DEPARTMENT OF HEALTH AND HUMAN SERVICES

Centers for Medicare & Medicaid Services

42 CFR Part 484

[CMS-1541-P]

RIN 0938-AO32

Medicare Program; Home Health Prospective Payment System Refinement and Rate Update for Calendar Year 2008

AGENCY: Centers for Medicare & Medicaid Services (CMS), HHS.

ACTION: Proposed rule.

SUMMARY: This proposed rule would set forth an update to the 60-day national episode rates and the national per-visit amounts under the Medicare prospective payment system for home health services, effective on January 1, 2008. As part of this proposed rule, we are also proposing to rebase and revise the home health market basket to ensure it continues to adequately reflect the price changes of efficiently providing home health services. This proposed rule also would set forth the refinements to the

payment system. In addition, this proposed rule would establish new quality of care data collection requirements.

DATES: To be assured consideration, comments must be received at one of the addresses provided below, no later than 5 p.m. on [**OFR—**insert date 60 days after the date of filing for public inspection at OFR].

ADDRESSES: In commenting, please refer to file code CMS-1541-P. Because of staff and resource limitations, we cannot accept comments by facsimile (FAX) transmission.

You may submit comments in one of four ways (no duplicates, please):

1. Electronically. You may submit electronic comments on specific issues in this regulation to http://www.cms.hhs.gov/eRulemaking. Click on the link "Submit electronic comments on CMS regulations with an open comment period." (Attachments should be in Microsoft Word, WordPerfect, or Excel; however, we prefer Microsoft Word.)

2. By regular mail. You may mail written comments (one original and two copies) to the following address ONLY:

Centers for Medicare & Medicaid Services,

Department of Health and Human Services,

Attention: CMS-1541-P,

P.O. Box 8012,

Baltimore, MD 21244-8012.

Please allow sufficient time for mailed comments to be received before the close of the comment period.

3. By express or overnight mail. You may send written comments (one original and two copies) to the following address ONLY:

Centers for Medicare & Medicaid Services,

Department of Health and Human Services,

Attention: CMS-1541-P,

Mail Stop C4-26-05,

7500 Security Boulevard,

Baltimore, MD 21244-1850.

4. By hand or courier. If you prefer, you may deliver (by hand or courier) your written comments (one original and two copies) before the close of the comment period to one of the following addresses. If you intend to deliver your comments to the Baltimore address, please call telephone number (410) 786-7195 in advance to schedule your arrival with one of our staff members.

Room 445-G, Hubert H. Humphrey Building,

200 Independence Avenue, SW.,

Washington, DC 20201; or

7500 Security Boulevard,

Baltimore, MD 21244-1850.

(Because access to the interior of the HHH Building is not readily available to persons without Federal Government identification, commenters are encouraged to leave their comments in the CMS drop slots located in the main lobby of the building. A stamp-in clock is available for persons wishing to retain a proof of filing by stamping in and retaining an extra copy of the comments being filed.)

Comments mailed to the addresses indicated as appropriate for hand or courier delivery may be delayed and received after the comment period.

Submission of comments on paperwork requirements. You may submit comments on this document's paperwork requirements by mailing your comments to the addresses provided at the end of the "Collection of Information Requirements" section in this document.

For information on viewing public comments, see the beginning of the "SUPPLEMENTARY INFORMATION" section.

FOR FURTHER INFORMATION CONTACT:

Randy Throndset, (410) 786-0131.

General Issues: Sharon Ventura, (410) 786-1985.

Clinical (OASIS) Issues: Kathy Walch, (410) 786-7970.

Quality Issues: Doug Brown, (410) 786-0028.

Market Basket Update Issues: Mollie Knight, (410) 786-7948; and Heidi Oumarou, (410) 786-7942.

SUPPLEMENTARY INFORMATION:

Submitting Comments: We welcome comments from the public on all issues set forth in this rule to assist us in fully considering issues and developing policies. You can assist us by referencing the file code CMS-1541-P and the specific "issue identifier" that precedes the section on which you choose to comment.

Inspection of Public Comments: All comments received before the close of the comment period are available for viewing by the public, including any personally identifiable or confidential business information that is included in a comment. We post all comments received before the close of the comment period on the following Web site as soon as possible after they have been received: http://www.cms.hhs.gov/eRulemaking. Click on the link "Electronic Comments on CMS Regulations" on that Web site to view public comments.

Comments received timely will also be available for public inspection as they are received, generally beginning approximately 3 weeks after publication of a document, at the headquarters of the Centers for Medicare & Medicaid Services, 7500 Security Boulevard, Baltimore, Maryland 21244, Monday

through Friday of each week from 8:30 a.m. to 4 p.m. To schedule an appointment to view public comments, phone 1-800-743-3951.

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I. Background

[If you choose to comment on issues in this section, please include the caption "BACKGROUND" at the beginning of your comments.]

A. Requirements of the Balanced Budget Act of 1997 for Updating the Prospective Payment System for Home Health Services

The Balanced Budget Act of 1997 (BBA) (Pub. L. 105-33) enacted on August 5, 1997, significantly changed the way Medicare pays for Medicare home health services. Until the implementation of a home health prospective payment system (HH PPS) on October 1, 2000, home health agencies (HHAs) received payment under a cost-based reimbursement system. Section 4603 of the BBA governed the development of the HH PPS.

Section 4603(a) of the BBA provides the authority for the development of a PPS for all Medicare-covered home health services provided under a plan of care that were paid on a reasonable cost basis by adding section 1895, entitled "Prospective Payment For Home Health Services," to the Social Security Act (the Act).

Section 1895(b)(1) of the Act requires the Secretary to establish a PPS for all costs of home health services paid under Medicare.

Section 1895(b)(3)(A) of the Act requires that (1) the computation of a standard prospective payment amount include all costs for 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 1895(b)(3)(B) of the Act addresses the annual update to the standard prospective payment amounts by the home health applicable increase percentage as specified in the statute.

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 significant variation in costs 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

home health services furnished in a geographic area compared to the applicable national average level. These wage-adjustment factors may be used by the Secretary for the different geographic wage levels for purposes of section 1886(d)(3)(E) of the Act.

Section 1895(b)(5) of the Act gives the Secretary the option to make 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 (FY) may not exceed 5 percent of total payments projected or estimated.

In accordance with the statute, we published a final rule (65 FR 41128) in the **Federal Register** on July 3, 2000 to implement the HH PPS legislation. This final rule established requirements for the new PPS for home health services as required by section 4603 of the BBA, and as subsequently amended by section 5101 of the Omnibus Consolidated and Emergency Supplemental Appropriations Act (OCESAA) for Fiscal Year 1999, (Pub. L. 105-277), enacted on October 21, 1998; and by sections 302, 305, and 306 of the Medicare, Medicaid, and SCHIP Balanced Budget Refinement Act (BBRA) of 1999, (Pub. L. 106-113), enacted on November 29, 1999. The requirements include the implementation of a PPS for home health services, consolidated billing requirements, and a number of other related changes. The

HH PPS described in that rule replaced the retrospective reasonable-cost-based system that was used by Medicare for the payment of home health services under Part A and Part B.

For a complete and full description of the HH PPS as required by the BBA, see the July 2000 HH PPS final rule.

B. Deficit Reduction Act of 2005

On February 8, 2006, the Deficit Reduction Act (DRA) of 2005 (Pub. L. 109-171) was enacted. This legislation affected updates to HH payment rates for CY 2006. The DRA also introduces home health care quality data and its effects on payments to HHAs beginning in CY 2007.

Specifically, section 5201 of the DRA changed the CY 2006 update from the applicable home health market basket percentage increase minus 0.8 percentage point to a 0 percent update.

In addition, section 5201 of the DRA amends section 421(a) of the Medicare Prescription Drug, Improvement, and Modernization Act of 2003 (MMA) (Pub. L. 108-173, enacted on December 8, 2003). The amended section 421(a) of the MMA requires that for home health services furnished in a rural area (as defined in section 1886(d)(2)(D) of the Act) on or after January 1, 2006 and before January 1, 2007, that the Secretary increase the payment amount otherwise made under section 1895 of the Act for home health services by 5 percent. The statute waives budget

neutrality for purposes of this increase since it specifically states that the Secretary must not reduce the standard prospective payment amount (or amounts) under section 1895 of the Act applicable to home health services furnished during a period to offset the increase in payments resulting in the application of this section of the statute.

The 0 percent update to the payment rates and the rural add-on provisions of the DRA were implemented through Pub. L. 100-20, One Time Notification, Transmittal 211 issued on February 10, 2006.

In addition, section 5201 of the DRA requires HHAs to submit data for purposes of measuring health care quality. This requirement is applicable for CY 2007 and each subsequent year. If an HHA does not submit quality data, the home health market basket percentage increase will be reduced 2 percentage points.

C. Updates to the HH PPS

As required by section 1895(b)(3)(B) of the Act, we have historically updated the HH PPS rates annually in a separate **Federal Register** document. In those documents, we also incorporated the legislative changes to the system required by the statute after the BBA, specifically the MMA.

On November 9, 2006, we published a final rule titled "Medicare Program; Home Health Prospective Payment System Rate Update for

Calendar Year 2007 and Deficit Reduction Act of 2005 Changes to Medicare Payment for Oxygen Equipment and Capped Rental Durable Medical Equipment; Final Rule" (CMS-1304-F) (71 FR 65884) in the **Federal Register** that updated the 60-day national episode rates and the national per-visit amounts under the Medicare PPS for home health services for CY 2007. In addition, this final rule ended the one-year transition period that consisted of a blend of 50 percent of the new area labor marker designations' wage index and 50 percent of the previous area labor market designations' wage index. We also revised the fixed dollar loss ratio, which is used in the calculation of outlier payments. According to section 5201(c)(2) of the DRA, this final rule also reduced, by 2 percentage points, the home health market basket percentage increase to HHAs that did not submit required quality data, as determined by the Secretary.

D. System for Payment of Home Health Services

Generally, Medicare makes payment under the HH PPS on the basis of a national standardized 60-day episode payment rate that is adjusted for case-mix and wage index. The national standardized 60-day episode payment rate includes the six home health disciplines (skilled nursing, home health aide, physical therapy, speech-language pathology, occupational therapy, and medical social services) and medical supplies. Durable medical

equipment covered under home health is paid for outside the HH PPS payment. To adjust for case mix, the HH PPS uses an 80-category case-mix classification to assign patients to a home heath resource group (HHRG). Clinical, functional, and service utilization are computed from responses to selected data elements in the OASIS assessment instrument.

For episodes with four or fewer visits, Medicare pays on the basis of a national per-visit amount by discipline, referred to as a LUPA. Medicare also adjusts the national standardized 60-day episode payment rate for certain intervening events that are subject to a partial episode payment adjustment (PEP adjustment) or a significant change in condition adjustment (SCIC adjustment). For certain cases that exceed a specific cost threshold, an outlier adjustment may also be available.

E. Summary of Home Health Payment Research

The objective of a prospective payment system that is case-mix adjusted is to predict resource costs of providing care to similar types of patients and to align payments to those costs. As MEDPAC points out in their December 2005 Report to Congress, if the case-mix is not aligned appropriately to resource costs, then the PPS may overpay for some services and underpay for others.

Since the July 3, 2000 final rule, we have stated our

intention to monitor the new PPS and make refinements to the system as needed. We believe refinements are now needed to improve the performance and appropriateness of the HH PPS, which has not undergone major refinements since its implementation in October of 2000. The general goal of any refinements would be to ensure that the payment system continues to produce appropriate compensation for providers while retaining opportunities to manage home health care efficiently. Also important in any refinement is maintaining an appropriate degree of operational simplicity. The analytic goals of our refinement research included improving the accuracy of the case-mix model, understanding the descriptive characteristics of the program and the use of payment adjusters, understanding variations in HHA margins, and the simulation of potential changes to payment methodology.

We contracted with Abt Associates, Inc., of Cambridge, Massachusetts to conduct several analyses in order to achieve these objectives. In particular, the Abt Associates analyses focused on the resource needs of long stay patients; alternatives to the current therapy threshold; the potential for a more extensive set of variables to improve the accuracy of the Clinical on Top (COT) model used to define the HHRG; alternative ways to account for non-routine medical supplies (NRS);

utilization and episode characteristics; and HHA margins. In order to conduct these analyses, Abt Associates primarily used data files created from a 20 percent sample of claims data collected between 2001 and 2004, Outcome and Assessment Information Set (OASIS) data linked to claims, and cost reports. For measures of resource use, Abt Associates used weighted minutes for the case-mix refinements research. For research on accounting for nonroutine supplies costs, Abt Associates analyzed supplies charges reported on claims after adjusting them using cost-to-charge ratios from selected cost reports. These analyses are described in more detail in section II.A.

In addition to these analyses, two Technical Expert Panel (TEP) meetings were conducted, under contract with Abt Associates, on December 15, 2005, and March 14, 2006. These TEP meetings provided an opportunity for experts, industry representatives, and practitioners in the field of home health care to provide feedback on Abt's research examining the HH PPS and exploration of payment policy alternatives. Abt considered this feedback when developing recommendations for refinements to the HH PPS. The refinements to the HH PPS described in the following sections are the culmination of substantial research efforts focusing on several areas identified for possible improvements.

II. Provisions of the Proposed Regulation

[If you choose to comment on issues in this section, include the caption "PROVISIONS OF THE PROPOSED REGULATIONS" at the beginning of your comments.]

