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Developing Outpatient Therapy Payment Alternatives (DOTPA): 2010 Utilization Report

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DEVELOPING OUTPATIENT THERAPY PAYMENT ALTERNATIVES (DOTPA): 2010 UTILIZATION REPORT

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EXECUTIVE SUMMARY

ES.1 Background

In 2008, the Centers for Medicare & Medicaid Services (CMS) established a research project titled Developing Outpatient Therapy Payment Alternatives (DOTPA). The purposes of this project are to identify, collect, and analyze therapy-related information tied to beneficiary need and the effectiveness of outpatient therapy services. The ultimate goal is to develop payment method alternatives to the current financial cap on outpatient therapy services.

Outpatient therapy services are composed of physical therapy (PT), occupational therapy (OT), and speech-language pathology (SLP). Outpatient therapy services are billed under Medicare Part B and are provided in multiple settings, including private practices, hospital outpatient clinics, nursing facilities, and long-term care facilities.

Past growth in Medicare expenditures led to increased attention to these services. Attempts to address the increased expenditures through payment policy changes led to the realization that CMS cannot adequately assess the appropriateness of utilization patterns or the impact of changes in payment policy without better information tied to patient need and the effectiveness of outpatient therapy services.

Significant changes in Medicare outpatient therapy payment policies began with the Balanced Budget Act (BBA) of 1997,[1] which made payment rates more consistent across outpatient therapy providers through two mechanisms. First, outpatient therapy services furnished by all providers were moved to a fee schedule to be more consistent with other outpatient payment methodologies and with one another. Previously, outpatient therapy provided in hospital outpatient departments (HOPDs), (skilled) nursing facilities (S/NFs), outpatient rehabilitation facilities (ORFs), and comprehensive outpatient rehabilitation facilities (CORFs) were paid on a reasonable-cost basis. Second, annual financial limits (*therapy caps*), already in place for PT and OT private practice patients, were extended to all other outpatient settings except hospital-based services, effective January 1, 1999.

Congress implemented temporary moratoria on the therapy caps for several years (2000–2001, extended to 2002, then 2003–2005) and in the Deficit Reduction Act of 2005[2] required CMS to establish in 2006 an exceptions process to allow the provision of medically necessary therapy services that would otherwise exceed the therapy caps. Subsequently, the Tax Relief and Health Care Act of 2006 extended this exceptions process for services furnished in 2007, and subsequent laws extended the exceptions process each year. The most recent law was the Middle Class Tax Relief and Job Creation Act of 2012, which extended the cap through December 31, 2012; it called for a manual review in cases where a beneficiary's expenditures for outpatient

[1] Balanced Budget Act of 1997 (Pub.L. 105-33, 111 Stat. 251, enacted August 5, 1997). http://www.gpo.gov/fdsys/pkg/BILLS-105hr2015enr/pdf/BILLS-105hr2015enr.pdf

[2] Deficit Reduction Act of 2005: 42 U.S.C. sect. 1305 (2006). http://www.gpo.gov/fdsys/pkg/BILLS-109s1932enr/pdf/BILLS-109s1932enr.pdf

therapy exceed $3,700 in the year, and implementation of the therapy cap in hospital outpatient settings for the final 3 months of calendar year 2012 (CY2012). It also mandated CMS to begin collecting additional information related to the beneficiary's functional status on all claims for outpatient therapy services.[3] The cap and exceptions method of payment was intended to address cost containment but did not address the fundamental issue of ensuring that appropriate therapy services are provided to the beneficiary efficiently.

ES.2 Purpose

The purpose of this report is to provide descriptive information about the utilization of and expenditures for outpatient therapy services in CY2010. These analyses update the previous utilization analyses conducted by Computer Sciences Corporation (CSC) and AdvanceMed for data between 1998 and 2006.[4] Unlike prior years, the CY2010 data are potentially subject to an unusual limitation. The data were extracted from the CMS National Claims History Standard Analytic Files (SAFs) in December 2011. At that time, CMS had not completed an update of the CY2010 SAF to reflect retroactive payment adjustments required by the passage of the Affordable Care Act 2010. These adjustments would affect only the dollar amounts and would not affect utilization statistics. We believe that the total impact of the adjustments is small.

ES.3 Key Results

The key results in this report are as follows:

- Medicare expenditures for outpatient therapy were more than $5.6 billion in CY2010. This represents a 4.5 percent increase from CY2009[5] and an apparent slowing of the 1-year rates of growth observed for 2007–2008 and 2008–2009, which were 9.1 percent and 13.1 percent, respectively.[4] Almost three-quarters (72.3 percent) of the CY2010 expenditures were for PT, followed by 19.3 percent for OT, and 8.4 percent for SLP. These proportions have changed only slightly since CY2002.[6]

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[3] Middle Class Tax Relief and Job Creation Act of 2012. Bill HR.3630 Passed by the 112th Congress of the United States of America. January 3rd, 2012. http://www.gpo.gov/fdsys/pkg/BILLS-112hr3630enr/pdf/BILLS-112hr3630enr.pdf

[4] Olshen, Ciolek, and Hwang, 2002; Ciolek and Hwang, 2004, 2006, 2008 and by RTI for data from 2007, 2008, and 2009 (Kandilov, Lyda-McDonald, and Drozd, 2009; Drozd, 2010; Lyda-McDonald, Drozd, and Gage, 2012; Silver, Lyda-McDonald, Bachofer, and Gage, 2012). Links to these reports, and all others cited in this report, can be found in the references section of this report.

[5] Because of rounding, using the expenditure figures reported in this section may not yield the reported percentage increases, which are based on exact dollar amounts. Also, expenditure amounts and percentage changes in expenditures are not adjusted for inflation or Medicare fee schedule payment amount updates.

[6] Ciolek, D.E., and Hwang, W.: Development of a Model Episode-Based Payment System for Outpatient Therapy Services: Feasibility Analysis Using Existing CY2002 Claims Data. PSC Contract Number 500-99-0009/0009. November 2004. http://www.cms.gov/TherapyServices/downloads/modelreport110304.zip. Accessed April 15, 2010.

- PT users, on average, were younger than OT and SLP users. Mean expenditures per user increased with the age of the beneficiaries. Overall, average per-user expenditures from 2009 to 2010 increased 3.0 percent, from $1,166 to $1,201: an increase of 81.4 percent from the $662 per-patient payment in CY1998.[7] The total number of claim lines decreased by 1.6 percent from CY2009, and the average paid per claim line increased from $33.00 to $35.07 in CY2010, a 6.3 percent increase.

- Overall, the number of outpatient therapy users increased by 1.4 percent from CY2009. Each discipline, however, showed an increase in users of greater than 1.4 percent (1.5 percent for PT, 1.7 percent for OT, and 2.5 percent for SLP), indicating that a greater percentage of beneficiaries may be receiving services from multiple disciplines.

- Similar to patterns found in 2009 and earlier years, outpatient therapy users in 2010 were disproportionately female (almost two-thirds).

- Medicare expenditures for outpatient therapy varied considerably across different States, which could reflect regional differences in supply of therapy providers, practice patterns, or the case-mix of patients.

- The distribution of the settings providing outpatient therapy has shifted in the last few years away from facilities (hospitals, etc.) and physician offices and toward therapists in private practice (PTPP, OTPP, and SLPPP). From 2004 to 2010, 13.0 percent fewer HOPDs, 35.3 percent fewer home health agencies (HHAs), 24.2 percent fewer ORFs, and 52.4 percent fewer CORFs provided outpatient therapy services. The number of physicians and nonphysician practitioners (NPPs) billing Medicare for outpatient therapy services also fell by 37.7 percent and 25.4 percent, respectively.[8] In contrast, the number of PTPPs increased by 50.9 percent, and the number of OTPPs increased by 59.5 percent. In this report PTPP, OTPP, SLPPP, NPP, and physician providers are counted as individual providers by Profiling Identification (PIN) number.

- Facility settings still account for the greater proportion of outpatient therapy expenditures, with S/NFs accounting for more than one-third of payments in 2010 (35.5 percent). The demographic characteristic that differs most by setting is age: relatively older patients, who have higher therapy expenditures on average, are more likely to be treated in S/NFs and HHAs than are younger patients.

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[7] Olshen, J.M., Ciolek, D.E., and Hwang, W.: Study and Report on Outpatient Therapy Utilization: Physical Therapy, Occupational Therapy, and Speech-Language Pathology Services Billed to Medicare Part B in All Settings in 1998, 1999 and 2000. PSC Contract Number 500-99-0009/0002. 2002. <http://www.cms.gov/TherapyServices/downloads/utilization02_rpts.zip>. Accessed April 15, 2010.

[8] As of third quarter of CY2009, SLPs were allowed to bill independently for therapy services provided. Specialty Code 15 was designated to indicate a specialty of SLP. In previous years it was not possible to identify a category of SLPPP, and some SLPPPs may have been miscategorized as PTPP, OTPP, or physician. Consequently, the decreases in "physician" and "NPP" may be overstated and the increases in PTPP and OTPP may be understated.

- In 2010 Part B therapy claims came from 44,694 providers. Of these, 42,887 had at least one claim for PT services; 22,789 had at least one claim for OT; and 19,086 had at least one claim for SLP services. Private practice individuals represented the greatest proportion of these providers: a total of 23,106 had at least one claim for therapy services in CY2010. S/NFs were second largest: 14,573 provided therapy services. The distribution of PT, OT, and SLP claims varied among the different settings, but nearly all had at least one claim for PT.

- The distributions of therapy expenditures across settings were fairly similar in both 2009 and 2010 with a few exceptions. CORFs experienced losses in OT (73.8 percent) and HHAs, which account for a very small share of expenditures, had gains in OT, PT, and SLP (149.2 percent, 83.4 percent, and 233.9 percent, respectively). Most other institutional settings, however, experienced substantial gains between CY2009 and CY2010. PT and OT expenditures fell in ORFs (2.8 percent and 15.0 percent, respectively), and PT and SLP expenditures fell for physicians (12.6 percent and 46.4 percent, respectively). Expenditures increased significantly from CY2009 to CY2010 for SLP in hospitals, S/NFs, and ORFs.

- A marked decrease in SLP expenditures was observed, not only in physician offices, but also in nonphysician practitioner settings between 2009 and 2010. This is most likely due to the ability of SLPs to bill independently for the entire year of 2010. In previous years, these services (now primarily identified as SLPPP) would have been identified as physician, NPP, or in some cases PTPP and OTPP. This may have led to an understatement of the growth rate of expenditures in these settings between 2009 and 2010. SLP services identified as PTPP and OTPP in previous years may have also inadvertently been classified as PT and OT. As such, statistics in this report may be presenting an understatement in the growth rate of non-institutional PT and OT expenditures and an overstatement in the growth rate of non-institutional SLP expenditures between 2009 and 2010.

- Similar to 2009, more than 80 percent of outpatient therapy users received only one type of therapy (PT, OT, or SLP) in 2010. Therapy users seen in S/NFs and CORFs were the most likely to receive two or more types of therapy in the year. With the exception of PTPPs, OTPPs, and SLPPPs, where therapy users all received a single type of therapy, therapy users in physician and NPP settings were the most likely to receive a single type of therapy.

- A total of 4,400,976 beneficiaries received either PT or SLP services in CY2010. Of those, 902,188 (20.5 percent) exceeded the established cap for PT and SLP services, and 236,148 of the total 1,043,011 beneficiaries receiving OT (22.6 percent) exceeded the cap for OT services. Overall, approximately 20.7 percent of the beneficiaries who received therapy services in CY2010 exceeded at least one of the two therapy caps, and about 3.5 percent exceeded both caps. PT/SLP showed a slight increase in the level of beneficiaries who exceeded the cap from CY2009 (19.9 percent), and OT showed a slight decrease from CY2009 (23.5 percent). The overall rate of beneficiaries exceeding either cap increased from 20.1 percent in CY2009, and the overall rate of beneficiaries exceeding both caps decreased from 3.7 percent.

- Beneficiaries in S/NFs were the most likely to exceed either of the therapy caps individually during the calendar year (38.4 percent of beneficiaries). S/NF beneficiaries were also the most likely to exceed both therapy caps (13.5 percent of beneficiaries).

- Although OT users were slightly more likely than others to exceed the therapy cap, by setting beneficiaries receiving OT in HOPDs, S/NFs, private practices, and those receiving therapy across multiple settings were actually less likely to exceed the OT cap than their PT/SLP counterparts in those same settings.

- Beneficiaries who exceeded the PT/SLP cap on average received therapy for 4.3 times as many visits as those that did not, and mean allowed charges for these patients were typically 5.3 times as high. Similarly, beneficiaries who exceeded the OT cap received therapy for 5.2 times as many therapy visits, and typically cost 6.1 times as much as those who did not.

- Almost 95.0 percent of all outpatient therapy claim lines and Medicare payments in both CY2009 and CY2010 were represented by just 15 Healthcare Common Procedure Coding System (HCPCS) codes.[9] The specific services that made up the top 15 varied across settings.

- Comparing outpatient therapy episodes for the 20 most common primary diagnoses showed important differences in the average number of treatment days and the average Medicare expenditures. Overall, the episode length was highly and positively correlated with higher Medicare payments—although the relationship was strongest in PT episodes. Comparing episodes across setting types, the longest and most expensive outpatient therapy episodes for OT sand SLP occurred in S/NFs, CORFs, and ORFs. The longest episodes for PT were also in these settings, with the CORFs' expenses higher than those in HHAs and ORFs.

[9] HCPCS is a standardized coding system for claims processing used by Medicare and other insurers. The HCPCS identifies several products, supplies, and services not included in the CPT system. See http://www.cms.hhs.gov/MedHCPCSGeninfo/.

SECTION 1
INTRODUCTION

In 2008, the Centers for Medicare & Medicaid Services (CMS) established a research project titled Developing Outpatient Therapy Payment Alternatives (DOTPA). The purposes of this project are to identify, collect, and analyze therapy-related information tied to beneficiary need and the effectiveness of outpatient therapy services. The ultimate goal is to develop payment method alternatives to the current financial cap on outpatient therapy services.

1.1 Background

1.1.1 Medicare Coverage for Outpatient Therapy Services

Outpatient therapy services are composed of physical therapy (PT), occupational therapy (OT), and speech-language pathology (SLP) services furnished by a licensed therapist in a variety of outpatient and residential settings. These settings include the following:

- Hospital Outpatient Departments (HOPDs)[1]
- (Skilled) Nursing Facilities (S/NF)
- Comprehensive Outpatient Rehabilitation Facilities (CORFs)
- Outpatient Rehabilitation Facilities (ORFs)
- Home Health Agencies (HHAs)
- Private Practices (see Section 1.1.2 below for further discussion of private practice payment issues)

Outpatient therapy services are covered by Part B of the Medicare program. Therapy services provided in a nursing facility (NF) are covered by Part B as outpatient therapy regardless of whether the facility is certified as an S/NF and/or as an NF (together referred to as an S/NF in this report), as long as the patient is not in a covered Part A S/NF stay.[2] Therapy services provided by an HHA are covered by Part B (as outpatient therapy) if the patient is not under a home health plan of care and/or not homebound.[3]

Medicare Part B covers a therapy service if it meets several criteria. First, the patient must need rehabilitation therapy services that can safely and appropriately be provided on an

[1] Throughout this report, when a setting is referred to as a "hospital," we are referring to a hospital outpatient department (HOPD).

[2] An S/NF claim would be covered by Part B if (1) the patient's stay or residence in the facility is not preceded by a qualifying 3-day Part A hospitalization, or (2) if the stay has extended beyond the 100-day Part A S/NF stay coverage limit.

[3] See Sections 220 and 230 of Chapter 15 of the Medicare Benefit Policy Manual (CMS, 2010).

outpatient basis (including to residents of an S/NF) and that are sufficiently complex that a licensed therapist must perform or supervise them.[4] In addition, there must be a reasonable expectation that the patient's condition will significantly improve in a reasonable and generally predictable amount of time as a result of receiving these services. Alternatively, for certain chronic diseases (e.g., Parkinson's or multiple sclerosis), the services must be part of an accepted maintenance program.

Second, a plan of care must be established before the patient can receive covered outpatient therapy services. The plan must specify the patient's diagnosis, long-term treatment goals, type of therapy, and duration and frequency of therapy. Each therapy discipline must have its own plan of care. A plan of care must be established by a physician or a nonphysician practitioner (NPP) or the therapist providing services under that plan of care.

Third, the patient must be under the care of a physician or an NPP. A physician (or NPP) must certify the plan of care; physicians or NPPs cannot certify plans of care for patients not under their care. A plan of care is certified for a maximum of 90 days. It can be recertified every 90 days, subject to review, based on the need for additional therapy or to modify the plan of care.

Finally, providers must maintain a written copy of the plan of care and certifications of this plan, and must retain progress reports, treatment notes, and evaluations.

1.1.2 Medicare Payment for Outpatient Therapy Services

Significant changes in Medicare outpatient therapy payment policies began with the Balanced Budget Act of 1997, which made payment rates more consistent across outpatient therapy providers. First, various outpatient therapy services furnished by most providers were moved to a fee schedule to be more consistent with other outpatient payment methodologies and with one another. Previously, outpatient therapy provided in HOPDs, S/NFs, ORFs, and CORFs was paid on a reasonable-cost basis.[5] Second, annual financial limits ("therapy caps"), already in place for PT and OT private practice patients, were extended to all other outpatient settings except hospital-based services.

Congress implemented temporary moratoria on the therapy caps for several years and in the Deficit Reduction Act of 2005 required CMS to establish in 2006 an exceptions process to allow the provision of medically necessary therapy services that would otherwise exceed the therapy caps. Subsequently, the Tax Relief and Health Care Act of 2006 extended this exceptions process for services furnished in 2007, and subsequent laws have extended the exceptions process each year. The most recent was the Middle Class Tax Relief and Job Creation Act of 2012, which extended the cap through December 31, 2012, and also called for a manual review in cases where a beneficiary's outpatient therapy expenditures exceed $3,700 in the year, and implementation of the therapy cap in hospital outpatient settings for the final 3

[4] PT and OT can be provided under the supervision of a licensed therapist.

[5] Critical access hospitals are an exception; their outpatient therapy services continue to be provided on a reasonable-cost basis.

months of calendar year 2012. It also mandated that CMS begin collecting additional information related to the beneficiary's functional status on all claims for outpatient therapy services (Middle Class Tax Relief and Job Creation Act of 2012). The exceptions process is a refinement of the therapy caps, not an alternative. The cap and exceptions method of payment was intended to address cost containment but did not address the fundamental issue of ensuring that appropriate therapy services are provided to the beneficiary efficiently. The cap levels for CY2010 were $1,860 for PT and SLP combined, and $1,860 for OT.[6]

1.2 Purpose

The purpose of this report is to provide descriptive information about the utilization of and expenditures for outpatient therapy services in CY2010. These analyses update the previous utilization analyses conducted by CSC and AdvanceMed for data between 1998 and 2006 (Olshen, Ciolek, and Hwang, 2002; Ciolek and Hwang, 2004, 2006, 2008), and by RTI for data from 2007 to 2009 (Kandilov, Lyda-McDonald, and Drozd, 2009; Lyda-McDonald, Munevar, and Drozd, 2010; Lyda-McDonald, Drozd, and Gage, 2012; Silver, Lyda-McDonald, Bachofer, and Gage, 2012).

1.3 Organization of This Report

This report is organized as follows. Section 2 describes the analytic data file construction process. The main results are presented in Section 3 within subsections containing CY2010 outpatient therapy utilization by patient demographics, provider characteristics, services provided, and patient diagnosis.

Accompanying this report is a set of Microsoft Excel workbooks providing more details on utilization than are presented in this report. The figures and tables in this report use data drawn from these workbooks, and workbook citations are provided in the source references for these figures and tables.

[6] In 2012, the cap limits were $1,880.

SECTION 2
DATA ANALYSIS METHODOLOGY

2.1 Source of Data

For the figures and tables used in this report, and for the Excel tables that accompany the report, RTI International used 100.0 percent of outpatient therapy fee for service (FFS) claims with dates of service between January 1, 2010, and December 31, 2010, as retrieved from the Centers for Medicare & Medicaid Services (CMS) National Claims History in December 2011. For outpatient therapy occurring in a facility—that is, hospital, skilled or other nursing facility (S/NF), comprehensive outpatient rehabilitation facility (CORF), outpatient rehabilitation facility (ORF), or home health agency (HHA[7])—therapy claims come from the Outpatient file. For outpatient therapy occurring in a private practice or physician's office—that is, physical therapist in private practice (PTPP), occupational therapist in private practice (OTPP), speech therapist in private practice (SLPPP), physician, and nonphysician practitioner (NPP)—therapy claims come from the Carrier/Noninstitutional file.

To identify outpatient therapy claims in the Outpatient file, RTI implemented the method developed by Ciolek and Hwang (2006, 2008) that uses outpatient therapy billing requirements published in Chapter 5 of the Medicare Claims Processing Manual (CMS, 2009). Claims submitted by institutional providers with one or more revenue center codes in the 042x, 043x, and 044x series (physical therapy, occupational therapy, and speech-language pathology revenue center codes, respectively), and with one or more Healthcare Common Procedure Coding System (HCPCS) codes in the CMS Therapy Code List[8] for 2010 (see Table 1), were retrieved through the CMS Data Extract System (DESY). Claims submitted by noninstitutional providers with a specialty code of 65 (physical therapy), 67 (occupational therapy), or 15 (speech-language pathology), or with one or more HCPCS codes in the CMS Therapy Code List, were retrieved through DESY.[9] If a noninstitutional claim did not contain one of the "therapy" specialty codes nor at least one HCPCS code listed below as "always therapy," it was included only if it contained a modifier indicating that therapy services were provided (GP for physical therapy, GO for occupational therapy, *or* GN for speech-language pathology).

