DEPARTMENT OF HEALTH AND HUMAN SERVICES

Health Care Financing Administration

42 CFR Parts 409, 410, 411, 413, 424, and 484

[HCFA–1059–P]

RIN 0938–AJ24

Medicare Program; Prospective Payment System for Home Health Agencies

AGENCY: Health Care Financing Administration (HCFA), HHS.

ACTION: Proposed rule.

SUMMARY: This proposed rule would establish requirements for the new prospective payment system for home health agencies as required by section 4603 of the Balanced Budget Act of 1997, as amended by section 5101 of the Omnibus Consolidated and Emergency Supplemental Appropriations Act for Fiscal Year 1999. These include the implementation of a prospective payment system for home health agencies, consolidated billing requirements, and a number of other related changes. The prospective payment system described in this rule would replace the retrospective reasonable-cost-based system currently used by Medicare for the payment of home health services under Part A and Part B.

DATES: Comments will be considered if we receive them at the appropriate address, as provided below, no later than 5 p.m. on December 27, 1999.

ADDRESSES: Mail written comments (1 original and 3 copies) to the following address: Health Care Financing Administration, Department of Health and Human Services, Attention: HCFA–1059–P, P.O. Box 8010, Baltimore, MD 21244–8010.

If you prefer, you may deliver your written comments (1 original and 3 copies) to one of the following addresses: Room 443–G Hubert H. Humphrey Building, 200 Independence Avenue, SW., Washington, DC 20201, or Room C5–14–03, 7500 Security Boulevard, Baltimore, MD 21244–1850.

FOR FURTHER INFORMATION CONTACT:

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SUPPLEMENTARY INFORMATION: Because of staffing and resource limitations, we cannot accept comments by facsimile (FAX) transmission. In commenting, please refer to file code HCFA–1059–P. Comments received timely will be available for public inspection as they are received, generally beginning approximately 3 weeks after publication of a document, in Room 443–G of the Department's offices at 200 Independence Avenue, SW., Washington, DC, on Monday through Friday of each week from 8:30 a.m. to 5 p.m. (phone: (202) 690–7890).

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To assist readers in referencing sections contained in this document, we are providing the following table of contents.

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Regulations Text

In addition, because of the many terms to which we refer by abbreviation in this rule, we are listing these abbreviations and their corresponding terms in alphabetical order below:

ADL—Activities of Daily Living
BBA—Balanced Budget Act of 1997
COPs—Conditions of participation
DME—Durable medical equipment
FIs—Fiscal intermediaries
FFY—Federal fiscal year
FMR—Focused medical review
FY—Fiscal year
HHA—Home health agency
HIC—Health insurance claim
HHRGs—Home Health Resource Groups
IADL—Instrumental Activities of Daily Living
IPS—Interim payment system
LUPA—Low-utilization payment adjustment
MS—Medical social services
MSA—Metropolitan Statistical Area
NCSB—Neurological, cognitive, sensory, and behavioral variables
OASIS—Outcome and Assessment Information Set
OBQI—Outcome based quality improvement
OCESAA—Omnibus Consolidated and Emergency Supplemental Appropriations Act for Fiscal Year 1999
OES—[U.S. Bureau of Labor Statistics] Occupational Employment Survey
OSCAR—On-line Survey and Certification System
OT—Occupational therapy
PEP—Partial episode payment
PPS—Prospective payment system
PT—Physical therapy
RHHI—Regional Home Health Intermediary
RUGs—Resource Utilization Groups
SCIC—Significant Change in Condition
SN—Skilled nursing service
SP—Speech-language pathology

I. Background

A. Current System for Payment of Home Health Agencies

The Balanced Budget Act of 1997 (Public Law 105–33) (BBA), enacted on August 5, 1997, significantly changed the way we pay for Medicare home health services. Until the implementation of a home health prospective payment system (PPS), home health agencies (HHAs) receive payment under a cost-based reimbursement system, referred to as the interim payment system and generally established by section 4602 of the BBA. The interim payment system imposes two sets of cost limits for HHAs. Section 4206(a) of the BBA reduced the home health per-visit cost limits from 112 percent of the mean labor-related and nonlabor per-visit costs for freestanding agencies to 105 percent of the median. In addition, HHA costs are subjected to an aggregate per-beneficiary cost limitation. For those providers with a 12-month cost reporting period ending in Federal fiscal year (FFY) 1994, the per-beneficiary cost limitation is based on a blend of costs (75 percent on 98 percent of the agency-specific costs and 25 percent on 98 percent of the standardized regional average of the costs for the agency's census region). For new providers and those providers without a 12-month cost-reporting period ending in FFY 1994, the per-beneficiary limitation is the national median of the per-beneficiary limits for HHAs. Under the interim payment system, HHAs are paid the lesser of (1) actual costs; (2) the per-visit limits; or (3) the per-beneficiary limits. Effective October 1, 1997, the interim payment system exists until prospective payment for HHAs is implemented.

On October 21, 1998, the Omnibus Consolidated and Emergency Supplemental Appropriations Act (OCESAA), 1999 (Public Law 105–277) was signed into law. Section 5101 of OCESAA amended section 1861(v)(1)(L) of the Social Security Act (the Act) by providing for adjustments to the per-beneficiary and per-visit limitations for cost-reporting periods beginning on or after October 1, 1998. We had published a notice with comment period establishing the cost limitations for cost reporting periods beginning on or after October 1, 1998 in the **Federal Register** that was entitled ''Medicare Program; Schedules of Per-Visit and Per-Beneficiary Limitations on Home Health Agency Costs for Cost Reporting Periods Beginning On or After October 1, 1998'' (HCFA–1035–NC) on August 11, 1998 (63 FR 42912). OCESAA made the following adjustments to these limitations:

Providers with a 12-month cost reporting period ending during FY 1994, whose per-beneficiary limitations were less than the national median, which is to be set at 100 percent for comparison purposes, will get their current per-beneficiary limitation plus ⅓ of the difference between their rate and the adjusted national median per-beneficiary limitation. New providers and providers without a 12-month cost-reporting period ending in FFR 1994 whose first cost-reporting period begins before October 1, 1998 will receive 100 percent of the national median per-beneficiary limitation.

New providers whose first cost-reporting periods begin during FFY 1999 will receive 75 percent of the national median per-beneficiary limitation as published in the August 11, 1998 notice. In the case of a new provider or a provider that did not have a 12-month cost-reporting period beginning during FFY 1994 that filed an application for HHA provider status before October 15, 1998 or that was approved as a branch of its parent agency before that date and becomes a subunit of the parent agency or a separate freestanding agency on or after that date, the per-beneficiary limitation will be set at 100 percent of the median. The per-visit limitation effective for cost-reporting periods beginning on or after October 1, 1998 is set at 106 percent of the median instead of 105 percent of the median, as previously required in the BBA.

There is contingency language for the home health PPS provided in the BBA that was also amended by section 5101 of OCESAA. If the Secretary for any reason does not establish and implement the PPS for home health services, the Secretary will provide for a reduction by 15 percent to the per-visit cost limits and per-beneficiary limits, as those limits would otherwise be in effect on September 30, 2000.

B. Requirements of the Balanced Budget Act of 1997 and the Omnibus Consolidated and Emergency Supplemental Appropriations Act for Fiscal Year 1999 for the Development of a Prospective Payment System for Home Health Agencies

Section 4603(a) of the BBA provides the authority for the development of a PPS for all Medicare-covered home health services paid on a reasonable cost basis that will ultimately be based on units of payment by adding section 1895 to the Act entitled ''Prospective Payment For Home Health Services.''

Section 5101(c) of OCESAA amends section 1895(a) of the Act by removing the transition into the PPS by cost-reporting periods and requiring all HHAs to be paid under PPS effective upon the implementation date of the system. Section 1895(a) of the Act now states ''Notwithstanding section 1861(v),

the Secretary shall provide for portions of cost-reporting periods occurring on or after October 1, 2000, for payments for home health services in accordance with a prospective payment system established by the Secretary under this section.''

Section 1895(b)(1) of the Act requires the Secretary to establish a PPS for all costs of home health services. Under this system all services covered and paid for on a reasonable-cost basis under the Medicare home health benefit as of the date of enactment of the BBA, including medical supplies, will be paid on the basis of a prospective payment amount. The Secretary may provide for a transition of not longer than 4 years during which a portion of the prospective payment may be agency-specific as long as the blend does not exceed budget-neutrality targets.

Section 1895(b)(2) of the Act requires the Secretary in defining a prospective payment amount to consider an appropriate unit of service and the number, type, and duration of visits furnished within that unit, potential changes in the mix of services provided within that unit and their cost, and a general system design that provides for continued access to quality services.

Section 1895(b)(3)(A)(i) of the Act requires that (1) the computation of a standard prospective payment amount include all costs of home health services covered and paid for on a reasonable cost basis and be initially based on the most recent audited cost report data available to the Secretary, and (2) the prospective payment amounts be standardized to eliminate the effects of case mix and wage levels among HHAs.

Section 5101(c) of OCESAA modifies the effective date of the budget-neutrality targets for HHA PPS by amending section 1895(b)(3)(A)(ii) of the Act. Section 1895(b)(3)(A)(ii) of the Act, as amended, requires that the standard prospective payment limitation amounts be budget neutral to what would be expended under the current interim payment system with the limits reduced by 15 percent at the inception of the PPS on October 1, 2000.

Section 5101(d)(2) of OCESAA also modifies the statutory provisions dealing with the home health market basket percentage increase. For fiscal years 2002 or 2003, sections 1895(b)(3)(B)(i) and (b)(3)(B)(ii) of the Act, as so modified, require that the standard prospective payment amounts be increased by a factor equal to the home health market basket minus 1.1 percentage points. In addition, for any subsequent fiscal years, the statute requires the rates to be increased by the applicable home health market basket index change.

Section 1895(b)(3)(C) of the Act requires the Secretary to reduce the prospective payment amounts if the Secretary accounts for an addition or adjustment to the payment amount made in the case of outlier payments. The reduction must be in a proportion such that the aggregate reduction in the prospective payment amounts for the given period equals the aggregate increase in payments resulting from the application of outlier payments.

Section 1895(b)(4) of the Act governs the payment computation. Sections 1895(b)(4)(A)(i) and (b)(4)(A)(ii) of the Act require the standard prospective payment amount to be adjusted for case mix and geographic differences in wage levels. Section 1895(b)(4)(B) of the Act requires the establishment of an appropriate case-mix adjustment factor that explains a significant amount of the variation in cost among different units of services. Similarly, section 1895(b)(4)(C) of the Act requires the establishment of wage adjustment factors that reflect the relative level of wages and wage-related costs applicable to the furnishing of home health services in a geographic area compared to the national average applicable level. These wage-adjustment factors may be the factors used by the Secretary for purposes of section 1886(d)(3)(E) of the Act.

Section 1895(b)(5) of the Act gives the Secretary the option to grant additions or adjustments to the payment amount otherwise made in the case of outliers because of unusual variations in the type or amount of medically necessary care. Total outlier payments in a given fiscal year cannot exceed 5 percent of total payments projected or estimated.

Section 1895(b)(6) of the Act provides for the proration of prospective payment amounts between the HHAs involved in the case of a patient electing to transfer or receive services from another HHA within the period covered by the prospective payment amount.

Section 1895(d) of the Act limits review of certain aspects of the HHA PPS. Specifically, there is no administrative or judicial review under sections 1869 or 1878 of the Act, or otherwise, of the following: the establishment of the transition period under 1895(b)(1) of the Act, the definition and application of payment units under section 1895(b)(2) of the Act, the computation of initial standard prospective amounts under 1895(b)(3)(A) of the Act (including the reduction described in section 1895(b)(3)(A)(ii) of the Act), the establishment of the adjustment for outliers under 1895(b)(3)(C) of the Act, the establishment of case-mix and area wage adjustments under 1895(b)(4) of the Act, and the establishment of any adjustments for outliers under 1895(b)(5) of the Act.

Section 4603(b) of the BBA amends section 1815(e)(2) of the Act by eliminating periodic interim payments for HHAs effective October 1, 2000.

Section 4603(c) of the BBA sets forth the following conforming amendments: Section 1814(b)(1) of the Act is amended to indicate that payments under Part A will also be made under section 1895 of the Act; section 1833(a)(2)(A) of the Act is amended to require that home health services, other than a covered osteoporosis drug, are paid under HHA PPS, and section 1833(a)(2) is amended by adding a new subparagraph (G) regarding payment of Part B services at section 1861(s)(10)(A) of the Act; and section 1842(b)(6)(F) is added to the Act and section 1832(a)(1) of the Act is amended to include a reference to section 1842(b)(6)(F), both governing the consolidated billing requirements.

Section 4603(d) of the BBA was amended by section 5101(c)(2) of OCESAA by changing the effective date language for the HHA PPS and the other changes made by section 4603 of the BBA. Section 4603(d) provided that: ''Except as otherwise provided, the amendments made by this section shall apply to portions of cost reporting periods occurring on or after October 1, 2000.'' This change requires all HHAs to be paid under HHA PPS effective October 1, 2000 regardless of the current cost-reporting period. This change is discussed in detail in section IV.H. of this regulation.

Section 4603(e) of the BBA sets forth the contingency language for HHA PPS. If the Secretary for any reason does not establish and implement HHA PPS on October 1, 2000, the per-visit cost limits and per-beneficiary limits under the interim payment system will be reduced by 15 percent.

C. Summary of the Research

The PPS described in the following sections is a culmination of substantial research efforts focusing on the areas of HHA payment and quality.

The Per-Visit Prospective Payment Demonstration

Description of the Demonstration

Under the per-visit demonstration, administered under a contract to Abt Associates, Inc., 47 agencies in California, Florida, Illinois, Massachusetts, and Texas were phased

into the project at the beginning of their fiscal years starting in October 1990 and continuing for 3 years. Of the 47 agencies, 26 were randomly assigned to be paid prospectively, and the remaining 21 were paid retrospectively, subject to the statutory limitations. The participating agencies were representative nationally in terms of their average costs per visit for each visit type and their patients' characteristics.

For the first year, prospective per-visit rates by type of visit (for example, skilled nursing or occupational therapy) were set for each demonstration agency based on the agency's cost for the year preceding its entry into the project and adjusted for inflation. If the base year cost used to set the rates exceeded the statutory cost limits, it was reduced to satisfy the limits. For the second and third years, the agency-specific rates were updated for inflation. The demonstration payment rates were adjusted annually for changes in agencies' volume. Payments were adjusted to share losses and profits with us.

The opportunity to earn a profit on visits was expected to motivate demonstration agencies to hold increases in cost per visit below the rate of increase in their payment per visit. It was expected that agencies would make a variety of changes to enhance efficiency and hold down both service-related and administrative costs. However, it was recognized that costs to the Medicare program could potentially increase under prospective rate setting, if agencies furnished more visits than they would have under cost reimbursement, or if agencies' efforts to lower costs also lowered quality of care and led to increased use of other Medicare services. It was the role of the evaluation contractor to study these and other potential consequences.

Evaluation of the Demonstration

We contracted with Mathematica Policy Research, Inc. to perform an independent evaluation of the demonstration. The objectives of the evaluation were to describe and assess the impacts on the Medicare program and its beneficiaries and to understand possible changes in agency decision making and operations as a result of the incentives of the new payment method.

Major data resources for the evaluation included Medicare claims, enrollment files, case studies, and site visits with participating providers, an annual mail survey of demonstration agencies, interviews with organizations involved in the demonstration (for example, fiscal intermediaries), provider cost reports, patient surveys, patient intake data collected by the providers, home health certification and plan of treatment forms (Form 485), and records of quality assurance reviews from the New England Research Institute, the demonstration's quality assurance contractor.

Several types of multivariate regression models were used to estimate treatment-control differences. For example, analysis of costs per visit and visit volume involved a comparison of cost reports during the 3 years of the demonstration and the 3 prior years. Using a regression procedure, the treatment group's change in average visit cost and average number of visits was compared to the control group's change. Impacts on visits per episode were estimated using episode-level data from claims, with separate analyses conducted for each demonstration year. Patient survey data and quality assurance reviews were among the sources for analyses of quality impacts, which controlled for potential confounding factors such as patient and agency characteristics.

Qualitative research to understand agency responses used case study methods. Twenty-two cases for study (11 treatment and 11 control agencies) were drawn from across the five States to represent the variation in a range of provider characteristics, such as auspices, size, and urban or rural location. The agencies were followed over most of the 3 years of the demonstration. Data were collected through site visit and telephone interviews, as well as from cost reports and a mail survey of agencies. The case studies focused on several key aspects of demonstration operations, such as strategic planning, clinical costs, administrative costs, relations between the agencies and administrative organizations, and perceptions about a national program of prospective payment.

Evaluation Results

Cost

The per-visit PPS did not result in more cost control, nor did it induce excessive volume. There were no statistically significant differences between treatment and control agencies in the change in average cost per visit, regardless of type of visit. For example, the cost per skilled nursing visit for treatment agencies increased from an average of about $81 to about $92 between the predemonstration and demonstration periods. Control agencies' average costs grew by a similar amount. A related analysis found that a subgroup of agencies—freestanding agencies with a large proportion of Medicare visits—exhibited treatment-control differences in profits and ability to control cost increases. Their greater success in generating profits and in holding down Medicare cost increases suggested that HHAs can be induced to control costs. Nonetheless, this possible demonstration effect was too small to produce a difference in impacts for the sample as a whole.

Utilization

The analysis of volume suggested no impact from prospective rate setting. Average total visits for the two groups grew at similar rates between the base year and the end of the demonstration—21.3 percent per year for the treatment group and 23.6 percent per year for the control group. Visit growth for three specific types of visits (skilled nursing, aide, and physical therapy) was statistically equal for the two groups as well. Small sample sizes prevented reliable estimation for the remaining three visit types.

Treatment group agencies did not differentially increase the number of visits per episode. They provided slightly fewer physical therapy visits per episode, a result that is inconsistent with the incentives to increase visits under visit-based rate setting and may not have been a result of the demonstration. The duration of episodes did not differ between treatment and control agencies, although the length of aide visits was significantly shorter for treatment agencies. However, the evaluators concluded this was probably not due to the prospective payment, and this finding was not supported by data from other evaluation sources. The demonstration had no effects on patients' use of other Medicare-covered services, such as hospital care or physicians' visits. Finally, per-visit PPS did not appear to affect patients' use of non-Medicare services or on the amount of informal care received.

Quality and Access

The evidence suggested that quality of care was unaffected by per-visit prospective payment. Analyses of quality assurance data uncovered no impacts. Access-related provider behavior—such as agencies becoming more selective about the patients they accepted—was unaffected. For example, treatment and control group patients differed significantly in all 3 years on only two of the many patient characteristics at admission—clinical stability and pre-admission location. There were no significant differences in the proportion of admissions with

characteristics suggesting a need for long visits.

Qualitative Findings

The first year of the demonstration was a time of transition, during which participants were adjusting to demonstration operations, which included collection of special patient-intake data and use of a single fiscal intermediary. Agencies reported that these adjustments imposed costs that limited their ability to reduce overall costs. The environment of the first year was one of change and competition, which continually compelled providers to assess their services and service areas, payment sources, and marketing activities. For many providers, it was also a time of large volume growth and an increasing proportion of more acutely ill patients. Agencies were continuing to seek efficiency measures, as they had before the demonstration. The evaluators did not observe any effect of the demonstration itself on such clinical activities as referral procedures, intake procedures, assessment and care planning, and quality assurance procedures. Relations with the fiscal intermediary were generally smooth, although some problems needed resolution, particularly during the early months.

By the third year of the demonstration, it was clear that the incentives introduced by the switch to visit-based prospective payment did not dramatically alter the overall environment of treatment agencies relative to controls. This outcome seemed attributable to background conditions deriving from Medicare program cost limits and allowable cost determinations. In addition, the combined effects of competition in the industry and cost control policies in other health sectors created a climate in which agencies, both treatment and control, felt pressures to produce services efficiently. Yet most identified little that could be done to reduce their costs. The evaluators concluded that the prospective payment incentive may have been responsible for some slight additional attention to cost cutting. Specific examples included more attention to efficiency and profitability in the strategic plans of treatment as compared to control agencies, more branch offices opened by treatment than control agencies, more use of computers by treatment than control agencies, and higher productivity expectations for staff of treatment compared to control agencies.

Summary of Results

The evaluation findings overall suggested that prospective per-visit rates are unlikely to generate sizable cost savings for the Medicare program. Agencies appeared to respond modestly to this incentive to be more efficient. Due to the limited size of the project, the evaluators had little opportunity to assess whether prospective rate setting worked better for certain types of agencies. Nevertheless, the demonstration suggested that agencies can make some changes to slow the rate of increase in costs per visit.

The Per-Episode Prospective Payment Demonstration Description of the Demonstration

The per-episode PPS demonstration, administered under a contract to Abt Associates, Inc., began in June 1995. The demonstration was scheduled to terminate by December 1998. At the participating agencies' request, the demonstration has been extended pending the implementation of a national, episode-based PPS. However, as originally planned, the collection of evaluation data terminated at year-end 1998.

Ninety-one agencies from five sites—California, Florida, Illinois, Massachusetts, and Texas—were randomly assigned to either the treatment group (PPS payment, 48 agencies) or the control group (conventional cost-based reimbursement, 43 agencies). The agencies phased into the demonstration at the beginning of their 1996 fiscal year.

The payments received by the treatment group agencies for the first 120 days of an episode are based on each agency's own costs in the fiscal year immediately preceding its entry into the demonstration, updated for inflation and adjusted for changes in its case mix. While each agency is ''at risk'' during the first 120 days after admission for all home health visits the patient needs, we reimburse treatment agencies for up to 99 percent of fiscal-year losses, up to the statutory payment limits. Profits in excess of the specified statutory limits are shared with us. For visits occurring after the initial 120 days, agencies are reimbursed using prospective per-visit rates.

Episodes are defined by gaps of at least 45 days in the receipt of Medicare home health care. Only after the 120-day payment period and a 45-day gap in services could an agency receive a new episode-based payment for a given Medicare beneficiary.

Treatment agencies can reduce the cost of care they furnish during the 120-day payment period by reducing visits, changing the mix of visits to make less costly visits a larger proportion of visits, reducing per-visit costs, or some combination of all three. The cost-reducing activities raise the possibility that quality of care might deteriorate under episode-based payment. Quality reduction could occur through several cost-saving mechanisms, such as inadequate provision of expensive therapeutic services, excessive reductions in visit frequency, or excessive shortening of visits.

Evaluation of the Demonstration

We contracted with Mathematica Policy Research, Inc. to evaluate the episode-based demonstration. As with the visit-based demonstration evaluation, this project sought to answer policy questions on two main issues: program impacts and agency decisions and operations. The program evaluation addresses impacts on home health utilization, other Medicare services utilization, non-Medicare services utilization, quality and access, and cost. The analysis of agency decisions and operations seeks to provide useful insights for the implementation of a national program of episode-based prospective payment.

We also contracted with the Center for Health Policy Research at the University of Colorado to perform quality assurance monitoring. All agencies participating in the demonstration are required to collect patient status data at the start of care, at discharge, at 120 days after admission if the patient is still on service, at admission to an inpatient facility for 48 hours or more, and upon resumption of care after an inpatient stay. Outcomes are reported at the agency level. Based on outcome report findings, agencies are requested to engage in follow-up activities to investigate processes of care, and specific agencies are selected for an additional process of care review. In addition to outcome monitoring for individual agencies, the quality assurance project reports on patterns of outcomes for treatment and control agencies.

The evaluation results to date are based largely on data from the first year of the demonstration. Most of the analyses are based on approximately 51,000 home health episodes from 85 of the demonstration agencies (6 dropped out or had inadequate data). All admissions occurring between an agency's start date (beginning of its 1996 fiscal year) and August 1996 are included. Medicare claims files provided data on the outcomes variables describing the use of services. Claims

data were supplemented with data from the quality assurance contractor for the analyses of quality impacts. Claims data and cost report data were used to research the impact of the demonstration on agency costs. Data from a survey of patients conducted during the second and third demonstration years were the basis for a study of utilization of non-Medicare services and selected quality outcomes.

For most statistical analyses, regression models were used to estimate treatment-control differences. Use of regression analysis permits the isolation of PPS effects from other potential causes of treatment-control differences, such as a difference in the proportion of agencies affiliated with a hospital. Data collected at admission for case-mix adjustment and from prior Medicare claims histories provided measures of pre-admission patient characteristics that were used to account for potential pre-existing treatment-control differences in patient populations. Other control variables were obtained from agency cost reports and the demonstration contractor.

A qualitative research component of the evaluation is based on case study methods. For a judgmental sample of 67 demonstration agencies, primary data were collected during site visits early in the demonstration and supplemented by agency documents. Freestanding agencies (56) predominated in the sample. About half of the freestanding agencies were for-profit, and half were voluntary or private nonprofit organizations (primarily visiting nurse associations). Administrative data on these agencies came from our provider files. The researchers also conducted telephone interviews with representatives of the demonstration contractor and fiscal intermediaries.

Interim Evaluation Results

Cost

On average, episode prospective payment reduced the cost per episode by $419, or 13 percent. This appears to have resulted from the combined effects of fewer visits and higher average cost per visit, compared to agencies not paid prospectively. For treatment agencies, the rising cost per visit would have increased the cost per episode by $377, whereas decreases in visits per episode would have reduced the cost per episode by $656, for a net decline of $280. For control agencies, a relatively small increase in cost per episode ($139, or about 4 percent) was due almost entirely to increases in costs per visit. Because treatment agencies' costs declined by $280 per episode instead of rising by $139, the overall effect of prospective payment was $419.

The impact on cost per episode was similar across different types of agencies, except that small agencies (less than 30,000 visits in the base year) exhibited a significantly smaller effect than large agencies. Small agencies failed to decrease their cost per episode in the first demonstration year, evidently because they added to their cost per visit more, and lowered their number of visits less, than larger treatment agencies. This response may be due in part to more pronounced economies of scale among small agencies, with the result that they incur relatively high cost increases as volume declines.

Utilization

Based on first-year findings, per-episode PPS appears to have a substantial impact on the amount of services delivered during the 120-day payment period. Few other impacts on the pattern of service delivery were observed. The number of visits in a 120-day risk period was 17 percent lower for patients in treatment agencies compared to controls. Treatment agencies delivered an average of 37 visits, compared to an average of 45 for control agencies. This difference was primarily due to fewer skilled nurse visits, home health aide visits, and medical social worker visits. Episode prospective payment reduced the average length of episodes (within the first 120 days) by about 15 percent. About 25 percent of stays exceeded 120 days under prospective payment, compared to about 35 percent without prospective payment.

Except for occupational therapy, the proportion of patients receiving care in each home health discipline changed little under episode payment. The one-third reduction in the user rate for occupational therapy (to about 8 percent of patients) may be due to fewer patients receiving assessment visits from occupational therapists. Prospective payment appeared to have no effect on the proportion of visits per episode accounted for by any particular home health discipline.

These findings generally applied to agencies regardless of size, nonprofit status, affiliation status (hospital or freestanding), or use pattern (that is, whether the agency provided more or less than the average number of visits during a base year, given its case mix). One exception to this rule was that the reduction in total visits was significantly greater for agencies with a high-use practice pattern than for agencies with a low-use practice pattern.

The reduction in visits does not lead to compensating utilization in other parts of the health care system. The analysis of utilization and reimbursement for other Medicare-covered services during the 120-day payment period found that prospective payment did not affect the use of reimbursement for these services. This suggests that a reduction in home health utilization at the level observed under the demonstration does not adversely affect care quality or shift costs to services in other settings (acute care hospitals, emergency rooms, skilled nursing facilities, other HHAs, and outpatient hospital departments). Questions on the patient survey addressed ''spillover effects'' on certain non-Medicare services. Prospective payment was associated with a lower likelihood of admission to an assisted living facility. It may have reduced the likelihood of admission to a nursing home. It did not affect the likelihood of receipt of nonresidential services, such as personal care aide and adult day care. Nor did it affect the likelihood of receipt of care from relatives or friends.

Quality

The interim analysis of quality impacts found few differences in patient outcomes between treatment and control agencies, and when differences were found they were small. The three basic sources of quality evaluation data to date are claims, the patient survey, and patient assessment data.

Analysis of claims data indicated that episode PPS patients have significantly lower emergency room use. There were no significant differences due to episode PPS in any other outcomes studied from the claims data, including institutional admissions for a diagnosis related to the home health diagnosis, and mortality.

Results from the patient survey on client satisfaction suggested that both treatment and control group clients were generally satisfied. On three specific components of satisfaction with agency staff, treatment-group clients were found to be somewhat less satisfied than control group clients, although satisfaction levels were quite high in both groups. Measures of health and functional outcomes from the survey offered equivocal evidence for small negative effects of prospective payment in a few of the functional outcomes. Those results are preliminary and will require further study.

Measures constructed from the patient status assessments at the start of care and at discharge or follow-up consist of indicators of improvement or

stabilization for 17 outcomes, such as improvement in pain or ambulation. Results from these data source are provisional, in part because differences in the timing of quality outcome data collection between the treatment and control groups could cause unreliable comparisons. As noted earlier, treatment agency patients tend to be discharged sooner. Their outcome measurements may reflect less improvement because of the earlier average observation point.

The comparisons demonstrated one significant difference suggesting improvement in measures of confusion was more likely among treatment agencies. There were also two differences in the stabilization indicators, one favoring the treatment group and one the control group; however, both differences were small. Analysis of the assessment data by the quality assurance contractor using different methods suggested no consistent evidence that per-episode payment under the demonstration improves or harms patient outcomes. Several separate analyses conducted by the contractor revealed a mix of small impacts, some favoring the treatment group and others favoring the control group. A recent analysis of the second year of the demonstration did not show any statistically significant differences between treatment and control agencies. See Center for Health Policy Research, Executive Summary of Quality Assurance Activities and Findings to Date, December 1998.

Qualitative Findings

The qualitative evaluation results to date come from the case study activities conducted early in the demonstration. Almost all of the case study agencies, which included both PPS agencies and controls, had taken steps to reduce their per-visit costs in the 3 years before the site visits. They had done so primarily to make themselves more attractive to managed care organizations from whom they were seeking contracts. Strategies to cut costs varied. About half of the agencies sought to reduce administrative costs (for example, through consolidating functions or positions) or to stabilize them while growing their volume. About one agency in five reduced per-visit costs by making technology investments, such as portable computers for home health workers. In addition, about one in six took an approach such as using lower-cost staff for intake, scheduling and record keeping; introduction of productivity standards and controls on overtime hours; moving away from hourly or salary payment of staff to per-visit payment; reducing travel costs by restructuring staffing of geographic areas or improving scheduling programs to reduce mileage; and reducing supply costs, through, for example, centralized purchasing.

Half of the visited treatment agencies reported plans for specific initiatives to reduce per-episode costs spurred by their participation in the demonstration project. These initiatives included closer supervision of utilization through such measures as better review of the initial plan of treatment and requiring special justification for any visits beyond those originally approved; use of care protocols for patients with selected diagnoses; greater reliance on community services or informal caregivers; replacement of some visits by telephone contacts; speeding up patient education in self-care; eliminating multiple visits in a day; making greater use of specialists such as dietitians and wound healing experts; focusing on patient rehabilitation or environmental modifications to reduce patient need for personal care; and use of multidosing pumps for intravenous therapy patients, so that patients and caregivers can administer a larger proportion of therapy treatments without assistance.

From their case studies conducted early in the demonstration, the evaluators concluded that treatment agencies did not change their behavior in ways that threatened access or quality of care. They did not change referral and patient admission practices to avoid costly patients or recruit lower-care ones. Many agencies were struggling to maintain a stream of referrals. They were not in a position to shun referral sources, and they did not do so. Some of the strategies being planned seemed likely to improve care quality, such as strategies to achieve quicker patient independence. For certain other strategies, the long-term consequences might be variable. For example, the success of greater reliance on informal caregivers and community resources would depend on the adequacy of these auxiliary resources.

Remaining Evaluation Activities

The evaluation of the second year of the demonstration is expected to be completed by fall 1999. A draft report that includes analysis of utilization effects beyond the first 120 days has been received and is under review. The findings are consistent with the initial results reported earlier: Episode prospective payment reduced the average number of visits to a patient in the year following admission to home health care by 24 percent compared to the levels under cost-based reimbursement. Reductions in services occurred both during and after the 120-day period covered by the episode payment, and they were of a similar proportion for each service type. Prospectively paid agencies achieved these reductions by shortening the overall length of service and by lowering the frequency of visits provided. Reductions occurred among all subgroups of agencies and patients investigated, and they were stable between the first and second years of the demonstration.

Subsequent reports will evaluate the consequences of these service reductions on patient health and access, non-home health expenditures, and other outcomes. These reports will include results from a follow-up patient survey at 8 months from admission that will address impacts on quality of care and use of non-Medicare health services over a longer term than did the first survey. There will be further case study results on agency response to the demonstration and an extension of previous work on cost impacts to include an analysis of agencies' financial performance. Finally, supplementary analyses will consider the representativeness of the demonstration sample and the patient selection behavior of agencies.

Case-Mix Research

Case-mix adjustment is a prerequisite for an effective national home health PPS. With a prospectively set payment unit, providers have an incentive to seek profits by economizing on patient care during the covered period. For example, providers can try to economize by admitting patients with lower care needs, or by furnishing fewer and lower-quality services. Case-mix adjustment seeks to counteract this incentive by modifying the prospective payments according to patient need for services. To administer the case-mix adjustment system, patients are evaluated and then classified into groups with differing expected need. Varying payments for the groups will reduce provider incentives to economize inappropriately. Case-mix adjusted payments are intended to produce appropriate compensation for providers while retaining opportunities to manage care efficiently.

Background of the Case-Mix Project

In the late 1980s, the Secretary funded several empirical studies that sought to increase understanding of the major issues facing PPS designers, particularly the factors that define case mix. As reported in the 1989 Report to Congress, studies investigating case-mix issues

were necessary because methodologies at that time were insufficiently tested on a large scale with Medicare patients. A sizable, comprehensive Medicare database was considered necessary to test existing methodologies and possibly develop new ones.

We assembled this data resource under a cooperative agreement with the Georgetown University School of Nursing (Virginia K. Saba, ''Develop and Demonstrate a Method for Classifying Home Health Patients to Predict Resource Requirements and to Measure Outcomes, Georgetown University School of Nursing, February 1991). Subsequent attempts to test existing case-mix methodologies using the Georgetown data suggested that indicators of home health treatments could play a substantial role in case-mix adjusters of acceptable predictive accuracy. Examples of treatment measures include indicators for specific skilled nursing activities, such as teaching diabetic care and infusion care, and physical, occupational, and speech therapy. Two basic case-mix adjustment methodologies tested with these data demonstrated comparable accuracy for the purposes of paying providers prospectively (Brown, Randall S., Barbara R. Phillips, and Valarie E. Cheh, *et al.* ''Case Mix Analysis Using Georgetown Data: Home Health Prospective Payment Demonstration.'' Princeton, NJ: Mathematica Policy Research, Inc., November 25, 1991). These two approaches were a regression-based approach and a classification-method approach that uses computer algorithms to find groups of similar patients.

Although case-mix research on the Georgetown data and other smaller-scale data sets demonstrated progress in testing and developing case-mix methodologies, a significant concern lingered. Research had demonstrated the explanatory power of treatment information, but treatments are not necessarily a suitable basis for payment. Treatment planning and execution is subject to some discretion on the part of the provider. This means a case-mix system predicated on treatments planned or delivered may be vulnerable to manipulation for profit maximization.

In the early 1990s, the per-visit prospective payment demonstration provided another relatively large source of data to continue case-mix adjuster development. The database was not as varied as the Georgetown database, but it was sizable, containing 11,000 cases. The expendability of possibly manipulable treatment variables was specifically addressed in the Georgetown research. This demonstration tested the impact of using less treatment information with the best methodologies. When measures of treatments considered highly or moderately vulnerable to provider manipulation were dropped from the study's case-mix adjuster, the predictive accuracy of the adjuster was poor. The researchers recommended that in future research we study additional patient characteristics data needed to make up for the loss of explanatory power from the treatments (Phillips, Barbara R., Randall S. Brown, Jennifer L. Schore, Amy C. Klein, Peter Z. Schochet, Jerrold W. Hill, and Dexter Chu. ''Case-Mix Analysis Using Demonstration Data: Home Health Prospective Payment Demonstration.'' Princeton, NJ: Mathematica Policy Research, Inc., December 21, 1992; and Phillips, Barbara R. ''Improving the Accuracy of Case-Mix Adjusters for Per-episode Home Health Prospective Payment: Measures of Alternative Sources of Care and Patient and Caregiver Characteristics.'' Draft Report. Princeton, NJ: Mathematica Policy Research, Inc., April 27, 1995).

By 1994, we had launched a comprehensive review of home health care policies called the Medicare Home Health Initiative. One result was a recommendation to revise the HHA conditions of participation (COP). The revision would require a standard assessment instrument to be used in a program of continuous quality improvement. We subsequently adopted a comprehensive list of specific patient assessment elements to implement this quality improvement system (final regulations were published January 25, 1999 (64 FR 3747 and 64 FR 3764)). Known as the Outcome and Assessment Information Set (OASIS), these elements cover patient demographics and health history, living arrangements, supportive assistance, sensory status, integumentary status, respiratory status, elimination status, neuro/emotional/behavioral status, Activities of Daily Living (ADLs) and Instrumental Activities of Daily Living (IADLs), medications, equipment management, emergent care use, and discharge disposition. OASIS offers a fairly detailed examination of the patient's condition. Importantly, if OASIS elements could be the basis for a case-mix adjuster as well as continuous quality improvement, we could implement home health payment and quality reforms while minimizing data burdens on providers.

Case-Mix Research Project for a National Home Health PPS

In 1996, in anticipation of the Medicare program's eventual adoption of OASIS assessment data, we began research with a sample of 90 HHAs to develop a case-mix adjustment system for use under a future national prospective payment for home health care. The project was conducted under contract to Abt Associates, Inc., of Cambridge, Mass. (Contract Number 500–96–0003/TO2). The purpose of this project was to develop a case-mix adjuster based on OASIS assessment elements and, potentially, on additional assessment items that could enhance the case-mix adjuster's predictive accuracy. To assure its relevancy to Medicare's needs, the project collected data on a large cohort of Medicare patients admitted to a broad sample of Medicare-certified HHAs in late 1997 and early 1998. An important feature of the Abt Associates research is the use of improved measurement methods compared to previous studies. Improvements in measurement for the dependent variable, resource costs, and for the explanatory variables of patient characteristics allow the system's developers to reach a clearer understanding of the contribution of individual items to case-mix measurement. This leads to improved predictive accuracy for the case-mix groups.

Another important feature of the Abt Associates project is its objective of developing easily understandable patient case-mix groupings. We sought a system of groups that uses recognizable clinical categories and adheres to clinicians' logic as they assess a patient's care needs.

The case-mix system resulting from the Abt Associates project was developed from statistical analysis, review of the literature, and consultation with home health clinicians. Government policy and research experts helped with the development process to ensure the administrative feasibility and policy relevance of the final product.

The system is a straightforward method of combining 20 data elements to measure case mix. The data elements measure three basic dimensions of case mix: clinical severity factors, functional status factors, and service utilization factors. Each possible value for each data element used in a dimension is given a score. Scores were developed through statistical analysis of the agencies' data. Within each dimension, scores on assessment items are summed, and the resulting summation is used to

assign a patient to a severity level on the given dimension. The case-mix system defines a set of 80 groups from all possible combinations of severity levels across the three dimensions.

The process of defining a structure for the case-mix system, and of selecting items for the dimensions, is described in detail in Abt Associates, Second Interim Report, August 1999. The process of selecting items for the three case-mix dimensions employed not only statistical criteria for predictive accuracy, but also qualitative criteria relating to policy objectives, incentives to provide good care, susceptibility to gaming, apparent item subjectivity, and administrative feasibility. Further discussion of the item selection process is provided below in section II.C.

The first case-mix system dimension is the clinical severity dimension. It is measured by OASIS items pertaining to the following clinical conditions and risk factors: diagnoses involving orthopedic, neurological, or diabetic conditions; therapies used at home (that is, intravenous therapy or infusion therapy, parenteral and enteral nutrition); vision status; pain frequency; status of pressure ulcers, stasis ulcers, and surgical wounds; dyspnea; urinary and bowel incontinence; bowel ostomy; and cognitive/behavioral problems such as impaired decisionmaking and hallucinations. This dimension captures significant indicators of clinical need from several OASIS subdomains, including patient history, sensory status, integumentary status, respiratory status, elimination status, and neuro/emotional/behavioral status.

The second case-mix dimension is the functional status dimension, comprised of six Activities of Daily Living: upper and lower body dressing, bathing, toileting, transferring, and locomotion. These items come from the ADL/IADL subdomain of the OASIS assessment instrument.

The third case-mix dimension is the services utilization dimension. This dimension is measured via two basic kinds of data elements. The first describes the patient's pre-admission location in the 14 days preceding admission to home care. The pre-admission location is recognized among clinicians and in the literature as an indicator for the amount and type of care likely to be needed by a patient. It comes from the patient history subdomain of OASIS. The second is a utilization variable from the period of the home health episode itself. This variable is receipt of home health therapies totaling at least 8 hours. The data for this variable will come from the HHA's billing records. Ideally, the case-mix system should rely on data elements that do not depend on treatments planned or received; however, the case-mix research project found that a measure of therapy received is extremely powerful in explaining resource use, even after all other predictive patient characteristics are used in the system. Consequently, we decided to incorporate a measure of therapy. It is adopted under a definition designed to minimize its vulnerability to provider manipulation. A patient must need and use at least 8 hours of home health therapies to be assigned to a therapy case-mix group. In the Abt Associates sample, a minority of therapy users receive at least 8 hours of therapy. It is probable that many of the remaining therapy users received relatively little therapy beyond services from therapists for evaluation purposes. The therapy receipt definition in the case-mix system is intended to preserve access to therapy for patients with significant therapy needs. Patients receiving relatively little therapy or those with therapy use limited to evaluation services with or without a small amount of therapy are included in nontherapy groups. Their relative resource cost is accounted for in those groups.

For each dimension, additional measures of patient characteristics or utilization were considered and tested before arriving at the final set of data elements in the recommended model. The proposed set of data elements is our best recommendation after an intensive process of subjecting the items to statistical analysis, policy criteria, criteria pertaining to clinical care incentives and gaming vulnerability that might be introduced, reliability-related criteria, and administrative feasibility considerations.

The recommended case-mix system performs well in terms of overall predictive accuracy. It explains 32 percent of the variation in resource use over a 60-day episode. The 60-day episodes available for case-mix system development from the Abt Associates research sample pertained to the first 60 days from admission. However, a sizable number of observations was assembled from the study sample to evaluate the explanatory power for the subsequent 60-day period of care. From data available to the case-mix project to date, we find that the explanatory power of the groups is similar regardless of whether the episode is the patient's first 60 days or the subsequent 60 days following the start of care. The presence of certain data elements in the case-mix adjustment model may help explain the statistical finding suggesting that the case-mix model is inherently self-adjusting to changes in patient characteristics that drive resource use over a sequence of 60-day episodes. Examples comprise the preadmission location variable, the functional status elements, the therapy receipt variable, and the ulcers/wound status variables. As the accumulating data permit, we will continue to test the model's explanatory power on later 60-day units.

The data and methods of the case-mix development project are described in further detail in sections II.A.2 and II.C below and in Abt Associates, Inc., Second Interim Report, August 1999. Comments on specific issues of model design and implementation are being solicited as noted in section II.C.

D. Home Health Agency Prospective Payment—Overview

1. Payment Provisions—National Episode Payment Rate

a. Episode Definition

The PPS will apply to all home health services furnished by all HHAs participating in the Medicare program. Section 4603(a) of the BBA adds section 1895(b)(1) to the Act. Section 1895(b)(1) requires all services covered and paid on a reasonable cost basis under the Medicare home health benefit as of the date of the enactment of the BBA, including medical supplies, to be paid on the basis of a prospective payment amount under HHA PPS. Durable medical equipment (DME) is a covered home health service that is not currently paid on a reasonable cost basis, but paid on a fee schedule basis when covered as a home health service under the Medicare home health benefit. Under HHA PPS, DME covered as a home health service as part of the Medicare home health benefit will continue to be paid under the DME fee schedule. Thus, a separate additional payment amount based on the DME fee schedule in addition to the prospective payment amount for home health services will be made for DME covered as a home health service under PPS.

In compliance with section 1895(b)(2) of the Act, requiring the Secretary to determine the unit of payment under PPS, we have analyzed the number, type, duration, and costs of visits furnished within the proposed episode payment. In addition, we will discuss the general system design that provides for continued access to quality services in section IV.J. of this regulation.

Preliminary results from the Phase II per-episode HHA PPS demonstration have provided information regarding how length of episodes are affected by prospective payments and how analysis

from the National Claims History File can show the existing use and length of service. Preliminary results from the Phase II per-episode PPS demonstration indicate that about 60 percent of episodes paid under PPS were completed within 60 days and 73 percent within 120 days. These episode completion rates are about 5 to 10 percentage points higher than rates for the control group under the demonstration. These findings indicate that PPS should result in shorter average length of episodes.

We also conducted analysis on an episode database created from the 1997 National Claims History File using 60-day episodes. Data from the 1997 national claims history suggest that the proportions completing their episodes in the first and second month are slightly lower than the proportions for the PPS demonstration control group. We interpret the demonstration findings to indicate that national PPS should use shorter average episodes. From the 1997 national claims history, we find at the end of a full year, 20 percent of home health beneficiaries have not yet completed their episodes. This indicates the need to provide continuing episode payments to capture the long-stay home health patient under PPS since the volume of long-stay cases exceeds the capacity of an outlier policy.

60-Day National Episode Payment

Recognizing that OASIS data will be captured on a 60-day cycle and current Medicare plan of care certification requirements govern a bimonthly period of time, we are proposing a 60-day episode as the basic unit of payment for the HHA PPS. We are proposing that a new 60-day episode begins with the first Medicare billable visit as day 1 and ends on and includes the 60th day from the start-of-care date. The next continuous episode recertification period would begin on day 61 and end on and include day 120. We are proposing the requirement that the 60-day episode payment covers one individual for 60 days of care regardless of the number of days of care actually furnished during the 60-day period unless there is one of the following intervening events during the 60-day episode: (1) A beneficiary elected transfer; (2) a discharge resulting from the beneficiary reaching the treatment goals in the original plan of care (not defined as a significant change in condition during an existing plan of care) and return to the same HHA; or (3) a significant change in condition resulting in a new case-mix assignment. The significant change in condition is a change not anticipated in the original plan of care or as part of the expected course of the patient's response to treatment. The significant change in condition must be sufficient to require a new OASIS assessment and thus, resulting in a change in the case-mix assignment.

