

The Centers for Medicare & Medicaid Services' Office of Research, Development, and Information (ORDI) strives to make information available to all. Nevertheless, portions of our files including charts, tables, and graphics may be difficult to read using assistive technology. Persons with disabilities experiencing problems accessing portions of any file should contact ORDI through e-mail at ORDI_508_Compliance@cms.hhs.gov.

February 2009

Impacts Associated with the Medicare Psychiatric PPS: A Study of Partial Hospitalization Programs

Report

Prepared for

Frederick Thomas, Ph.D.
Centers for Medicare & Medicaid Services
Office of Research, Development, and Information
Mail Stop MC-9, Room 115
7500 Security Boulevard
Baltimore, MD 21244-1850

Prepared by

Musetta Y. Leung, Ph.D.
Edward M. Drozd, Ph.D.
Janet Maier, RN, MPH
RTI International
1440 Main Street–Suite 310
Waltham, MA 02451-1623

RTI Project Number 0207964.018.005

IMPACT ASSOCIATED WITH THE MEDICARE PSYCHIATRIC PPS:
A STUDY OF PARTIAL HOSPITALIZATION PROGRAMS

by Musetta Y. Leung, Ph.D.
Edward M. Drozd, Ph.D.
Janet Maier, RN, MPH

Scientific Reviewer: Jerry Cromwell, Ph.D.

Federal Project Officer: Frederick G. Thomas, Ph.D.

RTI International

Contract No. CMS-500-00-0024, T.O. 18

February 2009

This project was funded by the Centers for Medicare & Medicaid Services under contract no. 500-00-0024, T.O. 18. The statements contained in this report are solely those of the authors and do not necessarily reflect the views or policies of the Centers for Medicare & Medicaid Services. RTI assumes responsibility for the accuracy and completeness of the information contained in this report.

CONTENTS

SECTION 1 BACKGROUND	1
1.1 Introduction.....	1
1.1.1 Descriptions of Partial Hospitalization Programs.....	1
1.1.2 The Medicare Partial Hospitalization Benefit.....	2
1.1.3 Mid-1990s Growth of Partial Hospitalization Programs	3
1.2 1998 Office of Inspector General Audit	4
1.3 CMS Review of PHP Benefit and PHP Trends Analysis 1995–1997	4
1.4 Inpatient Psychiatric Facility Prospective Payment System.....	5
1.5 Study Objectives	6
SECTION 2 PARTIAL HOSPITALIZATION PROGRAM MULTI-SITE INTERVIEWS.....	7
2.1 Introduction.....	7
2.2 Methods.....	7
2.2.1 Identification of Partial Hospitalization Programs	7
2.2.2 Interviews.....	8
2.2.3 Acceptance and Refusal Rates.....	9
2.2.4 Description of Facilities.....	9
2.3 Results.....	10
2.3.1 The Current State of PHPs and the Services PHPs Provide	10
2.3.2 PHP Niche and Populations and Communities Served.....	14
2.3.3 Differences between Hospital-based PHPs and CMHC-based PHPs.....	16
2.3.4 Differences between PHPs and Other “Intensive” Outpatient Programs	18
2.3.5 Challenges Faced by PHPs	18
2.3.6 Impact of IPF-PPS Implementation on the Use of PHP	20
2.4 Summary of Findings.....	20
SECTION 3 TRENDS IN PARTIAL HOSPITALIZATION PROGRAMS	23
3.1 Introduction.....	23
3.2 Methods.....	23
3.2.1 Data Sources	23
3.2.2 Definitions.....	26
3.3 Results.....	27
3.3.1 Partial Hospitalization Providers	27
3.3.2 Beneficiaries in Partial Hospitalization Programs	28
3.3.3 Utilization of Partial Hospitalization Programs.....	30
3.3.4 Medicare Program Expenditures on Partial Hospitalization Programs	33
3.3.5 Partial Hospitalization Program Utilization by Psychiatric Diagnosis	35

3.3.6	The Partial Hospitalization Program Landscape, by State.....	39
3.4	Discussion.....	43
SECTION 4 PATIENT FLOW PATTERNS: CURRENT ROLE OF PARTIAL HOSPITALIZATION PROGRAMS IN RELATIONS TO INPATIENT PSYCHIATRIC		
		45
4.1	Introduction.....	45
4.2	Methods.....	45
4.2.1	Data Sources	45
4.2.2	Definitions.....	46
4.2.3	Analysis.....	46
4.3.	Results.....	47
4.4	Discussion.....	52
REFERENCES		56

List of Figures

Figure 1-1	Flow of patients pre- and post-PHP care in a psychiatric episode.....	1
Figure 3-1	Net changes (%) in the number of partial hospitalization program providers from 1997 to 2005	40
Figure 3-2	Net changes (%) in the number of hospital-based partial hospitalization program providers from 1997 to 2005.....	41
Figure 3-3	Net changes (%) in the number of CMHC-based partial hospitalization program providers from 1997 to 2005.....	42
Figure 4-1	Psychiatric bed locations before a PHP episode, by number of days to PHP admission	50
Figure 4-2	Psychiatric bed locations after a PHP episode, by number of days to inpatient admission	51

List of Tables

Table 2-1	List of participating facilities	9
Table 3-1	Revenue center and HCPCS codes for PHP services	24
Table 3-2	Psychiatric conditions and associated ICD-9-CM diagnosis codes.....	26
Table 3-3	Number of PHP providers, 1997 to 2005.....	28
Table 3-4	Partial hospital program patient counts, 1997 to 2005	29
Table 3-5	Percentage of aged, disabled, and dual eligible beneficiaries in partial hospital programs, by type of facility, 1997 to 2005.....	29
Table 3-6	Distribution of race and ethnicity, by type of facility, 1997 to 2005.....	30
Table 3-7	PHP utilization decomposition, hospital-based PHPs, 1997 to 2005	31
Table 3-8	Rate of change in components of PHP utilization decomposition, hospital-based PHPs, annual rates of change, 1997 to 2005.....	31
Table 3-9	PHP utilization decomposition, CMHC-based PHPs, 1997 to 2005	32
Table 3-10	Rate of change in components of PHP utilization decomposition, CMHC-based PHPs, annual rates of change, 1997 to 2005.....	32
Table 3-11	Distribution of length of stay for hospital-based PHP services, 1997 to 2005	34
Table 3-12	Distribution of length of stay for CMHC-based PHP services, 1997 to 2005	34
Table 3-13	Total Medicare PHP program expenditures, expenditures per patient, and, 1997 to 2005.....	35
Table 3-14	Distribution of numbers of all provider PHP episodes, by diagnosis, 1997 to 2005	36
Table 3-15	Distribution of numbers of hospital-based provider PHP episodes, by diagnosis, 1997 to 2005	36
Table 3-16	Distribution of numbers of CMHC-based provider PHP episodes, by diagnosis, 1997 to 2005	37
Table 3-17	Mean PHP episode length, by primary diagnosis, 1997 to 2005	37
Table 3-18	Mean PHP episode length, by type of facility and proportion of all schizophrenic disorder episodes, 1997 to 2005.....	38
Table 3-19	Mean PHP episode length, by type of facility and proportion of all affective disorder episodes, 1997 to 2005.....	38
Table 3-20	Mean PHP episode length, by type of facility and proportion of all neurotic disorder episodes, 1997 to 2005.....	39

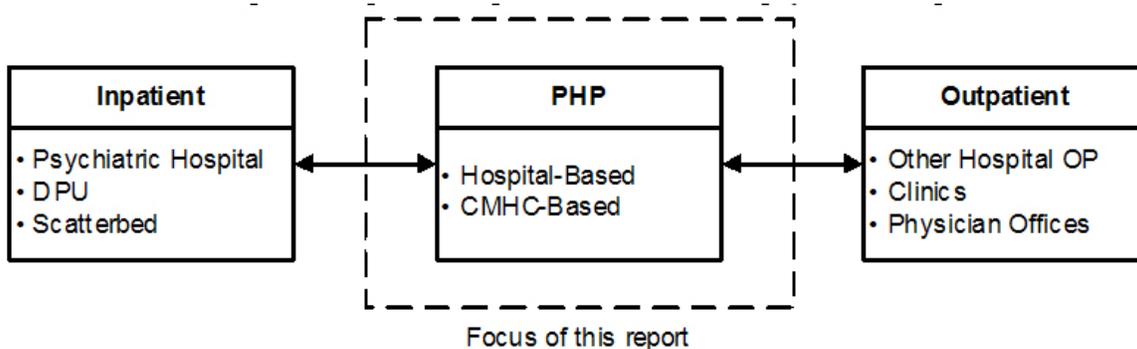
Table 4-1	Beneficiary characteristics	48
Table 4-2	Time to next event: step up and step down analysis among patients with a PHP episode in 2004	49
Table 4-3	Odds ratios of having an inpatient stay within 15 days before or after a PHP episode	53
Table 4-4	Odds ratios of having an inpatient stay anytime within 90 days before or after a PHP episode	54

SECTION 1 BACKGROUND

1.1 Introduction

Medicare covers various levels of psychiatric services. Partial hospitalization programs (PHPs) play a unique role within the continuum of care for psychiatric patients, denoted in Figure 1-1. This continuum spans from inpatient treatment to outpatient appointments. Partial hospitalization, which falls in between the two, was designed to provide psychiatric care “in lieu” of inpatient care, specifically for those patients who could safely reduce (or eliminate) the number of days of inpatient care (Sederer, 2001). As such, PHP care is designed for use at two distinct points in time: (1) to prevent a “step-up” to hospitalization, and (2) to support a patient’s transition from inpatient status back into the community (“step-down”).

Figure 1-1
Flow of patients pre- and post-PHP care in a psychiatric episode



1.1.1 Descriptions of Partial Hospitalization Programs

As a preventive step-up, patients may be referred into a PHP if staff assess the patient as (1) stable enough to be medically unsupervised for brief periods of time, such as home overnight; (2) able to remain safe and not a danger to themselves or others; and (3) that the patient will be able to participate in and benefit from the PHP treatment. Sources of referral for PHPs include self, family, providers (counselors, nurses, psychiatrists, etc.), and emergency department staff.

On the other hand, as a “substitute” for inpatient care, PHP services provide care that is intensive and very similar to that for inpatients, but a critical difference between these two distinct services is that PHP patients are deemed safe enough to spend the night in their home environment rather than in the inpatient setting. Provided that they meet the benefit category requirements for Medicare coverage, PHP patients may be: (1) those who are discharged from an inpatient hospital treatment program, and the PHP is in lieu of continued inpatient treatment; or (2) those who, in the absence of partial hospitalization, would be at reasonable risk of requiring inpatient hospitalization.

PHP services are only appropriate for a subset of hospitalized patients. In order to succeed in a PHP, patients must have the psychiatric and physical stamina to not only withstand, but also participate actively in several hours of therapy for several days each week, as well as the ability to tolerate a couple of hours of transportation to and from the PHP site. This is one reason

why geriatric patients may have difficulties with the physical requirements of PHP participation. Some other examples of patients who are inappropriate or at the very least unlikely to succeed are those who are actively hallucinating, have organic brain disorders that do not allow them to learn, are unable to concentrate for any number of reasons, cannot maintain appropriate behavior in group settings, or who abuse substances consistently during the treatment. Above all, the program is designed for patients who can reap the benefits of therapeutic group discussion and activities, insightful thinking, and clinical counseling and supervision.

During a PHP “stay,” patients continue to live at home, but attend several therapeutic groups each day, up to five days per week, for as many weeks as the physician and clinical team determine is necessary to prevent hospitalization. The intensive level of support of PHP treatment during the day can provide the bridge these patients need for a successful transition to their lives outside the inpatient environment. While PHP patients may not be well enough to function independently, they have been assessed to be safe enough to leave the hospital environment during evenings, nights, and in most cases, weekends. The treatment program consists primarily of individual and group therapy sessions which are geared to build patient coping and decision-making skills. Nursing services include on-going assessment and education about medications, and are provided in group and individual sessions as well. The connection of PHP patients with community resources and outpatient support is also an important part of the transition process, and as appropriate, patients are referred into the available outpatient services upon discharge from the PHP. In the few cases where patients destabilize and are unable to continue safely in the PHP, the treatment team can facilitate their admission into inpatient care.

An important but often forgotten factor in the success or lack thereof in PHP treatment is a patient’s residential environment. Only a small portion of a day is spent inside the safety and support of the inpatient setting during a PHP episode; most of their time is spent in the community. The supportiveness of a patient’s residential environment is therefore a critical factor for treatment success. Patients without those supports may require longer or more intensive treatment. Those who face severe stressors in their community include those who are homeless, who live in homes or neighborhood where substance abuse is a constant temptation, which have no supportive people in their lives, who cannot afford to purchase their psychiatric or other medications, or those who are surrounded by crime or domestic violence. In addition to the burden of recovering from their acute mental illness, these patients bear the added challenges of their environment.

1.1.2 The Medicare Partial Hospitalization Benefit

Programs with features similar to some of those included in modern partial hospitalization programs, particularly the concept of the “day hospital” serving as a transition between inpatient and outpatient settings, have existed since before the 1950s (Neffinger, 1981). The Congressional requirement made in the Community Mental Health Act of 1963 (Pub. L. 88-164) that PHP be one of the core services that must be provided by CMHCs presumably helped encourage their spread in the United States. It was not until the Omnibus Budget Reconciliation Act of 1987 (OBRA87; Pub. L. 100-203) that Medicare statutorily was authorized to pay specifically for PHP services. However, the OBRA87 legislation only required coverage for PHPs based in or affiliated with hospitals. Later, the Omnibus Budget Reconciliation Act of

1990 (OBRA90, Pub. L. 101-508) further extended the Medicare benefit to cover PHP services provided by CMHCs.

To qualify for coverage under Medicare as partial hospitalization, the service must be provided by a hospital or a community mental health center.¹ To receive Medicare payment for PHP, a CMHC must meet the mental health service requirements specified in Section 1913(c)(1) of the Public Health Service Act (or, if state regulations preclude the organization itself from screening patients for state mental health facilities, then the organization must contract to provide those services). In addition, the organization must meet all other applicable state licensing and certification requirements.

In keeping with the medical model, Medicare requirements for both hospital-based and CMHC-based PHP eligibility included the following: (1) a physician must certify that patients would otherwise require hospitalization under Section 1835(a)(2)(F) of the Social Security Act; (2) a written treatment plan is necessary for each patient; and (3) medical necessity, so that the patient would require hospitalization if not admitted to the PHP (Thomas et al., 2000; Sederer, 2001). Moreover, Section 1861(ff) specified that PHP treatment was expected to improve or maintain the patient's condition and functional level in order to prevent relapse or hospitalization (OIG, 1998).

Covered PHP services include activity therapies, group therapies and services of nursing and other staff not eligible to bill independently, and exclude food or medications (unless the patient cannot self-administer the medication). For example, PHPs may include services provided by licensed social worker services, as well as those of other clinicians (e.g., mental health workers, nurses who are not nurse practitioners) who cannot independently bill. On the other hand, professional services (physicians, clinical psychologists, nurse specialists, and physician assistants) are billed separately in the same manner as inpatient professional services (Thomas, 2000).

1.1.3 Mid-1990s Growth of Partial Hospitalization Programs

As a result of the two OBRA statutes, PHPs grew substantially during the mid-1990s. In particular, regulations published at 94FR2680, implementing the Congressional requirement for coverage of PHP services in CMHCs presumably increased growth in PHP services because of increasing the number of potential providers of this service. Both utilization and costs of PHPs increased dramatically. From 1995 to 1997 Medicare payments to PHP providers more than doubled, from \$245 million to \$550 million. This trend was coincident with the decline in the length of inpatient stays—largely within prospective payment system (PPS) exempt psychiatric hospitals and units in acute care hospitals—and the expansion of the PHP reimbursement to CMHCs (Thomas et al., 2000).

As the CMHC PHPs proliferated, the number of CMHCs billing Medicare increased from 296 in 1993 to 769 in 1997. The Health Care Financing Administration (HCFA, now known as

¹ Section 1866(e)(2) of the Social Security Act recognizes CMHCs as providers of services only for partial hospitalization programs. Coverage of other services provided in CMHCs would presumably be determined by coverage rules for individual clinicians.

CMS) had estimated an annual cost of \$15 million for the CMHC PHP services, but actual expenditures continued to increase exponentially and far outstripped CMS' expectations. Between 1993 and 1997 total Medicare payments to CMHCs increased 482 percent, from \$60 million to \$349 million (DHHS, 1998).

1.2 1998 Office of Inspector General Audit

In order to determine whether CMHCs were billing their PHP services according to the Medicare's eligibility and reimbursement requirements, and if two states (Colorado and Pennsylvania) were providing all five core services. The Office of Inspector General conducted an audit in 1998 of CMHC claims from FY 1997. A sample of 250 claims was selected from five large FIs covering five states: Texas, Alabama, Florida, Colorado, and Pennsylvania. These states accounted for about 77 percent of the CMHC PHP payments made during calendar year 1996. According to the OIG Report of October 1998, 91 percent of the PHP units of service in these claims did not meet Medicare requirements. Of the \$252 million in claims paid by Medicare to all CMHCs for PHP care in the five states, an estimated \$180 million were "unallowable" and \$49 million were "highly questionable" (DHHS, 1998). About 60 percent of the sampled beneficiaries were ineligible for PHPs, and 79 percent of the units of services were not reimbursable under Medicare requirements (Thomas et al., 2000).

1.3 CMS Review of PHP Benefit and PHP Trends Analysis 1995–1997

An intra-agency CMS task group conducted further investigation of claims data to study the use of Medicare-covered services in CMHC and hospital-based PHPs and to determine whether there was a need to restructure the benefit (Thomas et al., 2000). Through analysis of claims data from 1995–1997, the task group identified basic trends and utilization patterns of hospital and CMHC PHP services.