A. Refinements to the Home Health Prospective Payment System

The Medicare HH PPS has been in effect since October 1, 2000. As set forth in the final rule published July 3, 2000 in the **Federal Register** (65 FR 41128), the unit of payment under the Medicare HH PPS is a national standardized 60-day episode payment rate. As set forth in 42 CFR 484.220, we adjust the national standardized 60-day episode payment rate by a case-mix grouping and a wage index value based on the site of service for the beneficiary. Since the July 3, 2000 final rule, we have stated our intention to monitor the new PPS and make refinements to the system as needed. We believe refinements are now required to improve the performance and appropriateness of payment for the HH PPS. After implementation of the HH PPS, we received a number of public comments suggesting ways in which the payment system could be improved. We took those comments into consideration as we proceeded to explore the HH PPS for potential areas for refinement. This proposed rule sets forth the first major refinements to the HH PPS since its implementation in October of 2000. This proposed rule identifies seven major areas

of the HH PPS that were identified as possible areas for refinement. Those areas are: (1) the case mix model; (2) changes in case mix coding; (3) the PEP adjustment; (4) the LUPA; (5) the SCIC adjustment; (6) method of accounting for NRS, and (7) the outlier adjustment. While this proposed rule proposes to implement all of refinements discussed in this rule effective January 1, 2008, we recognize that there may be operational considerations, affecting CMS or the industry, which could necessitate an implementation schedule that results in certain refinements becoming effective on different dates (a split-implementation). We would like to solicit suggestions and comments from the public on this matter.

1. Current Payment Model

On July 3, 2000, we published a final rule (65 FR 41128) in the **Federal Register**. In that rule, we described a system for home health case-mix adjustment developed under a research contract with Abt Associates, Inc., of Cambridge, Massachusetts. Using selected data elements from the OASIS and an additional data element measuring receipt of at least 10 visits for therapy services, the case-mix system projects patient resource use based on patient characteristics. These data elements were selected because they were shown to influence home health resource utilization upon statistical

analysis of data from approximately 30,000 episodes. This model used data from first episodes only and a relatively small set of clinical, functional, and service utilization variables. Clinical judgment, the relative predictive value of potential case-mix variables, their susceptibility to gaming and subjectivity, and administrative implications were considered in the final resolution of the elements retained in the final model.

The data elements are organized into three dimensions to capture clinical severity factors, functional severity factors, and services utilization factors influencing case-mix. In the clinical and functional dimensions, each data element is assigned a score value derived from multiple regression analysis of the Abt research data. The score value measures the impact of the data element on total resource use. Scores are also assigned to data elements in the services utilization dimension. To find a patient's case-mix group, the case-mix grouper software sums the patient's scores within each of the three dimensions. The resulting sum is used to assign the patient to a severity level in each dimension. There are four clinical severity levels, five functional severity levels, and four services utilization severity levels. Thus, there are 80 possible combinations of severity levels across the three dimensions. Each combination defines one of the 80 HHRGs in the case-mix system. For example,

a patient with high clinical severity, moderate functional severity, and low services utilization severity is placed in the same group with all other patients whose summed scores place them in the same set of severity levels for the three dimensions.

We summarized the performance of the final PPS model for the PPS using the R-squared statistic. An initial episode was defined as the first home health episode of care for a given beneficiary in a sequence of adjacent episodes. For the purposes of our analysis, we defined a sequence of adjacent episodes for a beneficiary as a series of claims with no more than 60 days without home care between the end of one episode, which is the 60th day (except for episodes that have been PEP-adjusted), and the beginning of the next episode. At the time, based on data from the model development sample, this model's R-squared statistic was 0.34. In other words, the model explained 34 percent of the variation in resource use.

2. Refinements to the Case-Mix Model

Extensive research has been conducted to investigate ways to improve the performance of the case-mix model. We found that the addition of separate regression equations to account for later episodes and multiple therapy thresholds (replacing the current threshold of 10 therapy visits) significantly improved the fit and performance of the case-mix model. Further, we expanded the

set of variables to include new diagnosis groups, comorbidities, and interactions, yielding models that performed better in simulations. We feel that these changes would improve the HH PPS by allowing more accurate case-mix adjustment without providing incentives for providers to distort appropriate patterns of care.

As with the original case-mix model, the general approach to developing a case-mix model was to use patient data and other appropriate data to create a regression model for resource use over the course of a 60-day episode. Case-mix refinement analysis focused on investigating resource use in episodes that occur later in treatment as well as the initial episode; testing additional clinical, functional, and demographic variables; exploring the effect of comorbidities; and testing new therapy thresholds.

The basis for selecting these areas of analysis will be described in sections II.2.a., II.2.b., and II.2.c.

As with our case-mix studies that resulted in the case-mix methodology discussed in the July 3, 2000 HH PPS final rule, the dependent variable in these refinement studies is an estimate of cost known as resource cost. To derive the resource cost estimate, the total minutes reported on the claim for each discipline's visits are converted to a resource cost. Resource cost results from weighting each minute by the national average

labor market hourly rate for the individual discipline that provided the minutes of care. Bureau of Labor Statistics data are used to derive the hourly rate. The sum of the weighted minutes is the total resource cost estimate for the claim. This method standardizes the resource cost for all episodes in the analysis file.

Based on the findings of our analysis of the case-mix adjustment under HH PPS, which we describe in section II.A.2, we propose that the case-mix adjustment be refined to incorporate an expanded set of case-mix variables to capture the additional clinical conditions and comorbidities; four separate regression models that recognize four different types of episodes; and a graduated, three-threshold approach to accounting for therapy utilization. We refer to the four separate regression models in this proposed case-adjustment system as the four-equation model. The first regression equation is for low-therapy episodes (less than 14 therapy visits) that occur as the first or second episode in a series of adjacent episodes (Episodes are considered to be "adjacent" if they are separated by no more than a 60-day period between claims). The second regression equation is for high-therapy episodes (14 or more therapy visits) occurring as the first or second episode in a series of adjacent episodes. The third equation is for low-therapy episodes (under 14 therapy

visits) occurring after the second episode in a series of adjacent episodes. And the fourth equation is for high-therapy episodes (14 or more therapy visits) occurring after the second episode in a series of adjacent episodes. As described in further detail below, these equations incorporate a graduated, three-threshold approach to accounting for therapy utilization. The 153 case mix groups created from the results of the four-equation model are also described below, as is the method we used to form the groups.

a. Analysis of Later Episodes

As a starting point for our analysis, we examined the performance of our original model using data, derived from the National Claims History, reflecting the period after the HH PPS was initiated. These data from the period after the commencement of the HH PPS, a large random sample of claims from CY 2003, indicate the performance of the case-mix model differs from the original estimate, which reflected data from the time of the Abt case-mix study. The more recent data reflect both the inclusion of episodes beyond the first episode as well as behavioral changes of health care providers under the HH PPS. The R-squared statistic estimated from the more recent data is approximately 0.21. An appropriate comparison with the initial R-square statistic (0.34) is the R-squared value estimated from the more

recent data's initial episodes, which is 0.29. We therefore believe the data reflect a more modest reduction in model performance of 0.05. However, the value of the R-squared statistic calculated on all the data, 0.21, is an indication that the case-mix model does not fit non-initial episodes as well as it fits initial episodes. Therefore, one focus of our refinement work was to investigate resource use in episodes that occurred later in treatment as well as early episodes.

Based on exploratory analysis, we defined "early" episodes to include, not only the initial episode in a sequence of adjacent episodes, but also the next adjacent episode, if any, that followed the initial episode. "Later" episodes were defined as all adjacent episodes beyond the second episode. When we analyzed the performance of the case-mix model for later episodes, we determined there were two important differences for episodes occurring later in the home health treatment compared to earlier episodes: higher resource use per episode and a different relationship between clinical conditions and resource use.

Using a large, random sample of episodes, we found that the estimated resource cost of early episodes is approximately 7 percent lower than the estimated resource cost of later

episodes. The current case-mix model weights all episodes equally.

Furthermore, our exploratory regression models indicated that the relationships between case-mix variables and resource use differed between earlier and later episodes. This suggested that a scoring system that differed for earlier and later episodes could potentially perform better than a single scoring system. The system of four separate regression equations allows the scores to differ according to whether the episode is early or later. We recognize that this approach introduces more complexity into the case-mix adjustment system. However, less complex approaches that did not depend on separate equations did not perform as well in terms of predictive accuracy; for example, we explored using one equation in which we modeled additional lump-sum costs due to the timing of an episode in a sequence of adjacent episodes. This proved to be unsatisfactory because it addressed only one of the two important differences presented by later episodes, that is, their generally higher cost level.

For the purposes of payment, we propose to make changes to the OASIS (see section III. Collection of Information Requirements), by adding a new OASIS item to capture whether an episode is an early or later episode. If an HHA is uncertain as to whether the episode is an early or later episode, we propose to base payment as though the episode were an early episode.

Most patients do not have more than one episode in a year. Consequently, we believe that selecting early as the default is the best guess as to the eventual outcome of whether an episode is early or later.

b. Addition of Variables

Since the system for case-mix adjustment was first implemented, we have received comments suggesting ways in which case-mix adjustment may be improved. Most of these comments requested that we add specific variables or conditions to the case-mix model. We were also asked to examine the appropriateness of including additional diagnosis groups, comorbidities in general and specific comorbidities, for instance, heart conditions, additional wound-related indicators, and other patient characteristics. We considered these comments as we proceeded to explore potential case-mix changes. We also considered comments received during the initial rulemaking process, such as comments pertaining to clinical issues and social characteristics such as caregiver availability.

We evaluated variables for inclusion in a refined case-mix model in much the same way that we did for the 2000 final rule, in that we analyzed the relationship between resource use and patient characteristics. Whereas the original case-mix study required us to collect logs from a sample of episodes for the

measure of resource use, for this analysis, we were able to measure resource use directly from the claims sample. The measures of patient characteristics come from OASIS assessments. Under a contract with Fu Associates of Arlington, Virginia, Standard Analytical Claims Files from the National Claims History were cleaned, edited, and linked to the OASIS assessment associated with the beginning of each claim period. Abt Associates subsequently used these analytic files to draw large samples of claims for analysis.

In the course of refining the current case-mix model, we continued to monitor the performance of two special variables in explaining resource use. These variables are dual-eligibility for Medicare and Medicaid and caregiver support. The two variables are of interest to some agencies because of their perceived impact on resource use and overall profitability. Patients dually eligible for Medicare and Medicaid may have health care needs that exceed the average needs due to the health status and utilization differences associated with low-income populations. Some agencies with caseloads containing large numbers of dual eligibles have commented that they are penalized under the HH PPS system because of their willingness to serve a disadvantaged population without payments explicitly recognizing such agencies' higher costs. We have also received comments that

episodes involving patients without a caregiver were underpaid by the HH PPS, and that some agencies would be reluctant to admit such patients because of financial implications. These commenters believe that the low admission rate of patients without caregivers (about 2 percent of all episodes) is evidence of this reluctance.

During our development of the original case-mix model implemented in the July 2000 final rule, using the Abt Associates case-mix study sample, we tested the Medicaid variable (which indicates whether Medicaid was among the patient's payment sources). At that time, we found that it did not contribute meaningfully in explaining variation in resource use. Similarly, we tested the caregiver variable and it did not contribute to explaining variation in resource cost, either. Regarding the caregiver variable, we recognized in the July 3, 2000, final rule that adjusting payment in response to the presence or absence of a caregiver may be seen as inequitable. To the extent that availability of caregiver services, particularly privately paid services, reflects socioeconomic status differences, we indicated that reducing payment for patients who have caregiver assistance may be particularly sensitive in view of Medicare's role as an insurance program rather than a social welfare program. Furthermore, we stated that adjusting payment for caregiver

factors would risk introducing new and negative incentives into family and patient behavior. In the discussion in the July 3, 2000 final rule (65 FR 41145), we also indicated our belief that it is questionable whether Medicare should adopt a payment policy that could weaken informal familial supports currently benefiting patients at times when they are most vulnerable.

In our analysis for this proposed rule, we again tested variables for dual eligibility and caregiver support. We operationalized the Medicaid variable from the OASIS, using the presence of a Medicaid number on the assessment as the indicator for Medicaid eligibility. We found that Medicaid remains a marginal predictor at best, with a very low score, after accounting for a broad range of clinical and functional variables that predict resource use. We believe adding a Medicaid variable is not justified in view of these results, especially considering the added administrative burdens for both agencies and Medicare that using such a variable would entail. These include costs of ascertaining whether the reported Medicaid number is correct and whether the eligibility status as reported on the assessment is current.

We also operationalized a variable for support from a caregiver from the OASIS assessment, item M0350, Assisting

persons other than home health agency staff. This variable identified patients without any caregiver. While analyzing the payment adequacy of the four-equation model (as explained further below) for patients without a caregiver we found that, on average, episodes without caregivers would be "underpaid". However, the score to be gained by adding the variable is not large (5 to 13 points, depending on the episode), and the overall ability of the four-equation model to explain resource costs is improved only minimally by adding this variable.

Therefore, we are not proposing that this variable be added to the case-mix model. We continue to believe that including this kind of variable in the case-mix system raises significant policy concerns. We maintain that a case-mix adjustment should not discourage assistance from family members of home care patients, nor should it make patients feel there is some financial stake in how they report their familial supports during their convalescence.

We continue to believe that adjusting payment in response to the absence of a caregiver would introduce negative incentives with adverse affects on home health Medicare beneficiaries. Furthermore, we are doubtful that today’s low rate of episodes without a caregiver (2 to 3 percent) reflects access barriers for these patients and nothing more. We believe part of the reason

for the low rate may be that under a bundled payment system agencies are more careful about ascertaining whether support is available and encourage use of caregivers within the beneficiary's home.

