</thead>
<tbody>
<tr>
<td>Of therapy episodes, percent in which primary treatment diagnosis was stroke</td>
<td>7.1%</td>
<td>3.1% - 11.1%</td>
</tr>
<tr>
<td>Of therapy episodes, percent in which primary treatment diagnosis was spinal cord injury</td>
<td>1.7%</td>
<td>0% - 3.9%</td>
</tr>
<tr>
<td>Of therapy episodes, percent in which primary treatment diagnosis was neurologic disorder</td>
<td>52.0%</td>
<td>38.8% - 65.2%</td>
</tr>
<tr>
<td>Of therapy episodes, percent in which primary treatment diagnosis was hip fracture</td>
<td>5.1%</td>
<td>0% - 10.2%</td>
</tr>
<tr>
<td>Of therapy episodes, percent in which primary treatment diagnosis was back disorder</td>
<td>2.4%</td>
<td>0% - 4.9%</td>
</tr>
<tr>
<td>Of therapy episodes, percent in which primary treatment diagnosis was amputation and deformity</td>
<td>0%</td>
<td>N/A*</td>
</tr>
<tr>
<td>Of therapy episodes, percent in which primary treatment diagnosis was cardiovascular disorder</td>
<td>2.4%</td>
<td>0.1% - 4.7%</td>
</tr>
<tr>
<td>Of therapy episodes, percent in which primary treatment diagnosis was rehabilitation</td>
<td>0%</td>
<td>N/A*</td>
</tr>
<tr>
<td>Of therapy episodes, percent in which primary treatment diagnosis was musculoskeletal and soft tissues</td>
<td>11.4%</td>
<td>6.1% - 16.7%</td>
</tr>
<tr>
<td>Of therapy episodes, percent in which primary treatment diagnosis was orthopedic disorder</td>
<td>4.3%</td>
<td>1.0% - 7.6%</td>
</tr>
<tr>
<td>Of therapy episodes, percent in which primary treatment diagnosis was “other”</td>
<td>13.6%</td>
<td>8.1% - 19.2%</td>
</tr>
</tbody>
</table>

* Could not be calculated because there were no patients with this primary diagnosis in our sample.

21 Among episodes in which medical reviewers identified a primary treatment diagnosis.
<table>
<thead>
<tr>
<th>Statistic</th>
<th>Point Estimate</th>
<th>95 Percent Confidence Interval</th>
</tr>
</thead>
<tbody>
<tr>
<td>Of January - June 1999 therapy units for stroke patients, percent that were not medically necessary</td>
<td>24.4%</td>
<td>5.2% - 43.6%</td>
</tr>
<tr>
<td>Of January - June 1999 therapy units for neurologic patients, percent that were not medically necessary</td>
<td>13.5%</td>
<td>6.1% - 20.8%</td>
</tr>
<tr>
<td>Of January - June 1999 therapy units for hip fracture patients, percent that were not medically necessary</td>
<td>12.6%</td>
<td>0% - 26.1%</td>
</tr>
<tr>
<td>Of January - June 1999 therapy units for back patients, percent that were not medically necessary</td>
<td>3.9%</td>
<td>0% - 10.4%</td>
</tr>
<tr>
<td>Of January - June 1999 therapy units for cardiovascular patients, percent that were not medically necessary</td>
<td>19.2%</td>
<td>0% - 43.4%</td>
</tr>
<tr>
<td>Of January - June 1999 therapy units for musculoskeletal and soft tissues patients, percent that were not medically necessary</td>
<td>9.7%</td>
<td>2.0% - 17.0%</td>
</tr>
<tr>
<td>Of January - June 1999 therapy units for orthopedic patients, percent that were not medically necessary</td>
<td>3.9%</td>
<td>1.1% - 6.6%</td>
</tr>
<tr>
<td>Of January - June 1999 therapy units for patients in &quot;other&quot; category, percent that were not medically necessary</td>
<td>25.9%</td>
<td>6.5% - 45.2%</td>
</tr>
<tr>
<td>Statistic</td>
<td>Point Estimate</td>
<td>95 Percent Confidence Interval</td>
</tr>
<tr>
<td>--------------------------------------------------------------------------</td>
<td>----------------</td>
<td>-------------------------------</td>
</tr>
<tr>
<td>Of stroke episodes, 22 percent in which patient reached treatment goals</td>
<td>56.7 %</td>
<td>23.1% - 90.4%</td>
</tr>
<tr>
<td>Of neurologic episodes, percent in which patient reached treatment goals</td>
<td>67.8%</td>
<td>59.3% - 76.4%</td>
</tr>
<tr>
<td>Of hip fracture episodes, percent in patient reached treatment goals</td>
<td>62.4%</td>
<td>44.9% - 80.0%</td>
</tr>
<tr>
<td>Of back episodes, percent in which patient reached treatment goals</td>
<td>64.2%</td>
<td>15.5% - 100%</td>
</tr>
<tr>
<td>Of cardiovascular episodes, percent in which patient reached treatment goals</td>
<td>67.5%</td>
<td>26.4% - 100%</td>
</tr>
<tr>
<td>Of musculoskeletal episodes, percent in which patient reached treatment goals</td>
<td>79.1%</td>
<td>65.2% - 93.0%</td>
</tr>
<tr>
<td>Of orthopedic episodes, percent in which patient reached treatment goals</td>
<td>89.5%</td>
<td>74.0% - 100%</td>
</tr>
<tr>
<td>Of &quot;other&quot; episodes, percent in which patient reached treatment goals</td>
<td>76.1%</td>
<td>60.7% - 91.5%</td>
</tr>
</tbody>
</table>