In 1997 about 88,000 Medicare beneficiaries received PHP services, and the CMHC share had grown to about 40 percent of the total (Thomas et al., 2000). While hospital PHP admissions increased during those three years, PHP patient counts in CMHCs declined moderately. As the CMHC PHPs proliferated, the number of CMHCs submitting claims increased from 296 in 1993 to 769 in 1997. Moreover, HCFA (now CMS) estimated an annual cost of \$15 million for the CMHC PHP services, but actual expenditures continued to increase exponentially and far outstripped the agency's expectations. Although both hospital and CMHC PHP costs increased, the 1997 CMHC average cost per patient (\$10,266) was more than twice the average hospital PHP cost of \$3,755. The report concluded that "part of the reason for this cost differential is that CMHC PH programs experienced a decline in the number of patients treated, while hospital PH programs experienced an increase." (Thomas et al., 2000)

Noting that 45 percent of the CMHC episodes and 68 percent of the hospital-based episodes were shorter than 60 days, the report concluded that episodes exceeding 90 days in length reflected supportive services rather than Medicare-covered inpatient service levels. These longer episodes were more common in the CMHC-based programs (47 percent of cases) but still quite common in the hospital-based programs as well (23 percent). Episodes were defined by proxy as a gap of at least 45 days between claims per individual (Thomas et al., 2000).

The pattern of extended lengths of stay demonstrates another important factor underlying the differences in utilization: in the absence of a final rule from CMS, the interpretation of the law's statutory language varied significantly across the nation. According to a review of FI criteria conducted by the American Psychiatric Association office of Healthcare Systems and Financing, FIs and carriers developed widely differing review policies and procedures regarding PHP coverage (Sederer, 2001). The statutory language in Section 1835 (a)(2)(F) reinforces the acute nature of the need for treatment, specifying that without PHP treatment, the patient would otherwise need inpatient care. The problem lies in the language of Section 1861(ff), which states that PHP treatment is "reasonably expected to improve or **maintain** the individual's condition and **functional level** and **to prevent relapse** or hospitalization." (Thomas et al., 2000, emphasis in the original). Many providers and FIs interpreted this to include the more long-term support services provided in psycho-social rehabilitation and less intensive out-patient programs, services which are not reimbursed by Medicare.

The CMS task group also found that patients covered under other insurers did not have such long episodes because other insurers applied managed care techniques to control and coordinate service use. To gain similar advantages, CMS restructured the benefit guidelines in 1999 to use standardized review methods, intensify reviews, and develop more stringent criteria for the programs to reduce confusion about the intent of the benefit (Thomas et al., 2000).

1.4 Inpatient Psychiatric Facility Prospective Payment System

Another main development in Medicare coverage for psychiatric services in recent years was the implementation of the Inpatient Psychiatric Facility Prospective Payment System (IPF-PPS). When the Medicare Prospective Payment System (PPS) was implemented for acute general hospitals in 1984, hospital providers with certified Distinct Psychiatric Units, or DPUs, and free-standing psychiatric hospitals were allowed to remain on the pre-existing payment system instead of converting to Diagnosis Related Group (DRG) per case prospective payment. The Tax Equity and Fiscal Responsibility Act of 1982 (TEFRA) system paid on a per-case target amount with modest "bonus" and "penalty" payments for per-discharge costs below or above the target. At the time, Congress believed that DRGs were too limited in categorizing psychiatric patients in these facilities (Frank and Lave, 1986; Mitchell et al., 1987). Other discharges from hospitals, on the other hand, were (and continue to be) paid under the per case Acute Inpatient PPS (IPPS) system based on DRGs. These beds are otherwise referred throughout this report as "scatterbeds." As a result, there were (and continue to be) effectively two methods of payment for psychiatric inpatients treated in DPUs versus those treated in "scatter beds" on non-TEFRA units from 1984 until recently. For scatter bed patients, providers were paid on a per discharge basis according to a set of psychiatric and substance abuse DRGs. Patients in DPUs, however, were paid costs up to a ceiling target amount per discharge. This ceiling was provider-specific and set as of 1982 (or later if Medicare approved a new DPU).

In the Balanced Budget Refinement Act (BBRA) of 1999 (Pub.L. 106-113), Congress mandated CMS to develop a per diem payment system for all PPS-exempt TEFRA psychiatric facilities. The new system was to replace the TEFRA cost-sharing system and shifted the basis of payment from per discharge to per diem. As implemented, the IPF-PPS used DRGs as a basis for case mix adjustment but also included multiplicative adjustments for patient age and

comorbidities. The new payment system, the IPF-PPS, was implemented and phased-in starting in January 2005.

It is possible that changes to payment for inpatient psychiatric services (from TEFRA to the IPF-PPS) could have effects on the use of related Medicare-covered outpatient mental health services, such as PHP services. If providers perceive the new PPS rates to be low relative to their costs for certain patients, they may limit access to inpatient services or encourage the use of substitute services in place of the inpatient stay. Conversely, the per diem payment basis of the IPF-PPS may encourage longer hospital stays and fewer days of follow-up partial hospitalization, if any at all.

1.5 Study Objectives

Understanding the role of the PHP in treating psychiatric patients will be important for assessing whether patients' access to psychiatric care is affected by any payment or policy changes, especially since the tightened control of PHP services after the OIG report, the implementation of the Hospital Outpatient Prospective Payment System (HOPPS) and the Inpatient Psychiatric Facility PPS (IPF-PPS). Studying PHP populations, treatment patterns, and the flow of patients between the inpatient and outpatient setting may provide baseline information on whether these services are being used as step-down or step-up modalities in the continuum of care, and whether this differs for hospital-based versus CMHC-based programs. These analyses will provide CMS information on the following:

- Will changes in payment and policies prompt changes in the use of PHP services as a step-up or step-down modality, and whether this differed by PHP ownership?
- Are certain patient and providers characteristics, psychiatric conditions, and other factors predictors of treatment flow?
- Will providers who perceive payment disadvantages under the IPF-PPS increase the use of PHP as a substitute for inpatient services and reduce the number of patients admitted for an inpatient stay?
- Will providers increase their use of other outpatient psychiatric programs as a substitute for inpatient service use?

SECTION 2

PARTIAL HOSPITALIZATION PROGRAM MULTI-SITE INTERVIEWS

2.1 Introduction

The role of PHPs in treating psychiatric patients is important for assessing whether patients' access to psychiatric care is affected by payment policy changes. Studying PHP populations, treatment patterns, and the flow of patients between the inpatient and outpatient setting will provide information on whether these services are being used as step-down or step-up modalities in the continuum of care and whether this differs for hospital-based versus CMHC-based programs. While analyses using claims data can help answer some of the issues listed above, they cannot identify the exact niche played by each provider. Because of this, we gathered qualitative information derived from in-person site visits and telephone interviews with a self-selecting set of psychiatric service providers. We decided to specifically exclude facilities in Florida and Louisiana, despite these states accounting for about one-half of CMHCs billing for PHP services, due to hurricanes that affected these states in 2004. As a result, the results presented in this section should be viewed as suggestive rather than definitive. Under the scope of work for this project, RTI staff conducted case studies at a small but diverse sample of partial hospitalization programs. This section aims to address the following questions based on a series of case studies:

1. What is the current state of PHPs and the services they provide?
2. What is the niche of PHPs among the population served and within the community?
3. What are the differences, if any, between hospital-based PHPs and CMHC-based PHPs?
4. What are the differences between PHPs and other "intensive" outpatient psychiatric programs?
5. What challenges do PHPs face?
6. Will the implementation of the IPF-PPS prompt changes in the use of PHP services as a step-up or step-down modality?

2.2 Methods

2.2.1 Identification of Partial Hospitalization Programs

Information for this qualitative multi-site visit report was derived from in-person site visits and telephone interviews with a self-selecting set of psychiatric service providers. For site visits, two team members visited each facility together, so that one person could facilitate the discussions, while the other took detailed notes. Since January 2006, we have conducted case studies of hospital-based and community mental health center-based partial hospital programs. Planning for these case study interviews began by identifying potential providers using Medicare utilization data and suggestions from provider organizations (e.g., the AHA). Data from the Calendar Year 2004 Hospital Outpatient Prospective Payment System Partial Hospitalization Program identifiable dataset were used to construct a sample frame for facilities. Using data based on claims actually submitted rather than certification data (e.g., the Provider of Services

File) allowed identification of hospitals and CMHCs actually providing PHP services in sufficient volume for staff to be able to speak about the organization's PHP. These data were stratified by:

1. PHP type (hospital- or CMHC-based), determined by the Medicare provider ID (OSCAR) number.
2. Census division, as determined by the provider's state.
3. The provider's urbanicity, as determined by the FIPS state and county codes in the Provider of Services file using the December, 2003 definitions of metropolitan, micropolitan, and rural counties.

Due to scope limitations, freestanding psychiatric hospitals and their affiliated-PHPs, were excluded from the interview sample frame.² Additional criteria for selecting sites were developed in consultation with the Project Officer. To solicit participants for the case studies, letters encouraging participation in the study were sent from RTI and CMS to targeted sites, with telephone follow-up.

2.2.2 Interviews

Interview protocols were developed and sent to participants ahead of the interview. An example of the interview protocols, which were specific to the types of provider targeted, are included in Appendix A. Interview topics included an overview of the psychiatric services offered in each setting, types of populations treated, typical treatment patterns (such as frequency and duration of use), admission criteria, and discharge and recidivism issues each faced. Each facility was asked about the perceived role and niche of the PHP and other ambulatory services within the local area and how this was affected by hospital occupancy rates and other factors. Finally, the sites were asked about the expected impacts of the new inpatient PPS on their use levels, episode lengths, patient acuity, and service mix, as well as other factors they identified as likely to be affected by the new policies.

Site visit and interview participants included the facilities' executive directors, CFOs and directors of (Medicare) reimbursement, medical directors for psychiatric services, PHP directors, and other nursing and unit managers. In general, we interviewed directors of psychiatric services and directors of PHPs to understand the use of PHPs in the continuum of care and in the local market area. We spoke with the program directors, charge nurses, therapists (e.g., licensed social workers or mental health workers), and occasionally the medical director, to learn about their patient mix and treatment differences between PHP and inpatient programs. We also spoke with the same individuals to understand the role of these services in the patient's continuum of care and issues in identifying alternative services. Because each organization's structure was unique, and staff functions differed across sites, we determined the list of interviewees only after carefully reviewing the list of questions with our site liaisons, who were most often the director of psychiatric services or his/her assistant.

² The exclusion of freestanding psychiatric hospitals and their PHPs applies to only the site interviews, not the claims analyses in later sections of this report. The analyses presented in later sections of this report include all PHPs, including those sponsored by freestanding psychiatric hospitals.

2.2.3 Acceptance and Refusal Rates

The facilities described in this report were self-selected, as a provider solicited could decide whether to participate on a voluntary basis. We experienced some rejections, especially our requests for in-person site visits. Some of the reasons given for refusal included providers feeling overwhelmed by other facility business (e.g., JCAHO accreditation) and could not spare time for our interview. Altogether, we were able to conduct in-person interviews with six sites, and telephone interviews with three providers and their staff.

2.2.4 Description of Facilities

Providers included in this report consisted of both acute care hospitals with a hospital-operated partial hospitalization program and community mental health centers providing a partial hospitalization treatment program among their other outpatient psychiatric services. These facilities reflected a mix of geographic locations, including three of the four census regions, as well as a mix of urbanicity/ruralness. The facilities also included both for-profit and non-profit entities. A list of facilities that participated in our PHP study is provided in Table 2-1.

Table 2-1
List of participating facilities

Facility	Region	Type of PHP	Method
Beverly Hospital Beverly, MA	Northeast	Hospital-based	In-person site visit
South Bay Mental Health Plymouth, MA	Northeast	CMHC-based	In-person site visit
Methodist Hospital San Antonio, TX	South	Hospital-based	In-person site visit
La Paz Community Health Center San Antonio, TX	South	CMHC-based	In-person site visit
Centerstone CMHC Nashville, TN	South	CMHC-based	Telephone interview
Los Angeles Metropolitan Medical Center Los Angeles, CA	West	Hospital-based	In-person site visit
Paradise Valley CMHC National City, CA	West	CMHC-based	Telephone interview
Wesley Woods Geriatric Hospital Atlanta, GA	South	Hospital-based	In-person site visit
American Therapeutic Corporation Miami, FL	South	CMHC-based	Telephone interview

The PHPs interviewed varied not only by location, but also by size and average daily census (ADC). For example, two PHPs (one hospital-based, one CMHC-based) had an ADC of only four patients, while another one had five programs in five locations, with a total ADC of up to 91 patients. On the other hand, because facilities providing PHP services must follow a strict set of requirements (e.g., at least 20 hours of treatment per week), these programs largely provided similar structure and services for their patients. Details of the partial hospitalization programs will be addressed in a later section of this report.

2.3 Results

2.3.1 The Current State of PHPs and the Services PHPs Provide

Current State of PHPs—Some of the facilities indicated that Medicare’s decision to cover PHP services in the early 1990s was an impetus for them to begin their own partial hospitalization program. However, by all accounts, the 1999 changes in bill review procedures affected PHPs deeply, especially among the CMHC-based programs. While PHPs flourished in the late 1990s, the additional scrutiny by Fiscal Intermediaries (FIs) that followed the 1998 OIG report reduced the number of providers billing for PHP services. Even under cost-based reimbursement (prior to the implementation of the Hospital Outpatient PPS), many CMHC-based PHPs shut down because of the high rate of payment denials (see OIG report for denial reasons). Coupled with the introduction and subsequent reduction payments for PHP services under the HOPPS, interview participants in many PHPs stated that the review processes put in place to ensure that services provided meet documentation standards and reasonable and necessary service requirements for PHP resulted in many CMHCs dropping PHP services. One provider interviewed indicated that the only remaining PHPs in the area were all hospital-based because all of the CMHC-based PHPs closed in recent years. Respondents did not speculate on whether the PHPs that had closed had been providing services meeting Medicare coverage requirements.

The extant programs considered themselves to be the few “left standing” after the changes implemented between 1999 and 2001. First, many programs described themselves as operating under a mission of providing care to the community, despite self-described financial strains. Second, it became obvious that these remaining providers were able to meet the enforced requirements, additional documentation standards, and declining reimbursement for PHP services that had occurred simultaneously. For example, many providers we spoke with had a heightened sense of awareness in terms of documentation and coding for services, as they have learned to decrease their rate of audit through staff training and dedicating personnel to handle Medicare reimbursement. As one provider suggested, “although the current bundled reimbursement is not a lot, at least [the money] comes in, and so now we know how much we would be expecting and can just live with that.” We did not have cost information to corroborate these providers’ allegations of financial strain.

On the other hand, most of the hospital-based PHPs interviewed stated they were only able to keep their psychiatric services afloat because of their acute care service reimbursements.³ As more than one site noted, “behavioral health is not where the money is.” Some expressed deep concern about whether additional reductions in PHP reimbursement may occur; they claimed their operating expenses are high. For example, in addition to the cost of required services, every PHP in the study voluntarily provided transportation and meals to their patients, both of which are not Medicare-covered services. It was universally stated that patients would not come were transportation not provided.

Program description—Each PHP had specific requirements to ensure billing accuracy and appropriateness for the services provided. As specified by CMS, a certification by the physician must be made upon admission that a patient admitted to the PHP would require inpatient psychiatric hospitalization if the partial hospitalization services were not provided. The certification identifies the diagnosis and psychiatric need for the partial hospitalization. By all accounts, the sites were well-aware of this requirement, particularly for reimbursement purposes. Continued treatment in a PHP requires evidence that there were no treatment alternatives—that in determining the least restrictive level of care, less intensive treatment options could not provide the level of support necessary to maintain the patient in a stable psychiatric condition or functional level, or to prevent hospitalization. Respondents claimed ongoing efforts are made to restore the individual patient to a higher level of functioning that would permit discharge from the program. Goals for patients may be to return them to self-function, reduce treatment hours per week (e.g., 20 to 10 hours), or keep them completely out of the hospital and discharge them back to community.

PHP patients may be referred from state psychiatric hospitals, acute hospitals’ inpatient or ER units, families, private practices (physicians, psychiatrists, psychologists, or therapists), group/rest homes, law enforcement agencies, social services such as Department of Mental Health, and word of mouth. According to the PHPs interviewed, all patients admitted into PHPs must first face a myriad of assessments. Examples given included a mental status examination and psychiatric assessment that were part of an intake form and standardized testing such as the Framingham Scale and the Global Assessment of Functioning (GAF) scale. All respondents stated that only those who could tolerate and participate in the therapy sessions were admitted. For some sites, they were also only capable of treating patients who were independent and required little to no assistance in their activities of daily living. At least one PHP turned away patients who: (1) could not self-toilet; (2) could not handle too much stimuli; (3) had a low GAF score; or (4) required specialized services such as eating disorders. Other PHP documentation during a patient stay, aside from the initial intake assessment included:

- Treatment plan
- Physician certification and periodic recertification

³ In fact, CMHCs could be at a financial disadvantage since they are less able to cross-subsidize money-losing programs from net income from money-making programs, were they inclined to do so. However, CMHCs may have lower overhead than do acute hospitals, so the degree to which either provider type is at a disadvantage is ambiguous. However, CMS also does not have statutory authority to condition payment for PHP services on place of service.

- Partial Hospital Session Note (at intake, home visit, and sessions)
- Medical overview

Once admitted, the average patient length of stay (LOS) in the PHPs interviewed was typically around three to four weeks.⁴ However, some patients have been known to stay as long as six to nine months on occasion.⁵ It was not clear whether these long-LOS patients were receiving a PHP-level of care for that full length of time or instead had tapered down to a less-intensive treatment plan but were still considered by the provider to be in a continuous stay. It was also not clear whether the provider had tried to bill Medicare for a full six to nine months of PHP for those patients.

There seems to be a difference in opinion regarding the ideal LOS for patients. Some of the staff considered a four- to six-week stay in the PHP to be ideal, so that the patient could get the full benefit of the treatment but does not grow dependent on the program. As one site pointed out, “the longer [the patients] stay, the longer they backslide...and they don’t get on with their lives.” On the other hand, some providers suggested that a PHP LOS of three to four weeks was insufficient. First, some of the PHPs claimed to treat more acute and critical patients in their programs now, and these patients required longer follow-up. Second, as one PHP staff stated, “It takes about a week for the patient to get going with the program, to settle in, [to] develop trust with others. In the third week they are just getting integrated into [the PHP] enough [for us] to assess them and really start treatment, so treatment really starts the third week. Then it’s time to discharge them...” This site estimated that 65 to 70 percent of their patients would benefit from staying longer in the program. Again, it was unclear whether “staying longer in the program” meant that the patient would receive PHP-intensity level services for the additional time (Medicare cannot reimburse CMHCs for lower-intensity level mental health services).