For exploratory modeling of case-mix in our refinement work, in addition to using existing case-mix variables from the OASIS, new variables were created. Diagnosis codes reported on both the claims and the OASIS were used extensively to form new or revised diagnosis groups for inclusion in case-mix models. As a result, developmental models included many new variables, including an expanded set of primary and secondary diagnoses, as well as interaction terms that describe the effect of combinations of patient conditions or characteristics on resource cost. Using these new analytic files, it was possible to explore some conditions that were too infrequent to study in the original case-mix sample. For example, as suggested by commenters, Abt's analysis tested the impact on resource use of having multiple conditions from M0250, which reports on therapies received at home, including intravenous infusion, and enteral and parenteral nutrition. The results showed that a variable indicating the simultaneous presence of multiple conditions from OASIS item M0250 did not improve the accuracy of the case-mix model.

However, we did find that having separate scores for parenteral nutrition and IV therapy were not necessary.

Abt's case-mix analysis focused on various issues, such as changes to the list of conditions forming our diagnosis groups, additions of comorbidities, prediction of therapy resources, and interactions. The performance of each variable was scrutinized based on several criteria. First, variables were assessed for statistical performance. Variables that did not enhance the accuracy of the model were marked for exclusion.

Variables were also assessed for policy appropriateness. Some statistically significant variables were excluded if they offered incentives for providers to distort patterns of good care or posed excessive administrative burden on HHAs. In addition, some statistically weak variables considered important for clinical or policy reasons were added back to the model for further analysis.

We note we excluded a variable from this proposal, based in part on concerns of excessive administrative burden. We propose to exclude OASIS item M0175, which the case-mix system uses to identify the patient's pre-admission location, from the case-mix models. Under this proposal, there would be no case-mix score for M0175. Operational experience with M0175 revealed that some agencies have encountered difficulties in ascertaining precise

information about the patient's pre-admission location during the initial assessment. These difficulties, suggestive of unforeseen administrative complexities, contributed to our proposal to eliminate M0175 from the case-mix model.

In addition, the M0175 item did not perform well in the four-equation model. We found that the results differed across the equations in ways that were difficult to interpret. Moreover, the results showed that the impact of including information from M0175 was small, both in terms of case-mix scores and the overall payment accuracy of the case-mix model.

In weighing the indications of administrative complexities due to M0175 against the limited performance of M0175 in our analysis, we do not find that the contribution of this item in explaining case-mix justifies the operational challenge of achieving perfectly accurate reporting for payment. Thus, as noted above, we are proposing to eliminate it from the case-mix model. However, we continue to believe that it is necessary for the conditions of participation and the OASIS to require that agencies establish the patient's recent history of health care before determining the plan of care. This determination must be made with sufficient accuracy to allow appropriate planning, even if precise dates and institutional certifications are not exactly known. For example, it will be important to know the amount and

types of rehabilitation treatment the patient has received, the type of institution that delivered the treatment, and how recently it was delivered.

The final set of proposed clinical conditions resulting from our exploratory series of analyses covers more types of conditions than were used in the original case-mix model (Tables 2a and 2b). We identified conditions from diagnosis codes on both claims and OASIS in a linked sample of claims from FY 2003 (OASIS items M0230 and M0240, Diagnoses and Severity Index). For example, heart and mental conditions are now assigned case-mix scores. More wound conditions are assigned scores, based on results from adding variables to indicate wound-related diagnosis codes beyond those in the current HH PPS case-mix model. (See Table 2b for diagnosis codes that define each condition in the model.)

We also propose to assign scores to certain secondary diagnoses, used to account for cost-increasing effects of comorbidities. An example is secondary cancer diagnoses, whose cost-increasing effects are not as large as those for primary cancer diagnoses. However, with most diagnosis groups, we did not make a distinction in the final model between primary placement and secondary placement of a condition in the reported list of diagnoses. We made case-by-case decisions on this

question based on differences in the impact on resource cost between the primary diagnosis and secondary diagnosis. If differences were small, we combined cases reporting the conditions, regardless of whether the listed position of the diagnosis was primary or secondary. We believe this is an important protection against unintended and undesirable incentive effects that could arise if agencies perceive opportunities to change the placement of the diagnosis due to nonclinical reasons. In a few instances, the reason for combining the primary or secondary diagnoses was to improve the robustness of the scores.

Finally, we also propose that a small number of interactions--combinations of conditions in the same episode--be assigned scores, to capture the synergistic effect on resource use of certain conditions that coexist in the episode. In some instances, a condition appears as an interaction with a functional limitation or a treatment variable such as parenteral therapy. In Table 2a, the interaction scores are added to the case-mix score whenever the two conditions defining the interaction occur together in the episode. Interaction scores, therefore, do not substitute for scores of other variables in Table 2a that involve either only one or the other of the two conditions.

As noted earlier, we also found that, compared to early episodes, later episodes could exhibit a different relationship between resource costs and a condition. This is reflected in Table 2a by the absence of a condition-related score from one or more of the four equations, or a score that differs from one equation to another.

During the later phases of testing alternative formulations of an expanded list of clinical conditions, we followed two rules in our formation of diagnosis groups. These rules would ultimately affect the operation of the case-mix grouper which would be created pursuant to the revisions being proposed in this proposed rule. First, if an episode record in our sample file listed both primary and secondary diagnoses from the same diagnosis group, the model estimation procedure recognized the primary diagnosis variable for that case but not the secondary diagnosis variable. This means that an episode would not be eligible to earn more than one score for the same diagnosis group. The primary reason for this rule is that we are aware of diagnosis coding conventions that would produce repeated instances of the same or similar codes in the diagnosis list, and these conventions would build redundancy into the modeling process. A major goal of the exploratory modeling process was to investigate the impact of comorbidities by recognizing secondary

diagnoses, but redundancy inhibits our achievement of that goal. Consequently, we sought to reduce this type of redundancy. A further reason for adhering to this rule is to inhibit a future decline in model performance, which might come about through changes in coding behavior. If agencies were to perceive that redundant coding boosts the episode score, they might engage in it more in the future. The result would be a degradation in the ability of the case-mix model to provide for accurate payment.

The second rule we used affected how we define the interactions between conditions. The second rule is that, for purposes of forming diagnosis groups to test interactions between conditions, cases with either a primary or secondary diagnosis from the same diagnosis group are combined into a single group. This means that mention of a given diagnosis anywhere in the diagnosis list puts episodes in a single group for that diagnosis, for purposes of analyzing interactions between conditions. We believe this rule is consistent with our goal of isolating effects of comorbidities. Specifically, because the reason for studying interactions is to identify the effects of combinations of conditions, we believe it is appropriate to measure the combinations, regardless of the placement (that is, primary or secondary) of a diagnosis on the claim. Further, combining the primary and secondary diagnoses within groups

increases the ability of the modeling process to uncover meaningful interaction effects. The second rule also works to keep the model as simple as possible. Simplicity helps to limit the risk that the model would not fit well for later data sets. Simplicity also limits the amount of added administrative burden that could come from using a more-complex model.

Changes to the OASIS are needed to enable agencies to report secondary case-mix diagnosis codes. Specifically, the addition of secondary diagnoses to the case-mix system (see Table 2a, case-mix adjustment variables and scores) requires that the OASIS allow for reporting of instances in which a V-code is coded in place of a case-mix diagnosis other than the primary diagnosis. A case-mix diagnosis is a diagnosis that determines the HH PPS case-mix group. Currently, the OASIS allows for reporting of instances of displacement involving primary diagnosis only (M0245). Consequently, because of the nature and significance of the changes needed, we are proposing to delete the OASIS item M0245 and replace it with a new OASIS item. (see section III. Collection of Information Requirements).

c. Addition of Therapy Thresholds

As set forth in the July 3, 2000 final rule (65 FR 1128), patients were grouped according to their therapy utilization status in order to ensure that patients who required therapy

would maintain access to appropriate services. Specifically, we defined a therapy threshold of at least 8 hours of combined physical, speech, or occupational therapy over the 60-day episode, to identify "high" therapy cases. The 8-hour threshold was converted to a threshold of 10 therapy visits because the average visit length for therapy noted in our data was approximately 48 minutes. We instituted the threshold based on clinical judgment about the level of therapy that reflects a clear need for rehabilitation services and that would reasonably be expected to result in meaningful treatment over the course of 60 days.

Since the implementation of the therapy threshold in the HH PPS, we have received comments from the public requesting that we study and refine this approach to accounting for rehabilitation needs in the case-mix system. Commenters have suggested that a single therapy threshold did not fairly reflect the variation in therapy utilization and need. Some commenters requested that we re-examine the 10-visit threshold. Other commenters recommended that we work to eliminate the therapy threshold, in part due to concerns that the therapy threshold might introduce incentives to distort service delivery patterns for payment purposes.

Our data analysis revealed evidence of undesirable incentives from the 10-visit therapy threshold. Our analysis

suggested that the 10-visit therapy threshold might have distorted service delivery patterns. In our analysis sample, of all episodes at or above the threshold, half were concentrated in the range of 10 to 13 therapy visits. This range had the highest concentration of therapy episodes among episodes with at least one therapy visit. In contrast, a large analysis sample from a period immediately preceding the HH PPS indicated that the highest concentration of therapy episodes was in a range below the 10-visit threshold—-approximately 5 to 7 therapy visits. Under the HH PPS, there were two peaks in the graphic depiction of numbers of episodes according to the number of therapy visits delivered during the episode. One peak was below the therapy threshold and the other was the 10 to 13 visit peak above the therapy threshold. In the pre-PPS sample, there was only one peak in the depiction, and it was the concentration of episodes at 5 to 7 therapy visits--below the current 10-visit therapy threshold. All of these results suggested that the 10-visit threshold was responsible for a marked shift in rehabilitation services delivery under the HH PPS, a shift that we believe would probably not have occurred in the absence of the therapy threshold. Commenters have reinforced our belief that the impact of the single 10-visit threshold on therapy provision frequently

distorted the clinically based decision-making that should drive the delivery of rehabilitation services.

In our early efforts to address problems inherent in using a therapy threshold, we conducted analyses to identify new predictors of therapy resource use, with the goal of achieving large gains in explanatory power that would render the therapy threshold unnecessary. We used predictor variables including pre-admission status on activities of daily living (ADL), more diagnoses with a focus on conditions such as stroke, and more OASIS variables. However, models that included these particular explanatory variables predicted the probability of using therapy, but not how much therapy would be used.

Successive studies to account for therapy resources followed the goal of reducing the impact of a therapy threshold on the payment weights. The main conclusion from these studies was that therapy resources cannot be predicted with sufficient accuracy to eliminate the need for therapy thresholds in the HH PPS case-mix system. Although we tried several alternative approaches, no approach added sufficient predictive power to the case-mix model. Therefore, continued analysis focused primarily on refining the therapy threshold approach to reduce undesirable incentives. This work involved experimentation with alternative sets of thresholds consisting of more than one threshold.

After testing several sets of thresholds, and in consideration of the comments received, we proceeded to construct case-mix models with thresholds at 6, 14, and 20 therapy visits. We used these thresholds based on data analysis and, in part, on policy considerations.

Data analysis suggested it would be appropriate to add new thresholds both below and above the 10-visit level. One reason was that our review of data from the HH PPS period showed agencies provided large numbers of episodes with therapy visits in an interval below 10 visits. Moreover, data analysis suggested that, of all episodes with numbers of therapy visits below the 10-visit therapy threshold, some subsets did not receive an appropriate case-mix weight under the HH PPS. Specifically, episodes with 6 to 9 therapy visits had resource costs that seemingly exceeded the payment proxied in our analysis by the predicted resource cost under the current case mix model. However, we now believe that several common treatment plans require only about 6 visits, for example, assessments and treatment of certain types of patients at high risk for falls. We are therefore proposing that one threshold be added at 6 therapy visits.

In considering thresholds above the current 10-visit threshold, we observed that nearly half of episodes involving

therapy comprise episodes with 6 to 13 therapy visits. Therefore, we are proposing a second threshold at 14 therapy visits, which would have two advantages. First, this range covers the two peaks (that is, the one we observed below the 10-visit therapy threshold and the one we observed above the 10-visit threshold) in the distribution of therapy visits under the HH PPS. By avoiding a therapy threshold within this range, we hope to reduce the influence of payment incentives on treatment decisions. Second, we believe that the interval of 6 to 13 therapy visits represents a reasonable range of treatment levels for most rehabilitation episodes. For example, the range of 6 to 13 therapy visits encompasses typical treatment plans for both knee- and hip-replacement patients. As we describe later in this section, we propos to use further steps to address payment accuracy, by adding payment gradations within the intervals bounded by the three thresholds we are proposing.

We further observed that only a relatively small fraction of patients use 14 or more therapy visits. While no bright-line tests are available to distinguish a 14-visit case, we have received comments indicating that medical review staff at the fiscal intermediaries will have less difficulty judging appropriateness of treatment plans at this level, because such plans are intensive and not the norm.

Additionally, although few episodes require 20 or more therapy visits, we set the third therapy threshold at 20 visits. Our concern is to ensure access to appropriate treatment in the rare cases where such intensive treatment is necessary. Our analysis suggested that these episodes are extremely costly for agencies, so a payment adjustment to accommodate this service level is appropriate. Furthermore, commenters indicated that, because only rare cases should warrant this high number of therapy visits, monitoring of claims to prevent abuse of this payment provision, using our medical review resources, is feasible operationally.

Adding therapy thresholds in the revised case-mix regression model improves the ability of the model to predict resource use. The R-squared values for a three-therapy threshold model increased substantially for both early and later episodes over the R-squared values for a single therapy threshold model. In other words, using additional therapy thresholds clearly improved the case-mix system's ability to classify episodes into homogeneous cost groups.