An outpatient therapy *provider* is defined in this report as an organizational unit providing therapy services. On claims from the Outpatient file, incorporating only claims from institutional providers, providers are identified with the CMS Certification Number (CCN). On

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[7] Although home health therapy (HHA) services are typically provided in the home, historically HHAs have been classified as institutional providers and their claims are found in the Outpatient file. As such, these services are on occasion referred to as being provided "in a facility" in this report when discussed as a group with other institutional providers.

[8] The current version of the CMS Therapy Code List can be found on the CMS Web site at http://www.cms.gov/TherapyServices/05_Annual_Therapy_Update.asp#TopOfPage.

[9] For physician office and NPP claims, the discipline (OT, PT, or SLP) was established using modifier codes. The value of the first modifier code that identified a therapy discipline was the one used. If neither modifier identified a therapy discipline, but the HCPCS code was an "always therapy" code, then the default was to assign PT as the discipline.

claims from the carrier file, providers are identified with the Tax Identification Number (TIN) of the organization. Note that in our previous reports the definition of provider differed by file: in the Outpatient file a provider was a facility as in this report (hospital, S/NF, CORF, ORF, HHA); however, in the Carrier file a provider was an individual therapist, physician, or nonphysician provider in a particular office setting. This identification was made using the Profiling Identification Number (PIN) of the individual practitioner. For this report, across settings, a *provider* was counted as an organizational unit. In addition, the counts of individual therapists, physicians, and nonphysician providers were also included to show counts in a manner consistent with the method of previous years. See Section 2.4 for additional information on the PIN.

Table 1
Therapy Codes, CY2010

HCPCS Code	Description	Always therapy	Carrier-priced	Bundled with other therapy codes	Paid under HOPPS if billed by HOPD
0019T	extracorp shock wv tx,ms nos	No	No	No	No
64550	apply neurostimulator	No	No	No	No
0183T	Low frequency, non-contact, non-thermal ultrasound	Yes	No	No	Yes
90901	biofeedback train, any meth	No	No	No	No
92506	speech/hearing evaluation	Yes	No	No	No
92507	speech/hearing therapy	Yes	No	No	No
92508	speech/hearing therapy	Yes	No	No	No
92520	laryngeal functional studies	No	No	No	No
92526	oral function therapy	Yes	No	No	No
92597	oral speech device eval	Yes	No	No	No
92605	eval for nonspeech device rx	Yes	No	Yes	No
92606	non-speech device service	Yes	No	Yes	No
92607	ex for speech device rx, 1hr	Yes	No	No	No
92608	ex for speech device rx addl	Yes	No	No	No
92609	use of speech device service	Yes	No	No	No
92610	evaluate swallowing function	No	No	No	No
92611	motion fluoroscopy/swallow	No	No	No	No
92612	endoscopy swallow tst (fees)	No	No	No	No
92614	laryngoscopic sensory test	No	No	No	No
92616	fees w/laryngeal sense test	No	No	No	No
95831	limb muscle testing, manual	No	No	No	No
95832	hand muscle testing, manual	No	No	No	No
95833	body muscle testing, manual	No	No	No	No
95834	body muscle testing, manual	No	No	No	No
95851	range of motion measurements	No	No	No	No
95852	range of motion measurements	No	No	No	No
96105	assessment of aphasia	No	No	No	No
96110	developmental test, lim	No	No	No	Yes
96111	developmental test, extend	No	No	No	Yes
96125	cognitive test by hc pro	Yes	No	No	No
97001	pt evaluation	Yes	No	No	No
97002	pt re-evaluation	Yes	No	No	No
97003	ot evaluation	Yes	No	No	No
97004	ot re-evaluation	Yes	No	No	No
97010	hot or cold packs therapy	Yes	No	Yes	No
97012	mechanical traction therapy	Yes	No	No	No
97016	vasopneumatic device therapy	Yes	No	No	No
97018	paraffin bath therapy	Yes	No	No	No
97022	whirlpool therapy	Yes	No	No	No
97024	diathermy e.g., microwave	Yes	No	No	No
97026	infrared therapy	Yes	No	No	No
97028	ultraviolet therapy	Yes	No	No	No

(continued)

Table 1 (continued)
Therapy codes, CY2010

HCPCS code	Description	Always therapy	Carrier-priced	Bundled with other therapy codes	Paid under HOPPS if billed by HOPD
97032	electrical stimulation	Yes	No	No	No
97033	electric current therapy	Yes	No	No	No
97034	contrast bath therapy	Yes	No	No	No
97035	ultrasound therapy	Yes	No	No	No
97036	hydrotherapy	Yes	No	No	No
97039	physical therapy treatment	Yes	Yes	No	No
97110	therapeutic exercises	Yes	No	No	No
97112	neuromuscular reeducation	Yes	No	No	No
97113	aquatic therapy/exercises	Yes	No	No	No
97116	gait training therapy	Yes	No	No	No
97124	massage therapy	Yes	No	No	No
97139	physical medicine procedure	Yes	Yes	No	No
97140	manual therapy	Yes	No	No	No
97150	group therapeutic procedures	Yes	No	No	No
97530	therapeutic activities	Yes	No	No	No
97532	cognitive skills development	No	No	No	No
97533	sensory integration	Yes	No	No	No
97535	self care mngment training	Yes	No	No	No
97537	community/work reintegration	Yes	No	No	No
97542	wheelchair mngment training	Yes	No	No	No
97597	active wound care/20 cm or <	No	No	No	If not appropriate under therapy plan of care
97598	active wound care > 20 cm	No	No	No	If not appropriate under therapy plan of care
97602	wound(s) care non-selective	No	No	Yes	If not appropriate under therapy plan of care
97605	neg press wound tx, < 50 cm	No	No	No	If not appropriate under therapy plan of care
97606	neg press wound tx, > 50 cm	No	No	No	If not appropriate under therapy plan of care
97750	physical performance test	Yes	No	No	No
97755	assistive technology assess	Yes	No	No	No
97760	orthotic mgmt and training	Yes	No	No	No
97761	prosthetic training	Yes	No	No	No
97762	c/o for orthotic/prosth use	Yes	No	No	No
97799	physical medicine procedure	Yes	Yes	No	No
G0281	elec stim unattend for press	Yes	No	No	No
G0283	elec stim other than wound	Yes	No	No	No
G0329	electromagntic tx for ulcers	Yes	No	No	No

NOTES: “Always therapy” codes are codes for services requiring provision by a licensed therapist; the appropriate therapy modifier (GN for speech-language pathology, GO for occupational therapy, or GP for physical therapy) is not required for Medicare billing. “Carrier-priced” services are not priced under the Medicare Physician Fee Schedule (MPFS) but rather are priced by individual Carriers or Medicare Administrative Contractors (MACs). Services “bundled under other therapy codes” are services for which no separate payment is made but instead are paid for in the payment for other therapy services provided along with the indicated service. Services indicated as “billed under the HOPPS if billed by HOPD” are paid using the hospital outpatient PPS (HOPPS) if billed and provided by a hospital outpatient department (HOPD).

SOURCE: Annual Therapy Update: 2010 Therapy Code List and Dispositions.
http://www.cms.gov/TherapyServices/05_Annual_Therapy_Update.asp#TopOfPage

2.2 Dataset Description

Paid amounts and allowed charges are taken from the claims data. From the Medicare Non-Institutional Data, the Line NCH (National Claims History) Payment Amount is used to calculate the paid amounts for the non-institutional settings (PTPP, OTPP, SLPPP, physician, and NPP), and the Line Allowed Charge Amount is used for the allowed charges. In most cases, the difference between the allowed charges and the paid amounts includes both the 20.0 percent coinsurance and the deductible (where applicable) paid by the Medicare beneficiary. For claims from institutional settings, the Revenue Center Payment Amount is used to calculate paid amounts for the facility settings (hospital, S/NF, CORF, ORF, and HHA), and the allowed charges are the product of the Revenue Center Rate Amount and the Revenue Center Unit Amount. In general, the difference between these values also takes into account both the 20.0 percent coinsurance and the deductible paid by the beneficiary.

2.3 Episode Definition

The outpatient therapy episodes described in the latter part of this report are constructed based on the methodology outlined in the CSC report *Development of a Model Episode-Based Payment System for Outpatient Therapy Services: Feasibility Analysis Using Existing CY2002 Claims Data* (Ciolek and Hwang, 2004). An episode defined here differs from the original definition only through an updated list of HCPCS codes and modifier codes used to bill for therapy services. Each therapy episode begins with a beneficiary's first date of service for a particular discipline (PT, OT, or SLP) in the calendar year, or the first date of service that is preceded by a 60-day period without any services from that discipline. The episode continues through the last date of service in the calendar year or through the last date of service that precedes a 60-day period without any services within that discipline. The number of days in an episode is calculated as the number of days in which the beneficiary actually received some type of therapy treatment, not the number of days between the first date of service and the last date of service.

Using the CSC methodology, the episode itself is discipline specific but not setting specific. An episode may follow a beneficiary across multiple settings for the same type of therapy, but services from different disciplines are counted as separate episodes even if the episodes run concurrently. Although some other definitions, such as the description included in the Medicare Benefit Policy Manual (CMS, 2012), treat an episode of therapy as both discipline and setting specific, the less restrictive CSC definition used here allows for the understanding of courses of therapy that take place across multiple settings, while still differentiating plans of care from multiple disciplines.

The first diagnosis (ICD-9 code) on the first claim (for institutional claims) or claim line (for non-institutional claims) of an episode is considered to be the primary diagnosis for the entire episode, regardless of whether subsequent claim lines in the episode have the same primary diagnosis.

2.4 Limitations

The episode definition outlined in this report differs from the regulatory definition of an episode. The definition of an episode presented here may result in the inclusion of some "partial" episodes in the analysis/tables—those that began before January 1, 2010, and those that ended after December 31, 2010. This means that the average cost of an episode could be understated.

Disciplines are identified on institutional claims by the first modifier code on the claim line indicating therapy services. For non-institutional claims, however, disciplines are identified by the HCFA specialty code listed on the claim line, and the first modifier code on the claim line indicating therapy services if a specialty code associated with therapy services is not listed. If both a specialty code and a therapy modifier appear on a non-institutional claim, the specialty code takes precedence; if multiple therapy modifiers appear, the first modifier takes precedence over the others. Though this method of identification is generally accurate, some misclassification may have occurred if a non-institutional claim is submitted by a therapist from one discipline on behalf of a therapist from another discipline,[10] or if multiple therapy modifiers are indicated on a single claim line.

Among private practices, subgroups are identified by the HCFA specialty code listed on the non-institutional claim line. Each therapy discipline is identified by a specific specialty code, NPPs are identified by three other codes (50 [nurse practitioner], 89 [certified clinical nurse specialist], and 97 [physician assistant]), and the remaining physician specialty codes are identified as physicians providing therapy services. Though this method of identification is generally accurate, some misclassification may have occurred if a non-institutional claim is submitted by a provider from one discipline on behalf of a provider from another discipline.

The Part B therapy claims that were used in preparing this report were obtained from the CMS National Claims History Standard Analytic Files in December 2011. At that time, CMS had not completed an update of the CY2010 SAF to reflect retroactive payment adjustments required by the passage of the Affordable Care Act of 2010. These adjustments would affect only the dollar amounts and not utilization statistics. We believe that the total impact of the adjustments is small.

Finally, the Profiling Identification Number (PIN) used to count individual practitioners in private practice settings is assigned at the level of the Medicare administrative contractor. The uniqueness of these numbers across all providers, however, is not confirmed prior to assignment. As such, it is possible that a PIN may have been assigned more than once in different areas of the country, which could lead to the number of individual practitioners within private practices in this report being slightly understated. This limitation would not affect the reported counts of institutional providers, nor would it affect the reported count of private practice providers as unique organizational units.

[10] To approximate the possible magnitude of this limitation, the HCFA specialty codes on carrier claims were compared with the modifier codes reported on the claim lines. The discipline associated with the specialty code contradicted the discipline associated with the modifier code on less than 0.5 percent of claim lines for PT and SLP, and less than 3 percent of claim lines for OT.

SECTION 3
CY2010 OUTPATIENT THERAPY UTILIZATION

3.1 Outpatient Therapy Utilization—Overall Results

During CY2010, a total of 4,697,349 individuals received physical therapy (PT), occupational therapy (OT), and/or speech-language pathology (SLP) services. This number represents 13.5 percent of the 34,682,126 FFS beneficiaries[11] enrolled in Part B, and a 1.4% increase from the total number of outpatient therapy users in CY2009 (4,630,593 users in 2009; Lyda-McDonald, Drozd, and Gage, 2012). PT had the most users at 4,156,895 (89.0 percent), followed by OT with 1,043,011 users (22.0 percent), and SLP with 526,628 users (11.0 percent). Note that the sum of users of PT, OT, and SLP services is greater than the total number of users because some patients receive therapy from multiple disciplines.

As detailed in ***Table 2***, the total payment for all outpatient therapy in CY2010 was $5.6 billion—an increase of $243 million (4.5 percent) over CY2009 (see Lyda-McDonald, Munevar, and Drozd, 2011, for details on CY2009 outpatient therapy utilization). PT services ($4.1 billion) accounted for 72.3 percent of the total payments, whereas OT services ($1.1 billion) accounted for 19.3 percent, and SLP services ($476 million) accounted for 8.4 percent of total outpatient therapy payments. OT had the highest mean payments per user ($1,044), followed by PT ($981) and SLP ($905). PT had the highest median payments per user ($633), followed by OT ($571) and then SLP ($477). OT had the highest mean payment per episode ($921), followed by PT ($850) and SLP ($804).

Table 2
Summary of outpatient therapy expenditures, CY2010

Discipline	Outpatient therapy users	Percent of users	Total paid (thousands)	Percent of paid	Mean paid per user	Median paid per user	Mean paid per episode*
All	4,697,349	100.0%	$5,642,532	100.0%	$1,201	$655	$859
PT	4,156,895	88.5%	$4,077,033	72.3%	$981	$633	$850
OT	1,043,011	22.2%	$1,089,115	19.3%	$1,044	$571	$921
SLP	526,628	11.2%	$476,385	8.4%	$905	$477	$804

* See Section 2.3 for episode definition.

NOTES: OT = occupational therapy; PT = physical therapy; SLP = speech-language pathology. The sum of number of therapy users for each discipline exceeds the total number of users because some users receive therapy from multiple disciplines. Likewise, the sum of the discipline-specific percentage of users exceeds 100.0 percent.

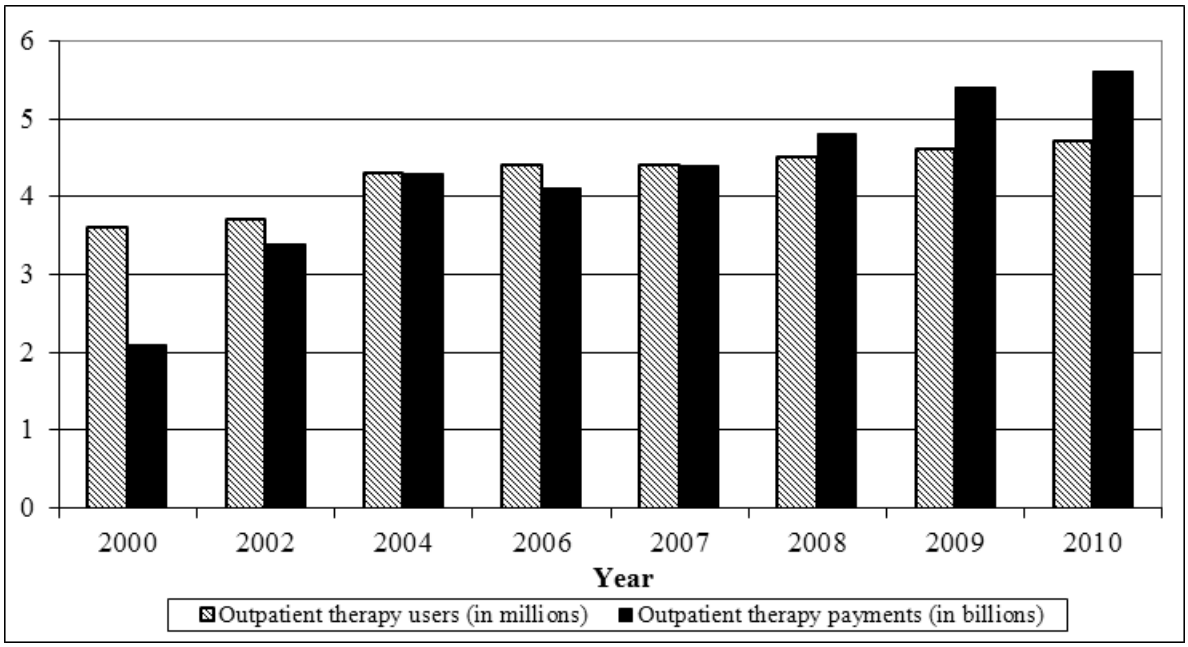
SOURCES: RTI International analysis of 2010 Medicare claims data for outpatient therapy services (see source files AnnualUserExpenditures_byTherapyType_1-100Percentile_CY2010.xls; OutpatientEpisodesbyDiagnosis_OT_CY2010.xls; OutpatientEpisodesbyDiagnosis_PT_CY2010.xls; OutpatientEpisodesbyDiagnosis_SLP_CY2010.xls; OutpatientTherapyDemographics_CY2010.xls, accompanying this report).

[11] This value represents the total number of beneficiaries with at least 1 month of enrollment in fee-for-service Medicare Part B in CY2010.

Figure 1 shows that the total number of outpatient therapy users has increased over the years. From CY2000 to CY2004, the expenditures for each discipline also increased, with PT and OT showing a higher rate of increase than SLP (data not shown). In CY2006, the expenditures for all disciplines combined decreased by 3.9 percent from the CY2004 levels. This decrease in expenditures was associated with both the resumption of therapy caps (with the end of the moratoria on the caps) implemented by the Deficit Reduction Act of 2005 as well as significant clarifications on documentation requirements added to the Medicare manuals. In 2006, the outpatient therapy allowed charges were capped at $1,740 for OT services and $1,740 for PT and SLP services combined. In 2007, the therapy caps rose to $1,780, in 2008 to $1,810, in 2009 to $1,840, and in 2010 to $1,860. Exceptions to the therapy caps were available beginning in 2006 based on the conditions and comorbidities of the beneficiaries. In fact, because of the mitigating effect of the exceptions process on the therapy caps, the clarifications to the documentation requirements may have applied more downward pressure to the expenditures than did the end of the therapy cap moratoria. From CY2006 to CY2007, expenditures increased by 7.3 percent, and from CY2007 to CY2010, total program expenditures for outpatient therapy rose by an additional 27.3 percent. Though the average annual growth rate in these 3 years was larger than that observed between CY2006 and CY2007, the CY2009–2010 change (4.5 percent) exhibited an apparent slowing of the 1-year rates of growth observed for 2007–2008 and 2008–2009, which were 9.1 percent and 13.1 percent, respectively. The increase between CY2007 and CY2010 was primarily due to the large jump in outpatient therapy payments per user and less a factor of increases in therapy users (6.8 percent increase in users, from 4.4 million in CY2007 to 4.7 million in CY2010). A factor that may have contributed to this increase was the automatic exceptions process, introduced January 1, 2007, which meant that with the proper modifier applied any claims exceeding the cap would automatically trigger an exception. Providers were required to maintain documentation justifying the need for additional therapy, and could be asked to submit it on request from CMS's agents; however, the manual application was no longer necessary.

The two annual therapy caps (one for the combination of PT and SLP services, and the other for OT services) do not apply to therapy services provided in hospital outpatient departments. ***Table 3*** summarizes growth rates in total paid amounts, users of therapy services, and average paid amounts per user for hospital outpatient versus nonhospital settings. The first column of this table provides the percentage distribution of paid amounts by setting. The next two columns give the growth rates in paid amounts from 2004 to 2006 and from 2006 to 2010. From 2004 to 2006, the overall percentage reduction in paid amounts (3.9 percent) was distributed relatively evenly across hospital (3.7 percent) and nonhospital (4.0 percent) settings. However, after 2006, total paid amounts in nonhospital settings increased markedly (by 43.3 percent over 4 years), whereas total paid amounts to hospitals increased only by 13.5 percent. This is because whereas mean payments in hospitals increased by only $29 between 2006 and 2010 with relatively little change in the number of users, the mean payments in nonhospital settings increased by nearly $360. The second-to-last column of this table presents the growth rate from 2006 to 2010 in users of each type of setting. Although the number of users of hospital settings grew faster than for users of nonhospital settings for outpatient therapy (a 7.9 percent increase vs. a 6.0 percent increase), the growth rate in total expenditures for nonhospital settings was much larger (43.3 percent vs. 13.5 percent), mostly driven by a large increase in per-user expenditures (35.8 percent vs. 5.2 percent), as shown in the last column of Table 3. In this period (2006-2010), the average annual growth was 8 percent per year.

Figure 1
Total outpatient therapy users and expenditures, CY2000–CY2010



SOURCES: RTI International analysis of 2010 Medicare claims data for outpatient therapy services (see source files OutpatientTherapyDemographics_CY2006.xls; OutpatientTherapyDemographics_CY2007.xls; OutpatientTherapyDemographics_CY2008.xls; OutpatientTherapyDemographics_CY2009; and OutpatientTherapyDemographics_CY2010.xls), accompanying this report; Lyda-McDonald, Drozd, and Gage (2011); Ciolek and Hwang (2004, 2006, 2008); and Olshen, Ciolek, and Hwang (2002).

