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Developing Outpatient Therapy Payment Alternatives (DOTPA): 2009 Utilization Report

Final Report

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DEVELOPING OUTPATIENT THERAPY PAYMENT ALTERNATIVES (DOTPA):
2009 UTILIZATION REPORT

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EXECUTIVE SUMMARY

ES.1 Background

In 2007, the Centers for Medicare and 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, 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 each other. Previously, outpatient therapy provided in (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 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 through December 31, 2011. The cap and exceptions method of payment addresses cost containment but does not address the fundamental issue of assuring 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 CY2009. 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 and 2008 (Kandilov, Lyda-McDonald, and Drozd, 2009; Lyda-McDonald, Munevar, Drozd, 2010).

ES.3 Key Results

The key results in this report are as follows:

- Medicare expenditures for outpatient therapy were over \$5.4 billion in CY2009. This represents a 13.1 percent increase from CY2008.¹ Almost three-quarters (73 percent) of the CY2009 expenditures were for PT, followed by 20 percent for OT and 7 percent for SLP. These proportions have changed only slightly since CY2002 (Ciolek and Hwang, 2004). However, since 1998, the proportion of Medicare expenditures for PT has risen by more than 10 percentage points, and the proportion of Medicare expenditures for OT and SLP services has fallen by at least 5 percentage points each (Olshen, Ciolek, and Hwang, 2002).
- PT users were, on average, younger than OT and SLP users. Mean expenditures per user increased with the age of the beneficiaries. Overall, average per-user expenditures from 2008 to 2009 increased 10 percent, from \$1,064 to \$1,166. This is an increase of 76 percent from the \$662 per-patient payment in CY1998 (Olshen, Ciolek, and Hwang, 2002).
- The growth rate of per-user expenditures from 2006 to 2009 in non-hospital settings was lower for patients whose expenditures on outpatient therapy services exceeded discipline-specific therapy financial limitations (“therapy cap”) than for the entire population of beneficiaries receiving outpatient therapy services. Per-user expenditures on outpatient therapy services provided in hospitals stayed the same overall, but rose for non-hospital Part B users who exceeded the therapy caps. Therefore, since the expenditure growth rates for all groups of patients in non-hospital settings was positive, but stayed the same or fell for hospital settings, the increase in per-user expenditures on outpatient therapy services from 2006 to 2009 was driven by increases in per-user expenditures in non-hospital settings for all users (those exceeding the caps and those not exceeding the caps).
- Similar to patterns found in 2008 and earlier years, outpatient therapy users in 2009 were disproportionately female. Almost two-thirds of outpatient therapy users were female.
- 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.

¹ Due to 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 percent changes in expenditures are not adjusted for inflation.

- 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 and OTTP). From 2004 to 2009, 10 percent fewer HOPDs, 36 percent fewer HHAs, and 43 percent fewer CORFs provided outpatient therapy services. The number of physicians and NPPs billing Medicare for outpatient therapy services also fell by 25 and 13 percent, respectively. In contrast, the number of PTPPs increased by 43 percent, and the number of OTTPs increased by 50 percent. As a result, the total number of providers increased by nearly 7 percent.²
- Facility settings still account for the greater proportion of outpatient therapy expenditures, with S/NFs accounting for almost one-third of payments in 2009 (34.5 percent). The demographic characteristic differing most by setting is age; relatively older patients, who have higher therapy expenditures on average, are more likely to be treated in facility-based settings. This association may be due to older patients' being more likely to be residents of a NF or to HOPDs' attracting relatively old patients for reasons that are unclear.
- The distributions of therapy expenditures across settings were fairly similar in both 2008 and 2009, with the exception of NPP and CORF settings that experienced losses for OT expenditures (69.2 percent and 30.5 percent, respectively). Also, SLP expenditures fell 2.1 percent in hospitals and PT expenditures fell 19.2 percent in CORFs.
- Expenditures increased significantly from CY2008 to CY2009 for S/NFs across all therapy types but less so for SLP. CORFs experienced a decline in expenditures in this time period for PT and OT, whereas NPPs experienced similar declines in OT only. HHAs saw a significant increase in OT expenditures over this time period.
- Similar to 2008, more than 80 percent of outpatient therapy users received only one type of therapy (PT, OT, or SLP) in 2009. 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 and OTTPs, 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.
- Almost 95 percent of all outpatient therapy claim lines and Medicare payments in both CY2008 and CY2009 were represented by just 15 Healthcare Common Procedure Coding System (HCPCS) codes.³ The specific services that made up the top 15 varied across settings.

² PTPP, OTTP, NPP, and Physician providers are counted as individual providers by PIN number.

³ HCPCS is a standardized coding system for claims processing used by Medicare and other insurers. The HCPCS identifies a number of products, supplies, and services not included in the CPT system. See <http://www.cms.hhs.gov/MedHCPCSGeninfo/>.

- 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 and SLP episodes. Comparing episodes across setting types, the longest and most expensive outpatient therapy episodes (for all three settings) occurred in S/NFs, CORFs, and ORFs.

SECTION 1 INTRODUCTION

In 2007, the Centers for Medicare and 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:

- Hospital Outpatient Departments (HOPDs)⁴
- Nursing Facilities
- 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), regardless of whether the facility is certified as a skilled nursing facility (SNF) and/or as a NF (together referred to as S/NFs in this report), are covered by Part B (as *outpatient therapy*⁵, *notwithstanding that the patient is normally a resident in the facility*) if the patient is not in a covered Part A SNF stay (i.e., if the patient's stay or residence in the facility is not preceded by a qualifying 3-day Part A hospitalization or has extended beyond the 100-day Part A SNF stay coverage limit). Therapy services provided by a 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.⁶

⁴ Throughout this report, when a setting is referred to as a "hospital," we are referring to a hospital outpatient department (HOPD).

⁵ Throughout this report, the terms "outpatient therapy" and "rehabilitation therapy" are used interchangeably,

⁶ See Sections 220 and 230 of Chapter 15 of the Medicare Benefit Policy Manual (CMS, 2009).

In order for a therapy service to be covered by Part B, several criteria must be met. First, a patient must have a need for rehabilitation therapy that can safely and appropriately be provided on an outpatient basis (including residents of a nursing facility). The services must be provided by (and must need to be provided by) a licensed therapist.⁷ In other words, the services must be sufficiently complex that a licensed therapist must perform or supervise them. In addition, for the services to be covered, there must be a reasonable expectation that the patient will make a significant improvement in his or her condition 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 in order for the services to be covered.

Second, there must be a plan of care established before the patient can receive covered outpatient therapy services. The plan of care 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 non-physician practitioner (NPP) or the therapist providing services under that plan of care.

Third, the patient must be under the care of a physician or NPP. A physician (or NPP) must certify the plan of care, and a physician or NPP cannot certify a plan of care for a patient not under their care. A plan of care is certified for a maximum of 90 days (less than 90 days if the plan of care duration is less than 90 days). A plan of care can be recertified every 90 days subject to review for need for therapy and need to modify the plan of care.

Finally, documentation standards must be met. The therapist must maintain a written copy of the plan of care and certifications of this plan. Progress reports, treatment notes, and evaluations must also be retained.

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, outpatient therapy services furnished by most providers were moved to a fee schedule to be more consistent with other outpatient payment methodologies and with each other. Previously, outpatient therapy provided in S/NFs, ORFs, and CORFs was paid on a reasonable-cost basis.⁸ 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

⁷ In the case of physical and occupational therapy, they can be provided under the supervision of a licensed therapist.

⁸ Critical access hospitals are an exception; their outpatient therapy services continue to be provided on a reasonable-cost basis.

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 through December 31, 2011. The exceptions process is a refinement of the therapy caps, not an alternative. The cap and exceptions methods of payment addresses cost containment but does not address the fundamental issue of assuring that appropriate therapy services are provided to the beneficiary efficiently. The cap levels for CY2009 were \$1,840 for PT and SLP combined and \$1,840 for OT.

Prior to July 1, 2009, SLPs were not able to bill Medicare directly for their services; instead, their services were billed by an institution (e.g., HOPD, nursing facility, etc.), physician, or NPP. However, as legislated through the Medicare Improvements for Patients and Providers Act (MIPPA) of 2008, SLPs in private practices have been able to bill Medicare directly. As a result, in this report (covering CY2009) some portion of SLP services indicated as provided by physicians or NPPs may be provided by SLPs. However, subject to state regulations and local Medicare Carrier/Medicare Administrative Contractor (MAC) discretion, therapy services can be provided directly by physicians and NPPs.

1.2 Purpose

The purpose of this report is to provide descriptive information about the utilization of and expenditures for outpatient therapy services in CY2009. 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 and 2008 (Kandilov, Lyda-McDonald, and Drozd, 2009; Lyda-McDonald, Munevar, Drozd, 2010).

1.3 Organization of This Report

This report is organized as follows. Section 2 of this report describes the analytic data file construction process. Section 3 presents the main results. This section is organized into subsections presenting CY2009 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.

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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 this report, RTI used 100 percent of outpatient therapy fee for service (FFS) claims with dates of service between January 1, 2009, and December 31, 2009, as retrieved from the Centers for Medicare and Medicaid Services (CMS) National Claims History in November 2010. 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)—therapy claims come from the Outpatient file. For outpatient therapy occurring in a private practice or physician’s office⁹—that is, physical therapist in private practice (PTPP), occupational therapist in private practice (OTPP), physician, and non-physician practitioner (NPP)—therapy claims come from the Carrier/Noninstitutional file.

To identify outpatient therapy claims in the Outpatient file, we used the method used by Ciolek and Hwang (2006, 2008), which uses outpatient therapy billing requirements published in Chapter 5 of the Medicare Claims Processing Manual (CMS, 2009b). Claims submitted by institutional providers using a UB-04 form 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), or with one or more Healthcare Common Procedure Coding System (HCPCS) codes in the CMS Therapy Code List for 2009 (see Table 1)¹⁰ were retrieved through the CMS Data Extract System (DESY). Claims submitted by non-institutional providers using a CMS-1500 form with a specialty code of 65 (physical therapy) or 67 (occupational therapy), or with one or more HCPCS codes in the CMS Therapy Code List, were retrieved through DESY.¹¹ Further, only services on the CMS Therapy Code List with the required therapy modifiers (GN for speech/language pathology, GO for occupational therapy, and GP for physical therapy) were included in the analyses presented in this report.

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.

¹⁰ 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.

¹¹ SLP specialty codes were not part of claims extraction specification. SLPs were not able to bill independently until 7/1/09. We do not believe the amount of missing data is large based on growth rates from settings where SLP services are captured in our data, such as physician offices.

**Table 1
Therapy Codes, CY2009**

| 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 | Yes | No | No |
| 64550 | apply neurostimulator | No | No | No | No |
| 0183T | Low frequency, non-contact, non-thermal ultrasound | Yes | Yes | 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 |
| 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 |
| 95992 | Canalith repositioning proc | No | No | Yes | 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 eg, microwave | Yes | No | No | No |
| 97026 | infrared therapy | Yes | No | No | No |
| 97028 | ultraviolet therapy | Yes | No | No | No |
| 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 |

(cont.)

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**Table 1 (continued)
Therapy Codes, CY2009**

| HCPCS code | Description | Always therapy | Carrier-priced | Bundled with other therapy codes | Paid under HOPPS if billed by HOPD |
|------------|------------------------------|----------------|----------------|----------------------------------|---|
| 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 mngmt training | Yes | No | No | No |
| 97537 | community/work reintegration | Yes | No | No | No |
| 97542 | wheelchair mngmt training | Yes | No | No | No |
| 97597 | active wound care/20 cm or < | No | No | No | No |
| 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).

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SOURCE: Annual Therapy Update: 2009 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 physician office settings (PTPP, OTPP, 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 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 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 following 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), with exceptions. Each therapy episode begins with a beneficiary's first date of service for that type of therapy (physical therapy [PT], occupational therapy [OT], or speech language therapy [SLP]) in the calendar year, or the first date of service that is preceded by a 60-day period without any services of that discipline. The episode continues through the last date of service in the calendar year, or the last date of service that precedes a 60-day period without any services of 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. Note that this definition differs from the regulatory definition of an episode. This definition of an episode may result in the inclusion of some "partial" episodes in the analysis/tables - those that began before January 1, 2009 and those that ended after December 31, 2009. This means that the average cost of an episode will be understated.

Also, in this report, an episode is only discipline-specific, not discipline- and setting-specific. The reason for the less restrictive definition of an episode is to understand when patients receive similar (same discipline) services from multiple settings.

The primary 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. Likewise, the secondary diagnosis of the episode is the second diagnosis code listed on the first claim line of an episode.

SECTION 3
CY2009 OUTPATIENT THERAPY UTILIZATION

3.1 Outpatient Therapy Utilization—Overall Results

During CY2009, a total of 4,630,593 individuals received physical therapy (PT), occupational therapy (OT), or speech language pathology (SLP) services. This represents 13.5% of the 34,293,550 FFS beneficiaries. PT had the most users at 4,096,735, followed by OT with 1,025,629 users, and SLP with 513,675 users. 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 CY2009 was \$5,399,603,418. This is more than a \$626 million (13 percent) increase from CY2008 (see Lyda-McDonald, Munevar, and Drozd, 2010, for details on CY2008 outpatient therapy utilization). PT services (\$3,941,005,259) accounted for 73.0 percent of the total payments, while OT services (\$1,080,240,890) accounted for 20.0 percent, and SLP services (\$378,357,269) accounted for 7.0 percent of total outpatient therapy payments. The largest fraction (88.5 percent) of therapy users received PT services, followed by OT with 22.1 percent of users and SLP with 11.1 percent of users. OT had the highest mean payments per user (\$1,053), followed by PT (\$962) and SLP (\$737). PT had the highest median payments per user (\$602), followed by OT (\$568) then SLP (\$378). OT also had the highest mean payment per episode (\$918), followed by PT (\$830) and SLP (\$655).