The intervening event defined above as (1) a beneficiary elected transfer or (2) a discharge and return to the same HHA during a 60-day episode, starts a new 60-day episode for purposes of payment, OASIS assessment, and physician certification of the plan of care. The original 60-day episode payment is proportionally adjusted to reflect the actual length of time the beneficiary remained under the agency's care prior to the intervening event of the beneficiary elected transfer or the discharge and return to the same HHA during the 60-day episode. The proportional payment adjustment that closes the original 60-day episode payment is called the partial episode payment adjustment or PEP adjustment. We are proposing the PEP adjustment to the original 60-day episode payment in order to equitably recognize the intervening events of a beneficiary elected transfer or a discharge and return to the same HHA over the course of a 60-day episode of home health care.

Since we are proposing to close out the initial episode payment with a PEP adjustment and restart the 60-day episode clock under an existing episode due to a beneficiary elected transfer, we are concerned that these transfer situations could be subject to manipulation. Therefore, we are proposing not to apply the PEP adjustment in the situation of transfers between organizations of common ownership. A determination of whether an individual (or individuals) or organization possesses significant ownership or equity in the provider organization and the supplying organization, in order to consider if the organizations related by common ownership, will be made on the basis of the facts and circumstances in each case. This rule applies whether the provider organization or supplying organization is a sole proprietorship, partnership, corporation, trust or estate, or any other form of business organization, proprietary or nonprofit. In the case of a nonprofit organization, ownership or equity of interest will be determined by reference to the interest in the assets of the organization. In the situation of a transfer among organizations of common ownership, we are proposing that the HHAs under common ownership look to the initial HHA for payment. Therefore, PEP adjustment would not apply in situations of transfers among HHAs under common ownership.

The discharge and return to the same HHA during the 60-day episode period is only recognized when a beneficiary has reached all treatment goals in the original plan of care for the 60-day episode. The original plan of care must be terminated with no anticipated need for additional home health services for the balance of the 60-day period. The discharge cannot be a result of a significant change in condition. In order for the situation to be defined as a PEP adjustment due to discharge and return to the same HHA during the 60-day episode, the discharge must be a termination of the complete course of treatment in the original plan of care. We would not recognize any PEP adjustment in an attempt to circumvent the more conservative payment made under the significant change in condition payment adjustment discussed below.

If a patient experiences an intervening hospital stay during an existing 60-day episode under an open plan of care, then the patient would not have met all of the treatment goals in the plan of care. Therefore, the intervening hospital admission during an existing 60-day episode could result in a SCIC adjustment, but could not be considered a discharge and return to the same HHA PEP adjustment.

The PEP adjustment is based on the span of days including the start of care date (first billable service date through and including the last billable service date) under the original plan of care prior to the intervening event. The PEP adjustment is calculated using the span of days (first billable service date through and including the last billable service date) under the original plan of care as a proportion of 60. The proportion is multiplied by the original case mix and wage adjusted 60-day episode payment. For example, a patient is assigned to a 60-day episode payment of $3000. Day 1 through Day 30 the patient is served by HHA–1. Day 1 is the first billable service date and Day 30 is the last billable service provided by HHA–1 under the original plan of care. The beneficiary elects to transfer to HHA–2 on Day 35. The first ordered service for the beneficiary under the new plan of care is Day 38. Day 38 starts a new 60-day episode clock for purposes of payment, OASIS assessment, and physician certification of the plan of care. Day 38 becomes Day 1 of the new 60-day episode. The final payment to HHA–1 is proportionally adjusted to reflect the length of time the beneficiary remained under its care. HHA–1 would receive a PEP adjustment equal to 30/60

* $3000 = $1500. The initial percentage payment will be adjusted accordingly to reflect the PEP adjustment. Several illustrative PEP adjustment examples are provided in section IV. of this regulation. An HHA may also receive a low-utilization payment adjustment instead of the PEP adjustment described in this section of the regulation or an outlier payment in addition to the PEP adjustment described in section IV. of this regulation.

We are proposing the requirement that the 60-day episode payment covers the individual for 60 days of care unless one of three intervening events occurs. The PEP adjustment described above encompasses the two intervening events defined as a beneficiary elected transfer or a discharge and return to the same HHA over the course of a 60-day episode of home health care. We are proposing that the third intervening during a 60-day episode of home health care that could trigger a change in payment level would be a significant change in the patient's condition. We are proposing the significant change in condition payment adjustment (SCIC adjustment) to be the proportional payment adjustment reflecting the time both prior and after the patient experienced a significant change in condition during the 60-day episode. The proposed SCIC adjustment occurs when a beneficiary experiences a significant change in condition during a 60-day episode that was not envisioned in the original plan of care. In order to receive a new case mix assignment for purposes of SCIC payment during the 60-day episode, the HHA must complete an OASIS assessment and obtain the necessary physician change orders reflecting the significant change in treatment approach in the patient's plan of care.

The SCIC adjustment is calculated in two parts. The first part of the SCIC adjustment reflects the adjustment to the level of payment *prior* to the significant change in the patient's condition during the 60-day episode. The second part of the SCIC adjustment reflects the adjustment to the level of payment *after* the significant change in the patient's condition occurs during the 60-day episode. The first part of the SCIC adjustment is determined by taking the span of days (first billable service date through the last billable service date) before the patient's significant change in condition (defined below) as a proportion of 60 multiplied by the original episode payment amount. The original episode payment level is proportionally adjusted using the span of time the patient was under the care of the HHA prior to the significant change in condition that warranted an OASIS assessment, physician change orders indicating the need for a significant change in the course of the treatment plan, and the new case mix assignment for payment at the end of the 60-day episode.

The second part of the SCIC adjustment reflects the time the patient is under the care of the HHA after the patient experienced the significant change in condition during the 60-day episode that warranted the new case mix assignment for payment purposes. The second part of the SCIC adjustment is a proportional payment adjustment reflecting the time the patient will be under the care of the HHA after the significant change in condition and continuing until the end of the 60-day episode. Once the HHA completes the OASIS, obtains the necessary physician change orders reflecting the need for a new course of treatment in the plan of care, and assigns a new case mix level for payment, the second part of the SCIC adjustment begins. The second part of the SCIC adjustment is determined by taking the span of days (first billable service date through the last billable service date) after the patient experiences the significant change in condition through the balance of the 60-day episode as a proportion of 60 multiplied by the new episode payment level resulting from the significant change. The initial percentage payment provided at the start of the 60-day episode will be adjusted at the end of the episode to reflect the first and second parts of the SCIC adjustment (or any applicable medical review or (LUPA) discussed below) determined at the final billing for the 60-day episode. Illustrative examples are provided in section IV.J.4. of this proposed rule.

As discussed above, we are concentrating additional monitoring resources on the events that would trigger the PEP adjustment and SCIC adjustment. We are also planning to analyze the data from the demonstration sites to determine the frequency of a (1) beneficiary elected transfer, (2) discharge and return to the same HHA during the 60-day episode, or (3) significant change in condition, in order to establish a baseline of information to determine how frequently these events occur prior to PPS. Based on this information we will establish a baseline, identify agencies which differ significantly from it, and concentrate monitoring resources on those agencies.

In order to address the needs of longer stay patients, at this time we are proposing not to limit the number of 60-day episode recertifications in a given fiscal year. There is the potential for unlimited consecutive episodes. Recertification of and payment for consecutive 60-day episodes is, of course, dependent on OASIS assessment and the patient's eligibility for continued medically necessary Medicare home health services. We believe the consecutive 60-day episode recertification and payment will ensure continued access to the Medicare home health benefit without exceeding the statutory budget-neutrality targets.

We believe the 60-day episode provides an appropriate time frame for purposes of prospective payment for many reasons. The 60-day episode period is the basic time frame under which HHAs have historically been required to manage and project home health care needs of beneficiaries in order to comply with current plan of care certification requirements for Medicare home health plans of care. The 60-day episode period also basically matches the reassessment schedule for OASIS, and this parallel time frame will permit case-mix adjustment of each episode. Further, the 60-day episode captures the majority of stays experienced in the Phase II per-episode HHA PPS demonstration.

As discussed above, about 60 percent of the Phase II per-episode HHA/PPS demonstration patients completed their episodes within 60 days. If capturing a majority of the patients is one criterion for the episode length, we now have evidence from the Phase II per-episode PPS demonstration that a 60-day episode will do so. A 120-day episode, as tested in the Phase II per-episode HHA/PPS demonstration, also meets this criterion, but we do not gain a significantly larger completion percentage by lengthening the episode to 120 days. A 120-day episode may result in more inequity in payments because of the larger risk of a change in a patient's condition over the span of the longer episode. We are specifically soliciting comments on the utility of a 60-day episode period for purposes of prospective payment and the efficacy of unlimited consecutive episode recertifications for eligible beneficiaries in a given fiscal year.

Low-Utilization Payment Adjustment

As discussed above, the statute requires that the definition of the unit of payment must take into consideration the number, type, duration, mix , and cost of visits furnished within the unit of payment. We are concerned with the financial incentive to provide minimal services within an episode. We are also challenged by the possible motivation to obtain an additional full 60-day episode payment beyond a current episode by

furnishing the absolute minimum of additional services. Utilization incentives potentially change from overutilization under the cost based payment system to underutilization under a prospective payment system. We want to ensure that HHAs do not have an incentive to provide less care than is necessary. Under such an approach, an HHA that provided the minimum threshold number of visits or less during the 60-day episode would receive a low utilization payment adjustment reflecting a national average per-visit payment by discipline for the visits actually provided during the episode. We believe this policy reduces incentives to provide only one or two visits to beneficiaries to trigger a full prospective payment and, in addition, makes it harder to obtain either an initial or a second prospective payment by providing a minimal number of additional services. As a result of our analysis, we determined the need to recognize a low utilization payment adjustment under HHA PPS.

Our next decision required us to determine the number of visits that must be provided before a full 60 day prospective payment is made. Increasing the number of visits required, decreases the potential for agency gaming by providing a few additional services to obtain a full prospective payment. Based on analysis of our episode database, we concluded approximately 12 percent of current episodes constitute four or fewer visits. We explored the option of a six or fewer visit threshold for the low utilization payment adjustment and found approximately 20 percent of episodes in our database contain six or fewer visits. However, we recognize that these numbers may change under a fully implemented PPS.

A potential advantage of the six or fewer visit threshold would be to further reduce the number of episodes with only six or fewer visits during a 60-day episode; that is, agencies will have incentives to provide enough services to reach the threshold by increasing the number of services delivered to individuals who currently receive only a few. It would also make it harder to provide enough additional services to game or trigger full prospective episode payments inappropriately. However, the six visit threshold based on current data would result in 20 percent of all episodes under national HHA PPS being paid at the lower per-visit amount. We are soliciting comments and supporting data on the most appropriate threshold for the low utilization payment adjustment. We also plan to focus our medical review resources on the fourth or sixth visit, whichever is chosen in the final rule, to assure the medical appropriateness of the visits which actually triggers a full prospective episode payment.

We have developed our approach in the regulation to reflect the four or fewer visit threshold for the low-utilization payment adjustment. The methodology for the low-utilization payment adjustment and all other payment calculations in this rule reflect the four or fewer visit threshold. Under this proposed provision, a 60-day episode, a PEP adjustment, or a SCIC adjustment with four or fewer visits would be paid the national standardized per-visit amount by discipline for each visit type furnished during the 60-day episode. However, we are seeking comments and supporting data on the utility of the six or fewer visit threshold for the low-utilization payment adjustment. We are soliciting comments on the operational and financial impact of the low utilization payment adjustment. We are also specifically seeking comments on the potential financial impact on rural HHAs to comply with this requirement.

We are concerned with the potential manipulation of the LUPA under a pattern of certification of continuous home health episodes. Our interest is focused on patterns of behavior involving two continuous 60-day episodes. We are concerned that the possibility of a 60-day period may be too long for a second episode if the intensity of services is greater in the earlier part of that second episode. We are also concerned that agencies may have greater incentives to provide five additional visits beyond the first 60-day episode so as to trigger a second 60-day payment than they do at the beginning of the first episode. We are analyzing data on the second and subsequent 60-day episode and the distribution of the intensity of services within these episodes. Based on this analysis, we are considering the following possible alternative policies: (1) modify the proposed episode definition; (2) extend the LUPA for the second and subsequent episodes from four to six visits. We invite comment on these alternatives to the policies presented in this proposed regulation.

b. National Episode Payment Rate

We propose that the HHA PPS use a 60-day national episode payment rate. Section 1895(b)(3)(A)(i) of the Act requires—(1) the computation of a standard prospective payment amount to include all costs of home health services covered and paid for on a reasonable cost basis and to be initially based on the most current audited cost report data available to the Secretary, and (2) the prospective payment amounts to be standardized to eliminate the effects of case mix and wage levels among HHAs. Section 5101(c) of OCESAA amends section 1895(b)(3)(A)(ii) of the Act, to require that the standard prospective payment amounts be budget neutral to the amounts expended under the current interim payment system as of the inception of the PPS on October 1, 2000, with the limits reduced by 15 percent. The data used to develop the HHA PPS rates were adjusted using the latest available market basket increases occurring between the cost-reporting periods contained in our database and September 30, 2001. Sections 1895(b)(3)(B)(i) and (b)(3)(B)(ii) of the Act, as amended by section 5101(d)(2) of OCESAA, require the standard prospective payment amounts for fiscal year 2002 or 2003 to be increased by a factor equal to the home health market basket minus 1.1 percentage points. For any subsequent fiscal years, the statute requires the rates to be increased by the applicable home health market basket index change.

The national 60-day episode payment incorporates adjustments to account for provider case mix using a clinical classification system that accounts for the relative resource utilization of different patient types. The classification system, The Clinical Model from Abt, uses patient assessment data (from the Outcome and Assessment Information Set (OASIS)) supplemented by one additional patient-specific item regarding number of therapy hours received in the 60-day episode period that is completed by HHAs to assign patients into one of 80 Home Health Resource Groups (HHRGs). The OASIS items and the supplemental therapy item are discussed in detail in section II.C.2. of this regulation. HHAs complete the OASIS assessment according to an assessment schedule specifically designed for Medicare payment (see section IV.L. of this regulation). The total case-mix-adjusted 60-day episode payment is based on the initial OASIS assessment and the supplemental item indicating projected therapy hours received in a 60-day episode submitted at the start of the 60-day episode. The projected number of therapy hours received (physical, speech-language pathology, and occupational therapy in any combination) in a 60-day episode reported at the start of the 60-day episode is confirmed by the actual receipt of therapy via the line-item date visits submitted on the final claim at the

end of the 60-day episode. The reconciliation of projected therapy use with actual therapy services furnished during the 60-day episode has the potential to decrease the final payment if actual therapy use reported at the end of the episode does not correspond to the projected therapy use provided at the start of the episode. We are proposing to use visit utilization data as a proxy for time. The proxy approach is discussed in detail in the case-mix methodology in section II.C.2. of this regulation.

For Medicare billing purposes, there are codes associated with each of the 80 HHRGs. The patient will be grouped into the appropriate case-mix category from the OASIS assessment at the HHA. The case-mix methodology consists of 19 OASIS items plus one supplemental non-OASIS item. We are exploring the approach that the ''grouper'' software will be provided to HHAs via the HAVEN software used for State transmission of OASIS quality data. The OASIS assessment is fed into the grouper logic at the HHA. The grouper logic selects the OASIS elements supplemented by one additional non-OASIS item indicating projected therapy hours (as translated into therapy visits) in a 60-day episode needed to establish the case-mix group and determines the appropriate case-mix category for the patient. The visit projection must be based on the physician's orders in the plan of care certified by the physician. The grouper logic generates a code. The code corresponds to the appropriate case-mix category and would be placed on the claim at the provider. The initial claim is submitted for an initial percentage payment at the start of care (see section I.D.2. of this regulation on percentage payments). As mentioned above, as applicable, the confirmation of the projected number of therapy hours received during the 60-day episode from the line-item date visit information submitted at the end of the 60-day episode is used for pricing the final case-mix adjusted payment. The pricer logic at the Regional Home Health Intermediary (RHHI) will compute the final episode payment based on the reconciliation of the projected therapy use received during the 60-day episode with the actual therapy visits reported on the final claim submitted at the end of the 60-day episode.

The confirmation of projected therapy services has the potential to decrease the final payment if the actual therapy use reported at the end of the episode does not correspond with the projected therapy use furnished at the start of the episode. The 60-day case-mix adjusted episode payment is intended to provide full payment for the patient for the 60-day period except in the case of a partial episode payment adjustment, low-utilization payment adjustment, outlier payment adjustment, or a finding that the episode was not medically necessary or covered due to medical review. We are seeking comments on our approach to the case-mix assignment during the 60-day episode. We are specifically seeking comments on potential effects on cash flow for HHAs. Operational aspects of the system design are discussed in more detail in section IV. of this regulation.

2. Payment Provisions—Split Payment

We are proposing a split percentage payment during the 60-day episode period. We propose that there be two percentage payments (initial and final) and two corresponding claims (initial and final) per 60-day episode. First, the initial percentage payment will equal 50 percent of the estimated case-mix adjusted episode payment. Each initial claim submitted for the initial percentage payment must be based on a current OASIS-based case mix and supplemented, as applicable, by one item indicating proposed therapy use in a 60-day episode. Second, the final payment will equal 50 percent of the actual case-mix adjusted episode payment. A new initial and final bill must be submitted for each recertified 60-day episode period. For example, patient is assessed via OASIS supplemented by the therapy variable, if applicable, and is categorized by the grouper logic into HHRG group Y. Included in HHRG group Y is a projected therapy use of 8 hours or more in a 60-day period. The HHRG group case-mix adjusted payment for the 60-day episode is $2,000. The HHA submits the claim with the corresponding code to HHRG group Y. The pricer at the RHHI computes 50 percent of the payment for HHRG group. The HHA receives an initial payment of $1,000. At the end of the 60-day episode, the HHA bills for the residual 50 percent final payment. The line-item date information confirms the receipt of at least 10 therapy visits as a proxy for time. The final claim is submitted for payment. The pricer at the RHHI confirms the line-item date information. No increase or decrease adjustment is necessary for therapy use. The pricer computes the 50 percent residual final payment. The HHA receives a final payment of $1,000. The initial percentage payment will be adjusted to reflect a LUPA, PEP adjustment, SCIC adjustment, or medical review determination as applicable.

Operational aspects of the split payment relationship to the system design are discussed in detail in section III. of this regulation. We are specifically soliciting comments on the impact on HHAs to financially and operationally comply with the split percentage payment approach. We are proposing a 50/50 percentage split for purposes of this proposed rule; however, more complete data may result in future refinements to the percentage payment approach.

3. Payment Provisions—Outlier Payments

Section 1895(b)(5) of the Act notes that we may provide for additions or adjustments to the payments due to unusual variations in the type or amount of medically necessary home health care. The total amount for addition or adjustment payments during a fiscal year may not exceed 5 percent of total payments projected or estimated to be made based on the HHA PPS in that year. Because successive episode payments will be made for a beneficiary as long as the beneficiary continues to be recertified and otherwise eligible for additional home care, there will be no need for long-stay outlier cases under the HHA PPS. However, we believe outlier payments for 60-day episodes in which the HHA incurs extraordinary costs beyond the regular episode payment amount may be desirable. Outlier payments would provide some protection for beneficiaries whose care needs cost more than the amount of the episode payment. They would also provide HHAs with some financial protection against possible losses on individual beneficiaries.

The methodology proposed for outlier payments is modeled on the outlier payment methodology of the Medicare inpatient hospital PPS. There are two basic principles underlying the approach: First, before outlier payments are made for a case or episode, cost should exceed the payment for the case. The amount by which cost exceeds payment should be the same for cases in all case-mix groups because a dollar lost is a dollar lost whether the case belongs in a low cost or a high cost case-mix group. Use of a uniform fixed dollar loss for all case-mix groups avoids creating differential incentives to accept patients in different case-mix groups. The second principle is that outlier payments should cover less than the full amount of the additional costs above the outlier threshold to preserve the incentive to contain costs once a case qualifies for outlier payments. (See Emmett B. Keeler, Grace M. Carter, and Sally Trude, ''Insurance Aspects of DRG

Outlier Payments,'' The Rand Corporation, N–2762–HHS, October 1988.) We discuss the outlier payments in greater detail in section II.A.5. of this regulation.

We are seeking comments on our approach to outlier payments.

4. Payment Provisions—Transition Period

Section 4603(b)(1) of the BBA provides discretion on the transition from payment under the current reasonable cost-based interim payment system to the full prospective payment amount by blending a portion of the PPS amount with agency-specific costs for a period of time. The statute provides for the blend of agency-specific costs for up to 4 years in a budget-neutral manner.

Blending options provides significant practical obstacles. We could in theory blend what would have been paid under the current reasonable cost reimbursement system and PPS. A percentage of the payment would be based on costs of the agency building on the current interim payment system and a percentage would be based on the national PPS amount.

While other prospective payment systems have used a blended agency and national payment amount, the complexities of blending dissimilar payment methodologies for home health are so great that we believe it is not a viable option. Moreover, OCESAA amended the statute to require that we implement PPS on the same date for all providers, regardless of their cost reporting period. This break in the cost reporting period further discourages continued use of the cost-based system. The legislation also reflects Congressional interest in expediting the transition from the interim payment system to PPS. We believe proceeding with a highly complicated percentage payment system based on historical data from the cost-based interim payment system would not be in the best interest of the industry based on historical reaction to the interim payment system.

We believe full transition to the PPS system on October 1, 2000 is the most viable option.

5. Consolidated Billing for Home Health Agencies

Both sections 4603(c)(2)(B) and (c)(2)(C) of the BBA require a new consolidated billing and bundling of all home health services while a beneficiary is under the plan of care. The BBA requires payment for all covered home health items and services to be made to an HHA. However, in accordance with section 1895(b)(1) of the Act, PPS payments are to include only those home health services paid on a reasonable cost basis, and DME is currently paid under the DME fee schedule. Furthermore, payment for Medicare covered home health services can only be made to the HHA that establishes the individual's home health plan of care. The result is that the HHA must bill when the plan of care specifies DME and even if an outside supplier provides it. HHAs will no longer be able to ''unbundle'' services to an outside supplier that can then submit a separate bill directly to the Part B carrier. Instead, the HHA itself will have to furnish the home health services either directly or under an arrangement with an outside supplier in which the HHA itself, rather than the supplier, bills Medicare. The outside supplier must look to the HHA rather than to Medicare Part B for payment. The HHA consolidated billing requirement is discussed in detail in section V. of this regulation.

6. Medical Review Under the Prospective Payment System

The financial incentives available to HHAs change from overutilization to underutilization under an episode-based PPS. The initial claim for each 60-day episode may contain visit information and will only include the code corresponding to the appropriate case-mix category. The final claim for the 60-day episode will include all of the line-item visit information for the previous 60 days. Given the limited information on the initial claim, prepayment review of the initial claim would be limited to overall medical necessity of care and technical eligibility issues, such as whether the homebound requirement was met. Medical review will be conducted on a random and targeted basis. Targeting may include claim-specific and patterns of case-mix upcoding as well as general issues of the medical need for the episode of care and technical eligibility. There must be the capacity, for both prepayment and postpayment, to deny claims in total or to adjust payment to correct case mix. Medical review will validate OASIS case-mix category information used for payment against medical records and the OASIS information separately submitted for quality. Medical review will also be conducted to verify individual beneficiary therapy information and patterns of therapy information for larger groups. The information reported on claims will be an essential part of this effort due to the significant impact of therapy use in the case-mix designation.

7. Continued Access to Quality Home Health Services Under the Prospective Payment System

The quality component of PPS is critical to ensure that HHAs do not furnish less care than is necessary to beneficiaries in an attempt to increase profit. The advantage of using similar elements to measure quality through outcomes of care and case mix for payment purposes is that an agency that provides less care than needed to a patient in an episode will be likely to reflect poor outcomes of care in terms of quality. The quality component of the HHA PPS is crucial to ensuring that beneficiaries receive needed services. The continued access to quality services under PPS is discussed further in section IV.J. of this regulation.

8. Implementation of the Prospective Payment System

Section 5101(c)(1) of OCESAA removed the effective date of the PPS by cost reporting period previously prescribed in the BBA and instead requires all Medicare participating HHAs to be paid under PPS effective on the same date of implementation—October 1, 2000. The implementation approach is discussed in section IV.H. of this regulation.

II. Prospective Payment System for Home Health Agencies

A. National 60-Day Episode Payment

This proposed rule sets forth the methodology for the national PPS applicable to all Medicare home health services covered under both Part A and Part B. This proposed rule incorporates a national 60-day episode payment for all of the reasonable costs of services furnished to an eligible beneficiary under a Medicare home health plan of care. This section describes the components of the national 60-day episode payment and the methodology and data used in computation.

1. Costs and Services Covered by the 60-Day Episode Payment

The 60-day episode prospective payment applies to all home health services set forth in section 1861(m) of the Act that are covered and paid on a reasonable cost basis under the Medicare home health benefit as of the date of the enactment of the BBA, including medical supplies. DME is a covered home health service that is not currently paid on a reasonable cost basis, but is paid on a fee schedule basis when covered as a home health service under the Medicare home health benefit. Under the HHA PPS, DME covered as a home health service as part

of the Medicare home health benefit will continue to be paid under the DME fee schedule. Thus, we believe a separate payment amount in addition to the prospective payment amount for home health services will be made for DME currently covered as a home health service under the PPS. All DME must be billed by the HHA during the 60-day episode when it is furnished directly, under arrangement, or otherwise as discussed in section V.C. of this regulation. Although the covered osteoporosis drug under the home health benefit is currently paid on a reasonable cost basis, section 4603(c) of the BBA of '97 amended section 1833(a)(2)(A) of the Act to specifically exclude it from the prospective payment rate. In addition, like DME, the osteoporosis drug is included in the consolidated billing requirements.

2. Data Sources Used for the Development of the 60-Day Episode Payment

The methodology we used in developing the 60-day episode payment combines a number of data sources. These data sources include audited cost report data, claims data, a wage index, a market basket inflation index, and Abt Associates Case-Mix Research Project Data. This section describes each of these data sources while the following section describes the methodology that combines them to produce the 60-day episode payment.

a. Audited Cost Report Data

Section 1895(b)(1) of the Act requires the prospective payment amount to include all services covered and paid on a reasonable cost basis under the Medicare home health benefit, including medical supplies. Section 1895(b)(3)(A)(i) of the Act requires the computation of a standard prospective payment amount to be initially based on the most recent audited cost report data available to the Secretary. Under section 1895(b)(3)(A)(i) of the Act, the primary data source in developing the cost basis for the 60-day episode payments was the audited cost report sample of HHAs whose cost reporting periods ended in fiscal year 1997 (that is, ended on or after October 1, 1996 through September 30, 1997).

In February 1998, we directed our fiscal intermediaries (FIs) to conduct comprehensive audits of the cost reports submitted by a sample of HHAs whose cost reporting periods ended in FFY 1997. Each FI received a list of agencies to audit and instructions on how to conduct the audits and report the data obtained.

The sample was designed to be representative of the home health industry in several respects: type of provider (for example, provider-based), census region, urban versus rural location, and large versus small agencies. We anticipated that many agencies in the sample would not be audited because their records were unavailable for a variety of reasons or their cost reporting periods were less than 12 months long. Consequently, the sample size was adjusted upward by 15 to 20 percent to allow for attrition.

To create national HHA PPS rates, each observation in the final data set is weighted so that in the aggregate the entire sample reflects the national Medicare home health payment experience. For example, the estimates will reflect differences across census regions and urban versus rural areas.

Audit Sample Methodology

The sample frame was intended to include all home health agencies except very small ones and agencies without a full year of cost reporting for the audit period. The sample selection design was a stratified sample. With this design, agencies are selected as samples within each stratum, where a stratum is defined for each provider type. There were four strata: freestanding not-for-profit, freestanding for-profit, freestanding governmental, and provider-based agencies. The stratified design of the sample takes into account the number of providers and the variation in cost and beneficiaries associated with each provider type. The sample was designed to produce estimates from key elements of the audit data with a reasonable level of precision.

One issue arose as auditing activities unfolded. Although ordinarily each sampling unit should appear once and only once in the frame, after the sample was drawn and fieldwork begun, it was found that this assumption was not strictly true for the governmental units. In some cases, multiple providers' numbers corresponding to a single cost report appear on the frame, while in other cases a provider number is a parent possibly with multiple subunits. In the former case, we considered the subunits associated with a single cost report as the appropriate sampling unit, and assigned weights to those observations to compensate for their higher probability of inclusion in the sample. This weighting procedure ensures that correct totals are obtained from the analysis.

The original sample design anticipated that the weights would need further adjustment so that audits expected but ultimately missing from the sample are represented and the sample in total will produce the known totals from the frame for key subgroups or cells. The process assigns a larger weight to audited units in the sample similar (in the same cell) to those missed. In the case of the HHA, the cells were defined by cross-classification of three characteristics: urban or rural location; the four census regions of Northeast, Midwest, South, and West; and provider type. Therefore, the weights were adjusted for the missed sample units to ensure that the units obtained most closely represent the missed units cell by cell. (The adjustment gives more weight to the audited HHA in a cell to account for the missing audits within the cell.) The adjustment was a minor one, because examination of counts from the realized sample, intended sample, and sample frame showed that the sample actually obtained generally was within range or close to the specifications.

After completing the weight adjustments, a file was created with the resulting weights, the provider number, provider type, Census4 (four census regions), and Metropolitan Statistical Area (MSA) code. This file can be merged with the data from the cost reports for the audited providers to compute weighted values for costs and visits in order to compute the average cost-per-visit ratios by discipline. As a check on the computations, the following table is the result of a summary by provider type that agrees with the frame totals.

Type	Sample	Frame #
FS/F	142	3290
FS/G	159	458
FS/N	171	955
PROV	95	2458

The final audit sample contained 567 audited cost reports which were the basis of the home health PPS rate calculations. See Section III. below for a more detailed description of the sampling and estimation procedures.

Updating to September 30, 2001

Before computing the average cost per visit for each discipline that would be used to calculate the prospective payment rate, we adjusted the costs from the audit sample by the latest available market basket factors to reflect expected cost increases occurring between the cost reporting periods ending in FY 1997 to September 30, 2001. Multiplying nominal dollars for a given FY end by their respective inflation adjustment factor will express those dollars in the dollar level for the FY end September 30, 2001. Therefore,

we multiplied the total costs for each provider by the appropriate inflation factor shown in the table below. See section II.A.2.b. of this regulation for a detailed description of the market basket.

Nonroutine Medical Supplies Paid on a Reasonable Cost Basis Under a Home Health Plan of Care

Before computing the average cost per episode for nonroutine medical supplies paid on a reasonable cost basis under a home health plan of care, we also adjusted the audited cost report data for nonroutine medical supplies using the latest available market basket factors to reflect expected cost increases occurring between the cost reporting periods ending in FY 1997 to September 30, 2001.

Adjusting Costs for Providers Impacted by the Visit Limits

For cost reporting periods ending in FY 1997, Medicare recognized reasonable costs as the lower of the provider's actual costs or the per-visit limit applied in the aggregate for the six disciplines. Because some providers' costs were higher than the per-visit limits applied in the aggregate for the six disciplines, it was necessary to adjust their costs in order to reflect only those costs for which the provider's payment was based. The adjustment factor was calculated by dividing a provider's total visit limit by the total Medicare costs, but only if the total visit limit was less than total Medicare costs. For those providers not impacted by the visit limit, no adjustment was necessary, and the adjustment factor was set equal to one. The adjustment factor was applied to each provider's total costs for each discipline. Summing each provider's updated, weighted, and adjusted total costs by the sum of visits for each discipline results in the nonstandardized, updated, weighted, and visit limit adjusted average cost per visit by discipline. The Office of Inspector General (OIG) has raised concerns that the payment rates may be inflated because improper costs were included in the base year data. These concerns are based on prior OIG reviews which have found improper payments have been made to HHAs in the past. Depending on the results of these past reviews and additional OIG reviews currently underway, HCFA may consider adjusting the payment rates to account for improper costs that were included in these rate calculations.

b. Home Health Agency Market Basket Index

The data used to develop the HHA PPS payments (60-day episode and LUPA) were adjusted using the latest available market basket factors to reflect expected cost increases occurring between the cost reporting periods contained in our database and September 30, 2001. The following inflation factors were used in calculating the HHA PPS:

Factors for Inflating Database Dollars to September 30, 2001

FY end	1996	1997
October 31	1.15486	.....
November 30	1.15222	.....
December 31	1.14961	.....
January 31	.....	1.14705
February 28	.....	1.14453
March 31	.....	1.14202
April 30	.....	1.13952
May 31	.....	1.13703
June 30	.....	1.13444
July 31	.....	1.13175
August 31	.....	1.12896
September 30	.....	1.12615

For fiscal year 2002 or 2003, sections 1895(b)(3)(B)(i) and (b)(3)(B)(ii) of the Act require the standard prospective payment amounts to be increased by a factor equal to the home health market basket minus 1.1 percentage points. In addition, for any subsequent fiscal years, the statute requires the rates be increased by the applicable home health market basket index change.

c. Claims Data

We also conducted analysis on an episode database created from the 1997 National Claims History File using 60-day episodes to define episode lengths. These data were based on use of home health services under the current system.

The 1997 60-day episode file used to establish the PPS rates was created in two parts. The first part matched all home health claim records for each beneficiary together to create a complete episode history. We combined monthly records of home health services using a 60-day gap of service as the break for when an episode would begin and end (that is, a 60-day consecutive gap in home health services would trigger a new episode). The second part of the episode file creation was to create exact 60-day episodes from the monthly episode file. Using the first day of the episode, we counted exactly 60 days to find the end of the 60-day episode. If the beneficiary was still receiving home health services, we then started another 60-day episode on day 61 and continued the process until the end of the episode.

In order to create the first part of the 1997 60-day episode file, we used the 100 percent National Claims History of 1997 HHA records. A list of Health Insurance Claim (HIC) numbers was created for all beneficiaries who received home health services in calendar year 1997. Using the HIC number for each of those beneficiaries, we compared it against the 1997 Master Beneficiary Denominator File. The comparison was done to eliminate (1) Railroad Board beneficiaries, (2) invalid beneficiary HIC numbers, and (3) beneficiaries enrolled in an HMO for any part of 1997.

The valid matches on the 1997 Master Beneficiary Denominator File were then matched against the initial 100 percent of 1997 HHA records. The records that resulted from this step were compared to a program table consisting of the dates that encompassed the universe of complete episodes created (January 1996 through June 1998). The HHA records were reformatted with Units and Reimbursement allocated to 1 of 7 Revenue Center Code groupings:

550–559	skilled nursing
420–429	physical therapy
430–439	occupational therapy
440–449	speech pathology
560–569	medical social services
570–579	home health aide
270–279	medical supplies

This output was then sorted by the ''From and Thru Dates'' on each claim to see if the From Date was within the first 2 months of 1997 and the Thru Date was within the last 2 months of 1997. If the From Date was within the first 2 months of 1997, a HIC list was created and matched to the 1996 HHA records. If the Thru Date was within the last 2 months of 1997, a HIC list was created and matched to the 1998 HHA records. At the time these files were created, 1998 HHA records were complete only through June 1998. The HIC lists were processed through a cross-reference procedure that ensures that any changes in HIC numbers are related to the original HIC and to ensure all utilization for a beneficiary was reflected under one current HIC number. These files were matched against the 1996 HHA and 1998 HHA files, respectively. The outputs of these matches were reformatted with Units and Reimbursement allocated to 1 of 7 Revenue Center Code groupings (listed above). The same process was performed on the 1997 HHA records.

The resulting three files for 1996, 1997, and 1998 were sorted by From Date within each HIC number. The sorted file was read and a complete

home health history was created for each beneficiary HIC. This was accomplished by sorting the HHA records for each HIC in chronological order from January 1996 through June 1998. During this process, Number of Days, Total Charges, and Total Reimbursement were allocated to a monthly table. For any records that spanned 2 calendar months, charges, visits, and reimbursement were apportioned based on the distribution of those days in each respective month. Whenever a beneficiary HIC's history was read and tabled, the data were analyzed in order to determine whether any prospective episodes would have ended in 1996 or started in 1998. If either was true, that historical utilization was discarded. The final valid data included 1996 data that were contiguous or ended within 2 months (60 days) of 1997 data and 1998 data that began within 2 months of 1997 data.

Once the valid table was completed, a single episode or multiple episodes were determined by a 60-day break. The final episode(s) for each home health beneficiary with combined monthly records was written to an output file referred to as the 1997 Home Health Monthly Interval File.

The 1997 HHA 60-Day Episode file was then derived from the 1997 Home Health Monthly Interval File by analyzing monthly records by episode number and sequential month number. A full episode from the Home Health Monthly Interval File is made up of two consecutive monthly intervals in which the beneficiary received services (no 60-day gap in services furnished to that beneficiary for a given episode of care). Each monthly record within the common episode number was assigned a sequential month number to indicate where, in the sequence of monthly records for that given episode number, a particular monthly record exists.

The first episode-begin-date for a 60-day episode was derived from the first from-date for a given previously established episode (a group of related monthly records) as read from the home health interval file. An episode-end-date for that first 60-day episode was calculated by adding 59 days to the episode-begin-date. Visits, charges, lengths of stay, and reimbursement dollars were then accumulated across the six disciplines (skilled nursing services, home health aide services, physical therapy (PT) services, occupational therapy (OT) services, speech-language pathology services, and medical social services) for the 60-day episode by adding in subsequent monthly interval records (if appropriate) for a given episode. If an episode-end-date occurs within a monthly record, accumulating variables were prorated between the 60-day episode record that was closed out and the subsequent 60-day episode to be created. Consequently, the subsequent 60-day episode was assigned an episode-begin-date equal to that of the previous episode's episode-end-date plus 1. For episodes that did not begin and end within a monthly record, the episode-begin-dates were established from the from-date and episode-end-dates were calculated from the episode-begin-date.

The end result was a 1997 HHA episode file of 60-day episode records. In addition to the accumulating variables mentioned above, the episode record also contained up to three provider numbers of HHAs involved in furnishing care for that patient during the 60-day episode. For identifiable purposes, the episode record contained variables depicting—(1) the episode number (the episode number relates 60-day episode records for which no 60-day gap in services existed), (2) the total number of related 60-day episodes for that episode number, and (3) a sequential number for that 60-day episode within the episode number.

Using the 60-day episode file, we were able to analyze the number, type, and duration of visits for each 60-day period as well as across multiple 60-day episodes. Since the full 100 percent episode file was created to determine actual episodes that could span more than 1 year, episodes were defined by actual start and end dates even if they were outside the calendar year period, as long as the beneficiary received home health services in calendar year 1997. This provided a true representation of the length of home health episodes and showed that 10 percent of the beneficiaries were receiving services that spanned more than a full calendar year. This file also showed that 46 percent of the beneficiaries completed home health services in the first 60 days and over 60 percent actually completed their episodes in less than 120 days.

To complete the second part of the 1997 60-day episode file needed to calculate prospective payment rates and to develop impacts, we needed to convert the full episode file to a file containing only those 60-day episodes that fell into the calendar year 1997 period. This meant that if a beneficiary started receiving home health services in July 1996 and continued for multiple 60-day episodes through June 1997, we only included their 4th, 5th, and 6th 60-day episodes that fell in calendar year 1997. Calculating the distribution of beneficiaries across the total number of episodes as we did for the full episode file, we determined that the total percentage of beneficiaries with only one episode increased to 51 percent. The table below shows the distribution across total number of 60-day episodes for both the full episode file and the calendar year 1997 file.

TABLE 1.—DISTRIBUTION OF THE NUMBER OF CONSECUTIVE 60-DAY EPISODES

Total number of consecutive 60-day episodes	Distribution based on all 60-day episodes—even those outside the CY 1997 period (percent)	Distribution based on only 60-day episodes that occurred in the CY 1997 period (percent)
1	46	51
2	16	18
3	8	8
4	5	5
5	3	4
6	3	3
7	3	10
8	3	.....
9	2	.....
10	2	.....
11	1	.....
12	2	.....
13	2	.....
14	3	.....
15	0	.....

Next, we calculated the average number of visits by discipline for all 60-day episodes and compared that to only those episodes that fell into the calendar year 1997. We discovered that there was a slight decrease in the average number of visits for home health aide and skilled nursing services when using only the episodes that fell in calendar year 1997. This was expected due to the fact that the utilization in 1997 declined because of the incentives under Operation Restore Trust and because the distribution of beneficiaries having fewer number of total episodes increased as shown in Table 1 above. Beneficiaries with fewer total episodes had on average a lower total average number of visits.

For purposes of rate setting, we believed it was more appropriate to use the average number of visits for only those episodes that occurred in calendar year 1997, as these reflect the reduced visit utilization experienced since 1997 and thus represented more closely the actual episodes that we would be paying for under PPS. Because we are paying episodes with four or fewer visits on a per-visit basis, under the LUPA methodology mentioned previously, it is necessary to exclude them for the calculation of the average number of

episodes. Taking the low-visit episodes out of the calculation resulted in an overall higher average for each discipline as would be expected.

TABLE 2.—COMPARISON OF THE AVERAGE NUMBER OF VISITS PER EPISODE FOR EACH DISCIPLINE FOR THE FULL EPISODE FILE, EPISODES IN CY 1997 AND EPISODES IN CY 1999 WITH FIVE OR MORE VISITS

Average number of visits by discipline	Average based on all 60-day episodes—even those outside the CY 1997 period	Average based on only 60-day episodes that fell into the CY 1997 period	Average based on only 60-day episodes that fell into the CY 1997 period with visits
Skilled Nursing Services	13.14	12.55	14.69
Physical Therapy Services	2.08	2.35	2.74
Occupational Therapy Services	.36	0.41	0.48
Speech Pathology Services	.14	0.15	0.18
Medical Social Services	.30	0.31	0.36
Home Health Aide Services	16.78	14.59	17.59
Total for all disciplines	32.8	30.36	36.04

Analysis of each 60-day episode that occurred within calendar year 1997 showed that the distribution of visits across each discipline changed the longer the home health patient received home health services. For beneficiaries who had only one episode, the proportion of skilled nursing visits to home health aide visits was about 2 to 1. But for beneficiaries who are in their 6th consecutive episode, the relationship is reversed. The longer a beneficiary receives home health services, the lower their skilled nursing needs and the more they become dependent only on home health aide services. It is also noticeable and expected that physical therapy services decline over time. This finding suggests that future PPS research should be directed at whether the episode payment should vary with each consecutive episode.

TABLE 3.—DISTRIBUTION OF DISCIPLINES ACROSS SERIES OF 60-DAY EPISODES

Total number of 60-day episodes	Episode No. within series of 60-day episodes	Percent of skilled nursing services	Percent of home health aide services	Percent of occupational therapy services	Percent of speech pathology services	Percent of medical social services	Percent of physical therapy services
1	1	50	26	3	1	2	19
2	1	46	34	3	1	1	15
2	2	44	40	2	1	1	12
3	1	46	38	2	1	1	11
3	2	43	44	2	1	1	9
3	3	43	46	1	1	1	8
4	1	45	42	2	1	1	9
4	2	42	48	1	1	1	7
4	3	42	49	1	1	1	6
4	4	42	50	1	0	1	6
5	1	44	45	2	1	1	8
5	2	41	50	1	1	1	6
5	3	40	52	1	0	1	5
5	4	40	53	1	0	1	5
5	5	40	53	1	0	1	5
6	1	42	48	1	1	1	7
6	2	39	53	1	0	1	5
6	3	38	55	1	0	1	4
6	4	38	57	1	0	1	4
6	5	37	57	1	0	1	4
6	6	38	56	1	0	1	4
7	1	36	59	1	0	1	4
7	2	35	60	1	0	1	3
7	3	35	61	0	0	1	3
7	4	34	62	0	0	1	3
7	5	34	62	0	0	1	3
7	6	34	62	0	0	1	2
7	7	35	61	0	0	1	3

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Nonroutine medical supplies are also a covered home health service listed in section 1861(m) of the Act. As discussed above, the home health prospective payment rate includes those items that are currently covered and paid on a reasonable-cost basis. DME covered as a home health service (see section 1861(m) of the Act) will continue to be paid the fee schedule amount. As discussed previously, there is a new consolidated billing provision that requires HHAs to bill for all home health services listed in section 1861(m)

of the Act that are ordered under a home health plan of care.

Before PPS implementation, HHAs were not required to bundle all home health services. Specifically, nonroutine medical supplies that are covered and paid under Part B could have been furnished by a supplier rather than the HHA. Under the current interim payment system, nonroutine medical supply costs were subjected to the aggregate per-beneficiary limits, but not the per-visit limits. Some HHAs may have chosen to unbundle those nonroutine medical supplies that had a corresponding Part B payment. In order to determine the scope of the unbundled nonroutine medical supplies under the current system, we identified 199 HCPCS codes, representing those items that would fall into the possible ''unbundled nonroutine medical supply'' category. We pulled all claims with the corresponding HCPCS codes from the Part B national claims history file. In order to determine whether the HCPCS codes were related to a beneficiary receiving home health services under a home health plan of care, we linked every Part B claim with one or more of the 199 HCPCS codes to home health episodes from our episode database, by beneficiary and dates of service. If a beneficiary received home health services during a 60-day episode and there was a corresponding Part B claim with one of the 199 HCPCS codes that was billed during the same 60-day episode, we identified the item as related to the home health stay.

Since the nonroutine medical supply costs are bundled into the prospective payment rate and subjected to consolidated billing under prospective payment, we are proposing an additional payment amount in the 60-day episode base rate for those nonroutine medical supplies with corresponding Part B codes that may have been unbundled under the interim payment system. The methodology amount is set forth in section II.B. of this regulation.

d. Hospital Wage Index

As discussed in section I. of this regulation, sections 1895(b)(4)(A)(ii) and (b)(4)(C) of the Act, require the Secretary to establish area wage adjustment factors that reflect the relative level of wages and wage-related costs applicable to the furnishing of home health services and to provide appropriate adjustments to the episode payment amounts under the PPS to account for area wage differences. The wage adjustment factors may be the factors used by the Secretary for purposes of section 1886(d)(3)(E) of the Act. The statute allows the Secretary to use the area where the services are furnished or such area as the Secretary may specify for the wage index adjustment. To be consistent with the application of the wage index adjustment under the current interim payment system for HHAs, we propose that the wage index value applied to the labor portion of the 60-day episode payment under HHA/PPS be adjusted by the appropriate wage index for the geographic area in which the beneficiary received home health services.

In addition, section 1895(b)(3)(A)(i) of the Act requires the Secretary to standardize the cost data used in developing the HHA/PPS payment amount for wage levels among different HHAs in a budget-neutral manner. The wage-index adjustments to the 60-day episode payments must be made in a manner that does not result in aggregate payments that are greater or less than those that would otherwise be made if the 60-day episode payments were not adjusted by the wage index.