Typical PHP schedule—Our interviews showed that a typical day for any PHP patient followed the same pattern, regardless of the type or location of the PHP. According to CMS rules, patients in PHPs were required to participate in 20 hours of therapy, four or five times per week. If this condition was not met for any given patient, providers may not be reimbursed for the services provided to this patient. However, how these 20 hours were scheduled varied. For example, we have encountered sites that provided their PHP six days per week for 3.5 to 4.5 hours per day. Others offered their program five days per week for four to five and one-half hours per day. One site offered evening groups to accommodate patients with jobs, but employed patients were the exception in the study overall.

Patients typically began the day by traveling to the facility. For the majority of these programs, complimentary transportation in the form of a shared van was provided for the

⁴ The site with the lowest average LOS also had the highest share of HMO payers. Most of their patients stayed 2 weeks and then returned to work. The close scrutiny of utilization reviewers was also attributed to the lower LOS compared to most PHPs.

⁵ In at least one site, we were told that they had longer LOS because if patients’ PHP treatment was interrupted by a hospitalization, the patients were not deemed discharged, and the PHP episode continued when the patient returned from inpatient treatment.

patients at a cost to the provider. Others came into the facility via public transportation, if available, or with help from family or friends. The treatment day included two or three morning sessions with a 10- to 15-minute break between sessions, a complimentary lunch, and another afternoon session. Group sessions generally included approximately 10 patients per session, although this number fluctuated depending on the program's census at the time. Individual therapy or consultation by a nurse took place when the patient was not in group therapy. The day ended when patients left for their home or residence (e.g., group homes, shelters, or family home). A typical PHP week is shown in the sample schedule found in Appendix B.

As noted, one of the criteria for entrance into a program was that the patient must be able to participate actively in the program, such as group activities and discussions, since PHP treatment was almost entirely a group process. Staff set therapeutic goals with each patient, and the treatment was process-oriented rather than outcome-oriented. For example, patients were not assigned to an activity just to pass time, but rather to learn interpersonal skills, coping skills, and other life skills. The staff evaluated the goals with the patients afterwards so that the activity would be "purpose-driven."

Staffing—CMS requirements for PHP services determined the core PHP staff. Each PHP had a director and at least one social worker, plus a therapist or counselor. With one exception, all of the PHPs participating in these interviews had psychiatrists on staff or on contract; one provider assigned their patients to psychiatrists in the community. All but two of the sites had at least one registered nurse, and over half of the PHPs interviewed had licensed mental health workers. Medical physicians were usually either available from hospital provider staff, or on contract to CMHCs. Other clinical staff mentioned included psychologists, case managers, home health nurses, chemical dependence counselors, family therapists, psychiatric rehabilitation therapists, recreation therapists, and nutritionists. Activity coordinators or clerical support were available at a few sites. One PHP also served as a training site for social work interns. Note that these staffing levels are numbers of people, not full time equivalent (FTE) staff levels.

In most cases, the director was also a clinician, whether nurse or social worker. Psychiatrists were usually part-time and conducted initial assessments, met weekly with patients, and completed applications to recertify patients. The nurse's role involved participating in assessments, on-going monitoring of psychiatric and medical needs, occasional assistance with medication administration, and leading groups in medication and symptom management.

Social workers and therapists or counselors were Master's-level clinicians, including Licensed Practical Counselors, and they generally worked full-time in the larger PHPs. These clinicians led groups of various types, such as anger management, life skills, group therapy, and, on a less frequent basis, family therapy. There also may be a milieu coordinator for ensuring that the patients' environment and activities were the most beneficial for recovery. In at least one site, Bachelor's-level staff served as case managers who were tasked to organize a client's life, set up team meetings, saw the client in the home once a month, and accompanied him/her for laboratory work or visits to the psychiatrist. Mental health workers often drove vehicles or coordinated arrangements with drivers, monitored patient safety, de-escalated patients (helped patients to regain or maintain control to avert a crisis), and sometimes helped with activities of daily living (ADLs). Some of these activities (e.g., transportation) are not Medicare-covered

services, so not all of this staffing can be attributed to Medicare requirements. One site recruited inpatient mental health workers to the PHP on an as-needed basis.

Our study data was not sufficient to generate meaningful staff-to-patient ratios, but economies of scale were evident. The two smallest PHPs each had an ADC of four patients. One had a basic staff of one RN, two therapists, a home health nurse, two psychiatrists, a case manager, and a mental health worker. The second-smallest PHP was staffed by a director, an RN, a social worker a nurse manager, and one recreation therapist, with mental health workers as needed from an inpatient unit nearby. In some cases, then, there was equal number of or more staff than the actual daily census. However, these staff were not generally assigned full time to these very small PHPs. On the other hand, programs with greater daily census did not require many more staff compared to the smaller facilities. In one of the larger facilities, the staff to patient ratio was about one staff person for every five patients. These typically included one director, three licensed social workers, one licensed mental health counselor, three case managers, and one milieu coordinator. Again, these figures are numbers of, and not FTE, staff.

2.3.2 PHP Niche and Populations and Communities Served

Demographic characteristics—Every CMHC-based PHP we interviewed described the majority of their population as “disadvantaged” or “indigent,” But only some of the hospital-based PHPs we interviewed described their population as “low income.” In fact, one PHP suggested that higher socio-economic status patients tended to avoid PHPs, and preferred to receive inpatient treatment at a nearby hospital or to seek other outpatient psychiatric practices for treatment. However, at least two sites reported treating a full range of socio-economic status patients, “from college professors and doctors to homeless,” and found that this mix of patients were able to benefit from participating in groups together.

The PHP programs we interviewed treated only adults, with an average age of around 40 years old, although the ages could, on rare occasions, ranged from late teens to mid-80s. While one hospital-based PHP served only a geriatric population, many PHPs, however, purposefully excluded children and geriatric patients from their services.⁶ According to several respondents, children may be better-served in an after-school outpatient setting, with an emphasis on family therapy, and elderly patients often lacked the stamina required to endure an hour (or more) of commute time plus three to four hours of sitting in groups. In addition, older adults often required additional ADL assistance that the centers were not equipped to provide and had more comorbid illnesses that complicated their care. Among the PHPs interviewed, most patients lived in group homes (“board and cares”) or residences with limited supervision, and only a minority of patients actually lived on their own or with family. However, the high proportion of patients not living alone or with family may be specific to the providers participating in these interviews and not representative of the Medicare PHP population nationally.

Clinical presentation—Across all the sites, bipolar disorder, major depression, schizophrenia, and schizo-affective disorders were the most common conditions presented at

⁶ Purposefully excluding children is not compliant with Medicare participation rules.

partial hospitalization programs. Patients with these diagnoses were also the “frequent flyers” in the program, meaning they were often readmitted several times throughout the year. However, one provider felt strongly that “chronics” such as schizophrenic and psychotic patients did not fit as well in the PHP setting as do patients with bipolar disorders. According to this provider, this was likely due to their lower level of cognitive functioning and lesser ability to engage in group treatment and socialize in the PHP setting.

Depending on the PHP, 30 to 80 percent of patients also may have substance abuse (SA) issues, and hence were dually diagnosed, although SA was never the primary admitting diagnosis. Many patients also had co-occurring Diagnostic and Statistical Manual of Mental Disorders (DSM-IV) Axis II conditions, such as borderline personality disorder. According to one director, these patients were often dependent on institutional care and at risk for developing dependency on PHP treatment; so long lengths of stay would not be ideal for them. As one director stated, “a PHP is the worst place for a patient with Axis II issues...They begin to cry when we talk about discharge.”

Niche in the community—By all accounts, patient acuity level in the PHP has increased over the years. One staff person noted, “Partial patients are very acute... [they are] what inpatient patients were five or six years ago”. PHP directors attributed this increase in severity to shorter inpatient stays and sicker patients in general. However, the shortened inpatient stays was not especially associated with the IPF-PPS, as this had been the trend before its implementation.

The sites we interviewed indicated that they largely began a partial hospitalization program because there was a need for more intensive psychiatric day services in the area. One site also stated there was a need for psychiatric services due to a paucity of inpatient treatment options. PHPs provided intensive level of care since most of the PHPs received patients “stepping down” from hospitals. In one site, the founder of the CMHC began a PHP program because of her “admiration for PHP as a step-down from inpatient services,” and set out to bridge the gap from hospital to home. Other sites shared similar sentiments that the role of the PHP was to prevent hospitalization or to transition patients from acute care to the community.

Many communities reported a shortage of inpatient psychiatric beds due to the closure of other psychiatric units, full state psychiatric hospitals, or staffing shortages. There were anecdotal reports (not verified) that psychiatric patients sometimes spent more than three days in the emergency room before they were either admitted into a psychiatric unit or discharged into another setting, such as a PHP. However, a shortage of inpatient beds was not universal in the communities in which the participating PHPs serve. One PHP in the southern United States was in a community with a large supply of inpatient psychiatric beds associated its low rate of PHP referrals and low average daily census with this surplus of inpatient capacity.

While the majority of PHPs reported being step-down services, sites noted that the number of times PHPs were used to prevent inpatient stays had increased. One site noted that one reason for this trend was that crisis and community clinicians were becoming more familiar with this service. Moreover, in some cases, including areas with few alternatives for inpatient psychiatric care, PHPs also served as a “step-up” from other outpatient programs, private mental health providers or psychiatrist offices. One CMHC described that PHP can be a “diversion from

hospital” for some patients. Another PHP provided stated that “without us, patients end up in hospital psych unit, ‘med/surg’ unit, or jail.”

One site described an additional benefit of the PHP in prevention of inpatient episodes. This site observed that some patients who had previously been in their program could self-refer in a more timely manner for care. The patients had learned to identify their own symptoms of decompensation, so they were able to seek care before they required inpatient treatment. According to this provider, the PHP offered an ideal venue for helping patients to learn to self monitor and when to seek treatment before they became incapacitated. It is unclear how unique these patients are since the other PHPs interviewed did not mention patient self-referral.

Finally, the providers we spoke to felt that PHPs can provide a better environment for patients’ recovery. Some shared that PHPs allow patients who are accustomed to being inpatients to know that their condition can improve. Because patients are treated in an outpatient setting, where they can go home (wherever, regardless of setting, they reside) at night, this freedom, in the PHPs’ opinion, may alter patients’ attitudes and create more hope for recovery. Moreover, the outpatient PHP setting “allows a person to deal with real life issues” because they can go back to some form of residential setting at night. PHP treatment also requires the patient to attend and actively participate in groups, whereas, as one PHP director pointed out, “patients in the inpatient setting can readily go back to their rooms at will and not participate in therapy.” PHPs may also be more beneficial than outpatient treatment because they allow for patient socialization and limit isolation, while providing nutritional and medication monitoring for the patients.

On the other hand, balanced time at home and in treatment settings introduces other risks. Staff from several PHPs reported the challenges of dealing with patients who were easily able to obtain street drugs and alcohol between PHP days. Absenteeism is particularly high on weekends and “check days.” By not having control over patient’s environment on a 24-hour basis, staff often observed patients struggle with their substance abuse issues. Not surprisingly, patients with poor support in their home/residence were reported to do less well overall in PHP treatment settings.

2.3.3 Differences between Hospital-based PHPs and CMHC-based PHPs

PHPs in hospitals and in CMHCs had many similarities in structure, treatment services, staffing patterns, and case mix and age of patients. However, some differences were found in their comparative advantages, size (ADC), average length of stay (ALOS), and payer mix.

The most obvious difference in the hospital-based versus CMHC-based PHPs was their financial contribution towards the organizations’ total revenues. For hospitals, PHP programs (total revenue, including Medicare program payments, deductibles, and coinsurance) often contributed only minimally (one percent or less) to the hospital’s revenue and maybe up to 10 percent of total psychiatric service line revenue. For the CMHCs we interviewed, however, revenues from the partial hospitalization program often made up the majority of revenues, in some cases up to 80 percent of the CMHC’s total net revenue.

Hospital and CMHC PHPs also differed in their payer mix. For all the CMHC-based PHPs we interviewed, Medicare was the primary payer, covering at least 75 percent of patients,

while Medicaid (excluding California), HMOs (excluding Tennessee), and self-payers covered the rest of reimbursements. Two of the CMHCs reported that HMOs constituted about 20 percent of their PHP revenues. In contrast, two of the hospital PHP providers had a majority of HMO payers, while the others were dominated by Medicare and Medicaid patients. Overall, managed care reimbursement played a small role in CMHC PHP revenues, but was a major player in some hospital PHP revenues.

In our interview sample, hospital-based PHPs had several advantages over CMHC-based PHPs. In general, they could offer better continuity of care to patients who have been discharged from an inpatient unit from the same provider (step-down). Information-sharing, e.g., lab results, was also more fluid in this kind of step-down situation. The hospital sites usually had easier access to more support staff, nutritionists, nurses, and in some cases, psychiatrists. One CMHC PHP suggested that their setting provided a wider array of therapists, but in our sample, a hospital PHP had the widest variety of therapists. Hospital PHPs had the obvious advantage in timely and safe re-admission to an inpatient unit. Moreover, in at least one setting, a hospital-based PHP admitted that they were careful to select for themselves only patients who were less chronic and less acute, and who could do well in a fairly short amount of time. At this hospital, the more chronic and severe patients, such as those with schizophrenia, were referred to the nearby CMHC-based PHP during inpatient discharge.

Fewer advantages of CMHC-based PHPs were discussed by interviewees. One CMHC-based PHP noted that they were “like a hospital without the beds,” and felt that they could provide essentially the same services but at lower cost. A large CMHC PHP provider felt that they were superior in providing culturally-appropriate services to patients, but this was in comparison to other CMHC PHPs rather than hospital PHPs.

Size differences in the number of PHP programs per provider and ADC were noted. CMHC PHPs tended to operate more programs (13 for four CMHCs) compared to hospital providers (eight among five hospitals). Both CMHC- and hospital-based programs had ADCs as low as four, but two CMHC programs had ADCs over 75, while the largest hospital PHPs’ ADCs were less than half that number.

Both CMHC and hospital PHPs had a wide range of lengths of stay (LOS). The CMHC PHPs’ ALOS was somewhat longer (three to four weeks, versus two to four for hospital-based programs). However, the site-specific ALOSs ranged from eight days to nine months. Longer stays tended to be concentrated in providers in areas with poor availability of community support services.

The major difference in payer mix was the percentage of Medicare patients versus HMO patients. Overall, most sites received most of the coverage from Medicare, but one hospital provider had mostly HMO coverage, while at least one CMHC noted that it was difficult for them to contract with managed care for PHP services. Two community PHPs, however, had as high as 20 percent HMO coverage for their PHPs. Unfortunately, we were unable to establish uniformly the proportion of the HMO patients who were actually Medicare Advantage plan members; so, some proportion of the HMO patients, in fact, may be Medicare beneficiaries.

2.3.4 Differences between PHPs and Other “Intensive” Outpatient Programs

In addition to PHPs, some facilities also had other outpatient programs. These included programs self-described as “intensive” outpatient programs (IOPs) as well as other, less-intensive outpatient and day treatment programs. Because CMHCs, by statute, can only receive Medicare payment for PHP services, the PHP providers indicating that they offer IOPs (or other Medicare-covered outpatient services) were all hospital-based.

There is no standard, official definition of IOPs, and there is no payment distinction between IOPs and other outpatient services (unlike for PHP, IOP is not a statutorily-defined service). However, sites with such programs described them as being less intensive than PHPs, but providing more frequent therapy for patients than they would receive in outpatient counseling. IOP treatment ranged from three to twelve hours of therapy per week, spread across two to four times per week. Most of the treatment sessions consisted of group therapy. Staff from one site stated the ideal IOP ALOS was about two to three weeks (approximately 16 sessions). These intensive outpatient programs were often used as a step-down for inpatient stays or PHPs, and were an avenue to exit to outpatient counseling. IOPs may be used as a way to transition out of the PHP, allowing patients to “titrate down” their therapy.

In one site, 50 percent of all PHP patients stepped-down to their in-house IOPs. Most of the other patients were referred for outpatient psychiatric follow-up, and a few were re-admitted as inpatients. In a few instances, the IOP also had been used as a transition setting to temporarily treat patients who were recently discharged from the PHP (“to tide them over”) until they could get an appointment with a psychiatrist, which could be three to 12 weeks later.

When asked how PHP and IOP patients are different, providers indicated that patients treated in the IOPs were less psychiatrically acute, less medically compromised, and usually had their own psychiatrist outside the program. Comparatively, PHP patients may be more at-risk of relapsing or they need more nursing care, such as help with their medications. Also, the psychiatrist was much more involved in a PHP compared to an IOP. The IOPs were more focused on group therapy and family therapy-oriented, especially for chemically dependent patients. An IOP typically had no nurse and had only psychotherapy and education groups. IOP patients tended to have the same diagnoses as those in the more intensive settings, but they were in less acute stages.

The final step-down service seemed to be outpatient services. These were not day treatment programs, because treatment was by appointment in an office and outreach setting, rather than milieu. For some centers, referrals for these services came from the state’s department of social services, or equivalent, so the population was generally not Medicare beneficiaries, but rather school-age individuals.

2.3.5 Challenges Faced by PHPs

Through our interviews, we also learned that some sites had shut down other PHP operations in the past. Further probing elucidated some of the challenges encountered by PHPs. Factors mentioned included:

- Long daily commutes

- The inability of the patient to concentrate and participate in group therapy
- What was described as a “time-consuming reimbursement process”
- Unsupportive residential environments for patients

Geography posed more limits upon patients in the PHP than the inpatient setting. PHP patients must make daily roundtrips to the PHP from their residence. The distance alone severely limited the number of patients who were willing and able to make the daily journey for PHP care. Shared van rides, which often lasted from 30 minutes to one hour, even when provided, can prove to be quite demanding, especially for older adults. One site noted that a single trip may span 40 miles and can last up to two hours (because of multiple pick-ups and drop-offs). This was particularly true in rural areas and areas of large suburban sprawl. One site cited distance as the primary obstacle for PHP attendance. Moreover, because many centers provided transportation for their patients as their only mean of commuting to the PHP services, the centers must factor in the added costs of vehicle maintenance and insurance, gasoline, and driver salary, which are nontrivial. Transportation services are statutorily excluded from PHP payment, so providers offering transportation to patient must either self-finance this service or find some other funding source.