Table 2
Summary of outpatient therapy expenditures, CY2009

| 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 | 4,630,593 | 100.0% | \$5,399,603 | 100.0% | \$1,166 | \$617 | \$801 |
| PT | 4,096,735 | 88.5% | \$3,941,005 | 73.0% | \$962 | \$602 | \$830 |
| OT | 1,025,629 | 22.1% | \$1,080,241 | 20.0% | \$1,053 | \$568 | \$918 |
| SLP | 513,675 | 11.1% | \$378,357 | 7.0% | \$737 | \$378 | \$655 |

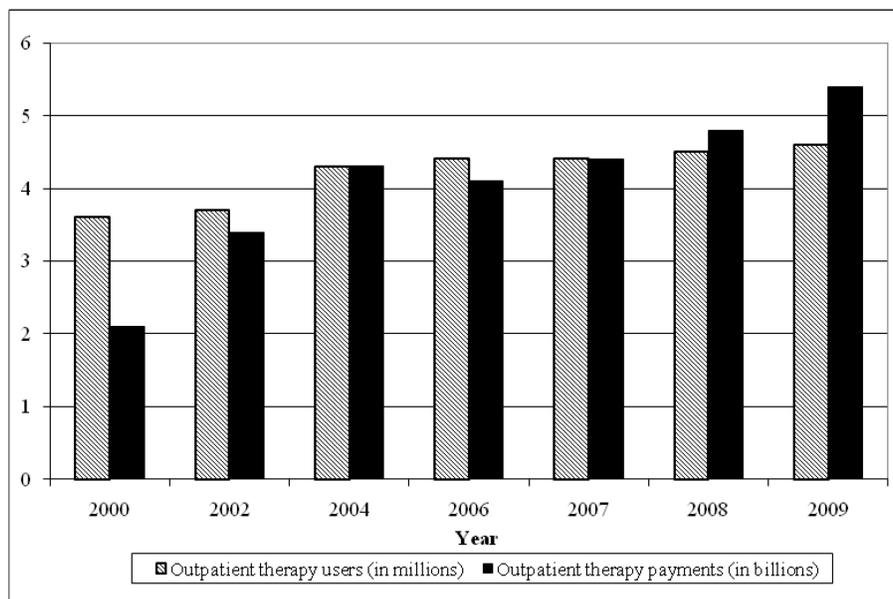
NOTE: The sum of number of therapy users for each discipline exceeds the total number of users since some users receive therapy from multiple disciplines. Likewise, the sum of the discipline-specific percent of users exceeds 100 percent.

* See Section 2.3 for episode definition.

SOURCE: RTI International analysis of 2009 Medicare claims data for outpatient therapy services (See source files AnnualUserExpenditures_byTherapyType_1-100Percentile_CY2009.xls; OutpatientEpisodesbyDiagnosis_OT_CY2009.xls; OutpatientEpisodesbyDiagnosis_PT_CY2009.xls; OutpatientEpisodesbyDiagnosis_SLP_CY2009.xls; OutpatientTherapyDemographics_CY2009.xls).

Figure 1 shows that the total number of outpatient therapy users has increased steadily 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 decreased by 3.9 percent from CY2004 levels. This decrease in expenditures was associated with both the resumption of therapy caps (sunsetting of the moratoria on the caps) implemented by the Deficit Reduction Act of 2006 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, and in 2009 to \$1,860. Exceptions to the therapy caps were available beginning in 2006 based on the conditions and co-morbidities of the beneficiaries. In fact, because of the mitigating effect of the exceptions process on the therapy caps, the documentation requirement clarifications may have applied more downward pressure to expenditures than did the sunsetting of the therapy cap moratoria. From CY2006 to CY2007, expenditures increased by 6.6 percent, and from CY2007 to CY2009, total program expenditures for outpatient therapy rose by an additional 23.3 percent. The increase between CY2007 and CY2009 was primarily due to the large jump in outpatient therapy payments per user and less a factor of increases in therapy users (4.9% increase in users, from 4.4 million in CY2007 to 4.6 million in CY2009). A factor that may have contributed to this increase was the automatic exceptions process, introduced January 1, 2007, which meant that all claims hitting the cap were automatically evaluated for the exceptions process. Prior to that date, there was also a manual process for exceptions.

Figure 1
Total outpatient therapy users and expenditures, CY2000–CY2009



SOURCE: RTI International analysis of 2009 Medicare claims data for outpatient therapy services (See source files OutpatientTherapyDemographics_CY2006.xls; OutpatientTherapyDemographics_CY2007.xls; OutpatientTherapyDemographics_CY2008.xls; and OutpatientTherapyDemographics_CY2009.xls); Lyda-McDonald, Munevar, and Drozd (2009); Ciolek and Hwang (2004, 2006, 2008); and Olshen, Ciolek, and Hwang (2002).

The two annual therapy caps (one for the combination of PT and SLP services, 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 non-hospital settings. The first column of this table provides the percentages of paid amounts for hospital versus other settings. The next two columns give the growth rates in paid amounts from 2004 to 2006 and from 2006 to 2009. From 2004 to 2006, the average 3.9 percent reduction in paid amounts was distributed relatively evenly across hospital and non-hospital settings. However, after 2006, total paid amounts in non-hospital settings increased markedly (by 38.3 percent over 3 years), whereas total paid amounts to hospitals only increased by 3.9 percent. This is because mean payments in hospitals decreased slightly by \$1 between 2006 and 2009 with little change in the number of users, but the mean payments in non-hospital settings increased by nearly \$300. The fourth column of this table presents the growth rate from 2006 to 2009 in users of each type of setting. Although the number of users of non-hospital settings grew faster than users of hospitals for outpatient therapy (a 5.7 percent increase versus a 4.1 percent increase), the growth in total expenditures was largely driven by increases in average paid amounts per user, as shown in the fifth column.

Table 3
Growth rates of total paid amounts, number of therapy users, and paid amounts per user, hospital versus non-hospital settings, 2006–2009

| Setting | Setting share of total expenditures | Percent change in total paid, 2004–2006 | Percent change in total paid, 2006–2009 | Percent change in users of each setting, 2006–2009 | Percent change in average total paid per user, 2006–2009 |
|--------------|-------------------------------------|---|---|--|--|
| All settings | 100.0% | –3.9% | 31.5% | 5.1% | 25.1% |
| Hospital | 15.5% | –3.7% | 3.9% | 4.1% | –0.2% |
| Non-hospital | 84.5% | –4.0% | 38.3% | 5.7% | 30.8% |

SOURCE: RTI International analysis of 2006 and 2009 Medicare claims data for outpatient therapy services (See source files *OutpatientTherapyDemographics_bySetting_CY2009.xls*, *OutpatientTherapyDemographics_CY2006.xls*); Lyda-McDonald, Munevar, and Drozd (2010).

Table 4 summarizes changes from 2006 to 2009 in mean allowed charges for all users of therapy services, for users who exceeded the combined PT/SLP cap, for users who exceeded the OT cap, and for users who exceeded either one or both of the caps for with any hospital use or only non-hospital setting use. The first three rows of this table summarize allowed charges and number of users for all users of outpatient therapy services. Allowed charges totals were used to determine whether a user exceeded either of the caps. As shown previously, expenditures per user (as represented here by mean allowed charges per user by setting) for those receiving any hospital-provided service in 2009 are the same as they were in 2006, whereas those for solely non-hospital settings rose markedly. The next three rows of this table present the same information for therapy users whose annual allowed charges exceeded the combined PT/SLP cap. Not surprisingly, their average allowed charges are much higher than those for the full outpatient therapy population (since these patients needed to have non-hospital PT plus SLP allowed charges above the cap). The non-hospital allowed charges for these patients grew more slowly than those of the total outpatient therapy-using population (18.6 percent vs. 32.6 percent). The results for patients exceeding the OT cap are similar, except that average allowed charges

for these patients are more than 50 percent higher than the average for patients exceeding the PT cap and more than five times higher than the average for the overall outpatient therapy-using population. Results for all patients exceeding at least one of the caps are similar to that of those exceeding the PT/SLP cap since the number of users of outpatient therapy services exceeding the PT/SLP cap is nearly three times as large as that of users exceeding the OT cap.

Patients exceeding both therapy caps had mean allowed charges that were higher than any of the other groups at \$8,928. Mean allowed charges for any hospital use were similar to the two separate groups exceeding the individual therapy caps. However, the mean allowed charges for only non-hospital settings (\$8,881) were higher than both the charges for patients exceeding the OT cap (\$7,458) and the charges for patients exceeding the PT/SLP cap (\$4,621). These mean allowed charges are all higher than the group of patients exceeding either cap, but the group of patients is much smaller (166,884 patients exceeding both caps; 838,411 exceeding either cap).

Table 4
Summary of changes in allowed charges per outpatient therapy user, for all users of therapy services and those exceeding therapy caps, CY2006–CY2009

| Patient population and year | Mean Allowed Charges: All Providers | Mean Allowed Charges: Hospital- Provided Services | Mean Allowed Charges: Non-Hospital- Provided Services | Mean Allowed Charges: Number of patients |
|--|--|---|---|---|
| All patients, 2006 | \$1,165 | \$229 | \$936 | 4,404,774 |
| All patients, 2009 | \$1,469 | \$229 | \$1,241 | 4,630,593 |
| Percent change, all patients, 2006–2009 | 26.1% | 0% | 32.6% | 5.1% |
| Patients exceeding PT/SLP cap, 2006 | \$3,947 | \$50 | \$3,897 | 526,306 |
| Patients exceeding PT/SLP cap, 2009 | \$4,666 | \$45 | \$4,621 | 776,950 |
| Percent change, patients exceeding PT/SLP cap, 2006–2009 | 18.2% | –9.5% | 18.6% | 47.6% |
| Patients exceeding OT cap, 2006 | \$6,070 | \$46 | \$6,025 | 145,432 |
| Patients exceeding OT cap, 2009 | \$7,501 | \$43 | \$7,458 | 228,345 |
| Percent change, patients exceeding OT cap, 2006–2009 | 28.7% | –6.5% | 23.8% | 57.0% |
| Patients exceeding either cap, 2006 | \$3,892 | \$49 | \$3,843 | 574,899 |
| Patients exceeding either cap, 2009 | \$4,590 | \$44 | \$4,546 | 838,411 |
| Percent change, patients exceeding either cap, 2006–2009 | 17.9% | –10.2% | 18.3% | 45.8% |
| Patients exceeding both caps, 2006 | \$7,465 | \$50 | \$7,414 | 96,839 |
| Patients exceeding both caps, 2009 | \$8,928 | \$47 | \$8,881 | 166,884 |
| Percent change, patients exceeding both caps, 2006–2009 | 19.6% | –6.0% | 19.8% | 72.3% |

SOURCE: RTI International analysis of 2006 and 2009 Medicare claims data for outpatient therapy services.

Table 5 summarizes program expenditures, the number of users, and annual expenditures per user for each therapy discipline from CY2002 through CY2009. From CY2008 to CY2009, PT users increased by 3.6 percent while expenditures increased by 12.6 percent. This represents an increasing growth in the number of users per year compared to previous 1-year periods (0.08 percent increase from CY2006 to CY2007, 2.0 percent increase from CY2007 to CY2008). There has also been a rebound in expenditure growth for PT services (which fell between 2004 and 2006). From CY2008 to CY2009, the number of OT users increased by 5.0 percent, and SLP users increased by 7.1 percent. For both of these disciplines, this is an increase in the growth rate of the number of users from both the CY2006 to CY2007 and CY2007 to CY2008 periods (OT: 2.0 percent increase from CY2006 to CY2007, and 4.6 percent increase from CY2007 to CY2008; SLP: 2.2 percent increase from CY2006 to CY2007, and 5.4 percent increase from CY2007 to CY2008). Expenditures for these two disciplines increased by 15.6 percent and 11.8 percent, respectively, from CY2008 to CY2009, a turnaround from small declines in expenditures from CY2004 to CY2006. The growth of OT expenditures over previous 1-year periods has been larger than the growth in SLP expenditures during the same time, which have remained relatively steady (OT: 10.0 percent increase from CY2006 to CY2007, and 12.4 percent increase from CY2007 to CY2008; SLP: 10.8 percent increase from CY2006 to CY2007, and 11.9 percent increase from CY2007 to CY2008).

Table 5
Summary of outpatient therapy expenditures, users, and per user expenditures,
by discipline, CY2000–CY2009

| Year | 2002 | 2004 | 2006 | 2007 | % Change 2006-2007 | 2008 | % Change 2007-2008 | 2009 | % Change 2008-2009 |
|---------------------------------|-------------|-------------|-------------|-------------|-----------------------|-------------|-----------------------|-------------|-----------------------|
| 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% |
| OT Expenditures (\$ thousands) | \$611,907 | \$770,862 | \$756,124 | \$831,594 | 10.0% | \$934,480 | 12.4% | \$1,080,241 | 15.6% |
| SLP Expenditures (\$ thousands) | \$236,203 | \$274,638 | \$273,170 | \$302,551 | 10.8% | \$338,448 | 11.9% | \$378,357 | 11.8% |
| 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% |
| OT Users | 745,241 | 888,725 | 915,867 | 933,826 | 2.0% | 976,397 | 4.6% | 1,025,629 | 5.0% |
| SLP Users | 367,783 | 433,048 | 445,389 | 455,248 | 2.2% | 479,834 | 5.4% | 513,675 | 7.1% |
| PT Expenditures per User | \$771.78 | \$863.61 | \$794.03 | \$836.21 | 5.3% | \$884.92 | 5.8% | \$961.99 | 8.7% |
| OT Expenditures per User | \$821.09 | \$867.38 | \$825.58 | \$890.52 | 7.9% | \$957.07 | 7.5% | \$1,053.25 | 10.0% |
| SLP Expenditures per User | \$642.24 | \$634.20 | \$613.33 | \$664.59 | 8.4% | \$705.34 | 6.1% | \$736.57 | 4.4% |

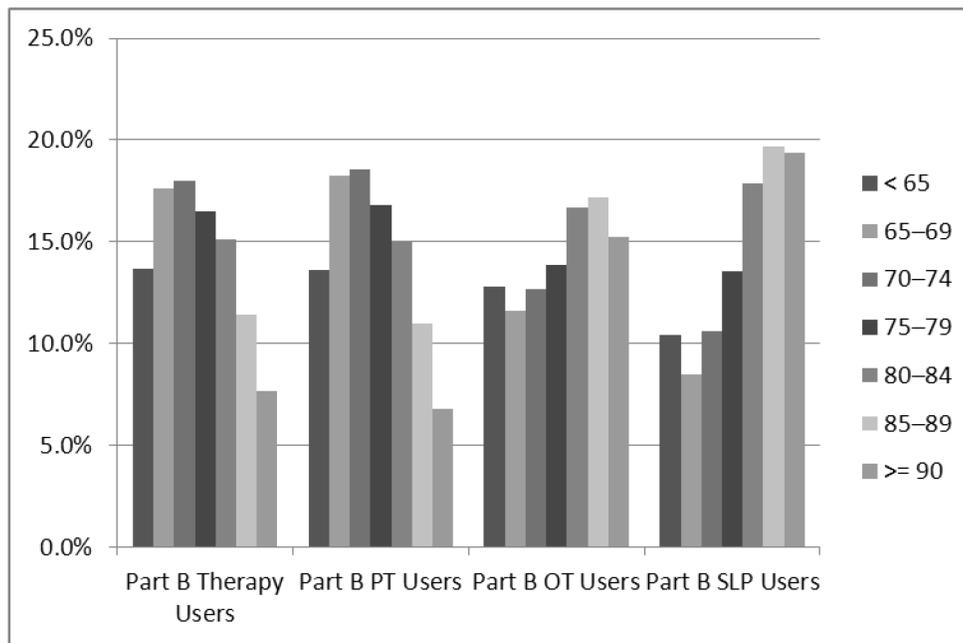
NOTE: For CY2000 and earlier, Olshen, Ciolek, and Hwang (2002) were unable to identify a specific discipline for some claims due to data reporting and documentation issues. Olshen, Ciolek, and Hwang (2002) did not tabulate the number of unique users by discipline.