22 Among episodes in which medical reviewers were able to determine whether or not patients reached their goals.
<table>
<thead>
<tr>
<th>Statistic</th>
<th>Point Estimate</th>
<th>95 Percent Confidence Interval</th>
</tr>
</thead>
<tbody>
<tr>
<td>Of stroke episodes,(^2) percent in which patient required no additional therapy</td>
<td>85.0%</td>
<td>60.0% - 100%</td>
</tr>
<tr>
<td>Of neurologic episodes, percent in which patient required no additional therapy</td>
<td>89.7%</td>
<td>80.7% - 98.7%</td>
</tr>
<tr>
<td>Of hip fracture episodes, percent in which patient required no additional therapy</td>
<td>80.7%</td>
<td>57.2% - 100%</td>
</tr>
<tr>
<td>Of back episodes, percent in which patient required no additional therapy</td>
<td>98.8%</td>
<td>95.7% - 100%</td>
</tr>
<tr>
<td>Of cardiovascular episodes, percent in which patient required no additional therapy</td>
<td>94.8%</td>
<td>83.8% - 100%</td>
</tr>
<tr>
<td>Of musculoskeletal episodes, percent in which patient required no additional therapy</td>
<td>97.3%</td>
<td>94.4% - 100%</td>
</tr>
<tr>
<td>Of orthopedic episodes, percent in which patient required no additional therapy</td>
<td>74.7%</td>
<td>52.2% - 97.2%</td>
</tr>
<tr>
<td>Of “other” episodes, percent in which patient required no additional therapy</td>
<td>78.1%</td>
<td>55.6% - 100%</td>
</tr>
</tbody>
</table>

\(^2\)Among episodes in which medical reviewers were able to determine whether or not patients required additional therapy.
<table>
<thead>
<tr>
<th>Statistic</th>
<th>Point Estimate</th>
<th>95 Percent Confidence Interval</th>
</tr>
</thead>
<tbody>
<tr>
<td>Of stroke patients, percent who reached the occupational cap during the review period</td>
<td>1.7%</td>
<td>0% - 11.9%</td>
</tr>
<tr>
<td>Of neurologic patients, percent who reached the occupational cap during the review period</td>
<td>0.5%</td>
<td>0% - 1.3%</td>
</tr>
<tr>
<td>Of hip fracture patients, percent who reached the occupational cap during the review period</td>
<td>1.5%</td>
<td>0% - 4.2%</td>
</tr>
<tr>
<td>Of back patients, percent who reached the occupational cap during the review period</td>
<td>5.8%</td>
<td>0% - 20.0%</td>
</tr>
<tr>
<td>Of cardiovascular patients, percent who reached the occupational cap during the review period</td>
<td>1.3%</td>
<td>0% - 3.4%</td>
</tr>
<tr>
<td>Of musculoskeletal patients, percent who reached the occupational cap during the review period</td>
<td>0%</td>
<td>NA*</td>
</tr>
<tr>
<td>Of orthopedic patients, percent who reached the occupational cap during the review period</td>
<td>0.8%</td>
<td>0% - 2.1%</td>
</tr>
<tr>
<td>Of &quot;other&quot; patients, percent who reached the occupational cap during the review period</td>
<td>0.8%</td>
<td>0% - 2.4%</td>
</tr>
</tbody>
</table>