Table 3
Growth rates of total paid amounts, number of therapy users, and paid amounts per user, hospital versus nonhospital settings, 2006–2010

Setting	Setting share of total expenditures	Percent change in total paid, 2004–2006	Percent change in total paid, 2006–2010	Percent change in users of each setting, 2006–2010	Percent change in average total paid per user, 2006–2010
All settings	100.0%	-3.9%	37.4%	6.6%	28.9%
Hospital	16.3%	-3.7%	13.5%	7.9%	5.2%
Nonhospital	83.6%	-4.0%	43.3%	6.0%	35.8%

SOURCES: RTI International analysis of 2006 and 2010 Medicare claims data for outpatient therapy services (see source files OutpatientTherapyDemographics_bySetting_CY2010.xls, OutpatientTherapyDemographics__bySetting_CY2006.xls, accompanying this report); Lyda-McDonald, Drozd, and Gage (2011).

Table 4 summarizes program expenditures, the number of users, and annual expenditures per user for each therapy discipline from CY2002 through CY2010. From CY2009 to CY2010, PT users increased by 1.5 percent whereas expenditures increased by 3.5 percent. This represents a decreasing growth rate in the number of users per year compared with recent 1-year periods (2.0 percent increase from CY2007 to CY2008, and 3.6 percent from CY2008 to CY2009). There has also been a decrease in expenditure growth for PT services.

Table 4
Summary of outpatient therapy expenditures, users, and per-user expenditures, by discipline, CY2000–CY2010

Discipline	2002	2004	2006	2007	% Change 2006–2007	2008	% Change 2007–2008	2009	% Change 2008–2009	2010	% Change 2009–2010
PT expenditures ($ thousands)	$2,544,117	$3,227,400	$3,076,614	$3,242,720	5.4%	$3,500,723	8.0%	$3,941,005	12.6%	$4,077,033	3.5%
OT expenditures ($ thousands)	$611,907	$770,862	$756,124	$831,594	10.0%	$934,480	12.4%	$1,080,241	15.6%	$1,089,115	0.8%
SLP expenditures ($ thousands)	$236,203	$274,638	$273,170	$302,551	10.8%	$338,448	11.9%	$378,357	11.8%	$476,385	25.9%
PT users	3,296,407	3,737,095	3,874,700	3,877,896	0.1%	3,955,991	2.0%	4,096,735	3.6%	4,156,895	1.5%
OT users	745,241	888,725	915,867	933,826	2.0%	976,397	4.6%	1,025,629	5.0%	1,043,011	1.7%
SLP users	367,783	433,048	445,389	455,248	2.2%	479,834	5.4%	513,675	7.1%	526,628	2.5%
PT expenditures per user	$771.78	$863.61	$794.03	$836.21	5.3%	$884.92	5.8%	$961.99	8.7%	$980.79	2.0%
OT expenditures per user	$821.09	$867.38	$825.58	$890.52	7.9%	$957.07	7.5%	$1,053.25	10.0%	$1044.20	-0.9%
SLP expenditures per user	$642.24	$634.20	$613.33	$664.59	8.4%	$705.34	6.1%	$736.57	4.4%	$904.60	22.8%

NOTES: OT = occupational therapy; PT = physical therapy; SLP = speech-language pathology. For CY2000 and earlier, Olshen, Ciolek, and Hwang (2002) were unable to identify a specific discipline for some claims because of data reporting and documentation issues; they did not tabulate the number of unique users by discipline.

SOURCES: RTI International analysis of 2010 Medicare claims data for outpatient therapy services (see source files OutpatientTherapyDemographics_ CY2010.xls, accompanying this report); Lyda-McDonald, Drozd, and Gage (2011); Ciolek and Hwang (2004, 2006, 2008); and Olshen, Ciolek, and Hwang (2002).

From CY2009 to CY2010, the number of OT users increased by 1.7 percent, and SLP users increased by 2.5 percent. For both of these disciplines, this represents a decrease in the growth rate of the number of users from both the CY2007 to CY2008 and CY2008 to CY2009 periods (OT: 4.6 percent increase from CY2007 to CY2008, and 5.0 percent increase from CY2008 to CY2009; SLP: 5.4 percent increase from CY2007 to CY2008, and 7.1 percent increase from CY2008 to CY2009). Expenditures for these two disciplines increased by 0.8 percent and 25.9 percent, respectively, from CY2009 to CY2010, a turnaround from small declines in expenditures from CY2004 to CY2006 for OT, and a much larger turnaround for SLP. The growth of OT expenditures over previous 1-year periods has generally been larger than the growth in SLP expenditures during the same time (OT: 10.0 percent increase from CY2006 to CY2007, 12.4 percent increase from CY2007 to CY2008, and 15.6 percent increase from CY2008 to CY2009; SLP: 10.8 percent increase from CY2006 to CY2007, 11.9 percent increase from CY2007 to CY2008, and 11.8 percent increase from CY2008 to CY2009). In CY2010, however, the growth in SLP expenditures was much larger than in OT (25.9 percent for SLP and 0.8 percent for OT).

The marked increase in SLP may be overstated for several reasons. Most notably, as of the third quarter 2009, non-institutional speech-language pathologists were allowed to bill independently for therapy services, and a new HCFA specialty code was assigned to claims from practitioners in that discipline (code 15). This allowed for more accurate identification of non-institutional SLP claims, which may have been identified by our methods as other disciplines in previous years. This possibility is further substantiated by the lower rates of increase in PT and OT than in previous years.

However, a substantial contributor to the observed increase in SLP expenditures was an approximately 30 percent increase in the Medicare fee schedule amount for CPT code 92526 (Treatment of swallowing dysfunction and/or oral function for feeding). This code was revalued by the American Medical Association's Health Care Professional Advisory Committee (HCPAC) in CY2010. SLP clinical labor was removed from direct practice expense and replaced by an adjustment to the work RVUs. Nearly half of all SLP claim lines and slightly more than half of all provider payments in both CY2009 and CY2010 were for this procedure. Between these 2 years, total provider payments increased by 30.8 percent, reflecting the combined effect of a 1.2 percent increase in utilization (total claim lines) and an increase of 29.2 percent in the average payment per claim line. When this code is excluded, provider payments for SLP procedures increased by 20.1 percent, reflecting a 7.3 percent increase in claim lines and an 11.9 percent increase in mean paid per line.[12]

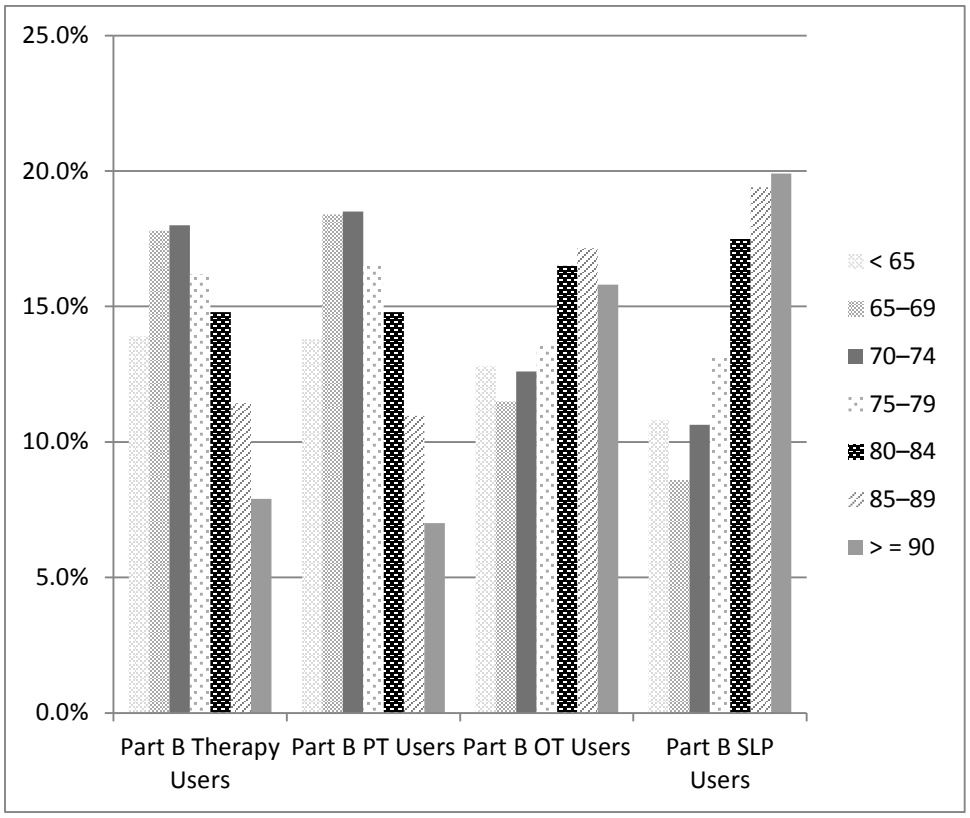
3.2 Outpatient Therapy Utilization by Beneficiary Age

The age distribution of outpatient therapy users varied by therapy discipline in CY2010, as shown in ***Figure 2***. The age group with the highest percentage of users across all disciplines and for PT patients was 70 to 74 years old (18.0 and 18.5 percent, respectively). The share of PT users rose from ages younger than 65 to peak at age 70 to 74 and then steadily declined to a low for patients 90 or older (7.0 percent of PT users). For both OT and SLP, the proportion of

[12] This is based on an RTI International analysis of 2009 and 2010 Medicare claims data for outpatient therapy services (see source files HCPCS_UnitsperLine_bySetting_SLP_CY2010.xls, HCPCS_UnitsperLine_bySetting_SLP_CY2009.xls, accompanying this report).

therapy users who were under 65 was larger than the proportion aged 65 to 69. After this point, the percentage of OT and SLP users in each age group rose until OT users peaked at age 85 TO 89 (17.2 percent) and SLP users peaked at 90 years of age and older (19.9 percent). Note that the share of SLP users in age group 85 to 89 was almost as large as that of users age 90 and older. Patients who were age 90 or older were more than twice as common among OT and SLP users as among PT users (7.0 percent). These age patterns are similar to those found by earlier studies (Ciolek and Hwang, 2004, 2006, 2008; Kandilov, Lyda-McDonald, and Drozd, 2009; Lyda-McDonald, Munevar, and Drozd, 2010; Lyda-McDonald, Drozd, and Gage, 2012).

Figure 2
Outpatient therapy user age-group distribution, CY2010



NOTES: OT = occupational therapy; PT = physical therapy; SLP = speech-language pathology.

SOURCE: RTI International analysis of 2010 Medicare claims data for outpatient therapy services (see source file OutpatientTherapyDemographics_CY2010.xls, accompanying this report).

Expenditures per user within age group varied as well, as shown in ***Table 5***. With few exceptions, annual therapy expenditures per user across the three disciplines rose steadily across age groups, beginning at $983 per user for those under age 65 and increasing to $1,713 per user for those age 90 or older. The overall annual therapy expenditures per user were $1,201. The age-related pattern is strictly true for PT, with the minimum annual expenditure per user of $827 for those under 65 and a maximum annual expenditure of $1,161 for those age 90 or older, compared with the mean of $981 for that discipline. The low for OT services was $895 for ages 65 to 69 and the high was $1,169 for age 90 or older, whereas the mean was $1,044.

Expenditures per user for SLP were at a minimum of $775 for those age 65 to 69, a peak of $983 for those 90 or older, and a mean of $905.

Table 5
Outpatient therapy annual per-user expenditures, by age group, CY2010

Age	Number of therapy users	Annual therapy expenditures per user	Annual PT expenditures per PT user	Annual OT expenditures per OT user	Annual SLP expenditures per SLP user
Total	4,697,349	$1,201	$981	$1,044	$905
< 65	653,464	$983	$827	$908	$809
65–69	835,677	$1,008	$916	$895	$775
70–74	843,416	$1,088	$969	$968	$811
75–79	761,183	$1,164	$993	$1,016	$869
80–84	696,926	$1,304	$1,033	$1,096	$939
85–89	535,185	$1,511	$1,100	$1,160	$979
≥ 90	371,507	$1,713	$1,161	$1,169	$983

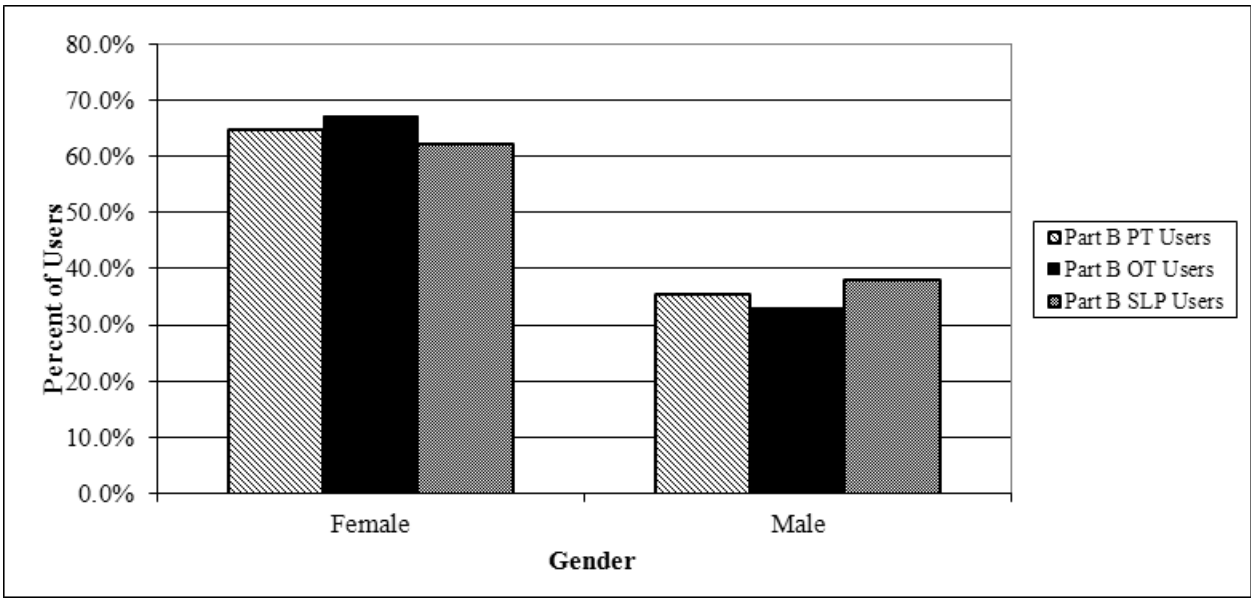
NOTE: OT = occupational therapy; PT = physical therapy; SLP = speech-language pathology.

SOURCE: RTI International analysis of 2010 Medicare claims data for outpatient therapy services (see source file OutpatientTherapyDemographics_CY2010.xls, accompanying this report).

3.3 Outpatient Therapy Utilization by Beneficiary Gender

The majority of outpatient therapy users were women, regardless of discipline, as shown in ***Figure 3***. The proportion of users who are female varies by discipline but is fairly close to two-thirds for all. In CY2010, women made up 64.6 percent of PT users, 67.0 percent of OT users, and 62.2 percent of SLP users. These proportions have not changed notably from prior studies (Ciolek and Hwang, 2004, 2006, 2008; Kandilov, Lyda-McDonald, and Drozd, 2009; Lyda-McDonald, Munevar, and Drozd, 2010; Lyda-McDonald, Drozd, and Gage, 2012).

Figure 3
Outpatient therapy users, by gender and therapy discipline, CY2010



NOTES: OT = occupational therapy; PT = physical therapy; SLP = speech-language pathology.

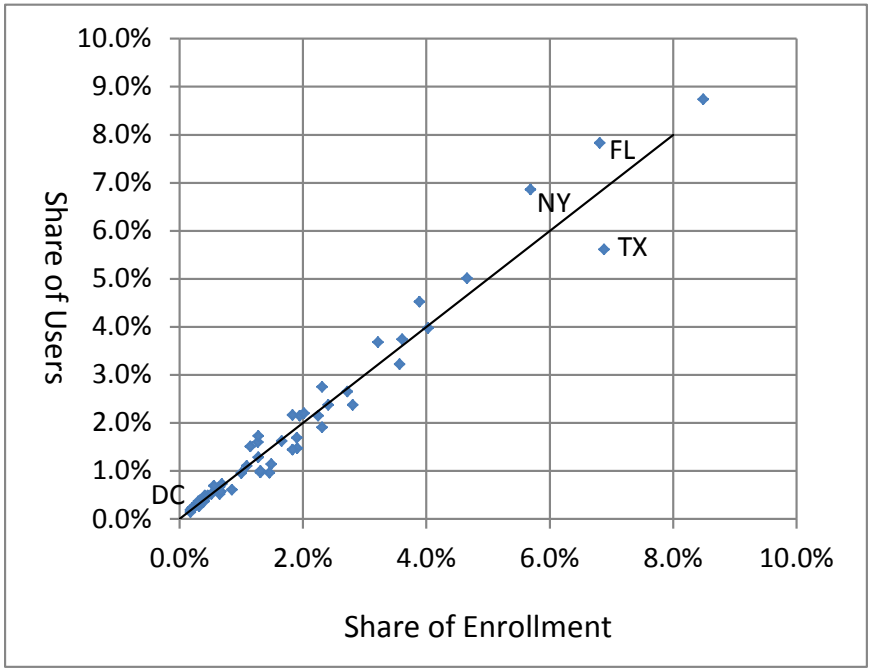
SOURCE: RTI International analysis of 2010 Medicare claims data for outpatient therapy services (see source file OutpatientTherapyDemographics_CY2010.xls, accompanying this report).

3.4 Outpatient Therapy Utilization by State

Outpatient therapy use and spending varied by geographic location. Five States accounted for 34.0 percent of all outpatient therapy users: California led with 8.7 percent of all therapy users, followed by Florida (7.8 percent), New York (6.9 percent), Texas (5.6 percent), and Illinois (5.0 percent). States in which the fewest outpatient therapy users resided were Alaska (0.1 percent); the District of Columbia and Wyoming (0.2 percent each); and Hawaii, North Dakota, South Dakota, and Vermont (0.3 percent each).

Figure 4 graphically compares each State's share of nationwide users of outpatient therapy (vertical axis) with the State's share of Medicare fee-for-service (FFS) enrollment (horizontal axis). States' ratios of the share of therapy users to the share of FFS enrollees are between 0.66 and 1.35. The solid diagonal line indicates equality of the outpatient therapy shares and the FFS enrollee shares. Two States, New York and Florida, have outlier shares of nationwide outpatient therapy users well above their Medicare FFS enrollee shares. Additionally, Texas has an outlier share of nationwide outpatient therapy users well below its Medicare FFS enrollee shares.

Figure 4
Shares of Medicare FFS beneficiaries and users of outpatient therapy, by State, CY2010



NOTES: DC = District of Columbia; FFS = fee for service; FL = Florida; NY = New York; TX = Texas.

SOURCES: RTI International analysis of 2010 Medicare claims data for outpatient therapy services (see source file OutpatientTherapyDemographics_CY2010.xls, accompanying this report); Medicare Data Compendia for 2008, 2009, and 2010 (CMS, 2008, 2009, 2010).

Looking at the mean payments per user by the therapy disciplines, ***Table 6*** shows that the set of States that have the highest and lowest expenditure per user varies by therapy discipline. New York led with an annual expenditure per PT user of $1,339, followed by New Jersey ($1,310), Maryland ($1,179), Louisiana ($1,150), and Pennsylvania ($1,123). The lowest PT expenditures were in North Dakota ($462), Minnesota ($561), Iowa ($625), Montana ($660), and Oregon ($672).

For OT, Mississippi had the highest mean annual expenditure per user at $1,559, followed by Louisiana ($1,547), Texas ($1,396), West Virginia ($1,233), and Kentucky ($1,217). The lowest payments were in North Dakota ($426), followed by Montana ($469), Iowa ($501), Oregon ($537), and Minnesota ($559).

Finally, for SLP, Mississippi also led—with a mean annual expenditure per user of $1,720—again followed by Louisiana ($1,572) and Texas ($1,220), then by Pennsylvania ($1,046) and Rhode Island ($1,032). The lowest mean annual expenditure per SLP user was in Iowa ($473), followed by North Dakota ($486), Arizona ($534), Montana ($543), and Oregon ($544).

Table 6
States with greatest and smallest mean Medicare outpatient therapy payments per user, by discipline, CY2010

Status	PT State	PT mean paid	OT State	OT mean paid	SLP State	SLP mean paid
Most costly	NY	$1,339	MS	$1,559	MS	$1,720
49th	NJ	$1,310	LA	$1,547	LA	$1,572
48th	MD	$1,179	TX	$1,396	TX	$1,220
47th	LA	$1,150	WV	$1,233	PA	$1,046
46th	PA	$1,123	KY	$1,217	RI	$1,032
5th	OR	$672	MN	$559	OR	$544
4th	MT	$660	OR	$537	MT	$543
3rd	IA	$625	IA	$501	AZ	$534
2nd	MN	$561	MT	$469	ND	$486
Least costly	ND	$462	ND	$426	IA	$473

NOTES: OT = occupational therapy; PT = physical therapy; SLP = speech-language pathology.

SOURCE: RTI International analysis of 2010 Medicare claims data for outpatient therapy services (see source file OutpatientTherapyDemographics_CY2010.xls, accompanying this report).

Possible explanations for the difference in mean annual expenditures per user among States include the following:

- the number of providers in each discipline,
- case mix of the State populations,
- differing practice patterns, and
- differing local coverage determination policies.