SOURCE: RTI International analysis of 2009 Medicare claims data for outpatient therapy services (See source files OutpatientTherapyDemographics_CY2009.xls); Lyda-McDonald, Munevar, and Drozd (2010); Ciolek and Hwang (2004, 2006, 2008); and Olshen, Ciolek, and Hwang (2002).

3.2 Outpatient Therapy Utilization by Beneficiary Age

The age distribution of outpatient therapy users varied by therapy discipline in CY2009, as shown in **Figure 2**. The largest age group of all therapy users was 70–74 years (18.0 percent), which was the same largest group for PT users (18.6 percent). The share of PT users rose from ages younger than 65 to a peak at age 70–74 and then steadily declined to a low for patients 90 or older (6.8% of PT users). For both OT and SLP, the proportion of therapy users who were under 65 was larger than the proportion who was aged 65–69. After this point, the percentage of OT and SLP users in each age group rose until users peaked at age 85–89 (17.2 percent and 19.7 percent, respectively). Users that were 90 or older utilized OT (15.3 percent) and SLP (19.4 percent) services more than PT users in the same age group (6.8 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).

Figure 2
Outpatient therapy user age group distribution, CY2009



SOURCE: RTI International analysis of 2009 Medicare claims data for outpatient therapy services (See source file *OutpatientTherapyDemographics_CY2009.xls*).

Expenditures per user based on age group varied as well, as shown in **Table 6**. With few exceptions, annual therapy expenditures per user rose steadily across age groups, beginning at \$996 per user for those under age 65, with a small dip to \$991 per user aged 65–69, and increasing to \$1,601 per user for those ages 90 or over. This pattern is true for PT, with the minimum annual expenditure per user of \$835 for those under 65 and a maximum annual expenditure of \$1,129 for those ages 90 or over, compared to the mean of \$962 for that discipline. The low for OT services was \$932 for ages 65–69 and the high was \$1,141 for ages 85–89, while the mean was \$1,053. Expenditures per user for SLP were at a minimum of \$647 for those 65–69, peaked at \$802 for those aged 85–89, and the mean was \$737.

Table 6
Outpatient therapy annual per user expenditures, by age group, CY2009

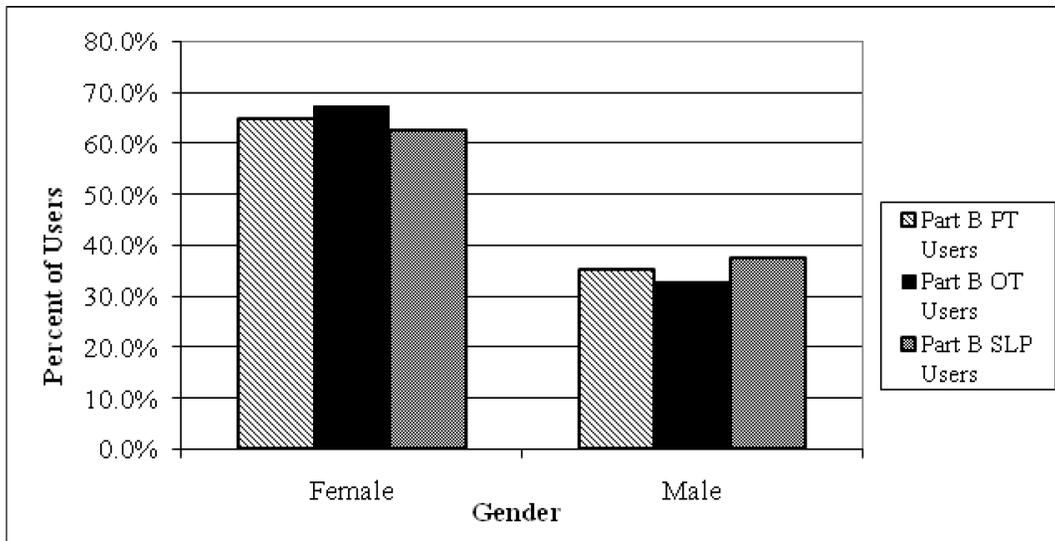
| Age | Number of therapy users | Annual therapy expenditures per user | Annual PT expenditures per PT user | Annual OT expenditures per OT user | Annual SLP expenditures per SLP user |
|-------|-------------------------|--------------------------------------|------------------------------------|------------------------------------|--------------------------------------|
| Total | 4,630,593 | \$1,166 | \$962 | \$1,053 | \$737 |
| < 65 | 633,444 | \$996 | \$835 | \$987 | \$653 |
| 65–69 | 817,103 | \$991 | \$898 | \$932 | \$647 |
| 70–74 | 832,956 | \$1,066 | \$949 | \$1,003 | \$669 |
| 75–79 | 764,476 | \$1,133 | \$971 | \$1,033 | \$717 |
| 80–84 | 698,553 | \$1,252 | \$1,006 | \$1,085 | \$766 |
| 85–89 | 529,712 | \$1,442 | \$1,072 | \$1,141 | \$802 |
| ≥ 90 | 354,360 | \$1,601 | \$1,129 | \$1,128 | \$778 |

SOURCE: RTI International analysis of 2009 Medicare claims data for outpatient therapy services (See source file OutpatientTherapyDemographics_CY2009.xls).

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. In CY2009, women made up 64.8 percent of PT users, 67.1 percent of OT users, and 62.5 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).

Figure 3
Outpatient therapy users, by gender and therapy discipline, CY2009



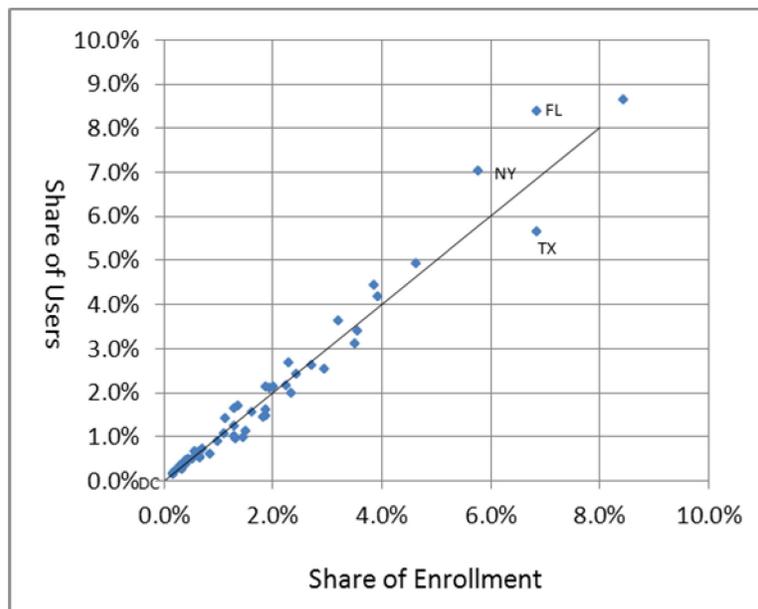
SOURCE: RTI International analysis of 2009 Medicare claims data for outpatient therapy services (See source file OutpatientTherapyDemographics_CY2009.xls).

3.4 Outpatient Therapy Utilization by State

Outpatient therapy use and spending varied by geographic location. Five states accounted for 34.7 percent of all outpatient therapy users. California led with 8.7 percent of all therapy users, followed by Florida (8.4 percent), New York (7.0 percent), Texas (5.7 percent), and Illinois (4.9 percent). States where 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) to the state's share of Medicare fee-for-service (FFS) enrollment (horizontal axis). Most states' ratios of the share of therapy users to the share of FFS enrollees are between 0.78 and 1.25. The solid diagonal line indicates equality of the outpatient therapy shares and the FFS enrollee shares. Two states (New York and Florida, marked on graph) have outlier shares of nationwide outpatient therapy users well above their Medicare FFS enrollee shares. And, one state (Texas, marked on graph) has an outlier share of nationwide outpatient therapy users well below their Medicare FFS enrollee shares.

Figure 4
Shares of Medicare FFS beneficiaries and users of outpatient therapy, by state, CY2009



SOURCE: RTI International analysis of 2009 Medicare claims data for outpatient therapy services (See source file OutpatientTherapyDemographics_CY2009.xls); Medicare Data Compendia for 2008 and 2009 (CMS, 2008, 2009).

Now we will look at the individual therapy disciplines' share of therapy use by state, beginning with PT. The mean annual expenditure per PT user varied among states. Looking at *Table 7*, you can see that the set of states with the most and least PT users is different from the states that are the most and least costly. New York led with an annual expenditure per user of \$1,282, followed by New Jersey (\$1,260), Florida (\$1,185), Maryland (\$1,148), and Louisiana

(\$1,141). The lowest expenditures were in North Dakota (\$428), Minnesota (\$544), Iowa (\$581), Wisconsin (\$640), and Oregon (\$647).

Table 7
States with greatest and smallest mean Medicare outpatient therapy payments per user,
by discipline, CY2009

| Status | PT state | PT mean paid | OT state | OT mean paid | SLP state | SLP mean paid |
|--------------|----------|--------------|----------|--------------|-----------|---------------|
| Least costly | ND | \$428 | ND | \$382 | ND | \$343 |
| 2nd | MN | \$544 | IA | \$465 | IA | \$379 |
| 3rd | IA | \$581 | MT | \$499 | NY | \$400 |
| 4th | WI | \$640 | OR | \$539 | AZ | \$433 |
| 5th | OR | \$647 | MN | \$554 | SD | \$441 |
| 46th | LA | \$1,141 | KY | \$1,176 | FL | \$860 |
| 47th | MD | \$1,148 | TX | \$1,388 | DC | \$912 |
| 48th | FL | \$1,185 | MS | \$1,482 | TX | \$1,009 |
| 49th | NJ | \$1,260 | LA | \$1,515 | LA | \$1,360 |
| Most costly | NY | \$1,282 | FL | \$1,614 | MS | \$1,459 |

SOURCE: RTI International analysis of 2009 Medicare claims data for outpatient therapy services (See source file OutpatientTherapyDemographics_CY2009.xls).

Similar to PT, the set of states with the most and least OT users is different from the states that are the most and least costly. Florida had the highest mean annual expenditure per OT user at \$1,614, followed by Louisiana (\$1,515), Mississippi (\$1,482), Texas (\$1,388), and Kentucky (\$1,176). The lowest payments were in North Dakota (\$382), followed by Iowa (\$465), Montana (\$499), Oregon (\$539), and Minnesota (\$554).

Again, the groups of states with the top five highest and lowest mean annual expenditures per SLP user were different from the states with the highest and lowest percentage of SLP therapy users. Mississippi led with a mean annual expenditure per SLP user of \$1,459, followed by Louisiana (\$1,360), Texas (\$1,009), the District of Columbia (\$912), and Florida (\$860). The lowest mean annual expenditure per SLP user was in North Dakota (\$343) followed by Iowa (\$379), New York (\$400), Arizona (\$433), and South Dakota (\$441).

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

- The number of providers in each discipline
- Case mix of the state populations
- Differing practice patterns
- Differing local coverage determination policies

3.5 Outpatient Therapy Utilization by Provider Setting

The overall number of outpatient therapy providers increased from 93,459 in CY2004 to 100,398 in CY2009; however the trends have varied depending on the particular setting. **Table 8** details these trends. Note, in the Outpatient file, a ‘provider’ is a facility (Hospital, SNF, CORF, ORF, HHA). In the Carrier file, a ‘provider’ is an individual therapist, physician, or non-physician provider in a particular office setting. The percentage change in providers of outpatient therapy services has been negative for hospitals (-10.3 percent), comprehensive outpatient rehabilitation facilities (CORFs; -42.9 percent), outpatient rehabilitation facilities (ORFs; -19.8 percent), home health agencies (HHAs; -36.4 percent), Physicians (-25.2 percent), and non-physician practitioners (NPPs; -13.3 percent). Settings that have experienced an increase in the number of providers of outpatient therapy services include S/NFs (2.5 percent), physical therapists in private practice (PTPPs; 43.4 percent), and occupational therapists in private practice (OTPPs; 50.1 percent). PTPPs (48,329), Physicians (24,062), and S/NFs (14,447) continued to have the largest number of providers in CY2009. The settings constituting the fewest numbers of providers were HHAs (173), followed by CORFs (350) and NPPs (773).

Table 8
Number of outpatient therapy providers, CY2004–CY2009

| Setting | Providers in CY2004 | Providers in CY2006 | Providers in CY2008 | Providers in CY2009 | Percent change, CY2004–2009 |
|--------------|------------------------|------------------------|------------------------|------------------------|--------------------------------|
| Hospital | 5,326 | 4,958 | 4,950 | 4,777 | -10.3% |
| S/NF | 14,088 | 14,267 | 14,381 | 14,447 | 2.5% |
| CORF | 613 | 553 | 409 | 350 | -42.9% |
| ORF | 2,569 | 2,509 | 2,215 | 2,060 | -19.8% |
| HHA | 272 | 275 | 199 | 173 | -36.4% |
| PTPP* | 33,704 | 41,980 | 47,157 | 48,329 | 43.4% |
| OTPP* | 3,790 | 4,824 | 5,618 | 5,687 | 50.1% |
| Physician* | 32,205 | 26,783 | 25,082 | 24,062 | -25.2% |
| NPP* | 892 | 768 | 771 | 773 | -13.3% |
| Total | 93,459 | 96,917 | 100,782 | 100,398 | 7.4% |

*These providers are found in the Carrier file, which counts the number of providers as the number of individual therapists, physicians, or non-physician providers in an office setting, not the numbers of facilities offering these services.

SOURCE: RTI International analysis of 2009 Medicare claims data for outpatient therapy services (See source file **NumberOutpatientTherapyProviders_CY2009.xls**); and Ciolek and Hwang (2006).

Table 9 presents the amount paid for outpatient therapy and number of claim lines based on setting. S/NFs received the largest percentage of paid dollars with 34.5 percent and had the fourth highest amount paid per line (\$34.28). Hospitals received the largest amount per line (\$36.97), but only accounted for 15.5 percent of all paid dollars. NPPs had the lowest amount paid per line (\$26.29) and accounted for 0.1 percent of paid dollars. The differences in payments per claim line are driven by the mix of services provided across the different settings.