Moreover, once inside the treatment center, the patient must remain attentive and alert for the duration of the treatment day, which often lasts five to six hours. As one director pointed out, the intensity of a PHP is similar to person going to work. Because PHP is a big commitment for the patients, another staff stated, “no one with jobs or kids can do this [PHP treatment].” Of course, some PHP patients have children or jobs, or are caregivers for others, but the demands on them to being away during the day for several weeks are more challenging than for most others. A few directors conveyed to us that PHPs were often difficult for those who are elderly, since there are few places for them to lie down or time to relax. One site geared towards older adults, however, was able to provide their program in a way that met the needs of their patients with shorter commutes, comfortable chairs, and more staff to help with ADLs.

Third, and perhaps not surprisingly, the Medicare reimbursement system was often described as “too administratively cumbersome.” These included FI audits, payment denials, and the ensuing appeal process. There is no doubt that the providers, especially CMHCs, had a negative regard for their respective FIs. As one provider quipped, “FIs have been trained to torture CMHCs. The amount of demand and scrutiny put on CMHC is very burdensome.” Other than desiring less administrative oversight, sites did not provide specific alternative approaches to FI oversight of CMHC billing. The current level of administrative oversight, however, was put in place in response to the generally high rate of poor billing and even fraudulent practices identified by the DHHS OIG (1998) among CMHCs during the mid-1990s. We did not ask any of the respondents whether their PHP had ever engaged in such practices, nor did the providers volunteer such information.

Fourth, for PHPs to provide the most effective treatment, patients ideally would have a steady and supportive residential setting to live during non-treatment hours and weekends. However, due to the reduction in suitable placements for psychiatric patients, providers experienced difficulties in helping patients deal with real-life settings, particularly for patients

with substance abuse disorders. PHPs have “control” of patients for only six hours per day, but not the remaining 18 hours. As one site told us, patients often relapsed every night or every weekend that they were not receiving PHP care. The quality of care, even for patients who have a care manager in board and cares, was reported in some cases to be very low. Patients ran out of medications when their managers neglected to coordinate with pharmacies. One site is planning to open a residence for PHP patients in order to improve their support while in the PHP, and also to reduce the degree of exposure to illegal drugs and the resulting substance abuse.

Finally, the lack of outpatient support had an important impact on recidivism. Patients who must wait 30 or more days for their first visit with a psychiatrist post-discharge from a PHP were more likely to relapse. A major metropolitan site reported that only two psychiatrists were willing take Medicare or Medicaid patients in their five-county area. Moreover, several sites mentioned problems with obtaining medications for patients to cover this treatment gap. Obviously, lack of medications to support patients between their discharge and first outpatient psychiatrist visit vastly increased the chances of a relapse. In fact, one site voluntarily purchased medications to “tide patients over” when no other source was available.

For various reasons, the sites reported that the acuity level of the patients have been increasing in recent years. With fewer available beds in inpatient psychiatric units, especially in the State Hospitals, patients have already been discharged sooner into PHPs. However, beyond claiming seeing shorter lengths of stay in inpatient settings,⁷ they could not speculate on why this phenomenon is occurring.

2.3.6 Impact of IPF-PPS Implementation on the Use of PHP

Interview respondents were unaware of any changes in their PHPs’ utilization resulting from the implementation of the IPF-PPS. This may at least in part be due to the fact that, at the time of the interviews, most IPFs were only in their first year of the four-year IPF-PPS phase-in period (with fully prospective rates in the fourth year). Furthermore, most sites were unwilling to speculate on whether they would experience a reduction or increase in their volume as a result in the change in inpatient payments.

2.4 Summary of Findings

The landscape and viability of partial hospitalization programs differed across the nation. In some states, the cut-backs from Medicaid and state-sponsored care, in addition to the dramatic reduction in available psychiatric beds in state psychiatric hospitals, have negatively impacted the entire continuum of psychiatric care. For example, there are patients in PHPs now who are on the waiting list for a state psychiatric hospital bed, which, in the communities served by the PHPs interviewed, can be as long as three months and continues to grow longer. In other cases, due to a shortage of psychiatrists in some areas, patients may have to wait six to 12 weeks for outpatient follow-up after an inpatient discharge. Whether as step-down or step-up bridges, PHPs (and the more loosely-defined IOPs) have been used to help close the gap between in-patient and out-patient care for at least a subset of patients. For these programs, all centers acknowledged that the acuity of their patients has increased in recent years. However, there is not statutory

⁷ Nationally, there has been little change in the average Medicare psychiatric inpatient length of stay.

definition or coverage requirement specifically for IOPs. Creating additional level-of-care distinctions (e.g., for IOPs) would require Congressional authority for CMS to define and create regulations for IOPs and determine payment amounts. To the degree that many PHP providers have difficulty with a single set of regulations (for PHP), creating multiple levels of care may create further confusion.

All of the CMHCs we interviewed were dissatisfied with their relationships with their Medicare fiscal intermediaries (FIs). Many of the complaints regarded what the sites felt to be burdensome reporting and billing requirements and high payment denial rates. However, they did note that when they in fact complied with the Medicare PHP regulations regarding meeting minimum requirements for days patients attend the program, number of groups attended, and maintaining documentation on these services, they encountered many fewer denials. In fact, over the past several years, these sites have re-evaluated how to improve the quality of their documentation, worked with their FI to “tighten” up medical necessity; and pushed for their staff to be licensed. One site found that having psychiatric treatment planning improved documentation. Some sites have learned to not bill for services if the compliance criteria were not met. In addition, these sites do not consider Medicare to be the worst payer, and Medicare payments remain a steady source of income, for PHP programs. Notably, hospital-based PHPs did not cite payment denial problems, nor did they state that service and documentation requirements were particularly burdensome.

One recurring theme that was stressed throughout our visits involves the need to take a more comprehensive view of all the patients’ needs to ensure long-term treatment success and reduce recidivism. This entails not only treating their immediate psychiatric needs, but also their surrounding environment and providing effective follow-up care. For PHPs, this is particularly pertinent because patients only receive treatment for five or six hours a day, with days off, where they spend the rest of the times away back in their residential environments. Some of these homes may not provide adequate care or supervision for the patients, while others are simply unsupportive or even harmful environments. As one provider summarized, “bad things can happen at night,” and, thus, patients’ progress is hindered.

All nine of the PHPs we interviewed voluntarily provided non-covered or otherwise unbilled services for their patients, including transportation and at least one meal. Several providers also employed a nutritionist to ensure that patients are receiving the most appropriate food. Another provided case managers who regularly work with the patients and families outside of normal PHP hours.

Moreover, several PHPs noted that follow-up care must be better coordinated once a patient is ready to be stepped-down to a lower level of psychiatric care, such as outpatient therapy. For example, in areas where there is a shortage of psychiatrists, a typical six- to 12-week waiting period for an outpatient appointment may not be a clinically appropriate for patients’ follow-up care. In addition to the lack of a stable home environment and inadequate follow-up support systems, a major contributor to recidivism is poor medication management, or non-adherence. One site felt that lack of adherence in taking medications was one of the most important reasons for frequent hospitalizations. Thus, the range of social services, stability of home environment, and availability of other outpatient providers in an area has a great deal of influence over any measurable outcomes (e.g., recidivism) of PHP care.

Although PHPs could offer a bridge between inpatient and outpatient follow-up, the sites remarked that they were not appropriate for every type of patient. Programs varied somewhat in their approaches to case mix, but all agreed that patients with bipolar disorders or major depression tend to be better-suited for PHPs, while those with moderate-to-severe cognitive impairment (dementia) or with severe psychosis are seldom, if ever, appropriate candidates for group therapy (an important component of PHP care). Some also felt that PHPs were a poor choice of treatment for patients with DSM-IV Axis II diagnoses, since they have a propensity to become dependent on the social stimulation provided by the program. A consensus emerged for describing patients who were best-suited for treatment in these programs:

- Having a stable living environment
- Having good home support and activity structure
- Having an ability to participate in group therapy
- Living within an hour of the PHP

These suggestions, along with the diagnostic criteria mentioned by the sites, could serve to inform and refine (both restrict and expand) medical necessity criteria for PHP care. However, much more research, and input from the provider community, would be necessary before making such changes.

SECTION 3

TRENDS IN PARTIAL HOSPITALIZATION PROGRAMS

3.1 Introduction

Following the work published in a previous PHP trends report (Thomas, 2000), we analyzed partial hospitalization services over the nine year period covering 1997 to 2005. In particular, we were interested in understanding whether and how the implemented changes in payment and guidelines affected hospital-based PHPs and CMHC-based programs differently. We conducted the following trend analyses: (1) the number of beneficiaries treated and providers available; (2) patient age, including aged versus disabled status; (3) the episode length; (4) the frequency of service; (5) psychiatric diagnoses; (6) payments, both total and costs per beneficiary treated; and (6) the proportion of dually eligible beneficiaries. For some of these measures, we also evaluated the trends by state.

3.2 Methods

3.2.1 Data Sources

For the PHP trend analysis, we obtained Medicare outpatient claims from the National Claims History files for 1997 through 2005. To identify claims for PHP services, we first restricted each year's claims to only those with (1) a Claim Related Condition Code of 41 (Partial Hospitalization) or (2) a Medicare Provider Number indicating the provider is a CMHC. Next, we included only claims with the relevant PHP Uniform Bill 2004 (UB-04) revenue codes or Common Procedural Terminology (CPT) or Healthcare Common Procedure Coding System (HCPCS) codes. A list of these codes can be found in Table 3-1. Finally, we excluded all Medicare claims from providers outside the United States.

For information on patient characteristics, such as age, gender, race, and Medicare eligibility status, we created "finder files" containing beneficiaries in each of the nine years with PHP services, and matched them against the denominator file for each year.

Table 3-1
Revenue center and HCPCS codes for PHP services

Category	Revenue center code	HCPCS code	Code description
Pharmacy	0250		Pharmacy–general classification
Occupational Therapy	0430		Occupational therapy–general classification
Occupational Therapy	0431		Occupational therapy–visit charge
Occupational Therapy	0432		Occupational therapy–hourly charge
Occupational Therapy	0433		Occupational therapy–group rate
Occupational Therapy	0434		Occupational therapy–evaluation or re-evaluation
Occupational Therapy	0439		Occupational therapy– other
Occupational Therapy		G0129	Occupational therapy requiring the skills of a qualified occupational therapist, furnished as a component of a partial hospitalization treatment, per day
Activity Therapy	904		Behavior health treatment/service–activity therapy
Activity Therapy		G0176	Activity therapy, such as music, dance, art, or play therapies not for recreation, related to the care and treatment of a patient’s disabling mental health problems, per session (45 minutes or more)
Psychiatric General Services	910		Behavioral health treatment/services
Psychiatric General Services		90801	Psychiatric diagnostic interview examination
Psychiatric General Services		90802	Interactive psychiatric diagnostic interview examination using play equipment, physical devices, language interpreter, or other mechanisms of communication
Psychiatric General Services		90875	Individual psychophysiological therapy incorporating biofeedback training by any modality (face-to-face with the patient), with psychotherapy (e.g., insight oriented, behavior modifying or supportive psychotherapy); approximately 20–30 minutes
Psychiatric General Services		90876	Individual psychophysiological therapy incorporating biofeedback training by any modality (face-to-face with the patient), with psychotherapy (e.g., insight oriented, behavior modifying or supportive psychotherapy); approximately 45–50 minutes
Psychiatric General Services		90899	Unlisted psychiatric service or procedure
Individual Psychotherapy	914		Behavioral health treatment/services–individual therapy
Individual Psychotherapy		90816	Individual psychotherapy, insight oriented, behavior modifying, and/or supportive, in an inpatient hospital, partial hospital, or residential setting, approximately 20 to 30 minutes face-to-face with the patient
Individual Psychotherapy		90817	Individual psychotherapy, insight oriented, behavior modifying, and/or supportive, in an inpatient hospital, partial hospital, or residential setting, approximately 20 to 30 minutes face-to-face with the patient; with medical evaluation and management services
Individual Psychotherapy		90818	Individual psychotherapy, insight oriented, behavior modifying, and/or supportive, in an inpatient hospital, partial hospital, or residential setting, approximately 45 to 50 minutes face-to-face with the patient
Individual Psychotherapy		90819	Individual psychotherapy, insight oriented, behavior modifying, and/or supportive, in an inpatient hospital, partial hospital, or residential setting, approximately 45 to 50 minutes face-to-face with the patient; with medical evaluation and management services
Individual Psychotherapy		90821	Individual psychotherapy, insight oriented, behavior modifying, and/or supportive, in an inpatient hospital, partial hospital, or residential setting, approximately 75 to 80 minutes face-to-face with the patient
Individual Psychotherapy		90822	Individual psychotherapy, insight oriented, behavior modifying, and/or supportive, in an inpatient hospital, partial hospital, or residential setting, approximately 75 to 80 minutes face-to-face with the patient; with medical evaluation and management services

(continued)

**Table 3-1
Revenue center and HCPCS codes for PHP services (continued)**

Category	Revenue center code	HCPCS code	Code description
Individual Psychotherapy		90823	Individual psychotherapy, interactive, using play equipment, physical devices, language interpreter, or other mechanisms of non-verbal communication, in an inpatient hospital, partial hospital, or residential care setting, approximately 20 to 30 minutes face-to-face with the patient
Individual Psychotherapy		90824	Individual psychotherapy, interactive, using play equipment, physical devices, language interpreter, or other mechanisms of non-verbal communication, in an inpatient hospital, partial hospital, or residential care setting, approximately 20 to 30 minutes face-to-face with the patient; with medical evaluation and management services
Individual Psychotherapy		90826	Individual psychotherapy, interactive, using play equipment, physical devices, language interpreter, or other mechanisms of non-verbal communication, in an inpatient hospital, partial hospital, or residential care setting, approximately 45 to 50 minutes face-to-face with the patient
Individual Psychotherapy		90827	Individual psychotherapy, interactive, using play equipment, physical devices, language interpreter, or other mechanisms of non-verbal communication, in an inpatient hospital, partial hospital, or residential care setting, approximately 45 to 50 minutes face-to-face with the patient; with medical evaluation and management services
Individual Psychotherapy		90828	Individual psychotherapy, interactive, using play equipment, physical devices, language interpreter, or other mechanisms of non-verbal communication, in an inpatient hospital, partial hospital, or residential care setting, approximately 75 to 80 minutes face-to-face with the patient
Individual Psychotherapy		90829	Individual psychotherapy, interactive, using play equipment, physical devices, language interpreter, or other mechanisms of non-verbal communication, in an inpatient hospital, partial hospital, or residential care setting, approximately 75 to 80 minutes face-to-face with the patient; with medical evaluation and management services
Group Therapy	915		Behavioral health treatment/services – group therapy
Group Therapy		90849	Multiple-family group psychotherapy
Group Therapy		90853	Group psychotherapy (other than multiple family group)
Group Therapy		90857	Interactive group psychotherapy
Family Psychotherapy	916		Behavioral health treatment/services – family
Family Psychotherapy		90846	Family psychotherapy (without the patient present)
Family Psychotherapy		90847	Family psychotherapy (conjoint psychotherapy) (with the patient present)
Family Psychotherapy		90849	Multiple-family group psychotherapy
Psychiatric Testing	918		Behavioral health treatment/services – testing
Psychiatric Testing		96100 [†]	
Psychiatric Testing		96115 [‡]	
Psychiatric Testing		96117 [§]	
Education/Training	942		Other therapeutic services – education/training (include diabetes diet training)
Education/Training		G0177	Training and educational services related to the care and treatment of a patient's disabling mental health problems per session (45 minutes or more)

3.2.2 Definitions

We studied outpatient claims for partial hospitalization programs (PHPs) to determine the basic trends and utilization patterns for hospital-based and community mental health center (CMHC) PHPs. To distinguish hospital-based PHPs from CMHC-based PHPs, we passed out the provider number field to ascertain those institutional providers affiliated with a hospital from those categorized as CMHCs. Beneficiaries' dual eligibility status were ascertained if they had any month of State "Buy-in" (i.e., Medicaid) during the year, and age was calculated as of the December 31 of each year. Note that all PHP claims and provider types (freestanding psychiatric hospitals, acute general hospitals, and CMHCs) are included in this analysis.

We defined each partial hospitalization episode as PHP services separated by any 45-day or longer gap between the last claim through date and the next claim from date. The claim from and claim through dates are defined as the first and last day on the claim covering services rendered to the beneficiary, respectively. Episodes were first created by sorting all claims by beneficiary identification (HIC) number and by the claim from date, and then numbering each unique episode sequentially. Next, we created a length of episode variable to capture the number of days in an episode. In the end, each beneficiary could have one or more PHP episodes in each year. Because we did not link the claims by beneficiary from year to year for this trend analysis, episodes were truncated by the beginning and end of each calendar year.

Finally, we categorized all psychiatric diagnoses in the Medicare claims into five conditions based on the claim principal diagnosis code, as shown in Table 3-2.

Table 3-2
Psychiatric conditions and associated ICD-9-CM diagnosis codes

Psychiatric conditions	ICD-9-CM diagnosis codes
Schizophrenic Disorders	295.xx
Affective Disorders	296.xx
Neurotic Disorders	300.xx
Alcohol and drug dependence	303.xx or 304.xx
Other	All other principal diagnosis codes

Each beneficiary's episode of care was then assigned a psychiatric condition, using the most prevalent condition from all the claims in that episode as the marker. For example, if a beneficiary had ten claims in one episode, and six of those were for schizophrenic disorders, while four were for neurotic disorders, then the episode was considered to be a schizophrenic disorder episode. In the end, then, each beneficiary episode would have a distinct psychiatric disorder.