3.5 Outpatient Therapy Utilization by Provider Setting

In CY2010, there were a total of 44,694 providers of outpatient therapy services. ***Table 7*** outlines the distribution of these providers across different settings and also compares these values with those of previous years. Note that in our previous reports the definition of *provider* differed by file: in the Outpatient file a provider is a facility (hospital, S/NF, CORF, ORF, HHA); and in the Carrier file a provider is an individual therapist, physician, or nonphysician provider in a particular office setting. For this report, across settings, a *provider* was counted as an organizational unit. However, because the discipline-specific distribution of providers in the Carrier file was not available when counting organizational units, the counts of individual therapists, physicians, and nonphysician providers were also included to show counts in a manner consistent with the method of previous years. Between 2004 and 2010, the percentage change in providers of outpatient therapy services has been negative for hospitals (-13.0 percent),

CORFs (-52.4 percent), ORFs (-24.2 percent), HHAs (-35.3 percent), and when counting practitioners in the Carrier file, for physicians (-37.7 percent), and NPPs (-25.4 percent). Settings that have experienced an increase in the number of providers of outpatient therapy services include S/NFs (3.2 percent), physical therapists in private practice (PTPPs; 50.9 percent), and occupational therapists in private practice (OTPPs; 59.5 percent). Private practices (23,106), S/NFs (14,537), and hospitals (4,635) continued to have the largest number of providers in CY2010. The settings comprising the fewest numbers of providers were HHAs (176), followed by CORFs (292).

Table 7
Number of outpatient therapy providers, CY2004–CY2010

Setting	Providers in CY2004	Providers in CY2006	Providers in CY2008	Providers in CY2010	Percent change, CY2004–2010
Total[1]	93,459	96,917	100,782	44,694	N/A
Hospital	5,326	4,958	4,950	4,635	-13.0%
S/NF	14,088	14,267	14,381	14,537	3.2%
CORF	613	553	409	292	-52.4%
ORF	2,569	2,509	2,215	1,948	-24.2%
HHA	272	275	199	176	-35.3%
Private practice[1]	N/A	N/A	N/A	23,106	N/A
PTPP[2]	33,704	41,980	47,157	50,850	50.9%
OTPP[2]	3,790	4,824	5,618	6,044	59.5%
SLPPP[2]	N/A	N/A	N/A	986	N/A
Physician[2, 3]	32,205	26,783	25,082	20,061	-37.7%
NPP[2]	892	768	771	665	-25.4%

[1]In previous years, this count included the counts of individually practicing therapists in the Carrier file, based on the individual PIN. For CY2010, this count represents the total number of organizational units in which therapy was provided, based on the Tax Identification Number. As such, it was also not possible to show a percentage change from previous years.
[2]These providers are found in the Carrier file, which counts the number of providers as the number of individual therapists, physicians, or nonphysician providers in an office setting, not the numbers of facilities offering these services.
[3]Prior to CY2009, SLPs were not able to bill independently, and it was not possible to establish this count. In previous years, SLPs were required to submit claims through another type of provider, which would have been classified as one of the other four categories listed.

NOTES: N/A = not applicable; CORF = Comprehensive Outpatient Rehabilitation Facility; HHA = Home Health Agency; NPP = Nonphysician practitioner; ORF = Outpatient Rehabilitation Facility; OTPP = occupational therapist in private practice; PTPP = physical therapist in private practice; SLPPP = speech-language pathologist in private practice; S/NF = (skilled) nursing facility.

SOURCES: RTI International analysis of 2010 Medicare claims data for outpatient therapy services (see source file NumberOutpatientTherapyProviders_CY2010.xls, accompanying this report); Lyda-McDonald, Drozd, and Gage (2011), and Ciolek and Hwang (2006).

Table 8 presents the amount paid for outpatient therapy and number of claim lines based on setting. Overall, the average paid per line has increased by 6.3 percent ($33.00 in CY2009) (Lyda-McDonald, Drozd, and Gage, 2012). S/NFs received the largest percentage of paid

dollars (35.5 percent) and had the fourth-highest amount paid per line ($36.55). Hospitals received the third-largest amount per line ($39.10) but accounted for only 16.2 percent of all paid dollars. NPPs had the lowest amount paid per line ($25.11) and accounted for less than 0.1 percent of paid dollars. The average amount paid per claim line in SLPPPs was nearly double the average paid per claim line in most other settings ($68.44). This is because SLP services have a higher fee attached to them by Medicare. The differences in payments per claim line are driven by the mix of services provided across the different settings.

Table 8
Outpatient therapy Medicare expenditures and average paid per line item, by setting or type of private practitioner, CY2010

Setting	Claim lines	Paid	Percent of paid dollars	Average paid per line
All	160,996,903	$5,651,061,015	100.0%	$35.07
Hospital	23,444,018	$916,716,222	16.2%	$39.10
S/NF	54,885,404	$2,006,152,654	35.5%	$36.55
CORF	1,541,951	$52,952,613	0.9%	$34.34
ORF	16,576,797	$575,316,264	10.2%	$34.71
HHA	168,023	$6,681,442	0.1%	$39.77
PTPP	52,389,661	$1,712,123,317	30.3%	$32.68
OTPP	3,528,735	$127,214,770	2.3%	$36.05
SLPPP	124,622	$8,528,728	0.2%	$68.44
Physician	8,273,974	$243,775,317	4.3%	$29.46
NPP	63,718	$1,599,689	0.0%	$25.11

NOTES: CORF = Comprehensive Outpatient Rehabilitation Facility; HHA = Home Health Agency; NPP = Nonphysician practitioner; ORF = Outpatient Rehabilitation Facility; OTPP = occupational therapist in private practice; PTPP = physical therapist in private practice; SLPPP = speech-language pathologist in private practice; S/NF = (skilled) nursing facility.

SOURCE: RTI International analysis of 2010 Medicare claims data for outpatient therapy services (see source file HCPCS_UtilizationSummary_by Setting_all_CY2010.xls, accompanying this report).

Total annual expenditures in each setting varied primarily as a result of the number of claim lines and the amount paid by Medicare for each billed service. Claim lines identify the procedures billed for the patient and are a measure of the volume of therapy services provided for Medicare beneficiaries. The total number of claim lines for all settings in CY2010 was 160,996,903. The setting with the most outpatient therapy claim lines was S/NF (54,885,404), followed by PTPPs (52,389,661) and hospitals (23,444,018). The lowest numbers of outpatient therapy claim lines were in NPPs (63,718) and SLPPPs (124,622). Compared with 2009, overall there was a 1.6 percent decrease in total claim lines (data not shown). CORFs and ORFs, physicians, and NPPs had a decrease in the number of claim lines. Among the settings with an increased number of claim lines, the percentage increase in claim lines was 3.3 percent at hospitals, 3.7 percent at PTPPs, 1.0 percent at S/NFs, 84.0 percent at HHAs, 13.8 percent at OTPP (full-year 2009 claim line counts for SLPPP are not available).

Table 9 presents selected demographics of the outpatient therapy population by setting along with mean and median allowed charges and paid amounts. An allowed charge is the total amount that the provider will be paid under Medicare fee schedules. The paid amount is the amount of the allowed charge less the coinsurance that the patient pays and is, therefore, the amount paid to the provider directly by Medicare for those services. Of the therapy settings, PTPPs had the most Part B therapy users with 1,713,764, followed by hospitals (1,548,129) and S/NFs (869,685). The lowest numbers of users were in HHAs (4,665), NPPs (5,646), and SLPPPs (11,469). Females were the largest percentage of users in each outpatient therapy setting, with the highest percentage in S/NFs (69.7 percent). The mean age of users varied from 71 years to 82 years depending on the provider setting. NPPs had the lowest mean age of 71 and S/NFs had the highest mean age of 82 The mean payment per outpatient therapy user for institutional providers was $1,220 (data not shown). Among institutional providers, S/NFs had the highest mean payments per user with $2,307, compared with the mean payment across all providers of $1,201. The lowest mean payment per user among institutional providers was hospitals at $592. The mean payment for all noninstitutional individual private practitioners was $995 (data not shown). Of the noninstitutional individual private practitioners, PTPPs had the highest mean payments ($999) and NPPs the lowest ($283). The mean allowed charge was $1,590 for institutional providers and $1,264 for noninstitutional individual private practitioners (data not shown). Consistent with the mean paid amounts, S/NFs had the highest mean allowed at $2,895, whereas NPPs had the lowest at $360.

Table 9
Demographic characteristics and mean payment amounts for outpatient therapy users, by setting or type of private practitioner, CY2010

Setting	Part B therapy users	Percent female	Percent male	Mean age	Median age	Mean paid per user	Mean allowed	Median paid	Median allowed
Total	4,697,349	64.6%	35.4%	74	75	$1,201	$1,516	$655	$832
Hospital	1,548,129	63.2%	36.8%	72	73	$592	$746	$327	$414
S/NF	869,685	69.7%	30.3%	82	84	$2,307	$2,895	$1,326	$1,668
CORF	39,415	62.5%	37.5%	73	74	$1,343	$1,697	$888	$1,124
ORF	454,530	64.7%	35.3%	74	74	$1,266	$1,593	$767	$968
HHA	4,665	68.2%	31.8%	80	82	$1,432	$1,796	$493	$621
PTPP	1,713,764	63.9%	36.1%	73	73	$999	$1,269	$690	$881
OTPP	142,783	65.6%	34.4%	73	74	$891	$1,127	$448	$572

(continued)

Table 9 (continued)
Demographic characteristics and mean payment amounts for outpatient therapy users, by setting or type of private practitioner, CY2010

Setting	Part B therapy users	Percent female	Percent male	Mean age	Median age	Mean paid per user	Mean allowed	Median paid	Median allowed
SLPPP	11,469	52.0%	48.0%	72	74	$744	$938	$245	$312
Physician	356,038	63.2%	36.8%	72	72	$661	$838	$316	$408
NPP	5,646	66.4%	33.6%	71	72	$283	$360	$93	$121

NOTE: CORF = Comprehensive Outpatient Rehabilitation Facility; HHA = Home Health Agency; NPP = Nonphysician practitioner; ORF = Outpatient Rehabilitation Facility; OTPP = occupational therapist in private practice; PTPP = physical therapist in private practice; SLPPP = speech-language pathologist in private practice; S/NF = (skilled) nursing facility.

SOURCE: RTI International analysis of 2010 Medicare claims data for outpatient therapy services (see source file OutpatientTherapyDemographics_bySetting_CY2010.xls, accompanying this report).

3.6 Outpatient Therapy Utilization by Therapy Discipline and Provider Setting

Table 10 describes the universe of providers of outpatient therapy services covered by Medicare Part B in 2010. During that year, a total of 44,694 providers were reimbursed for Part B fee-for-service treatments. The largest group of providers comprised private practices, with a total of 23,106 providing some form of therapy services. The majority of these practices (21,507) provided PT. Only 3,356 of private practices identified as providers of outpatient therapy had at least one claim for OT, and 837 practices had at least one claim for SLP. The second-largest provider of Part B therapy services was S/NFs. A total of 14,537 of these facilities had at least one Medicare Part B therapy claim in CY2010, and of these nearly all had a claim in each of the three disciplines.[13]

A total of 4,635 hospital outpatient departments (HOPD) had at least one claim for therapy services covered under Medicare Part B in CY2010. Of these, nearly all submitted at least one claim for PT; 3,867 submitted at least one claim for OT; and 3,665 had at least one claim for SLP. In addition, 292 CORFs; 1,948 ORFs; and 176 HHAs had at least one claim for therapy services covered under Medicare Part B. Of these, nearly all had at least one claim for PT services (289, CORF; 1,893, ORF; and 157, HHA). Approximately half of the ORFs and HHAs identified had a claim for OT, and a slightly larger proportion of CORFs (184) had at least one claim for OT. Approximately one-quarter of the CORFs and ORFs, and a third of HHAs identified had at least one claim for SLP. Nearly all of the providers identified had at least one claim for either PT or SLP.

[13] Some S/NFs exist in Continuum of Care Communities that also provide rehabilitation services for independent living and Assisted Living Facility (ALF) patients. The services for ALF patients may be billed through the S/NF NPI. Therefore, some of these less-complex patients are reflected in values presented for S/NFs.

Table 10
Total number of providers, by discipline and setting, CY2010

Provider type[1]	Total provider count	Providers with a PT claim	Providers with an OT claim	Providers with an SLP claim	Providers with PT or SLP claims[2]
Total	44,694	42,887	22,789	19,068	43,475
HOPD	4,635	4,531	3,867	3,665	4,573
S/NF	14,537	14,510	14,318	13,924	14,527
CORF	292	289	184	77	291
ORF	1,948	1,893	957	510	1,932
HHA	176	157	107	55	161
PP	23,106	21,507	3,356	837	21,991
PTPP[3]	50,850	50,850	N/A	N/A	50,850
OTPP[3]	6,044	N/A	6,044	N/A	N/A
SLPPP[3]	986	N/A	N/A	986	986
NPP[3]	665	616	51	28	637
Physician[3]	20,061	18,190	2,864	1,156	19,151

[1]Providers in this table were identified from both the carrier and outpatient files for CY2010. Providers in the outpatient file were identified by the CMS Certification Number (CCN), and providers in the carrier file were identified using their Tax Identification Number.
[2]The total number of providers identified with PT or SLP claims does not equal the sum of the provider counts for PT and SLP, because some providers may perform both PT and SLP.
[3]These providers are found in the carrier file and are identified by unique values of the individual PIN. Consequently, these values are counts of individually practicing therapists in private practices and other professional settings, and will exceed the total count of private practice settings.

NOTES: N/A = not applicable; CORF = Comprehensive Outpatient Rehabilitation Facility; HHA = Home Health Agency; HOPD = Hospital Outpatient Department; NPP = Nonphysician practitioner; ORF = Outpatient Rehabilitation Facility; OT = occupational therapy; OTPP = occupational therapist in private practice; PP = private practice; PT = physical therapy; PTPP = physical therapist in private practice; SLP = speech-language pathology; SLPP = speech-language pathologist in private practice; and S/NF = (skilled) nursing facility.

SOURCE: RTI International analysis of 2010 Medicare claims data for outpatient therapy services (see source file OutpatientTherapyCapAnalysis_CY2010.xls, accompanying this report).

As shown in ***Table 11***, overall PT accounted for 72.3 percent of Medicare therapy payments, whereas OT accounted for 19.3 percent, and the remaining 8.4 percent of payments were for SLP services. All three types of therapy (PT, OT, and SLP) were provided in almost all of the nine outpatient therapy settings. The primary exceptions were PTPP, OTPP, and SLPPP, which provided only PT, OT, and SLP services, respectively. However, the relative expenditures for services in each therapy discipline varied across the different settings. PT procedures were responsible for nearly three-quarters (72.3 percent) of payments across all settings with the exception of S/NFs, where PT procedures accounted for less than half of all payments, and OTPPs and SLPPPs, which by definition do not have any PT procedures. Other than SLPPP, S/NFs had the largest share of their payments for SLP (18.7 percent), followed by HHAs (8.1 percent) and hospitals (6.9 percent). Other than OTPPs, S/NFs and HHAs had the largest share of their payments for OT services: 35.0 percent and 33.3 percent, respectively.

Table 11
Outpatient therapy expenditures, by setting or type of private practitioner and therapy discipline, CY2010

Setting	PT paid	OT paid	SLP paid	Percent PT	Percent OT	Percent SLP
All	$4,077,054,835	$1,089,114,561	$476,385,122	72.3%	19.3%	8.4%
Hospital	$725,257,548	$128,582,417	$62,876,257	79.1%	14.0%	6.9%
S/NF	$929,562,220	$701,393,722	$375,196,712	46.3%	35.0%	18.7%
CORF	$40,260,223	$11,784,227	$908,163	76.0%	22.3%	1.7%
ORF	$445,440,844	$103,986,530	$25,888,890	77.4%	18.1%	4.5%
HHA	$3,916,357	$2,225,072	$540,013	58.6%	33.3%	8.1%
PTPP	$1,712,123,317	N/A	N/A	100.0%	N/A	N/A
OTPP	N/A	$127,214,770	N/A	N/A	100.0%	N/A
SLPPP	N/A	N/A	$8,528,728	N/A	N/A	100.0%
Physician	$218,970,304	$13,861,949	$2,436,567	93.1%	5.9%	1.0%
NPP	$1,524,022	$65,875	$9,792	95.3%	4.1%	0.6%

NOTES: CORF = Comprehensive Outpatient Rehabilitation Facility; HHA = Home Health Agency; N/A = not applicable; NPP = Nonphysician practitioner; ORF = Outpatient Rehabilitation Facility; OT = occupational therapy; OTPP = occupational therapist in private practice; PP = private practice; PT = physical therapy; PTPP = physical therapist in private practice; SLP = speech-language pathology; SLPP = speech-language pathologist in private practice; and S/NF = (skilled) nursing facility.

SOURCES: RTI International analysis of 2010 Medicare claims data for outpatient therapy services (see source files HCPCS_UnitsperLine_bySetting_PT_CY2010.xls; HCPCS_UnitsperLine_bySetting_OT_CY2010.xls; HCPCS_UnitsperLine_bySetting_SLP_CY2010.xls, accompanying this report).

Between CY2006 and CY2010, changes in discipline-specific therapy expenditures have varied considerably by setting. ***Tables 12*** through ***14*** show the changes between CY2004 and CY2010. Overall, PT expenditures grew by 32.5 percent during this time period (***Table 12***). Between CY2006 and CY2010 nearly all settings showed increases except for CORFs and physicians, which saw a 47.3 and 18.7 percent decrease, respectively, in expenditures. The settings that experienced the largest change in PT expenditures between CY2006 and CY2010 were HHAs, S/NFs, and PTPPs, with a growth of 111.6 percent, 60.5 percent, and 55.8 percent, respectively. By contrast, overall expenditures between CY2009 and CY2010 increased by only 3.5 percent, and across settings the changes were very different from the changes between CY2006 and CY2010. CORF expenditures for PT decreased by 48.2 percent between CY2009 and CY2010. The large decrease observed from CY2006 to CY2010 occurred in the final year of that period because this setting showed a slight increase in PT expenditures prior to CY2010. A similar strong, single-year impact on the trend was observed for the increase in HHA expenditures, with 83.4 percent of the 111.6 percent increase in PT expenditures from CY2006 to CY2010 occurring in the last year. In contrast, however, only 4.1 percent of the 60.5 percent increase observed in S/NF settings occurred in the final year of this period. NPPs also saw a large decrease in the last year of this period as compared with the other years; however, some of this may be due to the reclassification of SLPPPs previously noted. All PT settings saw decreases in expenditures from CY2004 to CY2006, with the exception of PTPP, which increased by 12.7 percent. HHAs, physicians, NPPs, and CORFs saw the largest decreases in

expenditures for PT in this period (39.2 percent, 31.3 percent, 30.0 percent, and 25.8 percent, respectively).

Table 12
Trends in physical therapy expenditures, by setting or type of private practitioner, CY2004–CY2010

Setting	PT paid, CY2004	PT paid, CY2006	PT paid CY2009	PT paid, CY2010	Percent change, CY2004–CY2006	Percent change, CY2006–CY2010	Percent change, CY2009-CY2010
All	$3,227,862,000	$3,076,614,353	$3,941,005,259	$4,077,032,005	-4.7%	32.5%	3.5%
Hospital	$664,040,010	$635,151,954	$666,639,714	$725,257,548	-4.4%	14.2%	8.8%
S/NF	$604,092,321	$579,089,975	$893,164,196	$929,562,220	-4.1%	60.5%	4.1%
CORF	$103,500,229	$76,781,300	$77,652,313	$40,260,223	-25.8%	-47.3%	-48.2%
ORF	$484,110,518	$414,448,408	$458,285,052	$445,440,844	-14.4%	7.5%	-2.8%
HHA	$3,045,456	$1,851,195	$2,135,005	$3,916,357	-39.2%	111.6%	83.4%
PTPP	$974,672,085	$1,098,617,569	$1,589,511,878	$1,712,123,317	12.7%	55.8%	7.7%
OTPP	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SLPPP	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Physician	$391,858,977	$269,217,333	$250,416,844	$218,970,304	-31.3%	-18.7%	-12.6%
NPP	$2,080,067	$1,456,619	$3,200,554	$1,524,022	-30.0%	4.6%	-52.4%

NOTES: CORF = Comprehensive Outpatient Rehabilitation Facility; HHA = Home Health Agency; N/A = not applicable; NPP = Nonphysician practitioner; ORF = Outpatient Rehabilitation Facility; OTPP = occupational therapist in private practice; PT = physical therapy; PTPP = physical therapist in private practice; SLPP = speech-language pathologist in private practice; and S/NF = (skilled) nursing facility.

SOURCE: RTI International analysis of 2010 Medicare claims data for outpatient therapy services (see source files HCPCS_UnitsperLine_bySetting_PT_CY2010.xls, HCPCS_UnitsperLine_bySetting_PT_CY2009.xls, accompanying this report); Ciolek and Hwang (2006, 2008).