The combined effect of the new therapy thresholds and payment gradations (to be described below) is expected to reduce the undesirable emphasis in treatment planning on a single therapy visit threshold, and to restore the primacy of clinical

considerations in treatment planning for rehabilitation patients.

During the analysis of the therapy threshold, we considered ways to provide for payment gradations between the therapy thresholds. We sought a way to implement a gradual increase in payment (see Table 1) between the proposed first and third therapy thresholds. We believe a case-mix model that increases payment with each added visit between the proposed first and third thresholds would achieve two goals. First, a gradual increase better matches payments to costs than the therapy thresholds alone. Second, a gradual increase avoids incentives for providers to distort patterns of good care created by the increase in payment that would occur at each proposed therapy threshold. However, as a disincentive for agencies to deliver more than the appropriate, clinically determined number of therapy visits, we are also proposing that any per-visit increase incorporate a declining, rather than constant, amount per added therapy visit. We implemented this in the case-mix model by decreasing slightly the added amount per therapy visit as the number of therapy visits grew above the proposed 6-visit threshold. Specifically, we began with a value determined from our sample—-the estimated marginal resource cost incurred by adding a 7^{th} therapy visit to the treatment plan. This is the first additional visit above the proposed six-visit therapy

threshold. The estimated marginal cost of adding a 7th therapy visit to an episode with six therapy visits was $36. Using this value as our starting point, we required the case-mix model to add a slightly lower value to the total episode resource cost with each additional therapy visit provided, up to the 19th therapy visit. This proposed approach imposes a deceleration of the growth in payment with each additional therapy visit. However, this proposed approach does not reduce total payments to home health providers, because the regression analysis still predicts the full resource cost of the episode. Table 1 shows the values that we imposed in the four-equation model estimation procedure to implement a deceleration in the added resource cost for individual therapy visits between 6 and 20 therapy visits. The individual values begin at $36 and then decline at a constant rate of one resource cost dollar per therapy visit between 6 and 20 therapy visits. These values represent the score that was imposed in the model for adding each additional therapy visit. The case-mix model that incorporates the imposed scores is called a "restricted regression model." The results of the restricted regression model of the four-equation system, including scores for diagnoses and conditions, and R-squared statistics, exhibited little change from imposing this pattern of deceleration in cost growth due to additional therapy visits.

Table 1: Resource Cost Values Imposing Deceleration Trend in Four-equation Model

Equation and services utilization severity level	Number of therapy visits in severity level	Resource cost values imposed in regression procedure
1st and 2nd Episodes, 6-13 Therapy Visits		
S3	7, 8, 9	36, 35, 34
S4	10	33
S5	11, 12, 13	32, 31, 30
1st and 2nd Episodes, 14-19 Therapy Visits		
S1*	15	28
S2	16, 17	27, 26
S3	18, 19	25, 24
3rd+ Episodes, 6-13 Therapy Visits		
S3	7, 8, 9	36, 35, 34
S4	10	33
S5	11, 12, 13	32, 31, 30
3rd+ Episodes, 14-19 Therapy Visits		
S1*	15	28
S2	16, 17	27, 26
S3	18, 19	25, 24

*For the second and fourth equations of the four equation model, S1 includes 14 therapy visits, but no value was imposed in the regression procedure for a 14th therapy visit because the regression intercept estimate automatically includes the resource cost impact.

The case-mix model at this stage was very detailed, because it included variables incorporating information about thresholds and therapy visit counts. We were concerned that, without streamlining the therapy-related information in the case-mix model, the ultimate system of case-mix groups would contain an

excessive number of case-mix groups. We recognize an extremely large number of case-mix groups would make the HH PPS complex to administer. Because the therapy-related details of the case-mix model are based on numbers of therapy visits, another issue would be that many case-mix groups would be differentiated based on visit counts, thereby making the system dependent on visits and less of a bundled system of services. Therefore, in order to form case-mix groups from the results of the case-mix model, we grouped the individual levels of therapy visits into small aggregates (1, 2, or 3 visits) (see Table 1). By doing so, we avoided creating a per-visit schedule of payment to account for therapy visits. We implemented these aggregations as differing severity levels at a subsequent stage of payment system development, the payment regression, which is described later in this section.

The proposed four equation model, with multiple therapy thresholds and payment graduation between those thresholds, adds a certain amount of complexity to the HH PPS. Consequently, in order to group beneficiaries into case-mix groups in this proposed four equation model, we propose to make changes to the OASIS to capture the projected number of total therapy visits for a given episode (see section III. Collection of Information Requirements), as opposed to indicating if there is a projected

need for ten or more therapy visits (current OASIS item M0825). Each severity level of the services utilization dimension represents a different number of therapy visits (see also Table 3: Severity Group Definitions: Four-Equation Model).

An additional aspect of our therapy threshold research addressed changing the unit of measurement of therapy thresholds from visits to minutes. In the July 2000 final rule, we indicated our intention to continue study of the appropriate unit of measurement for therapy services.

An important finding of our initial analyses on this question was that the length of therapy visits in minutes, on average, exhibited little change between the period covered by the original Abt Associates case-mix study, and the HH PPS period, based on data through 2003. We also found that the distribution of average therapy visit lengths was highly similar under HH PPS, regardless of the total number of therapy visits in the episode. A possible exception was episodes with 1 to 4 therapy visits, where a relatively high proportion of episodes (about 16 percent) had average therapy visit lengths of 30 minutes or less; no more than 9 percent of remaining episodes (more than four therapy visits) had averages of 30 minutes or less. There was also a slight tendency for these short average visit lengths to become less frequent as the total therapy visit

count per episode grew. Overall, the data indicated that at least 85 percent of episodes with therapy visits involved visits averaging at least 41 minutes. These results suggest that therapy practitioners tend to have consistent session lengths across many types of episodes.

We are proposing no change in the current way in which we measure therapy thresholds, which is based on counting therapy visits, in light of our analysis indicating that individual therapy visits appear to vary little in their length, regardless of the frequency of visits during the 60-day episode, and our analysis indicating that average visit lengths have remained stable since the time of the Abt case-mix study. Additionally, we are concerned incentive issues would arise if we changed the definition. The low variability in visit lengths appears to be an indication that under current practices, therapy session lengths are fairly uniform, regardless of the time period or intensity of the rehabilitation course of treatment. These practices have arisen out of clinical experience in the rehabilitation professions. Introducing a minutes or time standard risks introducing new financial incentives that might influence these widely held practices. We are concerned that changing to a minutes standard might result in financially driven pressures on clinical decisions concerning the number of sessions

in a patient's course of treatment, with potentially adverse effects on beneficiary outcomes.

One of our original concerns in proposing a visit-based threshold was that minutes unit reporting on the claims, which was a relatively new requirement at that time, might be unreliable. (Section 1895(c)(2) requires the claim to report the length of each billed visit as measured in 15-minute increments.) Based upon our experiences using the claims data in our research, we have no reason to believe this is a problem. Moreover, we believe the dual requirements to report both visit dates and minutes of each visit on Medicare claims should remain in place because they provide important information for program integrity activities and future research.

Based upon our analysis of the case-model described in section II.A.2, we propose to use four separate equations to derive scores for conditions including the proposed therapy thresholds. The proposed first equation is for early episodes below the 14-visit therapy threshold. The proposed second equation is for early episodes at or above the 14-visit therapy threshold. The proposed third equation is for later episodes below the 14-visit therapy threshold. The proposed fourth equation is for later episodes above the 14-visit therapy threshold. A threshold at 6 visits is accounted for by an

indicator variable in the proposed first and third equations, and a threshold at 20 visits is accounted for by an indicator variable in the proposed second and fourth equations. In addition, therapy visit count variables are added to the equations to model the graduated payment with each therapy visit between 6 and 20 visits. Finally, as we explained above, we imposed specific values for the coefficients of the therapy visit count variables. The resulting four-equation model has an improved statistical performance (an R-squared statistic of approximately 0.44) over the current model (an R-squared statistic of 0.21). The primary reason for the improvement in the proposed case-mix model fit (compared to the R-square statistic of 0.21 cited earlier) is the four-equation structure. This structure recognizes cost differences between early and later episodes, and between therapy treatment plans above and below the proposed 14-visit therapy threshold. Additional improvements come from adding other therapy variables to the case-mix model, specifically, the two additional thresholds (6 and 20 visits) and graduated payment--and from the new case-mix variables discussed in section II.A.2.a of this proposed rule.

We believe that in addition to improved statistical performance, the proposed model would provide better incentives for the provision of high-quality home health care without an

undue increase in administrative burden. For a more detailed discussion of the technical aspects of the four-equation model go to the CMS Web site (http://www.cms.hhs.gov/hha.asp) for a link to Abt's Technical Report.

Table 2a presents the full set of case-mix scores (other than the imposed scores for therapy visits) and all clinical and functional variables we are proposing for the refined case-mix model. In Table 2a, the score is the value of the regression coefficient for the variable; it measures the impact of the data element on total resource cost of the episode. See Table 2b for an inclusive list of ICD-9-CM diagnosis codes applicable for each scored condition variable in Table 2a. These codes define the clinical condition variables in our proposed model. We intend to continue to evaluate the appropriateness of these diagnosis codes in Table 2b. We believe the HH PPS case-mix system should avoid, to the fullest extent possible, nonspecific or ambiguous ICD-9-CM codes, codes that represent general symptomatic complaints in the elderly population, and codes that lack consensus for clear diagnostic criteria within the medical community. We solicit detailed suggestions from the public concerning codes that threaten to move the system away from a foundation of reliable and meaningful diagnosis codes.

Compared to the original four diagnosis groups in the case-mix model, the code groups in Table 2b incorporate additions and new group placements for individual ICD-9-CM diagnosis codes. Two variables from the original case mix system are not proposed: M0175, as noted earlier, and M0610, behavioral problems, which did not perform well in our studies. We believe that several additions to our diagnosis groups, namely, two groups for psychiatric diagnoses, account for the contribution of behavioral problems to resource cost variation.

We are aware that some of the diagnosis codes listed in Table 2b are manifestation codes. The ICD-9-CM Official Guidelines for Coding and Reporting requires that the underlying disease or condition code be sequenced first, followed by the manifestation code. The underlying disease codes associated with the manifestation codes are not listed in Table 2b. However, appropriate sequencing was accounted for in our analysis. When reporting certain conditions that have both an underlying etiology and a body system manifestation due to the underlying etiology, the appropriate sequencing should be followed according to the ICD-9-CM Coding Guidelines.

For purposes of determining final estimates on which to base the data set used in the final rule for CY 2008, we intend to update the dataset used for the four-equation model to CY 2005;

as noted above, the proposal to use the four-equation model is based on linked claims and OASIS data from FY 2003. We are aware that adding data from a later period may result in some variations, including some significant changes, in the scores presented in Table 2a. Some changes may occur because, effective October 2003 (FY 2004), diagnosis coding instructions on the OASIS assessment changed to allow for the use of ICD-9-CM V-codes. V-codes, particularly those applicable to home health services, do not in general describe disease states; rather, they describe reasons for using services. The major use of V-codes in the home health setting occurs when a person with current or resolving disease or injury encounters the health care system for specific aftercare of that disease or injury. For example, V-code V57.21 is reportable when the reason for the visit is "encounter for occupational therapy." As such, V-codes are less specific to the clinical condition of the patient than are numeric diagnosis codes. A single V-code could substitute for various numeric codes, each of which describes a specific, different clinical condition.

Medical review activities revealed an inappropriate utilization of V-codes following the effective date of V-codes on OASIS (October, 2003). In response to RHHI reports of increased provider non-compliance with correct ICD-9-CM coding procedures

related to V-codes, we posted OASIS diagnosis training on the CMS Web site and promoted RHHI provider educational efforts. Nonetheless, medical review activities continue to report an excessive utilization of the V-57 codes, signaling a possible non-compliance with correct coding practice related to the V-codes.

We are concerned that more use of V-codes could reduce data adequacy for modeling the impacts of clinical conditions we are proposing to use to predict resource use. One result, for example, might be a markedly different score for some conditions with lower reporting rates under the V-code instructions effective October 2003.

At this time, we do not know whether allowing V-codes on the OASIS, along with the over-use of V-codes revealed by medical review activities, significantly lowered the frequencies of non-V-code, numeric diagnosis codes for the clinical conditions we propose to use in the case mix model. Again, this could have occurred because of the way V-codes can displace a numeric code in the diagnosis list. If we find evidence that numeric codes' frequencies were reduced to the extent that it strongly influenced the scores we present in this proposal, we propose to base the refined system on the data from FY 2003.