3.3 Results

3.3.1 Partial Hospitalization Providers

The number of providers⁸ of partial hospitalization programs (PHPs) decreased substantially between 1997 to 2005 (from 1,888 to 689 providers), with the largest decrease between 1997 and 2001 (Table 3-3). The decrease was particularly conspicuous among community mental health center-based (CMHC-based) programs during this period. For CMHC-PHPs, the large decreases came after the dissemination of the 1998 Office of Inspector General report citing that Medicare paid for “unallowable and highly questionable PHP services” at CMHCs. After the publication of the OIG report, fiscal intermediaries and carriers added much stricter scrutiny of CMHC PHP charges, which led to the closing of many programs. Assuming some number of providers (beyond those specifically examined by the OIG) were in fact engaging in fraudulent practices, a reduction in the number of CMHCs able to bill Medicare was in fact a desired outcome. By 2001, only 17 percent of PHPs were CMHC-based. The decrease in the total number of providers continued with the implementation of the Hospital Outpatient Prospective Payment System (OPPS) during 2000 and 2001. The OPPS may have contributed to the drop in providers between the 2000 and 2003 period if facilities expected future payment reductions, especially among hospital-based PHP programs. Of course, other factors may have contributed to this decline as well, such as provider mergers, closures for unrelated reasons, and reductions in the incidence of multiple provider IDs per providers. However, there was a greater-than-trend reduction in the number of providers between 2000 and 2001, coincident with the implementation of the OPPS. The number of PHP providers have held steady since 2003.

⁸ Specifically, we define a “provider” to be a distinct Medicare provider ID number. It is possible that an organization may have multiple provider ID numbers, or that a single organization controls multiple organizations each with their own provider ID numbers. Thus the number of unique providing organizations may be smaller than the number of unique providers in a given year. However, since understanding the ownership relationships of all PHP providers in the nation was beyond the scope of this project, we adopted the definition that distinct provider ID numbers correspond to distinct providers.

Table 3-3
Number of PHP providers, 1997 to 2005

Year	Number of PHP providers	Percent of PHPs hospital-based	Percent of PHPs CMHC-based	Notable events
1997	1,888	60.0 %	40.0 %	
1998	1,850	60.2 %	39.8 %	OIG Report Released
1999	1,491	67.9 %	32.1 %	
2000	1,307	77.4 %	22.6 %	HOPPS Implemented
2001	894	82.6 %	17.4 %	
2002	766	82.4 %	17.6 %	
2003	686	80.2 %	19.8 %	
2004	679	76.9 %	23.1 %	
2005	689	74.2 %	25.8 %	IPF-PPS Implemented

SOURCE: RTI International analysis of Medicare claims data, 1997–2005.

3.3.2 Beneficiaries in Partial Hospitalization Programs

Along with the decrease in providers, the number of Medicare beneficiaries receiving PHP services also decreased over the nine-year period. The number of beneficiaries treated dropped by half from 71,031 to 35,805 between 1997 and 2005 (Table 3-4). Although more beneficiaries were treated in hospital-based programs historically, the distributions of patients are narrowing between the two types of facilities.

Among beneficiaries who used PHP services, more qualified into the Medicare because of disability status than age (Table 3-5). Between 1997 and 2001, more beneficiaries in hospital-based PHPs reported to have aged into the Medicare system, but hospital-based programs began to have a higher share of disabled beneficiaries starting in 2002. In fact, the proportions of disabled beneficiaries have steadily increased over the nine-year period. Combined with the trends in the overall numbers of Medicare beneficiaries receiving PHP services, this indicates that the number of aged beneficiaries receiving PHP services has declined over time.

Consistently, a larger proportion of beneficiaries treated in CMHC-based programs were dual eligible beneficiaries compared to their hospital-based counterparts, and this discrepancy has widened over the 9-year period. The number of dual eligible beneficiaries in PHPs decreased from 40,917 to 24,214 beneficiaries between 1997 and 2005. These included patients who ever had Medicaid during the year reported. However, this decline mirrored the overall decline in all beneficiaries receiving PHP services since the proportion of PHP recipients who are dually eligible rose slightly.

Table 3-4
Partial hospital program patient counts, 1997 to 2005

Year	Number of PHP patients	Percent of patients in hospital-based PHPs	Percent of patients in CMHC-based PHPs	Notable events
1997	71,031	62.5 %	37.5 %	
1998	68,307	58.6 %	41.4 %	OIG Report Released
1999	49,358	66.2 %	33.8 %	
2000	37,915	72.4 %	27.6 %	HOPPS Implemented
2001	28,555	72.2 %	27.8 %	
2002	28,864	69.0 %	31.0 %	
2003	28,766	64.3 %	35.7 %	
2004	31,824	59.6 %	40.4 %	
2005	35,805	53.6 %	46.4 %	IPF-PPS Implemented

SOURCE: RTI International analysis of Medicare claims data, 1997–2005.

Table 3-5
Percentage of aged, disabled, and dual eligible beneficiaries in partial hospital programs, by type of facility, 1997 to 2005

Year	Hospital-based Medicare patient count	CMHC-based Medicare patient count	Hospital-based aged %	Hospital-based disabled %	Hospital-based dual eligible %	CMHC-based aged %	CMHC-based disabled %	CMHC-based dual eligible %
1997	44,420	26,611	42.9 %	56.9 %	53.2 %	40.3 %	59.6 %	65.2 %
1998	40,008	28,299	41.5 %	58.3 %	55.0 %	38.5 %	61.4 %	66.7 %
1999	32,698	16,660	40.2 %	59.6 %	56.8 %	36.8 %	63.1 %	65.3 %
2000	27,437	10,478	39.8 %	60.1 %	56.5 %	34.7 %	65.2 %	68.0 %
2001	20,603	7,952	35.0 %	64.8 %	56.6 %	34.0 %	65.8 %	71.3 %
2002	19,929	8,935	30.9 %	69.0 %	57.3 %	32.3 %	67.6 %	73.2 %
2003	18,495	10,271	27.6 %	72.3 %	58.4 %	33.1 %	66.8 %	74.4 %
2004	18,959	12,865	27.8 %	72.1 %	57.6 %	35.4 %	64.5 %	76.0 %
2005	19,205	16,600	25.9 %	74.0 %	58.4 %	40.3 %	59.6 %	78.4 %

NOTE: Approximately 0.1% of beneficiaries did not have readily identifiable demographic information.

SOURCE: RTI International analysis of Medicare claims data, 1997–2005.

Historically, hospital-based PHPs have treated a larger proportion of patients who are white, while CMHC-based programs have treated larger proportions of patients who are racial or ethnic minorities. This is particularly noteworthy when comparing the proportions of Hispanics treated in the two types of facilities (Table 3-6).

**Table 3-6
Distribution of race and ethnicity, by type of facility, 1997 to 2005**

Year	Hospital-based White %	Hospital-based Black %	Hospital-based Hispanic %	Hospital-based other %	CMHC-based White %	CMHC-based Black %	CMHC-based Hispanic %	CMHC-based Other %
1997	78.1 %	15.5 %	3.2 %	3.3 %	68.5 %	17.0 %	11.2 %	3.3 %
1998	78.1 %	15.4 %	2.7 %	3.8 %	66.8 %	18.4 %	10.8 %	4.0 %
1999	77.6 %	15.3 %	2.6 %	4.5 %	64.9 %	20.5 %	9.6 %	4.9 %
2000	79.3 %	15.6 %	2.7 %	2.4 %	65.8 %	21.9 %	10.8 %	1.6 %
2001	78.4 %	17.1 %	2.4 %	2.1 %	65.3 %	22.8 %	10.5 %	1.4 %
2002	79.0 %	16.5 %	2.4 %	2.2 %	63.9 %	24.0 %	10.7 %	1.4 %
2003	78.8 %	16.7 %	2.2 %	2.3 %	63.0 %	23.6 %	11.9 %	1.5 %
2004	79.8 %	15.7 %	2.1 %	2.4 %	61.1 %	23.1 %	14.3 %	1.5 %
2005	79.5 %	15.7 %	2.4 %	2.5 %	58.8 %	21.8 %	17.8 %	1.6 %

NOTE: Approximately 0.1% of beneficiaries did not have readily identifiable demographic information.

SOURCE: RTI International analysis of Medicare claims data, 1997–2005.

3.3.3 Utilization of Partial Hospitalization Programs

Counting the number of days of PHP service, we see that the total number of treatment days across all beneficiaries dropped significantly between 1998 and 2001 for both hospital-based and CMHC-based programs (Tables 3-7 through 3-10). For hospital-based programs, this number has held steady between 2001 and 2005, but the total number of treatment days in CMHCs have increased since 2001, and actually surpassed those in hospital-based programs.

Averaging the number of treatment days over all beneficiaries with PHP services, we see that CMHC-based programs consistently had more days of treatment than hospital-based programs. There was a sharp decrease in treatment days among CMHC-PHPs between 1997 and 2000, but the trend has reversed since 2001. Among hospital-based PHPs, treatment days decreased from 1997 to 2001, and have held relatively steady since then.

Looking at the number of episodes per beneficiary, we are able to gauge the frequency of PHP services. The average number of episodes per year was similar between hospital-based programs and CMHC-based PHPs in 1997, but the frequency of service increased over time among CMHC-based programs, while decreasing slightly for hospital-based programs.

Table 3-7
PHP utilization decomposition, hospital-based PHPs, 1997 to 2005

Year	Total treatment days	Number of patients	Average episodes per beneficiary	Average episode length (days)	Average treatment days per calendar day	Average treatment days per episode
1997	2,255,096	44,420	1.15	55.1	0.80	44.1
1998	1,917,310	40,008	1.15	50.6	0.82	41.6
1999	1,406,978	32,698	1.15	45.7	0.82	37.6
2000	986,299	27,437	1.12	38.2	0.84	32.0
2001	679,731	20,603	1.11	34.8	0.85	29.6
2002	688,331	19,929	1.11	36.1	0.86	31.0
2003	658,380	18,495	1.12	37.2	0.86	31.9
2004	667,373	18,959	1.11	36.8	0.86	31.6
2005	664,655	19,205	1.12	35.6	0.87	30.9

SOURCE: RTI International analysis of Medicare claims data, 1997–2005.

Table 3-8
Rate of change in components of PHP utilization decomposition, hospital-based PHPs, annual rates of change, 1997 to 2005

Year	Total treatment days ($\Delta\%$) [†]	Number of patients ($\Delta\%$) [†]	Average episodes per beneficiary ($\Delta\%$) [†]	Average episode length (days) ($\Delta\%$) [†]	Average treatment days per calendar day ($\Delta\%$) [†]	Average treatment days per episode ($\Delta\%$) [†]
1998	-15.0 %	-9.9 %	0.0 %	-8.1 %	+2.8 %	-5.6 %
1999	-26.6 %	-18.3 %	-0.5 %	-9.8 %	+0.1 %	-9.8 %
2000	-29.9 %	-16.1 %	-1.9 %	-16.4 %	+1.9 %	-14.8 %
2001	-31.1 %	-24.9 %	-0.8 %	-8.9 %	+1.6 %	-7.4 %
2002	+1.3 %	-3.3 %	0.0 %	+3.8 %	+0.9 %	+4.7 %
2003	-4.4 %	-7.2 %	+0.3 %	+3.1 %	-0.3 %	+2.8 %
2004	+1.4 %	+2.5 %	-0.3 %	-1.2 %	+0.3 %	-0.8 %
2005	-0.4 %	+1.3 %	+0.6 %	-3.2 %	+1.0 %	-2.3 %
1997–2005 [‡]	-14.2 %	-10.0 %	-0.4 %	-5.3 %	+1.0 %	-4.4 %

NOTES: (†) $\Delta\%$ is the percentage growth rate in the PHP utilization component. (‡) The 1997–2005 growth rate is an average annualized rate for the entire period. All other growth rates are one-year growth rates.

SOURCE: RTI International analysis of Medicare claims data, 1997–2005.

Table 3-9
PHP utilization decomposition, CMHC-based PHPs, 1997 to 2005

Year	Total treatment days	Number of patients	Average episodes per beneficiary	Average episode length (days)	Average treatment days per calendar day	Average treatment days per episode
1997	2,040,264	26,611	1.14	78.7	0.85	67.1
1998	2,024,429	28,299	1.19	70.8	0.85	60.2
1999	880,104	16,660	1.20	52.7	0.84	44.2
2000	450,577	10,478	1.19	44.3	0.82	36.2
2001	359,764	7,952	1.21	47.1	0.79	37.4
2002	446,925	8,935	1.22	54.0	0.76	41.1
2003	588,109	10,271	1.22	62.0	0.76	46.9
2004	809,782	12,865	1.24	66.3	0.77	50.9
2005	1,081,090	16,600	1.28	65.5	0.78	50.9

SOURCE: RTI International analysis of Medicare claims data, 1997–2005.

Table 3-10
Rate of change in components of PHP utilization decomposition, CMHC-based PHPs, annual rates of change, 1997 to 2005

Year	Total treatment days ($\Delta\%$) [†]	Number of patients ($\Delta\%$) [†]	Average episodes per beneficiary ($\Delta\%$) [†]	Average episode length (days) ($\Delta\%$) [†]	Average treatment days per calendar day ($\Delta\%$) [†]	Average treatment days per episode ($\Delta\%$) [†]
1998	-0.8 %	+6.3 %	+4.1 %	-10.0 %	-0.4 %	-10.3 %
1999	-56.5 %	-41.1 %	+0.5 %	-25.6 %	-1.3 %	-26.6 %
2000	-48.8 %	-37.1 %	-0.6 %	-16.0 %	-2.5 %	-18.1 %
2001	-20.2 %	-24.1 %	+1.8 %	+6.4 %	-2.9 %	+3.3 %
2002	+24.2 %	+12.4 %	+0.6 %	+14.5 %	-4.1 %	+9.9 %
2003	+31.6 %	+15.0 %	+0.3 %	+14.8 %	-0.6 %	+14.1 %
2004	+37.7 %	+25.3 %	+1.3 %	+7.0 %	+1.5 %	+8.5 %
2005	+33.5 %	+29.0 %	+3.4 %	-1.2 %	+1.2 %	0.0 %
1997–2005 [‡]	-7.6 %	-5.7 %	+1.4 %	-2.3 %	-1.2 %	-3.4 %

NOTES: (†) $\Delta\%$ is the percentage growth rate in the PHP utilization component. (‡) The 1997–2005 growth rate is an average annualized rate for the entire period. All other growth rates are one-year growth rates.

SOURCE: RTI International analysis of Medicare claims data, 1997–2005.

As in treatment days, CMHC-based programs have consistently had longer lengths of treatment episodes (LOS) compared to hospital-based PHPs. This difference was about 30 days in 1997, and about 40 days in 2005. For both types of facilities, the LOS per beneficiary and per episode decreased between 1997 and 2000. For CMHC programs, this trend was reversed in 2001 with steady increases in LOS since then. For hospital-based programs, the LOS has held steady at around 40 days per patient since 2001.

One way to gauge treatment intensity is by looking at the number of treatment days within a given episode. The trends in average treatment days mirror that of the average length of episode. In general, the difference between the average length of episode and the average number of actual treatment days within an episode is around 10 days.

The difference in LOS between CMHC- and hospital-based PHPs is largely attributed to the higher proportion of episodes that are over 30 days in duration (Tables 3-11 and 3-12). For example, in 2005, 40 percent of CMHC-based episodes were longer than 60 days compared to 15 percent in hospital-based episodes.

3.3.4 Medicare Program Expenditures on Partial Hospitalization Programs

Historically, total Medicare payments, based on the claim payment amount to providers for PHP services, have always been higher for CMHC-based programs compared to hospital-based programs (Table 3-13, columns 1 and 4). While there were large differences in total payment between the two types of facilities from 1997 to 1999, the gap narrowed by 2000, when total payments to CMHCs decreased substantially. Nevertheless, there is a hint that the gap in payments has widened again in 2005.

Trends in average annual expenditure per patient also reveal that Medicare has consistently paid more for patients treated in CMHC-based programs compared to hospital-based programs (Table 3-13, columns 2 and 5). Payment per patient in CMHC programs oscillated between two to four times higher than for patients in hospital-based programs over the nine-year period, although the gap seems to have narrowed since 2003. This difference can be attributable to the greater episode length and greater payment per treatment day in CMHC-based versus hospital-based PHPs.

Because Medicare beneficiaries averaged slightly more than one episode per year, the average Medicare payment per episode is very similar to the trends shown in payment per patient (Table 3-13, columns 3 and 6), especially for hospital-based PHPs. The cost of an average CMHC-PHP episode oscillated between \$8,200 to \$10,500 during the nine-year period, while the cost of an average hospital-based episode increased from between around \$2,000 and \$2,500 to \$4,000.

Table 3-11
Distribution of length of stay for hospital-based PHP services, 1997 to 2005

Year	Percentage of episodes lasting less than 30 days (%)	Percentage of episodes lasting 30–59 days (%)	Percentage of episodes lasting 60–89 days (%)	Percentage of episodes lasting 90–180 days (%)	Percentage of episodes lasting more than 180 days (%)
1997	50.1 %	21.1 %	9.8 %	12.3 %	6.7 %
1998	52.5 %	21.9 %	9.5 %	10.5 %	5.7 %
1999	55.2 %	21.9 %	9.2 %	9.5 %	4.1 %
2000	60.5 %	21.2 %	8.1 %	7.5 %	2.6 %
2001	64.3 %	20.0 %	7.3 %	6.5 %	2.0 %
2002	63.1 %	21.4 %	6.9 %	6.0 %	2.6 %
2003	62.5 %	21.0 %	7.3 %	6.6 %	2.6 %
2004	63.9 %	19.9 %	7.1 %	6.4 %	2.7 %
2005	64.5 %	19.7 %	7.1 %	6.3 %	2.4 %

NOTE: Row percentages may not sum to 100 percent due to rounding.

SOURCE: RTI International analysis of Medicare claims data, 1997–2005.

Table 3-12
Distribution of length of stay for CMHC-based PHP services, 1997 to 2005

Year	Percentage of episodes lasting less than 30 days (%)	Percentage of episodes lasting 30–59 days (%)	Percentage of episodes lasting 60–89 days (%)	Percentage of episodes lasting 90–180 days (%)	Percentage of episodes lasting more than 180 days (%)
1997	30.0 %	22.5 %	13.6 %	20.5 %	13.4 %
1998	35.1 %	25.9 %	13.1 %	16.5 %	9.4 %
1999	43.2 %	29.7 %	11.1 %	11.3 %	4.7 %
2000	46.8 %	31.4 %	10.6 %	8.5 %	2.7 %
2001	43.5 %	32.0 %	11.9 %	10.0 %	2.7 %
2002	39.6 %	30.1 %	14.0 %	12.1 %	4.2 %
2003	36.8 %	26.9 %	16.0 %	14.1 %	6.2 %
2004	34.4 %	24.9 %	17.7 %	16.0 %	7.1 %
2005	33.4 %	26.0 %	18.1 %	16.1 %	6.4 %

NOTE: Row percentages may not sum to 100 percent due to rounding.