Table 9
Outpatient therapy Medicare expenditures and average paid per line item, by setting, CY2009

| Setting | Claim lines | Paid | Percent of paid dollars | Average paid per line |
|-----------|-------------|-----------------|-------------------------|-----------------------|
| All | 163,645,496 | \$5,399,603,418 | 100.0% | \$33.00 |
| Hospital | 22,697,274 | \$839,183,110 | 15.5% | \$36.97 |
| S/NF | 54,358,596 | \$1,863,311,048 | 34.5% | \$34.28 |
| CORF | 4,281,145 | \$124,017,767 | 2.3% | \$28.97 |
| ORF | 18,748,373 | \$599,461,891 | 11.1% | \$31.97 |
| HHA | 91,310 | \$3,189,643 | 0.1% | \$34.93 |
| PTPP | 50,527,362 | \$1,589,511,878 | 29.4% | \$31.46 |
| OTPP | 3,101,003 | \$108,817,893 | 2.0% | \$35.09 |
| Physician | 9,715,107 | \$268,815,291 | 5.0% | \$27.67 |
| NPP | 125,326 | \$3,294,897 | 0.1% | \$26.29 |

SOURCE: RTI International analysis of 2009 Medicare claims data for outpatient therapy services (See source file HCPCS_UtilizationSummary_by Setting_all_CY2009.xls).

Total annual expenditures in each setting varied primarily as a result of the number of claim lines. 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 CY2009 was 163,645,496. The setting with the most outpatient therapy claim lines was S/NF (54,358,596), followed by PTPPs (50,527,362) and Hospitals (22,697,274). The lowest numbers of outpatient therapy claims were in HHAs (91,310) and NPPs (125,326). Compared to 2008, CORFs had a decrease in the number of claim lines (data not shown). Of the others who had an increase in claim lines, the percentage increase in claim lines was 3 percent at Hospitals, 10 percent at PTPPs, 18 percent at S/NFs, 4 percent at ORFs, 8 percent at HHAs, 22 percent at OTPP, 3 percent at Physicians, and 8 percent at NPPs (data not shown).

Table 10 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 amount that providers can bill Medicare for services, while the paid amount is the actual amount paid by Medicare for those services. Of the therapy settings, PTPPs had the most Part B therapy users with 1,613,915, followed by Hospitals (1,494,392) and S/NFs (858,213). The lowest numbers of users were in HHAs (3,903), NPPs (8,262), and CORFs (54,285). Females were the

largest percentage of users in each outpatient therapy setting, with the highest percentage in S/NFs (70.1 percent). The mean age of users varied from 70.1 years to 81.9 years depending on the provider setting. NPPs had the lowest mean age of 70.1 and S/NFs had the highest mean age of 81.9. CORFs had the highest mean payments per outpatient therapy user with \$2,285, compared to the mean payment across all providers of \$1,166. The lowest mean payment per user among facility providers was Hospitals at \$562. The mean payment for noninstitutional providers was \$951 (data not shown). Of noninstitutional providers, PTPPs had the highest mean payments (\$985) and NPPs had the lowest (\$399). The mean allowed charge was \$1,555 for institutional providers and \$1,205 for noninstitutional providers (data not shown). CORFs had the highest mean allowed at \$2,871, while NPPs had the lowest at \$505.

Table 10
Demographic characteristics and mean payment amounts for outpatient therapy users, by setting, CY2009

| Setting | Part B therapy users | Percent female | Percent male | Mean age | Median age | Mean paid | Mean allowed | Median paid | Median allowed |
|-----------|----------------------|----------------|--------------|----------|------------|-----------|--------------|-------------|----------------|
| Total | 4,630,593 | 64.8% | 35.2% | 74.1 | 75 | \$1,166 | \$1,469 | \$617 | \$782 |
| Hospital | 1,494,392 | 63.2% | 36.8% | 72.0 | 73 | \$562 | \$707 | \$313 | \$396 |
| S/NF | 858,213 | 70.1% | 29.9% | 81.9 | 84 | \$2,171 | \$2,723 | \$1,224 | \$1,539 |
| CORF | 54,285 | 61.4% | 38.6% | 72.2 | 74 | \$2,285 | \$2,871 | \$1,246 | \$1,567 |
| ORF | 466,744 | 64.6% | 35.4% | 73.6 | 74 | \$1,284 | \$1,615 | \$748 | \$942 |
| HHA | 3,903 | 68.2% | 31.8% | 77.7 | 79 | \$817 | \$1,025 | \$255 | \$323 |
| PTPP | 1,613,915 | 64.1% | 35.9% | 72.6 | 73 | \$985 | \$1,248 | \$666 | \$847 |
| OTPP | 133,593 | 65.9% | 34.1% | 73.2 | 74 | \$815 | \$1,029 | \$406 | \$519 |
| Physician | 454,677 | 63.7% | 36.3% | 71.8 | 73 | \$591 | \$749 | \$238 | \$306 |
| NPP | 8,262 | 66.0% | 34.0% | 70.1 | 72 | \$399 | \$505 | \$91 | \$118 |

SOURCE: RTI International analysis of 2009 Medicare claims data for outpatient therapy services (See source file OutpatientTherapyDemographics_bySetting_CY2009.xls).

3.6 Outpatient Therapy Utilization by Therapy Discipline and Provider Setting

As shown in *Table 11*, overall, PT accounted for 73.0 percent of Medicare therapy payments, while OT accounted for 20.0 percent, and the remaining 7.0 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 and OTPP, which only provided PT and OT services, respectively. However, the relative provision of services by each therapy discipline varied across the different settings. PT procedures were responsible for an average of approximately 78 percent of payments across all settings, with the exception of S/NFs, where PT procedures were less than half of all payments, and OTPPs, which by definition do not have any PT procedures. The proportion of payments made for SLP services was the

largest in S/NFs, with 16.2 percent, followed by Hospitals with 6.3 percent and HHAs with 5.0 percent. Following OTPPs, CORFs and S/NFs had the highest proportions of payments for OT services, 36.2 percent and 35.9 percent, respectively.

Table 11
Outpatient therapy expenditures, by setting and therapy discipline, CY2009

| Setting | PT paid | OT paid | SLP paid | Percent PT | Percent OT | Percent SLP |
|-----------|-----------------|-----------------|---------------|------------|------------|-------------|
| All | \$3,941,005,259 | \$1,080,240,890 | \$378,357,269 | 73.0% | 20.0% | 7.0% |
| Hospital | \$666,639,714 | \$120,210,377 | \$52,333,020 | 79.4% | 14.3% | 6.3% |
| S/NF | \$893,164,196 | \$669,153,946 | \$300,992,906 | 47.9% | 35.9% | 16.2% |
| CORF | \$77,652,313 | \$44,918,002 | \$1,447,452 | 62.6% | 36.2% | 1.2% |
| ORF | \$458,285,052 | \$122,319,558 | \$18,857,271 | 76.4% | 20.4% | 3.2% |
| HHA | \$2,135,005 | \$892,897 | \$161,741 | 66.9% | 28.1% | 5.0% |
| PTPP | \$1,589,511,878 | \$0 | \$0 | 100.0% | 0.0% | 0.0% |
| OTPP | \$0 | \$108,817,893 | \$0 | 0.0% | 100.0% | 0.0% |
| Physician | \$250,416,844 | \$13,855,154 | \$4,543,294 | 93.2% | 5.2% | 1.6% |
| NPP | \$3,200,554 | \$73,064 | \$21,576 | 97.1% | 2.2% | 0.7% |

SOURCE: RTI International analysis of 2009 Medicare claims data for outpatient therapy services (See source files HCPCS_UnitsperLine_bySetting_PT_CY2009.xls; HCPCS_UnitsperLine_bySetting_OT_CY2009.xls; HCPCS_UnitsperLine_bySetting_SLP_CY2009.xls).

Between CY2006 and CY2009, changes in discipline-specific therapy expenditures have varied considerably by setting. **Tables 12 through 14** show the changes between CY2006 and CY2009. Overall, PT expenditures grew at an overall rate of 28.1 percent during this time period (Table 12). In 1-year increments, the rate of growth was 8.0 percent between CY2007 and CY2008, and 12.6 percent between 2008 and 2009 (data not shown). The settings that experienced the largest change in PT expenditures between CY2006 and CY2009 included NPPs, S/NFs, and PTPPs with a growth of 119.7 percent, 54.2 percent, and 44.7 percent, respectively, as shown in Table 12. All PT settings saw increases in expenditures from CY2007 to CY2008. The same was true for CY2008 to CY2009, except for CORFs, which saw a 19.2 percent decrease in expenditures, and the rates of growth in other settings varied significantly from the previous year. Between CY2007 and CY2008, NPPs, CORFs, and HHAs saw the most significant increases in expenditures for physical therapy (34.4 percent, 21.8 percent, and 16.0 percent, respectively), whereas between CY2008 and CY2009 PTPPs, NPPs, and SNFs had the greatest positive change (15.5 percent, 18.3 percent, and 21.3 percent, respectively) (data not shown).

Overall, OT expenditures grew 42.9 percent from CY2006 to CY2009 (Table 13). HHAs saw the most significant growth (146.6 percent) during this time period. When comparing OT

expenditures from CY2007 to CY2008 and CY2008 to CY2009 there are several examples of growth in certain settings moving from a decrease to an increase or increase to decrease. For example, there was an increase in expenditures for CORFs from CY2007 to CY2008 (37.8 percent), but a decrease from CY2008 to CY2009 (-30.5 percent) (data not shown). Alternatively, in physician practices there was a decrease in expenditures of 5 percent from CY 2007 to CY2008, but an increase of 7.4 percent from CY 2008 to 2009 (data not shown). The largest contrast is in NPPs, where there was a 123.3 percent increase in expenditures from CY2007 to CY2008, but a decrease of 69.2 percent from CY2008 to CY2009 (data not shown).

Overall, SLP expenditures grew by 38.5 percent from CY2006 to CY2009 (Table 14). No site had as significant a change as those highlighted above during this time period. However, SLP settings had a few similar variations to OT expenditures from CY2007 through CY2009. CORFs had a decrease in expenditures from CY2007 to CY2008 of 7.8 percent, but an increase from CY2008 to CY2009 of 9.0 percent (data not shown). Hospitals had a decrease in expenditures from CY2008 to CY2009 (2.1 percent) similar to the increase they had from CY2007 to CY2008 (2.2 percent).

Table 12
Trends in physical therapy expenditures, by setting, CY2004–CY2009

| Setting | PT paid, CY2004 | PT paid, CY2006 | PT paid, CY2009 | Percent change, CY2004–CY2006 | Percent change, CY2006–CY2009 |
|-----------|-----------------|-----------------|-----------------|-------------------------------|-------------------------------|
| All | \$3,227,862,000 | \$3,076,614,353 | \$3,941,005,259 | -4.7% | 28.1% |
| Hospital | \$664,040,010 | \$635,151,954 | \$666,639,714 | -4.4% | 5.0% |
| S/NF | \$604,092,321 | \$579,089,975 | \$893,164,196 | -4.1% | 54.2% |
| CORF | \$103,500,229 | \$76,781,300 | \$77,652,313 | -25.8% | 1.1% |
| ORF | \$484,110,518 | \$414,448,408 | \$458,285,052 | -14.4% | 10.6% |
| HHA | \$3,045,456 | \$1,851,195 | \$2,135,005 | -39.2% | 15.3% |
| PTPP | \$974,672,085 | \$1,098,617,569 | \$1,589,511,878 | 12.7% | 44.7% |
| OTPP | — | — | — | — | — |
| Physician | \$391,858,977 | \$269,217,333 | \$250,416,844 | -31.3% | -7.0% |
| NPP | \$2,080,067 | \$1,456,619 | \$3,200,554 | -30.0% | 119.7% |

SOURCE: RTI International analysis of 2009 Medicare claims data for outpatient therapy services (HCPCS_UnitsperLine_bySetting_PT_CY2009.xls); Ciolek and Hwang (2006, 2008).

Table 13
Trends in occupational therapy expenditures, by setting, CY2004–CY2009

| Setting | OT paid, CY2004 | OT paid, CY2006 | OT paid, CY2009 | Percent change, CY2004–CY2006 | Percent change, CY2006–CY2009 |
|-----------|-----------------|-----------------|-----------------|-------------------------------|-------------------------------|
| All | \$770,874,142 | \$756,123,540 | \$1,080,240,890 | –1.9% | 42.9% |
| Hospital | \$122,855,080 | \$117,457,244 | \$120,210,377 | –4.4% | 2.3% |
| S/NF | \$430,765,862 | \$426,034,820 | \$669,153,946 | –1.1% | 57.1% |
| CORF | \$49,580,588 | \$44,070,919 | \$44,918,002 | –11.1% | 1.9% |
| ORF | \$89,860,719 | \$80,704,272 | \$122,319,558 | –10.2% | 51.6% |
| HHA | \$733,834 | \$361,992 | \$892,897 | –50.7% | 146.6% |
| PTPP | — | — | — | — | — |
| OTPP | \$63,843,109 | \$70,664,810 | \$108,817,893 | 10.7% | 54.0% |
| Physician | \$13,101,463 | \$16,752,037 | \$13,855,154 | 27.9% | –17.3% |
| NPP | \$133,488 | \$77,446 | \$73,064 | –42.0% | –5.7% |

SOURCE: RTI International analysis of 2009 Medicare claims data for outpatient therapy services (See source files HCPCS_UnitsperLine_bySetting_OT_CY2009.xls); Ciolek and Hwang (2006, 2008).

Table 14
Trends in speech/language pathology expenditures, by setting, CY2004–CY2009

| Setting | SLP paid, CY2004 | SLP paid, CY2006 | SLP paid, CY2009 | Percent change, CY2006–CY2007 | Percent change, CY2007–CY2009 |
|-----------|------------------|------------------|------------------|-------------------------------|-------------------------------|
| All | \$274,637,075 | \$273,169,678 | \$378,357,269 | –0.5% | 38.5% |
| Hospital | \$51,943,327 | \$54,862,372 | \$52,333,020 | 5.6% | –4.6% |
| S/NF | \$202,714,913 | \$203,063,791 | \$300,992,906 | 0.2% | 48.2% |
| CORF | \$2,757,804 | \$1,623,672 | \$1,447,452 | –41.1% | –10.9% |
| ORF | \$13,551,668 | \$10,517,994 | \$18,857,271 | –22.4% | 79.3% |
| HHA | \$509,861 | \$165,568 | \$161,741 | –67.5% | –2.3% |
| PTPP | — | — | — | — | — |
| OTPP | — | — | — | — | — |
| Physician | \$3,151,455 | \$2,921,661 | \$4,543,294 | –7.3% | 55.5% |
| NPP | \$8,048 | \$14,620 | \$21,576 | 81.7% | 47.6% |

SOURCE: RTI International analysis of 2009 Medicare claims data for outpatient therapy services (See source files HCPCS_UnitsperLine_bySetting_SLP_CY2009.xls); Ciolek and Hwang (2006, 2008).