Each HHA's labor market area is determined based on definitions of Metropolitan Statistical Areas (MSAs) issued by the Office of Management and Budget (OMB). In establishing the 60-day episode payments, we used the most recently published hospital wage index (that is, the FY 1999 hospital wage index published in the **Federal Register** on February 25, 1999 (64 FR 9378), which is based on 1995 hospital wage data) without regard to whether these hospitals have been reclassified to a new geographic area. Therefore, the prospective payments reflect the MSA definitions that are currently in effect under the hospital PPS.

We believe the use of the hospital wage data results in an appropriate adjustment to the labor portion of costs based on an appropriate wage index as required under sections 1895(b)(3)(A)(i), (b)(4)(A)(ii), and (b)(4)(C) of the Act.

TABLE 4A.—FY 1999 WAGE INDEX FOR RURAL AREAS—PRE-FLOOR AND PRE-RECLASSIFIED

Rural Area	Wage Index
Alabama	0.7294
Alaska	1.2430
Arizona	0.7989
Arkansas	0.7250
California	0.9979
Colorado	0.8436
Connecticut	1.2074
Delaware	0.8807
Florida	0.8877
Georgia	0.7888
Guam	0.6516
Hawaii	1.0910
Idaho	0.8477
Illinois	0.7916
Indiana	0.8380
Iowa	0.7777
Kansas	0.7319
Kentucky	0.7844
Louisiana	0.7454
Maine	0.8467
Maryland	0.8555
Massachusetts	1.0834
Michigan	0.8875
Minnesota	0.8595
Mississippi	0.7312
Missouri	0.7452
Montana	0.8398
Nebraska	0.7674
Nevada	0.9256
New Hampshire	1.0240
New Jersey [1]	.....
New Mexico	0.8269
New York	0.8588
North Carolina	0.8112
North Dakota	0.7497
Ohio	0.8519
Oklahoma	0.7124
Oregon	0.9910
Pennsylvania	0.8664
Puerto Rico	0.4080
Rhode Island [1]	.....
South Carolina	0.8046
South Dakota	0.7508
Tennessee	0.7492
Texas	0.7565
Utah	0.8859
Vermont	0.9416
Virgin Islands	0.4588
Virginia	0.7857
Washington	1.0489
West Virginia	0.7875
Wisconsin	0.8711
Wyoming	0.8768

[1] All counties within the State are classified as urban.

TABLE 4B—WAGE INDEX FOR URBAN AREAS—PRE-FLOOR AND PRE-RECLASSIFIED

MSA	Urban Area (Constituent counties)	Wage Index
0040	Abilene, TX Taylor, TX	0.7981
0060	Aguadilla, PR Aguada, PR Aguadilla, PR Moca, PR	0.4727
0080	Akron, OH Portage, OH Summit, OH	0.9900
0120	Albany, GA Dougherty, GA Lee, GA	0.7975
0160	Albany-Schenectady-Troy, NY Albany, NY Montgomery, NY	0.8610

TABLE 4B—WAGE INDEX FOR URBAN AREAS—PRE-FLOOR AND PRE-RECLASSIFIED—Continued

MSA	Urban Area (Constituent counties)	Wage Index
	Rensselaer, NY	
	Saratoga, NY	
	Schenectady, NY	
	Schoharie, NY	
0200	Albuquerque, NM	0.8613
	Bernalillo, NM	
	Sandoval, NM	
	Valencia, NM	
0220	Alexandria, LA	0.8526
	Rapides, LA	
0240	Allentown-Bethlehem-Easton, PA	1.0204
	Carbon, PA	
	Lehigh, PA	
	Northampton, PA	
0280	Altoona, PA	0.9335
	Blair, PA	
0320	Amarillo, TX	0.8474
	Potter, TX	
	Randall, TX	
0380	Anchorage, AK	1.2818
	Anchorage, AK	
0440	Ann Arbor, MI	1.1033
	Lenawee, MI	
	Livingston, MI	
	Washtenaw, MI	
0450	Anniston, AL	0.8658
	Calhoun, AL	
0460	Appleton-Oshkosh-Neenah, WI	0.8825
	Calumet, WI	
	Outagamie, WI	
	Winnebago, WI	
0470	Arecibo, PR	0.4867
	Arecibo, PR	
	Camuy, PR	
	Hatillo, PR	
0480	Asheville, NC	0.8940
	Buncombe, NC	
	Madison, NC	
0500	Athens, GA	0.8673
	Clarke, GA	
	Madison, GA	
	Oconee, GA	
0520	Atlanta, GA	0.9915
	Barrow, GA	
	Bartow, GA	
	Carroll, GA	
	Cherokee, GA	
	Clayton, GA	
	Cobb, GA	
	Coweta, GA	
	DeKalb, GA	
	Douglas, GA	
	Fayette, GA	
	Forsyth, GA	
	Fulton, GA	
	Gwinnett, GA	
	Henry, GA	
	Newton, GA	
	Paulding, GA	
	Pickens, GA	
	Rockdale, GA	
	Spalding, GA	
	Walton, GA	
0560	Atlantic-Cape May, NJ	1.1536
	Atlantic, NJ	
	Cape May, NJ	
0600	Augusta-Aiken, GA–SC	0.9233
	Columbia, GA	
	McDuffie, GA	
	Richmond, GA	
	Aiken, SC	
	Edgefield, SC	
0640	Austin-San Marcos, TX	0.8782
	Bastrop, TX	
	Caldwell, TX	
	Hays, TX	
	Travis, TX	
	Williamson, TX	
0680	Bakersfield, CA	0.9531
	Kern, CA	
0720	Baltimore, MD	0.9642
	Anne Arundel, MD	
	Baltimore, MD	
	Baltimore City, MD	
	Carroll, MD	
	Harford, MD	
	Howard, MD	
	Queen Anne's, MD	
0733	Bangor, ME	0.9474
	Penobscot, ME	
0743	Barnstable-Yarmouth, MA	1.5382
	Barnstable, MA	
0760	Baton Rouge, LA	0.8872
	Ascension, LA	
	East Baton Rouge, LA	
	Livingston, LA	
	West Baton Rouge, LA	
0840	Beaumont-Port Arthur, TX	0.8659
	Hardin, TX	
	Jefferson, TX	
	Orange, TX	
0860	Bellingham, WA	1.1434
	Whatcom, WA	
0870	Benton Harbor, MI	0.8531
	Berrien, MI	
0875	Bergen-Passaic, NJ	1.2186
	Bergen, NJ	
	Passaic, NJ	
0880	Billings, MT	0.9143
	Yellowstone, MT	
0920	Biloxi-Gulfport-Pascagoula, MS	0.8276
	Hancock, MS	
	Harrison, MS	
	Jackson, MS	
0960	Binghamton, NY	0.9059
	Broome, NY	
	Tioga, NY	
1000	Birmingham, AL	0.9073
	Blount, AL	
	Jefferson, AL	
	St. Clair, AL	
	Shelby, AL	
1010	Bismarck, ND	0.8025
	Burleigh, ND	
	Morton, ND	
1020	Bloomington, IN	0.8965
	Monroe, IN	
1040	Bloomington-Normal, IL	0.8851
	McLean, IL	
1080	Boise City, ID	0.9160
	Ada, ID	
	Canyon, ID	
1123	Boston-Worcester-Lawrence-Lowell-Brockton, MA–NH	1.1269
	Bristol, MA	
	Essex, MA	
	Middlesex, MA	
	Norfolk, MA	
	Plymouth, MA	
	Suffolk, MA	
	Worcester, MA	
	Hillsborough, NH	
	Merrimack, NH	
	Rockingham, NH	
	Strafford, NH	
1125	Boulder-Longmont, CO	1.0038
	Boulder, CO	
1145	Brazoria, TX	0.8906
	Brazoria, TX	
1150	Bremerton, WA	1.1055
	Kitsap, WA	
1240	Brownsville-Harlingen-San Benito, TX	0.8237
	Cameron, TX	
1260	Bryan-College Station, TX	0.7820
	Brazos, TX	
1280	Buffalo-Niagara Falls, NY	0.9587
	Erie, NY	
	Niagara, NY	
1303	Burlington, VT	0.9577
	Chittenden, VT	
	Franklin, VT	
	Grand Isle, VT	
1310	Caguas, PR	0.4400
	Caguas, PR	
	Cayey, PR	
	Cidra, PR	
	Gurabo, PR	
	San Lorenzo, PR	
1320	Canton-Massillon, OH	0.8813
	Carroll, OH	
	Stark, OH	
1350	Casper, WY	0.870
	Natrona, WY	
1360	Cedar Rapids, IA	0.8814
	Linn, IA	
1400	Champaign-Urbana, IL	0.8723
	Champaign, IL	
1440	Charleston-North Charleston, SC	0.9114
	Berkeley, SC	
	Charleston, SC	
	Dorchester, SC	
1480	Charleston, WV	0.8990
	Kanawha, WV	
	Putnam, WV	
1520	Charlotte-Gastonia-Rock Hill, NC–SC	0.9686
	Cabarrus, NC	
	Gaston, NC	
	Lincoln, NC	
	Mecklenburg, NC	
	Rowan, NC	
	Stanly, NC	
	Union, NC	
	York, SC	
1540	Charlottesville, VA	1.0272
	Albemarle, VA	
	Charlottesville City, VA	
	Fluvanna, VA	
	Greene, VA	
1560	Chattanooga, TN–GA	0.9074
	Catoosa, GA	
	Dade, GA	

TABLE 4B—WAGE INDEX FOR URBAN AREAS—PRE-FLOOR AND PRE-RECLASSIFIED—Continued

MSA	Urban Area (Constituent counties)	Wage Index
	Walker, GA	
	Hamilton, TN	
	Marion, TN	
1580	Cheyenne, WY	0.8149
	Laramie, WY	
1600	Chicago, IL	1.0461
	Cook, IL	
	DeKalb, IL	
	DuPage, IL	
	Grundy, IL	
	Kane, IL	
	Kendall, IL	
	Lake, IL	
	McHenry, IL	
	Will, IL	
1620	Chico-Paradise, CA	1.0145
	Butte, CA	
1640	Cincinnati, OH–KY–IN	0.9595
	Dearborn, IN	
	Ohio, IN	
	Boone, KY	
	Campbell, KY	
	Gallatin, KY	
	Grant, KY	
	Kenton, KY	
	Pendleton, KY	
	Brown, OH	
	Clermont, OH	
	Hamilton, OH	
	Warren, OH	
1660	Clarksville-Hopkinsville, TN–KY	0.8040
	Christian, KY	
	Montgomery, TN	
1680	Cleveland-Lorain-Elyria, OH	0.9886
	Ashtabula, OH	
	Cuyahoga, OH	
	Geauga, OH	
	Lake, OH	
	Lorain, OH	
	Medina, OH	
1720	Colorado Springs, CO	0.9390
	El Paso, CO	
1740	Columbia, MO	0.8942
	Boone, MO	
1760	Columbia, SC	0.9290
	Lexington, SC	
	Richland, SC	
1800	Columbus, GA–AL	0.8511
	Russell, AL	
	Chattahoochee, GA	
	Harris, GA	
	Muscogee, GA	
1840	Columbus, OH	0.9781
	Delaware, OH	
	Fairfield, OH	
	Franklin, OH	
	Licking, OH	
	Madison, OH	
	Pickaway, OH	
1880	Corpus Christi, TX	0.8513
	Nueces, TX	
	San Patricio, TX	
1900	Cumberland, MD–WV	0.8242
	Allegany, MD	
	Mineral, WV	
1920	Dallas, TX	0.9369
	Collin, TX	
	Dallas, TX	

TABLE 4B—WAGE INDEX FOR URBAN AREAS—PRE-FLOOR AND PRE-RECLASSIFIED—Continued

MSA	Urban Area (Constituent counties)	Wage Index
	Denton, TX	
	Ellis, TX	
	Henderson, TX	
	Hunt, TX	
	Kaufman, TX	
	Rockwall, TX	
1950	Danville, VA	0.9045
	Danville City, VA	
	Pittsylvania, VA	
1960	Davenport-Moline-Rock Island, IA–IL	0.8413
	Scott, IA	
	Henry, IL	
	Rock Island, IL	
2000	Dayton-Springfield, OH	0.9605
	Clark, OH	
	Greene, OH	
	Miami, OH	
	Montgomery, OH	
2020	Daytona Beach, FL	0.9134
	Flagler, FL	
	Volusia, FL	
2030	Decatur, AL	0.8233
	Lawrence, AL	
	Morgan, AL	
2040	Decatur, IL	0.8035
	Macon, IL	
2080	Denver, CO	1.0331
	Adams, CO	
	Arapahoe, CO	
	Denver, CO	
	Douglas, CO	
	Jefferson, CO	
2120	Des Moines, IA	0.8448
	Dallas, IA	
	Polk, IA	
	Warren, IA	
2160	Detroit, MI	1.0544
	Lapeer, MI	
	Macomb, MI	
	Monroe, MI	
	Oakland, MI	
	St. Clair, MI	
	Wayne, MI	
2180	Dothan, AL	0.7892
	Dale, AL	
	Houston, AL	
2190	Dover, DE	0.9363
	Kent, DE	
2200	Dubuque, IA	0.8222
	Dubuque, IA	
2240	Duluth-Superior, MN–WI	0.9962
	St. Louis, MN	
	Douglas, WI	
2281	Dutchess County, NY	1.0530
	Dutchess, NY	
2290	Eau Claire, WI	0.8573
	Chippewa, WI	
	Eau Claire, WI	
2320	El Paso, TX	0.9215
	El Paso, TX	
2330	Elkhart-Goshen, IN	0.9305
	Elkhart, IN	
2335	Elmira, NY	0.8440
	Chemung, NY	
2340	Enid, OK	0.7983
	Garfield, OK	
2360	Erie, PA	0.9271
	Erie, PA	

TABLE 4B—WAGE INDEX FOR URBAN AREAS—PRE-FLOOR AND PRE-RECLASSIFIED—Continued

MSA	Urban Area (Constituent counties)	Wage Index
2400	Eugene-Springfield, OR	1.1193
	Lane, OR	
2440	Evansville-Henderson, IN–KY	0.8528
	Posey, IN	
	Vanderburgh, IN	
	Warrick, IN	
	Henderson, KY	
2520	Fargo-Moorhead, ND–MN	0.9520
	Clay, MN	
	Cass, ND	
2560	Fayetteville, NC	0.8389
	Cumberland, NC	
2580	Fayetteville-Springdale-Rogers, AR	0.8614
	Benton, AR	
	Washington, AR	
2620	Flagstaff, AZ–UT	0.9483
	Coconino, AZ	
	Kane, UT	
2640	Flint, MI	1.1031
	Genesee, MI	
2650	Florence, AL	0.7676
	Colbert, AL	
	Lauderdale, AL	
2655	Florence, SC	0.8501
	Florence, SC	
2670	Fort Collins-Loveland, CO	1.0770
	Larimer, CO	
2680	Ft. Lauderdale, FL	0.9807
	Broward, FL	
2700	Fort Myers-Cape Coral, FL	0.8942
	Lee, FL	
2710	Fort Pierce-Port St. Lucie, FL	1.0241
	Martin, FL	
	St. Lucie, FL	
2720	Fort Smith, AR–OK	0.7623
	Crawford, AR	
	Sebastian, AR	
	Sequoyah, OK	
2750	Fort Walton Beach, FL	0.8615
	Okaloosa, FL	
2760	Fort Wayne, IN	0.9047
	Adams, IN	
	Allen, IN	
	De Kalb, IN	
	Huntington, IN	
	Wells, IN	
	Whitley, IN	
2800	Forth Worth-Arlington, TX	0.9719
	Hood, TX	
	Johnson, TX	
	Parker, TX	
	Tarrant, TX	
2840	Fresno, CA	1.0700
	Fresno, CA	
	Madera, CA	
2880	Gadsden, AL	0.8779
	Etowah, AL	
2900	Gainesville, FL	0.9453
	Alachua, FL	
2920	Galveston-Texas City, TX	1.0894
	Galveston, TX	
2960	Gary, IN	0.9435
	Lake, IN	
	Porter, IN	
2975	Glens Falls, NY	0.8490
	Warren, NY	
	Washington, NY	

TABLE 4B—WAGE INDEX FOR URBAN AREAS—PRE-FLOOR AND PRE-RECLASSIFIED—Continued

MSA	Urban Area (Constituent counties)	Wage Index
2980	Goldsboro, NC	0.8530
	Wayne, NC	
2985	Grand Forks, ND–MN	0.8836
	Polk, MN	
	Grand Forks, ND	
2995	Grand Junction, CO	0.8279
	Mesa, CO	
3000	Grand Rapids-Muskegon-Holland, MI	0.9971
	Allegan, MI	
	Kent, MI	
	Muskegon, MI	
	Ottawa, MI	
3040	Great Falls, MT	0.8872
	Cascade, MT	
3060	Greeley, CO	0.9457
	Weld, CO	
3080	Green Bay, WI	0.9156
	Brown, WI	
3120	Greensboro-Winston-Salem-High Point, NC	0.9547
	Alamance, NC	
	Davidson, NC	
	Davie, NC	
	Forsyth, NC Guilford, NC	
	Randolph, NC	
	Stokes, NC	
	Yadkin, NC	
3150	Greenville, NC	0.9434
	Pitt, NC	
3160	Greenville-Spartanburg-Anderson, SC	0.9222
	Anderson, SC	
	Cherokee, SC	
	Greenville, SC	
	Pickens, SC	
	Spartanburg, SC	
3180	Hagerstown, MD	1.0183
	Washington, MD	
3200	Hamilton-Middletown, OH	0.9233
	Butler, OH	
3240	Harrisburg-Lebanon-Carlisle, PA	1.0060
	Cumberland, PA	
	Dauphin, PA	
	Lebanon, PA	
	Perry, PA	
3283	Hartford, CT	1.1831
	Hartford, CT	
	Litchfield, CT	
	Middlesex, CT	
	Tolland, CT	
3285	Hattiesburg, MS	0.7261
	Forrest, MS	
	Lamar, MS	
3290	Hickory-Morganton-Lenoir, NC	0.8904
	Alexander, NC	
	Burke, NC	
	Caldwell, NC	
	Catawba, NC	
3320	Honolulu, HI	1.1510
	Honolulu, HI	
3350	Houma, LA	
	Lafourche, LA	
	Terrebonne, LA	0.8197
3360	Houston, TX	0.9889
	Chambers, TX	
	Fort Bend, TX	
	Harris, TX	
	Liberty, TX	
	Montgomery, TX	
	Waller, TX	
3400	Huntington-Ashland, WV–KY–OH	0.9647
	Boyd, KY	
	Carter, KY	
	Greenup, KY	
	Lawrence, OH	
	Cabell, WV	
	Wayne, WV	
3440	Huntsville, AL	0.8385
	Limestone, AL	
	Madison, AL	
3480	Indianapolis, IN	0.9831
	Boone, IN	
	Hamilton, IN	
	Hancock, IN	
	Hendricks, IN	
	Johnson, IN	
	Madison, IN	
	Marion, IN	
	Morgan, IN	
	Shelby, IN	
3500	Iowa City, IA	0.9481
	Johnson, IA	
3520	Jackson, MI	0.9224
	Jackson, MI	
3560	Jackson, MS	0.8292
	Hinds, MS	
	Madison, MS	
	Rankin, MS	
3580	Jackson, TN	0.8560
	Madison, TN	
	Chester, TN	
3600	Jacksonville, FL	0.8900
	Clay, FL	
	Duval, FL	
	Nassau, FL	
	St. Johns, FL	
3605	Jacksonville, NC	0.7556
	Onslow, NC	
3610	Jamestown, NY	0.7660
	Chautauqua, NY	
3620	Janesville-Beloit, WI	0.9051
	Rock, WI	
3640	Jersey City, NJ	1.1598
	Hudson, NJ	
3660	Johnson City-Kingsport-Bristol, TN–VA	0.8773
	Carter, TN	
	Hawkins, TN	
	Sullivan, TN	
	Unicoi, TN	
	Washington, TN	
	Bristol City, VA	
	Scott, VA	
	Washington, VA	
3680	Johnstown, PA	0.8619
	Cambria, PA	
	Somerset, PA	
3700	Jonesboro, AR	0.7407
	Craighead, AR	
3710	Joplin, MO	0.7873
	Jasper, MO	
	Newton, MO	
3720	Kalamazoo-Battlecreek, MI	1.1331
	Calhoun, MI	
	Kalamazoo, MI	
	Van Buren, MI	
3740	Kankakee, IL	0.9418
	Kankakee, IL	
3760	Kansas City, KS–MO	0.9645
	Johnson, KS	
	Leavenworth, KS	
	Miami, KS	
	Wyandotte, KS	
	Cass, MO	
	Clay, MO	
	Clinton, MO	
	Jackson, MO	
	Lafayette, MO	
	Platte, MO	
	Ray, MO	
3800	Kenosha, WI	0.9129
	Kenosha, WI	
3810	Killeen-Temple, TX	1.0109
	Bell, TX	
	Coryell, TX	
3840	Knoxville, TN	0.8918
	Anderson, TN	
	Blount, TN	
	Knox, TN	
	Loudon, TN	
	Sevier, TN	
	Union, TN	
3850	Kokomo, IN	0.9275
	Howard, IN	
	Tipton, IN	
3870	La Crosse, WI–MN	0.8913
	Houston, MN	
	La Crosse, WI	
3880	Lafayette, LA	0.8255
	Acadia, LA	
	Lafayette, LA	
	St. Landry, LA	
	St. Martin, LA	
3920	Lafayette, IN	0.8841
	Clinton, IN	
	Tippecanoe, IN	
3960	Lake Charles, LA	0.7674
	Calcasieu, LA	
3980	Lakeland-Winter Haven, FL	0.8939
	Polk, FL	
4000	Lancaster, PA	0.9561
	Lancaster, PA	
4040	Lansing-East Lansing, MI	1.0090
	Clinton, MI	
	Eaton, MI	
	Ingham, MI	
4080	Laredo, TX	0.7343
	Webb, TX	
4100	Las Cruces, NM	0.8870
	Dona Ana, NM	
4120	Las Vegas, NV–AZ	1.1413
	Mohave, AZ	
	Clark, NV	
	Nye, NV	
4150	Lawrence, KS	0.8655
	Douglas, KS	
4200	Lawton, OK	0.8697
	Comanche, OK	
4243	Lewiston-Auburn, ME	0.9149
	Androscoggin, ME	
4280	Lexington, KY	0.8506
	Bourbon, KY	
	Clark, KY	

TABLE 4B—WAGE INDEX FOR URBAN AREAS—PRE-FLOOR AND PRE-RECLASSIFIED—Continued

MSA	Urban Area (Constituent counties)	Wage Index
	Fayette, KY	
	Jessamine, KY	
	Madison, KY	
	Scott, KY	
	Woodford, KY	
4320	Lima, OH	0.8949
	Allen, OH	
	Auglaize, OH	
4360	Lincoln, NE	0.9303
	Lancaster, NE	
4400	Little Rock-North Little Rock, AR	0.8503
	Faulkner, AR	
	Lonoke, AR	
	Pulaski, AR	
	Saline, AR	
4420	Longview-Marshall, TX	0.8698
	Gregg, TX	
	Harrison, TX	
	Upshur, TX	
4480	Los Angeles-Long Beach, CA	1.2085
	Los Angeles, CA	
4520	Louisville, KY–IN	0.9093
	Clark, IN	
	Floyd, IN	
	Harrison, IN	
	Scott, IN	
	Bullitt, KY	
	Jefferson, KY	
	Oldham, KY	
4600	Lubbock, TX	0.8496
	Lubbock, TX	
4640	Lynchburg, VA	0.8900
	Amherst, VA	
	Bedford, VA	
	Bedford City, VA	
	Campbell, VA	
	Lynchburg City, VA	
4680	Macon, GA	0.8980
	Bibb, GA	
	Houston, GA	
	Jones, GA	
	Peach, GA	
	Twiggs, GA	
4720	Madison, WI	1.0018
	Dane, WI	
4800	Mansfield, OH	0.8534
	Crawford, OH	
	Richland, OH	
4840	Mayaguez, PR	0.4401
	Anasco, PR	
	Cabo Rojo, PR	
	Hormigueros, PR	
	Mayaguez, PR	
	Sabana Grande, PR	
	San German, PR	
4880	McAllen-Edinburg-Mission, TX	0.8893
	Hidalgo, TX	
4890	Medford-Ashland, OR	1.0020
	Jackson, OR	
4900	Melbourne-Titusville-Palm Bay, FL	0.9216
	Brevard, Fl	
4920	Memphis, TN–AR–MS	0.8361
	Crittenden, AR	
	DeSoto, MS	
	Fayette, TN	
	Shelby, TN	
	Tipton, TN	
4940	Merced, CA	1.0033
	Merced, CA	
5000	Miami, FL	1.0017
	Dade, FL	
5015	Middlesex-Somerset-Hunterdon, NJ	1.1152
	Hunterdon, NJ	
	Middlesex, NJ	
	Somerset, NJ	
5080	Milwaukee-Waukesha, WI	0.9356
	Milwaukee, WI	
	Ozaukee, WI	
	Washington, WI	
	Waukesha, WI	
5120	Minneapolis-St. Paul, MN–WI	1.0854
	Anoka, MN	
	Carver, MN	
	Chisago, MN	
	Dakota, MN	
	Hennepin, MN	
	Isanti, MN	
	Ramsey, MN	
	Scott, MN	
	Sherburne, MN	
	Washington, MN	
	Wright, MN	
	Pierce, WI	
	St. Croix, WI	
5140	Missoula, MT	0.9189
	Missoula, MT	
5160	Mobile, AL	0.8377
	Baldwin, AL	
	Mobile, AL	
5170	Modesto, CA	1.0346
	Stanislaus, CA	
5190	Monmouth-Ocean, NJ	1.1317
	Monmouth, NJ	
	Ocean, NJ	
5200	Monroe, LA	0.8219
	Ouachita, LA	
5240	Montgomery, AL	0.7821
	Autauga, AL	
	Elmore, AL	
	Montgomery, AL	
5280	Muncie, IN	0.9414
	Delaware, IN	
5330	Myrtle Beach, SC	0.8179
	Horry, SC	
5345	Naples, FL	1.0177
	Collier, FL	
5360	Nashville, TN	0.9480
	Cheatham, TN	
	Davidson, TN	
	Dickson, TN	
	Robertson, TN	
	Rutherford TN	
	Sumner, TN	
	Williamson, TN	
	Wilson, TN	
5380	Nassau-Suffolk, NY	1.3593
	Nassau, NY	
	Suffolk, NY	
5483	New Haven-Bridgeport-Stamford-Waterbury-Danbury, CT	1.2328
	Fairfield, CT	
	New Haven, CT	
5523	New London-Norwich, CT	1.1616
	New London, CT	
5560	New Orleans, LA	0.9310
	Jefferson, LA	
	Orleans, LA	
	Plaquemines, LA	
	St. Bernard, LA	
	St. Charles, LA	
	St. James, LA	
	St. John The Baptist, LA	
	St. Tammany, LA	
5600	New York, NY	1.4461
	Bronx, NY	
	Kings, NY	
	New York, NY	
	Putnam, NY	
	Queens, NY	
	Richmond, NY	
	Rockland, NY	
	Westchester, NY	
5640	Newark, NJ	1.1866
	Essex, NJ	
	Morris, NJ	
	Sussex, NJ	
	Union, NJ	
	Warren, NJ	
	Newburgh, NY–PA	1.1155
	Orange, NY	
	Pike, PA	
5720	Norfolk-Virginia Beach-Newport News, VA–NC	0.8275
	Currituck, NC	
	Chesapeake City, VA	
	Gloucester, VA	
	Hampton City, VA	
	Isle of Wight, VA	
	James City, VA	
	Mathews, VA	
	Newport News City, VA	
	Norfolk City, VA	
	Poquoson City, VA	
	Portsmouth City, VA	
	Suffolk City, VA	
	Virginia Beach City VA	
	Williamsburg City, VA	
	York, VA	
5775	Oakland, CA	1.4993
	Alameda, CA	
	Contra Costa, CA	
5790	Ocala, FL	0.9152
	Marion, FL	
5800	Odessa-Midland, TX	0.8656
	Ector, TX	
	Midland, TX	
5880	Oklahoma City, OK	0.8708
	Canadian, OK	
	Cleveland, OK	
	Logan, OK	
	McClain, OK	
	Oklahoma, OK	
	Pottawatomie, OK	
5910	Olympia, WA	1.1522
	Thurston, WA	
5920	Omaha, NE–IA	0.9972
	Pottawattamie, IA	
	Cass, NE	
	Douglas, NE	
	Sarpy, NE	
	Washington, NE	

TABLE 4B—WAGE INDEX FOR URBAN AREAS—PRE-FLOOR AND PRE-RECLASSIFIED—Continued

MSA	Urban Area (Constituent counties)	Wage Index
5945	Orange County, CA	1.1522
	Orange, CA	
5960	Orlando, FL	0.9813
	Lake, FL	
	Orange, FL	
	Osceola, FL	
	Seminole, FL	
5990	Owensboro, KY	0.7771
	Daviess, KY	
6015	Panama City, FL	0.8507
	Bay, FL	
6020	Parkersburg-Marietta, WV–OH	0.8016
	Washington, OH	
	Wood, WV	
6080	Pensacola, FL	0.8246
	Escambia, FL	
	Santa Rosa, FL	
6120	Peoria-Pekin, IL	0.8058
	Peoria, IL	
	Tazewell, IL	
	Woodford, IL	
6160	Philadelphia, PA–NJ	1.1370
	Burlington, NJ	
	Camden, NJ	
	Gloucester, NJ	
	Salem, NJ	
	Bucks, PA	
	Chester, PA	
	Delaware, PA	
	Montgomery, PA	
	Philadelphia, PA	
6200	Phoenix-Mesa, AZ	0.9591
	Maricopa, AZ	
	Pinal, AZ	
6240	Pine Bluff, AR	0.7912
	Jefferson, AR	
6280	Pittsburgh, PA	0.9789
	Allegheny, PA	
	Beaver, PA	
	Butler, PA	
	Fayette, PA	
	Washington, PA	
	Westmoreland, PA	
6323	Pittsfield, MA	1.0819
	Berkshire, MA	
6340	Pocatello, ID	0.8792
	Bannock, ID	
6360	Ponce, PR	0.4788
	Guayanilla, PR	
	Juana Diaz, PR	
	Penuelas, PR	
	Ponce, PR	
	Villalba, PR	
	Yauco, PR	
6403	Portland, ME	0.9561
	Cumberland, ME	
	Sagadahoc, ME	
	York, ME	
6440	Portland-Vancouver, OR–WA	1.1178
	Clackamas, OR	
	Columbia, OR	
	Multnomah, OR	
	Washington, OR	
	Yamhill, OR	
	Clark, WA	
6483	Providence-Warwick-Pawtucket, RI	1.0801
	Bristol, RI	
	Kent, RI	
	Newport, RI	
	Providence, RI	
	Washington, RI	
6520	Provo-Orem, UT	0.9885
	Utah, UT	
6560	Pueblo, CO	0.8712
	Pueblo, CO	
6580	Punta Gorda, FL	0.9031
	Charlotte, FL	
6600	Racine, WI	0.9130
	Racine, WI	
6640	Raleigh-Durham-Chapel Hill, NC	0.9812
	Chatham, NC	
	Durham, NC	
	Franklin, NC	
	Johnston, NC	
	Orange, NC	
	Wake, NC	
6660	Rapid City, SD	0.8208
	Pennington, SD	
6680	Reading, PA	0.9234
	Berks, PA	
6690	Redding, CA	1.1858
	Shasta, CA	
6720	Reno, NV	1.1095
	Washoe, NV	
6740	Richland-Kennewick-Pasco, WA	1.0287
	Benton, WA	
	Franklin, WA	
6760	Richmond-Petersburg, VA	0.9211
	Charles City County, VA	
	Chesterfield, VA	
	Colonial Heights City, VA	
	Dinwiddie, VA	
	Goochland, VA	
	Hanover, VA	
	Henrico, VA	
	Hopewell City, VA	
	New Kent, VA	
	Petersburg City, VA	
	Powhatan, VA	
	Prince George, VA	
	Richmond City, VA	
6780	Riverside-San Bernardino, CA	1.0757
	Riverside, CA	
	San Bernardino, CA	
6800	Roanoke, VA	0.8509
	Botetourt, VA	
	Roanoke, VA	
	Roanoke City, VA	
	Salem City, VA	
6820	Rochester, MN	1.1698
	Olmsted, MN	
6840	Rochester, NY	0.9657
	Genesee, NY	
	Livingston, NY	
	Monroe, NY	
	Ontario, NY	
	Orleans, NY	
	Wayne, NY	
6880	Rockford, IL	0.8615
	Boone, IL	
	Ogle, IL	
	Winnebago, IL	
6895	Rocky Mount, NC	0.9012
	Edgecombe, NC	
	Nash, NC	
6920	Sacramento, CA	1.1962
	El Dorado, CA	
	Placer, CA	
	Sacramento, CA	
6960	Saginaw-Bay City-Midland, MI	0.9487
	Bay, MI	
	Midland, MI	
	Saginaw, MI	
6980	St. Cloud, MN	0.9586
	Benton, MN	
	Stearns, MN	
7000	St. Joseph, MO	0.9889
	Andrew, MO	
	Buchanan, MO	
7040	St. Louis, MO–IL	0.9151
	Clinton, IL	
	Jersey, IL	
	Madison, IL	
	Monroe, IL	
	St. Clair, IL	
	Franklin, MO	
	Jefferson, MO	
	Lincoln, MO	
	St. Charles, MO	
	St. Louis, MO	
	St. Louis City, MO	
	Warren, MO	
7080	Salem, OR	0.9904
	Marion, OR	
	Polk, OR0	
7120	Salinas, CA	1.5142
	Monterey, CA	
7160	Salt Lake City-Ogden, UT	0.9398
	Davis, UT	
	Salt Lake, UT	
	Weber, UT	
7200	San Angelo, TX	0.7646
	Tom Green, TX	
7240	San Antonio, TX	0.8100
	Bexar, TX	
	Comal, TX	
	Guadalupe, TX	
	Wilson, TX	
7320	San Diego, CA	1.2265
	San Diego, CA	
7360	San Francisco, CA	1.3957
	Marin, CA	
	San Francisco, CA	
	San Mateo, CA	
7400	San Jose, CA	1.3827
	Santa Clara, CA	
7440	San Juan-Bayamon, PR	0.4623
	Aguas Buenas, PR	
	Barceloneta, PR	
	Bayamon, PR	
	Canovanas, PR	
	Carolina, PR	
	Catano, PR	
	Ceiba, PR	
	Comerio, PR	
	Corozal, PR	
	Dorado, PR	
	Fajardo, PR	
	Florida, PR	
	Guaynabo, PR	
	Humacao, PR	

TABLE 4B—WAGE INDEX FOR URBAN AREAS—PRE-FLOOR AND PRE-RECLASSIFIED—Continued

MSA	Urban Area (Constituent counties)	Wage Index
	Juncos, PR	
	Los Piedras, PR	
	Loiza, PR	
	Luguillo, PR	
	Manati, PR	
	Morovis, PR	
	Naguabo, PR	
	Naranjito, PR	
	Rio Grande, PR	
	San Juan, PR	
	Toa Alta, PR	
	Toa Baja, PR	
	Trujillo Alto, PR	
	Vega Alta, PR	
	Vega Baja, PR	
	Yabucoa, PR	
7460	San Luis Obispo-Atascadero-Paso Robles, CA	1.1264
	San Luis Obispo, CA	
7480	Santa Barbara-Santa Maria-Lompoc, CA	1.1194
	Santa Barbara, CA	
7485	Santa Cruz-Watsonville, CA	1.3981
	Santa Cruz, CA	
7490	Santa Fe, NM	0.9652
	Los Alamos, NM	
	Santa Fe, NM	
7500	Santa Rosa, CA	1.3597
	Sonoma, CA	
7510	Sarasota-Bradenton, FL	0.9532
	Manatee, FL	
	Sarasota, FL	
7520	Savannah, GA	1.0060
	Bryan, GA	
	Chatham, GA	
	Effingham, GA	
7560	Scranton—Wilkes-Barre—Hazleton, PA	0.8299
	Columbia, PA	
	Lackawanna, PA	
	Luzerne, PA	
	Wyoming, PA	
7600	Seattle-Bellevue-Everett, WA	1.1526
	Island, WA	
	King, WA	
	Snohomish, WA	
7610	Sharon, PA	0.8847
	Mercer, PA	
7620	Sheboygan, WI	0.8225
	Sheboygan, WI	
7640	Sherman-Denison, TX	0.8570
	Grayson, TX	
7680	Shreveport-Bossier City, LA	0.9386
	Bossier, LA	
	Caddo, LA	
	Webster, LA	
7720	Sioux City, IA–NE	0.8481
	Woodbury, IA	
	Dakota, NE	
7760	Sioux Falls, SD	0.8912
	Lincoln, SD	
	Minnehaha, SD	
7800	South Bend, IN	0.9859
	St. Joseph, IN	0.9859
7840	Spokane, WA	1.0928
	Spokane, WA	
7880	Springfield, IL	0.8720
	Menard, IL	
	Sangamon, IL	
7920	Springfield, MO	0.8071
	Christian, MO	
	Greene, MO	
	Webster, MO	
8003	Springfield, MA	1.0990
	Hampden, MA	
	Hampshire, MA	
8050	State College, PA	0.9449
	Centre, PA	
8080	Steubenville-Weirton, OH–WV	0.8428
	Jefferson, OH	
	Brooke, WV	
	Hancock, WV	
8120	Stockton-Lodi, CA	1.1075
	San Joaquin, CA	
8140	Sumter, SC	0.8127
	Sumter, SC	
8160	Syracuse, NY	0.9400
	Cayuga, NY	
	Madison, NY	
	Onondaga, NY	
	Oswego, NY	
8200	Tacoma, WA	1.0380
	Pierce, WA	
8240	Tallahassee, FL	0.8449
	Gadsden, FL	
	Leon, FL	
8280	Tampa-St. Petersburg-Clearwater, FL	0.9113
	Hernando, FL	
	Hillsborough, FL	
	Pasco, FL	
	Pinellas, FL	
8320	Terre Haute, IN	0.8991
	Clay, IN	
	Vermillion, IN	
	Vigo, IN	
8360	Texarkana, AR-Texarkana, TX	0.8506
	Miller, AR	
	Bowie, TX	
8400	Toledo, OH	0.9991
	Fulton, OH	
	Lucas, OH	
	Wood, OH	
8440	Topeka, KS	0.9812
	Shawnee, KS	
8480	Trenton, NJ	1.0509
	Mercer, NJ	
8520	Tucson, AZ	0.9028
	Pima, AZ	
8560	Tulsa, OK	0.8463
	Creek, OK	
	Osage, OK	
	Rogers, OK	
	Tulsa, OK	
	Wagoner, OK	
8600	Tuscaloosa, AL	0.7641
	Tuscaloosa, AL	
8640	Tyler, TX	0.8818
	Smith, TX	
8680	Utica-Rome, NY	0.8418
	Herkimer, NY	
	Oneida, NY	
8720	Vallejo-Fairfield-Napa, CA	1.3413
	Napa, CA	
	Solano, CA	
8735	Ventura, CA	1.1014
	Ventura, CA	
8750	Victoria, TX	0.8381
	Victoria, TX	
8760	Vineland-Millville-Bridgeton, NJ	1.0440
	Cumberland, NJ	
8780	Visalia-Tulare-Porterville, CA	1.0083
	Tulare, CA	
8800	Waco, TX	0.8371
	McLennan, TX	
8840	Washington, DC–MD–VA–WV	1.0807
	District of Columbia, DC	
	Calvert, MD	
	Charles, MD	
	Frederick, MD	
	Montgomery, MD	
	Prince Georges, MD	
	Alexandria City, VA	
	Arlington, VA	
	Clarke, VA	
	Culpeper, VA	
	Fairfax, VA	
	Fairfax City, VA	
	Falls Church City, VA	
	Fauquier, VA	
	Fredericksburg City, VA	
	King George, VA	
	Loudoun, VA	
	Manassas City, VA	
	Manassas Park City, VA	
	Prince William, VA	
	Spotsylvania, VA	
	Stafford, VA	
	Warren, VA	
	Berkeley, WV	
	Jefferson, WV	
8920	Waterloo-Cedar Falls, IA	0.7958
	Black Hawk, IA	
8940	Wausau, WI	0.9733
	Marathon, WI	
8960	West Palm Beach-Boca Raton, FL	1.0219
	Palm Beach, FL	
9000	Wheeling, WV–OH	0.7627
	Belmont, OH	
	Marshall, WV	
	Ohio, WV	
9040	Wichita, KS	0.8898
	Butler, KS	
	Harvey, KS	
	Sedgwick, KS	
9080	Wichita Falls, TX	0.7830
	Archer, TX	
	Wichita, TX	
9140	Williamsport, PA	0.8556
	Lycoming, PA	
9160	Wilmington-Newark, DE–MD	1.1868
	New Castle, DE	
	Cecil, MD	
9200	Wilmington, NC	0.9343
	New Hanover, NC	
	Brunswick, NC	
9260	Yakima, WA	1.0318
	Yakima, WA	
9270	Yolo, CA	1.1233
	Yolo, CA	
9280	York, PA	0.9410
	York, PA	

TABLE 4B—WAGE INDEX FOR URBAN AREAS—PRE-FLOOR AND PRE-RECLASSIFIED—Continued

MSA	Urban Area (Constituent counties)	Wage Index
9320	Youngstown-Warren, OH	0.9815
	Columbiana, OH	
	Mahoning, OH	
	Trumbull, OH	
9340	Yuba City, CA	1.0865
	Sutter, CA	
	Yuba, CA	
9360	Yuma, AZ	1.0058
	Yuma, AZ	

e. Abt Associates Case Mix Research Project Data

Under the Abt Associates case-mix research project (Contract Number 500–96–0003/TO2), data necessary for developing a system of case-mix groups were collected and assembled into an analytic file. The basic data components needed for case-mix system development were (1) a reliable measure of resource cost for a defined unit of time and (2) reliable measures of patient characteristics along with several utilization variables. The patient and utilization variables were to be tested for their usefulness as predictors of resource cost. The defined unit of time was the 60-day payment episode, which was simulated from dates appearing on Medicare claims and primary data (visit logs) collected as part of the Abt Associates research. A total of 22,120 records for simulated 60-day episodes from more than 17,000 patients in the study sample comprise the file. A random subsample of episode records from this file was used for case-mix system development and refinement. The remaining records were used to validate the predictive accuracy of the recommended case-mix system. (A preliminary sample of 4,303 records available early in the study was used for most of the period during which Abt Associates conducted case-mix system development activities.)

After the case-mix system development phase was completed, the same file—now with a case-mix group assigned to every 60-day episode record—was combined with data on provider characteristics and national episode counts to generate a set of sample weights for the Abt Associates episode records. The provider characteristics data came from the On-line Survey and Certification System (OSCAR) Provider of Service file, and the national episode counts came from the episode claims file described in subsection c. above. In addition to the sample weights, the area hospital wage index applicable to each 60-day episode record was merged onto the sample of episodes.

The sample weights were designed to make the sample episodes with their case-mix group assignments represent 100 percent of the payment episodes nationally in 1997. Weights were developed by case-mix group for up to 32 stratification cells defined from an agency auspices variable, urban/rural location, and regional location. Weights were computed from the ratio of 1997 episodes in the stratum to episodes in the sample from that stratum. Weights for initial 60-day episodes were derived separately from weights for noninitial 60-day episodes.

After weighting the data, we estimated the average resource cost by case-mix group, as well as the overall average resource cost. Ratios formed from these averages provide case-mix relative weights. The file's sample weights also permit national estimates of case-mix group frequencies for 60-day episodes in 1997. Thus, the sample weights in conjunction with the case-mix group assignment for each record in the sample support two procedures underlying the rate setting methodology. One is the computation of the case-mix relative weights shown in Table 9. This computation procedure is described in Section II.C.3. The second procedure is the computation of the standardization factor (which also relies on the merged area hospital wage index). For a description of the standardization factor computation, see section II.A.3.d.

The remainder of this section provides a summary of the study sample and file construction activities leading to the Abt Associates analytic file comprising 22,120 simulated 60-day episodes. More detailed information on these aspects of the study is found in section II.C below.

Ninety agencies were selected to provide the patient sample—a cohort of all patients newly admitted between October 1997 and April 1998. Agencies were drawn from eight States (Arkansas, California, Florida, Illinois, Massachusetts, Pennsylvania, Texas, and Wisconsin) chosen to be representative of four census geographic regions (northeast, north central, south, and west). Within these States, agencies were selected from the four major auspices types (freestanding for-profit, freestanding voluntary/private nonprofit, hospital-based, and government) and both urban and rural areas. A final selection criterion was the practice pattern of the agencies, measured in terms of their visit volume relative to other agencies in the region.

Primary data sources for the study came from patient assessments and visit logs. Secondary data came from Medicare claims and several other administrative and economic data bases.

The assessment instrument consisted of OASIS data items supplemented by approximately 40 additional assessment items. Using the visit logs, agencies in the study collected data on every home health visit to members of the cohort. The visit logs provide the study's fundamental measure of resource use, the visit time, which is converted into a standardized resource cost using Bureau of Labor Statistics hourly wage data. Previous research on case mix generally used a measure of resource use based on the count of visits. The case-mix study measured time spent on visits rather than visit counts themselves to provide more reliable information for forming case-mix groups than did previous research.

Medicare claims for the 6-month cohort were linked to the patient characteristics data (OASIS and other assessment items) and visit log data to verify membership in the patient cohort, to provide utilization measures, and to simulate 60-day episodes, using the from-and thru-dates on the claims. Assessments were linked to an episode in the simulation file only if the assessment was conducted within 14 days of the start of the episode. Iterative matching algorithms, and intensive manual review of potential matches, were used to match assessments and visit logs to the claims records.

In order to estimate resource use for each 60-day period of care, decision rules for allocating claims and visit logs by discipline to 60-day ''windows'' of time, or episodes, were developed.

After resources were calculated for all simulated payment segments, analysis of the data revealed the presence of outliers in mean minutes per visit by discipline within payment segment. Outlier values were replaced with agency-level mean visit lengths by home health discipline. The application of the various linkage rules resulted in the final analytic file consisting of 22,120 60-day episodes of care. Further information on these data procedures is provided below in Section II.C. For complete details, see Abt Associates, Inc., Second Interim Report, August 1999.