Table 2a: Case-Mix Adjustment Variables and Scores					
	Episode number within sequence of adjacent episodes	1 or 2	1 or 2	3+	3+
	Therapy visits	0-13	14+	0-13	14+
	EQUATION:	*1*	*2*	*3*	*4*
	CLINICAL DIMENSION				
1	Primary Diagnosis = Cancer, selected benign neoplasms	4	11	4	8
2	Primary Diagnosis = Diabetes	5	11	2	9
3	Primary Diagnosis = Neuro 1 - Brain disorders and paralysis	3	5	5	5
4	Primary Diagnosis = Psych 1 - Affective and other psychoses, depression	6	13	2	5
5	Primary Diagnosis = Psych 2 - Degenerative and other organic psychiatric disorders	1	1		
6	Primary Diagnosis = Skin 1 - Traumatic wounds, burns, and post-operative complications	10	20	7	15
7	Primary or Other Diagnosis = Blindness/Low Vision	2	2	4	4
8	Primary or Other Diagnosis = Blood disorders	1	4		
9	Primary or Other Diagnosis = Dysphagia ***AND*** Primary or Other Diagnosis = Neuro 3 - Stroke	1	6	1	6
10	Primary or Other Diagnosis = Dysphagia **AND** M0250 (Therapy at home) = 3 (Enteral)	2			
11	Primary or Other Diagnosis = Gastrointestinal disorders	2	5	1	5
12	Primary or Other Diagnosis = Gastrointestinal disorders	3	3		

Table 2a: Case-Mix Adjustment Variables and Scores					
	Episode number within sequence of adjacent episodes	1 or 2	1 or 2	3+	3+
	Therapy visits	0-13	14+	0-13	14+
	EQUATION:	*1*	*2*	*3*	*4*
	AND M0550 (ostomy)= 1 or 2				
13	Primary or Other Diagnosis = Gastrointestinal disorders ***AND*** Primary or Other Diagnosis = Neuro 1 - Brain disorders and paralysis, OR Neuro 2 - Peripheral neurological disorders, OR Neuro 3 - Stroke, OR Neuro 4 - Multiple Sclerosis	1	1	3	3
14	Primary or Other Diagnosis = Heart Disease OR Hypertension	3	6	1	6
15	Primary or Other Diagnosis = Heart Disease ***AND*** M0250 (Therapy at home) = 1 (IV/Infusion) or 2(Parenteral)			4	
16	Primary or Other Diagnosis = Neuro 1 - Brain disorders and paralysis ***AND*** M0530 (Urinary incontinence) = 1 or 2			1	
17	Primary or Other Diagnosis = Neuro 1 - Brain disorders and paralysis **AND AT LEAST ONE OF THE FOLLOWING:** M0690 (Transferring) = 2 or more OR M0700 (Ambulation) = 3 or more	4	2	4	2

Table 2a: Case-Mix Adjustment Variables and Scores					
	Episode number within sequence of adjacent episodes	1 or 2	1 or 2	3+	3+
	Therapy visits	0-13	14+	0-13	14+
	EQUATION:	*1*	*2*	*3*	*4*
18	Primary or Other Diagnosis = Neuro 1 - Brain disorders and paralysis OR Neuro 2 - Peripheral neurological disorders ***AND*** M0680 (Toileting) = 2 or more	1	6	3	3
19	Primary or Other Diagnosis = Neuro 3 - Stroke **AND AT LEAST ONE OF THE FOLLOWING:** M0690 (Transferring) = 1 OR M0680 (Toileting) = 2 or more		4		2
20	Primary or Other Diagnosis = Neuro 3 - Stroke **AND AT LEAST ONE OF THE FOLLOWING:** M0690 (Transferring) = 2 or more OR M0700 (Ambulation) = 3 or more	1	4	1	2
21	Primary or Other Diagnosis = Neuro 4 - Multiple Sclerosis **AND AT LEAST ONE OF THE FOLLOWING:** M0670 (bathing) = 2 or more OR M0680 (Toileting) = 2 or more	2	2	9	9
22	Primary or Other Diagnosis = Neuro 4 - Multiple Sclerosis **AND AT LEAST ONE OF THE FOLLOWING:** M0690 (Transferring) = 2 or more OR M0700 (Ambulation) = 3 or more	4	4	7	7

Table 2a: Case-Mix Adjustment Variables and Scores					
	Episode number within sequence of adjacent episodes	1 or 2	1 or 2	3+	3+
	Therapy visits	0-13	14+	0-13	14+
	EQUATION:	***1***	***2***	***3***	***4***
23	Primary or Other Diagnosis = Ortho 1 - Leg Disorders or Gait Disorders **AND** M0460 (most problematic pressure ulcer stage)= 1, 2, 3 or 4	1			
24	Primary or Other Diagnosis = Ortho 1 - Leg OR Ortho 2 - Other orthopedic disorders ***AND*** M0250 (Therapy at home) = 1 (IV/Infusion) or 2 (Parenteral)	6	6	3	
25	Primary or Other Diagnosis = Pulmonary disorders		4		4
26	Primary or Other Diagnosis = Pulmonary disorders ***AND*** M0700 (Ambulation) = 1 or more	2			
27	Primary or Other Diagnosis = Skin 1 -Traumatic wounds, burns, and post-operative complications OR Skin 2 - Ulcers and other skin conditions ***AND*** M0250 (Therapy at home) = 1 (IV/Infusion) or 2 (Parenteral)	2	2	5	
28	Primary or Other Diagnosis = Skin 2 - Ulcers and other skin conditions	5	7	3	7
29	Other Diagnosis = Cancer, selected benign neoplasms	2	5	2	2

Table 2a: Case-Mix Adjustment Variables and Scores					
	Episode number within sequence of adjacent episodes	1 or 2	1 or 2	3+	3+
	Therapy visits	0-13	14+	0-13	14+
	EQUATION:	***1***	***2***	***3***	***4***
30	Other Diagnosis = Diabetes	2	4	1	4
31	Other Diagnosis = Psych 1 - Affective and other psychoses, depression	3	5	2	5
32	Other Diagnosis = Skin 1 - Traumatic wounds, burns, post-operative complications	5	8	4	8
33	M0250 (Therapy at home) = 1 (IV/Infusion) or 2 (Parenteral)	9	15	4	15
34	M0250 (Therapy at home) = 3 (Enteral)	3	12	1	6
35	M0390 (Vision) = 1 or more	1			
36	M0420 (Pain)= 2 or 3	1	1	1	1
37	M0450 = Two or more pressure ulcers at stage 3 or 4	4	4	5	5
38	M0460 (Most problematic pressure ulcer stage)= 1 or 2	5	10	5	10
39	M0460 (Most problematic pressure ulcer stage)= 3 or 4	14	22	11	18
40	M0476 (Stasis ulcer status)= 2	7	13	7	13
41	M0476 (Stasis ulcer status)= 3	11	13	11	13
42	M0488 (Surgical wound status)= 2			3	7
43	M0488 (Surgical wound status)= 3	6	6	6	6
44	M0490 (Dyspnea) = 2, 3, or 4	2	3		2
45	M0530 (Urinary incontinence) = 1 or 2	1	1		
46	M0540 (Bowel Incontinence) = 2 to 5	1	3	1	3
47	M0550 (Ostomy)= 1 or 2	3	6	2	6
48	M0800 (Injectable Drug Use) = 0, 1, or 2	1	1	1	3
	FUNCTIONAL DIMENSION				

Table 2a: Case-Mix Adjustment Variables and Scores					
	Episode number within sequence of adjacent episodes	1 or 2	1 or 2	3+	3+
	Therapy visits	0-13	14+	0-13	14+
	EQUATION:	*1*	*2*	*3*	*4*
49	M0650 or M0660 (Dressing upper or lower body)= 1, 2, or 3	2	3	3	6
50	M0670 (Bathing) = 2 or more	3	4	6	6
51	M0680 (Toileting) = 2 or more	1	1	1	1
52	M0690 (Transferring) = 1		1		1
53	M0690 (Transferring) = 2 or more	1	4	1	5
54	M0700 (Ambulation) = 1 or 2			1	
55	M0700 (Ambulation) = 3 or more		2	3	

Note: The data for the regression equations come from a 40 percent random sample of episodes from FY 2003. The sample excludes LUPA episodes and episodes with SCIC or PEP adjustments.

Table 2b: ICD-9-CM Diagnoses Included in the Diagnostic Categories for Case-Mix Adjustment Variables

Diagnostic Category	ICD-9-CM Code**	Manifestation*	Short Description of ICD-9-CM Code
Blindness and low vision	369.0		PROFOUND BLIND BOTH EYES
	369.1		MOD/SEV W PROFND IMPAIR
	369.2		MOD/SEV IMPAIR-BOTH EYES
	369.3		BLINDNESS NOS, BOTH EYES
	369.4		LEGAL BLINDNESS-USA DEF
	950		INJURY TO OPTIC NERVE AND PATHWAYS
Blood disorders	281		OTHER DEFICIENCY ANEMIAS
	282		HEREDITARY HEMOLYTIC ANEMIAS
	283		ACQUIRED HEMOLYTIC ANEMIAS

	284		APLASTIC ANEMIA
	285		OTHER AND UNSPECIFIED ANEMIAS
	286		COAGULATION DEFECTS
	287		PURPURA&OTHER HEMORRHAGIC CONDS
	288		DISEASES OF WHITE BLOOD CELLS
	289		OTH DISEASES BLD&BLD-FORMING ORGANS
Cancer and selected benign neoplasms	140		MALIGNANT NEOPLASM OF LIP
	141		MALIGNANT NEOPLASM OF TONGUE
	142		MALIG NEOPLASM MAJOR SALIV GLANDS
	143		MALIGNANT NEOPLASM OF GUM
	144		MALIGNANT NEOPLASM FLOOR MOUTH
	145		MALIG NEOPLSM OTH&UNSPEC PART MOUTH
	146		MALIGNANT NEOPLASM OF OROPHARYNX
	147		MALIGNANT NEOPLASM OF NASOPHARYNX
	148		MALIGNANT NEOPLASM OF HYPOPHARYNX
	149		OTH MALIG NEO LIP-MOUTH-PHARYNX
	150		MALIGNANT NEOPLASM OF ESOPHAGUS
	151		MALIGNANT NEOPLASM OF STOMACH
	152		MALIG NEOPLSM SM INTEST INCL DUODUM
	153		MALIGNANT NEOPLASM OF COLON
	154		MAL NEO RECT RECTOSIGMOID JUNC&ANUS
	155		MALIG NEOPLASM LIVER&INTRAHEP BDS
	156		MALIG NEOPLSM GALLBLADD&XTRAHEP BDS
	157		MALIGNANT NEOPLASM OF PANCREAS
	158		MALIG NEOPLASM RETROPERITON&PERITON

	159		MAL NEO DIGES ORGANS&PANCREAS OTH
	160		MAL NEO NASL CAV/MID EAR&ACSS SINUS
	161		MALIGNANT NEO LARYNX*
	162		MALIGNANT NEO TRACHEA/LUNG*
	163		MALIGNANT NEOPL PLEURA*
	164		MAL NEO THYMUS/MEDIASTIN*
	165		OTH/ILL-DEF MAL NEO RESP*
	170		MALIG NEOPLASM BONE&ARTICLR CART
	171		MALIG NEOPLSM CNCTV&OTH SOFT TISSUE
	172		MALIGNANT MELANOMA OF SKIN
	173		OTHER MALIGNANT NEOPLASM OF SKIN
	174		MALIGNANT NEOPLASM OF FEMALE BREAST
	175		MALIGNANT NEOPLASM OF MALE BREAST
	176		KAPOSIS SARCOMA
	179		MALIG NEOPLASM UTERUS PART UNSPEC
	180		MALIGNANT NEOPLASM OF CERVIX UTERI
	181		MALIGNANT NEOPLASM OF PLACENTA
	182		MALIGNANT NEOPLASM BODY UTERUS
	183		MALIG NEOPLSM OVRY&OTH UTERN ADNEXA
	184		MALIG NEOPLSM OTH&UNS FE GENIT ORGN
	185		MALIGNANT NEOPLASM OF PROSTATE
	186		MALIGNANT NEOPLASM OF TESTIS
	187		MAL NEOPLSM PENIS&OTH MALE GNT ORGN
	188		MALIGNANT NEOPLASM OF BLADDER
	189		MAL NEO KIDNEY&OTH&UNS URIN ORGN
	190		MALIGNANT NEOPLASM OF

			EYE
	192.0		MALIGNANT NEOPLASM, CRANIAL NERVES
	192.8		MALIGNANT NEOPLASM OTHER NERV SYS
	192.9		MALIGNANT NEOPLASM, UNS PART NERV SYS
	193		MALIGNANT NEOPLASM OF THYROID GLAND
	194		MAL NEO OTH ENDOCRN GLND&REL STRCT
	195		MALIG NEOPLASM OTH&ILL-DEFIND SITES
	196		SEC&UNSPEC MALIG NEOPLASM NODES
	197		SEC MALIG NEOPLASM RESP&DIGESTV SYS
	198		SEC MALIG NEOPLASM OTHER SPEC SITES
	199		MALIG NEOPLASM WITHOUT SPEC SITE
	200		LYMPHOSARCOMA AND RETICULOSARCOMA
	201		HODGKINS DISEASE
	202		OTH MAL NEO LYMPHOID&HISTCYT TISS
	203		MX MYELOMA&IMMUNOPROLIFERAT NEOPLSM
	204		LYMPHOID LEUKEMIA
	205		MYELOID LEUKEMIA
	206		MONOCYTIC LEUKEMIA
	207		OTHER SPECIFIED LEUKEMIA
	208		LEUKEMIA OF UNSPECIFIED CELL TYPE
	213		BEN NEOPLASM BONE&ARTICLR CARTILAGE
	225.1		BEN NEOPLSM CRANIAL NERVES
	225.8		BEN NEOPLSM OTH SPEC SITES
	225.9		BEN NEOPLSM UNSPEC PART NERV SYS
	230		CA IN SITU - DIGEST
	231		CA IN SITU - RESP
	232		CARCINOMA IN SITU OF SKIN
	233		CA IN SITU - BREAST AND GU