As shown in **Table 15**, most Medicare beneficiaries were receiving outpatient therapy from only one discipline in a year. In the entire population of outpatient therapy users, 80.1 percent were receiving services from only one therapy discipline in CY2009 (with most of these receiving PT), but 19.9 percent were receiving services from two or more disciplines. Not surprisingly, S/NF and CORF patients were the most likely to have received services from more than a single therapy discipline (54.0 percent and 37.3 percent, respectively). Excluding PTPP settings, ORF, Physician, and NPP patients receive more than 80 percent of outpatient therapy from physical therapy.

Table 15
Provision of services by multiple therapy disciplines per setting, by setting, CY2009

| 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 | 4,630,593 | 71.6% | 5.7% | 2.8% | 15.8% | 4.1% |
| Hospital | 1,494,392 | 71.0% | 5.6% | 2.6% | 18.5% | 2.3% |
| S/NF | 858,213 | 25.5% | 10.1% | 10.4% | 37.9% | 16.1% |
| CORF | 54,285 | 57.6% | 4.1% | 1.0% | 36.4% | 0.9% |
| ORF | 466,744 | 80.3% | 4.7% | 1.2% | 11.8% | 2.0% |
| HHA | 3,903 | 71.5% | 8.2% | 2.3% | 14.8% | 3.3% |
| PTPP | 1,599,759 | 100.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| OTPP | 131,837 | 0.0% | 100.0% | 0.0% | 0.0% | 0.0% |
| Physician | 448,843 | 88.7% | 4.9% | 3.8% | 2.6% | 0.0% |
| NPP | 8,135 | 92.7% | 3.7% | 2.0% | 1.7% | 0.0% |

SOURCE: RTI International analysis of 2009 Medicare claims data for outpatient therapy services (See source file OutpatientTherapyDemographics_TherapiesbySetting_CY2009.xls).

3.7 Types of Outpatient Treatment Services Provided

In CY2009, there were over 163 million outpatient therapy claim lines filed, leading to Medicare payments of nearly \$5.4 billion. This represents a 9 percent increase in outpatient therapy claim lines and more than a 13 percent increase in Medicare payments from 2008. Even though there were over 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 and 94.9 percent of all therapy payments. The frequencies and payment amounts for the top 15 HCPCS are presented in **Table 16**, while **Table 17** shows their relative importance within each of the three therapy types. 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 40 percent of all payments.

Table 16
Number of claim lines and mean paid per line item, fifteen most frequent outpatient therapy HCPCS codes, CY2009

| 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 | 163,645,496 | \$33.00 | \$41.58 | \$5,399,603,457 | \$6,803,992,215 | 100.0% | 100.0% |
| 97110* | Therapeutic exercises | 53,051,494 | \$40.67 | \$51.23 | \$2,157,550,598 | \$2,717,777,226 | 32.4% | 40.0% |
| 97140* | Manual therapy | 19,235,790 | \$27.70 | \$34.97 | \$532,908,660 | \$672,605,316 | 11.8% | 9.9% |
| 97530* | Therapeutic activities | 19,088,909 | \$35.84 | \$45.01 | \$684,108,777 | \$859,187,270 | 11.7% | 12.7% |
| 97112 | Neuromuscular reeducation | 13,892,099 | \$30.32 | \$38.09 | \$421,140,532 | \$529,179,777 | 8.5% | 7.8% |
| 97116 | Gait training therapy | 10,303,026 | \$23.07 | \$28.94 | \$237,691,476 | \$298,205,947 | 6.3% | 4.4% |
| G0283 | Electrical stimulation other than wound | 10,176,753 | \$9.34 | \$11.78 | \$95,068,004 | \$119,923,088 | 6.2% | 1.8% |
| 97035* | Ultrasound therapy | 6,989,544 | \$9.57 | \$12.09 | \$66,855,526 | \$84,502,984 | 4.3% | 1.2% |
| 97535* | Self care management training | 5,367,912 | \$37.42 | \$46.95 | \$200,884,420 | \$251,997,964 | 3.3% | 3.7% |
| 97001 | Physical therapy evaluation | 4,394,696 | \$54.88 | \$70.70 | \$241,171,417 | \$310,725,079 | 2.7% | 4.5% |
| 92526 | Oral function therapy | 3,344,153 | \$61.39 | \$77.07 | \$205,282,683 | \$257,724,588 | 2.0% | 3.8% |
| 97032* | Electrical stimulation | 2,863,051 | \$15.99 | \$20.20 | \$45,778,046 | \$57,819,654 | 1.8% | 0.9% |
| 97150 | Group therapeutic procedures | 1,931,727 | \$14.37 | \$18.09 | \$27,757,409 | \$34,945,940 | 1.2% | 0.5% |
| 92507 | Speech/hearing therapy | 1,825,757 | \$48.06 | \$60.32 | \$88,232,366 | \$110,741,986 | 1.1% | 1.6% |
| 97113 | Aquatic therapy/exercises | 1,216,419 | \$72.40 | \$91.11 | \$88,070,441 | \$110,822,113 | 0.7% | 1.6% |
| 97124 | Massage therapy | 1,204,355 | \$21.40 | \$27.01 | \$25,777,522 | \$32,533,900 | 0.7% | 0.5% |

SOURCE: RTI International analysis of 2009 Medicare claims data for outpatient therapy services (See source file HCPCS_UtilizationSummary_bySetting_all_CY2009.xls).

*On a claim line, CPT codes for these services are billed in terms of one or more 15-minute increments.

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Table 17
Frequencies of the 15 most frequent outpatient therapy HCPCS codes, by discipline, CY2009

| 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 | 126,381,815 | 100% | 30,601,376 | 100% | 6,662,305 | 100% | 100% |
| 15 Most Frequent | Total | 122,202,672 | 96.7% | 27,387,969 | 89.5% | 5,305,044 | 80.4% | 94.7% |
| 97110* | Therapeutic exercises | 43,772,164 | 34.6% | 9,221,184 | 30.1% | 58,146 | 0.9% | 34.3% |
| 97140* | Manual therapy | 17,239,012 | 13.6% | 1,995,606 | 6.5% | 1,172 | <0.1% | 12.4% |
| 97530* | Therapeutic activities | 12,653,761 | 10.0% | 6,398,846 | 20.9% | 36,302 | 0.5% | 12.3% |
| 97112 | Neuromuscular reeducation | 11,075,228 | 8.8% | 2,804,267 | 9.2% | 12,604 | 0.2% | 9.0% |
| 97116 | Gait training therapy | 10,291,395 | 8.1% | 11,587 | <0.1% | 44 | <0.1% | 6.7% |
| G0283 | Electrical stimulation other than wound | 9,341,351 | 7.4% | 834,494 | 2.7% | 908 | <0.1% | 6.6% |
| 97035* | Ultrasound therapy | 6,284,453 | 5.0% | 704,441 | 2.3% | 650 | <0.1% | 4.5% |
| 97535* | Self care management training | 619,855 | 0.5% | 4,738,995 | 15.5% | 9,062 | 0.1% | 3.5% |
| 97001 | Physical therapy evaluation | 4,392,168 | 3.5% | 2,509 | <0.1% | 19 | <0.1% | 2.8% |
| 92526 | Oral function therapy | 2,328 | <0.1% | 2,715 | <0.1% | 3,339,110 | 50.1% | 2.2% |
| 97032* | Electrical stimulation | 2,557,318 | 2.0% | 302,309 | 1.0% | 3,424 | <0.1% | 1.9% |
| 97150 | Group therapeutic procedures | 1,670,639 | 1.3% | 249,092 | 0.8% | 11,996 | 0.2% | 1.2% |
| 92507 | Speech/hearing therapy | 3,394 | <0.1% | 790 | <0.1% | 1,831,573 | 27.5% | 1.2% |
| 97113 | Aquatic therapy/exercises | 1,203,986 | 1.0% | 12,432 | <0.1% | 1 | <0.1% | 0.8% |
| 97124 | Massage therapy | 1,095,620 | 0.9% | 108,702 | 0.4% | 33 | <0.1% | 0.8% |

SOURCE: RTI International analysis of 2009 Medicare claims data for outpatient therapy services (See source files HCPCS_UnitsperLine_bySetting_OT_CY2009.xls; HCPCS_UnitsperLine_bySetting_PT_CY2009.xls; HCPCS_UnitsperLine_bySetting_SLP_CY2009.xls).

* On a claim line, CPT codes for these services are billed in terms of one or more 15-minute increments.

As shown in Table 17, some of the top 15 HCPCS codes were applicable only to 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 percent of SLP claim lines. The codes 92526 (oral function therapy) and 92507 (speech/hearing therapy) were almost exclusively used for speech/language pathology, while 97535 (self care management training) was primarily an OT procedure.

Among the different outpatient therapy settings, there was considerable variation in the frequencies of the 15 most common HCPCS codes, as seen in **Table 18**. Some therapy procedures were quite common among all settings; for example, HCPCS code 97110 (therapeutic exercise) made up 22.7 to 40.0 percent of claim lines. In contrast, the frequencies of some therapy procedures varied significantly across settings; for example, HCPCS code 97116 (gait training therapy) made up 12.4 and 14.4 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 larger percentage of S/NF, Hospital, and HHA claims than any other settings. Both HCPCS codes 97035 (ultrasound therapy) and 97032 (electrical stimulation) were much more common in physician (10.3% and 10.0%, respectively) and NPP (8.9% and 12.0%) 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 19**). The HCPCS code 97110 (therapeutic exercises) accounted for the largest fraction of payments in all settings; but 97140 (manual therapy) was the second largest for Hospital, PTPP, and Physician settings, while 97530 (therapeutic activities) was the second largest in terms of payments for S/NFs, CORFs, ORFs, HHAs, and OTTPs. S/NFs had the highest fraction of payments coming from the SLP procedure code 92526 (oral function therapy) with 10.1 percent. Hospitals had the highest percentage of procedure code 97001 (physical therapy evaluation), with 8.8 percent.

Table 18
Percent of claim lines of the 15 most frequent outpatient therapy HCPCS codes, by setting, CY2009

| 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) |
|------------|---|------------------------------|-----------------------------------|-------------------------------|-------------------------------|------------------------------|------------------------------|-------------------------------|-------------------------------|------------------------------------|------------------------------|
| 97110* | Therapeutic exercises | 32.4% | 40.0% | 29.2% | 24.7% | 30.9% | 33.4% | 34.7% | 32.7% | 27.3% | 22.7% |
| 97140* | Manual therapy | 11.8% | 10.3% | 1.1% | 17.7% | 14.7% | 2.4% | 20.0% | 16.8% | 15.8% | 8.5% |
| 97530* | Therapeutic activities | 11.7% | 5.1% | 19.3% | 14.7% | 12.8% | 18.3% | 6.8% | 13.2% | 5.8% | 4.3% |
| 97112 | Neuromuscular reeducation | 8.5% | 4.6% | 11.5% | 6.7% | 7.7% | 8.9% | 7.8% | 7.1% | 7.3% | 5.0% |
| 97116 | Gait training therapy | 6.3% | 4.2% | 12.4% | 6.8% | 5.8% | 14.4% | 2.3% | 0.2% | 0.7% | 2.6% |
| G0283 | Electrical stimulation other than wound | 1.8% | 5.5% | 1.9% | 8.5% | 7.5% | 1.7% | 10.1% | 3.4% | 9.3% | 9.4% |
| 97035* | Ultrasound therapy | 1.2% | 4.9% | 0.8% | 5.8% | 4.5% | 2.1% | 6.3% | 5.4% | 10.3% | 10.0% |
| 97535* | Self care management training | 2.7% | 1.3% | 6.4% | 7.0% | 3.9% | 6.1% | 0.6% | 7.2% | 0.6% | 3.8% |
| 97001 | Physical therapy evaluation | 2.7% | 5.7% | 1.4% | 1.4% | 2.5% | 3.5% | 3.2% | 0.1% | 1.9% | 0.9% |
| 92526 | Oral function therapy | 2.0% | 1.1% | 5.7% | 0.2% | 0.5% | 1.1% | <0.1% | <0.1% | 0.1% | <0.1% |
| 97032* | Electrical stimulation, ea 15 min | 1.8% | 0.7% | 0.4% | 3.3% | 1.3% | 0.3% | 2.3% | 1.8% | 8.9% | 12.0% |
| 97150 | Group therapeutic procedures | 1.2% | 2.4% | 0.7% | 0.3% | <0.1% | 0.1% | 1.1% | 0.3% | 0.7% | 2.6% |
| 92507 | Speech/hearing therapy | 1.1% | 1.9% | 2.2% | 0.3% | 0.9% | 1.3% | <0.1% | <0.1% | 0.3% | 0.1% |
| 97113 | Aquatic therapy/exercises | 0.7% | 2.0% | <0.1% | 0.4% | 0.9% | <0.1% | 1.0% | 0.1% | 0.3% | <0.1% |
| 97124 | Massage Therapy | 0.7% | 0.6% | 0.2% | 0.4% | 0.5% | 0.9% | 0.8% | 0.8% | 4.7% | 5.1% |
| | Total | 86.6% | 90.3% | 93.2% | 98.2% | 94.4% | 94.5% | 97.0% | 89.1% | 94.0% | 87.0% |

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SOURCE: RTI International analysis of 2009 Medicare claims data for outpatient therapy services (See source file %HCPCS_UtilizationSummary_bySetting_all_CY2009.xls).

* On a claim line, CPT codes for these services are billed in terms of one or more 15-minute increments.