Table 13
Trends in occupational therapy expenditures, by setting or type of private practitioner, CY2004–CY2010

Setting	OT paid, CY2004	OT paid, CY2006	OT paid, CY2009	OT paid, CY2010	Percent change, CY2004–CY2006	Percent change, CY2006–CY2010	Percent change, CY2009-CY2010
All	$770,874,142	$756,123,540	$1,080,240,890	$1,089,114,561	-1.9%	44.0%	0.8%
Hospital	$122,855,080	$117,457,244	$120,210,377	$128,582,417	-4.4%	9.5%	7.0%
S/NF	$430,765,862	$426,034,820	$669,153,946	$701,393,722	-1.1%	64.6%	4.9%
CORF	$49,580,588	$44,070,919	$44,918,002	$11,784,227	-11.1%	-73.3%	-73.8%
ORF	$89,860,719	$80,704,272	$122,319,558	$103,986,530	-10.2%	28.9%	-15.0%
HHA	$733,834	$361,992	$892,897	$2,225,072	-50.7%	514.7%	149.2%
PTPP	N/A	N/A	N/A	N/A	N/A	N/A	N/A
OTPP	$63,843,109	$70,664,810	$108,817,893	$127,214,770	10.7%	80.0%	16.9%
SLPPP	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Physician	$13,101,463	$16,752,037	$13,855,154	$13,861,949	27.9%	-17.3%	0.1%
NPP	$133,488	$77,446	$73,064	$65,875	-42.0%	-14.9%	-9.8%

NOTES: CORF = Comprehensive Outpatient Rehabilitation Facility; HHA = Home Health Agency; N/A = not applicable; NPP = Nonphysician practitioner; ORF = Outpatient Rehabilitation Facility; OT = occupational therapy; OTPP = occupational therapist in private practice; PTPP = physical therapist in private practice; SLPP = speech-language pathologist in private practice; and S/NF = (skilled) nursing facility.

SOURCE: RTI International analysis of 2010 Medicare claims data for outpatient therapy services (see source files HCPCS_UnitsperLine_bySetting_OT_CY2010.xls, HCPCS_UnitsperLine_bySetting_OT_CY2009.xls, accompanying this report); Ciolek and Hwang (2006, 2008).

Overall, OT expenditures grew 44.0 percent from CY2006 to CY2010 (***Table 13***). HHAs saw the most significant growth (514.7 percent) during this time period. When comparing OT expenditures from CY2004 to CY2006 and CY2006 to CY2010, there are several examples of growth in certain settings moving from a decrease to an increase or vice versa. For example, there was a decrease in expenditures for ORFs from CY2004 to CY2006 (-10.2 percent), but an increase from CY2006 to CY2010 (28.9 percent). Alternatively, in physician practices there was an increase in expenditures of 27.9 percent from CY2004 to CY2006, but a decrease of 17.3 percent from CY2006 to 2010. The largest contrast is in HHAs, where there was a 50.7 percent decrease in expenditures from CY2004 to CY2006, but an increase of 514.7 percent from CY2006 to CY2010. As with PT, the increase in total OT expenditures from CY2009 to CY2010 was very small when compared with the overall increase from CY2006 to CY2010 (0.8 percent vs. 44 percent, respectively). The changes also varied across settings, though most OT expenditure changes between CY2009 and CY2010, and between CY2006 and CY2010 appeared proportionally similar. Of note is that OT expenditures in CORFs decreased by 73.8 percent between CY2009 and CY2010, and 73.3 percent between CY2006 and CY2010. This indicates that, as with PT, OT expenditures in CORFs showed nearly all of the decrease between CY2006 and CY2010 in the final year of that period, and actually showed a slight increase in the years prior. In addition, ORF expenditures for OT showed an increase overall in that period (28.9 percent) but then a marked decrease from CY2009 to CY2010 (15.0 percent).

Overall, SLP expenditures grew by 74.4 percent from CY2006 to CY2010 (Table 14). SLP settings had a few variations similar to trends for OT expenditures from CY2006 through CY2010. HHAs had the biggest increase in expenditures from CY2006 to CY2010 (226.2 percent), but a decrease of 67.5 percent from CY2004 to CY2006. Hospitals had an increase in expenditures from CY2006 to CY2010 (14.6 percent) similar to the increase they had from CY2004 to CY2006 (5.6 percent). From CY2009 to CY2010, SLP showed a much greater increase in expenditures overall when compared with PT and OT (25.9 percent). SLP also showed a much greater increase overall when compared with previous years than PT and OT. Some of this increase, however, may be a result of the reclassification of SLP services previously discussed in Section 3.1. As with PT, the decrease in SLP expenditures in CORFs appeared to occur largely in the last year of the period between CY2006 and CY2010, and expenditures in HHAs actually showed a decrease for the first 3 years of that period followed by a sharp increase that led to an overall increase of 226.2 percent. It is not clear exactly what caused this sharp increase; however, a correlation may exist with the decreases observed in other settings.

Table 14
Trends in speech-language pathology expenditures, by setting or type of private practitioner, CY2004–CY2010

Setting	SLP paid, CY2004	SLP paid, CY2006	SLP paid, CY2009	SLP paid, CY2010	Percent change, CY2004–CY2006	Percent change, CY2006–CY2010	Percent change, CY2009-CY2010
All	$274,637,075	$273,169,678	$378,357,269	$476,385,122	-0.5%	74.4%	25.9%
Hospital	$51,943,327	$54,862,372	$52,333,020	$62,876,257	5.6%	14.6%	20.1%
S/NF	$202,714,913	$203,063,791	$300,992,906	$375,196,712	0.2%	84.8%	24.7%
CORF	$2,757,804	$1,623,672	$1,447,452	$908,163	-41.1%	-44.1%	-37.3%
ORF	$13,551,668	$10,517,994	$18,857,271	$25,888,890	-22.4%	146.1%	37.3%
HHA	$509,861	$165,568	$161,741	$540,013	-67.5%	226.2%	233.9%
PTPP	N/A	N/A	N/A	N/A	N/A	N/A	N/A
OTPP	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SLPPP[1]	N/A	N/A	N/A	$8,528,728	N/A	N/A	N/A
Physician	$3,151,455	$2,921,661	$4,543,294	$2,436,567	-7.3%	-16.6%	-46.4%
NPP	$8,048	$14,620	$21,576	$9,792	81.7%	-33.0%	-54.6%

[1] As of CY2009, SLPs were allowed to bill independently of other practitioners. Consequently, historical trends for SLPPP were not available because the category SLPPP did not exist prior to CY2009.

NOTES: CORF = Comprehensive Outpatient Rehabilitation Facility; HHA = Home Health Agency; N/A = not applicable; NPP = Nonphysician practitioner; ORF = Outpatient Rehabilitation Facility; OTPP = occupational therapist in private practice; PTPP = physical therapist in private practice; SLP = speech-language pathology; SLPP = speech-language pathologist in private practice; and S/NF = (skilled) nursing facility.

SOURCES: RTI International analysis of 2010 Medicare claims data for outpatient therapy services (see source files HCPCS_UnitsperLine_bySetting_SLP_CY2010.xls, HCPCS_UnitsperLine_bySetting_SLP_CY2009.xls, accompanying this report); Ciolek and Hwang (2006, 2008).

As shown in ***Tables 15*** and ***16***, the majority of Medicare beneficiaries in CY2010 received PT services, and most Medicare beneficiaries were receiving outpatient therapy from

only one discipline in the year. A total of 4,697,349 beneficiaries had at least one claim for therapy services in CY2010. The majority of these users received therapy from HOPDs and private practices (1,548,129 and 2,094,442, respectively). Excluding PTPP settings (in which all beneficiaries received only PT services), more than 80.0 percent of patients (with the exception of those in S/NFs) had at least one claim for PT. In the entire population of outpatient therapy users, 82.3 percent were receiving services from only one therapy discipline in CY2010 (most of these received PT), but 17.8 percent were receiving services from two or more disciplines. Not surprisingly, S/NF and HHA patients were the most likely to have received services from more than a single therapy discipline (53.8 percent and 26.9 percent, respectively).

Table 15
Total number of beneficiaries receiving Medicare Part B therapy services

Setting	Total patient count	Number of patients with claims for PT services	Number of patients with claims for OT services	Number of patients with claims for SLP services	Number of patients with claims for PT and/or SLP services
Total	4,697,349	4,156,895	1,043,011	526,628	4,400,976
HOPD	1,548,129	1,304,185	303,284	184,835	1,431,405
S/NF	869,685	651,968	510,882	316,244	780,788
CORF	39,415	36,846	10,879	1,080	37,389
ORF	454,530	423,813	76,001	21,290	430,987
HHA	4,665	4,073	1,608	496	4,239
PP	2,094,442	1,976,833	170,693	20,605	1,991,738
PTPP	1,713,764	1,713,764	N/A	N/A	1,713,764
OTPP	142,783	N/A	142,783	N/A	N/A
SLPPP	11,469	N/A	N/A	11,469	11,469
NPP	5,646	5,358	244	80	5,433
Physician	356,038	324,354	31,176	10,045	333,873

NOTES: CORF = Comprehensive Outpatient Rehabilitation Facility; HHA = Home Health Agency; HOPD = Hospital Outpatient Department; N/A = not applicable; NPP = Nonphysician practitioner; ORF = Outpatient Rehabilitation Facility; OT = occupational therapy; OTPP = occupational therapist in private practice; PP = private practice; PT = physical therapy; PTPP = physical therapist in private practice; SLP = speech-language pathology; SLPP = speech-language pathologist in private practice; and S/NF = (skilled) nursing facility.

SOURCE: RTI International analysis of 2010 Medicare claims data for outpatient therapy services (see source file OutpatientTherapyDemographics_TherapiesbySetting_CY2010.xls, accompanying this report).

Table 16
Provision of services by multiple therapy disciplines per setting, by setting or type of private practitioner, CY2010

Setting	Number of outpatient therapy users	Percent receiving PT only	Percent receiving OT only	Percent receiving SLP only	Percent receiving services from two disciplines	Percent receiving services from all three disciplines
Total	4,697,349	71.7%	6.3%	4.3%	13.7%	4.1%
Hospital	1,548,129	71.0%	7.5%	7.9%	11.4%	2.2%
S/NF	869,685	25.5%	10.2%	10.5%	37.5%	16.3%
CORF	39,415	70.7%	5.1%	1.2%	22.1%	0.8%
ORF	454,530	81.4%	5.2%	1.3%	9.8%	2.4%
HHA	4,665	61.1%	9.1%	2.9%	21.4%	5.5%
PTPP	1,713,764	100.0%	0.0%	0.0%	0.0%	0.0%
OTPP	142,783	0.0%	100.0%	0.0%	0.0%	0.0%
SLPPP	11,469	0.0%	0.0%	100.0%	0.0%	0.0%
Physician	356,038	88.5%	6.2%	2.7%	2.7%	0.0%
NPP	5,646	94.4%	3.8%	1.3%	0.5%	0.1%

NOTES: CORF = Comprehensive Outpatient Rehabilitation Facility; HHA = Home Health Agency; NPP = Nonphysician practitioner; ORF = Outpatient Rehabilitation Facility; OT = occupational therapy; OTPP = occupational therapist in private practice; PT = physical therapy; PTPP = physical therapist in private practice; SLP = speech-language pathology; SLPP = speech-language pathologist in private practice; and S/NF = (skilled) nursing facility. Counts of beneficiaries across settings will not sum to the total since a single beneficiary may have received therapy in more than one type of setting during the year.

SOURCE: RTI International analysis of 2010 Medicare claims data for outpatient therapy services (see source file OutpatientTherapyDemographics_TherapiesbySetting_CY2010.xls, accompanying this report).

Table 17 shows that a total of 75,333,602 visits for therapy services were covered under Medicare Part B in CY2010. For the purposes of this report, a visit for therapy services is identified as a single calendar day in which a beneficiary receives therapy services from a single discipline under Medicare Part B. A therapy visit is calculated by identifying claims for each of the three therapy disciplines for a unique combination of the beneficiary's Health Insurance Claim Number (HICN) and the date of service recorded on the claim. Setting-specific therapy visits were calculated by identifying claims with unique combinations of HICN, date of service, and setting type. If a beneficiary receives multiple therapy disciplines in a single day, this is counted as multiple visits in the overall total. For setting-specific therapy visits, if a beneficiary receives therapy in two or more settings on the same day, each setting would be counted as a separate visit. Of the 75,333,602 visits for therapy services billed under Medicare Part B, 55,119,849 were for PT; 14,397,612 were for OT; and 5,816,141 were for SLP.

The distribution of these visits across disciplines and settings is generally proportionate to the total number of beneficiaries in Table 15. An exception to this pattern is S/NFs, with a total of 36.1 percent (percentages are included in the accompanying workbook) of all therapy visits (27,220,784 visits out of a total of 75,333,602 visits in CY2010), contrasted with S/NFs seeing only 18.5 percent of beneficiaries (869,685 beneficiaries out of a total 4,697,349). Private practices and HOPDs represent a smaller proportion of total therapy visits than total beneficiaries. Hospital outpatient departments had a total of 14,040,354 visits (18.6 percent), but

account for 32.9 percent of beneficiaries; and private practices overall had a total of 26,342,136 visits (35.0 percent), but account for 44.6 percent of beneficiaries. Among private practices, beneficiaries receiving therapy from PTPPs generally require a greater number of visits than those in other settings. PTPPs provided therapy to 76.9 percent of the beneficiaries receiving therapy in private practices, but account for 82.0 percent of the visits provided in private practices. In contrast, beneficiaries receiving therapy in physician offices represent 16.0 percent of those receiving therapy in private practices, but account for only 12.0 percent of the visits. Other private practice settings also show a higher percentage of patients than visits as a subset of all private practices.

Table 17
Total number of visits for therapy services, by discipline and setting, CY2010

Provider type	Total visit count	Number of visits for PT services	Number of visits for OT services	Number of visits for SLP services	Number of visits for PT and SLP services[1]
Total	75,333,602	55,119,849	14,397,612	5,816,141	60,935,990
HOPD	14,040,354	11,393,398	1,828,485	818,471	12,211,869
S/NF	27,220,784	13,097,940	9,596,281	4,526,563	17,624,503
CORF	574,980	447,847	116,609	10,524	458,371
ORF	7,079,092	5,570,602	1,179,818	328,672	5,899,274
HHA	76,256	45,936	23,344	6,976	52,912
PP (Total)	26,342,136	24,564,126	1,653,075	124,935	24,689,061
PTPP	21,596,531	21,596,531	N/A	N/A	21,596,531
OTPP	1,462,024	N/A	1,462,024	N/A	N/A
SLPPP	95,903	N/A	N/A	95,903	95,903
NPP	29,187	27,758	1,278	151	27,909
Physician	3,158,491	2,939,837	189,773	28,881	2,968,718

[1]This column represents the sum of visits for PT and SLP services.

NOTES: CORF = Comprehensive Outpatient Rehabilitation Facility; HHA = Home Health Agency; HOPD = Hospital Outpatient Department; N/A = not applicable; NPP = nonphysician practitioner; ORF = Outpatient Rehabilitation Facility; OT = occupational therapy; OTPP = occupational therapist in private practice; PP = private practice; PT = physical therapy; PTPP = physical therapist in private practice; SLP = speech-language pathology; SLPP = speech-language pathologist in private practice; and S/NF = (skilled) nursing facility.

SOURCE: RTI International analysis of 2010 Medicare claims data for outpatient therapy services (see source file OutpatientTherapyCapAnalysis_CY2010.xls, accompanying this report).

Medicare Part B therapy patients received services on average over a total of 16.0 visits, as shown in ***Table 18***. The value, however, varies considerably across settings and disciplines. The mean number of therapy visits per beneficiary provided by S/NFs was 31.3 visits. This is more than three times as many visits as were provided on average to beneficiaries by HOPDs (9.1), and nearly 2.5 times as many as the mean number of visits for beneficiaries by private practices (12.6 overall). When comparing the three disciplines over all settings, OT generally involved the greatest number of visits per beneficiary (13.8). In the majority of settings,

however, PT accounted for the greatest number of visits per beneficiary (12.4 in private practices, 8.7 in HOPDs, 20.1 in S/NFs, and 12.2 in CORFs). SLP generally accounted for the smallest number of visits per beneficiary (11.0 across all settings), with the exception of ORFs and HHAs (15.4 and14.1 SLP visits per beneficiary, respectively) where PT accounted for the lowest mean number of visits per beneficiary (13.1 and 11.3, respectively). When looking at the combination of PT and SLP, we see that beneficiaries generally received 13.8 visits each in CY2010. Across settings, these values were generally just slightly higher than the number of PT visits per beneficiary in each setting. As with other individual disciplines, the mean number of visits per beneficiary was greatest in S/NFs (22.6), ORFs (13.7), and HHAs (12.5).

Table 18
Mean number of visits per beneficiary, by discipline and setting, CY2010

Setting	Total beneficiary count	Mean number of visits per beneficiary	Mean number of PT visits per beneficiary	Mean number of OT visits per beneficiary	Mean number of SLP visits per beneficiary	Mean number of PT/SLP visits per beneficiary[1]
Total	4,697,349	16.0	13.3	13.8	11.0	13.8
HOPD	1,548,129	9.1	8.7	6.0	4.4	8.5
S/NF	869,685	31.3	20.1	18.8	14.3	22.6
CORF	39,415	14.6	12.2	10.7	9.7	12.3
ORF	454,530	15.6	13.1	15.5	15.4	13.7
HHA	4,665	16.3	11.3	14.5	14.1	12.5
PP	2,094,442	12.6	12.4	9.7	6.1	12.4
PTPP	1,713,764	12.6	12.6	N/A	N/A	12.6
OTPP	142,783	10.2	N/A	10.2	N/A	N/A
SLPPP	11,469	8.4	N/A	N/A	8.4	8.4
NPP	5,646	5.2	5.2	5.2	1.9	5.1
Physician	356,038	8.9	9.1	6.1	2.9	8.9

[1] This value is equal to the mean number of visits per beneficiary for a combination of PT and SLP services. Because an individual beneficiary may receive both PT and SLP over the course of the year, this value will not directly correspond to the mean values and total beneficiary counts presented for PT and SLP individually.

NOTES: CORF = Comprehensive Outpatient Rehabilitation Facility; HHA = Home Health Agency; HOPD = Hospital Outpatient Department; N/A = not applicable; NPP = nonphysician practitioner; ORF = Outpatient Rehabilitation Facility; OT = occupational therapy; OTPP = occupational therapist in private practice; PP = private practice; PT = physical therapy; PTPP = physical therapist in private practice; SLP = speech-language pathology; SLPPP = speech-language pathologist in private practice; and S/NF = (skilled) nursing facility.

SOURCE: RTI International analysis of 2010 Medicare claims data for outpatient therapy services (see source file OutpatientTherapyCapAnalysis_CY2010.xls, accompanying this report).

The workbook accompanying this report (entitled OutpatientTherapyCapAnalysis_CY2010.xls) displays additional detail as to the distribution of beneficiary and visit volume by setting. Workbook Tables 4A through 4C display the number of providers (for PT, OT, and SLP, respectively) with different Medicare Part B therapy user volumes in CY2010. Panel A on each of the three tables shows the distribution of providers, and panels B

and C display the number of beneficiaries and visits, respectively, that occur with the corresponding providers in Panel A. Workbook Tables 4D and 4E display the same distribution for providers with a claim for PT or SLP services, and PT and OT services, respectively.

The general results from these workbook tables show that a plurality of outpatient therapy occurred in relatively large organizations, even though most providers of outpatient therapy in CY2010 were small (48 or fewer Medicare patients), as measured by the annual patient caseloads within a discipline. The presence of small providers varied considerably when breaking down the data by discipline: 52.9 percent of PT providers were small versus 69.7 percent of OT providers and 85.9 percent of SLP providers. PT users were most likely to be served in large health care units, and unlikely to be served in very small ones; specifically, 4 in 10 PT users were served in large organizations (360 or more PT cases annually), and less than 1.0 percent of users were seen in units serving 12 or fewer Medicare PT patients annually. In contrast, OT users were primarily served in small units of 13 to 48 OT beneficiaries (28.2 percent), followed by units of 49 to 72 beneficiaries (17.8 percent). With SLP, utilization was even more concentrated in small units of 13 to 48 cases (47.4 percent) and units of 49 to 72 cases (14.8 percent).

Overall, for providers of PT services, the greatest number saw between 13 and 48 beneficiaries each for PT in CY2010 (13,908 total). By setting, S/NFs and CORFs followed this trend; however, the distribution varied across setting types. The greatest number of HOPDs (1,306) and ORFs (321) saw more than 360 PT beneficiaries each, but a slightly smaller number of HOPDs (1,084) saw 12 or fewer beneficiaries. The greatest number of HHA and PP providers saw 12 or fewer beneficiaries for PT. Among individually practicing clinicians in private practice, the trend follows that of private practices overall, with the majority seeing 12 or fewer beneficiaries in CY2010. Overall, the largest portion of beneficiaries was treated in settings with more than 360 beneficiaries per year (2,006,594). Exceptions to this pattern were S/NFs and HHAs, where the most beneficiaries were seen in settings that provided therapy to 13 to 48 PT beneficiaries in CY2010 (238,217 in S/NFs; 1,069 in HHAs). The greatest number of visits occurred in settings with more than 360 PT beneficiaries, and, as with the distribution of beneficiaries, S/NFs and HHAs were exceptions to this trend. The greatest number of S/NF visits occurred in settings with 13 to 48 beneficiaries, and the greatest number of HHA visits occurred in settings with 97 to 120 beneficiaries in CY2010.

As workbook Table 4B shows, the plurality of OT providers across all settings treated from 13 to 48 OT beneficiaries each in CY2010 (10,848). This value is largely due to S/NFs, in which 8,480 of the total 14,318 S/NFs providing OT services provided therapy to between 13 and 48 OT beneficiaries. CORFs and ORFs also had the greatest number of providers seeing between 13 and 48 beneficiaries. For all other settings, the plurality of providers saw 12 or fewer OT beneficiaries in CY2010. The plurality of beneficiaries in settings with OT was also seen by providers with a volume of 13 to 48 OT beneficiaries in CY2010 (316,702). This value, however, was primarily due to S/NFs, in which 249,301 of the 522,560 S/NF beneficiaries receiving OT were seen in settings with 13 to 48 beneficiaries in CY2010. Exceptions to this trend were CORFs, in which the greatest number of beneficiaries were seen in settings with 121 to 180 OT patients (2,253), and HOPDs and ORFs, where the greatest number of beneficiaries were seen in settings with more than 360 OT beneficiaries treated in CY2010 (62,195 and 24,851, respectively). The distribution of OT visits by provider volume across the different settings is similar to the distribution of beneficiaries by setting.