3. Methodology Used for the Calculation of the 60-Day Episode Payment Amount

The methodology used to compute the standardized national 60-day episode payment rates was a multistep process combining each of the data sources described above. As stated above,

section 1895(b)(3)(A)(i) of the Act, requires—(1) the computation of a standard prospective payment amount that includes all costs of home health services covered and paid for on a reasonable-cost basis be initially based on the most recent audited cost report data available to the Secretary, and (2) the prospective payment amounts to be standardized to eliminate the effects of case mix and wage levels among HHAs. Section 5101(c)(1) of the OCESAA amends section 1895(b)(3)(A)(ii) of the Act, to require the standard prospective payment amounts be budget neutral to the amounts expended under the current interim payment system with the limits reduced by 15 percent at the inception of the PPS on October 1, 2000. The data used to develop the HHA PPS rates were adjusted using the latest available market basket increases occurring between the cost reporting periods contained in our database and September 30, 2001.

With data described above we calculated the standard average prospective payment amount for the 60-day episode using the following formula:

The nonstandardized average prospective payment amount for a 60-day episode is calculated by—

(1) multiplying the national mean cost per visit updated for inflation for each of the six disciplines (skilled nursing, physical therapy, occupational therapy, speech-language pathology services, medical social services, and home health aide services) in a 60-day episode by (2) the national mean utilization for each of the six disciplines in a 60-day episode summed in the aggregate. Added to this amount are amounts for (1) nonroutine medical supplies paid on a reasonable-cost basis under a home health plan of care, (2) possible unbundled nonroutine medical supplies billed under Part B that will be included under the PPS rate, and (3) an OASIS adjustment to pay HHAs for estimated ongoing OASIS assessment reporting costs.

Nonroutine Medical Supplies

The per-episode nonroutine medical supply amounts, paid on a reasonable cost basis under a home health plan of care, were calculated by summing the nonroutine medical supply costs for all of the providers in the audited cost report sample weighted to represent the national population and updated to FY 2001. That total was divided by the number of episodes for the providers in the audited cost report sample weighted to represent the national population and updated to FY 2001.

The per-episode possible unbundled nonroutine medical supply amounts billed under Part B included in the PPS rate were calculated by summing the allowed charges for the 199 HCPC codes (described in section II.A.2.c.) in calendar year 1997 for beneficiaries under a home health plan of care. That total was divided by the total number of episodes in calendar year 1997 from the episode database.

Ongoing OASIS Cost Adjustments

In the August 11, 1998 IPS Per-Visit and Per-Beneficiary Limitations notice (63 FR 42912) HCFA discussed a proposed adjustment for HHAs for the agency collection of the Outcome Assessment Information Set (OASIS) Data. Collecting and reporting OASIS is a condition of Medicare participation for HHAs. As we stated in the August 11, 1998 IPS notice, we believe there will be no permanent ongoing incremental costs associated with OASIS collection. Additionally, we believe that there will be no further one-time, start-up, OASIS reporting costs beyond those recognized at the inception of OASIS collection under IPS. However, we do believe that ongoing costs are associated with reporting OASIS data. Our proposed adjustment for the ongoing costs associated with OASIS reporting is based on information from the ongoing Medicare Quality and Improvement Demonstration, as well as the OASIS demonstration data. We assume, for purposes of deriving the OASIS proposed adjustment, that the typical HHA has 486 admissions and 30,000 visits per year and an 18 person staff. OASIS reporting adjustments are unlike the one-time OASIS collection adjustments published in the August 11, 1998 **Federal Register** which were based only on the number of skilled visits. These reporting adjustments are based on total Medicare visits. The following are HCFA's estimates of costs a typical HHA will incur for OASIS reporting which form the basis of the per-visit OASIS reporting adjustment and the per-episode OASIS adjustment. The first descriptive chart below shows the base OASIS reporting costs for an HHA which include the following: audits to ensure data accuracy; data entry, editing and auditing; supplies; and telephone costs. We estimate these ongoing OASIS costs to total $.101228 per visit. The second descriptive chart shows the OASIS personal computer costs for those HHAs that are unable to run OASIS because they lack the requisite hardware needed to support automation of the assessment tool. We estimate this percentage to be 50 percent (64 FR 3759). These costs consist of the depreciation of a personal computer and printer. For years one through three, HHAs are able to depreciate both their personal computer and printer. We estimate this OASIS cost to be $.026778 per visit. For years four and five, HHAs can only depreciate their printer. We estimate this OASIS cost to be $.004 per visit. In order for HHAs to keep pace with the ever evolving computing standards, to include enhancements to computer hardware and software, as well as future versions of Haven's OASIS software, this process of the depreciation of computer hardware is one that would repeat itself every five years. In that vain, a yearly average computer hardware depreciation adjustment was computed to yield an OASIS adjustment for each of the five years. This was accomplished by multiplying the first three years' computer hardware depreciation adjustment of $.026778 by 3, multiplying the following two years' computer hardware depreciation adjustment of $.004 by 2, summing those two factors, and dividing that sum by the total number of depreciable years(5) to get a yearly average for the computer hardware depreciation adjustment of $.017667. This yearly average for computer hardware depreciation adjustments ($.017667), when added to the base OASIS adjustment ($.101228), results in a total OASIS adjustment of $.118895 rounded to $.12 per visit.

For purposes of calculating the ongoing OASIS adjustment for the 60-day episode payment, we multiplied the average number of visits per 60-day episode (36 visits) by the total rounded per-visit OASIS adjustment ($.12 per visit). The calculation resulted in a per-episode OASIS adjustment of $4.32 for each 60-day episode under HHA PPS. The home health prospective payment calculation is provided in Table 5.

We calculated the ongoing OASIS adjustment for the low utilization payment adjustments by adding the total rounded per-visit OASIS adjustment ($.12 per visit) to the national standardized average cost per visit by discipline for each of the four or fewer visits provided in the episode. The low utilization payment adjustment calculation is provided in Table 6.

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Continuous Oasis Adjustment: base (for data reporting)

Type of Adjustment	Source	Formula	Cost per Visit
Audits to ensure data accuracy	University of Colorado (CHPR) BLS Occupational Employment Survey (1996) 1994 & 1995 HCFA Cost Report Data	(((((10 records per month * 12 months)) * .25 hrs) * $25.42) / 30,000 avg visits)...professional staff	$.02542
Data entry, editing, & auditing	University of Colorado(CHPR) Estimated average salary for clerical staff 1994 & 1995 HCFA Cost Report Data	((((8.5 hrs per month * 12) + (5 hrs per month * 12) + (1 hr per month * 12) + (5 hrs per year)) * $10 per hour) / 30,000 avg visits)	$.059667
Supplies	HCFA-3006-IFC OASIS Reporting (64FR3748) 1994 & 1995 HCFA Cost Report Data	$250 avg cost / 30,000 avg visits	$.008333
Ongoing telephone costs	Bell Atlantic 1994 & 1995 HCFA Cost Report Data (for average size HHA)	((($13.14 per month, per line) + ($ 6.38 per month subscriber fee)) * 12 months) / 30,000 avg visits)	$.007808
TOTAL			**$.101228**

Continuous Oasis Adjustment: 5 year depreciation averaging (for data reporting)

Type of Adjustment	Source	Formula	Cost per Visit
Computer Hardware: Computer Printer	American Hospital Association's..... Health Data & Coding Standards Group's "Estimated Useful Lives of Depreciable Hospital Assets" {revised 1998} Average cost for PC with minimal acceptable standards 1994 & 1995 HCFA Cost Report Data Average cost for printer with minimal acceptable standards 1994 & 1995 HCFA Cost Report Data	$2050 computer depreciated over 3 years.... (($2050/3) / 30,000 avg visits $600 printer cost depreciated over 5 years... (($600/5) / 30,000 avg visits	$.022778 $.004
	First 3 Year's Adjustment	***Note: computer & printer depreciation**	**$.026778**
	Next 2 Year's Adjustment	***Note: printer ONLY depreciation**	**$.004**
	5-Year Average Adjustment	**(((($.026777 * 3) + ($.004 * 2)) / 5)**	**$.017667**

Personal Computer Minimal Specifications

Description	Minimal Specifications
Warranty	Minimum 3 year
Processor	Pentium II Processor running at 400Mhz w/512 Cache
Operating System	32-bit operating system with Graphical User Interface
Hard Drive	3 Gb Hard drive minimum
Memory	32Mb minimum
CD ROM	14-32X, IDE, integrated sound
Floppy Drive	3.5" 1.44Mb diskette drive
Fax Modem	56K v.90 Data/Fax
Monitor	17" Color Monitor
Graphics	8Mb AGP
Mouse	Wheel mouse
Keyboard	104 key ergonomic keyboard
Anti Virus	Anti Virus Software
Management Software	System management client software/license
Printer	600 dpi Laser printer with cable

Oasis Adjustment: "One-Time" (for data reporting)

Type of Adjustment	Source	Formula	Cost per Visit
Training of Data Entry Staff	BLS Employer Provided Training(Hrs of Training{1995} & an estimated average salary for clerical personnel 1994 & 1995 HCFA Cost Report Data	(24 hrs * $10) / 30,000 avg visits	$.008
Telephone installation	Bell Atlantic Bell Atlantic 1994 & 1995 HCFA Cost Report Data	($28 processing fee) + ($40 per line connect fee)/ 30,000 avg visits	$.002266
TOTAL One Time Adjustment			**$.010266**

The nonstandardized average prospective payment amount must be standardized to eliminate the effects of case mix and wage levels among HHAs. The standard average prospective payment amount for the 60-day episode equals the nonstandardized average prospective payment amount for a 60-day episode divided by the standardization factor. The standardization factor is discussed in section II.A.3.d. of this regulation. Once the payment rate is standardized, that amount is multiplied by the budget-neutrality factor. The budget-neutrality factor is discussed in section II.A.3.e. of this regulation. The standardized budget-neutral amount is divided by 1.05 to account for outlier payments capped at 5 percent of total estimated outlays under PPS.

The actual national 60-day episode payment amount that will be paid to HHAs incorporates the standard average prospective payment amount adjusted to account for case mix and wage index. All of the elements incorporated into the national 60-day episode payment amounts (the standard average prospective payment amount adjusted to account for case mix and wage index) must be budget neutral to the interim payment system limitation amounts reduced by 15 percent. Table 5 illustrates the home health prospective payment calculation.

TABLE 5- HOME HEALTH PROSPECTIVE PAYMENT CALCULATION

Home Health Discipline Type	Total Costs for all providers in the PPS audit sample (weighted, updated to FY 2001, and visit limit adjusted)	Total Visits for all providers in the PPS audit sample (weighted)	Average Cost per Visit from the PPS audit sample	Average number of visits for episodes with >4 visits from the CY 1997 Episode File	Home Health Prospective Payment Rate
Home Health Aide Services	5,825,520,715	139,826,559	$41.66	17.59	$732.80
Medical Social Services	446,102,371	2,896,223	$154.03	.36	$55.45
Occupational Therapy. Services	435,117,642	4,192,964	$103.79	.48	$49.82
Physical Therapy Services	2,418,400,914	23,352,076	$103.56	2.74	$283.75
Skilled Nursing Services	11,945,901,801	126,256,624	$94.62	14.69	$1389.97
Speech Pathology Services	220,671,286	1,954,344	$112.91	.18	$20.32
Total Non Standardized Prospective Payment Amount Per 60-Day Episode For FY 2001					$2532.11
Average Cost per Episode for Non Routine Medical Supplies included in the home health benefit and reported as costs on the Cost Report					$52.78
Average Payment per Episode for Non Routine Medical Supplies possibly unbundled and billed separately to Part B					$10.35
Average Payment per episode for Ongoing OASIS Adjustment Costs					$4.32
Total Non Standardized Prospective Payment Amount Per 60-Day Episode For FY 2001 Plus Medical Supplies & Ongoing OASIS					$2,599.56

Total Non Standardized Prospective Payment Amount Per 60-Day Episode For FY 2001	Standardization Factor for Wage Index and Case Mix /1	Budget Neutrality Factor /2	Outlier Adjustment Factor 3/	Final Standardized and Budget Neutral Prospective Payment Amount Per 60-Day Episode For FY 2001
$2,599.56	.95502	.78578	1.05	$2037.04

/1 (based on ABT data validated using 100% episode wage index standardization factor)

/2 (budget neutral to current IPS with 15% reduction in limits)

/3 (Adjustment to PPS rate to account for 5% of total payments to outlier episodes)

Calculation for Non Routine Medical Supplies Per Episode Amount included in the Home Health Benefit

Non Routine Medical Supplies included in the home health benefit and reported as costs on the Cost Report 1/	Total number of episodes for those providers in the audited cost report sample 2/	Average Cost per Episode for Non Routine Medical Supplies included in the home health benefit and reported as costs on the Cost Report
$419,729,371.85	7,952,692	$52.78

1/Source: Audited Cost Report Data from the audit sample updated to FY 2001 and weighted to National Totals

2/Source: Calendar Year 1997 Episode file

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Calculation for Non Routine Medical Supplies Per Episode Amount Possibly Unbundled and Billed under Part B

Non Routine Medical Supplies possibly unbundled and billed separately to Part B and reimbursed on the Fee Schedule 1/	Total number of episodes for all providers in the calendar year 1997 file adjusted for estimated total episodes in FY 2001 2/	Average Payment per Episode for Non Routine Medical Supplies possibly unbundled and billed separately to Part B
$92,958,370.81	8,985,000	$10.35

1/Source: 1997 National Claims History Part B file extract for 199 codes matched to the 60-Day episode file by beneficiary and dates of service

2/Source: Calendar Year 1997 Episode file

Calculation for Ongoing OASIS Adjustment Cost Per Episode

Average Cost per Visit for Ongoing OASIS Adjustment Costs 1/	Average number of Visits per Episode for Episodes with Greater than 4 Visits 2/	Average Payment per Episode for Ongoing OASIS Adjustment Costs
$0.12	36.04	$4.32

1/See Section II.A.3 for a description of the average cost per visit

2/Source: Calendar Year 1997 Episode file

Each component of the methodology is discussed below. The methodology set forth in this rule may be refined based on the accumulation of national OASIS data reported to us. We are specifically soliciting comments on the impact on HHAs to financially comply with the methodology set forth in this section.

a. Cost Data—60-Day Episode Payment

The audited cost data is discussed above in detail in section II.A.2.a. of this proposed regulation. The data source used in developing the national mean cost per visit for a 60-day episode is the audited cost report sample database. We calculated the national mean cost per visit for each of the six disciplines (skilled nursing, physical therapy, occupational therapy, speech-language pathology services, medical social services, and home health aide services) used in a 60-day episode. The data source in developing the average cost per episode for nonroutine medical supplies paid on a reasonable-cost basis under a home health plan of care is the audited cost report sample database also discussed in section II.A.2.a. and III of this proposed regulation.

b. Utilization Data—60-Day Episode Payment

As discussed above, developing the national mean number of visits for each of the six disciplines in a 60-day episode resulted from the thorough analysis of the national claims history. See section II.A.2.c. of this regulation for a detailed description of the utilization data analysis.

c. Updating the Data

The HHA market basket index reflects changes over time in the prices of an appropriate mix of goods and services included in covered HHA services. The HHA market basket index is used to develop the national 60-day episode payment rates. The data used to develop the HHA PPS rates were adjusted using the latest available market basket increases occurring between the cost reporting periods contained in our database and September 30, 2001. For fiscal year 2002 or 2003, sections 1895(b)(3)(B)(i) and (b)(3)(B)(ii) of the Act require the standard prospective payment amounts be increased by a factor equal to the home health market basket minus 1.1 percentage points. In addition, for any subsequent fiscal years, the statute requires the rates to be increased by the applicable home health market basket index change. A complete discussion concerning the design and application of the HHA market basket index and the factors used in developing the 60-day episode payment rates is discussed in section II.A.2.b. of this regulation.

d. Standardization Factor

Section 1895(b)(3)(A)(i) of the Act requires that the prospective payment amounts be standardized to eliminate the effects of variation in wage levels and case mix among HHAs. The objective of standardization is to ensure that the wage-index and case-mix adjustments to the episode payment amount do not alter the aggregate payments that would occur in the absence of these adjustments. All the estimates described in this section are based on episodes with more than four visits since only those episodes will be paid on a per-episode basis.

Several types of information are required for standardization. To account for wage differences, the proportion of labor and nonlabor components of HHA costs must be identified. These proportions are based on the relative importance of the different components of the HHA market basket index. As calculated, the labor-related portion of cost is 77 percent and the nonlabor-related portion is 23 percent. Wage differences are measured using the hospital wage index. In standardizing the episode payment amount, we used the FY 1999 hospital wage index, which is based on 1995 hospital wage data. For application of the wage index, the statute allows us to use the service area or any other area we specify. To be consistent with the current interim payment system, the wage index value that will be applied to the labor portion of the episode amount will be the appropriate wage index for the geographic area where the beneficiary received home health services.

To account for case-mix differences, it is necessary to have information on the distribution of 60-day home health episodes among the 80 groups of the HHRG case-mix system. For this proposed rule, the only available nationally representative sample of Medicare home health episodes with information on HHRG case mix is the Abt data set (described in section II.C. of the preamble) that was used to develop the HHRG case-mix classification system. As national OASIS data become available, we will develop a national data set that may enable us to refine our standardization estimate for the final rule. Also required for standardization is the set of HHRG relative weights that reflect the resource intensity of the average episode in each HHRG group relative to the overall average episode. A detailed description of the HHRG relative weights appears in section II.C. of this regulation.

Ideally, standardization would be estimated using nationally representative data with information on the joint variation in case-mix and wage-index values. Currently, national data on wage-index variation are only available from the episode data set constructed from 1997 Medicare home health claims. However, we are not able to classify these data by case mix using the HHRGs. Only the Abt data set currently provides information on both wage and case-mix variation. However, because they are a sample, the Abt data provide less information on wage variation than the claims episode data set.

In calculating standardization factors using the Abt sample, population weights that reflect the number of episodes in the national population represented by each sample episode were used in place of 1.0 for each episode to obtain the best population estimate from the sample. These weights take account of the region, agency type, and urban/rural characteristics used to stratify the Abt sample as well as the case-mix distribution among HHRGs in the Abt data. The national episode data derived from 1997 home health claims were the source of the population estimates of episodes by region and agency characteristics. These weights should not be confused with the audit sample weights described in section II.A.2.a. The Abt sample weights are described in detail in Appendix F of Abt Associates, Inc. *Case-Mix Adjustment for a National Home Health Prospective Payment System*. Second Interim Report, August 1999.

To make full use of the available data, we developed the following strategy for standardizing the episode amount: First, we estimated two standardization factors using the Abt data set. One accounts only for variation in wage-index values; the other accounts for both case-mix and wage-index variation. The Abt standardization factors differ by about .006 (.96093 vs. .96667). Next, the wage-only standardization factor from the Abt data was compared to the wage-only standardization factor computed from the national claims episode data (.96093 vs. .94935). These standardization factors differ by about .012. These three estimates are quite consistent with one another. However, because the wage-only standardization factor based on the national claims data provides the most reliable estimate of the effects of wage variation, we decided to use it (.94935) after applying a small adjustment for the combined effects of wage and case-mix variation. Therefore,

we multiplied .94935 by the ratio of the two Abt estimates (.9667/.96093=1.00597) to obtain a standardization factor of .95502.

Each of the three estimates of the standardization factor was calculated in the following manner: For each episode (or in the case of the Abt data, the number of episodes represented by each sample episode), the appropriate wage-index value was multiplied by the labor-related proportion of cost (.77) and added to the nonlabor-related proportion (.23) to obtain a wage-adjustment factor. In turn, the wage-adjustment factor was multiplied by the HHRG relative weight. The product of the wage and case-mix factors was summed over all episodes in the database, yielding a case-mix and wage-adjusted episode sum. Dividing the case-mix and wage-adjusted episode sum by the total number of episodes (the unadjusted episode sum) yields the standardization factor, a ratio that indicates how the combined effects of wage and case-mix variation impact aggregate payments. If the standardization factor is greater than one, the unstandardized episode cost must be reduced to account for the aggregate payment effect of the case-mix and wage-index payment adjustments. If the factor is less than one, then the unstandardized episode cost must be increased to accomplish the same objective. The standardized episode amount is equal to the unstandardized episode cost divided by the standardization factor. Note that all three of our estimates were less than one, which implies that the standardization factor increases the standard episode amount. Our final standardization factor produces an increase of about 4.7 percent.

The OASIS data should give us better information about the national distribution of episodes across the HHRG categories. As these data are collected and reported, we will examine them to determine whether refinements to the current estimate are needed.

e. Budget-Neutrality Factor

Section 1895(b)(3)(A)(i) of the Act requires that the standardized prospective payment amounts be computed in a budget-neutral manner so that the total amounts payable under the PPS are equal to the amounts that would have been made if the PPS were not in effect (that is, payments were made under the interim payment system) but if the per-visit and per-beneficiary limits had been reduced by 15 percent. The BBA had established budget-neutrality with respect to expenditures that would have been made under the interim payment system for FY 2000 (that is, beginning October 1, 1999), and section 5101(c) of OCESAA changed the date for the budget-neutrality calculation to be expenditures that would have been made under the interim payment system for FY 2001 (that is, beginning October 1, 2000), as if the 15 percent reduction in per-visit and per-beneficiary limits had taken place. Before calculating home health PPS rates in 2001, the IPS rates are reduced by 15 percent. Then, the total amounts payable under the PPS are calculated in a budget neutral fashion to be what would have been expended under the current interim payment system with the limits reduced by 15 percent at the inception of the PPS on October 1, 2000. The reduction in the IPS limits will occur even if the PPS is not implemented by the October 1, 2000 statutory deadline.

To determine the adjustment factor, we determined what would have been paid under a prospective payment system having an episode payment of the non-standardized payment rate described earlier, which is $2,599.56. Under this system, in cases where a beneficiary receives four or fewer visits in an episode, we plan to reimburse at the per-visit rates described in low utilization payment adjustment methodology section of this regulation. We assumed that 5 percent of episodes would be reimbursed under this method. We determined the average reimbursement in these cases would be $348.72. This amount was determined by taking the difference between the non-standardized episode payment without low utilization episodes, $2,599.56 and the non-standardized payment that included such episodes in the average payment, $2,250.84.

In determining how many episodes there will be in fiscal year 2001, results from the analysis of the calendar year 1997 episode file were applied to the actual number of visits incurred in calendar year 1997. The most accurate estimate of incurred visits for 1997 is 281.6 million. The number of visits per episode resulting from these visits would have been 31.34, resulting in 8.985 million episodes. Although the number of visits in total has declined since 1997, there is nothing to indicate whether this would affect the number of 60-day episodes in a year. We are projecting that the total number of episodes will be the same in fiscal year 2001 as it was for 1997, 8.985 million. It is estimated that 95 percent of these episodes will be receiving an average payment of $2,599.56 and 5 percent will receive an average payment of $348.72. This would result in incurred fee-for-service home health payments of (8.985*.95*2599.56)+(8.985*.05*348.72), equaling $22,346 million for fiscal year 2001.

The current projection of incurred fee-for-service home health expenditures for FY 2001 under IPS with a 15 percent reduction in the per-visit and beneficiary cap limits is $17,466 million. We add to this the projected costs of the non-routine medical supplies under PPS that may have otherwise been unbundled under the interim payment system, which is $93 million. The budget neutrality factor is then calculated by dividing the sum of (1) our current projection for fee-for-service incurred home health expenditures and (2) the projected non-routine medical supplies currently paid by fee schedule by the projected aggregate episode payments: (17,466+93)/22,346=0.78578. The resulting budget neutrality factor is 0.78578.

4. Methodology Used for Low-Utilization Payments

As discussed above, section 1895(b)(1) of the Act requires the development of the definition of the unit of payment or episode to take into consideration the number, type, duration, mix, and cost of visits provided within the unit of payment. As a result of our analysis, we determined the need to also recognize a low-utilization payment under HHA PPS. Low-utilization payment would reduce the 60-day episode payments or the PEPA to those HHAs that provide minimal services to patients during a 60-day episode.

Payments for low-utilization episodes will be made on a per-visit basis using the cost-per-visit rates by discipline determined from the audited cost report sample for calculation of the standard episode amount. Included in these per-visit amounts are amounts for (1) nonroutine medical supplies paid under a home health plan of care, (2) nonroutine medical supplies possibly unbundled to Part B, and (3) a per visit ongoing OASIS reporting adjustment as discussed above in section II.A.3 of this regulation. These per-visit ''prices'' would be updated and adjusted for budget neutrality in the same manner as the standard episode amount. For low-utilization payments, they would be adjusted by the wage index in the same manner as the standard episode amount. However, the low-utilization payments are not case mix adjusted. The standardization factor used to adjust the LUPAs was calculated using national claims data for episodes containing four or fewer visits. This standardization factor includes adjustments only for the

wage index. The ''savings'' from the reduced episode payments would be redistributed to all episodes.

Below is Table 6, which presents the home health low-utilization provider adjustment payment calculation.

TABLE 6.—HOME HEALTH LOW-UTILIZATION PROVIDER ADJUSTMENT PAYMENT CALCULATION

Home health discipline type	Average cost per visit from the PPS audit sample	Average cost per visit for non routine medical supplies reported as costs on the cost report	Average cost per visit for non routine medical supplies possibly unbundled and billed separately to part B and reimbursed on the fee schedule	Average cost per visit for ongoing OASIS adjustment costs [4]	Standardization factor for wage index [1]	Budget neutrality factor [2]	Outlier adjustment factor [3]	Final wage standardized and budget neutral per visit payment amounts per 60-day episode for FY 2001
Home Health Aide Services	$41.66	$1.41	$0.35	$0.12	.94622	.78578	1.05	$34.44
Medical Social Services	154.03	1.41	0.35	0.12	.94622	.78578	1.05	123.31
Occupational Therapy. Services	103.79	1.41	0.35	0.12	.94622	.78578	1.05	83.57
Physical Therapy Services	103.56	1.41	0.35	0.12	.94622	.78578	1.05	83.39
Skilled Nursing Services	94.62	1.41	0.35	0.12	.94622	.78578	1.05	76.32
Speech Pathology Services	112.91	1.41	0.35	0.12	.94622	.78578	1.05	90.79

[1] Based on 100% episode for episodes with 4 or fewer visits and wage index only standardization factor.
[2] Budget neutral to current IPS with 15% reduction in limits.
[3] Adjustment to PPS rate to account for 5% of total payments to outlier episodes.
[4] See Section II.A.3 for description of calculation of OASIS Adjustment cost.

CALCULATION FOR NONROUTINE MEDICAL SUPPLIES PER-VISIT AMOUNT INCLUDED IN THE HOME HEALTH BENEFIT

Non Routine Medical Supplies included in the home health benefit and reported as costs on the Cost Report [1]	$419,729,371.85
Total number of visits for those providers in the audited cost report sample [2]	298,478,790
Average Cost per visits for Non Routine Medical Supplies included in the home health benefit and reported as costs on the Cost Report	$1.41

[1] Source: Audited Cost Report Data from the audit sample updated to FY 2001 and weighted to National Totals.
[2] Source: Calendar Year 1997 Episode file.

CALCULATION FOR NONROUTINE MEDICAL SUPPLIES PER-VISIT AMOUNT POSSIBLY UNBUNDLED AND BILLED UNDER PART B

Non Routine Medical Supplies possibly unbundled and billed separated to Part B and reimbursed on the Fee Schedule [1]	$92,958,370.81
Total number of visits for all providers in the calendar year 1997 file adjusted for estimated total episodes in FY 2001 [2]	263,144,000
Average Payment per visits for Non Routine Medical Supplies possibly unbundled and billed separately to Part B	$0.35

[1] Source: 1997 National Claims History Part B file extract for 199 codes matched to the 60-day episode file by beneficiary and dates of service.
[2] Calendar Year 1997 Episode file.

5. Methodology Used for Outlier Payments

As discussed above, while we are not statutorily required to make provision for outlier payments, we are proposing outlier payments. Outlier payments are payments made in addition to regular 60-day case-mix-adjusted episode payments for episodes that incur unusually large costs due to patient home health care needs. Outlier payments would be made for episodes whose estimated cost exceeds a threshold amount for each HHRG. The outlier threshold for each HHRG is defined as the 60-day episode payment for the HHRG plus a fixed dollar loss amount that is the same for all case-mix groups. Outlier payments can be made for 60-day episode payments that reflect a PEP adjustment or SCIC adjustment. The PEP adjustment results in a truncated episode period and a SCIC adjustment results in a total of two proportional payments over a 60-day episode, but these periods could still incur unusually large costs. The outlier threshold for the PEP adjustment is the PEP adjustment plus a fixed dollar loss. The outlier threshold for the SCIC adjustment equals the total SCIC payment plus a fixed dollar loss. The wage adjusted component discussed below will be applied consistently for the 60-day episode payment, the PEP adjustment, and the total SCIC adjustment. The outlier payment is defined to be a proportion of the estimated costs beyond the threshold. The proportion of additional costs paid as outlier payments is referred to as the loss-sharing ratio.

The fixed dollar loss amount and the loss-sharing ratio are chosen so that estimated total outlier payments are 5 percent of total episode payments. The 5 percent constraint on total outlier payments creates a tradeoff between the values selected for the fixed dollar loss amount and the loss-sharing ratio. For a given level of outlier payments, a higher fixed dollar loss amount reduces the number of cases that receive outlier payments, but makes it possible to select a higher loss-sharing ratio and therefore increase outlier payments per episode. Alternatively, a lower fixed dollar loss amount means that more episodes qualify for outlier payments, but outlier payments per episode must be lower. Therefore, setting these two parameters involves policy choices about the number of outlier cases and their rate of payment.

Estimating the fixed dollar loss amount and loss-sharing ratios that are consistent with the 5 percent constraint requires simulation of payments under the PPS (including PEP adjustment, LUPA, 60-day episode, SCIC adjustments and outlier payments) with and without outlier payments. Feasible choices of fixed dollar loss amounts and loss-sharing ratios must meet the following conditions: First, total payments with and without outlier payments must be equal. Second, for the simulation with outlier payments, total outlier payments must be 5 percent of total payments including outlier payments. In calculating LUPA and 60-day episode payments the standard per-visit and episode amounts are divided by 1.05 as the means of financing the

outlier payments. There will be no retroactive payments or recoupments in the event the projected amounts turn out to be different than the actual payment.

This simulation requires information on the HHRG for each episode with more than four visits in order to calculate the case-mix adjusted episode payment. The case-mix adjusted payment is necessary to determine the outlier threshold. In other words, episodes that qualify for outlier payments cannot be identified without knowing the assigned HHRG. Because the Abt sample data are the only data source that contains HHRG information by episode, they were used to simulate potential outlier policy parameters.

Another data requirement for the policy simulation and also for actual implementation of an outlier payment policy is an estimate of the resource cost of each episode. To calculate outlier payments, two questions must be answered: Does the cost of the episode exceed the outlier threshold, and if so, by how much? Using the Abt data, we estimated the cost of each episode using the same method that we propose to use for the low-utilization. Specifically, the national per-visit cost amounts used in constructing the standard episode payment amount were multiplied by the number of visits in each discipline to estimate a standard cost of the episode. In actually making outlier payments under PPS, the cost of outlier episodes would be calculated using the per-visit ''prices'' for each discipline that are used to pay for low-utilization episodes.

The wage adjustment can be conceptualized in two ways that are mathematically equivalent. First, all components could be wage adjusted: the case-mix adjusted episode amount, the fixed dollar loss amount, and the estimated cost of the episode. Then the difference between the wage-adjusted episode cost and the wage-adjusted outlier threshold would be multiplied by the loss-sharing ratio to obtain the outlier payment for the episode. Alternatively, but equivalently, the outlier threshold and the episode cost could be determined without applying the wage adjustment. Their difference could then be multiplied by the loss-sharing ratio and wage adjusted to obtain the outlier payment.

Simulations using the Abt data provide some guidance about the tradeoffs involved in the choice of outlier policy parameters. As shown below, a loss-sharing ratio of .80 is consistent with a fixed dollar loss of 1.35 times the standard episode payment amount. With these values, 5.5 percent of regular episodes would qualify for outlier payments, and the average outlier payment per outlier episode would be 93 percent of the standard episode payment amount. Decreasing the loss-sharing ratio to .70 supports a fixed dollar loss of 1.22 times the standard episode payment amount and increases the percent of episodes receiving outlier payments to 6.5 percent. For purposes of this rule, we are proposing the outlier policy option of a fixed dollar loss of 1.07 times the standard episode payment amount and a loss sharing ratio of .60. We believe this option provides the most equitable threshold for qualification of an outlier payment in the first year of PPS. The proposed option increases the estimated percent of episodes receiving outlier payment to 7.5 percent while holding estimated outlier outlays at the required 5 percent. We are interested in receiving comments concerning the choice of the outlier policy parameters set forth below.

The data were collected between October 1997 and April 1998, a period that is initially pre-interim payment system and that ends early in the interim payment system experience. Again, the availability of national OASIS data for outlier simulations before finalization of this rule will help us refine our outlier estimates.

OPTIONS FOR OUTLIER POLICY PARAMETERS: THE TRADEOFF BETWEEN THE FIXED DOLLAR LOSS AND THE LOSS SHARING RATIO

Fixed dollar loss	Loss sharing ratio	Outlier payments of total payments	Outlier episodes of total episodes	Outlier payment of std. episode amt.
1.35	.80	5.0	5.5	.93
1.29	.75	5.0	5.9	.93
1.22	.70	5.0	6.5	.72
1.15	.65	5.0	7.0	.66
1.07	.60	5.0	7.5	.62

Example: An HHA serves a beneficiary who resides in Harrisburg, PA. The HHA determines the beneficiary is in HHRG C3F4S0. The episode contained 88 skilled nursing visits and 60 home health aide visits. It qualifies for outlier payments. To simplify matters and demonstrate the determination of outlier payments, the example begins after the case-mix-adjusted episode payment has been calculated. Further, Harrisburg was chosen because its wage-index value is very close to 1.0060, and again for simplicity, the wage-index adjustment has also been omitted.

1. Determine the outlier threshold for C3F4S0 with the fixed dollar loss option of 1.07:
   - Outlier threshold = Fixed Dollar Loss + Case-mix adj. payment Fixed Dollar Loss = 1.07 * $2,037.04 ..... $2,179.63
   - Case-mix adjusted episode payment = ($2,037.04 * 1.4357) $2,924.58
   - Outlier threshold $5,104.21
2. Calculate the standard cost of the episode:
   - 88 skilled nursing visits @ $76.32 ..... $6,716.16
   - 60 hh aide visits @ $34.44 $2,066.40
   - Total cost $8,782.56
3. Calculate the cost in excess of the threshold:
   - $8,782.56 − $5,104.21 ..... $3,678.35
4. Calculate the outlier payment:
   - $3,678.35 * .6 ..... $2,207.01
5. Calculate total payment for the episode:
   - $2,924.58 + $2,207.01 ..... $5,131.59

B. Examples of National Standardized 60-Day Episode Payment Amounts and Low-Utilization Payment Adjustments

For any HHRG group, to compute a case-mix and wage-adjusted 60-day episode prospective payment amount, the standardized prospective payment rate for FY 2001 (see Table 5 of this regulation) is multiplied by the case-mix index from Table 9 for that HHRG

group. To compute a wage-adjusted national 60-day episode payment, the labor-related portion of the 60-day national prospective payment rate for FY 2001 is multiplied by the HHA's appropriate wage-index factor listed in Table 4A or 4B. The product of that calculation is added to the corresponding nonlabor-related component. The resulting amount is the national case-mix and wage-adjusted 60-day episode prospective payment rate for FY 2001.

EXAMPLE 1.—AN HHA IS PROVIDING SERVICES TO A MEDICARE BENEFICIARY IN STATE COLLEGE, PA. THE HHA DETERMINES THE BENEFICIARY IS IN HHRG C2F2S2

COMPUTATION OF CASE MIX AND WAGE ADJUSTED PROSPECTIVE PAYMENT AMOUNT	
Case mix index from Table 9 for case mix group	1.8275
Standardized Prospective Payment Rate for FY 2001	$2,037.04
Calculate the Case Mix adjusted Prospective Payment Rate for FY 2001 (1.8275 * $2,037.04)	$3,722.69
Calculate the Labor portion of the Prospective Payment Rate for FY 2001 (.77668 * $ 3,722.69)	$2,891.34
Apply wage index factor from Table 4B for patient in State College, PA (0.9449 * $ 2,891.34)	$2,732.03
Calculate the Non-Labor portion of the Prospective Payment Rate for FY 2001 (.22332 * $3,722.69)	$831.35
Calculate Total Prospective Payment Rate for FY 2001 by adding the labor and non labor portion of the case mix and wage index amounts ($2,732.03 + $831.35)	$3,563.38

EXAMPLE 2. AN HHA SERVES A BENEFICIARY WHO RESIDES IN LAKE PLACID, NY. THE HHA DETERMINES THE PATIENT IS IN HHRG C1F4S3

COMPUTATION OF CASE MIX AND WAGE ADJUSTED PROSPECTIVE PAYMENT AMOUNT	
Case mix index from Table 9 for case mix group	2.2241
Standardized Prospective Payment Rate for FY 2001	$2,037.04
Calculate the Case Mix adjusted Prospective Payment Rate for FY 2001 (2.2241 * $2,037.04)	$4,530.58
Calculate the Labor portion of the Prospective Payment Rate for FY 2001 .77668 * $4,530.58)	$3,518.81

EXAMPLE 2. AN HHA SERVES A BENEFICIARY WHO RESIDES IN LAKE PLACID, NY. THE HHA DETERMINES THE PATIENT IS IN HHRG C1F4S3—Continued

Apply wage index factor from Table 4A for patient in Lake Placid, NY (0.8588 * $3,518.81)	$3,021.95
Calculate the Nonlabor portion of the Prospective Payment Rate for FY 2001 (.22332 * $4,530.58)	$1,011.77
Calculate Total Prospective Payment Rate for FY 2001 by adding the labor and nonlabor portion of the case mix and wage index amounts ($3,021.95 + $ 1,011.77)	$4,033.72

EXAMPLE 3.—HHA SERVES A BENEFICIARY WHO RESIDES IN FORT COLLINS, CO. THE HHA DETERMINES THE BENEFICIARY IS IN HHRG C3F0S0

COMPUTATION OF CASE MIX AND WAGE ADJUSTED PROSPECTIVE PAYMENT AMOUNT	
Case mix index from Table 9 for case mix group	.9591
Standardized Prospective Payment Rate for FY 2001	$2,037.04
Calculate the Case Mix adjusted Prospective Payment Rate for FY 2001 (.9591 * $ 2,037.04)	$1,953.73
Calculate the Labor portion of the Prospective Payment Rate for FY 2001 (.77668 * $1,953.73)	$1,517.42
Apply wage index factor from Table 4B for patient in Fort Collins, CO (1.0770 * $1,517.42)	$1,634.26
Calculate the Non-Labor portion of the Prospective Payment Rate for FY (2001 .22332 * $1,953.73)	$436.31
Calculate Total Prospective Payment Rate for FY 2001 by adding the labor and non labor portion of the case mix and wage index amounts ($1,634.26 + $ 436.31)	$2,070.57

EXAMPLE 4.—HHA SERVES A BENEFICIARY WHO RESIDES IN GRAND FORKS, ND. THE HHA DETERMINES THE BENEFICIARY IS IN HHRG C0F3S1

COMPUTATION OF CASE MIX AND WAGE ADJUSTED PROSPECTIVE PAYMENT AMOUNT	
Case mix index from Table 9 for case mix group	.8537

EXAMPLE 4.—HHA SERVES A BENEFICIARY WHO RESIDES IN GRAND FORKS, ND. THE HHA DETERMINES THE BENEFICIARY IS IN HHRG C0F3S1—Continued

Standardized Prospective Payment Rate for FY 2001	$2,037.04
Calculate the Case Mix adjusted Prospective Payment Rate for FY 2001 (.8537* $2,037.04)	$1,739.02
Calculate the Labor portion of the Prospective Payment Rate for FY 2001 (.77668 * $1,739.02)	$1,350.66
Apply wage index factor from Table 4B for patient in Grand Forks, ND (0.8836 * $1,350.66)	$1,193.44
Calculate the Non-Labor portion of the Prospective Payment Rate for FY (2001 .22332 * $1,739.02)	$388.36
Calculate Total Prospective Payment Rate for FY 2001 by adding the labor and non labor portion of the case mix and wage index amounts ($1,193.44 + $388.36)	$1,581.80

Example 5. An HHA in Baltimore, MD assigns a patient to an HHRG at the start of a 60-day episode. The final claim for the patient indicates that only two visits (one skilled nursing and one home health aide) were furnished during the 60-day episode. The HHA would be paid the low-utilization payment adjustment. Any necessary adjustment to the 50 percent initial payment for the episode would be made on subsequent claims for the HHA.

COMPUTATION OF WAGE INDEX ADJUSTED LOW UTILIZATION PAYMENT

Number and visit discipline type	Final wage standardized and budget neutral per-visit payment amounts per 60-day episode for FY2001 [1]
1 Skilled Nursing Visit	$76.32
1 Home Health Aide Visit	34.44

[1] See Table 6 for the Calculation of Final Wage Standardized and Budget Neutral Per-Visit Payment Amounts Per 60-Day Episode for FY 2001.

Calculate the labor portion of the Standardized Budget Neutral Per-Visit Payment Amount for 1 Skilled Nursing Visit—.77668 * $76.32 = $59.28

Apply wage index factor from Table 4B for Baltimore, MD—.9642 * $59.28 = $57.15

Calculate the non-labor portion of the Standardized Budget Neutral Per-Visit Payment Amount for 1 Skilled Nursing Visit—.22332* $76.32 = $17.04

SUBTOTAL-Low Utilization Payment for 1 Wage Adjusted Skilled Nursing Visit rendered in a 60-day episode—$57.15 + $17.04 = $74.19

Calculate the labor portion of the Standardized Budget Neutral Per-Visit Payment Amount for 1 home health aide visit—.77668* $34.44 = $26.75

Apply wage index factor from Table 4B for Baltimore, MD—.9642* $26.75 = $25.79

Calculate the non-labor portion of the Standardized Budget Neutral Per-Visit Payment Amount for 1 home health aide visit—.22332* $34.44 = $7.69

SUBTOTAL—Low Utilization Payment for 1 wage adjusted home health aide visit rendered in a 60-day episode—$25.79 + $7.69 = $33.48

Calculate Total Low Utilization Payment Adjustment for 2 visits provided during the 60-day episode by adding the wage adjusted skilled nursing visit and the wage adjusted home health aide visit—$74.19 + $33.48 = $107.67

C. Design and Methodology for Case-Mix Adjustment of 60-Day Episode Payments

1. Background on Clinical Model Patient Classification System

As discussed above in section I.C. of this regulation, in 1996, we began the current research project. The basic approach to the home health case-mix adjuster development was to use the patient data and other appropriate data to define alternative case-mix adjusters and then estimate their ability to explain variation (R-squared value) in resource use over the course of a 60-day payment period. Compared to the 120-day payment period tested under the Phase II per-episode HHA PPS Demonstration, a 60-day payment period will make payments more responsive to the needs of long-stay home health patients and Medicare (as the payor), as discussed in section I.D.1.a of the preamble to this regulation.

The two basic data sources for the study are case-mix explanatory variables from the patient data on OASIS–B (supplemented by additional patient-specific items) and a resource-use variable from visit data. To arrive at an estimate of resource use from the visit logs (as discussed in section I.C. of this regulation), time is weighted by mean labor cost for the discipline providing the visit. Medicare claims were linked to the OASIS data and the visit log data to verify the visits and provide utilization measures.

Clinical judgment was used to refine the components and structure of a decision tree for assigning patients into case-mix groups. Along with clinical judgment, the relative predictive value of potential case-mix variables, their susceptibility to gaming and subjectivity, and as well as administrative implications were considered in the final resolution of the elements retained in the Clinical Model. The Clinical Model consists of 80 HHRGs and has an R-squared of 32 percent. The information to assign a patient to one of the 80 HHRGs are comprised of 19 OASIS–B elements supplemented by one additional patient status item regarding projected therapy use in the 60-day episode. The non-OASIS items tested in the case-mix research did not significantly increase the predictive value of the model; therefore, the non-OASIS items were not included in the final case-mix methodology.

2. Home Health Resource Group (HHRG) Classification System

In the HHRG case-mix classification system, patient characteristics and health status information from the OASIS–B such as ''primary home care diagnosis,'' ''ability to perform ADLs'' as supplemented by projected therapy use during a 60-day episode, will be used to assign the patient to an HHRG for payment.

The HHRG system measures three dimensions of case mix. Table 7 provides the HHRG system three-level decision tree logic.

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Table 7--Home Health Resource Group Case-Mix Classification

Decision Tree Logic

Clinical Dimension				
OASIS+ Item	**Description**	**Value**	**Points**	**Scoring**
M0230	Primary home care diagnosis	If Orthopedic DG, add If Neurological DG, add If Diabetes DG, add	10 19 16	min = 0-7 low = 8-16 mod = 17-26 high = 27+
M0250	IV/Infusion/ Parenteral/Enteral Therapies	If box 1, add If box 2, add If box 3, add	15 20 24	
M0390	Vision	If box 1 or 2, add	7	
M0420	Pain	If box 2 or 3, add	6	
M0460	Current pressure ulcer stage	If box 1 or 2, add If box 3 or 4, add	15 43	
M0476	Stasis ulcer	If box 3, add	24	
M0488	Surgical wound	If box 2 or 3, add	10	
M0490	Dyspnea	If box 2 - 4, add	5	
M0530	Urinary	If box 1 or 2, add	8	
M0540	Bowel	If box 2 -5, add	11	
M0550	Bowel ostomy	If box 1 or 2, add	10	
M0610	Behavioral	If box 1-6, add	3	

Functional Status Dimension				
OASIS+ Item	**Description**	**Value**	**Points**	**Scoring**
M0650 (current) M0660 (current)	Dressing	If M0650 or M0660 = box 1 - 3, add	4	min = 0-4 low = 5-15 mod = 16-22 high = 23-35 max = 36
M0670 (current)	Bathing	If box 2 - 5, add	8	
M0680 (current)	Toileting	If box 2 - 4, add	3	
M0690 (current)	Transfer-ring	If box 1, add If box 2 - 5, add	3 8	
M0700 (current)	Locomotion	If box 1 or 2, add If box 3 - 5, add	6 13	

Services Utilization Dimension			
Variable	**Description**	**Value**	**Scoring**
M0170 - line 1	NO Hospital discharge past 14 days	If box 1 IS BLANK, add 1 to score	Min = 0-2 Low = 3 Mod = 4-6 High= 7
M0170 - line 2 or 3	Inpatient rehab/SNF discharge past 14 days	If box 2 or 3, add 2 to score	
Receipt of Therapy	8 or more therapy hours	If yes, add 4 to score	

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A patient can be classified in one of 80 possible HHRG categories. The first level of the decision tree is the Clinical Dimension, which is divided into four severity groups. A patient is assigned one of four severity levels in the Clinical Dimension: minimum, low, moderate, or high clinical severity. To determine the severity group, a numeric score is applied to each answer provided to the following 12 clinical OASIS–B items: MO230 primary home health diagnosis, MO250 IV/Infusion/Parenteral/Enteral Therapies, MO390 Vision, MO420 Pain, MO460 Current Pressure Ulcer Stage, MO476 Stasis Ulcer, MO488 Surgical Wound, MO490 Dyspnea, MO530 Urinary Incontinence, MO540 Bowel Incontinence, MO550 Bowel Ostomy, MO610 Behavioral Problems. Table 7 provides the corresponding numeric scores for the responses provided to the items in the four severity groups within the Clinical Dimension. The scores are then summed. The severity level is determined by the value of the summed score. The next level of the subdivision of the decision tree logic is based on patient functional status.