SOURCE: RTI International analysis of Medicare claims data, 1997–2005.

Table 3-13
Total Medicare PHP program expenditures, expenditures per patient, and, 1997 to 2005

Year	Hospital-based PHP Medicare program expenditures (\$ Millions)	Hospital-based PHP average expenditures per patient (\$)	Hospital-based PHP average expenditures per PHP episode (\$)	CMHC-based PHP Medicare program expenditures (\$ Millions)	CMHC-based PHP average expenditures per patient (\$)	CMHC-based PHP average expenditures per PHP episode (\$)
1997	\$ 128.29	\$ 2,888.20	\$ 2,507.65	\$ 251.99	\$ 9,469.21	\$ 8,286.53
1998	\$ 103.96	\$ 2,598.44	\$ 2,256.58	\$ 291.98	\$ 10,317.83	\$ 8,676.32
1999	\$ 79.63	\$ 2,435.19	\$ 2,125.62	\$ 207.45	\$ 12,451.68	\$ 10,413.38
2000	\$ 64.75	\$ 2,359.94	\$ 2,100.76	\$ 118.33	\$ 11,293.39	\$ 9,501.53
2001	\$ 64.74	\$ 3,142.29	\$ 2,820.82	\$ 86.50	\$ 10,877.71	\$ 8,986.97
2002	\$ 64.46	\$ 3,234.55	\$ 2,903.93	\$ 110.57	\$ 12,374.44	\$ 10,162.28
2003	\$ 72.95	\$ 3,944.23	\$ 3,531.42	\$ 113.30	\$ 11,031.24	\$ 9,031.63
2004	\$ 89.31	\$ 4,710.75	\$ 4,229.35	\$ 140.43	\$ 10,915.90	\$ 8,825.05
2005	\$ 87.08	\$ 4,534.27	\$ 4,047.25	\$ 183.45	\$ 11,051.47	\$ 8,638.43

SOURCE: RTI International analysis of Medicare claims data, 1997–2005.

3.3.5 Partial Hospitalization Program Utilization by Psychiatric Diagnosis

The majority of patients in PHP programs had a primary diagnosis for schizophrenic disorders or affective disorders (Table 3-14). Higher proportions of patients with these two types of disorders were treated in CMHC-based PHPs, while hospital-based programs had higher proportions of patients with neurotic disorders and other psychiatric disorders. Cases with a primary diagnosis of alcohol and drug dependency constitute a very small (less than one percent) of cases since these cases often do not warrant inpatient levels of care, and Medicare does not cover 12-step and similar programs. Tables 3-15 and 3-16 present distributions of PHP patient diagnoses separately for hospital-based versus CMHC-based PHPs.

Comparing the lengths of stay by psychiatric diagnosis, we see that schizophrenic disorders had the longest length of treatment per episode, followed by neurotic disorders and affective disorders (Table 3-17). For all conditions except substance abuse, the trends showed sharp decreases in LOS between 1997 and 2001, but treatment duration has increased since 2001. Thus, case mix differences between CMHC- and hospital based PHPs are associated with longer episode lengths in CMHCs. However, this does not necessarily imply that diagnostic mix causes longer episodes in CMHCs, or that longer CMHC episodes induce longer episode lengths for patients with schizophrenic or neurotic disorders.

Considering LOS by diagnosis, we see that CMHC-based programs were consistently associated with longer LOS, regardless of diagnosis (Tables 3-18 to 3-20).

Table 3-14
Distribution of numbers of all provider PHP episodes, by diagnosis, 1997 to 2005

Year	Percentage of all PHP patients with schizophrenic disorders (%)	Percentage of all PHP patients with affective disorders (%)	Percentage of all PHP patients with neurotic disorders (%)	Percentage of all PHP patients with alcohol and drug dependency (%)	Percentage of all PHP patients with other disorders (%)
1997	29.3 %	45.9 %	4.7 %	3.6 %	16.6 %
1998	30.4 %	48.3 %	3.8 %	3.4 %	14.1 %
1999	30.7 %	49.9 %	2.9 %	3.7 %	12.8 %
2000	30.1 %	51.5 %	2.3 %	3.6 %	12.6 %
2001	30.2 %	53.2 %	2.2 %	3.6 %	10.8 %
2002	30.9 %	53.9 %	1.9 %	3.6 %	9.7 %
2003	31.6 %	54.2 %	1.6 %	3.6 %	9.0 %
2004	29.4 %	57.8 %	1.3 %	3.7 %	7.8 %
2005	28.9 %	58.3 %	1.1 %	4.9 %	6.7 %

NOTE: Row percentages may not sum to 100 percent due to rounding.

SOURCE: RTI International analysis of Medicare claims data, 1997–2005.

Table 3-15
Distribution of numbers of hospital-based provider PHP episodes, by diagnosis, 1997 to 2005

Year	Percentage of hospital-based PHP patients with schizophrenic disorders (%)	Percentage of hospital-based PHP patients with affective disorders (%)	Percentage of hospital-based PHP patients with neurotic disorders (%)	Percentage of hospital-based PHP patients with alcohol and drug dependency (%)	Percentage of hospital-based PHP patients with other disorders (%)
1997	25.3 %	43.0 %	5.8 %	5.1 %	20.8 %
1998	25.8 %	45.4 %	4.9 %	5.4 %	18.6 %
1999	26.7 %	47.9 %	3.4 %	5.3 %	16.7 %
2000	26.5 %	50.2 %	2.6 %	4.8 %	15.9 %
2001	26.7 %	52.1 %	2.7 %	4.6 %	13.9 %
2002	26.1 %	53.5 %	2.4 %	5.1 %	13.0 %
2003	26.4 %	53.0 %	2.1 %	5.7 %	12.9 %
2004	23.3 %	56.7 %	1.9 %	6.4 %	11.7 %
2005	23.4 %	55.1 %	1.8 %	9.3 %	10.2 %

NOTE: Row percentages may not sum to 100 percent due to rounding.

SOURCE: RTI International analysis of Medicare claims data, 1997–2005.

Table 3-16
Distribution of numbers of CMHC-based provider PHP episodes, by diagnosis,
1997 to 2005

Year	Percentage of CMHC-based PHP patients with schizophrenic disorders (%)	Percentage of CMHC-based PHP patients with affective disorders (%)	Percentage of CMHC-based PHP patients with neurotic disorders (%)	Percentage of CMHC-based PHP patients with alcohol and drug dependency (%)	Percentage of CMHC-based PHP patients with other disorders (%)
1997	36.0 %	50.8 %	2.8 %	1.0 %	9.5 %
1998	36.8 %	52.4 %	2.3 %	0.7 %	7.9 %
1999	38.2 %	53.6 %	2.0 %	0.6 %	5.5 %
2000	39.0 %	54.5 %	1.5 %	0.9 %	4.2 %
2001	38.6 %	55.8 %	1.2 %	1.0 %	3.4 %
2002	40.7 %	54.9 %	1.0 %	0.4 %	3.0 %
2003	40.3 %	56.2 %	0.8 %	0.2 %	2.5 %
2004	37.5 %	59.2 %	0.5 %	0.3 %	2.5 %
2005	34.5 %	61.6 %	0.4 %	0.3 %	3.2 %

NOTE: Row percentages may not sum to 100 percent due to rounding.

SOURCE: RTI International analysis of Medicare claims data, 1997–2005.

Table 3-17
Mean PHP episode length, by primary diagnosis, 1997 to 2005

Year	Mean episode length for patients with schizophrenic disorders (days)	Mean episode length for patients with affective disorders (days)	Mean episode length for patients with neurotic disorders (days)	Mean episode length for patients with alcohol and drug dependency (days)	Mean episode length for patients with other disorders (days)
1997	83.4	59.2	65.5	29.9	49.2
1998	79.9	51.9	56.8	28.7	47.4
1999	63.2	43.3	46.2	25.7	37.6
2000	51.6	36.8	38.1	24.9	29.6
2001	50.2	34.9	31.3	22.3	29.6
2002	56.4	37.2	36.4	21.5	30.9
2003	61.4	41.6	35.8	23.2	35.0
2004	64.3	45.8	40.3	23.1	34.3
2005	64.2	47.9	39.7	20.2	37.3

NOTE: Row percentages may not sum to 100 percent due to rounding.

SOURCE: RTI International analysis of Medicare claims data, 1997–2005.

Table 3-18
Mean PHP episode length, by type of facility and proportion of
all schizophrenic disorder episodes, 1997 to 2005

Year	Mean episode length for hospital-based PHP patients with schizophrenic disorders (days)	Mean episode length for CMHC-based PHP patients with schizophrenic disorders (days)	Percentage of PHP patients with schizophrenic disorders treated in hospital-based PHPs (%)	Percentage of PHP patients with schizophrenic disorders treated in CMHC-based PHPs (%)
1997	72.6	96.2	78.6 %	21.4 %
1998	70.1	89.3	76.3 %	23.7 %
1999	63.9	62.1	85.0 %	15.0 %
2000	52.9	49.5	90.4 %	9.6 %
2001	47.4	54.8	90.8 %	9.2 %
2002	51.8	62.5	89.8 %	10.2 %
2003	51.7	72.0	89.3 %	10.7 %
2004	51.2	75.1	86.0 %	14.0 %
2005	48.2	75.2	76.4 %	23.6 %

NOTE: Row percentages may not sum to 100 percent due to rounding.

SOURCE: RTI International analysis of Medicare claims data, 1997–2005.

Table 3-19
Mean PHP episode length, by type of facility and proportion of
all affective disorder episodes, 1997 to 2005

Year	Mean episode length for hospital-based PHP patients with affective disorders (days)	Mean episode length for CMHC-based PHP patients with affective disorders (days)	Percentage of PHP patients with affective disorders treated in hospital-based PHPs (%)	Percentage of PHP patients with affective disorders treated in CMHC-based PHPs (%)
1997	53.2	67.6	58.8 %	41.2 %
1998	47.1	57.5	54.2 %	45.8 %
1999	41.8	45.8	62.7 %	37.3 %
2000	35.3	40.2	69.5 %	30.5 %
2001	31.6	42.1	69.0 %	31.0 %
2002	31.9	47.8	66.5 %	33.5 %
2003	33.2	54.7	60.8 %	39.2 %
2004	33.9	61.0	56.0 %	44.0 %
2005	33.8	60.7	47.6 %	52.4 %

NOTE: Row percentages may not sum to 100 percent due to rounding.

SOURCE: RTI International analysis of Medicare claims data, 1997–2005.

Table 3-20
Mean PHP episode length, by type of facility and proportion of
all neurotic disorder episodes, 1997 to 2005

Year	Mean episode length for hospital-based PHP patients with neurotic disorders (days)	Mean episode length for CMHC-based PHP patients with neurotic disorders (days)	Percentage of PHP patients with neurotic disorders treated in hospital-based PHPs (%)	Percentage of PHP patients with neurotic disorders treated in CMHC-based PHPs (%)
1997	61.6	79.2	78.0 %	22.0 %
1998	49.9	76.9	74.5 %	25.5 %
1999	41.2	62.2	76.2 %	23.8 %
2000	35.2	50.3	80.8 %	19.2 %
2001	26.7	55.4	84.0 %	16.0 %
2002	29.5	68.5	82.4 %	17.6 %
2003	26.5	73.9	80.4 %	19.6 %
2004	32.1	80.2	83.0 %	17.0 %
2005	33.0	67.3	80.6 %	19.4 %

NOTE: Row percentages may not sum to 100 percent due to rounding.

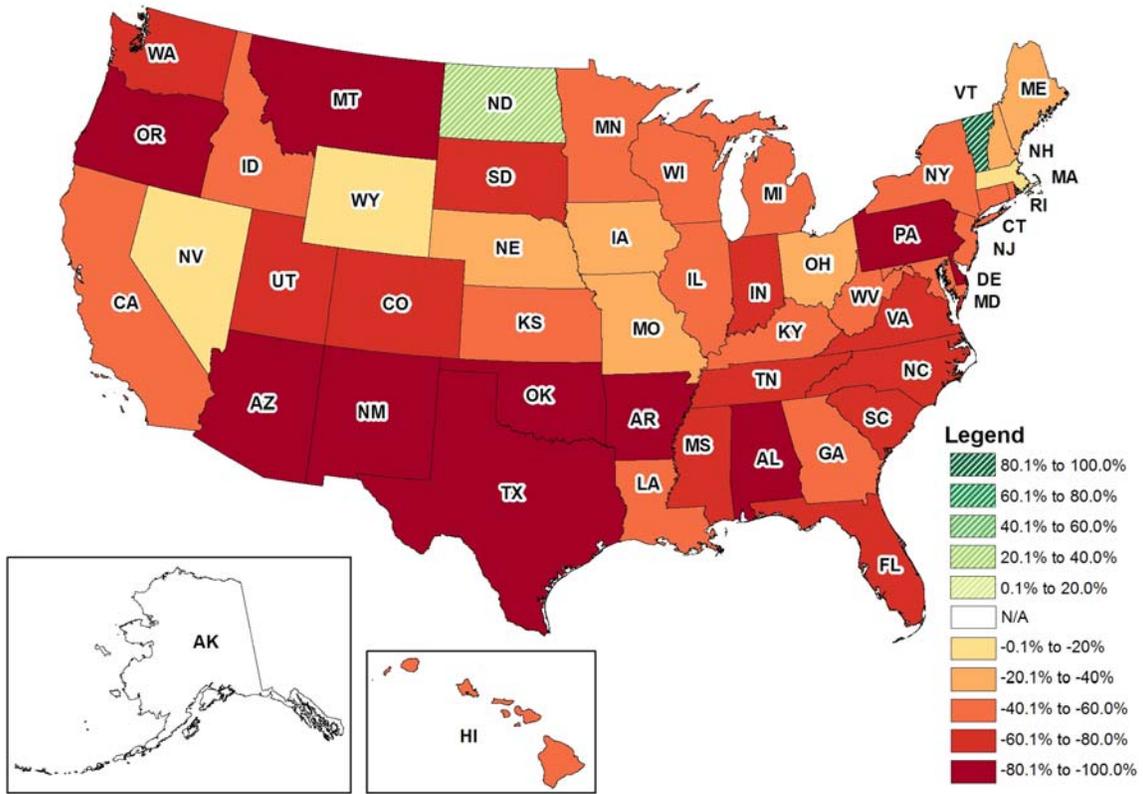
SOURCE: RTI International analysis of Medicare claims data, 1997–2005.

3.3.6 The Partial Hospitalization Program Landscape, by State

We also studied PHP services by state, with the expectation that varying population demographics and local Fiscal Intermediary involvement would affect the trends in supply and utilization differently.

Figure 3-1 shows the net changes in the number of PHP providers in each state over the nine-year study period. Overwhelmingly, there were more losses in the number of providers across the country than gains, although the extent to the losses differed largely by geography. The largest reductions in the numbers of PHP providers happened in the South, with Texas losing 80 percent of its providers, from 194 PHPs in 1997 to 34 in 2005. Similarly, Louisiana had a reduction from 105 to 62 PHP providers. These are also the states with the largest number of “problem” providers identified by the OIG (1998), so it should not be surprising that these states experienced the largest provider number declines—in fact this was presumably a desired outcome. As the maps in Figures 3-2 and 3-3 show, CMHCs contributed disproportionately to the decline in the number of PHP providers in the South, again as would be expected if “problem” PHP providers—those engaging in fraudulent activities or otherwise billing for non-covered services—were closed. On the other hand, both Vermont and North Dakota saw increases in the number of PHP providers between 1997 and 2005. However, these gains were small when the number of providers is counted. For example, Vermont gained a single PHP provider over the nine-year period to have two PHP providers in 2005, while North Dakota went from five PHP providers to seven.

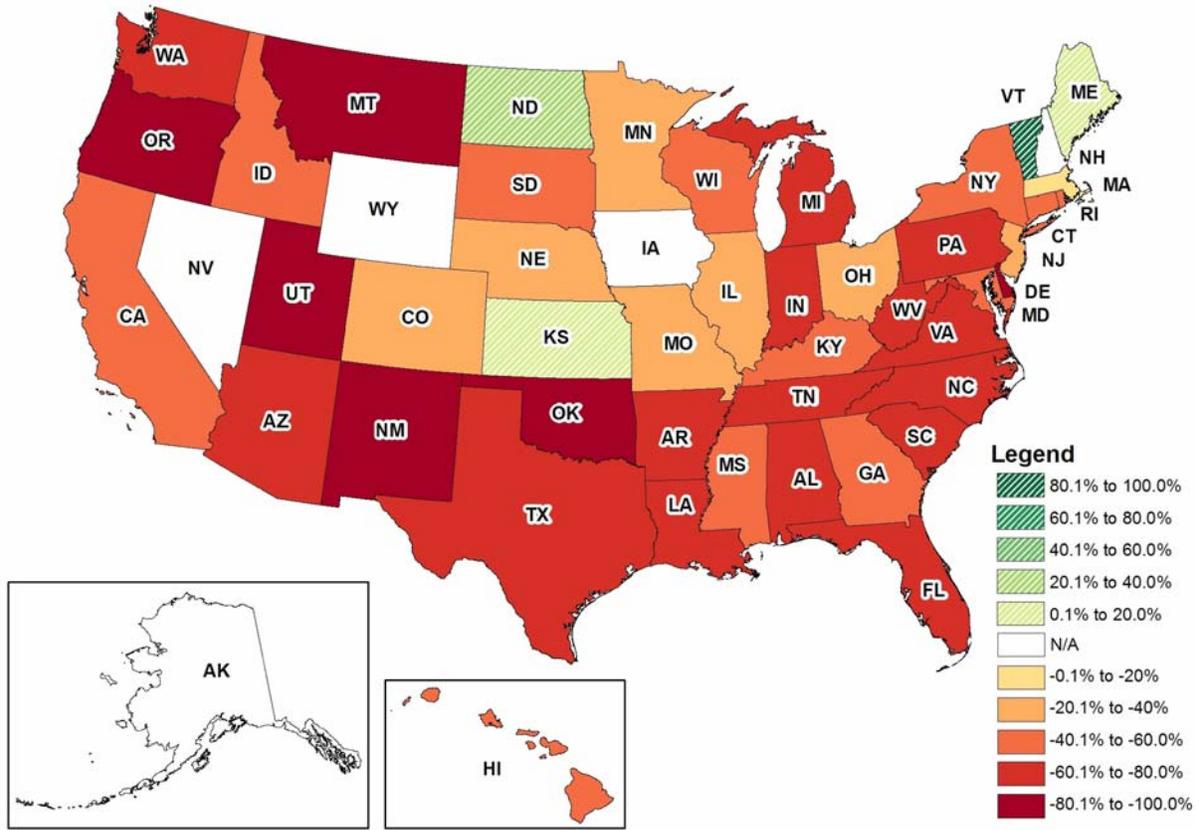
Figure 3-1
Net changes (%) in the number of partial hospitalization
program providers from 1997 to 2005



NOTES: The change in the number of PHP providers from 1997 to 2005 in a particular state is undefined if there were no PHP providers in that state in 1997.