	234		CA IN SITU - OTH
Diabetes	250		DIABETES MELLITUS
	357.2	M	POLYNEUROPATHY IN DIABETES
	362.01	M	BACKGROUND DIABETIC RETINOPATHY
	362.02	M	PROLIFERATIVE DIABETIC RETINOPATHY
	366.41	M	DIABETIC CATARACT
Dysphagia	787.2		DYSPHAGIA
Gait Abnormality	781.2		ABNORM GAIT
Gastrointestinal disorders	002		TYPHOID AND PARATYPHOID FEVERS
	003		OTHER SALMONELLA INFECTIONS
	004		SHIGELLOSIS
	005		OTHER FOOD POISONING
	006		AMEBIASIS
	007		OTHER PROTOZOAL INTESTINAL DISEASES
	008		INTESTINAL INFS DUE OTH ORGANISMS
	009		ILL-DEFINED INTESTINAL INFECTIONS
	530		DISEASES OF ESOPHAGUS
	531		GASTRIC ULCER
	532		DUODENAL ULCER
	533		PEPTIC ULCER, SITE UNSPECIFIED
	534		GASTROJEJUNAL ULCER
	535		GASTRITIS AND DUODENITIS
	536		DISORDERS OF FUNCTION OF STOMACH
	537		OTHER DISORDERS OF STOMACH&DUODENUM
	540		ACUTE APPENDICITIS
	541		APPENDICITIS, UNQUALIFIED
	542		OTHER APPENDICITIS
	543		OTHER DISEASES OF APPENDIX
	555		REGIONAL ENTERITIS
	556		ULCERATIVE COLITIS
	557		VASCULAR INSUFFICIENCY OF INTESTINE
	558		OTH NONINF GASTROENTERITIS&COLITI

			S
	560		INTEST OBST W/O MENTION HERN
	562		DIVERTICULA OF INTESTINE
	564		FUNCTIONAL DIGESTIVE DISORDERS NEC
	567	M	PERITONITIS
	568		OTHER DISORDERS OF PERITONEUM
	569		OTHER DISORDERS OF INTESTINE
	570		ACUTE&SUBACUTE NECROSIS OF LIVER
	571		CHRONIC LIVER DISEASE AND CIRRHOSIS
	572		LIVER ABSC&SEQUELAE CHRON LIVR DZ
	573	M	OTHER DISORDERS OF LIVER
	574		CHOLELITHIASIS
	575		OTHER DISORDERS OF GALLBLADDER
	576		OTHER DISORDERS OF BILIARY TRACT
	577		DISEASES OF PANCREAS
	578		GASTROINTESTINAL HEMORRHAGE
	579		INTESTINAL MALABSORPTION
	783.2		ABNORMAL LOSS OF WEIGHT
Heart Disease	410		ACUTE MYOCARDIAL INFARCTION
	411		OTH AC&SUBAC FORMS ISCHEMIC HRT DZ
	428		HEART FAILURE
Hypertension	401		ESSENTIAL HYPERTENSION
	402		HYPERTENSIVE HEART DISEASE
	403		HYPERTENSIVE RENAL DISEASE
	404		HYPERTENSIVE HEART&RENAL DISEASE
	405		SECONDARY HYPERTENSION
Neuro 1 - Brain disorders and paralysis	013		TB MENINGES&CNTRL NERV SYS
	047		MENINGITIS DUE TO

			ENTEROVIRUS
	046		SLOW VIRUS INFECTION CNTRL NERV SYS
	048		OTH ENTEROVIRUS DZ CNTRL NERV SYS
	049		OTH NON-ARTHROPOD BORNE VIRL DX-CNS
	191		MALIGNANT NEOPLASM OF BRAIN
	192.2		MALIG NEOPLSM SPINAL CORD
	192.3		MALIG NEOPLSM SPINAL MENINGES
	225.0		BEN NEOPLSM BRAIN
	225.2		BEN NEOPLSM BRAIN MENINGES
	225.3		BEN NEOPLSM SPINAL CORD
	225.4		BEN NEOPLSM SPINAL CORD MENINGES
	320.0		HEMOPHILUS MENINGITIS
	320.1		PNEUMOCOCCAL MENINGITIS
	320.2		STREPTOCOCCAL MENINGITIS
	320.3		STAPHYLOCOCCAL MENINGITIS
	320.7	M	MENINGITIS OTH BACT DZ CLASS ELSW
	320.81		ANAEROBIC MENINGITIS
	320.82		MENINGITIS DUE GM-NEG BACTER NEC
	320.89		MENINGITIS DUE OTHER SPEC BACTERIA
	320.9		MENINGITIS DUE UNSPEC BACTERIUM
	321.0	M	CRYPTOCOCCAL MENINGITIS
	321.1	M	MENINGITIS IN OTHER FUNGAL DISEASES
	321.2	M	MENINGITIS DUE TO VIRUSES NEC
	321.3	M	MENINGITIS DUE TO TRYPANOSOMIASIS
	321.4	M	MENINGITIS IN SARCOIDOSIS
	321.8	M	MENINGITIS-OTH NONBCTRL ORGNISMS CE
	322		MENINGITIS OF UNSPECIFIED CAUSE
	323.0	M	ENCEPHALITIS VIRAL DZ

			CLASS ELSW
	323.1	M	ENCEPHALIT RICKETTS DZ CLASS ELSW
	323.2	M	ENCEPHALIT PROTOZOAL DZ CLASS ELSW
	323.4	M	OTH ENCEPHALIT DUE INF CLASS ELSW
	323.5		ENCEPHALIT FOLLOW IMMUNIZATION PROC
	323.6	M	POSTINFECTIOUS ENCEPHALITIS
	323.7	M	TOXIC ENCEPHALITIS
	323.8		OTHER CAUSES OF ENCEPHALITIS
	323.9		ENCEPHALITUS NOS
	324		INTRACRANIAL&INTRASPINAL ABSCESS
	325		PHLEBIT&THRMBOPHLB INTRACRAN VENUS
	326		LATE EFF INTRACRAN ABSC/PYOGEN INF
	330.0		LEUKODYSTROPHY
	330.1		CEREBRAL LIPIDOSES
	330.2	M	CEREB DEGEN IN LIPIDOSIS
	330.3	M	CERB DEG CHLD IN OTH DIS
	330.8		CEREB DEGEN IN CHILD NEC
	330.9		CEREB DEGEN IN CHILD NOS
	334.1		HERED SPASTIC PARAPLEGIA
	335		ANTERIOR HORN CELL DISEASE
	336.1		VASCULAR MYELOPATHIES
	336.2	M	SUBACUTE COMB DEGEN SPINL CRD DZ CE
	336.3	M	MYELOPATHY OTH DISEASES CLASS ELSW
	336.8		OTHER MYELOPATHY
	336.9		UNSPECIFIED DISEASE OF SPINAL CORD
	337.3		AUTONOMIC DYSREFLEXIA
	344.1		PARAPLEGIA
	344.8		LOCKED-IN STATE
	344.9		PARALYSIS UNSPECIFIED
	348		OTHER CONDITIONS OF BRAIN
	349.82		OTH&UNSPEC DISORDERS

			NERVOUS SYSTEM
	336.0		SYRINGOMYELIA AND SYRINGOBULBIA
	344.0		QUADRAPLEGIA
	741		SPINA BIFIDA
	780.01		COMA
	780.03		PERSISTENT VEGETATIVE STATE
	806		FX VERT COLUMN W/SPINAL CORD INJURY
	851		CEREBRAL LACERATION AND CONTUSION
	852		SUBARACH SUB&XTRADURL HEMOR FLW INJ
	853		OTH&UNS INTRACRAN HEMOR FLW INJURY
	854		INTRACRAN INJURY OTH&UNSPEC NATURE
	907.0		LATE EFF INTRACRANIAL INJURY
	907.1		LATE EFFECT OF INJURY TO CRANIAL NERVE
	907.2		LATE EFFECT OF SPINAL CORD INJURY
	907.3		LATE EFFECT OF INJURY TO NERVE ROOT(S), SPINAL PLEXUS(ES), AND OTHER NERVES OF TRUNK
	907.4		LATE EFFECT OF INJURY TO PERIPHERAL NERVE OF SHOULDER GIRDLE AND UPPER LIMB
	907.5		LATE EFFECT OF INJURY TO PERIPHERAL NERVE OF PELVIC GIRDLE AND LOWER LIMB
	907.9		LATE EFFECT OF INJURY TO OTHER AND UNSPECIFIED NERVE
	952		SP CRD INJR W/O EVIDENCE SP BN INJR
Neuro 2 - Peripheral neurological disorders	045		ACUTE POLIOMYELITIS
	332		PARKINSONS DISEASE
	333		OTH XTRAPYRAMIDAL DZ&ABN MOVMNT D/O
	334.0		FRIEDREICH'S ATAXIA
	334.2		PRIMARY CEREBELLAR

			DEGEN
	334.3		CEREBELLAR ATAXIA NEC
	334.4	M	CEREBEL ATAX IN OTH DIS
	334.8		SPINOCEREBELLAR DIS NEC
	334.9		SPINOCEREBELLAR DIS NOS
	337.0		IDIOPATH PERIPH AUTONOM NEUROPATHY
	337.1	M	PRIPHERL AUTONOMIC NEUROPTHY D/O CE
	337.20		UNSPEC REFLEX SYMPATHETIC DYSTROPHY
	337.21		REFLX SYMPATHET DYSTROPHY UP LIMB
	337.22		REFLX SYMPATHET DYSTROPHY LOW LIMB
	337.29		REFLX SYMPATHET DYSTROPHY OTH SITE
	337.9		UNSPEC DISORDER AUTONOM NERV SYSTEM
	343		INFANTILE CEREBRAL PALSY
	344.2		DIPLEGIA OF BOTH UPPER LIMBS
	352		DISORDERS OF OTHER CRANIAL NERVES
	353.0		BRACHIAL PLEXUS LESION
	353.1		LUMBOSACRAL PLEXUS LESION
	353.5		NEURALGIC AMYLOTROPHY
	354.5		MONONEURITIS MULTIPLEX
	355.2		OTHER LESION OF FEMORAL NERVE
	355.9		LESION OF SCIATIC NERVE
	356		HEREDIT&IDIOPATH PERIPH NEUROPATHY
	357.0		ACUTE INFECTIVE POLYNEURITIS
	357.1	M	POLYNEUROPATHY COLL VASC DISEASE
	357.3	M	POLYNEUROPATHY IN MALIGNANT DISEASE
	357.4	M	POLYNEUROPATHY OTH DZ CLASS ELSW
	357.5		ALCOHOLIC POLYNEUROPATHY
	357.6		POLYNEUROPATHY DUE TO DRUGS
	357.7		POLYNEUROPATHY DUE

			OTH TOXIC AGENTS
	357.82		CRIT ILLNESS NEUROPATHY
	357.89		INFLAM/TOX NEUROPATHY
	357.9		UNSPEC INFLAM&TOXIC NEUROPATHY
	358.00		MYASTHENIA GRAVIS W/O ACUTE
	358.01		MYASTHENIA GRAVIS W/ACUTE
	358.1	M	MYASTHENIC SYNDROMES DZ CLASS ELSW
	358.2		TOXIC MYONEURAL DISORDERS
	358.9		UNSPECIFIED MYONEURAL DISORDERS
	359.0		CONGEN HEREDIT MUSCULAR DYSTROPHY
	359.1		HEREDITARY PROGRESSIVE MUSC DYSTROPH
	359.3		FAMILIAL PERIODIC PARALYSIS
	359.4		TOXIC MYOPATHY
	359.5	M	MYOPATHY ENDOCRINE DZ CLASS ELSW
	359.6	M	SX INFLAM MYOPATHY DZ CLASS ELSW
	359.8		OTHER MYOPATHIES
	359.9		UNSPECIFIED MYOPATHY
	386.0		MENIERE'S DISEASE
	386.2		VERTIGO OF CENTRAL ORIGIN
	386.3		LABYRINTHITIS
	392		RHEUMATIC CHOREA
	953		INJURY TO NERVE ROOTS&SPINAL PLEXUS
	954		INJR OTH NRV TRNK NO SHLDR&PLV GIRD
	955.8		INJR PERIPH NRV SHLDR GIRDL&UP LIMB
	956.0		INJR TO SCIATIC NERVE
	956.1		INJ TO FEMORAL NERVE
	956.8		INJR TO MULTIPLE PELVIC AND LE NERVES
Neuro 3 - Stroke	342		HEMIPLEGIA AND HEMIPARESIS
	344.3		MONOPLEGIA OF LOWER LIMB
	344.4		MONOPLEGIA OF UPPER

			LIMB
	344.6		UNSPECIFIED MONOPLEGIA
	430		SUBARACHNOID HEMORRHAGE
	431		INTRACEREBRAL HEMORRHAGE
	432		OTH&UNSPEC INTRACRANIAL HEMORRHAGE
	433.01		OCCLUSION&STENOSIS BASILAR ART W INFARC
	433.11		OCCLUSION&STENOSIS CAROTID ART W INFARC
	433.21		OCCLUSION&STENOSIS VERTEBRAL ART W INFARC
	433.31		OCCLUSION&STENOSIS MULT BILAT ART W INFARC
	433.81		OCCLUSION&STENOSIS OTH PRECER ART W INFARC
	434.01		CEREBRAL THROMBOSIS W INFARCTION
	434.11		CEREBRAL EMBOLISM W INFARCTION
	781.8		NEURO NEGLECT SYNDROME
	436		ACUT BUT ILL-DEFINED CEREBRVASC DZ
	438		LATE EFF CEREBROVASCULAR DZ
	435		TRANSIENT CEREBRAL ISCHEMIA
Neuro 4 - Multiple Sclerosis	340		MULTIPLE SCLEROSIS
	341	M	OTH DEMYELINATING DZ CNTRL NERV SYS
Ortho 1 - Leg Disorders	711.05		PYOGEN ARTHRITIS-PELVIS
	711.06		PYOGEN ARTHRITIS-L/LEG
	711.07		PYOGEN ARTHRITIS-ANKLE
	711.15	M	REITER ARTHRITIS-PELVIS
	711.16	M	REITER ARTHRITIS-L/LEG
	711.17	M	REITER ARTHRITIS-ANKLE
	711.25	M	BEHCET ARTHRITIS-PELVIS
	711.26	M	BEHCET ARTHRITIS-L/LEG
	711.27	M	BEHCET ARTHRITIS-ANKLE
	711.35	M	DYSENTER ARTHRIT-PELVIS