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Table 19
Percent of payments of the 15 most frequent outpatient therapy HCPCS codes, by setting, CY2009

| 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) |
|------------|---|-----------------------------|----------------------------------|------------------------------|------------------------------|-----------------------------|-----------------------------|------------------------------|------------------------------|-----------------------------------|-----------------------------|
| 97110* | Therapeutic exercises | 40.0% | 47.2% | 30.2% | 36.9% | 40.6% | 36.2% | 48.0% | 39.4% | 38.1% | 36.3% |
| 97140* | Manual therapy | 9.9% | 10.3% | 0.9% | 14.8% | 11.6% | 1.8% | 17.8% | 14.4% | 16.1% | 8.4% |
| 97530* | Therapeutic activities | 12.7% | 5.6% | 19.4% | 15.9% | 14.8% | 20.3% | 8.1% | 16.1% | 7.6% | 5.8% |
| 97112 | Neuromuscular reeducation | 7.8% | 4.7% | 9.8% | 6.6% | 7.1% | 7.0% | 7.4% | 6.8% | 9.1% | 4.9% |
| 97116 | Gait training therapy | 4.4% | 2.9% | 8.2% | 5.2% | 4.2% | 9.8% | 1.7% | 0.1% | 0.6% | 2.0% |
| G0283 | Electrical stimulation other than wound | 1.8% | 1.4% | 0.5% | 2.9% | 2.2% | 0.4% | 3.0% | 0.9% | 3.3% | 2.8% |
| 97035* | Ultrasound therapy | 1.2% | 1.2% | 0.2% | 2.0% | 1.3% | 0.6% | 1.9% | 1.5% | 3.9% | 4.0% |
| 97535* | Self care management training | 3.7% | 1.3% | 7.3% | 6.7% | 4.3% | 7.5% | 0.5% | 8.7% | 1.0% | 9.8% |
| 97001 | Physical therapy evaluation | 4.5% | 8.8% | 2.2% | 2.7% | 4.2% | 5.2% | 5.5% | 0.1% | 3.8% | 1.5% |
| 92526 | Oral function therapy | 3.8% | 1.1% | 10.1% | 0.4% | 0.9% | 1.9% | <0.1% | <0.1% | 0.2% | <0.1% |
| 97032* | Electrical stimulation | 0.9% | 0.3% | 0.2% | 1.6% | 0.6% | 0.1% | 1.0% | 0.8% | 6.3% | 8.8% |
| 97150 | Group therapeutic procedures | 0.5% | 1.0% | 0.3% | 0.1% | 0.8% | <0.1% | 0.5% | 0.1% | 0.3% | 1.1% |
| 92507 | Speech/hearing therapy | 1.6% | 2.6% | 3.0% | 0.6% | 1.4% | 2.0% | <0.1% | <0.1% | 0.6% | 0.2% |
| 97113 | Aquatic therapy/exercises | 1.6% | 3.5% | 0.1% | 1.0% | 2.2% | <0.1% | 2.5% | 0.2% | 0.9% | 0.1% |
| 97124 | Massage therapy | 0.5% | 0.3% | 0.1% | 0.2% | 0.3% | 0.4% | 0.5% | 0.5% | 4.1% | 4.9% |
| | Total | 94.9% | 92.2% | 92.5% | 97.6% | 96.5% | 93.2% | 98.4% | 89.6% | 95.9% | 90.6% |

SOURCE: RTI International analysis of 2009 Medicare claims data for outpatient therapy services (See source file HCPCS_UtilizationSummary_bySetting_all_CY2009.xls).

* On a claim line, CPT codes for these services are billed in terms of one or more 15-minute increments.

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

3.8.1 Physical Therapy Utilization by Principal Claim Diagnosis

For PT episodes in CY2009, there were 6,996 different ICD-9 diagnosis codes (data not shown) present as the principal diagnosis on the first claim (institutional settings) or claim line (private practice settings) of the almost 4.8 million episodes. However, 97 percent of these principal diagnoses represented less than 0.1 percent of PT episodes each. As shown in *Table 20*, the twenty most common principal diagnoses accounted for nearly 56 percent of PT episodes, and 80 percent of the episodes fell into the top 100 PT diagnoses. For each principal diagnosis, Table 18 presents: the number of episodes; the secondary diagnosis most frequently accompanying that principal diagnosis (diagnosis listed on the second line of the claim); mean episode days, paid amounts, and claim lines; and the percent of all episodes with this principal diagnosis. The secondary diagnosis is listed here to provide more information about patient medical diagnoses, but the order of diagnoses on claims is not necessarily significant.

3.8.2 Physical Therapy Episode Diagnoses by Setting

Similarly to outpatient therapy utilization in previous years (Kandilov, Lyda-McDonald, and Drozd, 2009; Lyda-McDonald, Munevar, and Drozd, 2010; Ciolek and Hwang, 2006, 2008), almost all PT episodes (99 percent) took place in a single type of care setting. *Table 21* provides descriptive information on single-setting PT episodes of care (in which all therapy care for that episode was provided in a single setting, e.g., Hospital, S/NF, etc.; see Section 2.3 of this report for a definition of episode used in this report). Physical therapists in private practice (PTPP) were responsible for the largest fraction of single-setting PT episodes (36.5 percent), followed closely by hospitals with 27.6 percent, and S/NFs with 16.1 percent. Private practice (non-institutional) settings account for a relatively large proportion (2,060,034 of all 4,559,017 single-setting episodes, or 45.2 percent). This percentage is only modestly higher (by 0.8 percentage points) than in 2008.

Overall, the most frequent initial diagnosis for PT episodes was V57.1 (physical therapy not elsewhere classified); however, in ORF, PTPP, and physician settings, the most common diagnosis was 724.2 (lumbago). Unfortunately, the most frequent PT episode diagnosis (V57.1, physical therapy not elsewhere classified, accounting for nearly one of every eight PT episodes) is not descriptive of why the patient is receiving therapy, and the other frequent PT episode diagnoses do not provide information on the medical condition producing the need for therapy.

PT payments per episode rose 8.3 percent (from \$766 to \$830) between CY2008 and CY2009, and payments for single-setting PT episodes rose 10.8 percent (from \$723 to \$801) in the same time period (see Lyda-McDonald, Munevar, and Drozd, 2010, for 2008 data). PT episodes that occurred in S/NFs were the longest with an average of 17 treatment days, followed by CORFs with 13 treatment days. These were also the sites for the most expensive episodes, with average Medicare payments of \$1,212 for CORF episodes and \$1,159 for S/NF episodes.

Table 20
Outpatient PT episodes, by principal diagnosis, CY2009

| First episode claim ICD-9 | ICD-9 description | Number of episodes | Most common 2nd diagnosis | Secondary ICD-9 description | Mean episode days | Mean episode paid | Mean claim lines | Percent of episodes |
|---------------------------|--------------------------|--------------------|---------------------------|-----------------------------|-------------------|-------------------|------------------|---------------------|
| All | — | 4,750,592 | 781.2 | Abnormality of gait | 11.6 | \$830 | 26.5 | 100.0% |
| V57.1 | Physical therapy nec | 584,556 | 724.2 | Lumbago | 9.9 | \$588 | 17.3 | 12.3% |
| 724.2 | Lumbago | 371,075 | 724.4 | Lumbosacral neuritis nos | 10.0 | \$730 | 24.0 | 7.8% |
| 781.2 | Abnormality of gait | 221,866 | 728.87 | Muscle weakness-general | 13.5 | \$1,045 | 30.4 | 4.7% |
| 719.41 | Joint pain-shlder | 175,798 | 719.51 | Jt stiffness nec-shlder | 11.2 | \$783 | 26.4 | 3.7% |
| 719.46 | Joint pain-l/leg | 165,808 | 719.56 | Jt stiffness nec-l/leg | 11.1 | \$810 | 25.2 | 3.5% |
| 719.7 | Difficulty in walking | 158,244 | 728.87 | Muscle weakness-general | 14.8 | \$1,112 | 34.6 | 3.3% |
| 723.1 | Cervicalgia | 150,888 | 724.2 | Lumbago | 9.8 | \$686 | 24.9 | 3.2% |
| 728.87 | Muscle weakness-general | 117,652 | 719.7 | Difficulty in walking | 15.1 | \$1,074 | 33.6 | 2.5% |
| 715.16 | Loc prim osteoart-l/leg | 84,389 | 719.46 | Joint pain-l/leg | 13.4 | \$1,068 | 34.1 | 1.8% |
| 719.45 | Joint pain-pelvis | 83,716 | 724.2 | Lumbago | 10.2 | \$718 | 22.2 | 1.8% |
| 724.02 | Spinal stenosis-lumbar | 69,617 | 724.2 | Lumbago | 11.8 | \$904 | 27.8 | 1.5% |
| 724.4 | Lumbosacral neuritis nos | 67,678 | 724.2 | Lumbago | 11.8 | \$963 | 33.8 | 1.4% |
| 726.10 | Rotator cuff synd nos | 66,291 | 719.41 | Joint pain shlder | 12.7 | \$961 | 32.4 | 1.4% |
| V57.89 | Rehabilitation proc nec | 64,534 | 781.2 | Abnormality of gait | 14.7 | \$974 | 31.6 | 1.4% |
| 729.5 | Pain in limb | 51,288 | 781.2 | Abnormality of gait | 9.4 | \$650 | 21.4 | 1.1% |
| 722.52 | Lumb/lumbosac disc degen | 49,656 | 724.2 | Lumbago | 10.1 | \$732 | 24.2 | 1.1% |
| 715.96 | Osteoarthros proc nec | 49,080 | 719.46 | Joint pain-l/leg | 13.1 | \$1,022 | 32.4 | 1.0% |
| 724.5 | Backache nos | 45,237 | V57.1 | Physical therapy nec | 9.2 | \$632 | 20.5 | 1.0% |
| V43.65 | Joint replaced knee | 44,105 | 719.46 | Joint pain-l/leg | 16.2 | \$1,279 | 36.7 | 0.9% |
| 724.3 | Sciatica | 40,862 | 724.2 | Lumbago | 10.9 | \$831 | 28.4 | 0.9% |

SOURCE: RTI International analysis of 2009 Medicare claims data for outpatient therapy services (See source file OutpatientEpisodesbyDiagnosis_PT_CY2009.xls).

Table 21
Single-setting PT episodes, by setting, CY2009

| Setting | Number of single-setting episodes | Most frequent ICD-9 | ICD-9 description | Mean episode days | Mean episode paid | Mean claim lines |
|-----------|-----------------------------------|---------------------|-----------------------|-------------------|-------------------|------------------|
| All | 4,559,017 | V57.1 | Physical therapy nec | 11.2 | \$801 | 25.6 |
| Hospital | 1,256,276 | V57.1 | Physical therapy nec | 8.3 | \$496 | 14.0 |
| S/NF | 732,805 | 719.7 | Difficulty in walking | 17.0 | \$1,159 | 39.5 |
| CORF | 55,735 | 781.2 | Abnormality of gait | 12.5 | \$1,212 | 40.1 |
| ORF | 446,888 | 724.2 | Lumbago | 12.1 | \$943 | 30.4 |
| HHA | 2,835 | 781.2 | Abnormality of gait | 9.1 | \$665 | 21.2 |
| PTPP | 1,662,583 | 724.2 | Lumbago | 11.5 | \$887 | 27.9 |
| OTPP | — | — | — | — | — | — |
| Physician | 397,451 | 724.2 | Lumbago | 7.6 | \$531 | 19.3 |
| NPP | 4,444 | 724.2 | Lumbago | 6.7 | \$426 | 13.9 |

SOURCE: RTI International analysis of 2009 Medicare claims data for outpatient therapy services (See source file OutpatientTherapyEpisodes__bySetting_CY2009.xls).

3.8.3 Occupational Therapy Utilization by Principal Claim Diagnosis

As shown in *Table 22*, for OT episodes in CY2009, the top twenty principal diagnoses represented 43.0 percent of all episodes. Over 73 percent of OT episodes could be categorized by one of the top 100 out of 6,014 OT diagnoses (data not shown). The trend in higher mean OT payments per episode than PT payments continued in CY2009 with per-episode payments for OT of \$918 compared to \$830 for PT. This pattern is consistent with that found in prior years.

3.8.4 Occupational Therapy Episode Diagnoses by Setting

Of the more than 1 million OT episodes in CY2009, 98 percent took place in a single type of setting. OT episodes differ greatly by setting, as seen in *Table 23*. Just less than half the OT episodes took place in S/NFs, followed by 24.7 percent in hospitals, and 11.7 percent in OTTP. Private practice (non-institutional) settings account for a relatively low proportion (165,580 of all 1,152,049 single-setting episodes, or 14.4 percent). This percentage is virtually unchanged (0.4 percentage points higher) from CY2008.

As expected, and consistent with CY2008, the most common diagnosis overall, and in hospitals, was V57.21 (Care Involving Occupational Therapy). For S/NFs and ORFs, the most common diagnosis was 728.87 (Muscle Weakness); whereas in OTTPs and NPPs, the most frequent principal diagnosis was 719.44 (Pain in Joint Involving Hand).

Table 22
Twenty most frequent outpatient OT episodes, by principal diagnosis, CY2009

| First episode claim ICD-9 | ICD-9 description | Number of episodes | Most common 2nd diagnosis | Secondary ICD-9 description | Mean episode days | Mean episode paid | Mean claim lines | Percent of episodes |
|---------------------------|-------------------------------------|--------------------|---------------------------|-----------------------------|-------------------|-------------------|------------------|---------------------|
| All | — | 1,176,855 | 728.87 | Muscle weakness-general | 12.4 | \$918 | 26.0 | 100.0% |
| V57.21 | Care involving Occupational Therapy | 79,042 | 457.1 | Other lymphedema | 9.0 | \$575 | 16.6 | 6.7% |
| 728.87 | Muscle weakness-general | 70,408 | 719.7 | Difficulty in walking | 15.9 | \$1,158 | 31.4 | 6.0% |
| V57.89 | Rehabilitation proc nec | 47,165 | 728.87 | Muscle weakness-general | 14.9 | \$1,043 | 28.8 | 4.0% |
| 719.7 | Difficulty in walking | 35,931 | 728.87 | Muscle weakness-general | 16.2 | \$1,251 | 35.2 | 3.1% |
| 781.2 | Abnormality of gait | 30,841 | 728.87 | Muscle weakness-general | 14.7 | \$1,160 | 32.1 | 2.6% |
| V57.1 | Physical therapy nec | 25,824 | V57.21 | Physical therapy nec | 8.7 | \$583 | 15.2 | 2.2% |
| 781.3 | Lack of coordination | 24,379 | 728.87 | Muscle weakness-general | 15.9 | \$1,298 | 33.0 | 2.1% |
| 331.0 | Alzheimer's disease | 18,899 | 728.87 | Muscle weakness-general | 13.7 | \$921 | 24.8 | 1.6% |
| 781.92 | Abnormal posture | 18,590 | 728.87 | Muscle weakness-general | 11.6 | \$755 | 19.5 | 1.6% |
| 354.0 | Carpal tunnel syndrome | 16,749 | 727.03 | Trigger finger | 6.3 | \$459 | 15.9 | 1.4% |
| 719.44 | Joint pain-hand | 15,587 | 719.54 | Jt stiffness nec-hand | 7.3 | \$515 | 17.8 | 1.3% |
| 728.2 | Musc disuse atrophy nec | 15,131 | 781.3 | Lack of coordination | 17.5 | \$1,289 | 35.1 | 1.3% |
| 332.0 | Paralysis agitans | 14,927 | 728.87 | Muscle weakness-general | 15.6 | \$1,175 | 30.8 | 1.3% |
| 719.41 | Joint pain-shlder | 14,846 | 719.51 | Jt stiffness nec-shlder | 11.5 | \$857 | 27.3 | 1.3% |
| 428.0 | Infective myositis | 14,026 | 728.87 | Muscle weakness-general | 15.6 | \$1,125 | 31.2 | 1.2% |
| 436 | CVA | 13,450 | 728.87 | Muscle weakness-general | 17.1 | \$1,238 | 33.7 | 1.1% |
| 715.09 | General osteoarthritis | 12,868 | 728.87 | Muscle weakness-general | 16.7 | \$1,376 | 38.0 | 1.1% |
| 799.3 | Debility nos | 12,607 | 728.87 | Muscle weakness-general | 14.0 | \$999 | 26.7 | 1.1% |
| 401.9 | Hypertension nos | 12,276 | 728.87 | Muscle weakness-general | 17.5 | \$1,300 | 35.7 | 1.0% |
| 780.79 | Malaise and fatigue nec | 11,433 | 728.87 | Muscle weakness-general | 11.6 | \$805 | 22.4 | 1.0% |

SOURCE: RTI International analysis of 2009 Medicare claims data for outpatient therapy services (See source file OutpatientEpisodesbyDiagnosis_OT_CY2009.xls).