As outlined in workbook Table 4C, the plurality of providers with at least one claim for SLP saw from 13 to 48 beneficiaries for SLP in CY2010. By setting, this is true of HOPDs (1,223) and S/NFs (8,345); however, the greatest number of CORFs (58), ORFs (242), HHAs (43), and private practices (543) saw 12 or fewer beneficiaries for SLP in CY2010. Across nearly all settings, the largest group of beneficiaries was also seen by providers with a volume of 13 to 48 SLP beneficiaries in CY2010 (263,615). Within each setting, the largest group of beneficiaries was seen by providers with 13 to 48 SLP beneficiaries in CY2010, and this remained true across all settings as well. HOPDs, however, saw nearly as many beneficiaries in settings with 121 to 180 beneficiaries, as were seen in settings with 13 to 48 beneficiaries (33,877 and 35,902, respectively). Similarly, the plurality of visits for providers of SLP services occurred in settings that saw 13 to 48 SLP beneficiaries in CY2009 (3,399,538). However, in ORFs and private practice s, the greatest number of visits occurred with providers with a volume of more than 360 beneficiaries in CY2010 (75,487 and 40,962, respectively).

The distribution of providers, beneficiaries, and visits across provider types and beneficiary volumes for providers of PT or SLP services appears similar to the distribution for providers with a claim for PT. As shown in workbook Table 4D, the plurality of providers saw from 13 to 48 beneficiaries each in CY2010, with the exceptions again being HOPDs, in which the greatest number of providers saw more than 360 beneficiaries (1,434), and HHAs, and private practices, in which the greatest number of providers saw 12 or fewer beneficiaries each (98, HHAs; 6,319, private practices). Similar trends to providers with PT were observed for the distribution of beneficiaries and visits in providers of PT or SLP. The total number of providers with at least one claim for PT or SLP is only 588 more than the total number of providers for PT. This represents 1.4 percent of the total number of providers identified with at least one claim for PT, and 3.8 percent of the total number of providers with at least one claim for SLP. Overall, this indicates that the majority of PT providers also provide SLP, and the majority of SLP providers also provide PT. This trend appears similar across most settings, with the exception of private practices, where only 42.2 percent of SLP providers also provide PT services.

Workbook Table 4E outlines the distribution of providers that provided therapy to beneficiaries who received both PT and OT in CY2009. Overall, the greatest number of these providers saw fewer than 12 beneficiaries with PT and OT in CY2010. As with OT providers, the greatest number of S/NFs (9,066 of the 14,327 total) in this category saw 13 to 48 beneficiaries in CY2009. The plurality of providers in all other categories saw 12 or fewer beneficiaries with PT and OT in CY2010. Overall, the greatest numbers of PT and OT beneficiaries seen in these settings (321,538) were seen by providers with 13 to 48 PT and OT beneficiaries in CY2010. The trend varied by provider type: HHAs saw the largest group of beneficiaries (354) in providers that treated 49 to 72 beneficiaries; for CORFs the largest group of beneficiaries (1,935) was seen by providers that treated 121 to 180 beneficiaries each in CY2010; for ORFs, the largest group of beneficiaries was treated in settings that saw more than 360 beneficiaries each (18,431); and for HOPDs, the largest group of beneficiaries (42,209) was seen by providers that treated 121 to 180 PT and OT beneficiaries per year. The distribution of these visits varied across settings. In HOPDs and CORFs, the majority of visits for these beneficiaries occurred in settings that saw 121 to 180 beneficiaries in CY2010. The greatest number of S/NF visits for these beneficiaries, however, occurred in settings that saw 13 to 48 beneficiaries. ORFs and private practice s had the greatest number of visits for these beneficiaries in settings with more than 360 beneficiaries in CY2010, and in HHAs, the greatest

number of visits for these beneficiaries occurred in settings that saw 49 to 72 beneficiaries in CY2010.

3.7 Outpatient Therapy Utilization—Patients That Did/Did Not Exceed the Cap

In CY2010, the cap for outpatient therapy was $1,860 in allowed charges. Separate $1,860 caps were in effect: one covering OT, and the other covering PT and SLP combined. Therapy services provided by any type of setting are subject to these caps with the exception of HOPDs, which are exempt. For the purposes of this report, patients receiving therapy from HOPDs are also counted as having exceeded the cap if their therapy utilization exceeds $1,860 in a particular category.

Of the 4,697,349 beneficiaries who received therapy services under Medicare Part B in CY2010, a total of 971,716 (20.7 percent) reached or exceeded at least one of the two therapy caps (***Table 19***). Of those receiving OT, 236,148 (22.6 percent) exceeded the OT therapy cap; among those receiving either PT or SLP, 902,188 (20.5 percent) reached or exceeded the PT/SLP cap.

Table 19
Number of patients exceeding the therapy cap, by discipline, CY2010

Discipline	Number of patients with a claim	Number of patients above the cap	Percent above the cap
All	4,697,349	971,716 (either) 166,620 (both)	20.7% (either) 3.5% (both)
OT	1,043,011	236,148	22.6%
PT/SLP	4,400,976	902,188	20.5%

NOTES: OT = occupational therapy; PT = physical therapy; SLP = speech-language pathology.

SOURCE: RTI International analysis of 2010 Medicare claims data for outpatient therapy services (see source file OutpatientTherapyCapAnalysis_CY2010.xls, accompanying this report).

Table 20 outlines the distribution of the more than 4.6 million beneficiaries receiving therapy services in CY2010 by type of therapy and the setting in which the services were provided. The four right-most columns contain the counts and percentage of those beneficiaries exceeding one or both of the respective therapy caps (PT/SLP and OT).

In this table, beneficiaries in the "Total patients" column are listed as having received any therapy in a particular setting only if they received *all* of their CY2010 therapy services from that type of setting (e.g., all therapy services were provided within an S/NF). Beneficiaries who received therapy from multiple types of settings in CY2010 are counted in the row labeled "Multiple settings." Therefore, within each of the first three "patient" columns from "Multiple settings" through the "PP" setting, the entries will sum vertically to the values on the "Total" row. Similarly, counts in each "PP" setting ("PTPP" through "Physician") will sum vertically to the counts in the "PP" row. However, combining patient counts from discipline-specific columns (PT/SLP and OT) will not equal the total column.

The discipline-specific columns reflect the patient counts associated with each cap and are calculated using only claims from those disciplines. Because therapy caps are established

separately for PT/SLP and OT services, patients may receive both of these services either within the same setting (e.g., both PT/SLP and OT from an HOPD) or across multiple settings. For example, if a beneficiary receives all PT from an HOPD and all OT from a CORF, he or she would be counted (1) in the "HOPD" row under the "PT/SLP" column, (2) in the "CORF" row under the "OT" column, and (3) in the "Multiple Settings" row under the total column. Because of this, the setting-specific rows will not sum to the total column.

Private practices provided therapy to the greatest number of beneficiaries who exceeded at least one of the therapy caps in 2010, but they did not account for the highest percentage of patients in one setting that exceeded either therapy cap. A total of 38.4 percent of beneficiaries who received therapy in S/NFs exceeded one or more of the therapy caps, based solely on the services received from S/NFs. A total of 17.8 percent of beneficiaries who received therapy from private practices exceeded one or more of the therapy caps, based solely on the services received from those practices. S/NFs, however, provided therapy to only 793,373 beneficiaries as compared with 1,772,601 in private practices.

Overall, beneficiaries receiving OT were more likely to exceed that cap than those receiving PT and/or SLP. Overall, 22.6 percent of beneficiaries receiving OT exceeded the OT cap, whereas only 20.5 percent of beneficiaries receiving PT and/or SLP exceeded the PT/SLP cap. These levels are slightly different from those seen in CY2009, where 19.9 percent of beneficiaries receiving PT and/or SLP exceeded the PT/SLP cap, and 23.5 percent of beneficiaries receiving OT exceeded the OT cap. The overall rate of beneficiaries exceeding either cap increased from 20.1 percent in CY2009, and the overall rate of beneficiaries exceeding both caps decreased slightly from 3.7 percent (Silver, Lyda-McDonald, Bachofer, and Gage, 2012). The distribution of cases that exceeded each of the caps was very different across settings, however. Beneficiaries in HOPDs, S/NFs, and private practices more often exceeded the PT/SLP cap than the OT cap (8.0 percent and 6.4 percent for HOPD; 37.4 percent and 31.5 percent for S/NF; and 17.9 percent and 16.0 percent for private practice, respectively). OT patients in CORFs, ORFs, and HHAs were more likely to exceed the cap than PT/SLP patients were to exceed their respective cap in those same settings, with 26.1 percent, 30.9 percent, and 33.1 percent of OT patients exceeding the cap, respectively. In these settings, 24.7 percent, 21.6 percent, and 25.2 percent of PT/SLP patients exceeded the PT/SLP cap, respectively.

Beneficiaries who received therapy in multiple settings more closely resembled S/NF patients in terms of the percentage of beneficiaries exceeding the cap, at nearly double the rate of most other settings. Approximately 36.8 percent of beneficiaries receiving therapy across multiple settings exceeded at least one of the two caps, a combination of 42.8 percent of PT/SLP patients and 40.4 percent of OT patients. Note that 8.5 percent of these beneficiaries exceeded both caps in CY2010.

Table 20
Number of patients exceeding the therapy cap, by setting, CY2010

Setting	Total patients[1,2]	PT/SLP patients[1,2]	OT patients[1,2]	Number of patients over either cap (%)[3]	Number of patients over the PT/SLP cap (%)[4]	Number of patients over the OT cap (%)[4]	Number of patients over both caps (%)[3]
Total	4,697,349	4,395,144	1,043,011	971,716 (20.7%)	902,188 (20.5%)	236,148 (22.6%)	166,620 (3.5%)
Multiple settings	415,894	326,129	33,217	152,994 (36.8%)	139,567 (42.8%)	13,427 (40.4%)	35,308 (8.5%)
HOPD	1,302,325	1,214,470	278,940	105,990 (8.1%)	96,839 (8.0%)	17,800 (6.4%)	7,201 (0.6%)
S/NF	793,373	711,433	490,899	304,795 (38.4%)	266,086 (37.4%)	154,793 (31.5%)	106,908 (13.5%)
CORF	31,092	30,151	9,965	8,012 (25.8%)	7,433 (24.7%)	2,598 (26.1%)	1,772 (5.7%)
ORF	378,945	364,773	70,060	83,487 (22.0%)	78,617 (21.6%)	21,629 (30.9%)	14,712 (3.9%)
HHA	3,119	2,877	1,388	831 (26.6%)	725 (25.2%)	460 (33.1%)	305 (9.8%)
PP	1,772,601	1,745,311	158,542	315,607 (17.8%)	312,921 (17.9%)	25,441 (16.0%)	414 (0.0%)
PTPP	1,442,190	1,497,971	N/A	279,331 (19.4%)	288,241 (19.2%)	N/A	N/A
OTPP	72,421	N/A	132,230	11,228 (15.5%)	N/A	23,636 (17.9%)	N/A
SLPPP	4,799	5,137	N/A	340 (7.1%)	373 (7.3%)	N/A	N/A
NPP	2,229	2,157	182	67 (3.0%)	60 (2.8%)	7 (3.8%)	N/A
Physician	250,962	240,046	26,130	24,641 (9.8%)	24,247 (10.1%)	1,798 (6.9%)	414 (0.2%)

Table 20 (continued)
Number of patients exceeding the therapy cap, by setting, CY2010

[1] The count of patients in the "Total patients" column is the number of beneficiaries who received therapy of any type (PT, SLP, or OT) solely in the setting listed. The count of patients in the "PT/SLP patients" and "OT patients" columns are the number of beneficiaries who received PT or SLP treatment and OT treatment, respectively, solely in the setting listed. If a beneficiary received therapy from multiple settings (HOPD through PP), then they were counted in the "Multiple settings" row.

The sum of row counts "HOPD" through "PP (Total)" within each column equals the count in the "Total" row.

Because some patients receive both PT/SLP and OT treatment in the same or in multiple settings, the total number of beneficiaries receiving PT/SLP or OT ("Total patients") is not equal to the number of patients receiving PT/SLP plus the number of patients receiving OT.

[2] The sum of row counts "PTPP" through "Physician" within each column equals the count in the "PP (Total)" row.

Discipline-specific patient counts represent patients with at least one claim for therapy services in that discipline. Because some patients receive therapy in multiple PP settings, a beneficiary may be counted in different rows of the table. For example, 72,421 beneficiaries in the "Total Patients" column received therapy *entirely* in an OTPP, whereas a total of 59,809 (=132,230 – 72,421) patients received OT in an OTPP along with therapies in other settings.

[3] The percentage of patients over either cap or over both caps was calculated as the number over the cap divided by the total number of Part B therapy patients in CY2010 overall (4,697,349 patients) and by setting. For example, the number of patients over both caps entirely in HOPDs was 7,201, or 8.5 percent of the 1,302,325 patients that received therapy entirely in HOPDs.

[4] The percentage of patients over discipline-specific caps was calculated as the number of patients over each individual cap over the total number of patients with at least one claim for therapy in that discipline. For example, the number of patients over the OT cap entirely in CORFs was 2,598, or 26.1 percent of the 9,965 OT patients that received OT entirely in CORFs.

NOTES: CORF = Comprehensive Outpatient Rehabilitation Facility; HHA = Home Health Agency; HOPD = Hospital Outpatient Department; N/A = not applicable; ORF = Outpatient Rehabilitation Facility; OT = occupational therapy; OTPP = occupational therapist in private practice; PP = private practice; PT = physical therapy; PTPP = physical therapist in private practice; SLP = speech-language pathology; SLPPP = speech-language pathologist in private practice; and S/NF = (skilled) nursing facility.

SOURCE: RTI International analysis of 2010 Medicare claims data for outpatient therapy services (see source file OutpatientTherapyCapAnalysis_CY2010.xls, accompanying this report).

As outlined in ***Table 21***, beneficiaries who used therapy services beyond the cap on average had a substantially higher number of visits than those who did not. The mean number of visits for a beneficiary that exceeded the PT/SLP cap was 34.5, and the mean number of visits for beneficiaries below that cap was 8.1. For the OT, the mean number of visits for a beneficiary that exceeded the cap was 36.6, whereas those beneficiaries who did not exceed the cap had 7.1 visits on average. A setting-specific breakdown can be found in the workbook accompanying this report. Data in the workbook show that S/NF beneficiaries had the highest mean number of treatment days (i.e., visits) per beneficiary for both patients that did and did not exceed either of the caps. The greatest number of treatment days per beneficiary was seen in those who exceeded the PT/SLP cap in S/NFs (41.1). Beneficiaries who exceeded either the PT/SLP or the OT cap had the fewest treatment days on average in CORFs (25.0 for PT/SLP and 20.7 for OT); however, SLPs in private practice saw patients who did not exceed the PT/SLP cap on average for the fewest days (3.9), and HOPDs had the lowest mean number of visits per beneficiary for those below the OT cap (4.4).

Consequently, beneficiaries who exceeded the cap also had much higher allowed charges over the course of the year than those that did not. The mean total payment for beneficiaries who exceeded the PT/SLP cap was $3,683, whereas the mean total payment for those that did not was $694. The mean payment for beneficiaries who exceeded the OT cap was $3,726, whereas those that did not on average received only $606 worth of care. As with visits, S/NFs had the highest mean allowed charges per beneficiary for those who exceeded the PT/SLP cap ($4,241.73); however, beneficiaries receiving care from HHAs had the highest mean allowed charges for those exceeding the OT cap ($4,030.60). The lowest mean allowed charges were found in HOPDs ($3,014.08) and nonphysician practitioners ($2,544.92), respectively. For those that did not exceed the PT/SLP cap, the highest mean allowed charges were found in CORFs ($829.14), and the lowest were seen in nonphysician practitioners ($282.68). For those below the OT cap, the highest mean allowed charges were found in CORFs ($887.92), and the lowest in nonphysician practitioners ($333.83).

Table 21
Outpatient therapy expenditures for patients that did/did not exceed the cap, CY2010

Therapy cap status	Number of patients	Mean number of visits	Mean allowed charges
Above the PT/SLP cap	902,188	34.5	$3,683
Below the PT/SLP cap	3,498,788	8.1	$694
Above the OT cap	236,148	36.6	$3,726
Below the OT cap	806,863	7.1	$606

NOTES: OT = occupational therapy; PT = physical therapy; SLP = speech-language pathology.

SOURCE: RTI International analysis of 2010 Medicare claims data for outpatient therapy services (see source file OutpatientTherapyCapAnalysis_CY2010.xls, accompanying this report).

3.8 Types of Outpatient Treatment Services Provided

In CY2010, nearly 161 million outpatient therapy claim lines were filed, leading to Medicare payments of more than $5.6 billion. This represents a 1.7 percent decrease

In outpatient therapy claim lines and a 4.5 percent increase in Medicare payments from 2009. Further analysis indicates that there was a comparable reduction in the number of units billed (1.4 percent) on these claim lines, indicating a genuine increase in the mean paid by Medicare per claim line from CY2009 to CY2010. (Section 3.1 discusses the large increase in the fee for a common SLP service, a contributor to the increase in the overall mean amount paid per claim line.) The reduction appears equally similar across disciplines, with 1.0 percent fewer PT units billed, 4.0 percent fewer OT units billed, and 4.5 fewer SLP units billed, as compared with a 1.2 percent, 5.1 percent, and 4.3 percent reduction in claim lines in each discipline, respectively. Additional information on the distribution of units billed across claim lines can be found in the workbooks accompanying this report.

The frequency and payment amounts for the top 15 HCPCS are presented in ***Table 22***, and ***Table 23*** shows their relative importance within each of the three therapy types. Even though there were more than 70 different HCPCS that could receive Medicare Part B payments as outpatient therapy, just 15 HCPCS codes represented 94.7 percent of all therapy claim lines (Table 23) and 95.5 percent of all therapy payments (Table 22). The most prominent HCPCS code, in terms of both frequency and payments, was 97110 (therapeutic exercises), which accounted for approximately one-third of all claim lines and about 39 percent of all payments.

As shown in Table 23, some of the top 15 HCPCS codes were applicable to only one or two therapy types. For example, HCPCS code 97110 made up a large portion of both PT and OT claims lines, but was just under 1.0 percent of SLP claim lines. The codes 92526 (oral function therapy) and 92507 (speech/hearing therapy) were almost exclusively used for SLP, whereas 97535 (self-care management training) was primarily an OT procedure.

Table 22
Number of claim lines and mean paid per line item, 15 most frequent outpatient therapy HCPCS codes, CY2010

HCPCS code	HCPCS description	Total claim lines	Mean paid per claim line	Mean allowed per claim line	Total paid all claim lines	Total allowed all claim lines	Percent of total claim lines	Percent of total paid
All	All codes	160,872,281	$35.07	$44.25	$5,642,532,287	$7,119,267,883	100.0%	100.0%
97110*	Therapeutic exercises	52,533,884	$41.97	$52.94	$2,204,776,441	$2,781,397,352	32.7%	39.1%
97140*	Manual therapy	19,264,151	$29.18	$36.90	$562,103,334	$710,819,448	12.0%	10.0%
97530*	Therapeutic activities	18,820,694	$37.78	$47.48	$710,962,799	$893,597,037	11.7%	12.6%
97112*	Neuromuscular reeducation	13,990,607	$31.73	$39.90	$443,886,017	$558,284,938	8.7%	7.9%
97116*	Gait training therapy	10,057,159	$24.17	$30.33	$243,033,102	$305,083,314	6.3%	4.3%
G0283	Electrical stimulation other than wound	9,829,223	$9.77	$12.34	$95,987,112	$121,257,765	6.1%	1.7%
97035*	Ultrasound therapy	6,146,246	$9.97	$12.62	$61,272,550	$77,586,371	3.8%	1.1%
97535*	Self-care management training	4,999,902	$40.33	$50.63	$201,658,030	$253,130,099	3.1%	3.6%
97001	Physical therapy evaluation	4,505,156	$56.32	$72.89	$253,743,736	$328,384,251	2.8%	4.5%
92526	Oral function therapy	3,383,283	$79.33	$99.58	$268,398,792	$336,907,297	2.1%	4.8%
97032*	Electrical stimulation	2,293,662	$16.20	$20.49	$37,152,374	$46,999,463	1.4%	0.7%
97150	Group therapeutic procedures	2,251,300	$15.15	$19.07	$34,098,282	$42,935,187	1.4%	0.6%
92507	Speech/hearing therapy	1,951,009	$51.35	$64.48	$100,191,914	$125,791,828	1.2%	1.8%
97113*	Aquatic therapy/exercises	1,187,040	$77.76	$97.94	$92,298,352	$116,256,300	0.7%	1.6%
97003	OT evaluation	1,113,522	$61.02	$77.54	$67,945,863	$86,338,461	0.7%	1.2%

NOTES: *On a claim line, CPT codes for these services are billed in terms of one or more 15-minute increments. HCPCS = Healthcare Common Procedure Coding System; OT = occupational therapy.