	711.36	M	DYSENTER ARTHRIT-L/LEG
	711.37	M	DYSENTER ARTHRIT-ANKLE
	711.45	M	BACT ARTHRITIS-PELVIS
	711.46	M	BACT ARTHRITIS-L/LEG
	711.47	M	BACT ARTHRITIS-ANKLE
	711.55	M	VIRAL ARTHRITIS-PELVIS
	711.56	M	VIRAL ARTHRITIS-L/LEG
	711.57	M	VIRAL ARTHRITIS-ANKLE
	711.65	M	MYCOTIC ARTHRITIS-PELVI
	711.66	M	MYCOTIC ARTHRITIS-L/LEG
	711.67	M	MYCOTIC ARTHRITIS-ANKLE
	711.75	M	HELMINTH ARTHRIT-PELVIS
	711.76	M	HELMINTH ARTHRIT-L/LEG
	711.77	M	HELMINTH ARTHRIT-ANKLE
	711.85	M	INF ARTHRITIS NEC-PELVI
	711.86	M	INF ARTHRITIS NEC-L/LEG
	711.87	M	INF ARTHRITIS NEC-ANKLE
	711.95		INF ARTHRIT NOS-PELVIS
	711.96		INF ARTHRIT NOS-L/LEG
	711.97		INF ARTHRIT NOS-ANKLE
	712.15	M	DICALC PHOS CRYST-PELVI
	712.16	M	DICALC PHOS CRYST-L/LEG
	712.17	M	DICALC PHOS CRYST-ANKLE
	712.25	M	PYROPHOSPH CRYST-PELVIS
	712.26	M	PYROPHOSPH CRYST-L/LEG
	712.27	M	PYROPHOSPH CRYST-ANKLE
	712.35	M	CHONDROCALCIN NOS-PELVI
	712.36	M	CHONDROCALCIN NOS-L/LEG
	712.37	M	CHONDROCALCIN NOS-ANKLE
	712.85		CRYST ARTHROP NEC-PELVI
	712.86		CRYST ARTHROP NEC-L/LEG
	712.87		CRYST ARTHROP NEC-ANKLE
	712.95		CRYST ARTHROP NOS-PELVI
	712.96		CRYST ARTHROP NOS-L/LEG
	712.97		CRYST ARTHROP NOS-ANKLE
	716.05		KASCHIN-BECK DIS-PELVIS

	716.06		KASCHIN-BECK DIS-L/LEG
	716.07		KASCHIN-BECK DIS-ANKLE
	716.15		TRAUM ARTHROPATHY-PELVIS
	716.16		TRAUM ARTHROPATHY-L/LEG
	716.17		TRAUM ARTHROPATHY-ANKLE
	716.25		ALLERG ARTHRITIS-PELVIS
	716.26		ALLERG ARTHRITIS-L/LEG
	716.27		ALLERG ARTHRITIS-ANKLE
	716.35		CLIMACT ARTHRITIS-PELVIS
	716.36		CLIMACT ARTHRITIS-L/LEG
	716.37		CLIMACT ARTHRITIS-ANKLE
	716.45		TRANS ARTHROPATHY-PELVIS
	716.46		TRANS ARTHROPATHY-L/LEG
	716.47		TRANS ARTHROPATHY-ANKLE
	716.55		POLYARTHRITIS NOS-PELVIS
	716.56		POLYARTHRITIS NOS-L/LEG
	716.57		POLYARTHRITIS NOS-ANKLE
	716.67		MONOARTHRITIS NOS-ANKLE
	716.85		ARTHROPATHY NEC-PELVIS
	716.86		ARTHROPATHY NEC-L/LEG
	716.87		ARTHROPATHY NEC-ANKLE
	716.95		ARTHROPATHY NOS-PELVIS
	716.96		ARTHROPATHY NOS-L/LEG
	716.97		ARTHROPATHY NOS-ANKLE
	717		INTERNAL DERANGEMENT OF KNEE
	718.05		ART CARTIL DISORDER PELVIS AND THIGH
	718.06		ART CARTIL DISORDER LOWER LEG
	718.07		ART CARTIL DIS ANKLE FOOT
	718.25		PATHOLOGIC DISLOCATION PELVIS AND THIGH

	718.26		PATHOLOGIC DISLOCATION LOWER LEG
	718.27		PATHOLOGIC DISLOCATION ANKLE FOOT
	718.35		RECURRENT DISLOCATION PELVIS AND THIGH
	718.36		RECURRENT DISLOCATION LOW LEG
	718.37		RECURRENT DISLOCATION ANKLE FOOT
	718.45		CONTRACTURE PELVIS AND THIGH
	718.46		CONTRACTURE LOWER LEG
	718.47		CONTRACTURE OF JOINT ANKLE FOOT
	718.55		ANKYLOSIS OF PELVIS AND THIGH
	718.56		ANKYLOSIS OF LOWER LEG
	718.57		ANKYLOSIS OF JOINT ANKLE FOOT
	718.85		OTHER DERANGEMENT OF PELVIS AND THIGH
	718.86		OTHER DERANGEMENT OF JOINT OF LOWER LEG
	718.87		OTH DERANGMENT JT NEC ANKLE FOOT
	719.15		HEMARTHROSIS PELVIS AND THIGH
	719.16		HEMARTHROSIS LOWER LEG
	719.17		HEMARTHROSIS ANKLE AND FOOT
	719.25		VILLONODULAR SYNOVITIS PELVIS AND THIGH
	719.26		VILLONODULAR SYNOVITIS LOWER LEG
	719.27		VILLONODULAR SYNOVITIS ANKLE AND FOOT
	719.35		PALANDROMIC RHEUMATISM PELVIS AND THIGH
	719.36		PALANDROMIC RHEUMATISM LOWER LEG
	719.37		PALANDROMIC RHEUMATISM ANKLE AND FOOT
	727.65		RUPTURE OF TENDON QUADRACEPS
	727.66		RUPTURE OF TENDON PATELLAR

	727.67		RUPTURE OF TENDON ACHILLES
	727.68		RUPTURE OTHER TENDONS FOOT AND ANKLE
	730.05		AC OSTEOMYELITIS-PELVIS
	730.06		AC OSTEOMYELITIS-L/LEG
	730.07		AC OSTEOMYELITIS-ANKLE
	730.15		CHR OSTEOMYELIT-PELVIS
	730.16		CHR OSTEOMYELIT-L/LEG
	730.17		CHR OSTEOMYELIT-ANKLE
	730.25		OSTEOMYELITIS NOS-PELVI
	730.26		OSTEOMYELITIS NOS-L/LEG
	730.27		OSTEOMYELITIS NOS-ANKLE
	730.35		PERIOSTITIS-PELVIS
	730.36		PERIOSTITIS-L/LEG
	730.37		PERIOSTITIS-ANKLE
	730.75	M	POLIO OSTEOPATHY-PELVIS
	730.76	M	POLIO OSTEOPATHY-L/LEG
	730.77	M	POLIO OSTEOPATHY-ANKLE
	730.85	M	BONE INFECT NEC-PELVIS
	730.86	M	BONE INFECT NEC-L/LEG
	730.87	M	BONE INFECT NEC-ANKLE
	730.95		BONE INFECT NOS-PELVIS
	730.96		BONE INFECT NOS-L/LEG
	730.97		BONE INFECT NOS-ANKLE
	733.14		PATHOLOGIC FRACTURE OF NECK OF FEMUR
	733.15		PATHOLOGIC FRACTURE OF FEMUR
	733.16		PATHOLOGIC FRACTURE OF TIBIA OR FIBULA
	733.42		ASEPTIC NECROSIS OF HEAD AND NECK OF FEMUR
	733.43		ASEPTIC NECROSIS OF MEDIAL FEMORAL CONDYLE
	808		FRACTURE OF PELVIS
	820		FRACTURE OF NECK OF FEMUR
	821		FRACTURE OTHER&UNSPEC PARTS FEMUR
	822		FRACTURE OF PATELLA
	823		FRACTURE OF TIBIA AND FIBULA

	824		FRACTURE OF ANKLE
	825		FRACTURE 1/MORE TARSAL&MT BNS
	827		OTH MX&ILL-DEFINED FX LOWER LIMB
	828		MX FX LEGS-LEG W/ARM-LEGS W/RIBS
	835		DISLOCATION OF HIP
	836		DISLOCATION OF KNEE
	897		TRAUMATIC AMPUTATION OF LEG
	928		CRUSHING INJURY OF LOWER LIMB
Ortho 2 - Other Orthopedic disorders	711.01		PYOGEN ARTHRITIS-SHLDER
	711.02		PYOGEN ARTHRITIS-UP/ARM
	711.03		PYOGEN ARTHRITIS-FOREAR
	711.04		PYOGEN ARTHRITIS-HAND
	711.08		PYOGEN ARTHRITIS NEC
	711.09		PYOGEN ARTHRITIS-MULT
	711.10	M	REITER ARTHRITIS-UNSPEC
	711.11	M	REITER ARTHRITIS-SHLDER
	711.12	M	REITER ARTHRITIS-UP/ARM
	711.13	M	REITER ARTHRITIS-FOREAR
	711.14	M	REITER ARTHRITIS-HAND
	711.18	M	REITER ARTHRITIS NEC
	711.19	M	REITER ARTHRITIS-MULT
	711.20	M	BEHCET ARTHRITIS-UNSPEC
	711.21	M	BEHCET ARTHRITIS-SHLDER
	711.22	M	BEHCET ARTHRITIS-UP/ARM
	711.23	M	BEHCET ARTHRITIS-FOREAR
	711.24	M	BEHCET ARTHRITIS-HAND
	711.28	M	BEHCET ARTHRITIS NEC
	711.29	M	BEHCET ARTHRITIS-MULT
	711.30	M	DYSENTER ARTHRIT-UNSPEC
	711.31	M	DYSENTER ARTHRIT-SHLDER
	711.32	M	DYSENTER ARTHRIT-UP/ARM
	711.33	M	DYSENTER ARTHRIT-

			FOREAR
	711.34	M	DYSENTER ARTHRIT-HAND
	711.38	M	DYSENTER ARTHRIT NEC
	711.39	M	DYSENTER ARTHRIT-MULT
	711.40	M	BACT ARTHRITIS-UNSPEC
	711.41	M	BACT ARTHRITIS-SHLDER
	711.42	M	BACT ARTHRITIS-UP/ARM
	711.43	M	BACT ARTHRITIS-FOREARM
	711.44	M	BACT ARTHRITIS-HAND
	711.48	M	BACT ARTHRITIS NEC
	711.49	M	BACT ARTHRITIS-MULT
	711.50	M	VIRAL ARTHRITIS-UNSPEC
	711.51	M	VIRAL ARTHRITIS-SHLDER
	711.52	M	VIRAL ARTHRITIS-UP/ARM
	711.53	M	VIRAL ARTHRITIS-FOREARM
	711.54	M	VIRAL ARTHRITIS-HAND
	711.58	M	VIRAL ARTHRITIS NEC
	711.59	M	VIRAL ARTHRITIS-MULT
	711.60	M	MYCOTIC ARTHRITIS-UNSPE
	711.61	M	MYCOTIC ARTHRITIS-SHLDE
	711.62	M	MYCOTIC ARTHRITIS-UP/AR
	711.63	M	MYCOTIC ARTHRIT-FOREARM
	711.64	M	MYCOTIC ARTHRITIS-HAND
	711.68	M	MYCOTIC ARTHRITIS NEC
	711.69	M	MYCOTIC ARTHRITIS-MULT
	711.70	M	HELMINTH ARTHRIT-UNSPEC
	711.71	M	HELMINTH ARTHRIT-SHLDER
	711.72	M	HELMINTH ARTHRIT-UP/ARM
	711.73	M	HELMINTH ARTHRIT-FOREAR
	711.74	M	HELMINTH ARTHRIT-HAND
	711.78	M	HELMINTH ARTHRIT NEC
	711.79	M	HELMINTH ARTHRIT-MULT
	711.80	M	INF ARTHRITIS NEC-UNSPE
	711.81	M	INF ARTHRITIS NEC-SHLDE
	711.82	M	INF ARTHRITIS NEC-UP/AR
	711.83	M	INF ARTHRIT NEC-FOREARM
	711.84	M	INF ARTHRITIS NEC-HAND
	711.88	M	INF ARTHRIT NEC-OTH SIT
	711.89	M	INF ARTHRITIS NEC-MULT
	711.90		INF ARTHRITIS NOS-UNSPE

	711.91		INF ARTHRITIS NOS-SHLDE
	711.92		INF ARTHRITIS NOS-UP/AR
	711.93		INF ARTHRIT NOS-FOREARM
	711.94		INF ARTHRIT NOS-HAND
	711.98		INF ARTHRIT NOS-OTH SIT
	711.99		INF ARTHRITIS NOS-MULT
	712.10	M	DICALC PHOS CRYST-UNSPE
	712.11	M	DICALC PHOS CRYST-SHLDE
	712.12	M	DICALC PHOS CRYST-UP/AR
	712.13	M	DICALC PHOS CRYS-FOREAR
	712.14	M	DICALC PHOS CRYST-HAND
	712.18	M	DICALC PHOS CRY-SITE NE
	712.19	M	DICALC PHOS CRYST-MULT
	712.20	M	PYROPHOSPH CRYST-UNSPEC
	712.21	M	PYROPHOSPH CRYST-SHLDER
	712.22	M	PYROPHOSPH CRYST-UP/ARM
	712.23	M	PYROPHOSPH CRYST-FOREAR
	712.24	M	PYROPHOSPH CRYST-HAND
	712.28	M	PYROPHOS CRYST-SITE NEC
	712.29	M	PYROPHOS CRYST-MULT
	712.30	M	CHONDROCALCIN NOS-UNSPE
	712.31	M	CHONDROCALCIN NOS-SHLDE
	712.32	M	CHONDROCALCIN NOS-UP/AR
	712.33	M	CHONDROCALC NOS-FOREARM
	712.34	M	CHONDROCALCIN NOS-HAND
	712.38	M	CHONDROCALC NOS-OTH SIT
	712.39	M	CHONDROCALCIN NOS-MULT
	712.80		CRYST ARTHROP NEC-UNSPE
	712.81		CRYST ARTHROP NEC-SHLDE
	712.82		CRYST ARTHROP NEC-