The Functional Dimension is divided into five severity groups. A patient is assigned one of five severity levels in the Functional Dimension: minimum, low, moderate, high, or maximum functional severity. To determine the severity group, a numeric score is applied to each answer provided for the following six OASIS-B items: MO650 and MO660 Dressing Upper and Lower Body, MO670 Bathing, MO680 Toileting, MO690 Transferring, and MO700 Locomotion. Table 7 provides the corresponding numeric scores to the responses provided to the functional status items. The scores are then summed. The severity level for the Functional Dimension is determined by the value of the summed score. The final level of the subdivision of the decision tree logic is the Services Utilization Dimension.

The Services Utilization Dimension is also divided into four severity groups. A patient is assigned to one of the four following severity levels in the Services Utilization Dimension: minimum, low, moderate, or high. To determine the severity group, a numeric score is applied to each answer provided to the following OASIS–B item divided into two questions, and one supplemental item regarding projected receipt of therapy use: MO170 hospital discharge in past 14 days, MO170 inpatient rehabilitation/SNF discharge in past 14 days, and receipt of therapy. Table 7 provides the corresponding scores to the responses provided to the items in the Services Utilization Dimension. The scores are then summed. The severity level for the Services Utilization Dimension is determined by the value of the summed scores.

We are proposing a utilization proxy for the time variable corresponding to the need for 8 or more therapy hours during a 60-day episode. As a result of the Abt case-mix research, Abt determined that 10 visits of physical therapy, occupational therapy, or speech-language pathology services in any combination in a 60-day period equate to 8 hours of physical therapy, occupational therapy, or speech-language pathology services in any combination in a 60-day period. At the inception of HHA PPS, the case-mix treatment variable regarding the need for 8 or more hours of therapy in a 60-day episode will be defined as 10 visits of physical therapy, occupational therapy, or speech-language pathology services in any combination furnished during the 60-day episode.

As discussed above, HHAs will project the therapy need for the patient at the start of the 60-day episode. In accordance with the utilization proxy for time developed by Abt, the need for 8 or more hours of therapy during the 60-day episode will be defined as 10 visits of physical therapy, occupational therapy, or speech-language pathology services in any combination in a 60-day episode. The projection of therapy use

at the start of the 60-day episode (8 hours of therapy as defined as 10 visits) will be confirmed at the end of the 60-day episode with the current line-item date visit billing requirements included on the final claim under PPS. We envision that the pricer logic at the RHHI will confirm the projection of the utilization data at the start of care with the actual utilization data submitted on the final claim. If 8 or more hours of therapy as defined as 10 therapy visits are projected at the start of the episode and confirmed at the end of the episode via the line-item date billing information on the final claim, the episode would be paid at the case-mix index level including the therapy-use variable. This assumes no adjustment for other reasons, for example, medical review etc. However, the reconciliation of projected therapy use with actual therapy use has the potential to decrease the final episode payment if the actual therapy use reported at the end of the episode on the final claim does not correspond to projected therapy use provided at the start of the episode. Depending upon the results of the reporting of 15-minute increment billing, we will of course consider reverting to measure the therapy use in terms of hours by 15-minute increments rather than visits.

We are soliciting comments on the financial impact of this proposal on HHAs as well as suggestions for future research to refine the PPS methodology after implementation. The 60-day payment schedule results in conforming changes to the current time frames governing plan of care certifications and recertifications and the cycle of OASIS assessments. The conforming changes are discussed in section IV. of this regulation.

Application of the case-mix indices to the standardized 60-day payment amount presented in Table 6 results in 80 separate case-mix-adjusted 60-day episode national payment amounts corresponding to the 80 separate HHRG classification groups described above and individually listed in Table 9.

Below is Table 8 designating the acceptable ICD–9 codes corresponding to the orthopedic, neurological, and diabetes diagnosis groups for purposes of case-mix classification.

TABLE 8.—ICD–9 CODES USED TO DEFINE DIAGNOSTIC GROUPS

DG	ICD–9 Code	Description
ORTHO	170	MAL NEO BONE/ARCTIC CART.
ORTHO	171	MAL NEO SOFT TISSUE.
ORTHO	213	BEN NEO BONE/ARCTIC CART.
ORTHO	274	GOUT.
ORTHO	710	DIFF CONNECTIVE TISS DIS.
ORTHO	711	ARTHROPATHY W INFECTION.
ORTHO	712	CRYSTAL ARTHROPATHIES.
ORTHO	713	ARTHROPATH IN OTHER DIS.
ORTHO	714	OTH INFLAMM POLYARTHROP.
ORTHO	716	ARTHROPATHIES NEC/NOS.
ORTHO	717	INTERNAL DERANGEMENT KNEE.
ORTHO	718	OTHER JOINT DERANGEMENT.
ORTHO	720	INFLAM SPONDYLOPATHIES.
ORTHO	721	SPONDYLOSIS ET AL.
ORTHO	722	INTERVERTEBRAL DISC DIS.
ORTHO	723	OTHER CERVICAL SPINE DI.
ORTHO	724	BACK DISORDER NEC & NOS.
ORTHO	725	POLYMYALGIA RHEUMATICA.
ORTHO	728	DIS OF MUSCLE/LIG/FASCIA.
ORTHO	730	OSTEOMYELITIS.
ORTHO	731	OSTEITIS DEFORMANS.
ORTHO	732	OSTEOCHONDROPATHIES.
ORTHO	781	NERV/MUSCULSKEL SYS SYMP.
ORTHO	800	SKULL VAULT FRACTURE.
ORTHO	801	SKULL BASE FRACTURE.
ORTHO	802	FRACTURE OF FACE BONES.
ORTHO	803	OTHER SKULL FRACTURE.
ORTHO	804	MULT FX SKULL W OTH BONE.
ORTHO	805	VERTEBRL FX W/O CORD INJ.
ORTHO	806	VERTEBRAL FX W CORD INJ.
ORTHO	807	FX RIB/STERN/LARYN/TRACH.
ORTHO	808	PELVIC FRACTURE.
ORTHO	809	FRACTURE OF TRUK BONES.
ORTHO	810	CLAVICLE FRACTURE
ORTHO	811	SCAPULA FRACTURE.
ORTHO	812	HUMERUS FRACTURE.
ORTHO	813	RADIUS & ULNA FRACTURE.
ORTHO	814	CARPAL FRACTURE.
ORTHO	815	METACARPAL FRACTURE.
ORTHO	816	FRACTURE PHALANGES, HAND.
ORTHO	817	MULTIPLE HAND FRACTURES.
ORTHO	818	FRACTURE ARM MULT/NOS.
ORTHO	819	FX ARMS W RIB/STERNUM.
ORTHO	820	FRACTURE NECK OF FEMUR.
ORTHO	821	OTHER FEMORAL FRACTURE.
ORTHO	822	PATELLA FRACTURE.
ORTHO	823	TIBIA & FIBULA FRACTURE.
ORTHO	824	ANKLE FRACTURE.
ORTHO	825	FX OF TARSAL/METATARSAL.

TABLE 8.—ICD–9 CODES USED TO DEFINE DIAGNOSTIC GROUPS—Continued

DG	ICD–9 Code	Description
ORTHO	827	LOWER LIMB FRACTURE NEC.
ORTHO	828	FX LEGS W ARM/RIB.
ORTHO	831	SHOULDER DISLOCATION.
ORTHO	832	ELBOW DISLOCATION.
ORTHO	833	WRIST DISLOCATION.
ORTHO	835	DISLOCATION OF HIP.
ORTHO	836	DISLOCATION OF KNEE.
ORTHO	837	DISLOCATION OF ANKLE.
ORTHO	838	DISLOCATION OF FOOT.
ORTHO	846	SPRAIN SACROILIAC REGION.
ORTHO	847	SPRAIN OF BACK NEC/NOS.
ORTHO	88	TRAUMATIC AMPUT ARM/HAND.
ORTHO	896	TRAUMATIC AMPUTAT FOOT.
ORTHO	897	TRAUMATIC AMPUTATION LEG.
ORTHO	927	CRUSHING INJ UPPER LIMB.
ORTHO	928	CRUSHING INJURY OF LEG.
NEURO	13	CNS TUBERCULOSIS.
NEURO	45	ACUTE POLIOMYELITIS.
NEURO	46	CNS SLOW VIRUS INFECTION.
NEURO	47	ENTEROVIRAL MENINGITIS.
NEURO	48	OTH ENTEROVIRAL CNS DIS.
NEURO	49	OTH NONARTHROPOD CNS VIR.
NEURO	191	MALIGNANT NEOPLASM BRAIN.
NEURO	192	MAL NEO NERVE NEC/NOS.
NEURO	225	BENIGN NEO NERVOUS SYST.
NEURO	320	BACTERIAL MENINGITIS.
NEURO	321	OTH ORGANISM MENINGITIS
NEURO	322	MENINGITIS, UNSPECIFIED.
NEURO	323	ENCEPHALOMYELITIS.
NEURO	324	CNS ABSCESS.
NEURO	325	PHLEBITIS INTRCRAN SINU.
NEURO	326	LATE EFF CNS ABSCESS.
NEURO	330	CEREBRAL DEGEN IN CHILD.
NEURO	331	CEREBRAL DEGENERATION.
NEURO	332	PARKINSON'S DISEASE.
NEURO	333	EXTRAPYRAMIDAL DIS NEC.
NEURO	334	SPINOCEREBELLAR DISEASE.
NEURO	335	ANT HORN CELL DISEASE.
NEURO	336	SPINAL CORD DISEASE NEC.
NEURO	337	AUTONOMIC NERVE DISORDER.
NEURO	340	MULTIPLE SCLEROSIS.
NEURO	341	OTHER CNS DEMYELINATION.
NEURO	342	HEMIPLEGIA.
NEURO	343	INFANTILE CEREBRAL PALSY.
NEURO	344	OTH PARALYTIC SYNDROMES.
NEURO	347	CATAPLEXY AND NARCOLEPS.
NEURO	348	OTHER BRAIN CONDITIONS.
NEURO	349	CNS DISORDER NEC/NOS.
NEURO	352	DISORDER CRAN NERVE NEC.
NEURO	356	HERED PERIPH NEUROPATHY.
NEURO	357	INFLAM/TOXIC NEUROPATHY.
NEURO	358	MYONEURAL DISORDERS .
NEURO	392	RHEUMATIC CHOREA.
NEURO	430	SUBARACHNOID HEMORRHAGE.
NEURO	431	INTRACEREBRAL HEMORRHAGE.
NEURO	432	INTRACRANIAL HEM NEC/NOS.
NEURO	433	PRECEREBRAL OCCLUSION.
NEURO	434	CEREBRAL ARTERY OCCLUS.
NEURO	435	TRANSIENT CEREB ISCHEMIA.
NEURO	436	CVA .
NEURO	437	OTH CEREBROVASC DISEASE.
NEURO	741	SPINA BIFIDA.
NEURO	742	OTH NERVOUS SYSTEM ANOM.
NEURO	851	CEREBRAL LACER/CONTUSION.
NEURO	852	MENINGEAL HEM FOLLOW INJ.
NEURO	853	OTH TRAUMATIC BRAIN HEM.
NEURO	854	OTHER BRAIN INJURY.
NEURO	907	LATE EFF NERV SYSTEM INJ.
NEURO	950	INJ OPTIC NERV/PATHWAYS.
NEURO	951	CRANIAL NERVE INJURY NEC.
NEURO	952	SPINAL CORD INJ W/O FX.
NEURO	953	INJ NERVE ROOT/SPIN PLEX.

TABLE 8.—ICD–9 CODES USED TO DEFINE DIAGNOSTIC GROUPS—Continued

DG	ICD–9 Code	Description
NEURO	954	INJURY OTH TRUNK NERVE.
NEURO	955	INJ PERIPH NERV SHLD/ARM.
NEURO	956	INJ PERIPH NERV PELV/LEG.
DM	250	DIABETES MELLITUS.

3. Determining the Case-Mix Indices

As discussed in section I. of this regulation, sections 1895(b)(4)(A)(i) and (b)(4)(B) of the Act require us to establish and make appropriate case-mix adjustments to the episode payment in a manner that explains a significant amount of the variation in cost. Case-mix adjustment takes into account the relative resource use of different patient types served by an HHA. The goal of a case-mix payment system is to measure the intensity of care and services required for each patient and translate it into an appropriate payment level. A patient's need for care resources is represented by an index score or relative weight based on the combination of clinical, functional, and service utilization indicators measured at the start of the 60-day episode. The decision tree logic for the case-mix groups is discussed in section II.C.2. of this regulation.

As also discussed in section I.C. of this regulation, the patient classification system used under the HHA PPS is the Clinical Model developed by Abt, an 80-group patient case-mix classification system (HHRGs), which provides the basis for the case-mix payment indices used both for standardization of the 60-day episode payments and subsequently to establish the case-mix adjustments to the 60-day episode payment for patients with different home health service needs. These indices reflect the weight of relative resource utilization or value of each of the 80 HHRGs relative to all of the groups.

These payment indices are based on patient data (from the OASIS–B supplemented by an additional non-OASIS treatment variable) and average resource use per discipline. To arrive at an estimate of resource use through visit logs, time is weighted by mean labor cost for each of the six disciplines covered under the Medicare home health benefit providing the visit. Medicare claims were linked to the OASIS data and the visit log data to verify the visits and provide utilization measures.

Construction of the Relative Weights for the HHRGs

Each of the 80 HHRGs is assigned a relative weight that, when multiplied by the wage-adjusted standard episode amount, comprises the case-mix-adjusted payment for each episode. The relative weights measure the average resource intensity of the episodes in each HHRG relative to the average resource intensity of all episodes. The data that Abt used to develop the case-mix groups of the HHRG classification system were also used to construct the relative weights reported in Table 9. At this time, they are the only data that contain information on resource intensity by HHRG. Because we are proposing to pay episodes with four or fewer visits on a per-visit basis, we excluded those episodes from the data used to construct the relative weights. The resulting data set contained 19,449 episodes. The measure of resource intensity used in the computation was the same variable that Abt used in developing the HHRG system: the minutes spent on each visit were multiplied by a standard national labor cost per minute for the type of visit (skilled nursing, home health aide, etc.); these standard visit costs were then summed for all visits within the episode to obtain the cost for the episode.

If a large national data set that linked resource utilization and HHRG classifications for 60-day episodes of care were available, we would have computed the relative weights in the following manner: First, we would have calculated the mean cost per episode for each HHRG, as well as the mean cost for all episodes. Then, each mean cost would have been divided by the mean cost of all episodes. Calculating the relative weights in this manner ensures that the relative weight of the average episode is 1.0.

However, since only a sample data set is available, it was necessary to modify this method in order to obtain reliable relative weights. The Abt data set is large enough to establish the case-mix groups and to calculate average resource use for many of the HHRG categories. However, there are also many HHRGs with relatively small numbers of episodes for which reliable estimates cannot be made. As a result, it was necessary to make full use of the information contained in the sample. We are proposing to revise the case mix weights to adjust for changes in patient population, actual changes in home health care practice patterns, and changes in the coding or classification of patients that do not reflect real changes in case mix.

All episodes at each level of the clinical, functional, and service domains were employed to estimate the resource use for specific combinations of clinical, functional, and service levels. For example, in estimating the average cost of HHRG C3F4S1, we used data for all C3 episodes, all F4 episodes, and all S1 episodes. The method involved computing an average cost for each clinical level (C0, C1, C2, and C3), each functional level (F0, F1, F2, F3, and F4), and each service level (S0, S1, S2, and S3). Then the average additional cost of each level above the C0F0S0 base cost was computed: C1–C0, C2–C0, C3–C0; F1–F0, F2–F0, F3–F0, F4–F0; S1–S0, S2–S0, S3–S0. Finally, these average additional cost amounts were added to the base cost (C0F0S0) to obtain the average cost of each HHRG. For example, to calculate the average cost of C1F1S0, take the C0F0S0 amount and add to it the additional cost of C1 cases (C1–C0) and the additional cost of F1 cases (F1–F0); likewise, to obtain the average cost of C3F4S1, start with C0F0S0 and add to it C3–C0, F4–F0, and S1–S0.

In more precise statistical terms, the mean cost estimates described above were obtained using multiple regression analysis. To account for the stratification of the sample, weighted regression was used. We regressed the dependent variable (the Abt resource cost) on categorical variables C1–C3, F1–F4, and S1–S3. By omitting C0, F0, and S0 from the regression, the intercept term measures the mean cost of the C0F0S0 group. The regression coefficients of each of the clinical, functional, and service levels measure the mean difference in cost between the given level and the base cost (C0F0S0). For example, the coefficient of the C2 variable measures the average cost difference, C2–C0.

Example: Calculation of Relative Weight for HHRG C3F4S1

Average cost for HHRG C0F0S0:	$1371.44
Additional average cost of C3:	+1121.77

Additional average cost of F4:	+1239.00	Average cost of C3F4S1:	$3,950.30	Relative weight of C3F4S1: Average cost of C3F4S1 divided by average cost of all episodes: $3950.30/$2599.56=1.5196
Additional average cost of S1:	+218.09			

TABLE 9—RELATIVE CASE-MIX WEIGHTS CORRESPONDING TO HOME HEALTH RESOURCE GROUPS

HHRG group	HHRG description	Case mix weight
C0F0S0	"Clinical=Min, Functional=Min, Service=Min"	0.5276
C0F0S1	"Clinical=Min, Functional=Min, Service=Low"	0.6115
C0F0S2	"Clinical=Min, Functional=Min, Service=Mod"	1.4400
C0F0S3	"Clinical=Min, Functional=Min, Service=High"	1.6620
C0F1S0	"Clinical=Min, Functional=Low, Service=Min"	0.6015
C0F1S1	"Clinical=Min, Functional=Low, Service=Low"	0.6854
C0F1S2	"Clinical=Min, Functional=Low, Service=Mod"	1.5140
C0F1S3	"Clinical=Min, Functional=Low, Service=High"	1.7360
C0F2S0	"Clinical=Min, Functional=Mod, Service=Min"	0.7234
C0F2S1	"Clinical=Min, Functional=Mod, Service=Low"	0.8073
C0F2S2	"Clinical=Min, Functional=Mod, Service=Mod"	1.6359
C0F2S3	"Clinical=Min, Functional=Mod, Service=High"	1.8579
C0F3S0	"Clinical=Min, Functional=High, Service=Min"	0.7698
C0F3S1	"Clinical=Min, Functional=High, Service=Low"	0.8537
C0F3S2	"Clinical=Min, Functional=High, Service=Mod"	1.6822
C0F3S3	"Clinical=Min, Functional=High, Service=High"	1.9043
C0F4S0	"Clinical=Min, Functional=Max, Service=Min"	1.0042
C0F4S1	"Clinical=Min, Functional=Max, Service=Low"	1.0881
C0F4S2	"Clinical=Min, Functional=Max, Service=Mod"	1.9166
C0F4S3	"Clinical=Min, Functional=Max, Service=High"	2.1386
C1F0S0	"Clinical=Low, Functional=Min, Service=Min"	0.6131
C1F0S1	"Clinical=Low, Functional=Min, Service=Low"	0.6970
C1F0S2	"Clinical=Low, Functional=Min, Service=Mod"	1.5255
C1F0S3	"Clinical=Low, Functional=Min, Service=High"	1.7475
C1F1S0	"Clinical=Low, Functional=Low, Service=Min"	0.6870
C1F1S1	"Clinical=Low, Functional=Low, Service=Low"	0.7709
C1F1S2	"Clinical=Low, Functional=Low, Service=Mod"	1.5995
C1F1S3	"Clinical=Low, Functional=Low, Service=High"	1.8215
C1F2S0	"Clinical=Low, Functional=Mod, Service=Min"	0.8089
C1F2S1	"Clinical=Low, Functional=Mod, Service=Low"	0.8928
C1F2S2	"Clinical=Low, Functional=Mod, Service=Mod"	1.7214
C1F2S3	"Clinical=Low, Functional=Mod, Service=High"	1.9434
C1F3S0	"Clinical=Low, Functional=High, Service=Min"	0.8553
C1F3S1	"Clinical=Low, Functional=High, Service=Low"	0.9392
C1F3S2	"Clinical=Low, Functional=High, Service=Mod"	1.7677
C1F3S3	"Clinical=Low, Functional=High, Service=High"	1.9898
C1F4S0	"Clinical=Low, Functional=Max, Service=Min"	1.0897
C1F4S1	"Clinical=Low, Functional=Max, Service=Low"	1.1736
C1F4S2	"Clinical=Low, Functional=Max, Service=Mod"	2.0021
C1F4S3	"Clinical=Low, Functional=Max, Service=High"	2.2241
C2F0S0	"Clinical=Mod, Functional=Min, Service=Min"	0.7192
C2F0S1	"Clinical=Mod, Functional=Min, Service=Low"	0.8031
C2F0S2	"Clinical=Mod, Functional=Min, Service=Mod"	1.6316
C2F0S3	"Clinical=Mod, Functional=Min, Service=High"	1.8536
C2F1S0	"Clinical=Mod, Functional=Low, Service=Min"	0.7932
C2F1S1	"Clinical=Mod, Functional=Low, Service=Low"	0.8771
C2F1S2	"Clinical=Mod, Functional=Low, Service=Mod"	1.7056
C2F1S3	"Clinical=Mod, Functional=Low, Service=High"	1.9276
C2F2S0	"Clinical=Mod, Functional=Mod, Service=Min"	0.9150
C2F2S1	"Clinical=Mod, Functional=Mod, Service=Low"	0.9989
C2F2S2	"Clinical=Mod, Functional=Mod, Service=Mod"	1.8275
C2F2S3	"Clinical=Mod, Functional=Mod, Service=High"	2.0495
C2F3S0	"Clinical=Mod, Functional=High, Service=Min"	0.9614
C2F3S1	"Clinical=Mod, Functional=High, Service=Low"	1.0453
C2F3S2	"Clinical=Mod, Functional=High, Service=Mod"	1.8738
C2F3S3	"Clinical=Mod, Functional=High, Service=High"	2.0959
C2F4S0	"Clinical=Mod, Functional=Max, Service=Min"	1.1958
C2F4S1	"Clinical=Mod, Functional=Max, Service=Low"	1.2797
C2F4S2	"Clinical=Mod, Functional=Max, Service=Mod"	2.1082
C2F4S3	"Clinical=Mod, Functional=Max, Service=High"	2.3303
C3F0S0	"Clinical=High, Functional=Min, Service=Min"	0.9591
C3F0S1	"Clinical=High, Functional=Min, Service=Low"	1.0430
C3F0S2	"Clinical=High, Functional=Min, Service=Mod"	1.8715
C3F0S3	"Clinical=High, Functional=Min, Service=High"	2.0935
C3F1S0	"Clinical=High, Functional=Low, Service=Min"	1.0331
C3F1S1	"Clinical=High, Functional=Low, Service=Low"	1.1170
C3F1S2	"Clinical=High, Functional=Low, Service=Mod"	1.9455

TABLE 9—RELATIVE CASE-MIX WEIGHTS CORRESPONDING TO HOME HEALTH RESOURCE GROUPS—Continued

HHRG group	HHRG description	Case mix weight
C3F1S3	"Clinical=High, Functional=Low, Service=High"	2.1675
C3F2S0	"Clinical=High, Functional=Mod, Service=Min"	1.1550
C3F2S1	"Clinical=High, Functional=Mod, Service=Low"	1.2389
C3F2S2	"Clinical=High, Functional=Mod, Service=Mod"	2.0674
C3F2S3	"Clinical=High, Functional=Mod, Service=High"	2.2894
C3F3S0	"Clinical=High, Functional=High, Service=Min"	1.2013
C3F3S1	"Clinical=High, Functional=High, Service=Low"	1.2852
C3F3S2	"Clinical=High, Functional=High, Service=Mod"	2.1138
C3F3S3	"Clinical=High, Functional=High, Service=High"	2.3358
C3F4S0	"Clinical=High, Functional=Max, Service=Min"	1.4357
C3F4S1	"Clinical=High, Functional=Max, Service=Low"	1.5196
C3F4S2	"Clinical=High, Functional=Max, Service=Mod"	2.3481
C3F4S3	"Clinical=High, Functional=Max, Service=High"	2.5702

4. Application of the Clinical Model Patient Classification System

The following are several illustrative examples.

Case 1

An 83-year-old woman was discharged from a hospital 2 days ago after admission for a stroke and referred for home health care. She has residual right hemiparesis and also has diabetes and hypertension. She is able to dress her upper body if clothes are laid out for her, but needs help putting on socks, nylons and sometimes slacks. She needs assistance with bathing to get in and out of the tub and uses a cane for ambulating on flat surfaces and to transfer from sitting to standing, but needs another person's assistance to go up and down stairs. She is occasionally incontinent of urine, especially at night.

Her plan of care includes—

Physical therapy: two 45-minute visits per week for 9 weeks
Occupational therapy: one 45-minute visit per week for 4 weeks
Skilled nursing: one visit per week for 2 weeks, then one visit every other week for 7 weeks
Aide: one visit twice a week for 9 weeks
Scoring: Clinical Severity=19 (for neurologic diagnosis)+8 urinary incontinence=27 high severity
Functional Status Domain=4 (for dressing)+9 (bathing)+6 (locomotion)=19 Moderate severity
Service Domain=2 (hospital discharge)+4 (therapy more than 8 hours) Moderate severity
HRG=C3F2S2

Case 2

A 73-year-old man with amyotrophic lateral sclerosis (ALS) is referred for home health care after a hospitalization for an aspiration pneumonia. Because of his inability to swallow, he had a gastrostomy tube placed during the hospitalization and now receives enteral feeding. He is dependent in all activities of daily living (ADLs).

His plan of care includes—

Skilled nursing three times a week for 9 weeks
Aide services daily for 9 weeks
Scoring
Clinical severity=19 (for neurological)+20 (for enteral feeding) High
Functional status=27 High severity
Service Domain=0 Minimum severity
HRG=C3F3S0

5. Background on Case-Mix Research Project for a National Home Health PPS

In 1996, in anticipation of the Medicare program's eventual adoption of OASIS assessment data, we began research with a sample of 90 HHAs to develop a case-mix adjustment system for use under a future national prospective payment for home health care. The project was conducted under contract to Abt Associates, Inc., of Cambridge, Mass. (Contract Number 500–96–0003/TO2). Agencies participating in the sample have collected OASIS data supplemented by approximately 50 additional assessment items on all patients newly admitted between October 1997 and April 1998 (this group of patients is called the six-month cohort) to enable comparisons among items in terms of their utility in measuring case mix. At the same time, agencies in the study collected data on every home health visit to members of the cohort. Visit information was collected on visit logs specially designed for each home health service discipline (skilled nursing, physical therapy, medical social work, etc.). The visit logs provided the fundamental measure of resource use for developing case-mix groups. This measure is the visit time, which is converted into a standardized resource cost using Bureau of Labor Statistics hourly wage data (see below for further description).

The development of case-mix groups requires identifying groups of patients with similar resource cost and similar clinical and functional characteristics. To do this, data analyses studied the statistical association between clinical and functional characteristics, as measured by the assessments, and resource cost, as measured by the standardized resource cost. In choosing patient characteristics for inclusion in the case-mix adjuster, and in arranging those characteristics into a system of groups, the system's developers gave considerable weight to the clinical diagnostic process. We sought data elements and an overall system that reflected a clinician's perspective when confronted with a patient with care needs to be assessed. We also gave considerable weight to simplicity in the system's overall structure, and thus opted for a straightforward three-dimensional approach. Under this approach, a patient's case-mix classification is found by assessing the patient on each of the three dimensions, and then combining the results from the three dimensions. Further details on the methods of the study and the resulting case-mix system follow.

Methods

Sample Selection

Agencies were recruited for the case-mix research in the spring of 1997. The sample design was intended to permit the computation of nationally representative results. Eight States (Arkansas, California, Florida, Illinois, Massachusetts, Pennsylvania, Texas, and Wisconsin) were selected to be representative of four census geographic regions: northeast, north central, south, and west. Sample selection was also intended to ensure that the four major auspices types (freestanding for-profit, freestanding voluntary/private nonprofit, hospital-based, and

government) and both urban and rural agencies would be included. In addition, selection criteria included the historical practice pattern of the agencies, in order to ensure representation of agencies with relatively low, moderate, and high numbers of visits per episode in their region. When cross-classified, the four selection criteria—region (four classes), auspices (four classes), urban/rural (two classes), and practice pattern (three classes)— produced a theoretical stratification scheme consisting of 96 cells. Target sample sizes for the cells were proportional to the universe populations of the cells (for example, some of the cells had zero agencies in the universe), and totaled 90 agencies for the sample overall. To be selected, agencies had to have active Medicare certification before July 1, 1993, at least 50 Medicare patients in CY 1995, could not be participating in other HCFA demonstrations involving collection of OASIS data, and could not have been participating in the treatment group of the per-visit home health prospective payment demonstration.

Considerable effort was made to recruit and inform potential participants of the study goals and operations, and potential benefits to themselves. Potential participants were told they could expect to receive three main benefits from participation—management reports based on the data to be collected during the study, technical assistance and training on OASIS procedures, and reimbursement for data collection costs. Out of 1,797 eligible providers, approximately 290 agencies actually volunteered to participate in the study. Agencies were randomly selected from among the volunteers within each sampling cell in July 1997. Further details of the recruitment process are provided in Abt Associates, First Interim Report, July 1998 (revised December 1998).

Agency Training

The next phase of the study was training the agencies in data collection procedures. Abt Associates staff developed a Procedures Manual covering the project overview, directions on administering patient assessments using the OASIS and supplemental items (OASIS and the supplemental items were termed OASIS+, data storage and transfer procedures, and information on training techniques for agencies to use internally with their staff. Particular attention was given to item-by-item guidelines for OASIS elements, in part to ensure the reliability of the data collected for developing the case-mix adjuster. The uniform assessments afforded by OASIS were a strength of the project, because reliable data allow analysts to accurately evaluate the contribution of potential case-mix variables to a case-mix adjuster.

Additional training activities included slides and other written materials, and 2-day training sessions for participants. At least one training session was held in each of the 8 States in July and August of 1997. Training sessions were attended by 296 staff from the 90 participating agencies, and covered the meaning and intent of the OASIS and other assessment items, as well as operational procedures and data management. A significant effort was made to educate staff in methods of training and motivating their colleagues at the participating agency. After the sessions, follow-up training activities and other educational contacts were conducted by the contractor. Once the study was underway, Abt Associates continued to promote communication with the agencies, and to foster information-sharing among agencies, through activities such as conference calls, meetings, and an e-mail discussion group.

Data Resources

The two basic data sources for the study are case-mix explanatory variables from the patient assessments and a resource use variable from the visit data. Claims data comprised a third data source, and were used to verify membership in the 6-month cohort and to supply several additional potential case-mix explanatory variables for testing. All three sources of data were collected on the 6-month cohort from admission until the end of home care in the participating agency or March through April 1999, whichever came first.

OASIS data. Study agencies collected patient characteristics data using the OASIS assessment supplemented by additional assessment items at the following points: admission to home health, resumption of care following an inpatient stay, at follow up (every 57 to 62 days until discharge), upon transfer to an inpatient facility, and at discharge or death at home. The 129 patient data elements cover the following domains: patient demographics and health history, living arrangements, supportive assistance, sensory status, integumentary status, respiratory status, elimination status, neuro/emotional/behavioral status, ADLs and IADLs, medications, equipment management, emergent care use, and discharge disposition. The items supplemental to OASIS were integrated in the following OASIS domains: demographics and patient history; living arrangements; supportive assistance; integumentary status; elimination status; neuro/emotional/behavioral status; ADLs and IADLs; and medications. An additional dimension was added to the assessment data set, nutrition/hydration status, as the research literature indicates that nutritional status and the potential for dehydration are important predictors of poorer outcomes. Development of new items was beyond the scope of the project; therefore, supplemental items generally came from previously validated instruments such as the Minimum Data Set for Home Care (MDS–HC) (Morris, J. N., B. E. Fries, and D. Mehr, et al. ''A Comprehensive Clinical Assessment in Community Settings.'' November 1996a, unpublished manuscript; and Morris, J. N. The Minimum Data Set for Home Care. Presentation for ''The Key to Elderly Care in an Aging World'' in Reykjavik, Iceland, 1996b).

Visit log data. Visit information was recorded on a visit log separately tailored for each type of visit (for example, home health aide or medical social worker). The visit log consists of identifying information, starting and ending times, and a column of items for checkoff that detail the services performed during the visit and factors explaining the time spent. The checkoff items were not intended to capture information on all activities performed in the home—only those likely to significantly affect the length of the visits. The starting and ending times allow the calculation of total visit time for the key resource use measure for the study. To arrive at a standardized measure of resource use, time is weighted by the average labor cost for the discipline of the clinician making the visit.

Standardized measure of resource use. Previous research on case mix generally used a measure of resource use based on the count of visits. However, visit lengths may vary substantially, making visit counts a relatively imprecise measure of resource use. The case-mix study measured time spent on visits, rather than the number of visits themselves, to provide a more reliable measure resource use than did previous research. The mean labor cost estimate for the standardized resource use measure was based on hourly wage data from HHA respondents to the U.S. Bureau of Labor Statistics Occupational Employment Survey (OES). The survey collects wage data by occupation and industry. The Standard Industrial Classification industry category used for our estimate excludes agencies under

government auspices and hospital-based agencies where workers are employed by the hospital. However, government civil service grades or hospital pay for specialized occupations may systematically depart from market wage rates. Our mean labor cost included an estimate of benefits. Following our salary equivalency estimates for therapists, the benefits were estimated exclusive of supplemental pay. The occupational category mix within each discipline (for example, registered nurses and licensed practical nurses delivering skilled nursing visits) was estimated from the OES data. For further details on the derivation of the mean labor cost used in the study, see Appendix E in Abt Associates, Inc., First Interim Report, July 1998, Revised December 1998.

Medicare claims. The Medicare claims for the 6-month cohort were linked to the patient characteristics data and visit log data to verify membership in the 6-month cohort and to provide utilization measures (for example, therapy use or institutional health care services received during the episode). The Medicare claims were also used to simulate 60-day episodes, using the from-and through-dates on the claims.

Data collection and management. The project's data management procedures were designed to support agencies in the collection and submission of consistent and reliable data on patient characteristics and service use. Participating agencies entered the patient assessment data into an electronic data file using software provided by Abt Associates or their own data systems. Data entry on site was required because this allowed a computer program to edit the data and to report any errors for correction before the data were submitted to Abt Associates. The visit logs were printed in different colors to minimize the chances for confusion. The forms were designed for optical scanning of the checkoff boxes, and the agencies forwarded the originals directly to an optical scanning contractor. The data were double entered and scanned, and the hard copy forms were sent to Abt Associates, along with the electronic data files, for cleaning. Abt processed all visit log forms received from project agencies, and generated reports for the agencies indicating the outcomes of this editing process. When agencies received the error reports and the associated hard copy logs, their responsibility was to review the problems, make any changes, and resubmit the forms.

Data preparation. The OASIS and other assessment items that had been submitted by agencies had to be merged with the records for cohort patients as defined using the claims data. Iterative matching algorithms, and intensive manual review of potential matches, were used to match assessment records to the claims patient records. Of 21,426 patients identified for the 6-month cohort from claims, 17,351 had one or more assessments that could be matched at the time Abt Associates constructed the analytic file used for case-mix system development. Visit logs on more than 750,000 visits that had been submitted by project agencies and processed by August 1998 were available for matching to claims records. Because of the occasional presence of inaccurate data in the identifying fields on the visit logs, it was necessary to protect against false matching based on incorrect visit log data. Even with an exact match on one key matching field (besides the necessary match on provider, discipline and date), it was required that the rest of the key fields be compatible. To accomplish this, a matching algorithm was developed by Abt Associates and applied to comparisons of all possible match fields. Based on the algorithm, 588,846 logged visits were matched to claims for cohort patients. The remaining logs come from visits to non-cohort Medicare patients at participating providers and visits to non-Medicare patients, inasmuch as some agencies completed logs for all of their home care patients, regardless of payor, to simplify recordkeeping procedures during the study. In addition, some of the unmatched logs likely come from an unknown number of visits to patients in the 6-month cohort whose identifying information was not sufficient to make a match at the time of file construction. (For further details of these matching procedures, see Abt Associates, Second Interim Report, August 1999.)

Analytic file construction. The project data were assembled to simulate a 60-day episode. In order to estimate resource use for each 60-day period of care, we developed certain decision rules for allocating claims and visit logs by discipline to 60-day ''windows'' of time, or episodes. Because we superimposed the 60-day episodes on the pre-existing claims stream, an episode could start and end sometime during the period covered by a claim. Many claims did not show the date of each visit; therefore, an algorithm was needed to allocate visits when a claim period fell into more than one episode. In general, the visit logs were used to make this allocation since they provided individual visit dates. If some logs were missing, the percentages of nonmissing logs falling in the claim service period before and after the episode date boundary were used to allocate visits identified on the claim to the two episodes straddled by the claim. If no logs were available, the visits from claims were allocated to the episodes in proportion to the number of days covered by the claim that fell in each 60-day episode. In episodes with missing logs, additional steps were taken to estimate the missing minutes of care that would have been measured in the missing logs. Efforts were made to use all available patient-and discipline-specific information in the imputation. Combining these procedures with a rule requiring a 60-day gap in service before a new start of care could be initiated for a cohort member resulted in a total of 31,725 payment episodes—an average of approximately 1.4 60-day episodes per cohort member with the data available at the time of file construction. After resources were calculated for all payment segments, analysis of the data revealed the presence of extreme values of mean minutes per visit by discipline within the 60-day episode. Visit lengths in episodes with extreme values (defined as the highest and lowest 0.25 percent of cases within each home health discipline) were replaced with agency-level mean visit lengths by discipline. A total of 335 episodes (1 percent) were adjusted in this manner, resulting in an insignificant change in mean total resources per 60-day episode. These allocation, imputation, and data adjustment procedures are described in detail in Abt Associates, Inc., Second Interim Report, August 1999.

Linking the Assessment Data

To complete the analytic file, the patient assessment data had to be added to the simulated episode file that contained data on visits and resource costs. To protect the reliability of the assessment data for the purpose of case-mix system development, assessments were linked to an episode in the simulation file only if the assessment was conducted within 14 days of the start of the episode.

Analytical Approach

Initial development of the case-mix model used data from 4,303 episodes pertaining primarily to the first 60-day period of care for members of the 6-month cohort who enrolled from October 1997 through December 1997. Subsequent refinement of the model occurred after the analytic file was enlarged with data accumulated later to create an augmented file. The augmented file was partitioned into a

development sample and a validation sample. The development sample, consisting of 10,413 initial 60-day episodes for cohort members and 2,059 subsequent episodes, was used for the refinement phase. The development sample episodes were randomly selected from the augmented file. The remaining episodes—6,963 initial episodes and 1,331 subsequent episodes—were reserved to validate the final model.

The basic approach to case-mix development was to use the patient data and other appropriate data to identify candidate case-mix adjusters or their components, and then estimate their ability to explain variation in resource use over the course of the simulated 60-day episode. The measure of ''explanatory power'' used to evaluate the overall system and its component dimensions as development proceeded was the coefficient of determination, or R-squared.

The R-squared measures the proportion of variation in standardized resource costs that is explained by the case-mix groups. R-squared cannot be negative or greater than one. An R-squared of one would indicate that each case-mix group's average resource cost exactly predicts the individual resource cost of each episode in the case-mix group. In actual applications in social science research, an R-squared of one could be obtained only if each observation comprised its own group. The R-squared for the final home health case-mix model is .32. Based on the R-squared results, the home health case-mix system has predictive accuracy comparable to its counterparts from other payment systems. The diagnosis-related group (DRG) system used for hospital PPS has an R-squared reported in various studies in the range of .26 to .33 (Worthman, Linda G. and Shan Cretin. Review of the Literature on Diagnosis Related Groups, A RAND Note, N–2492–HCFA, Santa Monica, CA, October 1986). The Resource Utilization Groups (RUGS)–III system of 44 case mix groups used for Medicare SNF per diem prospective payment has a reported R-squared as high as .56 (Fries, B. E., D. P. Schneider, and W. J. Foley, et al., ''Refining a Case-Mix Measure for Nursing Homes: Resource Utilization Groups (RUG/II).'' *Medical Care* 32:668–685, 1994). But comparisons between the SNF and home health case-mix measures must recognize that home health resource consumption is being ''predicted'' over a 60-day period rather than on a daily basis, and that factors other than case mix may be a stronger influence on resource consumption under home health, leaving less variation to be explained by case-mix variables. Additionally, there is evidence that the RUGS–III system in actual application under the Medicare program will achieve an R-squared of less than .56 (White, A., S. Pizer, and C. White. Refining Resource Utilization Groups (RUG–III) for a National Skilled Nursing Facility System: Technical Expert Panel Briefing. October 1998).

To construct alternative case-mix groupings, preliminary regression analyses were used to investigate the relative importance of various factors explaining resource use. Then, clinical judgment was used to identify and define clinically meaningful dimensions of case mix, taking into account the results from the regressions. Alternative ways of measuring and constructing the dimensions and relating them to one another in a complete structure were explored in consultation with clinical experts. Along with clinical considerations, policy and incentive implications of alternative variables or structures were also considered—particularly the implications of alternatives for promoting improvement in health and functional status and for making the adjuster vulnerable to manipulation for profit-maximization.

Another consideration was ease of implementing the system. For example, if all of the case-mix elements were available on the OASIS assessment, then adoption of the data collection procedures necessary for PPS would already be accomplished when agencies met the OASIS requirements of the revised Conditions of Participation, pending for the quality system. Thus, the resulting case-mix groupings, and their component dimensions, were evaluated and refined interactively with clinical, policy, and administrative input.

Case-mix development work under the Abt Associates contract produced two alternative case-mix models, dubbed the ''clinical'' model and the ''diagnostic'' model. The two models had many elements in common, but the diagnostic model gave more emphasis to medical diagnosis in measuring case mix. In the diagnostic model, patients were classified into one of seven diagnosis groups based on the home health primary diagnosis from the OASIS. Further subgrouping of the basic seven groups was based on clinical, functional, and utilization-related variables. There has been controversy regarding the relative advantages and disadvantages of a diagnostically-driven model. Proponents believe it more accurately reflects the way clinicians think about patients. It may also have the potential to create more homogeneous patient groupings, providing an opportunity to develop clinical, functional, and utilization criteria customized for different diagnoses. There are several disadvantages of the diagnostically-driven model, however. One is that only a relatively few diagnostic categories (notably orthopedic, neurological, diabetes, and skin wounds/lesions) carried significant explanatory power in the analyses. This suggests that diagnostic classification beyond these few categories brings little or no additional benefit in predictive accuracy. Also, the diagnosis-based approach usually leads to a model with a higher number of end-points that may make it more complex and difficult to use. Another disadvantage is that the use of diagnostic categories is problematic when dealing with a home care population that frequently has multiple diagnoses—the choice of a primary diagnosis to report could be unduly influenced by payment incentives. If the case-mix system were to consider multiple diagnoses simultaneously, the problem of incentive impacts on reporting might be reduced, but at the expense of more complexity in the adjuster. High predictive accuracy could outweigh these disadvantages, but the R-squared of the diagnostic model was not appreciably higher than the simpler clinical model.

The case-mix project analytic work occurred in three stages: early exploratory analyses, clinically driven development work, and refinements.

Early data analyses. We began exploratory analyses with the 4,303 observations available early in the analysis phase. These analyses relied mostly on regression equations to begin to understand which OASIS and other assessment variables might play an important role in an eventual case-mix adjuster, and to gauge how much variation in resource use beyond case mix alone could be explained in a mathematical model that included factors such as agency characteristics, economic characteristics in the agency's environment, and events taking place during the home health visit. These exploratory regressions suggested that up to .47 of the variation in resource use could be explained using regression analyses that accounted for a range of causal factors encompassing more than case mix. The equations included variables to measure clinical, functional, home environment, agency, and economic factors; home health treatment variables; and unusually time-consuming events taking place during

visits. These analyses highlighted several potentially appropriate and powerful variables in the data, such as preadmission location of the patient; certain acute conditions (orthopedic, neurologic, open wounds and lesions, diabetes); the presence of an ostomy; and functional dependence in locomotion. These models further suggested that restricting the explanatory variables to a subset of purely clinical and functional patient characteristics alone would produce an R-squared of approximately .20.

Clinically driven case-mix models: The project's goal from the outset was to develop a case-mix adjuster that defines a number of mutually exclusive patient groups that could be associated with differing resource use. Another criterion for the grouping system is that it should be clinically meaningful to the home health clinicians using it, by making use of recognized clinical categories and by being consistent with the clinical diagnostic process. A further criterion was simplicity; ideally, the system should be comprised of a limited number of mutually exclusive groups, and rules for classifying patients into groups should be straightforward.

As described in their project report (Abt Associates, Inc., Second Interim Report, August 1999), these objectives were approached by the Abt Associates nurse-clinicians through a combination of professional experience and study of previous work in the field reported in the literature. They first focused on identifying clinically significant indicators that address patient care needs from the perspective of the home health clinician. To help identify indicators, they considered the following questions: What level of complexity, severity and instability characterizes the patient's clinical condition? How much and what type of assistance does the patient need with activities of daily living? Does the patient require special therapies or high-tech services? What cognitive impairments, behavioral characteristics, risk factors, and environmental conditions affect the amount and type of care this patient will require? The Abt team then proceeded to review the patient assessment variables as a source of information for the indicators. The resulting list of variables was reviewed in light of several issues:

Policy implications: Some patient characteristics are not suitable as a basis for payment because they raise issues of equity or are otherwise questionable from a policy perspective. For example, the assessment's race and education variables were excluded, as were measures of the patient's social or physical environment (for example, unsanitary or unsafe conditions). Similarly, a case-mix adjustment system should not discourage assistance from family members of home care patients. Although many observers assume that the availability or efficacy of a caregiver is a significant influence on HHA resource consumption, adjusting payment in accordance with caregiver variables does not seem advisable.