Table 23
Single-setting OT episodes, by setting, CY2009

| Setting | Number of single-setting episodes | Most frequent ICD-9 | ICD-9 description | Mean episode days | Mean episode paid | Mean claim lines |
|-----------|-----------------------------------|---------------------|--------------------------|-------------------|-------------------|------------------|
| Total | 1,152,049 | V57.21 | Encntr occupatnal thrpy | 12.2 | \$902 | 25.5 |
| Hospital | 284,933 | V57.21 | Encntr occupat'nal thrpy | 6.1 | \$405 | 10.4 |
| S/NF | 578,463 | 728.87 | Muscle weakness-genl | 16.1 | \$1,127 | 31.4 |
| CORF | 28,110 | 724.4 | Lumbago | 12.8 | \$1,406 | 51.7 |
| ORF | 93,976 | 728.87 | Muscle weakness-genl | 13.5 | \$1,222 | 36.2 |
| HHA | 987 | 781.2 | Abnormality of gait | 9.9 | \$856 | 20.2 |
| PTPP | — | — | — | — | — | — |
| OTPP | 135,068 | 719.44 | Joint pain-hand | 9.2 | \$768 | 21.7 |
| Physician | 30,258 | 354.0 | Carpal tunnel syndrome | 5.8 | \$412 | 13.5 |
| NPP | 254 | 719.44 | Joint pain-hand | 3.1 | \$144 | 4.4 |

SOURCE: RTI International analysis of 2009 Medicare claims data for outpatient therapy services (See source file OutpatientTherapyEpisodes__bySetting_CY2009.xls).

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 (16 days of treatment), followed by ORF and CORF settings (14 and 13 days, respectively).

OT payments per episode rose 9.5 percent (from \$838 to \$918) between CY2008 and CY2009, and payments for single-setting OT episodes rose 10.0 percent (from \$820 to \$902) in the same time period (see Lyda-McDonald, Munevar, and Drozd, 2010, for 2008 data). The highest payments for OT episodes were in CORFs (\$1,406), ORFs (\$1,222), and S/NFs (\$1,127). The lowest payments for OT procedures were in the NPP (\$144), Hospital (\$405), and Physician (\$412) settings.

3.8.5 Speech/Language Pathology Utilization by Principal Claim Diagnosis

As shown in *Table 24*, episodes of SLP therapy 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 percent of all SLP episodes were for 787.2 (dysphagia), and the top twenty diagnoses covered

Table 24
Twenty most frequent outpatient SLP episodes, by principal diagnosis, CY2009

| First episode claim ICD-9 | ICD-9 description | Number of episodes | Most common 2nd diagnosis | Secondary ICD-9 description | Mean episode days | Mean episode paid | Mean claim lines | Percent of episodes |
|---------------------------|--|--------------------|---------------------------|-------------------------------|-------------------|-------------------|------------------|---------------------|
| All | | 577,656 | 787.20 | Dysphagia nos | 9.7 | \$655 | 11.5 | 100.0% |
| 787.20 | Dysphagia nos | 88,846 | 530.81 | Esophageal reflux | 5.0 | \$347 | 5.8 | 15.4% |
| V57.3 | Speech therapy | 38,373 | 787.20 | Dysphagia nos | 8.3 | \$516 | 9.2 | 6.6% |
| 787.22 | Dysphagia, oropharyngeal | 38,210 | 331.0 | Alzheimer's disease | 10.3 | \$705 | 12.0 | 6.6% |
| V57.89 | Rehabilitation proc nec | 22,016 | 438.20 | Hemiplegia affect unspec side | 13.6 | \$864 | 16.0 | 3.8% |
| 331.0 | Alzheimer's disease | 16,136 | 787.22 | Dysphagia, oropharyngeal | 11.6 | \$760 | 13.7 | 2.8% |
| 728.87 | Muscle weakness-general | 16,063 | 719.7 | Difficulty in walking | 13.5 | \$907 | 16.5 | 2.8% |
| 787.21 | Dysphagia, oral phase | 14,073 | 331.0 | Alzheimer's disease | 9.3 | \$632 | 10.8 | 2.4% |
| 719.7 | Difficulty in walking | 10,244 | 728.87 | Muscle weakness-general | 12.8 | \$860 | 15.5 | 1.8% |
| 332.0 | Paralysis agitans | 9,954 | 787.20 | Dysphagia nos | 12.4 | \$871 | 15.4 | 1.7% |
| 290.0 | Senile dementia uncomp | 9,558 | 787.22 | Dysphagia, oropharyngeal | 12.0 | \$813 | 14.4 | 1.7% |
| 436 | CVA | 9,271 | 787.22 | Dysphagia, oropharyngeal | 15.3 | \$1,054 | 19.0 | 1.6% |
| 781.2 | Abnormality of gait | 8,366 | 728.87 | Muscle weakness-general | 12.5 | \$865 | 15.4 | 1.5% |
| 784.49 | Voice disturbance nec | 8,052 | 530.81 | Esophageal reflux | 3.6 | \$256 | 3.9 | 1.4% |
| 486 | Pneumonia, organism nos | 7,096 | 787.22 | Dysphagia, oropharyngeal | 10.6 | \$751 | 12.6 | 1.2% |
| 294.8 | Mental disor nec oth dis | 6,668 | 787.22 | Dysphagia, oropharyngeal | 10.9 | \$713 | 12.8 | 1.2% |
| 401.9 | Hypertension nos | 6,487 | 787.20 | Dysphagia nos | 13.2 | \$930 | 16.7 | 1.1% |
| 428.0 | CHF nos | 6,438 | 787.20 | Dysphagia nos | 12.0 | \$821 | 14.6 | 1.1% |
| V57.1 | Physical therapy nec | 6,170 | 787.20 | Dysphagia nos | 8.9 | \$535 | 9.7 | 1.1% |
| 599.0 | Urinary tract infection, site not specific | 4,885 | V57.21 | Physical therapy nec | 9.8 | \$760 | 12.8 | 0.9% |
| 434.91 | Cerebral artery occlusion unspec w/ cerebral infarct | 4,607 | 787.22 | Dysphagia, oropharyngeal | 6.0 | \$682 | 11.8 | 0.8% |

SOURCE: RTI International analysis of 2009 Medicare claims data for outpatient therapy services (See source file OutpatientEpisodesbyDiagnosis_SLP_CY2009.xls).

just over 57 percent of SLP episodes. This concentration of principal diagnoses is slightly less than that in CY2008 (see Lyda-McDonald, Munevar, and Drozd, 2010). The top 100 diagnoses accounted for almost 83 percent of all SLP episodes (data not shown). The most common secondary diagnosis for all SLP episodes, 787.2, accounted for the largest percentage of SLP episodes. With an average of 9.7 treatment days and \$655 in Medicare payments, SLP episodes were shorter and less expensive than both PT and OT episodes.

SLP payments per episode rose 4.0 percent (from \$630 to \$655) between CY2008 and CY2009, and payments for single-setting SLP episodes rose 2.8 percent (from \$615 to \$632) in the same time period (see Lyda-McDonald, Munevar, and Drozd, 2010, for 2008 data).

3.8.6 Speech/Language Pathology Episode Diagnoses by Setting

As with PT and OT episodes, the vast majority (97 percent) of SLP episodes were completed in a single care setting. **Table 25** summarizes diagnosis, mean length, 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 61.1 percent of SLP episodes occurring solely in an S/NF. The next largest setting for SLP episodes was hospitals (31.9 percent). Possibly due to billing requirements in effect until mid-2009 that prohibited speech language pathologists to bill Medicare directly using their own provider codes, and instead required them to bill through a facility or a physician,¹² private practice (non-institutional) settings account for a modest proportion (18,852 of all 522,932 single-setting episodes, or 3.0 percent) of SLP episodes, compared to the large role of these settings in PT episodes (1,662,583 of all 4,559,017 single-setting episodes, or 36.5 percent) and OT episodes (135,322 of all 1,152,049 single-setting episodes, or 11.7 percent).

The mean episode length for SLP episodes in S/NF and ORF settings was 12.2 and 12.9 treatment days, respectively, with CORF trailing slightly behind with 10.7 days. Likewise, episodes in all three settings also represented the highest average payments, with \$921 in CORFs, \$887 for ORFs, and \$825 in S/NFs. HHAs saw a slight decrease in mean episode payments of 1.4 percent from CY2008 to CY2009. It is notable that the diagnosis dysphagia is used most often in facility settings and voice disturbance in physician office settings, suggesting different practice patterns in those settings.

¹² SLPs are currently able to directly bill Medicare for their services provided to Medicare patients.

Table 25
Single-setting SLP episodes, by setting, CY2009

| Setting | Number of single-setting episodes | Most frequent ICD-9 | ICD-9 description | Mean episode days | Mean episode paid | Mean claim lines |
|-----------|-----------------------------------|---------------------|-----------------------|-------------------|-------------------|------------------|
| Total | 560,199 | 787.20 | Dysphagia nos | 9.4 | \$632 | 11.2 |
| Hospital | 178,757 | 787.20 | Dysphagia nos | 4.3 | \$278 | 4.7 |
| S/NF | 342,016 | 787.20 | Dysphagia nos | 12.2 | \$825 | 14.7 |
| CORF | 1,234 | 332.0 | Paralysis agitans | 10.7 | \$921 | 16.3 |
| ORF | 19,076 | 787.20 | Dysphagia nos | 12.9 | \$887 | 16.5 |
| HHA | 264 | 787.20 | Dysphagia nos | 8.4 | \$547 | 9.4 |
| PTPP | — | — | — | — | — | — |
| OTPP | — | — | — | — | — | — |
| Physician | 18,750 | 784.49 | Voice disturbance nec | 2.8 | \$218 | 3.3 |
| NPP | 102 | 784.49 | Voice disturbance nec | 2.4 | \$158 | 2.9 |

SOURCE: RTI International analysis of 2009 Medicare claims data for outpatient therapy services (See source file OutpatientTherapyEpisodes_bySetting_CY2009.xls).

3.9 Outpatient Therapy Utilization by CSC Classification Group and Discipline

Due to 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*.

3.9.1 Physical Therapy Utilization by CSC Classification Group

As shown in **Table 26**, for physical therapy, there are 23 classification groups, which together covered 81.3 percent of all PT episodes. The largest group contained episodes with Lumbar/Sacral/Thoracic diagnoses (18.4 percent), followed by Mobility and Shoulder/Upper Arm (10.4 percent, each), and then by the Knee/Leg group (10.2 percent). However, the highest category was “Other” (18.7 percent). For all PT episodes, the most common secondary diagnosis was 781.2 (abnormality of gait), but there was considerable variation across the classification groups. Overall, across 23 classification groups, there were only 13 unique secondary diagnoses. For five of the groups, the most frequent secondary diagnosis was for abnormality of gait—for example, as expected, the Lumbar/Sacral/Thoracic primary diagnoses

Table 26
PT episode utilization, by CSC classification group, CY2009

| CSC classification group–PT | Number of episodes | Percent of episodes | Most common 2nd ICD9 | Secondary ICD-9 description | Mean episode days | Median episode days | Mean episode paid | Median episode paid |
|-----------------------------|--------------------|---------------------|----------------------|------------------------------|-------------------|---------------------|-------------------|---------------------|
| All | 4,237,958 | 100.0% | 781.2 | Abnormality of gait | 11.7 | 9.0 | \$837 | \$545 |
| Other | 791,539 | 18.7% | 724.2 | Abnormality of gait | 10.0 | 7.0 | \$614 | \$389 |
| Lumbar/Sacral/Thoracic | 781,100 | 18.4% | 724.2 | Abnormality of gait | 10.3 | 8.0 | \$761 | \$516 |
| Mobility | 442,330 | 10.4% | 728.87 | Muscle weakness-general | 14.1 | 11.0 | \$1,083 | \$744 |
| Shoulder/Upper Arm | 439,933 | 10.4% | 719.41 | Joint pain-shlder | 12.4 | 10.0 | \$891 | \$625 |
| Knee/Leg | 433,459 | 10.2% | 719.46 | Joint pain-l/leg | 12.2 | 10.0 | \$927 | \$666 |
| Cervical | 259,454 | 6.1% | 723.1 | Cervicalgia | 10.2 | 8.0 | \$738 | \$503 |
| Multiple Sites | 206,221 | 4.9% | 719.7 | Difficulty in walking | 15.0 | 11.0 | \$1,108 | \$749 |
| Hip/Pelvis/Thigh | 198,046 | 4.7% | 719.45 | Joint pain-pelvis | 11.8 | 9.0 | \$864 | \$594 |
| Neuromusculoskeletal-Other | 179,092 | 4.2% | 781.2 | Abnormality of gait | 11.1 | 8.0 | \$790 | \$484 |
| Neurologic | 106,144 | 2.5% | 781.2 | Abnormality of gait | 16.6 | 12.0 | \$1,220 | \$795 |
| Ankle/Foot | 106,095 | 2.5% | 719.47 | Joint pain-ankle | 8.7 | 6.0 | \$610 | \$389 |
| Cardiac/Vascular/Pulmonary | 86,775 | 2.1% | 728.87 | Muscle weakness-general | 15.0 | 10.0 | \$1,083 | \$640 |
| Cognitive/Mental | 54,933 | 1.3% | 719.7 | Difficulty in walking | 15.0 | 11.0 | \$998 | \$664 |
| Wrist/Hand | 41,260 | 1.0% | 719.44 | Joint pain-hand | 9.7 | 7.0 | \$693 | \$444 |
| Edema | 26,047 | 0.6% | V57.1 | Physical therapy nec | 9.2 | 5.0 | \$709 | \$362 |
| Metabolic | 25,311 | 0.6% | 728.87 | Muscle weakness-general | 13.3 | 8.0 | \$919 | \$443 |
| Elbow/Forearm | 12,740 | 0.3% | 719.42 | Joint pain-up/arm | 9.5 | 8.0 | \$671 | \$468 |
| Spine | 10,965 | 0.3% | 724.2 | Abnormality of gait | 9.9 | 8.0 | \$707 | \$497 |
| Swallowing | 9,332 | 0.2% | V57.1 | Physical therapy nec | 16.8 | 12.0 | \$1,125 | \$734 |
| Skin-Not Decubitus | 8,585 | 0.2% | 719.7 | Difficulty in walking | 11.1 | 4.0 | \$659 | \$202 |
| Incontinence | 8,094 | 0.2% | 728.2 | Musc disuse atrophy nec | 5.7 | 4.0 | \$347 | \$163 |
| Skin-Decubitus | 4,544 | 0.1% | 707.20 | Pressure ulcer, unspec stage | 17.7 | 8.0 | \$922 | \$350 |
| Amputation | 3,740 | 0.1% | 719.7 | Difficulty in walking | 19.2 | 12.0 | \$1,388 | \$799 |
| Spinal Cord | 2,219 | 0.1% | 728.87 | Muscle weakness-general | 12.0 | 4.0 | \$962 | \$296 |

SOURCE: RTI International analysis of 2009 Medicare claims data for outpatient therapy services (See source file OutpatientTherapyEpisodes_byClassificationGroups_CY2009.xls).

were most often accompanied by a 724.2 diagnoses (abnormality of gait). The four other classification groups that shared 724.2 as secondary diagnoses include Other, Neuromusculoskeletal-Other, Neurologic, and Spine.