SOURCE: RTI International analysis of Medicare claims data, 1997–2005.

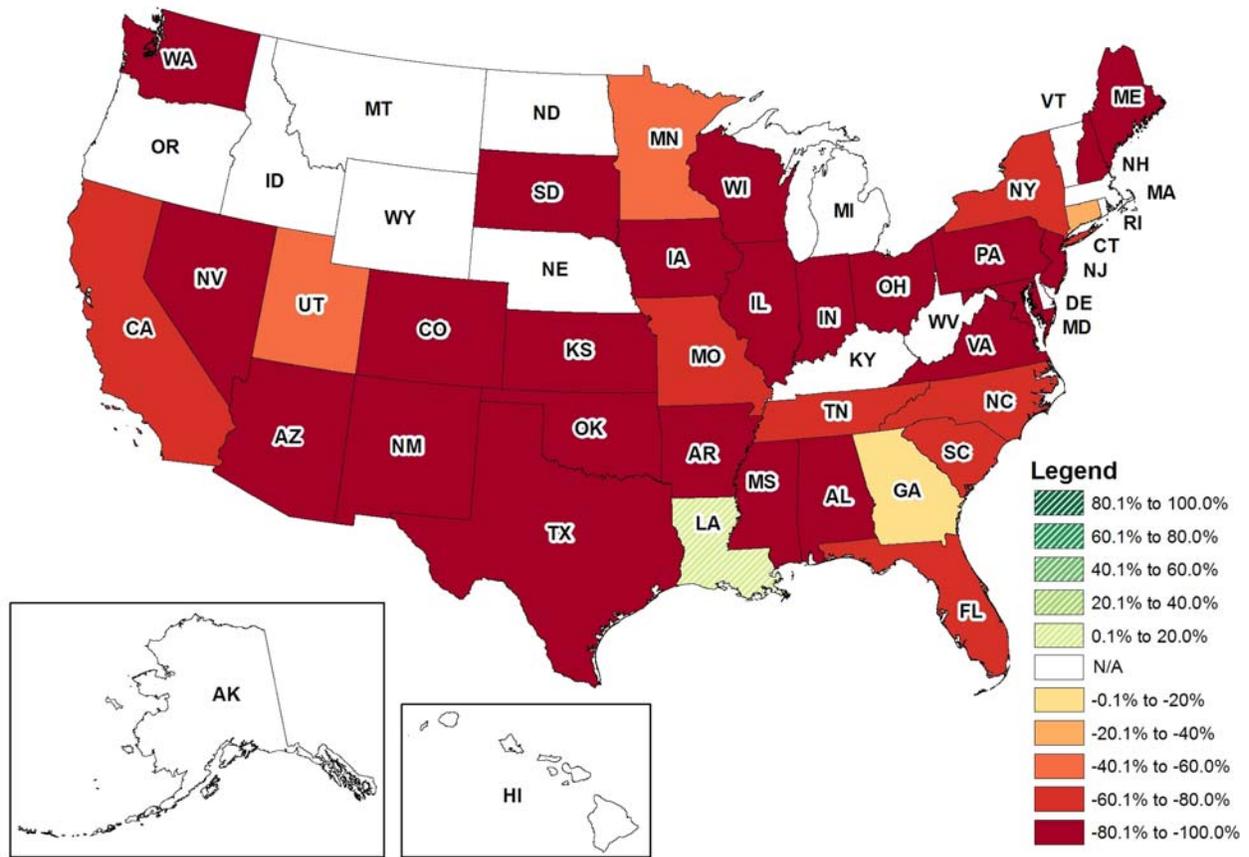
Figure 3-2
Net changes (%) in the number of hospital-based partial hospitalization
program providers from 1997 to 2005



NOTES: The change in the number of hospital-based PHP providers from 1997 to 2005 in a particular state is undefined if there were no hospital-based PHP providers in that state in 1997.

SOURCE: RTI International analysis of Medicare claims data, 1997–2005.

Figure 3-3
Net changes (%) in the number of CMHC-based partial hospitalization program providers from 1997 to 2005



NOTES: The change in the number of CMHC-based PHP providers from 1997 to 2005 in a particular state is undefined if there were no CMHC-based PHP providers in that state in 1997.

SOURCE: RTI International analysis of Medicare claims data, 1997–2005.

3.4 Discussion

Partial hospitalization programs in the U.S. experienced large changes from 1997 to 2005. In just a nine-year period, the number of providers and their beneficiaries served declined markedly, by over 50 percent. The largest decline occurred between the start of our observation period, 1997, and 2001, which coincided with two main events that may have adversely impacted the viability of PHPs. Of course, the viability of many programs, particularly those provided by certain CMHCs, seemed to have been predicated on billing Medicare inappropriately for services not qualifying as PHP-level services.

First, the 1998 OIG audit report on a number of CMHC-based PHPs called attention to unallowable and questionable billing practices by a significant number of CMHCs. As a result, fiscal intermediaries nationwide stepped up their scrutiny on all PHPs and their submitted claims, especially those from CMHC-based programs. This was manifested in the larger drop in the number of CMHC-based PHPs from 1998 to 2001 compared to hospital-based programs. For example, while CMHC-based PHPs made up 40 percent of all PHPs in 1997, this proportion fell to only 17 percent by 2001. On the other hand, hospital-based PHPs did not exhibit a substantial drop in numbers between 1997 and 2000.

The second main event that affected PHPs was the implementation of the Hospital Outpatient Prospective Payment System (OPPS). Effects of the OPPS became evident after 2000, when the overall number of PHPs dropped 32 percent, including a first substantial drop of 27 percent among hospital-based PHPs, and a continuous drop of 47 percent among CMHC programs. The decline in the total number of PHPs has slowed since 2003, but the number of hospital-based programs continued to drop. Although there are presumably other reasons for the number of providers billing for PHP services to drop, the decline in the number of providers billing for PHP services between 2000 and 2001 appears somewhat larger than trend and may be attributable to provider concern over potential effects of prospective payment.

The disappearance of available partial hospitalization programs was associated with the reduction in the number of beneficiaries these programs served. While 71,031 beneficiaries had at least one PHP claim in 1997, by 2005, this number fell by half to 35,805 beneficiaries. If all billed PHP services were in fact truly used as substitutes or step-down for inpatient psychiatric programs, then the dramatic reduction in the number of available providers would have created access to care issues for these vulnerable people with psychiatric needs. Based on the OIG (1998) report, a significant number of these patients were likely receiving services that were not PHP services. However, it is not certain that only inappropriate services have been reduced.

By 2005, the remaining PHPs seemed to have developed ways to adapt to the tightened scrutiny, increased administrative burden (necessary to reduce billing for inappropriate services but affecting all PHP providers), and payment under a scheduled prospective payment system. First, although the 1998 to 2001 period experienced a severe plunge in the number of treatment days for both hospital-based and CMHC-based PHPs, this had held steady since 2001. In fact, for CMHCs, treatment days and frequency of service seems to have increased by the end of our study period. Second, the increase in volume in both types of PHPs since 2001, as indicated by the number of beneficiaries per provider, also suggests that providers were heading towards a growth period, which could be translated to increased profits. In fact, our analyses of Medicare

payment per PHP treatment day indicated a small steady increase in payment for hospital-based programs. Finally, it should also be noted that average payment per patient in CMHC programs were consistently higher than payments for patients in hospital-based programs. This is largely attributable to the fact that CMHC-based patients generally had longer episodes, higher number of treatment days, and higher recidivism rates (i.e., frequency of PHP service) during a given year. This may financially benefit these programs, but implications for quality of care are ambiguous (CMHCs may be expanding into harder-to-treat populations but alternatively may be reducing the quality of care provided to the same populations they had already been treating).

Considering the longer treatment episodes and treatment days per episode for CMHC patients compared to hospital-based PHP patients, one could question (1) whether the demographics, insurance status or case mix were different between these two sets of patients, or (2) do CMHC-based programs provide significantly different services that rendered the longer and more frequent services? Our analyses indicate that CMHCs have increasingly treated more aged patients, although beneficiaries eligible for Medicare through disability still dominated the patient pool in both types of PHPs. In fact, the majority of patients were dual eligible beneficiaries, and this was more evident among CMHC patients. CMHCs also had a higher proportion of Hispanic patients, although this may be due to geographic factors, such as where CMHCs are located within a state and across the country. Finally, it was evident that CMHCs had higher proportions of patients with schizophrenic disorders and affective disorders. Since patients with schizophrenic disorders generally have higher acuity and are at risk of recidivism, the higher percentage of these patients in CMHCs may have attributed to the more intensive level of services provided, as indicated by increased lengths of treatment and higher payments. Moreover, the need for quality after-hour supervision may be greater among patients with these types of psychiatric disorders.

Because our study period for these trend analyses did not extend beyond 2005, we have limited ability to evaluate whether PHP services were impacted by the 2005 phase-in of the IPF-PPS. Examinations of more recent PHP claims may be warranted to capture any potential effects of the new payment system on outpatient utilization. Moreover, in-depth studies of geographic (i.e., state) differences in the trends can shed light on access related questions.

SECTION 4

PATIENT FLOW PATTERNS: CURRENT ROLE OF PARTIAL HOSPITALIZATION PROGRAMS IN RELATIONS TO INPATIENT PSYCHIATRIC

4.1 Introduction

Use patterns observable in the Medicare claims could provide good baseline information on the relative use of inpatient and outpatient psychiatric services. Changes in these patterns may be affected by the providers' perceptions of the niche filled by PHP and how this role changed after the new IPF PPS was implemented. In this part of the study, we analyzed Medicare claims to identify patient flow and hospital referral patterns. These analyses will provide CMS information on whether:

- Hospital-based and CMHC-based partial hospitalization programs are used differently in the psychiatric treatment continuum?
- Certain patient and providers characteristics, psychiatric conditions, and other factors are predictors of treatment flow?

In this section, we focused on evaluating the relationship between inpatient stays and outpatient PHP treatment. Episodes of care were constructed for patients using psychiatric services to understand whether PHPs were used as a step-down from inpatient admissions.

4.2 Methods

Medicare administrative files were used to construct information on the flow of psychiatric patients between inpatient and PHP modalities. Using these inpatient and outpatient claims, we studied the probability of beneficiaries using another treatment modality besides PHP, as well as the time to the next treatment setting. The assumption is that inpatient and PHPs represent different levels of care, with PHPs used as a lower or "step-down" level of treatment. We also identified the predictors of having an inpatient stay before or after a PHP episode, and whether this depended on the type of PHP facility.

Moreover, linking the inpatient and outpatient PHP files allowed us to study referral patterns, thus allowing us to estimate the variation in proportions of inpatient cases discharged to PHP. Using the complete set of MedPAR records for inpatient psychiatric discharges in 2004, we were able to count the number of psychiatric discharges for each type of hospital group (freestanding psychiatric, psychiatric DPUs, other psychiatric discharges from scatterbeds). This generated the denominator in the proportion of discharges using PHP, while the number of PHP episodes served as the numerator. Furthermore, we studied whether patients discharged from a freestanding psychiatric hospital, a hospital DPU, or a "scatterbed" facility were more likely to have a PHP episode afterwards using logistic regression methods.

4.2.1 Data Sources

We constructed two sets of analytic files. In the first method, we identified all beneficiaries with at least one PHP episode in 2004 and gathered all of their inpatient claims

between 2003 and 2005, so that we had at least one year of data before or after their “anchoring” 2004 PHP episode (i.e., inpatient to 2004 PHP and back to inpatient). Conversely, in the second method, we identified all beneficiaries with an inpatient psychiatric stay in 2004, and evaluated whether these patients had a PHP episode flanking the inpatient stay. To do so, we used inpatient claims from 2004, but PHP claims from 2003 to 2005, allowing at least one year of data before or after the “anchoring” 2004 inpatient stay (i.e., PHP to 2004 inpatient and back to PHP).

To construct PHP treatment episodes, a finder file was created using all beneficiaries with at least one PHP service in 2004. PHP treatment episodes were created using the methods described in the trend analysis section, Section 2.1, of this report. This PHP finder file was then used to identify related inpatient psychiatric stays in freestanding psychiatric hospitals, certified or distinct psychiatric units (DPUs), and short stay acute hospitals providing psychiatric services, using the 2003 to 2005 MedPAR files.⁹ Psychiatric stays were identified using diagnosis related group (DRG) discharge codes and included the following: 012, 023, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 521, 522, and 523. In doing so, claims from inpatient psychiatric services at least one year prior and one year subsequent to the PHP episode were included. All inpatient and PHP claims were then combined and sorted by beneficiary identification number and claim date, so that all services were arranged chronologically.

4.2.2 Definitions

As in Section 2, we distinguished hospital-based PHPs from CMHC-based PHPs by parsing out the provider number field to ascertain those institutional providers affiliated with a hospital from those categorized as CMHCs. Beneficiaries’ dual eligibility and HMO status were ascertained if they had any month of State (i.e., Medicaid) “buy-in” or HMO membership during the year, respectively. Age was calculated as of the December 31 of each year.

Inpatient claims were classified by the treatment location of the psychiatric stay. These included discharges from: (1) psychiatric hospitals; (2) post-acute care facilities; and (3) acute care hospitals. Acute care hospitals were further categorized by whether they had a distinct psychiatric unit (DPU), and if so, whether the claim came from the DPU or from a psychiatric DRG discharge.

4.2.3 Analysis

Using the combined inpatient and PHP claims, we were able to first ascertain whether a beneficiary had an inpatient stay before or after a PHP episode. For people with an inpatient claim, we calculated the time (in days) between the different levels of treatment. These periods were expressed as “days since inpatient” to indicate the time from an inpatient stay to the PHP

⁹ The MedPAR file available for this analysis contained 2003 to 2005 claims for only patients with an inpatient psychiatric stay in 2004. Future analysis will have to include MedPAR data for all patients with a PHP episode in 2004. For the present analysis, beneficiaries were eligible for these analyses if they had a qualifying PHP admission date. For all pre-PHP analysis, this is defined as having a PHP admission date later than the time-period plus one day. For example, to be eligible for a 15-day pre-PHP inpatient analysis, the beneficiary must have had an admission on or later than January 16, 2004. For all post-PHP analysis, the qualifying date is defined as a PHP discharge date earlier than the time-period minus one day. For example, to be eligible for a 30-day post-PHP inpatient analysis, the qualifying discharge date must be on or earlier than December 1, 2004.

admission (inpatient to PHP), and “days since PHP” to indicate the time from a PHP discharge to an inpatient admission (PHP to inpatient).

Next, we looked at whether there were any inpatient stays within 15, 30, 45, 60 and 90 days before or after the anchoring PHP episode. For episodes with a contiguous inpatient claim, we identified the location of the inpatient claim. Finally, we conducted logistic regression analyses to ascertain the odds of having an inpatient stay within the designated time period before or after the 2004 PHP episode, and the predictors that increased or decreased this likelihood.

4.3. Results

Inpatient to PHP to inpatient analysis—There were 31,824 Medicare beneficiaries with at least one partial hospitalization episode in 2004 (data not shown), but only 19,281 who also had a flanking inpatient claim for psychiatric services (Table 4-1). Since we are interested in the relationship between these two levels of care, we present descriptive characteristics for these patients only. More people used a hospital-based PHP instead of a CMHC-based program (66 percent versus 34 percent) in 2004. There were slightly more females than males in this population, and the majority qualified for Medicare because they were disabled (77 percent), which dropped the average age of this population to 51 years of age. Among patients with a 2004 PHP episode and an inpatient claim, the majority had a primary diagnosis for affective disorders (55 percent), followed by those with schizophrenic disorders (31 percent). About 64 percent of the Medicare beneficiaries were dual eligible for Medicaid, but few people also had HMO coverage during the year (less than two percent).

Among PHP episodes with flanking inpatient stays, the average time between a PHP episode and the inpatient stay beforehand was approximately 24 days (Table 4-2). The time between a PHP episode and a subsequent inpatient stay was much longer, however, and averaged around 75 days. Compared to CHMC-based PHPs, hospital-based programs had slightly shorter gaps between the inpatient stay and the PHP treatment. Following an inpatient discharge, on average, there was only a 20-day gap until a hospital-based PHP claim began compared to a 32-day gap for CMHC-based PHPs. Likewise, the gap between a PHP episode and a subsequent inpatient stay was shorter by six days among hospital-based programs compared to CMHCs.

Among the PHP episodes with a prior inpatient stay, the majority of inpatient discharges came from distinct psychiatric units (DPU) psychiatric beds in acute care hospitals and psychiatric hospitals (Figure 4-1). Similarly, inpatient stays after PHP episode were also to psychiatric hospital beds, or beds in DPUs (Figure 4-2). In general, however, CMHC-based PHPs were associated with higher proportions of hospitalization with psychiatric DRG discharges compared to hospital-based programs. This was true for the inpatient stay both preceding and following the PHP episode.