Administrative ease: Initially, the list of assessment items capturing clinically significant indicators included some that were supplemental to the OASIS itself. Incorporating these items in the assessment would require modification of the OASIS data collection procedures and complicate the startup phase for OASIS data collection. We carefully examined the explanatory power of the individual items and sought substitutes for them whenever possible from among the existing OASIS items. We were able to find substitutes for almost all of them with little impact on the explanatory power of the model. The only notable exception was an assessment item about a history of falls, which analysis suggests could raise the explanatory power of the model by about one one-hundredth. However, because this was the only remaining variable that was not obtainable from the existing OASIS collection procedure, we weighed its utility against possible delays and confusion in OASIS implementation and decided not to use it. A utilization variable pertaining to inpatient stays occurring during the home health episode was also seriously considered but ultimately dropped because data limitations prevented us from clearly understanding its impact and because it posed an added data collection burden for home health providers. This item would have required the HHA to report whether a Medicare-covered inpatient stay occurred during the 60-day episode and the length of the stay. This information would be used to determine any adjustment to the case-mix group assignment at the end of the episode.

Other criteria: Reliability-related concerns were also a part of the item selection process. If case-mix variables address characteristics that appear subject to varying interpretation by assessing clinicians, the system could be vulnerable to manipulation by providers or patients. When payment increments are at stake, great care must be taken before accepting items even if they have been proved reliable in other circumstances, such as quality assurance research. For example, items on rehabilitative prognosis and overall prognosis were eliminated on these grounds. Some symptoms may be very short-lived, but if they are present at the time of the assessment they would have an impact on the case-mix adjuster if included. An example is a supplemental item such as ''In last 3 days, noticeable decrease in the amount of food client usually eats or fluids usually consumed?'' We determined that basing payment adjustments on potentially transient signs and symptoms captured by these items is ill-advised because their impact on care delivery is uncertain at best. In addition, diagnoses that were candidates for inclusion in broader diagnosis groups were reviewed by a member of our clinical staff from the perspective of their reliability as markers for resource-intensive conditions.

Incentive effects: Unintended incentive effects could result from using variables that reward providers for negative practice patterns, such as the use of a urinary catheter absent clinical need for the device.

Structure of the system for case-mix measurement. In addition to studying individual variables from the perspectives of explanatory power, policy and administrative implications, and reliability, it was necessary to define the system's decision logic, or structure. Examples of other grouping models developed for research purposes, case-mix classification, risk adjustment or care and treatment were studied to suggest ways of categorizing functional impairment, clinical severity, and other patient characteristics—such as whether to group patient characteristics via distinct dimensions of health status (for example, functional versus clinical); whether to consider bifurcations of groups for which partitioning would produce clinical and statistical meaning (that is, ADL ''splits,'' as the RUG–III system uses); the desirability of symmetrical versus asymmetrical models; and whether to create an indexing system or a categorical system. For example, when considering issues such as cognition, we considered whether these variables would be more appropriately captured within a clinical or functional domain, or whether they would provide more clinical meaning (or statistical power) if used as a binary split (that is, yes/no cognitive impairment) after clinical and functional groups were established.

Similarly, in our consideration of existing classification systems, we examined the clinical value of different structural and operational features of systems. The Nursing Severity Index, for example, adds points per each qualifying nursing diagnosis and sums to a total score. The total score, or index, reflects the patient's severity, with a

total index of 34 reflecting the highest severity of illness. Unlike the NSI, the RUG–III classification system is a hierarchical system, with seven general categories that are placed in general order of costs associated with caring for residents. The first category, or top split, is rehabilitation; the last is reduced physical function. As we reviewed these systems, we gave consideration to which type of system seemed least complex for use by home health clinicians, most clinically-intuitive, and most feasible to operationalize, given the nature of the assessment data set.

Abt Associates used a computer package called PC-Group, which creates decision trees whose terminal nodes may be regarded as case-mix groups. This package allows the analyst to ''grow'' the tree interactively, which means considerable judgment can be imposed in selecting and dividing nodes as the tree is constructed.

To produce a workable product with the package, it was necessary for the Abt analysts to summarize their variables first. Based on the conceptual work and literature review conducted during the project, they arrived at a small set of dimensions for summarizing assessment elements. There are separate dimensions for clinical severity; functional status; and service utilization. This organizing principle suggests that patients can be classified along each dimension, and this classification is correlated with resource consumption in home care. In an effort to maximize the clinical utility and explanatory power of the patient classification model, the project team experimented with many variations of each dimension, adding and removing items and examining their effect on the way the models functioned.

The Clinical Severity Dimension. The clinical severity in the final model incorporates three diagnostic categories: Neurologic, Orthopedic, and Diabetes. Specific diagnoses comprising each group were reviewed to ensure that diagnoses used on highly heterogeneous groups of patients would not be included. Inclusion of these diagnoses could weaken the predictive power of the case-mix adjuster. The diagnoses in each group are shown in Table 9. The diagnosis code comes from OASIS item number M230. The clinical dimension also includes the following OASIS items as indicators of clinical severity: status of wounds and ulcers (M0460, M0476, M0488); vision status (M0390); pain frequency (M0420); presence of a bowel ostomy; (M0550) use of parenteral and enteral nutrition, and intravenous therapy or infusion therapy (M0250); dyspnea (M0490); urinary and bowel incontinence (M0530, M0540); and behavioral problems (M0610).

Early versions of the clinical model did not include measures of cognitive, sensory and behavioral impairment which might affect resource use, primarily because statistical analysis did not suggest they were useful in explaining variation. Based upon subsequent review, we determined this was a serious omission from the model, so we renewed attempts to integrate cognition and related indicators into the model. An additional dimension consisting solely of the OASIS neurological, cognitive, sensory, and behavioral (NCSB) variables was created, which produced a minor variance reduction in the overall sample of only .015. Furthermore, the highest degree of cognitive impairment was not consistently related to the highest mean costs.

Since increasing levels of severity of the NCSB variables as a group are not consistently associated with increased resource use, we did not attempt to use them as an independent dimension. Using data from regression analysis, however, we were able to integrate M0390 (vision) and M0610 (behaviors) into the Clinical Severity dimension in a way that did not produce counter-intuitive cost groupings.

Further technical discussion of the statistical results on each variable is found in Abt Associates, Second Interim Report, August 1999, Chapter 3.

The Functional Status dimension. As in the development of the clinical severity dimension, we began by selecting assessment items considered to be potential predictors of increased resource use, focusing on the extent of assistance the patient required with activities of daily living. Early exploration with the available functional indicators suggested OASIS items were equivalent in explanatory power to the supplemental items we tested. We tested restricting the ADLs to late loss ADLs (that is, those ADLs likely to be lost late in life: eating, transferring, toileting, and bed mobility) to see whether the restricted list better predicted resource use in the home-bound elderly, as is the case among the elderly which reside in nursing homes (Williams, Brent C., Brant E. Fries, and William J. Foley, ''Activities of Daily Living and Costs in Nursing Homes,'' *Health Care Financing Review*, 15 (4):117–134 (Summer 1994)). This was not supported. We also experimented with cognition-related variables, based on findings in the literature (Torres, H. A., L. Fratiglioni, Z. Guo, M. Viitanen, E. von Strauss, and B. Winblad, ''Dementia is the Major Cause of Functional Dependence in the Elderly: 3-Year Follow-up Data from a Population-based Study,'' *American Journal of Public Health*, 88:1452–1456 (1998).

In the version of the dimension ultimately used in the Clinical model, ambulation locomotion was integrated and both early-loss and late-loss ADLs were included (while cognitive factors were incorporated into the Clinical Dimension). We dropped the eating and grooming ADLs because they were statistically redundant when the other items (dressing (M0650, M0660), bathing (M0670), toileting (M0680), transferring (M0690), and locomotion (M0700)) were included. M0650 (Dressing Upper body) and M0660 (Dressing lower body) were found to have a significant degree of interaction and therefore were combined. Additional experimentation with the functional status dimension involved testing different schemes for ordering the variables and partitioning subgroups of patients in accordance with measurements on the variables.

None of the variables in the Functional Status Dimension was eliminated due to reliability-related or incentive concerns. Some home health clinicians who reviewed the model in October 1998 commented on the potential of functional status items to be manipulated by providers, who would have an incentive to make patients seem as functionally impaired as possible on admission to home care. However, because the functional status items make an important contribution in predicting home health resource use, and because they are integral to clinical decisionmaking for the home care benefit, they were retained. Furthermore, under the planned Outcome-Based Quality Improvement system for home care, beyond the initial assessment, quality assurance monitoring may help counteract any tendency to overstate the functional dependency of patients. We are soliciting suggestions for approaches, new assessment items, procedures, or other mechanisms that might help guard against mismeasurement of functional status items due to payment incentives.

The Service Utilization Dimension

The Service Utilization dimension contains variables related to services the patient received both before and during the episode of home care. To measure utilization before the start of home care, OASIS item M0170 collects information about inpatient discharges during the 14 days before the assessment. In the analysis of costs associated with pre-admission location, we examined how

responses to M0170 were related to mean resource cost. It should be noted that a Medicare SNF stay is always preceded by an acute care hospital stay, so if a patient has a long SNF stay (exceeding 14 days) the acute care stay probably would not be measured by this item. A similar censoring of an acute care event may also occur with rehabilitation stays, although there is no Medicare requirement that such stays be preceded by an acute care hospital stay. On the other hand, if both an acute care stay and a SNF or rehabilitation inpatient discharge occurred within the previous 14 days, it seems likely that the SNF stay or rehabilitation stay was relatively short. We found that patients who are admitted to home care directly from the community are on average more resource-intensive for home care providers than patients who were recently discharged from an acute care hospital and had no evidence from M0170 that they used post-acute institutional care. Patients experiencing both a hospital and SNF/rehabilitation stay within the past 14 days are about as resource-intensive as the patients with no pre-admission stay. Finally, patients for whom only a SNF/rehabilitation hospital stay is observable within the past 14 days are the most expensive. We theorize that they tended to have relatively long SNF or rehabilitation stays of (at least 14 days), which may suggest that the definition of this group using M0170 is a marker for clinically complicated cases with intensive care needs.

The other variable in the service utilization dimension measures home health therapy hours totaling 8 hours or more during the 60-day episode. In developing the patient classification models, we sought to focus on variables that predicted care needed by the patient, as opposed to care furnished by providers. Ideally, we sought a case-mix adjustor that creates as little incentive as possible for providers to enhance revenues by providing unnecessary services. However, including a variable measuring the receipt of a significant amount of home health therapy (physical, occupational, or speech/language) improved the R-squared of our models by about .20. The RUG–III system for SNF case-mix measurement also includes an indicator for receipt of therapy. An advantage of paying differentially for therapy cases in the case-mix adjuster is that it will help to maintain access to therapy among home health patients who need it. The threshold of 8 hours targets additional payments for home health therapy to patients with a clear need for therapy. We believe this decision rule will motivate home health providers to efficiently plan therapy evaluation visits and therapy delivery for patients who need little or no therapy.

Additional variables were tested for the services utilization dimension. We decided not to use a variable for previous home health utilization in the past 90 days because, under the influence of payment incentives, it carried the potential to encourage readmissions to home care within the 90-day window. The predictive value of the service utilization was lowered by only .0059 as a result. We also tested the value of including inpatient stay events during the episode. This intervening-stay variable modestly improved the total R-squared for the model. However, as discussed above, it may present substantial data collection burdens for providers.

Scoring Patient Variables and Developing Severity Categories

Variables within the clinical and functional dimensions have differing impacts on resource cost. Before the final refinement phase of model development, we assigned a score to each outcome on each variable based on the increase in mean resource cost associated with each outcome. Within each dimension, the sum of scores for the component variables is correlated with resource consumption in home care. This is consistent with our conceptualization of the clinical, functional, and service utilization components as dimensions along which patients can be classified in accordance with their home health resource consumption.

During the refinement phase of model development, we used regression-adjusted mean resource cost to re-examine the scores. The purpose of the regression was to control for all case-mix variables simultaneously to get a more accurate picture of their respective independent contribution to resource use. Having quantified their contribution via the regression, we could derive more accurate scores for the variables. In addition, we looked for results that could signal redundancy among the variables and tested several interaction terms in the regression. (Interaction terms capture potential synergy among variables.) Both the improved scoring and the interaction terms could potentially improve the explanatory power of the case-mix system. The results of the regression analyses changed some of the scoring and resulted in the merging of some items. A few items were eliminated after examining the regressions, which suggested they were redundant.

The next step in model development was to find score intervals along the clinical dimension and the functional dimension that would define patient groups of relative severity along the respective dimension. Whenever possible, we used ''natural breaks'' in the array of scores in the sample to define the intervals. When partitioning the functional dimension scores, we examined the types of dependencies that would be captured in the intervals, particularly at the low and high end of the functional dimension. We determined the number of intervals also in light of the number of groups that would ultimately be created as more intervals are defined. The R-squared does not improve substantially when one or two more breaks are defined, but the number of groups increases greatly, adding to the complexity of the system.

For the clinical dimension, we classified patients into four levels of impact (minimal, low, moderate, and high), and for the functional dimension, five levels of impact (minimal, low, moderate, high, and maximum). The service utilization dimension is actually comprised of categorical variables that partition patients into four groups of increasing impact on resource use. We assigned scores to each of these four groups in accordance with the increasing impact.

Case-mix Groups. Each dimension contains four or five impact levels or intervals (for example, high, moderate, minimum, and low). For every combination of intervals, there is a case-mix group. For example, patients who are high on the clinical dimension, moderate on the functional dimension, and low on the services utilization dimension are grouped together. Since there are four clinical levels, five functional levels, and four service utilization levels, the case-mix system comprises a total of 80 groups. Half of the groups involve patients with therapy use of at least 8 hours.

In the case-mix research sample, the number of patients in each group varies widely, from few or no patients to between 1,000 and 1,500 in several of the groups (unweighted data). The therapy groups comprise a minority of patients in the sample— 15 percent (unweighted). Approximately 30 percent of the sample fell into the minimal clinical level, 30 percent into the low clinical level, 23 percent into the moderate clinical level, and 17 percent into the high clinical level. Approximately 15 percent of the sample fell into the minimal functional level, 30 percent into the low functional level, 36

percent into the moderate functional level, 11 percent into the high functional level, and 7 percent into the maximal functional level.

III. Audited Cost Report Data Sample Methodology

Audited Cost Report Data

Section 1895(b)(1) of the Act requires the prospective payment amount to include all services covered and paid on a reasonable cost basis under the Medicare home health benefit, including medical supplies. Section 1895(b)(3)(A)(i) of the Act requires the computation of a standard prospective payment amount to be initially based on the most recent audited cost report data available to the Secretary. Under section 1895(b)(3)(A)(i) of the Act, the primary data source in developing the cost basis for the 60-day episode payments was the audited cost report sample of HHAs whose cost reporting periods ended in fiscal year 1997 (that is, ended on or after October 1, 1996 through September 30, 1997).

In February 1998, we directed our fiscal intermediaries (FIs) to conduct comprehensive audits of the cost reports submitted by a sample of HHAs whose cost reporting periods ended in FFY 1997. Each FI received a list of agencies to audit and instructions on how to conduct the audits and report the data obtained.

The sample was designed to be representative of the home health industry in several respects: provider-based versus freestanding, census region, urban versus rural location, and large versus small agencies. Because we anticipated that many agencies in the sample would not be audited because their records were unavailable for a variety of reasons or their cost reporting periods were less than 12 months long, the sample size was adjusted upward by 15 to 20 percent to allow for attrition.

To create national HHA PPS rates, each observation in the final data set is weighted to reflect the national Medicare home health payment experience. For example, the estimates will reflect differences across census regions and urban versus rural areas.

Audit Sample Methodology

To meet these objectives, a statistical sample begins with a list of all HHAs that submit cost reports. The list is referred to as a frame. Considerable effort went into the process of developing the frame for HHAs and identifying units to be included. The frame for this sample excludes all HHAs that are incidental providers (too small) or not likely to yield a full year of cost reporting for the audit period.

Once a frame was developed, we selected a sample. The sample for the HHAs was selected by choosing samples for each provider type (freestanding not-for-profit, freestanding for-profit, freestanding governmental, and provider-based). The provider types are referred to as strata in sampling terms. The design of the sample took into account the number of providers and the variation in cost and beneficiaries in each stratum. The sample was designed to produce estimates from key elements of the audit data with a reasonable level of precision.

A sample selection assumes the frame is complete and each sampling unit appears once and only once in the frame. Unfortunately, after the sample was drawn and fieldwork begun, we found that this assumption was not strictly true for the governmental units.

The problem arises from the fact that multiple providers, referred to as subunits, report under a single cost report. In some cases, multiple providers' numbers corresponding to a single cost report appear on the frame, while in other cases a provider number is a parent possibly with multiple subunits. We then considered the subunits associated with a single cost report as the appropriate sampling unit because there is no way to accurately distribute costs among subunits. The subunits on the frame associated with a single cost report were identified and the listings of individual subunits were regarded as if the appropriate sampling unit had been included a known number of times on the frame list.

This somewhat changed the sample composition. When the sample was drawn for a stratum so that each unit on the list has the same probability of selection (as among the governmental units), the probability that the multiply-listed unit be included in the sample was higher. The higher probability of representation is in proportion to the number of inclusions on the frame list. This is like a drawing in which an individual enters his name (or his family members' names) multiple times to enhance his (or his family's) odds of winning. When one analyzes data from a sample that is biased by giving a higher probability of selection to some units, these units need to be given smaller weights if the estimates are to correctly represent the population that the frame should have enumerated.

That is, the analysis of the sample data must take into account the sampling probabilities by assigning each sampling unit a weight that is less if the probability of inclusion is higher. Indeed, the sample may include the same subunit multiple times, and we retained the values for each time the unit appears in the sample when the proper weights are used.

For purposes of this example, n equals the number of governmental subunits reporting under a single cost report in the frame. Therefore, a governmental cost report is n-times more likely to appear in the sample, and the weights for each occurrence in the sample are reduced by dividing by n. A description of a similar situation involving a household survey based on samples drawn from children in school is described in Morris H. Hansen, William N. Hurwitz, and William G. Madow, *Sample Survey Methods and Theory*, vol. 1 (NY: Wiley, 1953) 59–65. Because households with large families will have a higher probability of being included in the sample, households with large families will be over-represented in the sample unless some adjustment is made. That adjustment can be done, as we did here, by providing weights in the analysis that give less weight to the households that are more likely to be included in the sample.

From the frame we have known totals for the number of units in the cells. Weights were adjusted so that corresponding totals based on the sample match these known cell totals. Even if all units in the sample were successfully audited, the process described above ensures that correct cell totals are obtained from the analysis.

However, when audits are not obtained as intended and the missed units are not in the sample as intended, the weights must be adjusted so that the sample data reproduce the known totals from the frame for key subgroups or cells. The process assigns a larger weight to audited units in the sample similar (in the same cell) to those missed. In the case of the HHA, the cells were defined by the urban or rural area; the four census regions of Northeast, Midwest, South, and West; and provider type. Therefore, the weights were adjusted for the missed sample units to ensure that the units obtained most closely represent the missed units cell by cell.

Summary of the Missing Audits in the Home Health Audit Sample and Results Used to Develop Weights for the Sample

In the home health audit sample design we assumed there would be nonresponse or missing audits for a variety of reasons. The reasons included situations such as the following: the provider no longer existed in order to do the audit, the provider was under

investigation, or the provider filed a short cost report, that is, a cost reporting period less than 12 months. The chart below shows the original sample sizes for each provider type and the oversampling cushion associated with each one. Because we rounded numbers up in the sample size calculations and selection algorithms, the actual oversampling factors exceed 13 percent, as follows:

Stratum	True sample size	Oversample	Oversample percentage
Freestanding nonprofit	161	31	19.3
Freestanding for profit	148	23	15.5
Freestanding government	141	20	14.2
Provider-based	98	23	23.5

After examining the data for missing cases, we found the actual number of missing cases as follows:

Stratum	Sample size	Actual	Percent missed	Percent of target
Freestanding nonprofit	192	171	10.9	107.5
Freestanding for profit	171	142	17	98.0
Freestanding government	161	159	1.2	114.2
Provider-based	121	95	21.5	98.0

From this it is evident that the sample actually obtained generally was within range or close to the specifications. The percent of target is based on the sample size without the allowance for anticipated missed audits.

Freestanding for Non-Profit Summaries

DISTRIBUTION OF SAMPLE AND FRAME FOR FREESTANDING FOR NONPROFIT BY URBAN/RURAL AND CENSUS REGION

Area	Audits	Missed	Frame
MW—Rural	12	0	58
MW—Urban	40	4	195
NE—Rural	9	1	59
NE—Urban	46	3	260
SO—Rural	20	6	112
SO—Urban	25	2	148
WS—Rural	5	3	49
WS—Urban	14	2	74

Freestanding For-Profit Summaries

DISTRIBUTION OF SAMPLE AND FRAME FOR FREESTANDING FOR-PROFIT BY URBAN/RURAL AND CENSUS REGION

Area	Audits	Missed	Frame
MW—Rural	6	0	131
MW—Urban	19	6	520
NE [1]—Urban	18	0	263
SO—Rural	21	2	458
SO—Urban	54	15	1311
WS—Rural	7	1	102
WS—Urban	17	5	489

[1] No sample was obtained in the NE Rural category for this group. This cell was combined with NE Urban in obtaining weights.

Freestanding Governmental Summaries

DISTRIBUTION OF SAMPLE AND FRAME FOR FREESTANDING GOVERNMENTAL BY URBAN/RURAL AND CENSUS REGION

Area	Audits	Missed	Frame
MW—Rural	53	1	222
MW—Urban	11	0	36
NE—Rural	8	0	29
NE—Urban	9	0	42
SO—Rural	49	1	193
SO—Urban	20	0	69
WS—Rural	8	0	25
WS—Urban	1	0	11

Provider-Based Summaries

DISTRIBUTION OF SAMPLE AND FRAME FOR PROVIDER-BASED BY URBAN/RURAL AND CENSUS REGION

Area	Audits	Missed	Frame
MW—Rural	15	2	450
MW—Urban	13	0	293
NE—Rural	2	0	31
NE—Urban	9	3	196
SO—Rural	26	4	567
SO—URBAN	13	11	485
WS—Rural	10	3	195
WS—Urban	7	3	241

Determination of the Weights for the Actual Sample

The weights would essentially be equal for each HHA within a type if all HHAs in the sample had been successfully audited. The weights would be the ratio of the frame to sample size for each type because the units were drawn with equal probability within provider type. However, as noted above, some of the proposed sample units were not successfully audited. Therefore, the numbers for the distribution in the frame given above were used as known control totals. Then the known control totals were used to adjust the weights to the frame control totals. The ratio of the frame to the corresponding sample totals is used as the weight for the corresponding cases in the sample, provided the audits are not missing. If the HHA was not audited and therefore missing, the weight was zero. This process gives more weight to the audited HHA in a cell to account for the missing audits within the cell. This is equivalent to imputing the weighted average of the audited HHAs in the cell to the missed HHAs within the same cell. In one case noted above, cells were combined because there were no providers in the sample in the relatively small NE Rural cell for freestanding for-profit providers.

Weight Adjustment Factors to Account for Governmentals

In the case of the governmental HHAs, the adjustment process was modified to account for the multiple subunits included on the frame. First, it was necessary to examine the provider numbers on the frame for the governmental HHAs. Providers that are subunits have the last four digits in the range 7800–7999. We also used the last four digits to identify parent units. Parents have the last four digits in the ranges 7000–7299 or 7400–7799 or 8000–8499 or 9000–9999. The following

list shows the distribution of subunits and parents on the frame by State.

State	Provider	Subunits	Parents
AL	61	60	1
AR	62	62	0
AZ	5	0	5
CA	7	0	7
CO	8	0	8
CT	8	0	8
DE	1	0	1
FL	2	0	2
GA	3	1	2
IA	56	0	56
ID	2	0	2
IL	29	0	29
IN	3	0	3
KS	21	0	21
KY	18	0	18
LA	6	0	6
MA	3	0	3
MD	10	9	1
MI	18	0	18
MN	31	0	31
MO	26	0	26
MS	16	16	0
MT	4	0	4
NC	39	0	39
ND	2	0	2
NE	2	1	1
NH	2	0	2
NJ	6	0	6
NM	2	0	2
NV	2	0	2
NY	50	0	50
OH	30	0	30
OR	3	0	3
PR	1	0	1
SC	13	13	0
SD	1	0	1
TN	4	0	4
TX	2	0	2
UT	1	0	1
VA	9	0	9
VI	1	0	1
WI	39	0	39
WV	16	15	1
WY	2	1	1

An examination of the data for the few cases with multiple subunits from the same State confirmed that parent numbers were from a single cost report, and subunits, as in Alabama, all had a single cost report but a different parent.

Although there are various possible approaches regarding this issue, the approach taken here is consistent with the HCFA numbering conventions and the data examined to the extent we were able to confirm them from the sample. Therefore, a number of units was assigned to each HHA in the frame for the governmental HHAs. The number of units assigned is one for each parent and the sum of the number of subunits within a State for each subunit within the corresponding State. The same unit numbers were also assigned to the HHAs in the sample.

When totals are computed for the reciprocal of the unit numbers, the result is the number of cost reports. To see how this works, consider the State of Alabama. There are 60 subunits each assigned a unit count of 60, and there is 1 parent assigned a unit count of 1. The sum of the reciprocal of the unit numbers for the 60 subunits is 60 times 1/60 or 1, and the sum of the reciprocal of the unit number of 1 for the parent is 1. Therefore, there would be two cost reports if all of the HHAs from Alabama were audited.

The following summary by State shows the number of governmental providers on the frame and the number of cost reports or audits one would expect to find for each State if all governmental providers on the frame were audited.

State	Provider	Cost reports
AL	61	2
AR	62	1
AZ	5	5
CA	7	7
CO	8	8
CT	8	8
DE	1	1
FL	2	2
GA	3	3
IA	56	56
ID	2	2
IL	29	29
IN	3	3
KS	21	21
KY	18	18
LA	6	6
MA	3	3
MD	10	2
MI	18	18
MN	31	31
MO	26	26
MS	16	1
MT	4	4
NC	39	39
ND	2	2
NE	2	2
NH	2	2
NJ	6	6
NM	2	2
NV	2	2
NY	50	50
OH	30	30
OR	3	3
PR	1	1
SC	13	1
SD	1	1
TN	4	4
TX	2	2
UT	1	1
VA	9	9
VI	1	1
WI	39	39
WV	16	2
WY	2	2

Frame totals for possible audits were obtained by using the assigned unit numbers for each HHA in the governmental stratum. Therefore, the following control totals apply to the governmental stratum.

Area	HHAs	Audits
MW—Rural	222	222.00
MW—Urban	36	36.00
NE—Rural	29	29.00
NE—Urban	42	42.00
SO—Rural	193	61.31
SO—Urban	69	31.69
WS—Rural	25	25.00
WS—Urban	11	11.00

Note that a summary by State yields whole numbers for the audits. However, both the urban and rural classifications occur within a State. Therefore, a single audit may apply to providers within each category.

The corresponding sample totals are as follows:

Area	Providers	Audits
MW—Rural	54	54.00
MW—Urban	11	11.00
NE—Rural	8	8.00
NE—Urban	9	9.00
SO—Rural	50	12.18
SO—Urban	20	8.45
WS—Rural	8	8.00
WS—Urban	1	1.00

These totals are used to obtain the adjusted weights so that the sample totals for audits will match the frame totals. This is as if 458 audits are needed to audit the frame of 627 HHA providers because a single audit covers multiple provider numbers or subunits.

Final Weight Factor Calculations

The weight adjustment was applied to the cells defined by the four major census regions and the Urban/Rural classification. The weight adjustments used the control totals from the frame. Each weight was modified so that the weighted totals using the providers actually audited for each cell matched the corresponding control totals. The adjustment was a simple ratio adjustment. This corrected for the imbalance associated with sampling and the imbalance that arose from the distribution of missed audits.

After completing the weight adjustments, a file was created with the resulting weights, the provider number, provider type, Census 4 (four census regions), and Metropolitan Statistical Area (MSA) code. This file can be merged with the data from the cost reports for the audited providers to compute weighted values for costs and visits in order to compute the average cost-per-visit ratios by discipline. As a check on the computations, the following table is the result of a summary by provider type that agrees with the frame totals.

Type	Sample	Frame No.
FS/F	142	3290
FS/G	159	458
FS/N	171	955
Provider	95	2458

The final audit sample contained 567 audited cost reports which were the basis of the HHA PPS rate calculations.

IV. HHA PPS Framework—How the System Works

We are proposing the following policy framework; however, refinements will be made based on comments, additional national data, and efficiencies realized in the development of the final rule.

As discussed earlier in this regulation, we are proposing a 60-day episode as the ordinary unit of payment for home health PPS. The new 60-day episode begins with the start of care date, which is the first billable service date, and includes the 60th day from start of care date. The 60-day episode payment covers one individual for 60 days of care regardless of the number of days of care actually provided during the 60-day period unless there is a PEP adjustment, SCIC adjustment, LUPA, additional outlier payment, or medical review determination.

The 60-day episode payment will be case-mix adjusted using the OASIS assessment (as mandated by HHA conditions of participation regulations published in the **Federal Register** on January 25, 1999 at 65 FR 3747 and 65 FR 3764) supplemented, as applicable, by one additional patient-specific item regarding projected number of therapy hours received in the 60-day episode period (see section II.C. and IV.L of this regulation). The total case-mix-adjusted 60-day episode payment is based on the initial OASIS assessment and the supplemental item regarding projected therapy hours received submitted at the start of the 60-day episode and the confirmation of projected therapy use submitted via the line-item date visit information reported on the final claim at the end of the 60-day episode.

A. Start of Care

The HHA establishes the plan of care and the patient will be grouped into the appropriate case-mix category via the OASIS assessment and the additional item regarding projected number of therapy hours received in a 60-day episode at the HHA. We are exploring the approach that would allow grouper software at the HHA to interface with the HAVEN software used for State transmission of OASIS quality data. The OASIS assessment supplemented by one additional treatment-specific item on projected therapy use is fed into the grouper logic, and the grouper logic selects the OASIS elements needed to establish the case-mix group and determines the appropriate case-mix category for the patient. The grouper logic generates a code. The code corresponds to the appropriate case-mix category and is placed on the initial claim. The HHA must have all physician orders in the plan of care and a physician's signature for the plan of care before billing. The physician's orders for therapy services will be a key focus of medical review.

The initial claim with the appropriate code is submitted to the RHHI for payment. The pricer computes the initial percentage payment equal to 50 percent of the 60-day case-mix adjusted payment for that HHRG category. The pricer also adjusts the payment by the appropriate wage index corresponding to the site of service delivery. The clean claim is processed, and the initial 50 percent payment is issued to the HHA.

The HHA that initially establishes the plan of care is responsible for billing for all home health services provided under the plan of care, including nonroutine medical supplies and durable medical supplies in a 60-day episode. If a patient transfers during a 60-day episode, the responsibility for consolidating billing moves to the transfer HHA.

The Use of Clinical Model "Grouper" Software

As discussed at the beginning of this section, all data necessary to classify a patient to one of the 80 HHRG categories are contained on the OASIS–B supplemented, as applicable, by one additional item regarding projected therapy use in a given 60-day episode period. Under this PPS, HHAs are required to use the collection reporting requirements for the data elements in the **Federal Register** on January 25, 1999, supplemented by one additional item regarding projected therapy use in a given 60-day episode period for classification of patients for case mix. We expect that the software programs that use OASIS–B supplemented by projected therapy use to assign patients to the appropriate groups, called grouper software, will be available from many software vendors. The version we use will be available at no cost from our future HCFA website on PPS. We are proposing an option to build the grouper logic into the HAVEN software, which is used for transmission of OASIS–B data for purposes of quality via the State system. We may refine the grouper logic with experience and the onset of 15-minute increment billing data in the future.

B. End of Episode

The final claim may contain all of the line-item date visit information for the entire 60-day episode period. As discussed above, the confirmation of actual therapy hours received in the previous 60-day episode period will be captured with a utilization proxy based on the line-item date visit information reported on the final claim. The final claim will be sent to the RHHI and the pricer will compute the final payment equal to 50 percent of the actual case-mix-adjusted episode payment and wage index adjusts the payment. If the actual therapy use does not correspond to the code submitted for the episode, a correction will be necessary.

C. Recertification of 60-Day Episode Period

At the end of the 60-day episode a decision must be made to recertify the patient for another 60-day episode period. An eligible beneficiary who qualifies for a continuous 60-day episode would start the continuous 60-day episode on Day 61. A new OASIS is performed as part of the overall approach to assessment and to determine the appropriate case-mix category for the next episode. The physician's orders for services in the plan of care and the physician's certification of eligibility are required before the HHA submits a bill for the next 60-day episode period.

D. Determining Whether a Beneficiary Is Under an Established Plan of Care

Episodes must be tracked to ensure the case-mix adjusted episode payment is allocated to the appropriate HHA. This tracking requirement, which is needed for payments, proration, and consolidated billing, entails both an ability for internal RHHI systems to inquire and establish the status of HHAs providing services under a home health plan of care in a given 60-day episode period, as well as an external ability for HHAs to query the system to determine whether a beneficiary is already under an established home health plan of care in a given 60-day episode period. The national episode history by beneficiary must be created and maintained that contains beneficiary identification, provider identification, dates of service, utilization, case-mix classification codes, and discharge and transfer status indicators. HCFA is proposing to develop a tracking system available to both providers and RHHIs that would provide information on whether a

beneficiary is under an established home health plan of care.

E. Medical Review

Section 1816 of the Act requires our contractors to conduct audits of providers' records, as needed, to ensure that payments are appropriate for the items or services furnished. Payments under this HHA PPS are per episode prospective payment rates based on the patient's condition as determined by classification into one of the 80 HHRGs. This classification system uses patient assessment data from the OASIS–B supplemented, as applicable, by one additional patient-specific item regarding the amount of therapy hours received in the 60-day episode period. HHAs must complete the OASIS assessment according to an assessment schedule specifically designed for Medicare payment (see section IV.L. of this regulation). HHAs will send each patient's OASIS–B (including, as indicated, projected therapy use) to the State and claims for Medicare payment to the RHHI.

The total case-mix-adjusted 60-day episode payment is based on the initial OASIS assessment and, if applicable, a supplemental item indicating the projected therapy (that is, physical, speech-language pathology, and occupational therapy in any combination) hours to be received in a 60-day episode submitted at the start of the 60-day episode (note: we are proposing to use therapy visit data as a proxy for time). The projected number of therapy hours reported at the start of the 60-day episode (that is, on the initial claim) is confirmed by the actual receipt of therapy identified on the final claim (that is, line-item visit information) at the end of the 60-day episode. The initial claim for each 60-day episode may not contain visit information and may only include the code corresponding to the appropriate case-mix category/HHRGs. The final claim for the 60-day episode may include all of the line-item visit information for the previous 60 days. Adjustment to the HHRG payment is the confirmation of actual therapy use and coverage determinations based on medical review of the claim. These adjustments are in lieu of the partial episode, low-utilization, and outlier payment adjustments (see sections I.D., II.A.4., and II.A.5. of this regulation) discussed in the earlier sections of this proposal.

The medical review process for HHA PPS bills must be consistent with the new total case-mix-adjusted 60-day episode payment process and billing information available on the initial and final claims for each 60-day episodes. Considering the limited information available on the initial claim, prepayment medical review of the initial claim would probably be limited to the technical eligibility for home health services and overall medical necessity of care. For example, the RHHI would determine if the patient is homebound (HCFA=Pub. 11, Sec. 204.1), whether a plan of treatment is established (HCFA=Pub. 11, Sec. 204.2), and skilled services are needed. For the final claim for the 60-day episode, line-item date visit information for the previous 60 days will be considered in confirming actual therapy use and medical necessity coverage determinations. For continuous 60-day episode periods, any payment adjustments (for example, recovery of overpayments) would be made on an ensuing 60-day episode claim for that or other patients. At this time, specific to final closeout claims (see section IV.B. of this regulation), we anticipate no change in the current process for recovering overpayments from an HHA.

Because all Medicare-participating HHAs will be transitioned onto the new payment system on a particular calender date (see section IV.H. of this regulation), the initial medical review strategy for HHA PPS bills will be a parallel approach of random and focused medical review. The purpose of the random review is to get a cross-sectional overview of trends in beneficiary care and utilization of services. The information gained will support HCFA's and RHHI's data needs and aid in developing focused medical review (FMR) criteria that may be unique to a particular RHHI's provider population. In addition to the random review, RHHIs will continue to monitor specific claims or services historically known for potential areas of abuse. As with current medical review guidelines, RHHIs will be required to validate suspected problems before targeting medical review efforts.

After a few months of HHA PPS experience, HCFA and the RHHIs should be able to gain the information needed to identify and study trends in beneficiary care and utilization of services. At that time, medical review efforts will return to a data-driven approach targeting on those areas with the most potential for inappropriate billing, overutilization, and abuse (that is, FMR). Review efforts may be claim specific and driven by patterns of case-mix upcoding or the medical need for the episode(s) of care and technical eligibility. As with current Medicare medical review practice, HCFA will allow RHHIs to supplement their primary prepayment review activities with a limited amount of postpayment review.

Prepayment and postpayment review activity will continue with the capability to deny claims in total or adjust payment to correct case mix. Also, because this case-mix classification system can be supplemented by the amount of therapy hours received in a 60-day episode period, if applicable to the claim, medical review should ensure that the therapy was actually furnished and intensity (for example, time) of those services were reasonable and necessary for the beneficiary's condition. Information, such as the patient's OASIS, medical records, and the billing history will be considered in determining payment for covered services. This same review strategy will also be used to determine the coverage of medical supplies and DME under a home health plan of care (that is, consolidated billing). Finally, if during the review of HHA PPS claims the RHHI becomes suspicious of poor health and safety conditions, case referrals will be made to HCFA staff who will in turn alert the applicable State Agencies. Beneficiary quality of care concerns will also be referred to the applicable Peer Review Organization.

To accomplish this new perspective on medical review of HHA claims, the RHHIs need to have timely information on patients to determine, for example, whether the HHRG rate to be paid is appropriate and accurately reflects the beneficiary's clinical condition. The HHA PPS Inquiry System (see section III.E. of this regulation) will provide the RHHIs with the internal and external real-time query capability to access the information as establishing the status of an HHA providing services under a home health plan of care in a given 60-day episode period, beneficiary identification, provider identification, dates of service, utilization, case-mix classification codes, and discharge and transfer status indicator codes. Also, RHHI access into the national HCFA Repository should help facilitate the data matching and analysis of beneficiary-specific OASIS–B and billing information used to support program integrity functions.

F. Overpayments and Adjustments

If it is determined from proration, medical review, etc. that the preliminary case-mix-adjusted episode payment exceeds the amount ultimately due to an HHA, the overpayment may be offset against future episode payments due to the HHA for the same or other agency patients.

G. Implementation Effective Date for PPS

OCESAA requires all HHAs to be paid under PPS effective upon implementation of the system October 1, 2000. There is no transition by cost reporting period; therefore, all HHAs begin PPS on the same implementation date (October 1, 2000). We are aware that most cost reporting periods do not end with the statutory implementation date of PPS. Rather than requiring the close-out of cost reports with short period cost reports, we are exploring the use of a supplemental schedule in the cost report to allocate costs and limits between pre- and post-PPS.

H. Claims Processing Transition

Under the October 1, 2000 PPS implementation date, all HHAs must bill for all eligible Medicare beneficiaries under a home health plan of care under the PPS. If an HHA has beneficiaries already under an established plan of care, all open bills for services provided September 30, 2000 or earlier will need to be closed as of September 30, 2000.

I. Quality System

Under the Medicare COPs, HHAs must develop, implement, maintain, and evaluate an effective, data-driven quality assessment and performance improvement program. The program must reflect the complexity of the HHA's organization and services, including those services provided directly or under arrangement. The HHA must take actions that result in improvements in the HHA's performance across the spectrum of care. An integral part of this approach is the additional COP requirement that HHAs use a standard core assessment data set, the Outcome and Assessment Information Set (OASIS), when evaluating patients. The OASIS is a set of valid, reliable measures, developed to assess patient outcomes to care provided in the home.

The use of a uniform patient assessment in home health is part of a broader HCFA goal to develop outcome measures for all provider types. The OASIS is expected to become one of the most important aspects of the HHA's quality assessment and performance improvement efforts. By integrating a core standard assessment data set into its own more comprehensive assessment system, an HHA can use this data set as the foundation for valid and reliable information for patient assessment, care planning, and service delivery, as well as to build a strong and effective quality assessment and performance improvement program.

As a part of the COP, Medicare-certified HHAs are required to collect, and report to the States, OASIS data on all adult home health patients served by the agency with the following exceptions: (1) Maternity patients; (2) those under 18; and (3) those receiving other than personal care services or health services, for example, housekeeping and chore services. We will regularly collect OASIS data from the States for storage in a national OASIS repository. Information from the repository will be used to generate national OASIS outcome reports for dissemination through the States to the HHAs to be used for outcome based quality improvement (OBQI).

The general framework for OBQI is a two-stage process of continuous quality improvement. Data are collected at regular time intervals for all adult patients. Outcome measures are computed using the OASIS data reported by the HHAs. Risk adjustment is undertaken, and outcome reports are produced for specific patient conditions (focused reports) and for all adult patients (global reports). These outcome reports are provided to the participating HHAs and are used to determine which outcomes are inferior, thereby providing a focus for agency staff to target problematic care. Exemplary care is also investigated in order to reinforce positive care behaviors. A plan of action allows the agency to monitor the changes in care behavior and through the next round of data collection, determine if targeted outcomes have improved and if reinforcement activities have maintained exemplary outcomes. HHAs are expected to integrate this information into the development of their OBQI programs to care for all home health patients.

The State Agencies will be responsible for disseminating the national aggregate information, generating and disseminating State aggregate information, and providing individual reports for each HHA in their State. Each HHA will have regular access to outcome reports based on its own OASIS data submissions and comparative State and national aggregate reports. Eventually, the individual HHA reports will include case-mix-adjusted outcomes from the HHA's current year and previous year. In addition, through the States, the HHA will have continuous on-line access to case-mix, tabular, and adverse event reports based on its own reported OASIS data.

We will provide support to the States and HHAs to ensure the continuous reporting of OASIS data, the generation of OBQI reports, and the development and use of OBQI programs by HHAs. To assist in the effective use of OBQI, HHAs will be expected to participate in a program specified by the Secretary that involves the targeting of State or specific national quality outcomes for improvement.

J. Illustrative Examples

1. 60-day Episode—No Recertification

In a 60-day episode, a patient is assessed and assigned to HHRG10 by HHA–A. The patient is under a physician certified plan of care with a predicted end date of Day 30. The patient meets the treatment goals and is discharged on Day 30. The patient does not experience a significant change in condition from Day 1–30. The patient does not return to HHA–A during Day 31–60 of the 60-day episode and does not transfer to another HHA during Day 31–60 of the 60-day episode. Even though HHA–A only served the patient from Day 1–30, HHA–A receives the total 60-day episode payment for the patient.

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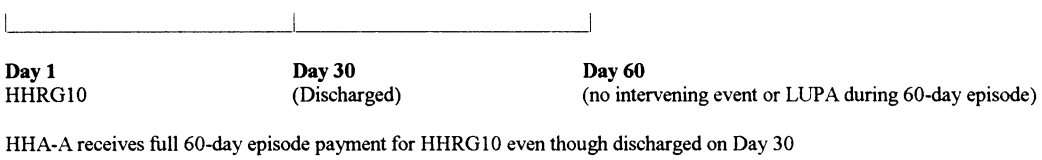

2. 60-Day Episode with Recertification

An eligible home health patient is certified for a 60-day episode period including the start of care date October 1 through and including the last day of the episode November 29. The patient is grouped into HHRG W. No therapy is required for the patient. The corresponding payment amount for

HHRG W is $800. The HHA has obtained a signed plan of care before billing. The HHA submits the initial claim with the code associated with HHRG W to the RHHI. The pricer computes the 50 percent payment for HHRG W, and the RHHI processes the $400 payment to the HHA.

The 60-day payment covers the patient for the 60-day period covering October 1 (the first billable service date) through November 29. At the end of the episode, the HHA reassesses the patient via the OASIS and in conjunction with the physician determines the need for continued home care. At the end of the episode, the HHA submits the final claim for the residual 50 percent payment for HHRG W. The HHA submits the final claim to the RHHI. The pricer computes the 50 percent residual payment and processes the clean claim. The HHA receives the $400 residual payment for the patient.

At the end of the episode, the HHA also completes a follow-up OASIS for purposes of recertification of the 60-day episode. The reassessment OASIS is fed into the grouper logic at the HHA, and a different HHRG code is generated. The HHRG U is placed on the claim, and the HHA will submit an initial claim for the next 60-day episode. The cycle repeats. As discussed above, the recertification of subsequent episodes for continuous home care spans the start of care date plus 60 days. Unlike the PEP adjustment, continuous episode recertifications for eligible beneficiaries do not begin with the first billable visit.

3. Partial Episode Payment Adjustment Examples

The following specific intervening events—

- a beneficiary elected transfer; or
- a discharge and return to the same HHA start a new 60-day episode clock for purposes of payment, OASIS assessment, and physician certification of the plan of care. The original 60-day episode payment is proportionally adjusted to reflect the length of time the beneficiary remained under the agency's care prior to the intervening event. The proportional payment is called the PEP adjustment.

The PEP adjustment is based on the span of days including the start-of-care date (first billable service date through and including the last billable service date) under the original plan of care prior to the intervening event. The PEP adjustment is calculated using the span of days (first billable service date through and including the last billable service date) under the original plan of care as a proportion of 60. The proportion is multiplied by the original case mix and wage adjusted 60-day episode payment.

Beneficiary Elected Transfer

In a 60-day episode, a patient is assigned to HHRG10=$3000 by HHA–1 and is discharged on Day 20. Day 18 is the last day of the current 60-day episode with a physician ordered/billable visit. The patient transfers to HHA–2 on Day 40. HHA–2 assesses the patient and obtains physician orders for a new plan of care. The first ordered service/billable service is Day 43. Day 43 becomes Day 1 of the new 60-day episode for HHA–2. The PEP adjustment for HHA–1 would equal $3000 * 18/60. The triggering date for the end of the partial episode is the last physician ordered service/billable visit date for the HHA. The triggering date for the new 60-day episode is the first ordered service in the new plan of care corresponding to the new 60-day episode due to the beneficiary elected transfer or transfer to a new HHA that is not under common ownership with original HHA–1.