On average, the longest episodes belonged to the Amputation (19.2 days), Skin-Decubitus (17.7 days), and the Swallowing groups (16.8 days), while the shortest episodes were for therapy patients in the Incontinence and Ankle/Foot groups, who averaged 5.7 and 8.7 days of treatment, respectively. With the exception of Skin Decubitus which averaged 17.7 treatment days with a mean episode payment of \$922, the number of treatment days was highly correlated with the episode payments, as the longer episodes from the Amputation and Neurologic groups had the highest payments at \$1,388 and \$1,220 and the lowest payments went to the Incontinence (\$347) and Ankle/Foot (\$610) episodes.

3.9.2 Occupational Therapy Utilization by CSC Classification Group

As shown in *Table 27*, the 21 classification groups for occupational therapy encompassed 78.8 percent of all OT episodes. Between CY2008 and CY2009, changes in the frequencies of episodes remained fairly consistent. Episodes categorized as “Other” were the most frequent at 21.2 percent, followed by 15.1 percent in the Neuromusculoskeletal-Other group, and 12.5 percent in the Mobility group. The most common secondary diagnosis, both for all of the classified episodes and for eleven of the OT classification groups, was 728.87 (Muscle Weakness). As such, variability of secondary diagnoses across OT classification groups was considerably less than PT groups.

As with PT episodes, the longest and most expensive episodes belonged to the Amputation group. These episodes had an average of 18.5 treatment days and cost an average of \$1,356, but they were one of the two smallest of the OT classification groups. The Vision episodes were the shortest, lasting an average of only 2.9 days; these were also the least expensive episodes, costing an average of \$285. The relationship between average treatment days and payments for OT groups was different from PT groups in the middle of the range of treatment days—for example—for OT, 15 classification groups, or two-thirds of the episodes averaged between 11 and 15 treatment days and averaged more than \$1,100 per episode. Similarly, in 2008, 14 classification groups, accounting for about two-thirds of episodes, satisfied this episode length criterion. The average paid amount for these groups was \$1,000, suggesting that the rapid rise in OT payments shown earlier occurred across a broad range of conditions and was not driven by a small set of outlier episodes.

Table 27
OT episode utilization, by CSC classification group, CY2009

| CSC classification group–OT | Number of episodes | Percent of episodes | Most common 2nd ICD9 | Secondary ICD-9 description | Mean episode days | Median episode days | Mean episode paid | Median episode paid |
|-----------------------------|--------------------|---------------------|----------------------|-----------------------------|-------------------|---------------------|-------------------|---------------------|
| All | 1,005,955 | 100.0% | 728.87 | Muscle weakness-general | 12.6 | 9.0 | \$935 | \$557 |
| Other | 213,505 | 21.2% | 728.87 | Muscle weakness-general | 10.5 | 6.0 | \$713 | \$365 |
| Neuromusculoskeletal-Other | 151,701 | 15.1% | 719.7 | Difficulty in walking | 13.9 | 10.0 | \$1,014 | \$631 |
| Mobility | 125,575 | 12.5% | 728.87 | Muscle weakness-general | 14.7 | 11.0 | \$1,128 | \$759 |
| Neurologic | 86,052 | 8.6% | 728.87 | Muscle weakness-general | 15.2 | 10.0 | \$1,104 | \$669 |
| Wrist/Hand | 68,181 | 6.8% | 719.44 | Joint pain-hand | 7.9 | 5.0 | \$539 | \$304 |
| Cardiac/Vascular/Pulmonary | 62,992 | 6.3% | 728.87 | Muscle weakness-general | 15.1 | 11.0 | \$1,100 | \$691 |
| Cognitive/Mental | 55,192 | 5.5% | 728.87 | Muscle weakness-general | 13.9 | 10.0 | \$943 | \$580 |
| Shoulder/Upper Arm | 52,219 | 5.2% | 719.41 | Joint pain-shlder | 12.0 | 10.0 | \$965 | \$708 |
| Lumbar/Sacral/Thoracic | 36,715 | 3.7% | 781.2 | Abnormality of gait | 11.2 | 10.0 | \$1,021 | \$757 |
| Elbow/Forearm | 26,464 | 2.6% | 719.43 | Joint pain-forearm | 9.4 | 7.0 | \$657 | \$406 |
| Multiple Sites | 22,121 | 2.2% | 728.87 | Muscle weakness-general | 15.9 | 12.0 | \$1,231 | \$872 |
| Metabolic | 21,242 | 2.1% | 728.87 | Muscle weakness-general | 14.2 | 9.0 | \$1,019 | \$569 |
| Hip/Pelvis/Thigh | 18,270 | 1.8% | 728.87 | Muscle weakness-general | 14.1 | 11.0 | \$1,125 | \$794 |
| Knee/Leg | 16,446 | 1.6% | 719.46 | Joint pain-l/leg | 12.2 | 13.0 | \$1,203 | \$1,296 |
| Cervical | 12,693 | 1.3% | 723.1 | Cervicalgia | 11.8 | 13.0 | \$1,235 | \$1,352 |
| Edema | 11,621 | 1.2% | V57.21 | Enctr occupatnal thrpy | 8.6 | 6.0 | \$736 | \$408 |
| Swallowing | 9,740 | 1.0% | 728.87 | Muscle weakness-general | 15.2 | 11.0 | \$1,036 | \$644 |
| Vision | 7,090 | 0.7% | 362.51 | Nonexudat macular degen | 2.9 | 1.0 | \$285 | \$150 |
| Skin | 4,124 | 0.4% | 728.87 | Muscle weakness-general | 14.8 | 9.0 | \$1,028 | \$550 |
| Ankle/Foot | 2,066 | 0.2% | 781.2 | Abnormality of gait | 12.7 | 10.0 | \$1,082 | \$715 |
| Amputation | 1,018 | 0.1% | 728.87 | Muscle weakness-general | 18.5 | 13.0 | \$1,356 | \$854 |
| Spinal Cord | 928 | 0.1% | 728.87 | Muscle weakness-general | 11.8 | 5.0 | \$802 | \$322 |

SOURCE: RTI International analysis of 2009 Medicare claims data for outpatient therapy services (See source file OutpatientTherapyEpisodes_byClassificationGroups_CY2009.xls).

3.9.3 Speech/Language Pathology Utilization by CSC Classification Group

As shown in **Table 28**, seven specific CSC categories comprise 60.7 percent of the services provided in SLP episodes. Following closely behind “Other” at 39.3 percent, the largest group was for Swallowing conditions (34.3 percent). The Communication episodes had the greatest number of treatment days, at 15.6, followed by the Neurologic episodes (13.0 days) and the Cognitive episodes (11.9 days). Voice and Hearing episodes were the shortest, with an average of 3.6 and 3.0 days, respectively. These were also the least expensive episodes, with average payments of \$259 (Voice) and \$226 (Hearing). Table 24 shows how the relationship between longer episodes is highly correlated with higher average payments among the SLP classification groups.

The most common secondary diagnosis for all classified speech therapy episodes was 787.2 (dysphagia). Four out of the seven classification groups for SLP, excluding “Other”, had this same modal secondary diagnosis (787.22 - Dysphagia, oropharyngeal), unlike the PT and OT classification groups, which had a larger variety of secondary diagnosis codes.

Table 28
SLP episode utilization, by CSC classification group, CY2009

| CSC classification group– SLP | Number of episodes | Percent of episodes | Most common 2nd ICD9 | Secondary ICD-9 description | Mean episode days | Median episode days | Mean episode paid | Median episode paid |
|----------------------------------|--------------------------|------------------------|----------------------------|-----------------------------|-------------------------|---------------------------|-------------------------|---------------------------|
| Total | 484,229 | 100.0% | 787.20 | Dysphagia nos | 9.8 | 5.0 | \$659 | \$354 |
| Other | 190,207 | 39.3% | 787.20 | Dysphagia nos | 10.9 | 6.0 | \$727 | \$428 |
| Swallowing | 166,158 | 34.3% | 787.22 | Dysphagia, oropharyngeal | 7.0 | 2.0 | \$487 | \$165 |
| Cognitive | 47,981 | 9.9% | 787.22 | Dysphagia, oropharyngeal | 11.9 | 8.0 | \$791 | \$546 |
| Neurologic | 47,028 | 9.7% | 787.22 | Dysphagia, oropharyngeal | 13.0 | 8.0 | \$892 | \$535 |
| Communication | 12,709 | 2.6% | 787.22 | Dysphagia, oropharyngeal | 15.6 | 11.0 | \$980 | \$666 |
| Voice | 12,160 | 2.5% | 784.49 | Voice disturbance nec | 3.6 | 1.0 | \$259 | \$144 |
| Speech | 6,671 | 1.4% | 787.20 | Dysphagia nos | 8.8 | 4.0 | \$568 | \$276 |
| Hearing | 1,315 | 0.3% | 388.30 | Tinnitus nos | 3.0 | 1.0 | \$226 | \$126 |

SOURCE: RTI International analysis of 2009 Medicare claims data for outpatient therapy services (See source file OutpatientTherapyEpisodes_byClassificationGroups_CY2009.xls).

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SECTION 4 SUMMARY OF KEY RESULTS

The key results in this report are as follows:

- Medicare expenditures for outpatient therapy were over \$5.4 billion in CY2009. This represents a 13.1 percent increase from CY2008.¹³ Almost three-quarters (73 percent) of the CY2009 expenditures were for PT, followed by 20 percent for OT and 7 percent for SLP. These proportions have changed only slightly since CY2002 (Ciolek and Hwang, 2004). However, since 1998, the proportion of Medicare expenditures for PT has risen by more than 10 percentage points, and the proportion of Medicare expenditures for OT and SLP services has fallen by at least 5 percentage points each (Olshen, Ciolek, and Hwang, 2002).
- PT users were, on average, younger than OT and SLP users. Mean expenditures per user increased with the age of the beneficiaries. Overall, average per-user expenditures from 2008 to 2009 increased 10 percent, from \$1,064 to \$1,166. This is an increase of 76 percent from the \$662 per-patient payment in CY1998 (Olshen, Ciolek, and Hwang, 2002).
- The growth of per-user expenditures from 2006 to 2009 in non-hospital settings was lower for patients whose expenditures on outpatient therapy services exceeded discipline-specific therapy financial limitations (“therapy cap”) than for the entire population of beneficiaries receiving outpatient therapy services. Per-user expenditures on outpatient therapy services provided in hospitals stayed the same overall, but rose for non-hospital Part B users who exceeded the therapy caps. Therefore, since the expenditure growth rates for all groups of patients in non-hospital settings was positive, but stayed the same or fell for hospital settings, the increase in per-user expenditures on outpatient therapy services from 2006 to 2009 was driven by increases in per-user expenditures in non-hospital settings for all users (those exceeding the caps and those not exceeding the caps).
- Similar to patterns found in 2008 and earlier years, outpatient therapy users in 2009 were disproportionately female. Almost two-thirds of outpatient therapy users were female.
- 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 and OTPP). From 2004 to 2009, 10 percent fewer HOPDs, 36 percent fewer HHAs, and 43 percent fewer CORFs provided outpatient therapy

¹³ Due to 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 percent changes in expenditures are not adjusted for inflation.

services. The number of physicians and NPPs billing Medicare for outpatient therapy services also fell by 25 and 13 percent, respectively. In contrast, the number of PTPPs increased by 43 percent, and the number of OTPPs increased by 50 percent. As a result, the total number of providers increased by nearly 7 percent.

- Facility settings still account for the greater proportion of outpatient therapy expenditures, with S/NFs accounting for almost one-third of payments in 2009 (34.5 percent). The demographic characteristic differing most by setting is age; relatively older patients, who have higher therapy expenditures on average, are more likely to be treated in facility-based settings. This association may be due to older patients' being more likely to be residents of a NF or to HOPDs' being exempt from the therapy caps.
- The distributions of therapy expenditures across settings were fairly similar in both 2008 and 2009, with the exception of NPP and CORF settings that experienced losses for OT expenditures (69.2 percent and 30.5 percent, respectively). Also, SLP expenditures fell 2.1 percent in hospitals and PT expenditures fell 19.2 percent in CORFs.
- Expenditures increased significantly from CY2008 to CY2009 for S/NFs across all therapy types but less so for SLP. CORFs experienced a decline in expenditures in this time period for PT and OT, whereas NPPs experienced similar declines in OT only. HHAs saw a significant increase in OT expenditures over this time period.
- Similar to 2008, more than 80 percent of outpatient therapy users received only one type of therapy (PT, OT, or SLP) in 2009. 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 and OTPPs, 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.
- Almost 95 percent of all outpatient therapy claim lines and Medicare payments in both CY2008 and CY2009 were represented by just 15 Healthcare Common Procedure Coding System (HCPCS) codes.¹⁴ 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 and SLP episodes. Comparing episodes across setting types, the longest and most expensive outpatient therapy episodes (for all three settings) occurred in S/NFs, CORFs, and ORFs.

¹⁴ HCPCS is a standardized coding system for claims processing used by Medicare and other insurers. The HCPCS identifies a number of products, supplies, and services not included in the CPT system. See <http://www.cms.hhs.gov/MedHCPCSGeninfo/>.

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