Table 4-1
Beneficiary characteristics

Patient characteristic	Patients in sample (n=19,281)
Sex: Female	52.0 %
Sex: Male	48.0 %
Medicare Status: Aged	23.0 %
Medicare Status: Disabled	76.9 %
Medicare Status: ESRD Only	0.1 %
Primary Diagnosis: Schizophrenic Disorders	31.2 %
Primary Diagnosis: Affective Disorders	54.6 %
Primary Diagnosis: Neurotic Disorders	1.1 %
Primary Diagnosis: Alcohol or Drug Dependency	4.7 %
Primary Diagnosis: Other Disorders	8.4 %
Had Medicare+Choice Coverage in 2004	1.6 %
Hospital-Based PHP Episode	66.3 %
Dual Eligible in 2004	64.4 %
Died in 2004	2.5 %
Average Age (years)	51.0

NOTES: Since the inpatient file contained 2003 to 2005 claims for only patients with a psychiatric hospital stay in 2004, any patients with only PHP in 2004, but has inpatient stays in 2003 or 2005 would not have records. As a result, these descriptive analyses are presented for patients who had *both* inpatient *and* PHP claims in 2004. Eleven beneficiaries did not have information on gender, Medicare status, dual eligibility, HMO status, death or age.

SOURCE: RTI International analysis of Medicare claims data, 1997–2005.

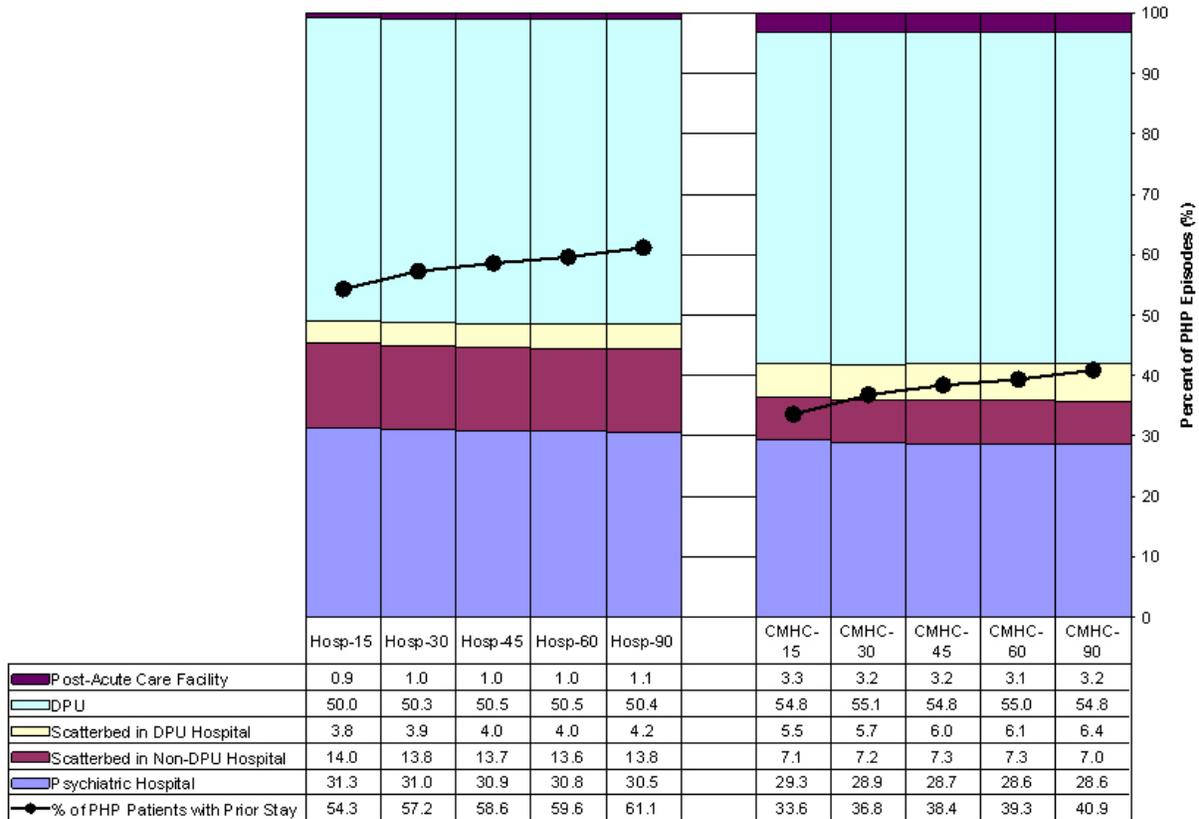
Table 4-2
Time to next event: step up and step down analysis among patients
with a PHP episode in 2004

Type of PHP	Inpatient-to-PHP “step down”: average number of days between an inpatient stay and a PHP episode (days)	PHP-to-inpatient “step up”: average number of days between a PHP episode and an inpatient stay (days)
All	24.3	74.7
Hospital-Based	19.8	72.4
CMHC-Based	32.4	78.8

NOTE: Since the inpatient file contained 2003 to 2005 claims for only patients with a psychiatric hospital stay in 2004, any patients with only PHP in 2004, but has inpatient stays in 2003 or 2005 would not have records. As a result, these descriptive analyses are presented for patients who had BOTH inpatient and PHP claims in 2004.

SOURCE: RTI International analysis of Medicare claims data, 1997–2005.

Figure 4-1
Psychiatric bed locations before a PHP episode, by number of days to PHP admission

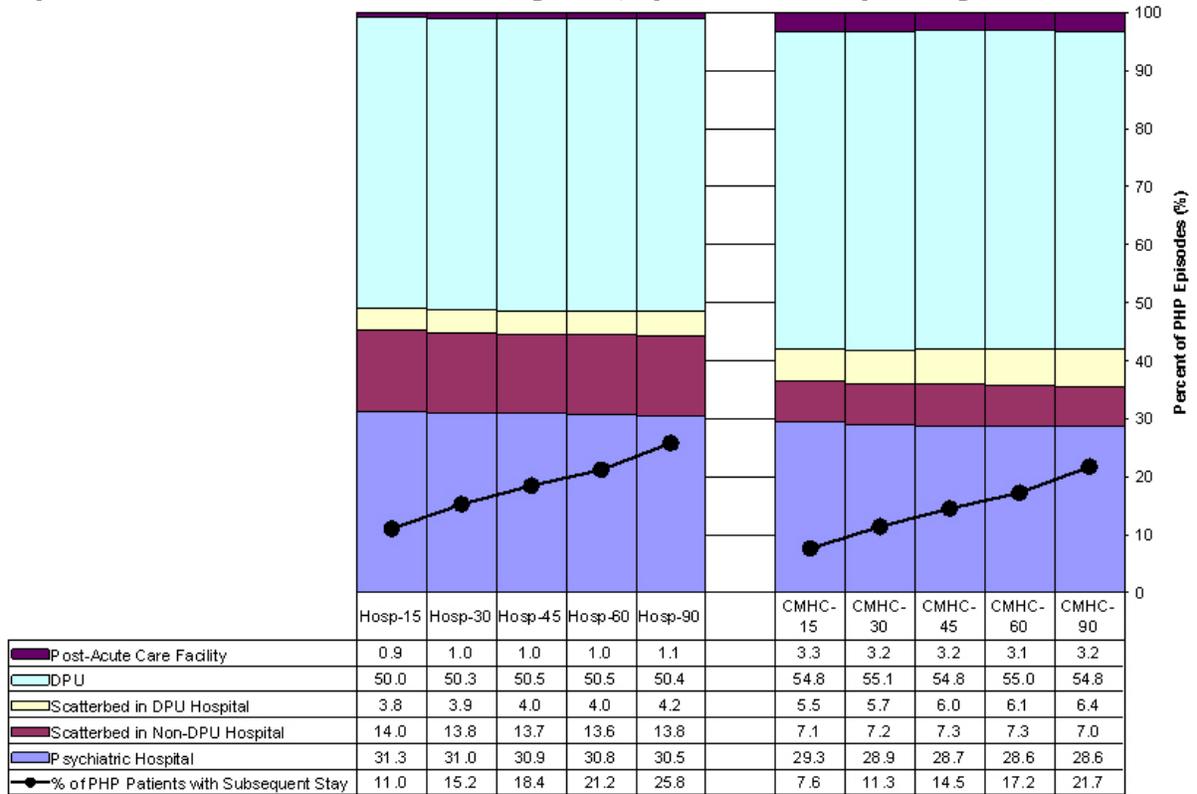


NOTES: Hospital-based PHP episodes are denoted “Hosp-xx,” and CMHC-based episodes are denoted “CMHC-xx,” where “xx” is the number of days between a hospital/SNF discharge date and the first day of a PHP episode. The “% of PHP Patients with Prior Stay” is computed based on the number of PHP patients, not episodes, since there are PHP episodes with PHP visits to both hospital-based and CMHC-based PHPs.

SOURCE: RTI International analysis of Medicare claims data, 1997–2005.

Figure 4-2

Psychiatric bed locations after a PHP episode, by number of days to inpatient admission



NOTES: Hospital-based PHP episodes are denoted “Hosp-xx,” and CMHC-based episodes are denoted “CMHC-xx,” where “xx” is the number of days between a hospital/SNF discharge date and the first day of a PHP episode. The “% of PHP Patients with Prior Stay” is computed based on the number of PHP patients, not episodes, since there are PHP episodes with PHP visits to both hospital-based and CMHC-based PHPs.

SOURCE: RTI International analysis of Medicare claims data, 1997–2005.

Our logistic regression models provided information on factors that increased or decreased the likelihood of having an inpatient stay before or after a PHP episode. Table 4-3 presents odds ratios of factors associated with a PHP patient having an inpatient stay within 15 days of their PHP episode, and Table 4-4 presents odds ratios for factors associated with an inpatient stay within 90 days of the PHP episode. For example, in the 90-day models, we found that PHP episodes from hospital-based PHP programs were more likely (odds ratio of 1.73) than CMHC-based episodes to have flanking inpatient stays within 90 days (Table 4-4). Males were more likely (odds ratio of 1.17) than females to have a PHP episode with an inpatient stay before or after PHP, and people who qualified for Medicare under a disability status were twice as likely (odds ratio of 2.14) as the aged to have flanking inpatient stays as well. Compared to PHP episodes for patients with affective disorders, schizophrenic episodes were more likely (odds ratio of 1.50) to require a higher level (inpatient) of care both 15-days before and after the PHP treatment. Episodes for alcohol or drug dependency, however, seem to have more inpatient stays before the PHP treatment rather than afterwards compared to the reference diagnosis (odds ratio of 1.23). On the other hand, PHP episodes for patients with neurotic disorders were less likely (odds ratio of 0.59) than affective disorders to follow an inpatient stay. Having managed care coverage anytime during 2004 also lessened the likelihood (odds ratio of 0.62) of having an inpatient stay before a PHP episode. Finally, PHP episodes for patients dually eligible for Medicare and Medicaid were less likely (odds ratio of 0.75) to have an inpatient stay 15-days beforehand, but were more likely (odds ratio of 1.21) to have an inpatient stay after the PHP treatment. However, compared to other people, dually eligible beneficiaries were more likely (odds ratio of 1.22) to have both pre- and post-PHP inpatient stays. Similar findings were found for every time-period we assessed (see Appendix C for tables of odds ratios for additional time windows). In fact, starting with the 30-day gap analysis, we also found that people who died during 2004 were more likely to have a higher level of treatment (in an inpatient setting) after a PHP episode.

4.4 Discussion

In general, only sixty-percent of Medicare beneficiaries who had a 2004 PHP claim also had an inpatient claim in 2004. This suggests that a large percentage of PHP patients may only be using outpatient services, such as PHPs, intensive outpatient therapies, or other forms of outpatient treatment. Comparing the types of PHPs, hospital-based programs had a larger proportion of contiguous inpatient stays, but, then again, there were many more hospital-based providers compared to CMHC-based PHPs in 2004. People who were Medicare disabled and those who also had Medicaid were affiliated with having an inpatient claim along with their PHP services. This may suggest higher severity of illness and disability which is evident in their use of inpatient care. Moreover, among patients who were hospitalized in 2004, there were more females and people with a primary diagnosis for affective disorders.

Table 4-3
Odds ratios of having an inpatient stay within 15 days before or after a PHP episode

Characteristic	Pre-PHP inpatient stay	Post-PHP inpatient stay	Either pre- or post-PHP inpatient stay	Both pre- and post- PHP inpatient stay
Sex: Female	—	—	—	—
Sex: Male	1.284*	1.164*	1.210*	1.310
Medicare Status: Aged	—	—	—	—
Medicare Status: Disabled	1.988*	2.253*	1.996*	2.569
Medicare Status: ESRD Only	0.850	0.643	0.862	1.017
Primary Diagnosis: Schizophrenic Disorder	1.198*	1.343*	1.139*	1.292
Primary Diagnosis: Affective Disorder	—	—	—	—
Primary Diagnosis: Neurotic Disorder	0.588*	0.876	0.590*	0.941
Primary Diagnosis: Alcohol or Drug Dependency	1.344*	0.630*	1.339*	0.596
Primary Diagnosis: Other Disorder	0.941	0.829*	0.922	0.812
Had Medicare+Choice Coverage in 2004	0.687*	1.128	0.821*	0.833
Hospital-based PHP episode	2.184*	1.461*	2.100*	1.623
Dual Eligible in 2004	0.748*	1.107*	0.762*	1.176
Died in 2004	1.132	1.107	0.956	1.141
Number of Patients in Sample	28,163	29,843	31,800	26,206
Percent of Patients in Sample With Inpatient Stay	48.0 %	10.8 %	46.3 %	7.8 %

NOTES: One asterisk denotes significance at the 95 percent level. Odds ratios for reference categories (female; aged; affective disorders) are shown as a dash since they are undefined.

SOURCE: RTI International analysis of Medicare claims data, 1997–2005.

Table 4-4
Odds ratios of having an inpatient stay anytime within 90 days before
or after a PHP episode

Characteristic	Pre-PHP inpatient stay	Post-PHP inpatient stay	Either pre- or post-PHP inpatient stay	Both pre- and post- PHP inpatient stay
Sex: Female	—	—	—	—
Male	1.219*	1.231*	1.165*	1.349*
Aged	—	—	—	—
DISABLED	2.321*	2.143*	2.139*	2.443*
ESRD only	0.588	0.802	0.75	0.503
Primary Diagnosis: Schizophrenic Disorder	1.308*	1.402*	1.255*	1.498*
Primary Diagnosis: Affective Disorder	—	—	—	—
Primary Diagnosis: Neurotic Disorder	0.585*	0.712*	0.636*	0.659*
Primary Diagnosis: Alcohol or Drug Dependency	1.229*	0.760*	1.054	0.900
Primary Diagnosis: Other Disorder	0.921	0.839*	0.913*	0.822*
Had HMO in 2004	0.621*	1.002	0.790*	0.707
Hospital-based PHP episode	2.150*	1.295*	1.730*	1.488*
Dual Eligible in 2004	0.753*	1.211*	0.851*	1.222*
Died in 2004	1.121	1.26*	0.895	1.351*
Number of patients eligible for analysis	22,838	23,728	31,800	14,766
Percent with inpatient stay	54.0 %	24.5 %	48.4 %	19.4 %

NOTES: One asterisk denotes significance at the 95 percent level. Odds ratios for reference categories (female; aged; affective disorders) are shown as a dash since they are undefined.

SOURCE: RTI International analysis of Medicare claims data, 1997–2005.

The fact that hospital-based PHP episodes had shorter gaps between the hospitalization and the PHP admission compared to CHMCs may suggest some existing relationship between the inpatient and outpatient setting.

As our findings suggest, the majority of 2004 discharges to a PHP came from psychiatric facilities and beds within a distinct psychiatric unit of an acute hospital. However, there was a noticeable difference between hospital-based PHPs and CMHC-based programs in terms of receiving patients who were discharged from “scatterbeds” or acute beds with an inpatient PPS (DRG) discharge. While only five percent of patients who subsequently entered into a hospital-based PHP were discharged from scatterbeds, over 15 percent of CMHC admissions came from these DRG discharges. Similar proportions were found when we studied the inpatient stay after the PHP episode. We conducted additional analysis of the overall 2004 inpatient psychiatric discharge patterns (i.e., type of psychiatric bed), regardless of PHP use, and found that the percentage of scatterbeds, or DRG discharges, were actually around 33 percent. This proportion was much higher than the percentages found in our study population (i.e., those with PHP and inpatient claims). This suggests that patients with DRG discharges are less likely to be followed up by the next stepped down level of treatment. However, at this point, it is unclear whether these patients are more likely to continue with inpatient treatment or go directly into less intensive outpatient follow-up care, thus bypassing PHPs. Moreover, among hospitals with a PHP program, it is also unclear whether patients treated in scatterbeds tend to be readmitted back into inpatient care when discharged, or whether they are simply followed up by professionals in the community, therefore, bypassing the PHP nevertheless.

Our logistic models confirmed our understanding that PHPs are used step-down level of treatment for patients with more acuity. These include patients who are Medicare disabled, and those with schizophrenic disorders. We also found men more likely to go between hospitals and PHPs than women, even though there were more women using PHPs in 2004.

REFERENCES

Centers for Medicare & Medicaid Services: "Partial Hospitalization Payment Methodology," *Federal Register* 68(155): 48011–48020.

Frank RG, Lave JR: "Per Case Prospective Payment for Psychiatric Inpatients: An Assessment and Alternatives," *Journal of Health Politics, Policy, and Law* 11(1): 83–96, Spring 1986.

Mitchell JB et al.: "Bringing Psychiatric Patients into the Medicare Prospective Payment System: Alternatives to DRGs," *American Journal of Psychiatry* 144(5): 610–15, May 1987.

Neffinger GG: "Partial Hospitalization: An Overview," *Journal of Community Psychology* 9(3): 262–9, May 1981.

Sederer L.I.: "Inpatient and Partial Hospital Care Under Medicare," *Psychiatric Services* 52(8):1023-1025, August 2001.

Thomas F, Stephens S, Hawthorne J, Hattery D, Sullivan F, Samen J: "Review of the Medicare Partial Hospitalization Benefit," HCFA Office of Strategic Planning working paper OSP-00-01, February 2000.

U.S. Department of Health and Human Services, Office of Inspector General: "Review of Partial Hospitalization Provided Through Community Mental Health Centers," Memo to the Administrator, Health Care Financing Administration A-04-98-01246, October 5, 1998.