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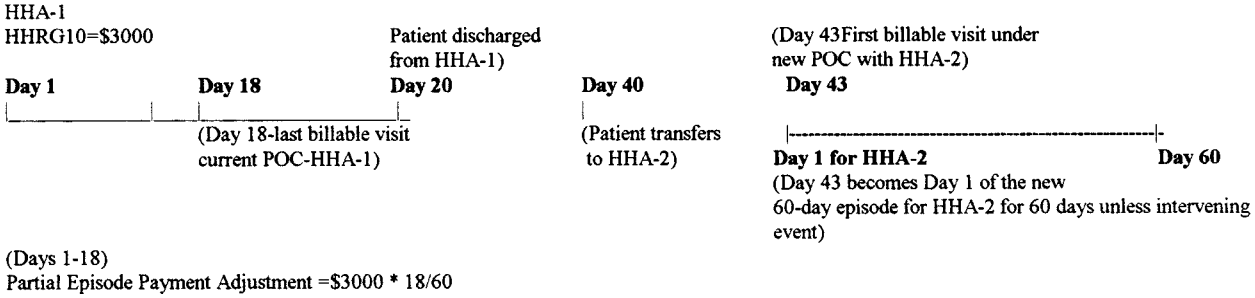
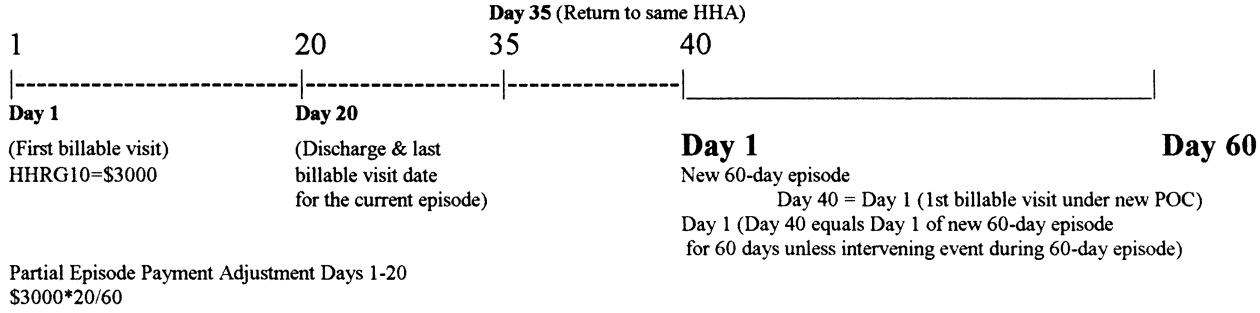


Discharge and Return to the Same HHA During the 60-Day Episode

In a 60-day episode, a patient is discharged on Day 20 and returns to the same HHA on Day 35. The patient met the treatment goals in the original plan of care. The original plan of care was terminated with no anticipated need for home care during the balance of the 60-day episode. The initial percentage payment would be adjusted to recognize the 20 days served by the HHA under the initial case-mix category. The last ordered visit was under the original plan of care coincidentally furnished on Day 20 of the initial 60-day episode. For example, the patient is assigned to HHRG10=3000 episode payment, is discharged on Day 20, and returns to the same HHA on Day 35. The HHA would reassess the patient on or about Day 35 and start a new 60-day clock for physician recertification, OASIS, and case-mix assignment for payment. The start of the new payment clock corresponds to the first physician ordered service/billable service in the new plan of care. For purposes of this example, the first physician ordered service in the new plan of care for the new 60-day episode payment is Day 40. Day 40 of the original episode becomes Day 1 of the new certified period.

The adjusted payment for the partial episode spans the start of care date (Day 1-first physician ordered service) through and including the last day of the 60-day episode that includes the last physician ordered service furnished/billable visit prior to the intervening event as a proportion of 60 days. The adjusted payment for the partial episode spans Day 1 through and including Day 20. Day 20 is the last day of the original episode that includes a physician ordered/billable service. The PEP adjustment would equal $3000 times 20/60. The triggering date that closes the original episode with a PEP adjustment is the last date of service with a physician ordered/billable service prior to the intervening event. The triggering date for the new episode is the first ordered service in the new plan of care corresponding to the new 60-day episode due to discharge and return to the HHA in same episode.



4. Significant Change in Condition Payment Adjustment Examples

As discussed above, we are proposing that the third intervening event over a course of a 60-day episode of home health care that could trigger a change in payment level would be a significant change in the patient's condition. We are proposing the significant change in condition payment adjustment (SCIC Adjustment) to be the proportional payment adjustment reflecting the time both prior and after the patient experienced a significant change in condition during the 60-day episode. The proposed SCIC adjustment occurs when a beneficiary experiences a significant change in condition during a 60-day episode that was not envisioned in the original plan of care. In order to receive a new case mix assignment for purposes of payment during the 60-day episode, the HHA must complete an OASIS assessment and obtain the necessary physician change orders reflecting the significant change in treatment approach in the patient's plan of care.

As discussed above, the SCIC adjustment occurs in two parts during the 60-day episode. The first part of the SCIC adjustment uses the span of days of the first billable service date through the last billable service date prior to the intervening event of the patient's significant change in condition that warrants a new case mix assignment for payment. The second part of the SCIC adjustment is determined by taking the span of days (first billable service date through the last billable service date) after the patient experiences the significant change in condition through the balance of the 60-day episode as a proportion of 60 multiplied by the new episode payment level resulting from the significant change. The initial percentage payment provided at the start of the 60-day episode will be adjusted at the end of the episode to reflect the first and second parts of the SCIC adjustment (or any applicable medical review or LUPA) determined at the final billing of the 60-day episode .

For example, an HHA assigns a patient to a HHRG that equals $2,000 and would be paid the initial 50 percent equaling $1,000 at the start of the episode. The patient's first billable service date is Day 1. The patient experiences a significant change in condition on Day 19. The last billable service date prior to the significant change in condition is Day 20. The HHA completes the OASIS assessment, obtains the necessary physician change orders to alter the course of treatment in the plan of care, and changes the case mix assignment for payment reflecting the patient's change in condition. The HHA has all of the necessary information to begin rendering services under the revised plan of care and at the new case mix level of a HHRG that equals $4,000 on Day 25. The span of days that are used to calculate the first part of the SCIC adjustment are Day 1 through Day 20. Day 25 is the first billable service date under the second part of the SCIC adjustment. Day 60 is the last billable service date at the case mix level HHRG that equals $4,000 prior to the end of the 60-day episode.

The first part of the SCIC adjustment is:

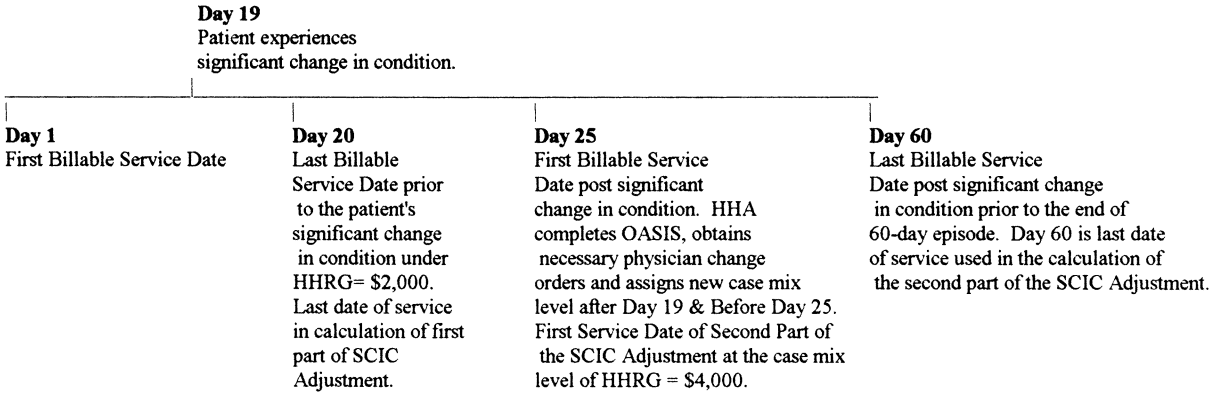
(Day 1–Day 20) $20/60 \times \$2,000 = \$666.67$

The second part of the SCIC adjustment is:

(Day 25–Day 60) $36/60 \times \$4,000 = \$2,400.00$

Total SCIC Adjustment= $3,066.67

The original $1,000 payment (50 percent of the HHRG=$2,000) would be adjusted with $2,066.67. to pay the balance of the total SCIC Adjustment of $3,066.67 unless there is any applicable medical review or LUPA determined at the final billing for the 60-day episode.



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K. Required Schedule for Completing OASIS Supplemented by One Additional Case-Mix Item

As discussed above, sections 1895(b)(4)(A)(i) and (b)(4)(B) of the Act require the Secretary to establish and make appropriate case-mix adjustments to the units of payment in a manner that explains a significant amount of the variation in cost among different units of service. Section 1895(b)(2) of the Act requires the Secretary to provide a general system design for the HHA PPS that provides for continued access to quality services. Further, section 4602(e) of the BBA, effective for cost reporting periods beginning on or after October 1, 1997, the Secretary may require all HHAs to submit additional information that the Secretary considers necessary for the development of a reliable case-mix system.

Required Schedule for Completion of OASIS Supplemented by One Additional Case-Mix Item

As discussed above, the initial OASIS assessment completed at the start of care and the assessment at every subsequent follow-up recertification for beneficiaries who continue to be eligible for home health services will be the only assessments recognized for purposes of payment for the 60-day episode. The start of care OASIS must be completed at the beginning of each 60-day episode. An HHA may not bill for the initial percentage episode payment without the grouper-generated code corresponding to the complete OASIS assessment supplemented, as necessary, by the additional therapy variable for that 60-day episode. We are proposing to amend the current bimonthly completion time frames published in the January 25, 1999 conditions of participation (COP) final rule (64 FR 3764) by revising 42 CFR 484.55, ''Condition of participation: Comprehensive assessment of patients,'' paragraph (d)(1), to state that the standard for the update of the comprehensive assessment would be every 60 days beginning with the start of care date, unless there is an intervening beneficiary elected transfer, a significant change in condition resulting in a new case mix assignment, or a discharge and return to the same HHA during the 60-day episode. We are using discrete 60-day episodes for purposes of payment under PPS, so it is necessary to replace references to the current ''bimonthly period'' to ''every 60 days unless there is an intervening beneficiary elected transfer, a significant change in condition resulting in a new case mix assignment, or a discharge and return to the same HHA during the 60-day episode.'' The initial OASIS assessment completed at the start of care is updated every 60 days. The initial OASIS and subsequent follow-up OASIS supplemented, as applicable, by the treatment variable regarding therapy use will also be updated on a 60-day timetable. Each 60-day follow-up OASIS supplemented by the treatment variable regarding therapy will be the basis for case-mix adjusting each subsequent 60-day episode period for purposes of payment.

One modification to the current OASIS schedule for the follow-up assessment is necessary in order for the case-mix adjustment of each subsequent 60-day episode recertification. The current follow-up assessment schedule does not now include data elements MO230 Primary Home Care Diagnosis and MO390 Vision. Both are necessary elements of the case-mix adjustment methodology. The schedule for follow-up assessments must be modified to include these two case-mix variables. Each follow-up assessment is used as the basis for updating the comprehensive assessment and case-mix adjusting subsequent 60-day episodes for payment purposes. The follow-up assessment schedule must include all 19 OASIS items that have been determined to be necessary for case-mix adjustment.

As discussed above in section IV.A. of this regulation, we are proposing that the grouper logic will be located at the provider level. The grouper logic at the HHA will select and categorize the relevant OASIS items and one treatment variable regarding therapy use necessary to establish a case-mix category for payment purposes. As stated above, under section 4602(e) of the BBA, effective for cost reporting periods beginning on or after October 1, 1997, the Secretary may require all HHAs to submit additional information that the Secretary considers necessary for the development of a reliable case-mix system. Therapy use (physical therapy, speech-language pathology services, and occupational therapy) during the 60-day episode is a significant explanatory variable in the clinical case-mix model. Since actual therapy use cannot be determined until the end of the 60-day episode, we are proposing the projection of therapy use at the start of the 60-day episode and the confirmation of the therapy use at the end of the 60-day episode. As discussed in section II.C. of this regulation, the research has developed a utilization proxy for time. As stated above, 10 therapy visits equate to 8 or more therapy hours during a 60-day episode. We will use the line-item date information from the close-out bill to confirm the projected therapy use incorporated into the code placed on the start of care bill.

The additional case-mix item regarding therapy use during a 60-day episode will be effective October 1, 2000 with the date of PPS implementation.

L. Relationship Between Payment and OASIS

As explained above, each Medicare home health patient is classified into an HHRG group for each 60-day episode period. The group to which the patient is classified is based on the information about the patient's clinical resource needs as reported on the OASIS–B as part of the approach to overall comprehensive assessment as required by 42 CFR 484.55 in the HHA COPs, and the services ordered in the patient's home health plan of care, including but not limited to, a physician's orders for therapy services.

M. Transition of Assessment and Certification Dates for Beneficiaries Under an Established Home Health Plan of Care

For eligible beneficiaries under an established home health plan of care on October 1, 2000, we are providing transition alternatives.

1. Use of Current OASIS Assessment for Purposes of Case-Mix Classification

If a beneficiary is under an established home health plan of care before October, 1, 2000 and the HHA has completed a Start of Care or Follow-Up OASIS earlier than September 1, 2000, the HHA must complete a one-time additional Follow-Up OASIS within 5 days before October 1, 2000 for purposes of case-mix classification. If a beneficiary is under an established home health plan of care before October 1, 2000 and the HHA completed a Start of Care or Follow-Up OASIS on or after September 1, 2000 and does not wish to do a one-time OASIS at the inception of PPS, the HHA may use that earlier version of the OASIS. This is a one-time grace period.

2. Physician Certification Dates for Beneficiaries Under an Established Home Health Plan of Care

If a beneficiary is under an established home health plan of care before October 1, 2000 and the certification date is earlier than September 1, 2000, the HHA in conjunction with a certifying physician must complete a one-time additional recertification of the plan of care before the inception of PPS on October 1, 2000.

If a beneficiary is under an established home health plan of care before October 1, 2000 and the certification date is on or after September 1, 2000 and the HHA in conjunction with a certifying physician does not wish to do a one-time additional recertification of the plan of care at the inception of PPS, the HHA may use the recertification date (September 1, 2000 through September 30, 2000) from the earlier version of the plan of care. This is a one-time grace period.

V. Consolidated Billing

A. Background

Under the HHA Consolidated Billing requirement established by sections 4603(c)(2)(B) and (c)(2)(C) of the BBA, the HHA that establishes the home health plan of care has the Medicare billing responsibility for all of the Medicare-covered home health services listed in section 1861(m) of the Act that the patient receives and are ordered by the physician in the plan of care.

B. HHA Consolidated Billing Legislation

Specific Provisions of the Legislation

Sections 4603(c)(2)(B) and (c)(2)(C) of the BBA amend sections 1842(b)(6) and 1862(a) of the Act, respectively, to require a new consolidated billing and bundling of all home health services while a beneficiary is under the plan of care. The statute now requires payment for all items and services to be made to an agency.

Specifically, the law requires, ''in the case of home health services furnished to an individual who (at the time the item or service is furnished) is under the plan of care of a home health agency, payment shall be made to the agency (without regard to whether or not the item or service was furnished by the agency, by others under arrangement with them made by the agency, or when any other contracting or consulting arrangement, or otherwise).''

However, the statute also provides for separate payment amounts for home health care and services currently provided under the DME fee schedule. As discussed above in section I.D.1.a. of this regulation, under the HHA PPS, DME covered as a home health service as part of the Medicare home health benefit will continue to be paid under the DME fee schedule. We believe a separate payment amount in addition to the prospective payment amount for home health services will be made for DME currently covered as a home health service under the PPS. Nevertheless, payment for home health services can only be made to the HHA that establishes the individual's home health plan of care. This requirement would apply even in circumstances in which the services are not provided directly or under arrangement. For example, this would require the HHA to bill when the plan of care specifies DME and an outside supplier provides it.

C. Types of Services That Are Subject to the Provision

Under the consolidated billing requirement, we require that the HHA must submit all Medicare claims for the home health services included in 1861(m) of the Act while the beneficiary is under the home health plan of care established by a physician and is eligible for the home health benefit. The home health services included in consolidated billing are:

- Part-time or intermittent skilled nursing care.
- Part-time or intermittent home health aide services.
- Physical therapy.
- Speech-language pathology.
- Occupational therapy, medical social services.
- Routine and nonroutine medical supplies.
- A covered osteoporosis drug (as defined in section 1861(kk) of the Act—(not paid under PPS rate, see 1833(a)(2)(A)), but excluding other drugs and biologicals).
- DME subject to 20 percent coinsurance whether covered under Part A or Part B.
- Medical services provided by an intern or resident-in-training of the hospital, under an approved teaching program of the hospital in the case of an HHA that is affiliated or under common control with a hospital
- Services at hospitals, SNFs, or rehabilitation centers when they involve equipment too cumbersome to bring to the home.

We are seeking comments on the operational feasibility of this requirement.

D. Effects of This Provision

HHAs will no longer be able to ''unbundle'' services to an outside supplier that can then submit a separate bill directly to the Part B carrier. Instead, the HHA itself will have to furnish the home health services either directly or under an arrangement with an outside supplier in which the HHA itself, rather than the supplier, bills Medicare. The outside supplier must look to the HHA rather than to Medicare Part B for payment. This will be a change, especially regarding nonroutine medical supplies and DME.

The consolidated billing requirement eliminates the potential for duplicative billings for the same services to the RHHI by the HHA and to the Part B carrier by an outside supplier. All covered home health services listed in section 1861(m) of the Act ordered in the patient's plan of care must be billed by the HHA. We are exploring two options for the administrative implementation of this provision. The first option would require that all covered home health services listed in section 1861(m) of the Act ordered in the patient's plan of care must be billed by the HHA to the RHHI. This would include all home health services included in the prospective payment amount (part-time or intermittent skilled nursing services, part-time or intermittent home health aide services, physical therapy services, occupational therapy services, speech-language pathology services, medical social services, and medical supplies) and the separate additional fee schedule payment for durable medical equipment subject to the 20 percent coinsurance would be billed by the HHA to the RHHI. The second option would require all covered home health services listed in section 1861(m) of the Act ordered in the plan of care included in the prospective payment amount (part-time or intermittent skilled nursing services, part-time or intermittent home health aide services, physical therapy services, occupational therapy services, speech-language pathology services, medical social services, and medical supplies) to be billed by the HHA to the RHHI and the separate additional fee schedule payment for durable medical equipment subject to the 20 percent coinsurance billed by the HHA as a supplier to be billed to the Durable Medical Equipment Regional Carrier under Part B. This means the HHA would have to otherwise conform with supplier standards. We solicit public comment on either of these approaches.

As discussed in section II.D.4 of this regulation, the responsibility for consolidated billing moves to the transfer HHA. The consolidated billing requirement enhances the HHA's capacity to meet its existing responsibility to oversee and coordinate the Medicare-covered home health services that each of its patients receives.

Consistent with SNF PPS consolidated billing, the beneficiary exercises his or her freedom of choice for the entire home health benefit of services listed in 1861(m) by choosing the HHA. Once a home health patient chooses a particular HHA, he or she has clearly exercised freedom of choice with respect to all items and services included within the scope of the

Medicare home health benefit. The HHA's consolidated billing role supersedes all other billing situations the beneficiary may wish to establish for home health services covered under the scope of the home health benefit during the certified episode.

Current law is silent regarding the specific terms of an HHA's payment to an outside supplier, and does not authorize the Medicare program to impose any requirements in this regard. We remain concerned, however, over the potential for the provision of unnecessary services, and will continue to evaluate possible legislative and other approaches addressing this concern. One appropriate way to address any abusive practices would be through more vigorous enforcement of existing statutes and regulations (such as medical review procedures). Further, since under current law, an HHA's relationship with its supplier is essentially a private contractual matter, the terms of the supplier's payment by the HHA must be arrived at through direct negotiations between the two parties themselves. Accordingly, we believe that the most effective way for a supplier to address any concerns that it may have about the adequacy or timeliness of the HHA's payment would be for the supplier to ensure that any terms to which it agrees in such negotiations satisfactorily address those concerns. Finally, we note that matters relating to the enforcement of the statutory anti-kickback provisions lie exclusively within the purview of the Office of the Inspector General, and any questions or concerns in this area should be directed to the attention of that agency.

E. Effective Date for Consolidated Billing

The effective date for consolidated billing is October 1, 2000.

VI. Provisions of the Proposed Rule

We are proposing to make a number of revisions to the regulations in order to implement both the prospective payment system and the HHA Consolidated Billing provision. We propose to make conforming changes in 42 CFR parts 409, 424, and 484 to synchronize all timeframes for the plan of care certification, OASIS resumption of care assessment, and episode payments to reflect a 60-day period. In addition, we are proposing to add a new subpart in part 484 to set forth our new payment system for HHAs. These revisions and others are discussed in detail below.

First, we are proposing to revise part 409, subpart E, which discusses the requirements that must be met for Medicare to make payment for home health services. We are proposing to make a conforming change in § 409.43 regarding the plan of care requirements. Specifically, we propose to revise the frequency for review in paragraph (e) of this section by replacing the phrase ''62 days'' with ''60 days unless there is—

- An intervening beneficiary elected transfer;
- A significant change in condition resulting in a new case mix assignment; or
- A discharge and return to the same HHA during the 60-day episode that warrants a new 60-day episode payment and a new physician certification of the new plan of care.''

In addition, we are proposing to revise subpart H of this part regarding payments of hospital insurance benefits. We are proposing to revise paragraph (a) in § 409.100, which discusses payment for services, to specify the conditions under which Medicare may pay hospital insurance benefits for home health services. We are proposing to provide introductory text to paragraph (a) and to redesignate the current paragraph (a) as paragraph (a)(1). Proposed paragraph (a)(2) of this section would require that Medicare may pay hospital insurance benefits for the home health services specified at section 1861(m) of the Act, when furnished to an individual who at the time the item or service is furnished is under a plan of care of an HHA, to the HHA (without regard to whether the item or service is furnished by the HHA directly, under arrangement with the HHA, or under any other contracting or consulting arrangement).

We are proposing to make similar changes in part 410, subpart I, which deals with payment of benefits under Part B. We propose to add a new paragraph (b)(19) to § 410.150 to specify the conditions under which Medicare Part B pays for home health services. Specifically, proposed paragraph (b)(19) would specify that Medicare Part B pay a participating HHA, for home health services furnished to an individual who at the time the item or service is furnished is under a plan of care of an HHA (without regard to whether the item or service is furnished by the HHA directly, under arrangement with the HHA, or under any other contracting or consulting arrangement).

We also propose to revise part 411 subpart A, which discusses excluded services. We propose to add a new paragraph (q) to § 411.15 to specify the conditions under which HHA services are excluded from coverage. Proposed paragraph (q) would specify that a home health service as defined in section 1861(m) of the Act furnished to an individual who is under a plan of care of an HHA is excluded from coverage unless that HHA has submitted a claim for payment for such services.

We are also proposing to simplify the authority citation for part 413. In § 413.1 in the introduction to the section on principles of reasonable cost reimbursement, we are proposing to add a new paragraph (h) to include the timeframe under which home health services will be paid prospectively. Paragraph (h) under this section would specify that the amount paid for home health services as defined in section 1861(m) of the Act that are furnished beginning on or after October 1, 2000 to an eligible beneficiary under a home health plan of care is determined according to the prospectively determined payment rates for HHAs set forth in part 484, subpart E of this chapter. In addition, we propose to amend § 413.64 concerning payments to providers. Specifically, we propose to amend paragraph (h)(1) of this section by removing Part A and Part B HHA services from the periodic interim payment method.

We also propose to revise part 424, which explains the conditions for Medicare payment. We are proposing to revise § 424.22 regarding the certification requirements as a condition for payment. We are proposing to add a new paragraph (a)(1)(v) that would specify that as a condition for payment of home health services under Medicare Part A or Medicare Part B, a physician must certify that the individual is correctly assigned to one of the HHRGs. We are also proposing to make a conforming change at paragraph (b)(1) of this section regarding the timing of the recertification. Specifically, we propose to amend § 424.22(b) by replacing the phrase ''at least every 2 months'' with ''at least every 60 days,'' and adding the following sentence: ''The recertification is required at least every 60 days unless there is a beneficiary elected transfer, or a discharge and return to the same HHA during the 60-day episode that warrants a new 60-day episode payment and a new physician certification of the new plan of care.''

We are proposing to add a new statutory authority, section 1895 of the Act, to paragraph (a) of § 484.200, ''Basis and scope.'' Section 1895 provides for the implementation of a prospective payment system for HHAs for portions of cost-reporting periods occurring on or after October 1, 2000.

We are proposing to revise the regulations in 42 CFR part 484, which deal with the conditions that an HHA must meet in order to participate in

Medicare. First, we are proposing to revise the part heading from ''Conditions Of Participation: Home Health Agencies'' to the more generic heading ''Home Health Services.'' We are proposing to make a conforming change in § 484.18(b) by replacing the phrase ''62 days'' with ''60 days unless there is—

- A beneficiary elected transfer;
- A significant change in condition resulting in a change in the case-mix assignment; or
- A discharge and return to the same HHA during the 60-day episode.''

Also, we propose to revise § 484.55(d)(1) by replacing ''every second calendar month'' with language that reflects the 60-day episode and possible PEP adjustment or SCIC adjustment. We are proposing to require that the comprehensive assessment be updated and revised as frequently as the patient's condition warrants but not less frequently than every 60 days beginning with the start-of-care date unless there is—

- A beneficiary elected transfer;
- A significant change in condition resulting in a change in the case-mix assignment; or
- A discharge and return to the same HHA during the 60-day episode.

In addition, we are proposing to add and reserve a new subpart D, then add a new subpart E, ''Prospective Payment System for Home Health Agencies.'' This new subpart would set forth the regulatory framework of the new prospective payment system. It specifically discusses the development of the payment rates, associated adjustments, and related rules. In § 484.202, ''Definitions,'' we are proposing the following definitions for purposes of this new subpart:

As used in this subpart—

Case-mix index means a scale that measures the relative difference in resource intensity among different groups in the clinical model.

Clinical model means a system for classifying Medicare-eligible patients under a home health plan of care into mutually exclusive groups based on clinical, functional, and intensity-of-service criteria. The mutually exclusive groups are defined as Home Health Resource Groups (HHRGs).

Discipline means one of the six home health disciplines covered under the Medicare home health benefit (skilled nursing services, home health aide services, physical therapy services, occupational therapy services, speech-language pathology services, and medical social services).

Market basket index means an index that reflects changes over time in the prices of an appropriate mix of goods and services included in home health services.

In proposed § 484.205 ''Basis of payment,'' we discuss the Medicare payment to providers of services. Proposed § 484.205(a) describes the method by which the provider will receive payment. Specifically, § 484.205(a)(1) provides that an HHA receives a national 60-day episode payment of a predetermined rate for a home health service paid on a reasonable cost basis. We determine this national 60-day episode payment under the methodology set forth in § 484.215. Paragraph (a)(2) would specify that an HHA may receive a low-utilization payment adjustment (LUPA) of a predetermined per-visit rate. We determine the LUPA under the methodology set forth in § 484.230. Paragraph (a)(3) of this section provides that an HHA may receive a PEP adjustment due to an intervening event during an existing 60-day episode that initiates the start of a new 60-day episode payment and a new patient plan of care. We determine the PEP adjustment under the methodology set forth in § 484.235. Paragraph (a)(4) of this section specifies that a HHA may receive a significant change in condition payment adjustment (SCIC) adjustment due to the intervening event defined as a significant change in the patient's condition during an existing 60-day episode. We determine the SCIC adjustment under a methodology set forth in § 484.237.

Proposed paragraph (b) discusses the 60-day episode payment and circumstances surrounding adjustments to the payment method. This paragraph proposes that the national 60-day episode payment represents payment in full for all costs associated with furnishing a home health service paid on a reasonable cost basis as of August 5, 1997 (the date of the enactment of the BBA) unless the national 60-day episode payment is subject to a low-utilization payment adjustment as set forth in § 484.230, a partial episode payment adjustment as set forth in § 484.235, a significant change in condition payment adjustment set forth in § 484.237 or an additional outlier payment as set forth in § 484.240. All payments under this system may be subject to a medical review adjustment. DME provided as a home health service as defined in section 1861(m) of the Act continues to be paid the fee schedule amount.

In paragraph (c) of this section, we propose the low-utilization payment adjustment to the 60-day episode payment. We would require that an HHA receive a national 60-day episode payment of a predetermined rate for home health services paid on a reasonable cost basis as of August 5, 1997, unless we determine at the end of the 60-day episode that the HHA furnished minimal services to a patient during the 60-day episode. We determine a low-utilization payment adjustment under the methodology set forth in § 484.230.

In paragraph (d), we discuss the partial episode payment adjustment (PEP). We describe that an HHA receives a national 60-day episode payment of a predetermined rate for home health services paid on a reasonable cost basis as of August 5, 1997, unless there is an intervening event that warrants the initiation of a new 60-day episode payment and a new physician certification of the new plan of care. The initial HHA receives a PEP adjustment reflecting the length of time the patient remained under its care. The PEP adjustment would not apply in situations of transfers among HHAs of common ownership. Further, the discharge and return to the same HHA is only recognized in those circumstances when a beneficiary reached the goals in the original plan of care. The original plan of care must have been terminated with no anticipated need for additional home health services for the balance of the 60-day episode. We determine a partial episode payment adjustment under the methodology set forth in § 484.235.

In paragraph (e), we discuss the significant change in condition adjustment. We discuss that the HHA receives a national 60-day episode payment of a predetermined rate for home health services paid on a reasonable cost basis as of August 5, 1997, unless HCFA determines an intervening event defined as a beneficiary experiencing a significant change in condition during a 60-day episode that was not envisioned in the original plan of care. In order to receive a new case mix assignment for purposes of payment during the 60-day episode, the HHA must complete an OASIS assessment and obtain the necessary physician change orders reflecting the significant change in the treatment approach in the patient's plan of care. The significant change in condition payment adjustment is a proportional payment adjustment reflecting the time both before and after the patient experienced a significant change in condition during the 60-day episode.

In paragraph (f), we discuss how we treat payment for outliers. In this paragraph we would provide that an HHA receives a national 60-day episode payment of a predetermined rate for

home health services paid on a reasonable-cost basis as of August 5, 1997, unless the estimated cost of the 60-day episode exceeds a threshold amount. The outlier payment is defined to be a proportion of the estimated costs beyond the threshold. An outlier payment is a payment in addition to the national 60-day episode payment. The total of all outlier payments is limited to 5 percent of total outlays under the HHA PPS. We determine an outlier payment under the methodology set forth in § 484.240.

In the proposed § 484.210, we would specify the data used for the calculation of the national prospective 60-day episode payment. These data include the following:

- Medicare cost data on the most recent audited cost report data available.
- Utilization data based on Medicare claims.
- An appropriate wage index to adjust for area wage differences.
- The most recent projections of increases in costs from the HHA market basket index.
- OASIS assessment data and other data that account for the relative resource utilization for different HHA Medicare patient case-mix.

In § 484.215, paragraphs (a) through (e) would specify the methodology used for the calculation of the national 60-day episode payment. Proposed paragraph (a) would specify that in calculating the initial unadjusted national 60-day episode payment applicable for a service furnished by an HHA using data on the most recent available audited cost reports, we determine each HHA's costs by summing its allowable costs for the period. We determine the national mean cost per visit.

Proposed paragraph (b) of this section would specify that in calculating the initial unadjusted national 60-day episode payment, we determine the national mean utilization for each of the six disciplines using home health claims data.

Proposed paragraph (c) of this section would specify that we use the HHA market basket index to adjust the HHA cost data to reflect cost increases occurring between October 1, 1996 through September 30, 2001. For each fiscal year from 2002 or 2003, we update the cost data by a factor equivalent to the annual market basket index percentage minus 1.1 percentage points.

Proposed paragraph (d) of this section would describe how we calculate the unadjusted national average prospective payment amount for the 60-day episode. Specifically, we would calculate this payment amount by—

- Computing the mean national cost per visit;
- Computing the national mean utilization for each discipline;
- Multiplying the mean national cost per visit by the national mean utilization summed in the aggregate for each discipline; then
- Adding to this amount, amounts for nonroutine medical supplies and an OASIS adjustment for estimated ongoing reporting costs.

Proposed paragraph (e) regarding standardization of the data for variation in area wage levels and case-mix would specify that we standardize the cost data described in paragraph (a) of this section to remove the effects of geographic variation in wage levels and variation in case mix. We standardize the cost data for geographic variation in wage levels using the hospital wage index. We standardize the cost data for HHA variation in case mix using the case-mix indices and other data that indicate HHA case mix.

Proposed § 484.220 would describe how we calculate the national adjusted prospective 60-day episode payment rate for case-mix and area wage levels. This section would specify that we adjust the national prospective 60-day episode payment rate to account for HHA case mix using a case-mix index to explain the relative resource utilization of different patients. We also adjust the national prospective 60-day episode payment rate to account for geographic differences in wage levels using an appropriate wage index.

In proposed § 484.225, we explain our methods for annually updating the national adjusted prospective 60-day episode payment rates for inflation. This update is handled in the following manner:

- We update the unadjusted national 60-day episode payment rate on a fiscal year basis.
- For FY 2001, the unadjusted national 60-day episode payment rate is adjusted using the latest available market basket factors.
- For fiscal year 2002 or 2003, the unadjusted national 60-day episode payment rate is equal to the rate for the previous period or fiscal year increase by a factor equal to the HHA market basket minus 1.1 percentage point.
- For any subsequent fiscal years, the unadjusted national rate is equal to the rate for the previous fiscal year increased by the applicable HHA market basket index amount.

In proposed § 484.230, we explain the methodology we use for the calculation of the low-utilization payment adjustment. In this section, we would specify that in calculating the low-utilization payment adjustment an episode with four or fewer visits is paid the national average standardized per-visit amount by discipline for each visit type. We would also specify that the national average standardized per-visit amount is determined by using cost data set forth in § 484.210(a) and adjusting by the appropriate wage index.

Proposed § 484.235 illustrates the methodology we used to calculate the partial episode payment adjustment. The intervening event of a beneficiary elected transfer, or discharge and return to the same HHA during the 60-day episode warrants a new 60-day episode payment and a new physician certification of a new plan of care. The original 60-day episode payment is adjusted with a partial episode payment that reflects the length of time the beneficiary remained under the care of the original HHA. The partial episode payment is calculated using the actual days served by the original HHA as a proportion of 60 multiplied by the initial 60-day episode payment.

Proposed § 484.237 illustrates the methodology we used to calculate the significant change in condition payment adjustment. The intervening event, here a beneficiary experiencing a significant change in condition during a 60-day episode that was not envisioned in the original plan of care, initiates the significant change in condition payment adjustment. The significant change in condition adjustment is calculated in two parts. The first part of the SCIC adjustment reflects the adjustment to the level of payment *prior* to the significant change in the patient's condition during the 60-day episode. The second part of the SCIC adjustment reflects the adjustment to the level of payment *after* the significant change in the patient's condition occurs during the 60-day episode. The first part of the SCIC adjustment is determined by taking the span of days prior to the patient's significant change in condition as a proportion of 60 multiplied by the original episode amount. The original episode payment level is proportionally adjusted using the span of time the patient was under the care of the HHA prior to the significant change in condition that warranted an OASIS assessment, physician change orders indicating the need for a significant change in the course of the treatment plan, and the new case mix assignment for payment at the end of the 60-day episode. The second part of the SCIC adjustment is a proportional payment adjustment reflecting the time the patient will be under the care of the HHA after the significant change in condition and continuing until the end

of the 60-day episode. The second part of the SCIC adjustment is determined by taking the span of days (first billable service date through the last billable service date) after the patient experiences the significant change in condition through the balance of the 60-day episode as a proportion of 60 multiplied by the new episode payment level resulting from the significant change. The initial percentage payment provided at the start of the 60-day episode will be adjusted at the end of the episode to reflect the first and second parts of the SCIC adjustment.

Proposed § 484.240 describes the methodology we used to calculate the outlier payment. This methodology for the calculation of the outlier payment involves the following:

- We make an outlier payment for an episode whose estimated cost exceeds a threshold amount for each case-mix group.
- The outlier threshold for each case-mix group is the episode payment amount for that group, the PEP adjustment amount for the episode or the total significant change in condition adjustment for the episode plus a fixed dollar loss amount that is the same for all case-mix groups.
- The outlier payment is a proportion of the amount of estimated cost beyond the threshold.
- We estimate the cost for each episode by applying the standard per-visit amount to the number of visits by discipline reported on claims.
- The fixed dollar loss amount and the loss-sharing proportion are chosen so that the estimated total outlier payment is no more than 5 percent of total episode payment.

Proposed § 484.250 relates to data that must be submitted for the development of a reliable case mix. Specifically, we would require an HHA to submit the OASIS data described at the current § 484.55(b)(1) and (d)(1) (that we propose to revise in this rule) to administer the payment rate methodologies described in § 484.215 (methodology used for the calculation of the national 60-day episode payment), § 484.230 (methodology used for the calculation of the LUPA), § 484.235 (methodology used for the calculation of the PEP adjustment), and § 484.237 (methodology used for the calculation of the SCIC adjustment.

Proposed § 484.260 discusses the limitation for review with regard to our new payment system. In this section, we specify that judicial or administrative review under sections 1869 or 1878 of the Act, or otherwise, is prohibited with regard to the establishment of a payment unit including the national 60-day episode payment rate and the LUPA. This prohibition includes the establishment of the transition period, definition and application of the unit of payments, the computation of initial standard prospective payment amounts, the establishment of the adjustment for outliers, and the establishment of case-mix and area wage adjustment factors.

VII. Response to Comments

Because of the large number of items of correspondence we normally receive on **Federal Register** documents published for comment, we are not able to acknowledge or respond to them individually. We will consider all comments we receive by the date and time specified in the **DATES** section of this preamble, and, when we proceed with a subsequent document, we will respond to the comments in the preamble to that document.

VIII. Collection of Information Requirements

Under the Paperwork Reduction Act (PRA) of 1995, we are required to provide 60-day notice in the **Federal Register** and solicit public comment before a collection of information requirement is submitted to the Office of Management and Budget (OMB) for review and approval. In order to fairly evaluate whether an information collection should be approved by OMB, section 3506(c)(2)(A) of the PRA requires that we solicit comment on the following issues:

- The need for the information collection and its usefulness in carrying out the proper functions of our agency.
- The accuracy of our estimate of the information collection burden.
- The quality, utility, and clarity of the information to be collected.
- Recommendations to minimize the information collection burden on the affected public, including automated collection techniques.

We are soliciting public comment on each of these issues for the information collection requirements (ICRs) as summarized and discussed below.

Section 484.55 Condition of Participation: Comprehensive Assessment of Patients

Section 484.55(d)(1), ''Update of the comprehensive assessment,'' requires entities to complete OASIS every 60 days beginning with the start of care date. This proposed requirement will revise the current requirement referenced in § 484.55(d)(1) by replacing ''every second calendar month'' with ''every 60 days'' and adding language to address the possible PEP adjustment or SCIC adjustment. The new language would require that the comprehensive assessment be updated and revised as frequently as the patient's condition warrants but not less frequently that every 60 days beginning with the start-of-care date, unless there is—

- A beneficiary elected transfer;
- A significant change in condition resulting in a new case-mix assignment; or
- A discharge and return to the same HHA during the 60-day episode that warrants a new 60-day episode payment and a new physician certification of the new plan of care. We believe the 60-day episode provides an appropriate time frame for purposes of prospective payment for many reasons. The 60-day episode period is the basic time frame under which HHAs have historically been required to manage and project home health care needs of beneficiaries in order to comply with current plan of care certification requirements for Medicare home health plans of care. The 60-day episode period basically matches the reassessment schedule for OASIS, and this parallel time frame will permit case-mix adjustment of each episode. As discussed above in section I.C., the 60-day episode captures the majority of stays experienced in the per-episode HHA PPS Demonstration.

We do not believe the change in reporting from at least every 62 days to 60 days imposes any additional burden on HHAs. However, we explicitly solicit comments on this revision of reporting requirements.

We are specifically seeking comments on the potential burden associated with the PEP adjustment in terms of acquiring a new physician certification and new plan of care in order to receive a new 60-day episode payment when a patient is discharged and returns to the same HHA during the 60-day episode or a beneficiary elects to transfer to a new HHA during the 60-day episode. We do not believe there is any new burden associated with requiring a new physician certification and new plan of care when a patient elects to transfer to a new HHA during a 60-day episode, as these are current requirements. We also believe the SCIC adjustment reflects the current practice of notifying the physician when the patient's condition changes and obtaining necessary physician change orders to reflect a change in the course of treatment in the beneficiary's existing plan of care. We are, however, seeking comments on the proposal.

Each episode must be identified to establish that a beneficiary is under a plan of care at that primary HHA. The primary HHA is responsible for coordinating the beneficiary's care and

billing for all covered home health services ordered in the plan of care for the 60-day episode. The primary HHA must provide this information to HCFA. Consistent with the patients' rights provisions in the HHA conditions of participation regulation, the HHA must advise patients that as their primary HHA, all covered home health services provided during the episode must be furnished directly or under arrangement with the agency unless the beneficiary elects to transfer to another primary HHA. The acknowledgment that this information has been provided should be retained by the HHA. We do not envision a new specific form requirement for the primary HHA designation. We are specifically seeking comments on the industry's ability to operationally comply with this requirement.

We have submitted a copy of this proposed rule to the Office of Management and Budget (OMB) for its review of the information collection requirements described above. These requirements are not effective until they have been approved by OMB.

If you comment on any of these information collection and record keeping requirements, please mail copies directly to the following:

Health Care Financing Administration, Office of Information Services, Security and Standards Group, Division of HCFA Enterprise Standards, Room N2–14–26, 7500 Security Boulevard, Baltimore, MD 21244–1850, Attn: John Burke, HCFA–1059–P

and

Office of Information and Regulatory Affairs, Office of Management and Budget, Room 10235, New Executive Office Building, Washington, DC 20503, Attn: Allison Eydt, HCFA Desk Officer.

IX. Regulatory Impact Statement

Section 804(2) of title 5, United States Code (as added by section 251 of Public Law 104–121), specifies that a ''major rule'' is any rule that the Office of Management and Budget finds is likely to result in—

- An annual effect on the economy of $100 million or more;
- A major increase in costs or prices for consumers, individual industries, Federal, State, or local government agencies, or geographic regions; or
- Significant adverse effects on competition, employment, investment productivity, innovation, or on the ability of United States based enterprises to compete with foreign based enterprises in domestic and export markets.

We estimate, based on a simulation model, that the redistributional effects on HHAs participating in the Medicare program associated with this proposed rule would range from a positive $650 million for freestanding not-for-profit agencies to a negative $983 million for freestanding for-profit agencies in FY 2001. Therefore, this rule is a major rule as defined in Title 5, United States Code, section 804(2).

We have examined the impacts of this proposed rule as required by Executive Order 12866, the Unfunded Mandates Reform Act of 1995, (Public Law 104–4), and the Regulatory Flexibility Act (RFA) (Public Law 96–354). Executive Order 12866 directs agencies to assess all costs and benefits of available regulatory alternatives and, when regulation is necessary, to select regulatory approaches that maximize net benefits (including potential economic, environmental, public health and safety effects, distributive impacts, and equity). A regulatory impact analysis (RIA) must be prepared for major rules with economically significant effects ($100 million or more annually). Section 1895(b)(3)(A)(i) of the Act requires that the total amounts payable under the HHA PPS be equal to the total amount that would have been paid if this system had not been in effect. Section 1895(b)(3)(A)(ii) of the Act requires the standard prospective payment amounts to be budget neutral to the FY 2001 home health interim payment system limits reduced by 15 percent. Section 4603(e) requires that the 15 percent reduction in interim payment system limits takes place if the PPS is not implemented. Section 5101(d)(2) of OCESAA adds a new section 1895(b)(3)(B)(ii) to the Act to require the standard prospective payment amounts to be increased by a factor equal to the home health market basket minus 1.1 percentage points for FY 2002 or 2003. In addition, for subsequent fiscal years, the law requires the rates to be increased by the applicable home health market basket index change. Thus, subject to these adjustments, the statutory construction of this proposed rule is budget neutral. However, we are aware that there would be a number of organizational accommodations that must be made by HHAs in order to make the transition from the cost-based/interim payment system environment to a prospective payment environment that would result in costs to these entities. On that basis, we are preparing this RIA.

Section 202 of the Unfunded Mandates Reform Act of 1995 requires that agencies prepare an assessment of anticipated costs and benefits for any rule that may result in an expenditure by State, local, or tribal governments, in the aggregate, or by the private sector, of $100 million in any given year. We believe that the costs associated with this proposed rule that apply to these governmental sectors would fall below this threshold. Therefore, the law does not apply and we have not prepared an assessment of anticipated costs and benefits of this proposed rule.

The RFA requires agencies to analyze options for regulatory relief of small businesses. For purposes of the RFA, small entities include small businesses, nonprofit organizations, and governmental agencies. Most HHAs are considered small entities, either by nonprofit status or by having revenues of $5 million or less annually. Table 10 illustrates the distribution of HHAs by provider type participating in Medicare as of April 13, 1999.

TABLE 10.—NUMBER OF HHAS BY PROVIDER TYPE

HHA provider type	Number
Visiting Nurse Association	484
Combination Government and Voluntary	34
Official Health Agency	1,067
Rehab Facility Based	2
Hospital Based	2,486
Skilled Nursing Facility Based	174
Other	4,612
Total	8,859

Source: HCFA—On Line Survey Certification and Reporting System Standard Report 10—4/13/99.

The following RIA/RFA analysis, together with the rest of this preamble, explains the rationale for and purposes of this rule, analyzes alternatives, and presents the measures we propose to minimize the burden on small entities.

A. Background

1. General

This proposed rule sets forth a prospective payment system for all costs of home health services under section 1895(b) of the Act. Section 5101(c)(2) of OCESAA amended the statute to require that all HHAs be paid under HHA PPS effective October 1, 2000. Section I. of the preamble details the requirements of the BBA and OCESAA for the development of the HHA PPS. Below we summarize a number of those areas that specifically apply to the impact.

- Section 1895(b)(1) of the Act provides for a transition of not longer than 4 years during which a portion of the prospective payment amount may be agency-specific as long as the blend

does not exceed budget-neutrality targets.

- Section 1895(b)(3)(A)(i) of the Act requires that the prospective payment amounts be standardized to eliminate the effects of case mix and wage levels among HHAs.
- Section 1895(b)(3)(C) of the Act provides for outlier payments. Section 1895(b)(5) of the Act states that total outlier payments cannot exceed 5 percent of either projected or estimated total HHA PPS payments.

Section 1895(b) of the Act allows us broad authority in the establishment of several key elements of the system. Most of these elements, and the alternatives that were considered, are discussed in detail earlier in the preamble of this proposed rule. Several that warrant additional discussion are the length of episode for payment purposes, the case-mix methodology, and proration of prospective payment amounts.