* Could not be calculated because none of the sampled patients with this primary diagnosis reached the cap.
<table>
<thead>
<tr>
<th>Statistic</th>
<th>Point Estimate</th>
<th>95 Percent Confidence Interval</th>
</tr>
</thead>
<tbody>
<tr>
<td>Of stroke patients, percent who reached the combined cap during the review period</td>
<td>3.4%</td>
<td>0% - 8.1%</td>
</tr>
<tr>
<td>Of neurologic patients, percent who reached the combined cap during the review period</td>
<td>1.6%</td>
<td>0% - 3.6%</td>
</tr>
<tr>
<td>Of hip fracture patients, percent who reached the combined cap during the review period</td>
<td>6.5%</td>
<td>2.1% - 10.9%</td>
</tr>
<tr>
<td>Of back patients, percent who reached the combined cap during the review period</td>
<td>0%</td>
<td>NA*</td>
</tr>
<tr>
<td>Of cardiovascular patients, percent who reached the combined cap during the review period</td>
<td>0%</td>
<td>NA*</td>
</tr>
<tr>
<td>Of musculoskeletal patients, percent who reached the combined cap during the review period</td>
<td>1.5%</td>
<td>0% - 4.3%</td>
</tr>
<tr>
<td>Of orthopedic patients, percent who reached the combined cap during the review period</td>
<td>0.8%</td>
<td>0% - 2.1%</td>
</tr>
<tr>
<td>Of “other” patients, percent who reached the combined cap during the review period</td>
<td>5.4%</td>
<td>0% - 12.0%</td>
</tr>
</tbody>
</table>

* Could not be calculated because none of the sampled patients with this primary diagnosis reached the cap.
DATE: JUN 13 2001
TO: Michael F. Mangano
   Acting Inspector General
   Office of Inspector General
FROM: Michael McMullan
   Acting Deputy Administrator
   Health Care Financing Administration
SUBJECT: Office of Inspector General (OIG) Draft Reports: Physical, Occupational, and Speech Therapy for Medicare Nursing Home Patients: Medical Necessity and Cost Under the $1,500 Therapy Caps, (OEI-09-99-00560); Medical Record and Documentation and Billing, (OEI-09-99-00562); and Medical Necessity and Quality of Care Based on Treatment Diagnosis, (OEI-09-99-00563)

Thank you for the opportunity to review the above-referenced draft reports. The Health Care Financing Administration's (HCFA) main focus is to ensure health care security for all of our beneficiaries. These three companion reports have provided us with information that will allow us to protect and improve beneficiary health and satisfaction with outpatient rehabilitation services.

Following a thorough review, OIG found that less than 2 percent of Medicare beneficiaries reached either of the $1,500 therapy caps and that 86 percent of all Medicare Part B therapy was medically necessary. The OIG also found that the providers' medical documentation and billing techniques were not up to HCFA's standards and that efforts should be made to address these issues. We concur with OIG findings and will continue to work with the fiscal intermediaries (FIs), nursing home staff, and national therapy associations to make sure our beneficiaries receive the quality care they deserve.

The OIG has issued the following recommendations:

OIG Recommendation
HCFA should encourage FIs to continue educating nursing homes on Medicare Part B billing.

HCFA Response
We concur. The HCFA will continue to encourage FIs to educate nursing homes on Part B billing. The Therapy Review Program (TRP) mentioned in this report is tasked with providing educational materials and activities. We believe that providers of services
as well as administrators of nursing homes should be provided with information that facilitates appropriate claims billing.

**OIG Recommendation**

HCFA should instruct FIs to conduct focused medical review in order to identify and collect Medicare Part B therapy overpayments.

**HCFA Response**

We concur. The HCFA highly recommends focused medical review. The FIs were instructed to conduct focused medical review whenever their analysis suggests egregious overutilization of services. Furthermore, progressive correction action ensures both education and monitoring. The TRP will provide medical review of a statistically significant number of skilled nursing facility (SNF) Part B service claims for the years 1998, 1999, and 2000.

**OIG Recommendation**

HCFA should consider options when developing a new reimbursement system for Medicare Part B therapy such as: (1) reimbursement based on an episode of therapy; and (2) prior authorization for therapy that exceeds a separate monetary cap for each type of therapy.

**HCFA Response**

We concur. As required by statute, HCFA will be considering alternative payment systems for therapy services. Information collected by TRP from data analyses, medical review, and a variety of information-gathering activities will be analyzed by HCFA in the reports that Congress requested in the Balanced Budget Reconciliation Act of 1999.

**OIG Recommendation**

HCFA should continue working collaboratively with the national therapy associations to ensure that they provide accurate and comprehensive information to their members on proper documentation of therapy in medical records.

**HCFA Response**

We concur. The HCFA plans to continue working collaboratively with the national therapy associations to encourage provision of accurate and comprehensive information to their members on documentation of therapy services. The TRP has developed working relationships with the relevant associations resulting in a valuable exchange of information.

**OIG Recommendation**

HCFA should instruct FIs to provide regular workshops to nursing homes and their staff on Medicare requirements for record documentation and retention with an emphasis on the proper documentation of physician's orders in patient records.
We concur. Nursing home staff will be encouraged to learn and use appropriate documentation and retention, including documentation of physician's orders.

Attachment