SOURCE: RTI International analysis of 2010 Medicare claims data for outpatient therapy services (see source file HCPCS_UtilizationSummary_bySetting_all_CY2010.xls, accompanying this report).

Table 23
Frequency of the 15 most frequent outpatient therapy HCPCS codes, by discipline, CY2010

HCPCS code	Procedure description	PT total claim lines	PT percent	OT total claim lines	OT percent	SLP total claim lines	SLP percent	Percent of total claim lines, all disciplines
All	Total	124,894,101	100.0%	29,032,353	100.0%	6,946,174	100%	100.0%
15 most frequent	Total	120,042,911	96.1%	26,827,144	92.4%	5,456,985	78.6%	94.7%
97110*	Therapeutic exercises	43,653,642	35.0%	8,830,915	30.4%	49,327	0.7%	32.7%
97140*	Manual therapy	17,606,705	14.1%	1,656,978	5.7%	468	<0.1%	12.0%
97530*	Therapeutic activities	12,557,372	10.1%	6,225,719	21.4%	37,603	0.5%	11.7%
97112*	Neuromuscular reeducation	11,235,612	9.0%	2,746,633	9.5%	8,362	0.1%	8.7%
97116*	Gait training therapy	10,048,698	8.0%	8,366	<0.1%	95	<0.1%	6.3%
G0283	Electrical stimulation other than wound	9,173,958	7.3%	654,568	2.3%	697	<0.1%	6.1%
97035*	Ultrasound therapy	5,593,791	4.5%	552,394	1.9%	61	<0.1%	3.8%
97535*	Self-care management training	524,038	0.4%	4,468,969	15.4%	6,895	0.1%	3.1%
97001	Physical therapy evaluation	4,502,799	3.6%	2,332	<0.1%	25	<0.1%	2.8%
92526	Oral function therapy	1,612	<0.1%	1,704	<0.1%	3,379,992	48.7%	2.1%
97032*	Electrical stimulation	2,107,007	1.7%	183,860	0.6%	2,795	<0.1%	1.4%
97150	Group therapeutic procedures	1,857,405	1.5%	371,906	1.3%	21,989	0.3%	1.4%
92507	Speech/hearing therapy	2,001	<0.1%	538	<0.1%	1,948,647	28.1%	1.2%
97113*	Aquatic therapy/ exercises	1,175,315	0.9%	11,724	<0.1%	1	<0.1%	0.7%
97003	OT evaluation	2,956	<0.1%	1,110,538	3.8%	28	<0.1%	0.7%

NOTES: * On a claim line, CPT codes for these services are billed in terms of one or more 15-minute increments. HCPCS = Healthcare Common Procedure Coding System; OT = occupational therapy; PT = physical therapy; SLP = speech-language pathology.

SOURCES: RTI International analysis of 2010 Medicare claims data for outpatient therapy services (see source files HCPCS_UnitsperLine_bySetting_OT_CY2010.xls; HCPCS_UnitsperLine_bySetting_PT_CY2010.xls; HCPCS_UnitsperLine_bySetting_SLP_CY2010.xls, accompanying this report).

Among the different outpatient therapy settings, there was considerable variation in the frequency of the 15 most common HCPCS codes, as seen in ***Table 24***. Some therapy procedures were quite common among all settings; for example, HCPCS code 97110 (therapeutic exercise) made up 22.8 to 39.9 percent of claim lines except for SLPPP (0.7 percent). In contrast, the frequency of some therapy procedures varied significantly across settings; for example, HCPCS code 97116 (gait training therapy) made up 12.1 and 12.5 percent of claim lines only in S/NF and HHA settings, respectively, but minimally in other settings. The primarily SLP codes 92526 (oral function therapy) and 92507 (speech/hearing therapy) made up a much larger percentage of SLPPP claims than any other setting. Both HCPCS codes 97035 (ultrasound therapy) and 97032 (electrical stimulation) were more common in physician (9.0 percent and 7.6 percent, respectively) and NPP (6.9 percent and 7.2 percent) offices than in any other setting.

Similarly, the proportion of total payments for each of the top 15 HCPCS codes varied across settings (see ***Table 25***). The HCPCS code 97110 (therapeutic exercises) accounted for the largest fraction of payments in all settings, except for SLPPP; 97140 (manual therapy) was the second largest for hospital, CORF, PTPP, physician, and NPP settings; and 97530 (therapeutic activities) was the second largest in terms of payments for S/NFs, ORFs, HHAs, and OTPPs. Of all settings, S/NFs had the highest fraction of payments coming from the SLP procedure code 92526 (oral function therapy), with 12.2 percent. SLPPPs had nearly 41.0 percent of payments coming from HCPCS code 92507 (speech/hearing therapy). Hospitals had the highest percentage of procedure code 97001 (physical therapy evaluation), with 8.7 percent.

3.9 Outpatient Therapy Utilization by Discipline and Principal Claim Diagnosis per Episode

3.9.1 Physical Therapy Utilization by First Claim Diagnosis

For PT episodes in CY2010, there were 6,901different ICD-9 diagnosis codes (data not shown) present as the principal diagnosis on the first claim (institutional settings) or claim line (private practice settings) among the 4.8 million episodes. However, 97.0 percent of these principal diagnoses represented less than 0.1 percent of PT episodes each. For each principal diagnosis, ***Table 26*** presents the number of episodes; mean of episode days,[14] paid amounts, and claim lines; and the percentage of all episodes with this principal diagnosis. As shown in Table 26, the 20 most common principal diagnoses accounted for 57.6 percent of PT episodes. Nearly 82.0 percent of the episodes fell into the top 100 PT diagnoses (data not shown).

[14] See Section 2.3 for the definition of "Days" in the episodes discussed in this section.

Table 24
Percent of claim lines of the 15 most frequent outpatient therapy HCPCS codes, by setting, CY2010

HCPCS code	Procedure description	Percent of claim lines (All)	Percent of claim lines (Hospital)	Percent of claim lines (S/NF)	Percent of claim lines (CORF)	Percent of claim lines (ORF)	Percent of claim lines (HHA)	Percent of claim lines (PTPP)	Percent of claim lines (OTPP)	Percent of claim lines (Physician)	Percent of claim lines (NPP)	Percent of claim lines (SLPPP)
97110*	Therapeutic exercises	32.7%	39.9%	28.4%	30.9%	32.2%	32.8%	34.7%	32.6%	28.8%	22.8%	0.7%
97140*	Manual therapy	12.0%	13.6%	1.2%	16.5%	13.5%	2.1%	20.8%	17.5%	17.3%	15.1%	<0.1%
97530*	Therapeutic activities	11.7%	5.3%	19.6%	10.9%	13.1%	28.0%	6.6%	13.5%	5.8%	3.7%	5.1%
97112*	Neuromuscular reeducation	8.7%	5.1%	11.2%	9.0%	8.3%	3.9%	8.0%	8.0%	7.3%	4.5%	<0.1%
97116*	Gait training therapy	6.3%	4.2%	12.1%	6.2%	6.0%	12.5%	2.3%	0.1%	0.9%	1.3%	<0.1%
G0283	Electrical stimulation other than wound	6.1%	5.4%	2.1%	7.9%	6.7%	0.9%	10.1%	3.2%	9.4%	14.7%	<0.1%
97035*	Ultrasound therapy	3.8%	4.5%	0.8%	4.2%	3.8%	1.5%	5.7%	4.9%	9.0%	6.9%	<0.1%
97535*	Self-care management training	3.1%	1.3%	6.3%	4.8%	3.3%	7.8%	0.5%	7.9%	0.5%	2.4%	0.8%
97001	Physical therapy evaluation	2.8%	5.8%	1.4%	2.3%	2.6%	2.3%	3.3%	0.1%	2.1%	1.4%	<0.1%
92526	Oral function therapy	2.1%	0.7%	5.6%	0.2%	0.7%	1.1%	<0.1%	<0.1%	0.3%	<0.1%	16.6%
97032*	Electrical stimulation, ea 15 min	1.4%	0.6%	0.4%	1.5%	1.0%	0.3%	2.1%	1.3%	7.6%	7.2%	<0.1%
97150	Group therapeutic procedures	1.4%	2.3%	1.2%	0.7%	2.1%	<0.1%	1.2%	0.3%	0.7%	4.1%	<0.1%
92507	Speech/hearing therapy	1.2%	1.9%	2.2%	0.5%	1.3%	3.6%	<0.1%	<0.1%	1.0%	0.1%	50.4%
97113*	Aquatic therapy/exercise	0.7%	1.9%	<0.1%	0.7%	1.0%	0.2%	1.0%	0.1%	0.3%	<0.1%	<0.1%
97003	OT evaluation	0.7%	1.3%	1.1%	0.7%	0.5%	1.0%	<0.1%	3.7%	0.2%	0.2%	0.3%
	Total	94.70%	93.80%	93.60%	97.00%	96.10%	98.00%	96.30%	93.20%	91.20%	84.40%	73.90%

NOTES: * On a claim line, CPT codes for these services are billed in terms of one or more 15-minute increments. CORF = Comprehensive Outpatient Rehabilitation Facility; HCPCS = Healthcare Common Procedure Coding System; HHA = Home Health Agency; NPP = nonphysician practitioner; ORF = Outpatient Rehabilitation Facility; OT = occupational therapy; OTPP = occupational therapist in private practice; PT = physical therapy; PTPP = physical therapist in private practice; SLP = speech-language pathology; SLPPP = speech-language pathologist in private practice; and S/NF = (skilled) nursing facility.

SOURCE: RTI International analysis of 2010 Medicare claims data for outpatient therapy services (see source file HCPCS_UtilizationSummary_bySetting_all_CY2010.xls, accompanying this report).

Table 25
Percent of payments of the 15 most frequent outpatient therapy HCPCS codes, by setting, CY2010

HCPCS code	Procedure description	Percent of total paid (All)	Percent of total paid (Hospital)	Percent of total paid (S/NF)	Percent of total paid (CORF)	Percent of total paid (ORF)	Percent of total paid (HHA)	Percent of total paid (PTPP)	Percent of total paid (OTPP)	Percent of total paid (Physician)	Percent of total paid (NPP)	Percent of total paid (SLPPP)
97110*	Therapeutic exercises	39.1%	46.2%	28.2%	44.5%	40.4%	32.4%	47.5%	38.8%	39.0%	35.9%	0.3%
97140*	Manual therapy	10.0%	10.7%	1.0%	13.3%	10.5%	1.6%	18.5%	15.0%	17.2%	16.1%	<0.1%
97530*	Therapeutic activities	12.6%	5.7%	19.5%	10.7%	15.3%	32.2%	7.8%	16.0%	7.0%	4.8%	4.8%
97112*	Neuromuscular reeducation	7.9%	5.1%	9.4%	8.3%	7.5%	3.0%	7.7%	7.6%	8.2%	4.6%	<0.1%
97116*	Gait training therapy	4.3%	2.9%	7.9%	4.1%	4.2%	7.8%	1.8%	0.1%	0.7%	1.0%	<0.1%
G0283	Electrical stimulation other than wound	1.7%	1.4%	0.5%	2.3%	1.9%	0.2%	3.0%	0.9%	3.2%	4.9%	<0.1%
97035*	Ultrasound therapy	1.1%	1.1%	0.2%	1.2%	1.1%	0.4%	1.7%	1.4%	3.3%	2.6%	<0.1%
97535*	Self-care management training	3.6%	1.4%	7.1%	4.2%	4.0%	8.1%	0.5%	9.1%	0.6%	6.6%	0.5%
97001	Physical therapy evaluation	4.5%	8.7%	2.2%	3.7%	4.3%	3.2%	5.5%	0.1%	4.0%	2.6%	<0.1%
92526	Oral function therapy	4.8%	1.4%	12.2%	0.5%	1.5%	2.2%	<0.1%	<0.1%	0.8%	0.1%	<0.1%
97032*	Electrical stimulation	0.7%	0.2%	0.2%	0.6%	0.4%	0.1%	0.9%	<0.1%	5.1%	5.7%	<0.1%
97150	Group therapeutic procedures	0.6%	0.9%	0.5%	0.5%	0.9%	<0.1%	0.5%	0.1%	0.4%	2.1%	<0.1%
92507	Speech/hearing therapy	1.8%	2.6%	3.0%	0.9%	1.9%	4.6%	<0.1%	<0.1%	1.8%	0.1%	40.9%
97113*	Aquatic therapy/ exercises	1.6%	3.5%	0.1%	1.7%	2.3%	0.5%	2.4%	0.2%	0.8%	0.1%	<0.1%
97003	OT evaluation	1.2%	2.0%	1.8%	1.1%	0.8%	1.5%	<0.1%	6.1%	0.5%	0.3%	<0.1%
	Total	95.50%	93.80%	93.80%	97.60%	97.00%	97.80%	97.80%	95.40%	92.60%	87.50%	46.50%

NOTES: * On a claim line, CPT codes for these services are billed in terms of one or more 15-minute increments. CORF = Comprehensive Outpatient Rehabilitation Facility; HCPCS = Healthcare Common Procedure Coding System; HHA = Home Health Agency; ORF = Outpatient Rehabilitation Facility; OT = occupational therapy; OTPP = occupational therapist in private practice; PTPP = physical therapist in private practice; SLPPP = speech-language pathologist in private practice; and S/NF = (skilled) nursing facility.

SOURCE: RTI International analysis of 2010 Medicare claims data for outpatient therapy services (see source file HCPCS_UtilizationSummary_bySetting_all_CY2010.xls, accompanying this report).

Table 26
Outpatient PT episodes, by 20 most common principal diagnoses, CY2010

First episode claim ICD-9	ICD-9 description	Number of episodes	Mean episode days	Mean episode paid	Mean claim lines	Percent of episodes
All	…	4,810,845	11.5	$847	26.0	100.0%
Top 20	20 most frequent ICD-9s	2,777,158	11.3	$829	25.2	57.6%
V57.1	Physical therapy nec	629,232	9.8	$621	17.5	13.1%
724.2	Lumbago	386,549	9.8	$742	23.4	8.0%
781.2	Abnormality of gait	220,357	13.2	$1,057	29.6	4.6%
719.41	Joint pain-shlder	185,570	11.1	$802	25.9	3.9%
719.46	Joint pain-l/leg	179,052	11.0	$834	25.1	3.7%
719.7	Difficulty in walking	160,861	14.5	$1,125	33.5	3.3%
723.1	Cervicalgia	160,240	9.7	$708	24.6	3.3%
728.87	Muscle weakness-general	133,960	14.9	$1,115	33.3	2.8%
719.45	Joint pain-pelvis	92,145	10.0	$736	21.9	1.9%
715.16	Loc prim osteoart-l/leg	85,176	13.3	$1,083	33.2	1.8%
V57.89	Rehabilitation proc nec	72,433	15.1	$1,061	33.3	1.5%
724.02	Spinal stenosis-lumbar	68,114	11.4	$899	26.9	1.4%
724.4	Lumbosacral neuritis nos	64,672	11.3	$917	30.5	1.3%
726.10	Rotator cuff synd nos	63,226	12.3	$945	30.9	1.3%
722.52	Lumb/lumbosac disc degen	50,003	10.0	$752	23.9	1.0%
729.5	Pain in limb	48,184	9.5	$687	21.7	1.0%
715.96	Osteoarthros proc nec	46,469	13.0	$1,025	31.2	1.0%
724.5	Backache nos	45,358	9.1	$651	20.4	0.9%
V43.65	Joint replaced knee	44,859	15.8	$1,288	36.2	0.9%
719.47	Joint pain-ankle and foot	40,698	9.3	$691	23.3	0.9%

NOTES: PT = physical therapy.

SOURCE: RTI International analysis of 2010 Medicare claims data for outpatient therapy services (see source file OutpatientEpisodesbyDiagnosis_PT_CY2010.xls, accompanying this report).

3.9.2 Physical Therapy Episode Diagnoses by Setting

Table 27 provides descriptive information on single-setting PT episodes of care where a 'single-setting episode' is defined as an episode where therapy care was provided in one—and not multiple—type(s) of setting (see Section 2.3 for a definition of *episode* used in this report). Similar to outpatient therapy utilization in previous years (Ciolek and Hwang, 2006, 2008; Kandilov, Lyda-McDonald, and Drozd, 2009; Lyda-McDonald, Munevar, and Drozd, 2010; Lyda-McDonald, Drozd, and Gage, 2012), almost all PT episodes (96.0 percent) took place in a single type of care setting. Physical therapists in private practice (PTPP) were responsible for the largest fraction of single-setting PT episodes (38.8 percent), followed closely by hospitals with 28.3 percent, and S/NFs with 16.1 percent. Private practice (non-institutional) settings

account for a relatively large proportion (2,101,521 of all 4,628,581 single-setting episodes, or 45.4 percent). This percentage is only slightly higher (by 0.2 percentage points) than in 2009.

Overall, the most frequently recorded initial diagnosis for PT episodes was V57.1 (physical therapy not elsewhere classified). However, in CORF, ORF, PTPP, physician, and NPP settings, the most common diagnosis was 724.2 (lumbago). According to Table 26, V57.1 accounts for about 13.0 percent of PT episodes, but it does not describe why the patient is receiving therapy. The other frequent PT episode diagnoses do not provide information on the medical condition producing the need for therapy, but rather in many cases on the specific symptom or function being worked on by the therapist. This issue can be seen across information presented from all disciplines in this report.

PT payments per episode rose 2.0 percent (from $830 to $847) between CY2009 and CY2010, and payments for single-setting PT episodes rose 2.4 percent (from $801 to $820) in the same time period (see Lyda-McDonald, Drozd, and Gage, 2012, for the 2009 data). PT episodes that occurred in S/NFs were the longest, with an average of 16.7 treatment days, followed by ORFs, with 12.0 treatment days, and HHAs with 11.5 treatment days. These were also the sites for the most expensive episodes, with average Medicare payments of $1,181 for S/NF episodes and $1,017 for CORF episodes.

Table 27
Single-setting PT episodes, by setting, CY2010

Setting	Number of single-setting episodes	Percent of single-setting episodes	Most frequent ICD-9	ICD-9 description	Mean episode days	Mean episode paid	Mean claim lines
All	4,628,581	100.0%	V57.1	Physical therapy nec	11.1	$820	25.1
Hospital	1,309,813	28.3%	V57.1	Physical therapy nec	8.2	$517	13.9
S/NF	746,093	16.1%	728.87	Muscle weakness-general	16.7	$1,181	38.9
CORF	36,329	0.8%	724.2	Lumbago	11.3	$1,017	29.0
ORF	431,236	9.3%	724.2	Lumbago	12.0	$960	29.2
HHA	3,589	0.1%	719.7	Difficulty in walking	11.5	$977	27.0
PTPP	1,797,093	38.8%	724.2	Lumbago	11.2	$889	27.2
OTPP	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Physician	301,645	6.5%	724.2	Lumbago	8.2	$607	21.4
NPP	2,783	0.1%	724.2	Lumbago	5.0	$285	10.1
SLPPP	N/A	N/A	N/A	N/A	N/A	N/A	N/A

NOTES: CORF = Comprehensive Outpatient Rehabilitation Facility; HCPCS = Healthcare Common Procedure Coding System; HHA = Home Health Agency; N/A = not applicable; NPP = ORF = Outpatient Rehabilitation Facility; OTPP = occupational therapist in private practice; PT = physical therapy; PTPP = physical therapist in private practice; SLPPP = speech-language pathologist in private practice; and S/NF = (skilled) nursing facility.

SOURCE: RTI International analysis of 2010 Medicare claims data for outpatient therapy services (see source file OutpatientTherapyEpisodes__bySetting_CY2010.xls, accompanying this report).

3.9.3 Occupational Therapy Utilization by Principal Claim Diagnosis

As shown in ***Table 28***, for OT episodes in CY2010, the top 20 principal diagnoses represented 44.4 percent of all episodes. More than 73.0 percent of OT episodes could be categorized by one of the top 100 out of 5,994 OT diagnoses (data not shown). The trend in higher mean OT payments per episode than PT payments continued in CY2010 with per-episode payments for OT of $920 compared with $847 for PT (Table 26). This pattern is consistent with that found in prior years.

Table 28
Outpatient OT episodes, by 20 most common principal diagnoses, CY2010

First episode claim ICD-9	ICD-9 description	Number of episodes	Mean episode days	Mean episode paid	Mean claim lines	Percent of episodes
All	N/A	1,184,338	12.2	$920	24.5	100.0%
Top 20	20 most frequent ICD-9s	526,539	13.6	$1,029	27.1	44.4%
V57.21	Care involving occupational therapy	87,976	8.9	$602	16.5	7.4%
728.87	Muscle weakness-general	79,943	15.6	$1,206	31.1	6.8%
V57.89	Rehabilitation proc nec	56,594	15.1	$1,114	29.8	4.8%
719.7	Difficulty in walking	34,021	16.2	$1,291	33.5	2.9%
781.2	Abnormality of gait	28,759	14.6	$1,183	30.3	2.4%
781.3	Lack of coordination	27,506	16.0	$1,381	33.7	2.3%
V57.1	Physical therapy nec	26,671	9.0	$635	15.8	2.3%
331.0	Alzheimer's disease	18,297	13.6	$956	24.8	1.5%
719.41	Joint pain-shlder	17,062	12.2	$975	29.1	1.4%
719.44	Joint pain-hand	16,651	7.6	$560	18.5	1.4%
781.92	Abnormal posture	16,597	11.6	$798	20.3	1.4%
354.0	Carpal tunnel syndrome	16,336	6.1	$448	14.7	1.4%
332.0	Paralysis agitans	15,028	15.3	$1,192	30.3	1.3%
728.2	Musc disuse atrophy nec	14,320	17.1	$1,323	34.8	1.2%
428.0	Infective myositis	13,460	15.7	$1,185	31.6	1.1%
401.9	Hypertension nos	12,012	16.8	$1,297	34.7	1.0%
436	CVA	11,895	16.6	$1,252	32.8	1.0%
715.09	General osteoarthrosis	11,895	16.2	$1,333	34.9	1.0%
290.0	Senile dementia uncomp	10,822	14.4	$1,055	27.3	0.9%
799.3	Debility nos	10,694	13.9	$1,021	26.4	0.9%

NOTES: N/A = not applicable; OT = occupational therapy.