2. 60-Day Episode Definition and Payment Rate

As we explain in section II. of the preamble, we are proposing that the prospective payment unit of payment under the HHA PPS be based on a 60-day episode of Medicare-covered home health care as OASIS data will be captured on a 60-day cycle. Current Medicare plan-of-care certification requirements are also done bimonthly, and most episodes in the HHA per-episode PPS demonstration ended in 60 days or less.

As we explain in section II. of the preamble, the 60-day episode payment rate includes all costs of home health services covered and paid for on a reasonable-cost basis and would be based on the most recently available audited cost-report data. It would be standardized to eliminate the effects of case mix and wage levels among HHAs. It must be budget neutral to the current HHA interim payment system limitation amounts reduced by 15 percent at the inception of the HHA PPS on October 1, 2000. As amended by section 5101(d)(2) of OCESAA, sections 1895(b)(3)(B)(i) and (b)(3)(B)(ii) of the Act require that the standard prospective payment amounts are to be increased by a factor equal to the home health market basket minus 1.1 percentage points for fiscal year 2002 or 2003. Also, it incorporates adjustments to account for provider case mix using a clinical classification system that accounts for the relative resource utilization of different patient types. The classification system used, the Clinical Model from Abt, uses the OASIS patient data set supplemented, as applicable, by one additional patient-specific item regarding number of therapy hours/visits received in the 60-day episode period.

3. Case Mix

The goal of a case-mix payment system is to measure the intensity of care and services required for each patient and translate it into an appropriate payment level. Case-mix adjustment takes into account the relative resource use of different patient types served by an HHA. As we explain in section II. of the preamble, sections 1895(b)(4)(A)(i) and (b)(4)(B) of the Act require us to establish and make appropriate case-mix adjustments to the episode payment amounts in a manner that explains a significant amount of the variation in cost among different units of services. The patient classification system used under the HHA PPS is the Clinical Model from Abt, an 80-group patient classification system, that provides the basis for the case-mix payment indices used both for standardization of the 60-day episode payments and subsequently to establish the case-mix adjustments to the 60-day episode payment for patients with different home health service needs.

B. Alternatives Considered

Several alternatives have been considered in our development of the HHA PPS.

1. Unit of Payment

Section 1895(b)(2) of the Act requires the Secretary in defining a prospective payment amount to consider an appropriate unit of service and the number, type, and duration of visits provided within the unit; and potential changes in the mix of services provided within that unit and their cost. As discussed in section II. of this preamble, we are proposing a 60-day episode for the unit of payment under the HHA PPS. The proposed system provides for a low-utilization payment adjustment (LUPA) and a partial episode payment adjustment (PEP) adjustment. The proposed payment system also provides for a separate cost outlier payment in addition to the 60-day episode payment. Outlier payment alternatives are discussed below.

a. 60-Day National Episode Payment

Recognizing that (1) OASIS data will be captured on a 60-day cycle, (2) current Medicare plan of care certification requirements govern a bimonthly period of time, and (3) most episodes of care will be concluded in 60 days or less in the HHA PPS demonstration, we are proposing a 60-day episode as the unit of payment for HHA PPS. We are proposing that the 60-day episode begins with the start-of-care date as day 1 (first billable date) and ends on and includes the 60th day from start of care. The next continuous episode period would begin on day 61 as the start-of-care date and end on and include day 120. We are proposing the requirement that the 60-day episode payment covers one individual for 60 days of care regardless of the number of days of care actually provided during the 60-day period, unless there is a low-utilization payment adjustment, partial episode payment adjustment, additional outlier payment, or medical review determination. An HHA that accepts a Medicare-eligible beneficiary for home health care for the 60-day episode period and submits a bill for payment may not refuse to treat an eligible beneficiary who has been discharged from the HHA during the 60-day episode, but later requires Medicare-covered home health services during the same 60-day episode period and elects to return to the same HHA.

In order to address the needs of longer stay patients, at this time we are proposing not to limit the number of 60-day episode recertifications in a given fiscal year. There is the potential for unlimited consecutive episodes if eligibility and coverage rules continue to be satisfied. Recertification of and payment for consecutive 60-day episodes is, of course, dependent on OASIS assessment and the patient's eligibility and need for continued medically necessary Medicare home health services. We believe consecutive 60-day episode recertification and payment would ensure continued access to the Medicare home health benefit without exceeding the statutory budget-neutrality targets.

We believe the 60-day episode provides an appropriate time frame for purposes of prospective payment for many reasons. The 60-day episode period is the basic time frame that HHAs have historically been required to manage and project home health care needs of beneficiaries in order to comply with current plan of care certification requirements for Medicare home health plans of care. The 60-day episode period also matches the reassessment schedule for OASIS, and this parallel time frame would permit case-mix adjustment of each episode.

We considered the option of a 120-day episode payment under the national HHA PPS. As discussed in section I. of this preamble, the HHA per-episode PPS demonstration tested a 120-day episode payment. In the HHA per-episode PPS demonstration, the 120-day episode payment was calculated using agency-specific costs in a given base-year

period. The calculation used for the 120-day episode payment in the HHA per-episode PPS demonstration was mean agency-specific cost per discipline multiplied by mean agency-specific utilization per discipline summed in the aggregate. The 60-day national episode payment methodology set forth in this rule parallels the general formula of mean cost multiplied by mean utilization summed in the aggregate. However, the 60-day episode payment for the national system is based on national mean cost and national mean utilization from the audited cost report sample database. The HHA per-episode PPS demonstration reflected an agency-specific methodology.

Another feature of the HHA per-episode PPS demonstration that was not adopted in the national PPS proposal is a prospective per-visit payment approach after completion of the 120-day episode. In the HHA per-episode PPS demonstration, agencies were paid a prospective per-visit amount for beneficiaries who required home health care after the 120-day episode had elapsed. Under the national HHA PPS, we are proposing continuous 60-day case-mix and wage-adjusted episode payments for beneficiaries who continue to be eligible for Medicare-covered home health services.

Based on the HHA per-episode PPS demonstration findings, the 60-day episode captured the majority of stays experienced in the HHA per-episode PPS demonstration. About 60 percent of the HHA per-episode PPS demonstration patients completed their episodes within 60 days. One criterion for the appropriate episode length is that it capture a majority of the patients. We now have evidence from the HHA per-episode PPS demonstration that a 60-day episode will do so. A 120-day episode, as tested in the HHA per-episode PPS demonstration, also meets this criterion, but we do not gain significantly larger completion percentage by lengthening the episode to 120 days. Moreover, a 120-day episode would result in more inequity in payments because of the larger risk of a change in a patient's condition over the span of the longer episode. We are specifically soliciting comments on the utility of a 60-day episode period for purposes of prospective payment and the efficacy of unlimited consecutive episode recertifications for eligible beneficiaries in a given fiscal year. We are also proposing a low-utilization payment adjustment (LUPA).

b. Low-Utilization Payment Adjustment

As discussed in section I. of the preamble, the statute requires that the definition of the unit of payment or episode must take into consideration the number, type, duration, mix, and cost of visits provided within the unit of payment. As a result of our analysis, we determined the need to also recognize a low-utilization payment under the HHA PPS. Low-utilization payment would reduce the 60-day episode payments, the partial episode payment adjustment, or the significant change in condition adjustments to those HHAs that provide minimal services to patients during the time the beneficiary is under their care. A reduced payment for low-utilization episodes would moderate the financial incentive for extreme skimping on services provided within an episode. It would also reduce the incentive to obtain an additional episode payment beyond a current episode by providing a bare minimum of additional services. It also redistributes monies to episodes reflecting higher service intensity.

Episodes with four or fewer visits would be paid the national average standardized per-visit amount times the number of visits actually provided during the episode. Based on analysis of our episode database, we concluded approximately 15 percent of current episodes constitute four or fewer visits. We explored the option of a six-visit threshold for low-utilization payments, but found approximately 20 percent of episodes in our episode database contain six or fewer visits. However, we are soliciting comments on the six or fewer visit threshold as discussed above in section I.D. of this regulation.

c. Partial Episode Payment Adjustment

We are proposing that the 60-day episode payment covers one beneficiary for 60 days of care regardless of the number of the days of care actually furnished during the 60-day episode unless one of the following intervening events occurs during the 60-day episode:

- A beneficiary elected transfer, or
- A discharge and return to the same HHA.

The intervening event described above restarts the 60-day episode clock for purposes of payment, OASIS assessment, and new physician certification of the new plan of care. The original 60-day episode payment is proportionally adjusted to reflect the actual length of time the beneficiary remained under the agency's care prior to the intervening event. The proportional payment is called the partial episode payment adjustment (PEP) adjustment.

The PEP adjustment is based on the span of days including the start of care date (first billable service date through and including the last billable service date) under the original plan of care prior to the intervening event. The PEP adjustment is calculated using the span of days (first billable service date through and including the last billable service date) under the original plan of care as a proportion of 60. The proportion is multiplied by the original case mix and wage adjusted 60-day episode payment. For example, a patient is assigned to a 60-day episode payment of $3000. Day 1 through Day 30 the patient is served by HHA–1. Day 1 is the first billable service date and Day 30 is the last billable service provided by HHA–1 under the original plan of care. The beneficiary elects to transfer to HHA–2 on Day 35. The first ordered service for the beneficiary under the new plan of care is Day 38. Day 38 starts a new 60-day episode clock for purposes of payment, OASIS assessment, and physician certification of the plan of care. Day 38 becomes Day 1 of the new 60-day episode. The final payment to HHA–1 is proportionally adjusted to reflect the length of time the beneficiary remained under its care. HHA–1 would receive a PEP adjustment of 30/60 * $3000 = $1500.

d. Significant Change in Condition Adjustment

We are proposing the requirement that the 60-day episode payment covers the individual for 60 days of care unless one of three intervening events occurs. The PEP adjustment described above encompasses the two intervening events defined as a beneficiary elected transfer or a discharge and return to the same HHA over the course of a 60-day episode of home health care. We are proposing that the third intervening event over a course of a 60-day episode of home health care that could trigger a change in payment level would be a significant change in the patient's condition. The proposed SCIC adjustment occurs when a beneficiary experiences a significant change in condition during a 60-day episode that was not envisioned in the original plan of care. In order to receive a new case mix assignment for purposes of SCIC payment during the 60-day episode, the HHA must complete an OASIS assessment and obtain the necessary physician change orders reflecting the significant change in the treatment approach in the patient's plan of care.

The SCIC adjustment is calculated in two parts. The first part of the SCIC adjustment reflects the adjustment to the level of payment *prior* to the significant change in the patient's condition during the 60-day episode. The second part of the SCIC adjustment reflects the adjustment to the level of

payment *after* the significant change in the patient's condition occurs during the 60-day episode. The first part of the SCIC adjustment uses the span of days of the first billable service date through the last billable service date prior to the intervening event of the patient's significant change in condition that warrants a new case mix assignment for payment. The first part of the SCIC adjustment is determined by taking the span of days prior to the patient's significant change in condition as a proportion of 60 multiplied by the original episode payment amount. The original episode payment level is proportionally adjusted using the span of time the patient was under the care of the HHA prior to the significant change in condition that warranted an OASIS assessment, physician change orders indicating the need for a significant change in the course of the treatment plan, and the new case mix assignment for payment at the end of the 60-day episode.

The second part of the SCIC adjustment reflects the time the patient is under the care of the HHA after the patient experienced the significant change in condition during the 60-day episode that warranted the new case mix assignment for payment purposes. The second part of the SCIC adjustment is a proportional payment adjustment reflecting the time the patient will be under the care of the HHA after the significant change in condition and continuing until the end of the 60-day episode. Once the HHA completes the OASIS, obtains the necessary physician change orders reflecting the need for a new course of treatment in the plan of care, and assigns a new case mix level for payment, the second part of the SCIC adjustment begins. The second part of the SCIC adjustment is calculated by using the span of days of the first billable service date through the last billable service date during the balance of the 60-day episode. The second part of the SCIC adjustment is determined by taking the span of days (first billable service date through the last billable service date) after the patient experiences the significant change in condition through the balance of the 60-day episode as a proportion of 60 multiplied by the new episode payment level resulting from the significant change. The initial percentage payment provided at the start of the 60-day episode will be adjusted at the end of the episode to reflect the first and second parts of the SCIC adjustment (or any applicable medical review or LUPA discussed below) determined at the final billing for the 60-day episode.

2. Outlier Payments

Section 1895(b)(5) of the Act governs the payment option for additions or adjustments to the payments due to unusual variations in the type or amount of medically necessary home health care under the HHA PPS. The total amount for addition or adjustment payments during a fiscal year may not exceed 5 percent of total payments projected or estimated to be made based on the HHA PPS in that year.

We considered the option of a long-stay outlier payment. Because we are proposing that successive episode payments would be made for a beneficiary as long as the beneficiary continues to be eligible and requires covered services, there would be no need for long-stay outlier cases under the HHA PPS. However, we believe outlier payments for 60-day episodes in which the HHA incurs extraordinary costs beyond the regular episode payment amount may be desirable. Outlier payments would provide some protection for beneficiaries whose care needs cost much more than the prospectively determined amount of the episode payment. They would also provide HHAs with some financial protection against possible losses on individual beneficiaries.

As discussed in section I. of the preamble, while we are not statutorily required to make provision for outlier payments, we are proposing outlier payments. Outlier payments are payments made in addition to regular 60-day case-mix-adjusted episode payments for episodes that incur unusually large costs due to patient home health care needs. Outlier payments would be made for episodes whose estimated cost exceeds a threshold amount for each HHRG. The outlier threshold for each HHRG would be the 60-day episode payment amount for that group plus a fixed dollar loss amount that is the same for all case-mix groups. Outlier payments would be made for 60-day episode payments that have been adjusted by a PEP adjustment or SCIC adjustment. The outlier threshold for the PEP adjustment equals the PEP adjustment plus a fixed dollar loss amount that is the same for all case-mix groups. The outlier threshold for the SCIC adjustment is the total SCIC payment plus a fixed dollar loss amount that is the same for all case mix groups. The outlier payment would be a proportion of the amount of estimated costs beyond the threshold. Costs would be estimated for each episode by applying standard per-visit amounts to the number of visits by discipline reported on claims. The fixed dollar loss amount and the loss-sharing proportion would be chosen so that estimated total outlier payments are no more than 5 percent of total episode payments. As discussed above, there is no need for a long-stay outlier payment because we are not limiting the number of continuous episode payments in a fiscal year that may be made for Medicare home health care to eligible beneficiaries. As described above, the proposed outlier option is a fixed dollar loss of 1.07 times the standard episode payment amount and a loss sharing ratio of .60. The proposed option results in 7.5 percent of total estimated episodes receiving outlier payment, while holding total estimated outlier outlays to the required 5 percent.

3. Transition

Section 1895(b)(1) of the BBA provides discretion on providing for a transition from the current cost-based interim payment system to a full prospective payment system by permitting a blended PPS payment amount. Under such a transition, the law allows us to provide for a PPS amount, with a portion of payments based on agency-specific costs. The law provides for this blended PPS amount for up to 4 years in a budget-neutral manner.

Blending options provides significant practical obstacles. We could in theory blend what would have been paid under the current reasonable-cost reimbursement system and the PPS. A percentage of the payment would be based on reasonable costs building off the current interim payment system and a percentage would be based on the national PPS amount.

While other PPS systems have used a blended agency and national payment amount, the complexities of blending payments under such dissimilar payment methodologies for home health are so great, that we believe it is not a viable option. Moreover, OCESAA requires that we implement the PPS on the same date for all providers, regardless of their cost-report year. This break in cost-report year would further encourage continued use of the cost-based system. Recent legislation also reflects Congressional interest in expediting the transition from the interim payment system to the PPS. We believe proceeding with a highly complicated blended percentage payment system based on historical data from the cost-based interim payment system would not be in the best interest of the industry.

Section 1895(b)(3) also provides the option to recognize regional differences or differences based upon whether the

services or agency are in an urbanized area. We are proposing a national system of payment rates upon PPS implementation. The wage-index adjustment based on site of service reflects the regional differences in wages across urban and rural areas.

4. Operational Options

As discussed above, we envision two claims per beneficiary per 60-day episode. The initial claim submitted at the start of care will contain the appropriate HHRG code for purposes of partial payment for the 60-day episode and the final claim will be submitted at the end of the 60-day episode. The final claim may contain all of the line-item data visit information for the 60-day period and permit payment for the balance due for the episode. We do not believe this billing approach would impose any additional burden on the industry. We are proposing to require that the HHA identify itself as the primary HHA for the beneficiary during the 60-day episode. This is necessary to establish the HHA to which payment is made during the episode. We do not envision a new specific form requirement for this requirement.

5. Consolidated Billing

The requirement to consolidate all durable medical equipment (DME) with the billing for home health services is expected to have a number of positive benefits. By making the HHA accountable for all services furnished to a Medicare patient, the HHA is in a better position to coordinate all aspects of the care being provided. This ensures that the responsibility for managing both the services and the DME needed for the patient's care is located in one place. The coordination will reduce the possibility of duplicate billings for DME and the opportunities for abusive billing practices. Moreover, the patient does not have to deal with two or more entities involved in the patient's care—one providing the skilled care and one or more entities supplying the DME during the time the HHA is in charge of caring for the patient.

However, we are concerned that because the statute requires an HHA to assume responsibility for all DME while the patient is under the care of the HHA, problems may occur for patients who already have a relationship with their current DME supplier. The impact of the consolidated billing provision with regard to DME takes effect when an HHA takes over the care of a patient, the HHA has no agreement with the patient's DME supplier, and the patient's existing relationship with the DME supplier ends. The HHA's DME supplier will replace the previous supplier and the patient will be required to receive his or her equipment from the new DME supplier. When a patient is discharged from the HHA, a similar situation could arise. Unless the patient chooses to continue receiving his or her DME from the HHA's DME supplier, when the patient is discharged, he or she will have to find a new supplier or reestablish contact with the previous supplier.

The problem of switching suppliers as a result of the consolidated billing requirement could be especially acute for a patient who must maintain a long term relationship with a DME supplier. Patients who might be most affected by the consolidated billing requirement include those who need oxygen equipment or complex equipment such as motorized wheelchairs that require periodic maintenance. Switching between DME suppliers could be confusing for patients and could affect a patient's treatment and well being. Currently we have no immediate solutions to these difficulties under the current statutory language and invite public comment.

C. Effects of This Proposed Rule

This proposed rule would establish requirements for the new prospective payment system for home health agencies as required by section 4603 of the BBA, as amended by section 5101 of OCESAA. These include the implementation of a prospective payment system for home health agencies, consolidated billing requirements, and a number of other related changes. The prospective payment system described in this rule replaces the retrospective reasonable cost-based system currently used by Medicare for the payment of home health services subject to interim payment system limits under Part A and Part B.

Section 1895(b)(3)(A)(i) of the Act requires the computation of a standard prospective payment amount to be initially based on the most recent audited cost-report data available to the Secretary. In accordance with this section of the Act, the primary data source in developing the cost basis for the 60-day episode payments was the audited cost-report sample of HHAs whose cost reporting periods ended in fiscal year 1997 (that is, ending on or after October 1, 1996 through September 30, 1997).

However, Table 11 below illustrates the proportion of HHAs that are likely to be affected.

This table reflects how agencies would be paid under PPS versus how they would be paid under the interim payment system (IPS) with the 15 percent reduction in limits required in FY 2001. The limits under IPS were determined by updating the per-visit limits in effect for FY 2000 by the market basket minus 1.1 percent updating each agency's per-beneficiary cap for FY 2000 by this same percentage. Each of these limits was then reduced by 15 percent. For each agency in the audited cost report data set, we updated their costs from FY 1997 to FY 2001 by our best estimate of HHA cost increases during this period. We then compared each agency's FY 2001 costs to the IPS limits to determine their IPS payment in FY 2001. To determine each agency's payment under PPS, we translated the cost report data into 60-day episodes and used the average case mix for urban/rural and provider type as a proxy. We extrapolated the audited cost report data to reflect the total Medicare HHA distribution. We obtained average case-mix values based on the type of provider and whether the HHA was urban or rural from the Abt data set. We then multiplied the agency's expected number of episodes in FY 2001 by the wage-adjusted and case-mix-adjusted episode payment to obtain the agency's expected PPS payment. The PPS payment was then compared to the IPS payment.

TABLE 11.—IMPACT OF THE HOME HEALTH PROSPECTIVE PAYMENT AMOUNTS ON HOME HEALTH AGENCIES BY TYPE AND LOCATION FOR THE 567 AUDITED COST REPORT SAMPLE AGENCIES

Type of agency	Percentage Change from (IPS—15%) to PPS
ALL AGENCIES	0.0
By Urban/Rural and Provider Type	
Rural:	
Freestanding:	
For-Profit	−17.0
Governmental	46.4
Non-Profit	13.7
Provider Based.	
Urban:	
Freestanding:	
For-Profit	−18.4
Governmental	50.9
Non-Profit	20.5
Provider Based	2.1
By Provider Type	
Freestanding:.	
For-Profit	−18.1
Governmental	47.9
Non-Profit	19.4
Provider Based	3.8

TABLE 11.—IMPACT OF THE HOME HEALTH PROSPECTIVE PAYMENT AMOUNTS ON HOME HEALTH AGENCIES BY TYPE AND LOCATION FOR THE 567 AUDITED COST REPORT SAMPLE AGENCIES—Continued

Type of agency	Percentage Change from (IPS—15%) to PPS
By Urban/Rural	
Rural Agencies	4.2
Urban Agencies	−0.4
By Region	
Midwest States	21.8
Northeast States	21.4
Southern States	−15.5
Western States	−1.3

Table 11 represents the projected effects of the HHA PPS and is based on the 567 providers in the audited cost-report sample weighted to the national total of HHAs. This sample has been adjusted by the most recent market basket factors to reflect the expected cost increases occurring between the cost-reporting periods for the data contained in the database and September 30, 2001.

This impact table compares the effect on categories of HHAs in moving from the interim payment system limits minus 15 percent payment methodology to the PPS payment methodology and thus already factors in the effects of the interim payment system minus 15 percent limits. These cost limits have already had the effect of reducing many extremes in the cost of the system; therefore, as a result of the interim payment system, a majority of HHA providers are currently held at the median national cost per beneficiary or below. It should be noted that HHAs will have had 2 or more years experience under this system before PPS implementation.

Column one of this table divides HHAs by a number of characteristics including provider type, region, and urban versus rural location. For purposes of this impact table four regions have been defined: Northeast, South, Midwest, and West. The Northeast Region consists of Connecticut, Massachusetts, Maine, New Hampshire, New Jersey, New York, Pennsylvania, Puerto Rico, Rhode Island, Vermont, and the Virgin Islands. The South Region consists of Alabama, Arkansas, the District of Columbia, Delaware, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, and West Virginia. The Midwest Region consists of Iowa, Illinois, Indiana, Kansas, Michigan, Minnesota, Missouri, North Dakota, Nebraska, Ohio, South Dakota, and Wisconsin. The West Region consists of Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, New Mexico, Nevada, Oregon, Utah, Washington, and Wyoming.

Column two shows the percentage change in Medicare payments a particular category of HHAs would experience in moving from the interim payment system limits minus 15 percent payment methodology to the proposed PPS payment methodology. Because the statute requires aggregate payments under the HHA PPS and HHA interim payment system minus 15 percent payment methodology to be budget neutral, the effect on agencies in the aggregate is zero.

Rural freestanding for-profit HHAs experience a 17.0 percent decrease in moving from the interim payment system limits minus 15 percent payment methodology to the PPS payment methodology. Rural freestanding governmental HHAs experience a 46.4 percent increase in moving from the interim payment system limits minus 15 percent payment methodology to the PPS payment methodology. Rural freestanding nonprofit HHAs experience a 13.7 percent increase in moving from the interim payment system limits minus 15 percent payment methodology to the PPS payment methodology. Rural provider-based HHAs, in the aggregate, experience a 10.1 percent increase in moving from the interim payment system limits minus 15 percent methodology to the PPS payment methodology. Rural agencies, in the aggregate, experience a 4.2 percent increase in moving from the interim payment system limits minus 15 percent payment methodology to the PPS payment methodology.

Urban freestanding for-profit HHAs experience an 18.4 percent decrease in moving from the interim payment system limits minus 15 percent payment methodology to the PPS payment methodology. Urban freestanding governmental HHAs experience a 50.9 percent increase in moving from the interim payment system limits minus 15 percent payment methodology to the PPS payment methodology. Urban freestanding nonprofit HHAs experience a 20.5 percent increase in moving from the interim payment system limits minus 15 percent payment methodology to the PPS payment methodology. Urban provider-based HHAs, in the aggregate, experience a 2.1 percent increase in moving from the interim payment system limits minus 15 percent payment methodology to the PPS payment methodology. Urban agencies, in the aggregate, experience a –0.4 percent decrease in moving from the interim payment system limits minus 15 percent payment methodology to the PPS payment methodology.

The current cost limits have been criticized as providing better financial treatment of urban providers relative to rural providers. The HHA PPS system, which is based on patient characteristics, tends to level the playing field; thus, rural providers, in general, fare relatively better than urban providers. The largest impact on urban providers is in the urban freestanding for-profit category where it can be argued that historical costs have been disproportionately high compared to other providers for reasons unrelated to the relative needs of the patients they serve.

Freestanding for-profit HHAs, in the aggregate, experience an 18.1 percent decrease in moving from the interim payment system limits minus 15 percent payment methodology to the PPS payment methodology. Freestanding governmental HHAs, in the aggregate, experience a 47.9 percent increase in moving from the interim payment system limits minus 15 percent payment methodology to the PPS payment methodology. Freestanding nonprofit HHAs, in the aggregate, experience a 19.4 percent increase in moving from the interim payment system limits minus 15 percent payment methodology to the PPS payment methodology. Provider-based HHAs, in the aggregate, experience a 3.8 percent increase in moving from the interim payment system limits minus 15 percent payment methodology to the PPS payment methodology.

It should be noted that governmental providers fare relatively better under the HHA PPS system than other types of providers. In part, this is because the HHA PPS system is driven primarily by the needs of patients rather than utilization incentives. Thus, governmental providers are less affected by the interim payment system limits minus 15 percent payment methodology because their costs have been historically lower and visit utilization per episode is much lower. On average, governmental agencies have reported lower average costs per visit as well as fewer visits per episode. It should be noted that this category of HHAs accounts for only 2.6 percent of total home health expenditures and therefore the large increase attributed to them has little impact in the aggregate system costs. Although provider-based agencies tended to have, as a group, higher per-

visit costs, the payment differential reflected in this impact table for provider-based agencies is relatively modest and in a positive direction. This can be attributed to the fact that the reduction in the per-visit limit under interim payment system limits minus 15 percent payment methodology has the effect of reducing this cost-per-visit differential, and thus provider-based HHAs actually gain slightly under PPS.

HHAs in the Midwest region experience a 21.8 percent increase in moving from the interim payment system limits minus 15 percent payment methodology to the PPS payment methodology. HHAs in the Northeast region experience a 21.4 percent increase in moving from the interim payment system limits minus 15 percent payment methodology to the PPS payment methodology. HHAs in the South region experience a 15.4 percent decrease in moving from the interim payment system limits minus 15 percent payment methodology to the PPS payment methodology. HHAs in the West region experience a 1.3 percent decrease in moving from the interim payment system limits minus 15 percent payment methodology to the PPS payment methodology.

We would have preferred to provide an impact table with more regions; however, the limitations of our data prevented us from obtaining provider data at a lower level than the four major regions. However, this regional breakdown does reflect what one might expect in moving from our current interim payment system cost limitations payment methodology to a national PPS payment methodology. Medicare payments have historically varied by region without regard to the relative needs/conditions of patients; therefore, those regions that had the highest unexplained costs for home health services are the most impacted areas (South region followed by the West region). In contrast, the Northeast region and the Midwest region fare relatively well by comparison. It must be noted that in a payment methodology system that is legislatively required to achieve budget neutrality, any effort to increase payments to those regions more affected by a national payment system necessarily results in a reduction of payments to those regions that have historically restrained costs under home health.

D. Rural Hospital Impact Statement

Section 1102(b) of the Act requires us to prepare a regulatory impact analysis if a rule may have a significant impact on the operations of a substantial number of small rural hospitals. This analysis must conform to the provisions of section 603 of the RFA. For purposes of section 1102(b) of the Act, we define a small rural hospital as a hospital that is located outside of a Metropolitan Statistical Area and has fewer than 50 beds.

We have not prepared a rural impact statement since we have determined, and the Secretary certifies, that this rule would not have a significant economic impact on the operations of a substantial number of small rural hospitals.

In accordance with the provisions of Executive Order 12866, this regulation was reviewed by the Office of Management and Budget. We have reviewed this proposed rule under the threshold criteria of Executive Order 13132, Federalism. We have determined that the proposed rule would not have substantial direct effects on the rights, roles, and responsibilities of States.

List of Subjects

42 CFR Part 409

Health facilities, Medicare.

42 CFR Part 410

Health facilities, Health professions, Kidney diseases, Laboratories, Medicare, Rural areas, X-rays.

42 CFR Part 411

Kidney diseases, Medicare, Reporting and recordkeeping requirements.

42 CFR Part 413

Health facilities, Kidney diseases, Medicare, Puerto Rico, Reporting and recordkeeping requirements.

42 CFR Part 424

Emergency medical services, Health facilities, Health professions, Medicare.

42 CFR Part 484

Health facilities, Health professions, Medicare, Reporting and recordkeeping requirements.

For the reasons set forth in the preamble, 42 CFR chapter IV would be amended as follows:

PART 409—HOSPITAL INSURANCE BENEFITS

A. Amend part 409 as set forth below:

1. The authority citation for part 409 continues to read as follows:

Authority: Secs. 1102 and 1871 of the Social Security Act (U.S.C. 1302 and 1395hh).

2. In § 409.43, revise paragraph (e) to read as follows:

§ 409.43 Plan of care requirements.

* * * * *

(e) *Frequency of review.* (1) The plan of care must be reviewed by the physician (as specified in § 409.42(b)) in consultation with agency professional personnel at least every 60 days unless there is a—

(i) Beneficiary elected transfer;

(ii) Significant change in condition resulting in a change in the case-mix assignment; or

(iii) Discharge and return to the same HHA during the 60-day episode that warrants a new 60-day episode payment and a new physician certification of the new plan of care.

(2) Each review of a beneficiary's plan of care must contain the signature of the physician who reviewed it and the date of review.

* * * * *

3. In § 409.100, revise paragraph (a) to read as follows:

§ 409.100 To whom payment is made.

(a) *Basic rule.* Except as provided in paragraph (b) of this section—

(1) Medicare pays hospital insurance benefits only to a participating provider.

(2) For home health services furnished to an individual who at the time the item or service is furnished is under a plan of care of an HHA, payment is made to the HHA (without regard to whether the item or service is furnished by the HHA directly, under arrangement with the HHA, or under any other contracting or consulting arrangement).

* * * * *

PART 410—SUPPLEMENTARY MEDICAL INSURANCE (SMI) BENEFITS

B. Amend part 410 as set forth below:

1. The authority citation for part 410 continues to read as follows:

Authority: Secs. 1102 and 1871 of the Social Security Act (U.S.C. 1302 and 1395hh).

2. In § 410.150, republish the introductory text to paragraph (b) and add new paragraph (b)(19) to read as follows:

§ 410.150 To whom payment is made.

* * * * *

(b) *Specific rules.* Subject to the conditions set forth in paragraph (a) of this section, Medicare Part B pays as follows:

* * * * *

(19) To a participating HHA, for home health services furnished to an individual who at the time the item or service is furnished is under a plan of care of an HHA (without regard to whether the item or service is furnished by the HHA directly, under arrangement with the HHA, or under any other contracting or consulting arrangement).

PART 411—EXCLUSIONS FROM MEDICARE AND LIMITATIONS ON MEDICARE PAYMENT

C. Amend part 411 as set forth below:

1. The authority citation for part 411 continues to read as follows:

Authority: Secs. 1102 and 1871 of the Social Security Act (U.S.C. 1302 and 1395hh).

2. In § 411.15, republish the introductory text to the section, and add a new paragraph (q) to read as follows:

§ 411.15 Particular services excluded from coverage.

The following services are excluded from coverage:

* * * * *

(q) A home health service as defined in section 1861(m) of the Act furnished to an individual who is under a plan of care of an HHA, unless that HHA has submitted a claim for payment for such services.

PART 413—PRINCIPLES OF REASONABLE COST REIMBURSEMENT; PAYMENT FOR END-STAGE RENAL DISEASE SERVICES; OPTIONAL PROSPECTIVELY DETERMINED PAYMENT RATES FOR SKILLED NURSING FACILITIES

D. Amend part 413 as set forth below:

1. Revise the authority citation for part 413 to read as follows:

Authority: Secs. 1102, 1861(v)(1)(A), and 1871 of the Social Security Act (U.S.C. 1302, 1395x(v)(1)(A), and 1395hh).

2. In § 413.1, add a new paragraph (h) to read as follows:

§ 413.1 Introduction.

* * * * *

(h) *Payment for services furnished by HHAs.* The amount paid for home health services as defined in section 1861(m) of the Act that are furnished beginning on or after October 1, 2000 to an eligible beneficiary under a home health plan of care is determined according to the prospectively determined payment rates for HHAs set forth in part 484, subpart E of this chapter.

§ 413.64 [Amended]

3. In § 413.64, in paragraph (h)(1), remove the phrase ''and for both Part A and Part B HHA services'' at the end of the paragraph.

PART 424—CONDITIONS FOR MEDICARE PAYMENT

E. Amend part 424 as set forth below:

1. The authority citation for part 424 continues to read as follows:

Authority: Secs. 1102 and 1871 of the Social Security Act (U.S.C. 1302 and 1895hh).

2. In § 424.22, republish the introductory text to paragraph (a)(1), add a new paragraph (a)(1)(v), and revise paragraph (b)(1) to read as follows:

§ 424.22 Requirements for home health services.

* * * * *

(a) *Certification*—(1) *Content of certification.* As a condition of payment of home services under Medicare Part A or Medicare Part B, a physician must certify as follows:

* * * * *

(v) The individual is correctly assigned to one of the Home Health Resource Groups.

* * * * *

(b) *Recertification.* (1) *Timing and signature of recertification.* Recertification is required at least every 60 days, preferably at the time the plan is reviewed, and must be signed by the physician who reviews the plan of care. The recertification is required at least every 60 days unless there is a—

(i) Beneficiary elected transfer; or

(ii) Discharge and return to the same HHA during the 60-day episode.

* * * * *

PART 484—HOME HEALTH SERVICES

F. Amend part 484 as set forth below:

1. The authority citation for part 484 continues to read as follows:

Authority: Secs. 1102 and 1871 of the Social Security Act (42 U.S.C. 1302 and 1395(hh).

2. Revise the heading for part 484 to read as set forth above.

§ 484.18 [Amended]

3. In § 484.18, in paragraph (b), remove the phrase ''62 days'' and in its place add the phrase ''60 days unless there is a beneficiary elected transfer; a significant change in condition resulting in a change in the case-mix assignment; or a discharge and return to the same HHA during the 60-day episode.''

4. In § 484.55, revise paragraph (d)(1) to read as follows:

§ 484.55 Condition of participation: Comprehensive assessment of patients.

* * * * * *

(d) *Standard: Update of the comprehensive assessment.* * * *

(1) Every 60 days beginning with the start-of-care date, unless there is a—

(i) Beneficiary elected transfer;

(ii) Significant change in condition resulting in a new case-mix assignment; or

(iii) Discharge and return to the same HHA during the 60-day episode.

* * * * *

5. Add and reserve a new subpart D.

6. Add a new subpart E, consisting of §§ 484.200, 484.202, 484.205, 484.210, 484.215, 484.220, 484.225, 484.230, 484.235, 484.237, 484.240, 484.250, and 484.260 to read as follows:

Subpart E—Prospective Payment System for Home Health Agencies

Sec.

Subpart E—Prospective Payment System for Home Health Agencies

§ 484.200 Basis and scope.

(a) *Basis.* This subpart implements section 1895 of the Act, which provides for the implementation of a prospective payment system (PPS) for HHAs for portions of cost reporting periods occurring on or after October 1, 2000.

(b) *Scope.* This subpart sets forth the framework for the HHA PPS, including the methodology used for the development of the payment rates, associated adjustments, and related rules.

§ 484.202 Definitions.

As used in this subpart—

Case-mix index means a scale that measures the relative difference in resource intensity among different groups in the clinical model.

Clinical model means a system for classifying Medicare-eligible patients under a home health plan of care into mutually exclusive groups based on clinical, functional, and intensity-of-service criteria. The mutually exclusive groups are defined as Home Health Resource Groups (HHRGs).

Discipline means one of the six home health disciplines covered under the Medicare home health benefit (skilled nursing services, home health aide services, physical therapy services, occupational therapy services, speech-language pathology services, and medical social services).

Market basket index means an index that reflects changes over time in the prices of an appropriate mix of goods and services included in home health services.

§ 484.205 Basis of payment.

(a) *Method of payment.* (1) An HHA receives a national 60-day episode payment of a predetermined rate for a home health service paid on a reasonable cost basis. HCFA determines this national 60-day episode payment under the methodology set forth in § 484.215.

(2) An HHA may receive a low-utilization payment adjustment (LUPA) of a predetermined per-visit rate. HCFA determines the LUPA under the methodology set forth in § 484.230.

(3) An HHA may receive a partial episode payment adjustment (PEP) adjustment due to an intervening event defined as a beneficiary elected transfer or a discharge and return to the same HHA during the 60-day episode that warrants a new 60-day episode payment during an existing 60-day episode, that initiates the start of a new 60-day episode payment and a new physician certification of the new plan of care. HCFA determines the PEP adjustment under the methodology set forth in § 484.235.

(4) An HHA may receive a significant change in condition payment adjustment (SCIC Adjustment) due to the intervening event defined as a significant change in the patient's condition during an existing 60-day episode. The SCIC adjustment occurs when a beneficiary experiences a significant change in condition during a 60-day episode that was not envisioned in the original plan of care. We determine the SCIC Adjustment under a methodology set forth in § 484.237.

(b) *Episode payment.* The national 60-day episode payment represents payment in full for all costs associated with furnishing a home health service paid on a reasonable cost basis as of August 5, 1997 unless the national 60-day episode payment is subject to a low-utilization payment adjustment set forth in § 484.230, a partial episode payment adjustment set forth at § 484.235, or an additional outlier payment set forth in § 484.240. All payments under this system may be subject to a medical review adjustment. DME provided as a home health service as defined in section 1861(m) of the Act continues to be paid the fee schedule amount.

(c) *Low-utilization payment.* An HHA receives a national 60-day episode payment of a predetermined rate for home health services paid on a reasonable cost basis as of August 5, 1997, unless HCFA determines at the end of the 60-day episode that the HHA furnished minimal services to a patient during the 60-day episode. HCFA determines a low-utilization payment adjustment under the methodology set forth in § 484.230.

(d) *Partial episode payment adjustment.* An HHA receives a national 60-day episode payment of a predetermined rate for home health services paid on a reasonable cost basis as of August 5, 1997, unless HCFA determines an intervening event, defined as a beneficiary elected transfer, or discharge and return to the same HHA during a 60-day episode, warrants a new 60-day episode payment. The PEP adjustment would not apply in situations of transfers among HHAs of common ownership. The discharge and return to the same HHA during the 60-day episode is only recognized in those circumstances when a beneficiary reached the goals in the original plan of care. The original plan of care must have been terminated with no anticipated need for additional home health services for the balance of the 60-day episode. If the intervening event warrants a new 60-day episode payment and the new physician certification of a new plan of care, the initial HHA receives a partial episode payment adjustment reflecting the length of time the patient remained under its care. HCFA determines a partial episode payment adjustment under a methodology set forth in § 484.235.

(e) *Significant change in condition adjustment.* The HHA receives a national 60-day episode payment of a predetermined rate for home health services paid on a reasonable cost basis as of August 5, 1997, unless HCFA determines an intervening event defined as a beneficiary experiencing a significant change in condition during a 60-day episode that was not envisioned in the original plan of care occurred. In order to receive a new case mix assignment for purposes of payment during the 60-day episode, the HHA must complete an OASIS assessment and obtain the necessary physician change orders reflecting the significant change in the treatment approach in the patient's plan of care. The total significant change in condition payment adjustment is a proportional payment adjustment reflecting the time both prior and after the patient experienced a significant change in condition during the 60-day episode.

(f) *Outlier payment.* An HHA receives a national 60-day episode payment of a predetermined rate for a home health service paid on a reasonable cost basis as of August 5, 1997, unless the estimated cost of the 60-day episode exceeds a threshold amount. The outlier payment is defined to be a proportion of the estimated costs beyond the threshold. An outlier payment is a payment in addition to the national 60-day episode payment. The total of all outlier payments is limited to 5 percent of total outlays under the HHA PPS. HCFA determines an outlier payment under the methodology set forth in § 484.240.

§ 484.210 Data used for the calculation of the national prospective 60-day episode payment.

To calculate the national prospective 60-day episode payment, HCFA uses the following:

(a) Medicare cost data on the most recent audited cost report data available.

(b) Utilization data based on Medicare claims.

(c) An appropriate wage index to adjust for area wage differences.

(d) The most recent projections of increases in costs from the HHA market basket index.

(e) OASIS assessment data and other data that account for the relative resource utilization for different HHA Medicare patient case mix.

§ 484.215 Methodology used for the calculation of the national 60-day episode payment.

(a) *Determining an HHA's costs.* In calculating the initial unadjusted national 60-day episode payment applicable for a service furnished by an HHA using data on the most recent available audited cost reports, HCFA determines each HHA's costs by summing its allowable costs for the period. HCFA determines the national mean cost per visit.

(b) *Determining HHA utilization.* In calculating the initial unadjusted national 60-day episode payment, HCFA determines the national mean utilization for each of the six disciplines using home health claims data.

(c) *Use of the market basket index.* HCFA uses the HHA market basket index to adjust the HHA cost data to reflect cost increases occurring between October 1, 1996 through September 30, 2001.

(d) *Calculation of the unadjusted national average prospective payment amount for the 60-day episode.* HCFA

calculates the national unadjusted 60-day episode payment in the following manner:

(1) By computing the mean national cost per visit.

(2) By computing the national mean utilization for each discipline.

(3) By multiplying the mean national cost per visit by the national mean utilization summed in the aggregate for the six disciplines.

(4) By adding to this amount, amounts for nonroutine medical supplies and an OASIS adjustment for estimated ongoing reporting costs.

(e) *Standardization of the data for variation in area wage levels and case mix.* HCFA standardizes the cost data described in paragraph (a) of this section to remove the effects of geographic variation in wage levels and variation in case mix. HCFA standardizes the cost data for geographic variation in wage levels using the hospital wage index. HCFA standardizes the cost data for HHA variation in case mix using the case-mix indices and other data that indicate HHA case mix.

§ 484.220 Calculation of the national adjusted prospective 60-day episode payment rate for case mix and area wage levels.

HCFA adjusts the national prospective 60-day episode payment rate to account for HHA case mix using a case-mix index to explain the relative resource utilization of different patients. HCFA also adjusts the national prospective 60-day episode payment rate to account for geographic differences in wage levels using an appropriate wage index.

§ 484.225 Annual update of the national adjusted prospective 60-day episode payment rate.

(a) HCFA updates the unadjusted national 60-day episode payment rate on a fiscal year basis.

(b) For fiscal year 2001, the unadjusted national 60-day episode payment rate is adjusted using the latest available market basket factors.

(c) For fiscal year 2002 or 2003, the unadjusted national 60-day episode payment rate is equal to the rate for the previous period or fiscal year increase by a factor equal to the HHA market basket minus 1.1 percentage point.

(d) For subsequent fiscal years, the unadjusted national rate is equal to the rate for the previous fiscal year increased by the applicable HHA market basket index amount.

§ 484.230 Methodology used for the calculation of the low-utilization payment adjustment.

An episode with four or fewer visits is paid the national average standardized per-visit amount by discipline for each visit type. The national average standardized per-visit amount is determined by using cost data set forth in § 484.210(a) and adjusting by the appropriate wage index.

§ 484.235 Methodology used for the calculation of the partial episode payment adjustment.

(a) HCFA makes a partial episode payment adjustment to the original 60-day episode payment that is interrupted by an intervening event described in § 484.205(d).

(b) The original 60-day episode payment is adjusted to reflect the length of time the beneficiary remained under the care of the original HHA.

(c) The partial episode payment is calculated by determining the actual days served by the original HHA as a proportion of 60 multiplied by the initial 60-day episode payment.

§ 484.237 Methodology used for the calculation of the significant change in condition payment adjustment.

(a) HCFA makes a significant change in condition payment adjustment to the original 60-day episode payment that is interrupted by the intervening event defined in § 484.205(e).

(b) The SCIC adjustment is calculated in two parts.

(1) The first part of the SCIC adjustment reflects the adjustment to the level of payment prior to the significant change in the patient's condition during the 60-day episode. The first part of the SCIC adjustment is determined by taking the span of days prior to the patient's significant change in condition as a proportion of 60 multiplied by the original episode amount.

(2) The second part of the SCIC adjustment reflects the adjustment to the level of payment after the significant change in the patient's condition occurs during the 60-day episode. The second part of the SCIC adjustment is calculated by using the span of days of the first billable service date through the last billable service date during the balance of the 60-day episode.

(c) The initial percentage payment provided at the start of the 60-day episode will be adjusted at the end of the episode to reflect the first and second parts of the total SCIC adjustment determined at the end of the 60-day episode.

§ 484.240 Methodology used for the calculation of the outlier payment.

(a) HCFA makes an outlier payment for an episode whose estimated cost exceeds a threshold amount for each case-mix group.

(b) The outlier threshold for each case-mix group is the episode payment amount for that group, the PEP adjustment amount for the episode or the total significant change in condition adjustment amount for the episode plus a fixed dollar loss amount that is the same for all case-mix groups.

(c) The outlier payment is a proportion of the amount of estimated cost beyond the threshold.

(d) HCFA estimates the cost for each episode by applying the standard per-visit amount to the number of visits by discipline reported on claims.

(e) The fixed dollar loss amount and the loss sharing proportion are chosen so that the estimated total outlier payment is no more than 5 percent of total episode payment.

§ 484.250 Patient assessment data.

HCFA requires an HHA to submit the OASIS data described at § 484.55(b)(1) and (d)(1) to administer the payment rate methodologies described in §§ 484.215, 484.230, 484.235, and 484.237.

§ 484.260 Limitation on review.

Judicial or administrative review under sections 1869 or 1878 of the Act, or otherwise, is prohibited with regard to the establishment of the payment unit, including the national 60-day episode payment rate and the LUPA. This prohibition also includes the establishment of the transition period, definition and application of the unit of payments, the computation of initial standard prospective payment amounts, the establishment of the adjustment for outliers, and the establishment of case-mix and area wage adjustment factors.

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Dated: May 4, 1999.

Nancy-Ann Min DeParle,

Administrator, Health Care Financing Administration.

Dated: July 21, 1990.

Donna E. Shalala,

Secretary.

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