SOURCE: RTI International analysis of 2010 Medicare claims data for outpatient therapy services (see source file OutpatientEpisodesbyDiagnosis_OT_CY2010.xls, accompanying this report).

3.9.4 Occupational Therapy Episode Diagnoses by Setting

OT episodes differed greatly by setting, as seen in ***Table 29***. Of the more than 1.1 million OT episodes in CY2010, 98.0 percent took place in a single type of setting. Just over half of the OT episodes took place in S/NFs, followed by 26.0 percent in hospitals, and 12.9 percent in OTPP. Private practice (non-institutional) settings account for a relatively low proportion, at 15.4 percent (i.e., 178,849 of all 1,160,492 single-setting episodes). This percentage is slightly higher (1.0 percentage point higher) than in CY2009.

As expected, and consistent with CY2009, the most common diagnosis overall, and in hospitals, was V57.21 (Care Involving Occupational Therapy). For S/NFs, ORFs, and HHAs, the most common diagnosis was 728.87 (Muscle Weakness); whereas in OTPPs and NPPs, the most frequent principal diagnosis was 719.44 (Pain in Joint Involving Hand).

The difference in most common primary diagnosis across these settings points to differences in the severity of impairment among the different patient populations, as does the variation in episode length and Medicare payments. As with PT episodes, the longest OT episodes were seen in S/NF settings (15.9 days of treatment), followed by ORF and HHA settings (14.0 and 13.3 days, respectively).

OT payments per episode rose 0.2 percent (from $918 to $920) between CY2009 and CY2010, and payments for single-setting OT episodes rose 0.6 percent (from $902 to $907) in the same time period (see Lyda-McDonald, Drozd, and Gage, 2012, for the 2009 results). The highest payments for OT episodes were in HHAs ($1,269), ORFs ($1,235), and S/NFs ($1,161). The lowest payments for OT procedures were in the NPP ($304), hospital ($409), and physician ($432) settings.

Table 29
Single-setting OT episodes, by setting, CY2010

Setting	Number of single-setting episodes	Percent of single setting episodes	Most frequent ICD-9	ICD-9 description	Mean episode days	Mean episode paid	Mean claim lines
Total	1,160,492	100.0%	V57.21	Encntr occupatnal thrpy	12.0	$907	24.2
Hospital	301,477	26.0%	V57.21	Encntr occupat'nal thrpy	5.8	$409	10.0
S/NF	586,856	50.6%	728.87	Muscle weakness-genl	15.9	$1,161	31.2
CORF	11,071	1.0%	724.2	Lumbago	10.1	$1,023	33.7
ORF	80,577	6.9%	728.87	Muscle weakness-genl	14.0	$1,235	31.8
HHA	1,662	0.1%	728.87	Muscle weakness-genl	13.3	$1,269	29.3
PTPP	N/A	N/A	N/A	N/A	N/A	N/A	N/A
OTPP	149,231	12.9%	719.44	Joint pain-hand	9.3	$817	22.7

(continued)

Table 29 (continued)
Single-setting OT episodes, by setting, CY2010

Setting	Number of single-setting episodes	Percent of Single setting episodes	Most frequent ICD-9	ICD-9 description	Mean episode days	Mean episode paid	Mean claim lines
Physician	29,417	2.5%	354.0	Carpal tunnel syndrome	5.9	$432	13.4
NPP	201	0.0%	719.44	Joint pain-hand	5.8	$304	7.2
SLPPP	N/A	N/A	N/A	N/A	N/A	N/A	N/A

NOTES: CORF = Comprehensive Outpatient Rehabilitation Facility; HCPCS = Healthcare Common Procedure Coding System; HHA = Home Health Agency; N/A = not applicable; NPP = nonphysician practitioner; ORF = Outpatient Rehabilitation Facility; OT = occupational therapist; OTPP = occupational therapist in private practice; PTPP = physical therapist in private practice; SLPPP = speech-language pathologist in private practice; and S/NF = (skilled) nursing facility.

SOURCE: RTI International analysis of 2010 Medicare claims data for outpatient therapy services (see source file OutpatientTherapyEpisodes__bySetting_CY2010.xls, accompanying this report).

3.9.5 Speech-Language Pathology Utilization by Principal Claim Diagnosis

As shown in ***Table 30***, SLP therapy episodes were as concentrated in their diagnoses as PT episodes. In other words, the most frequent principal diagnosis among SLP episodes constituted a similar percentage of SLP episodes as PT episode principal diagnoses. Nearly 15.0 percent of all SLP episodes were for 787.2 (dysphagia), and the top 20 diagnoses covered almost 58.0 percent of SLP episodes. This concentration of principal diagnoses is slightly more than that in CY2009 (see Lyda-McDonald, Drozd, and Gage, 2012). The top 100 diagnoses accounted for almost 84.0 percent of all SLP episodes (data not shown). With an average of 9.8 treatment days and $804 in Medicare payments, SLP episodes were shorter and less expensive than were PT and OT episodes.

SLP payments per episode rose 22.7 percent (from $655 to $804) between CY2009 and CY2010, and payments for single-setting SLP episodes rose 24.1 percent (from $632 to $784) in the same time period (see Lyda-McDonald, Drozd, and Gage, for the 2009 results). The large increase is likely associated with the billing changes described at the end of Section 3.1.

3.9.6 Speech-Language Pathology Episode Diagnoses by Setting

As with PT and OT episodes, the vast majority (97.4 percent) of SLP episodes were completed in a single-care setting. ***Table 31*** summarizes diagnosis, mean length of episode in days, and mean payments for single-setting SLP episodes. Similar to the results for OT episodes, S/NFs were the primary setting for SLP episodes, with 60.9 percent of SLP episodes occurring solely in an S/NF. The next-largest setting for SLP episodes was hospitals (31.6 percent). Private practice (non-institutional) settings account for a modest proportion (20,496 of all 577,210 single-setting episodes, or 3.6 percent) of SLP episodes, relatively speaking, even smaller, when compared with the large role of these settings in PT episodes (2,101,521 of all 4,628,581 single-setting episodes, or 45.4 percent) and OT episodes (178,849 of all 1,160,492 single-setting episodes, or 15.4 percent).

Table 30
Outpatient SLP episodes, by 20 most common principal diagnoses, CY2010

First episode claim ICD-9	ICD-9 description	Number of episodes	Mean episode days	Mean episode paid	Mean claim lines	Percent of episodes
All	—	592,341	9.8	$804	11.7	100.0%
Top 20	20 most frequent ICD-9s	340,147	9.6	$790	11.4	57.6%
787.20	Dysphagia nos	87,080	4.8	$432	5.6	14.7%
V57.3	Speech therapy	42,892	8.2	$615	9.1	7.2%
787.22	Dysphagia, oropharyngeal	41,105	9.8	$873	11.5	6.9%
V57.89	Rehabilitation proc nec	26,460	13.8	$1,030	16.4	4.5%
728.87	Muscle weakness-general	18,376	13.7	$1,102	16.8	3.1%
331.0	Alzheimer's disease	15,563	11.7	$947	13.9	2.6%
787.21	Dysphagia, oral phase	14,904	9.1	$809	10.5	2.5%
719.7	Difficulty in walking	10,441	13.0	$1,044	15.8	1.8%
332.0	Paralysis agitans	10,240	12.1	$1,018	15.0	1.7%
290.0	Senile dementia uncomp	10,096	12.2	$995	14.6	1.7%
436	CVA	8,042	14.8	$1,192	18.3	1.4%
781.2	Abnormality of gait	8,032	12.9	$1,034	16.0	1.4%
486	Pneumonia, organism nos	6,847	11.0	$970	13.1	1.2%
2948	Mental disor nec oth dis	6,443	10.8	$880	12.8	1.1%
428.0	CHF nos	6,358	11.9	$988	14.4	1.1%
V57.1	Physical therapy nec	6,229	9.5	$665	10.5	1.1%
401.9	Hypertension nos	6,196	13.7	$1,147	17.3	1.1%
784.42	Dysphonia	5,070	3.3	$251	3.5	0.9%
784.60	Symbolic dysfunction, unspecified	4,904	15.3	$1,156	19.8	0.8%
599.0	Urinary tract infection, site not specific	4,869	11.1	$952	13.5	0.8%

NOTES: — = empty cell; SLP = speech and language pathology.

SOURCE: RTI International analysis of 2010 Medicare claims data for outpatient therapy services (see source file OutpatientEpisodesbyDiagnosis_SLP_CY2010.xls, accompanying this report).

Table 31
Single-setting SLP episodes, by setting, CY2010

Setting	Number of single-setting episodes	Percent of single-setting episodes	Most frequent ICD-9	ICD-9 description	Mean episode days	Mean episode paid	Mean claim lines
Total	577,210	100.0%	787.20	Dysphagia nos	9.6	$784	11.5
Hospital	182,412	31.6%	787.20	Dysphagia nos	4.3	$327	4.6
S/NF	351,252	60.9%	787.22	Dysphagia, oropharyngeal	12.4	$1,024	14.9
CORF	961	0.2%	787.20	Dysphagia nos	8.9	$752	11.8
ORF	21,612	3.7%	728.87	Muscle weakness-general	13.9	$1,084	17.7
HHA	477	0.1%	719.7	Difficulty in walking	13.2	$1,019	16.5
PTPP	N/A	N/A	N/A	N/A	N/A	N/A	N/A
OTPP	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Physician	9,695	1.7%	784.42	Dysphonia	2.2	$190	2.6
NPP	52	0.0%	335.20	Amyotrophic lateral sclerosis	1.9	$132	2.1
SLPPP	10,749	1.9%	787.22	Dysphagia, oropharyngeal	6.8	$622	9.2

NOTES: CORF = Comprehensive Outpatient Rehabilitation Facility; HCPCS = Healthcare Common Procedure Coding System; HHA = Home Health Agency; N/A = not applicable; NPP = nonphysician practitioner; ORF = Outpatient Rehabilitation Facility; OTPP = occupational therapist in private practice; PTPP = physical therapist in private practice; SLP = speech-language pathologist; SLPPP = speech-language pathologist in private practice; and S/NF = (skilled) nursing facility.

SOURCE: RTI International analysis of 2010 Medicare claims data for outpatient therapy services (see source file OutpatientTherapyEpisodes_bySetting_CY2010.xls, accompanying this report).

The mean episode length for SLP episodes, 9.6 days, was exceeded in S/NF, ORF, and HHA settings (12.4, 13.9, and 13.2 treatment days, respectively). Likewise, episodes in all three settings also represented the highest average payments, with $1,084 in ORFs, $1,024 for S/NFs, and $1,019 in HHAs. CORFs saw a decrease in mean episode payments of 15.2 percent from CY2009 to CY2010.

In ORFs and HHAs, the most common ICD-9 code listed first on the claims was “Muscle weakness – general” and “Difficulty in walking,” respectively. Although one might expect such a code to typically be associated with a discipline other than SLP, there are several possible reasons that this could occur. First, within institutional settings, services for multiple disciplines may have been billed on the same claim. As such, the first ICD-9 code listed may not have been directly relevant to SLP services, and it is not possible accurately to identify a primary ICD-9 code for a particular discipline. Second, a beneficiary’s underlying condition may exhibit multiple symptoms, only some of which are addressed by a speech-language pathologist. A stroke would be an example of such a case requiring SLP services, and “Difficulty in walking” would be a common ICD-9 code also associated with such a case. As previously discussed, the

ICD-9 codes listed on the claim often speak to a specific symptom or functional impairment being addressed by the therapist as opposed to the underlying condition.

3.10 Outpatient Therapy Utilization by CSC Classification Group and Discipline

Given the inefficiency of analyzing outpatient therapy episodes by the primary diagnosis when therapy episodes could fall into one of a few thousand different ICD-9 codes, CSC developed classification groups for each discipline separately (PT, OT, and SLP) to collect similar diagnoses into one category and allow for a more meaningful comparison. These classification groups are described by CSC (Ciolek and Hwang, 2006) in the *Outpatient Therapy Services Utilization and Edit Report*. Each classification group is composed of a set of ICD-9 codes. A beneficiary was assigned to a classification group in this report based on the first ICD-9 code listed on the claim. Some prominent classification groups in each discipline (such as "Swallowing'' for PT) may not typically be associated with that discipline. This is likely caused by the difficulties previously mentioned with identifying the most relevant ICD-9 code for each discipline on an institutional claim. Detailed descriptions of the ICD-9 codes included in each classification group can be found in the report by Ciolek and Hwang (2006).

To maintain consistency with previous reports, the CSC classification groups have not been altered from their original design. However, as discussed below, the most prominent classification group in all three disciplines is "Other," which may indicate that some revision is needed in the future to identify the prominent ICD-9 codes associated with each therapy discipline.

3.10.1 Physical Therapy Utilization by CSC Classification Group

As shown in ***Table 32***, there are 23 classification groups that together covered 80.5 percent of all PT episodes. The largest specific group contained episodes with Lumbar/Sacral/Thoracic diagnoses (18.3 percent), followed by Mobility (10.4 percent), and Knee/Leg (10.3 percent). However, the largest number of episodes was grouped in "Other" (19.6 percent).

On average, the longest episodes belonged to the Amputation (19.1 days), Skin-Decubitus (17.4 days), and the Swallowing groups (16.4 days), whereas the shortest episodes were for therapy patients in the Incontinence group (5.9 days), followed by the Ankle/Foot and Edema groups, which averaged 9.1 days of treatment each. With the exception of Skin-Decubitus, which averaged 17.4 treatment days with a mean episode payment of $925, the number of treatment days was highly correlated with the episode payments, in that the longer episodes from the Amputation and Neurologic groups had the highest payments at $1,418 and $1,227, and the lowest payments went to the Incontinence ($423) and Ankle/Foot ($665) episodes.

Table 32
PT episodes by CSC classification group, CY2010

CSC classification group–PT	Number of episodes	Percent of episodes	Mean episode days	Median episode days	Mean episode paid	Median episode paid
All	4,318,152	100.0%	11.5	8.0	$851	$564
Other	847,984	19.6%	9.9	7.0	$645	$413
Lumbar/sacral/thoracic	790,998	18.3%	10.0	8.0	$763	$529
Mobility	447,088	10.4%	13.9	10.0	$1,104	$762
Knee/leg	444,669	10.3%	12.0	10.0	$937	$682
Shoulder/upper arm	441,739	10.2%	12.2	9.0	$899	$636
Cervical	263,986	6.1%	10.0	8.0	$743	$514
Multiple sites	218,227	5.1%	14.8	11.0	$1,134	$775
Hip/pelvis/thigh	206,024	4.8%	11.4	9.0	$854	$595
Neuromusculoskeletal-other	169,243	3.9%	11.0	8.0	$812	$508
Neurologic	106,289	2.5%	16.1	12.0	$1,227	$812
Ankle/foot	101,176	2.3%	9.1	7.0	$665	$452
Cardiac/vascular/pulmonary	80,471	1.9%	15.1	11.0	$1,120	$701
Cognitive/mental	56,307	1.3%	14.8	11.0	$1,016	$693
Wrist/hand	39,568	0.9%	9.5	7.0	$705	$451
Edema	26,763	0.6%	9.1	5.0	$733	$378
Metabolic	22,741	0.5%	13.9	9.0	$986	$549
Elbow/forearm	12,659	0.3%	9.4	8.0	$684	$489
Spine	10,939	0.3%	9.7	8.0	$717	$504
Swallowing	8,923	0.2%	16.4	12.0	$1,156	$746
Skin-not decubitus	7,422	0.2%	12.0	5.0	$759	$289
Incontinence	5,335	0.1%	5.9	4.0	$423	$233
Skin-decubitus	3,760	0.1%	17.4	8.0	$925	$369
Amputation	3,533	0.1%	19.1	13.0	$1,418	$850
Spinal cord	2,308	0.1%	11.5	4.0	$938	$263

NOTES: CSC = Computer Science Corporation.

SOURCE: RTI International analysis of 2010 Medicare claims data for outpatient therapy services (see source file OutpatientTherapyEpisodes_byClassificationGroups_CY2010.xls, accompanying this report).

3.10.2 Occupational Therapy Utilization by CSC Classification Group

As shown in ***Table 33***, the 21 classification groups for occupational therapy (all groups except "Other") encompassed 77.0 percent of all OT episodes. Between CY2009 and CY2010, changes in the frequency of episodes remained fairly consistent. Episodes categorized as "Other" were the most frequent at 23.2 percent, followed by 15.8 percent in the Neuromusculoskeletal-Other group, and 12.0 percent in the Mobility group.

As with PT episodes, the longest and most expensive episodes belonged to the Amputation group. These episodes had an average of 18.4 treatment days and cost an average of

$1,378, but they were the least common of the OT classification groups. The Vision episodes were the shortest, lasting an average of only 2.8 days; these were also the least expensive episodes, costing an average of $289. The relationship between the median number of treatment days and payments for OT groups differed from the relationship exhibited for PT. For example, 9 OT classification groups, a cumulative 47.0 percent of the episodes, had between 10 and 14 treatment days in length and each of these groups averaged more than $1,000 per episode. This differs from PT where only 7 classification groups (21.5 percent of episodes) met the same criterion. Similarly, in 2009, 15 classification groups, accounting for about two-thirds of episodes, satisfied this episode-length criterion.

Table 33
OT episodes by CSC classification group, CY2010

CSC classification group–OT	Number of episodes	Percent of episodes	Mean episode days	Median episode days	Mean episode paid	Median episode paid
All	1,006,496	100.00%	12.4	8	$937	$551
Other	233,175	23.20%	10.4	6	$749	$390
Neuromusculoskeletal-other	159,048	15.80%	13.7	10	$1,047	$655
Mobility	120,423	12.00%	14.8	11	$1,184	$785
Neurologic	86,679	8.60%	14.8	10	$1,119	$689
Wrist/hand	70,410	7.00%	7.8	5	$559	$314
Cardiac/vascular/pulmonary	61,250	6.10%	15	11	$1,129	$724
Cognitive/mental	55,600	5.50%	13.6	10	$966	$607
Shoulder/upper arm	50,072	5.00%	12	9	$964	$663
Lumbar/sacral/thoracic	29,861	3.00%	9.7	5	$802	$398
Elbow/forearm	26,877	2.70%	9.1	6	$654	$410
Metabolic	21,705	2.20%	13.6	9	$1,006	$589
Multiple sites	20,936	2.10%	15.6	12	$1,221	$847
Hip/pelvis/thigh	15,250	1.50%	13.3	9	$1,027	$629
Edema	12,224	1.20%	8.5	5	$753	$417
Knee/leg	9,950	1.00%	10.2	7	$861	$561
Swallowing	9,281	0.90%	15	11	$1,082	$688
Cervical	9,245	0.90%	10.7	10	$1,053	$961
Vision	6,846	0.70%	2.8	1	$289	$153
Skin	3,941	0.40%	14.6	10	$1,051	$608
Ankle/foot	1,780	0.20%	11.6	7	$911	$504
Spinal cord	1,023	0.10%	10.8	4	$780	$261
Amputation	920	0.10%	18.4	13	$1,378	$823

NOTES: CSC = Computer Science Corporation; OT = occupational therapy.

SOURCE: RTI International analysis of 2010 Medicare claims data for outpatient therapy services (see source file OutpatientTherapyEpisodes_byClassificationGroups_CY2010.xls, accompanying this report).

3.10.3 Speech-Language Pathology Utilization by CSC Classification Group

As shown in ***Table 34***, seven specific CSC categories made up 59.9 percent of the services provided in SLP episodes. Following closely behind "Other" at 40.1 percent, the largest

group was for Swallowing conditions (34.2 percent). The Communication episodes had the greatest number of treatment days, at 15.4, followed by the Neurologic episodes (12.8 days) and the Cognitive episodes (12.1 days). Voice and Hearing episodes were the shortest, with an average of 3.9 and 4.4 days, respectively. These were also the least expensive episodes, with average payments of $308 (Voice) and $289 (Hearing). Table 34 indicates that the episode lengths are positively related to average payments among the SLP classification groups.

Table 34
SLP episodes by CSC classification group, CY2010

CSC classification group–SLP	Number of episodes	Percent of episodes	Mean episode days	Median episode days	Mean episode paid	Median episode paid
Total	492,382	100.0%	9.9	5.0	$812	$455
Other	197,402	40.1%	11.2	7.0	$885	$537
Swallowing	168,272	34.2%	6.9	2.0	$615	$213
Cognitive	48,562	9.9%	12.1	9.0	$974	$689
Neurologic	46,915	9.5%	12.8	8.0	$1,049	$643
Communication	14,857	3.0%	15.4	11.0	$1,096	$730
Voice	8,543	1.7%	3.9	2.0	$308	$156
Speech	7,004	1.4%	10.5	4.0	$838	$330
Hearing	827	0.2%	4.4	1.0	$289	$132

NOTES: CSC = Computer Science Corporation; SLP = speech-language pathology.

SOURCE: RTI International analysis of 2010 Medicare claims data for outpatient therapy services (see source file OutpatientTherapyEpisodes_byClassificationGroups_CY2010.xls, accompanying this report).

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