			UP/AR
	712.83		CRYS ARTHROP NEC-FOREAR
	712.84		CRYST ARTHROP NEC-HAND
	712.88		CRY ARTHROP NEC-OTH SIT
	712.89		CRYST ARTHROP NEC-MULT
	712.90		CRYST ARTHROP NOS-UNSPE
	712.91		CRYST ARTHROP NOS-SHLDR
	712.92		CRYST ARTHROP NOS-UP/AR
	712.93		CRYS ARTHROP NOS-FOREAR
	712.94		CRYST ARTHROP NOS-HAND
	712.98		CRY ARTHROP NOS-OTH SIT
	712.99		CRYST ARTHROP NOS-MULT
	713.0	M	ARTHROP W ENDOCR/MET DI
	713.1	M	ARTHROP W NONINF GI DIS
	713.2	M	ARTHROPATH W HEMATOL DI
	713.3	M	ARTHROPATHY W SKIN DIS
	713.4	M	ARTHROPATHY W RESP DIS
	713.5	M	ARTHROPATHY W NERVE DIS
	713.6	M	ARTHROP W HYPERSEN REAC
	713.7	M	ARTHROP W SYSTEM DIS NE
	713.8	M	ARTHROP W OTH DIS NEC
	714		RA&OTH INFLAM POLYARTHROPATHIES
	715.15		OSTEOARTHROSIS, LOCALIZED, PRIMARY, PELVIS AND THIGH
	715.16		OSTEOARTHROSIS, LOCALIZED, PRIMARY, LOWER LEG
	715.25		OSTEOARTHROSIS, LOCALIZED, SECONDARY, PELVIS AND THIGH
	715.26		OSTEOARTHROSIS, LOCALIZED, SECONDARY,

			LOWER LEG
	715.35		OSTEOARTHROSIS, LOCALIZED, NOT SPEC PRIMARY OR SECONDARY, PELVIS AND THIGH
	715.36		OSTEOARTHROSIS, LOCALIZED, NOT SPEC PRIMARY OR SECONDARY, LOWER LEG
	715.95		OSTEOARTHROSIS, UNSPECIFIED, PELVIS AND THIGH
	715.96		OSTEOARTHROSIS, UNSPECIFIED, LOWER LEG
	716.00		KASCHIN-BECK DIS-UNSPEC
	716.01		KASCHIN-BECK DIS-SHLDER
	716.02		KASCHIN-BECK DIS-UP/ARM
	716.03		KASCHIN-BECK DIS-FOREARM
	716.04		KASCHIN-BECK DIS-HAND
	716.08		KASCHIN-BECK DIS NEC
	716.09		KASCHIN-BECK DIS-MULT
	716.10		TRAUM ARTHROPATHY-UNSPEC
	716.11		TRAUM ARTHROPATHY-SHLDER
	716.12		TRAUM ARTHROPATHY-UP/ARM
	716.13		TRAUM ARTHROPATH-FOREARM
	716.14		TRAUM ARTHROPATHY-HAND
	716.18		TRAUM ARTHROPATHY NEC
	716.19		TRAUM ARTHROPATHY-MULT
	716.20		ALLERG ARTHRITIS-UNSPEC
	716.21		ALLERG ARTHRITIS-SHLDER
	716.22		ALLERG ARTHRITIS-UP/ARM
	716.23		ALLERG ARTHRITIS-FOREARM
	716.24		ALLERG ARTHRITIS-HAND
	716.28		ALLERG ARTHRITIS NEC
	716.29		ALLERG ARTHRITIS-MULT

	716.30		CLIMACT ARTHRITIS-UNSPEC
	716.31		CLIMACT ARTHRITIS-SHLDER
	716.32		CLIMACT ARTHRITIS-UP/ARM
	716.33		CLIMACT ARTHRIT-FOREARM
	716.34		CLIMACT ARTHRITIS-HAND
	716.38		CLIMACT ARTHRITIS NEC
	716.39		CLIMACT ARTHRITIS-MULT
	716.40		TRANS ARTHROPATHY-UNSPEC
	716.41		TRANS ARTHROPATHY-SHLDER
	716.42		TRANS ARTHROPATHY-UP/ARM
	716.43		TRANS ARTHROPATH-FOREARM
	716.44		TRANS ARTHROPATHY-HAND
	716.48		TRANS ARTHROPATHY NEC
	716.49		TRANS ARTHROPATHY-MULT
	716.50		POLYARTHRITIS NOS-UNSPEC
	716.51		POLYARTHRITIS NOS-SHLDER
	716.52		POLYARTHRITIS NOS-UP/ARM
	716.53		POLYARTHRIT NOS-FOREARM
	716.54		POLYARTHRITIS NOS-HAND
	716.58		POLYARTHRIT NOS-OTH SITE
	716.59		POLYARTHRITIS NOS-MULT
	716.60		MONOARTHRITIS NOS-UNSPEC
	716.61		MONOARTHRITIS NOS-SHLDER
	716.62		MONOARTHRITIS NOS-UP/ARM
	716.63		MONOARTHRIT NOS-FOREARM
	716.64		MONOARTHRITIS NOS-HAND
	716.65		UNSPECIFIED MONOARTHRITIS, PELVIS

			AND THIGH
	716.66		UNSPECIFIED MONOARTHRITIS, LOWER LEG
	716.68		MONOARTHRIT NOS-OTH SITE
	716.80		ARTHROPATHY NEC-UNSPEC
	716.81		ARTHROPATHY NEC-SHLDER
	716.82		ARTHROPATHY NEC-UP/ARM
	716.83		ARTHROPATHY NEC-FOREARM
	716.84		ARTHROPATHY NEC-HAND
	716.88		ARTHROPATHY NEC-OTH SITE
	716.89		ARTHROPATHY NEC-MULT
	716.90		ARTHROPATHY NOS-UNSPEC
	716.91		ARTHROPATHY NOS-SHLDER
	716.92		ARTHROPATHY NOS-UP/ARM
	716.93		ARTHROPATHY NOS-FOREARM
	716.94		ARTHROPATHY NOS-HAND
	716.98		ARTHROPATHY NOS-OTH SITE
	716.99		ARTHROPATHY NOS-MULT
	718.01		ART CARTIL DISORDER SHOULDER
	718.02		ART CARTIL DIS UPPER ARM
	718.03		ART CARTIL DIS FOREARM
	718.04		ART CARTIL DIS HAND
	718.08		ART CART DIS OTH SITES
	718.09		ART CART DIS MULT
	718.1		LOOSE BODY IN JT
	718.20		PATHOLOGIC DISLOCATION UNSPEC SITE
	718.21		PATHOLOGIC DISLOCATION SHOULDER
	718.22		PATHOLOGIC DISLOCATION UPPER ARM
	718.23		PATHOLOGIC DISLOCATION FOREARM

	718.24		PATHOLOGIC DISLOCATION HAND
	718.28		PATHOLOGIC DISLOCATION OTH LOC
	718.29		PATHOLOGIC DISLOCATION MULT LOC
	718.30		RECURRENT DISLOCATION UNSPEC SITE
	718.31		RECURRENT DISLOCATION SHOULDER
	718.32		RECURRENT DISLOCATION UPPER ARM
	718.33		RECURRENT DISLOCATION FOREARM
	718.34		RECURRENT DISLOCATION HAND
	718.38		RECURRENT DISLOCATION OTH LOC
	718.39		RECURRENT DISLOCATION MULT LOC
	718.40		CONTRACTURE OF JOINT UNSPEC SITE
	718.41		CONTRACTURE SHOULDER
	718.42		CONTRACTURE OF JOINT UPPER ARM
	718.43		CONTRACTURE OF JOINT FOREARM
	718.44		CONTRACTURE OF JOINT HAND
	718.48		CONTRACTURE OF JOINT OTH LOC
	718.49		CONTRACTURE OF JOINT MULT LOC
	718.50		ANKYLOSIS OF JOINT UNSPEC SITE
	718.51		ANKYLOSIS OF SHOULDER
	718.52		ANKYLOSIS OF JOINT UPPER ARM
	718.53		ANKYLOSIS OF JOINT FOREARM
	718.54		ANKYLOSIS OF JOINT HAND
	718.58		ANKYLOSIS OF JOINT OTH LOC
	718.59		ANKYLOSIS OF JOINT MULT LOC
	718.60		UNSPED 'INTRAPELVIC PROTRUSION ACETAB
	718.7		DEV DISLOC JOINT
	718.80		OTH DERANGMENT JT NEC UNSPEC SITE
	718.81		OTHER DERANGEMENT OF

			SHOULDER
	718.82		OTH DERANGMENT JT NEC UPPER ARM
	718.83		OTH DERANGMENT JT NEC FOREARM
	718.84		OTH DERANGMENT JT NEC HAND
	718.88		OTH DERANGMENT JT NEC OTH LOC
	718.89		OTH DERANGMENT JT NEC MULT LOC
	718.9		UNSPEC DERANGMENT JT
	719.1		HEMARTHROSIS UNSPECIFIED SITE
	719.11		HEMARTHROSIS SHOULDER
	719.12		HEMARTHROSIS UPPER ARM
	719.13		HEMARTHROSIS FOREARM
	719.14		HEMARTHROSIS HAND
	719.18		HEMARTHROSIS OTHER SPECIFIED
	719.19		HEMARTHROSIS MULTIPLE SITES
	719.2		VILLONODULAR SYNOVITIS UNSPECIFIED SITE
	719.21		VILLONODULAR SYNOVITIS SHOULDER
	719.22		VILLONODULAR SYNOVITIS UPPER ARM
	719.23		VILLONODULAR SYNOVITIS FOREARM
	719.24		VILLONODULAR SYNOVITIS HAND
	719.28		VILLONODULAR SYNOVITIS OTHER SITES
	719.29		VILLONODULAR SYNOVITIS MULTIPLE SITES
	719.3		PALANDROMIC RHEUMATISM UNSPECIFIED SITE
	719.31		PALANDROMIC RHEUMATISM SHOULDER
	719.32		PALANDROMIC RHEUMATISM UPPER ARM
	719.33		PALANDROMIC RHEUMATISM FOREARM
	719.34		PALANDROMIC RHEUMATISM HAND
	719.38		PALANDROMIC RHEUMATISM OTHER SITES

	719.39		PALANDROMIC RHEUMATISM MULTIPLE SITES
	720.0		ANKYLOSING SPONDYLITIS
	720.1		SPINAL ENTHESOPATHY
	720.2		SACROILIITIS NEC
	720.8	M	OTHER INFLAMMATORY SPONDYLOPATHIES
	720.81	M	SPONDYLOPATHY IN OTH DI
	720.89		OTHER INFLAMMATORY SPONDYLOPATHIES
	720.9		UNSPEC INFLAMMATORY SPONDYLOPATHY
	721		SPONDYLOSIS AND ALLIED DISORDERS
	722.0		DISPLACEMENT OF CERVICAL INTERVERTEBRAL DISC WITHOUT MYELOPATHY
	722.1		DISPLACEMENT OF THORACIC OR LUMBAR INTERVERTEBRAL DISC WITHOUT MYELOPATHY
	722.2		DISPLACEMENT OF INTERVERTEBRAL DISC, SITE UNSPECIFIED, WITHOUT MYELOPATHY
	722.4		DEGENERATION OF CERVICAL INTERVERTEBRAL DISC
	722.5		DEGENERATION OF THORACIC OR LUMBAR INTERVERTEBRAL DISC
	722.6		DEGENERATION OF INTERVERTEBRAL DISC, SITE UNSPECIFIED
	722.7		INTERVERTEBRAL DISC DISORDER WITH MYELOPATHY
	722.8		POSTLAMINECTOMY SYNDROME
	722.9		OTHER AND UNSPECIFIED DISC DISORDER
	723.0		SPINAL STENOSIS OF CERVICAL REGION
	723.1		CERVICALGIA
	723.2		CERVICOCRANIAL SYNDROME
	723.3		CERVICOBRACHIAL SYNDROME

	723.4		BRACHIA NEURITIS OR RADICULITIS
	723.5		TORTICOLLIS, UNSPECIFIED
	723.6		PANNICULITIS SPECIFIED AS AFFECTING NECK
	723.7		OSSIFICATION OF POSTERIOR LONGITUDINAL LIGAMENT IN CERVICAL REGION
	723.8		OTHER SYNDROMES AFFECTING CERVICAL REGION
	723.9		UNSPEC MUSCULOSKEL SX OF NECK
	724		OTHER&UNSPECIFIED DISORDERS OF BACK
	725		POLYMYALGIA RHEUMATICA
	726.0		ADHESIVE CAPSULITIS
	726.10		DISORDERS OF BURSAE AND TENDONS
	726.11		CALCIFYING TENDINITIS
	726.12		BICIPITAL TENOSYNOVITIS
	726.19		ROTATOR CUFF SYNDROME OTHER
	727.61		COMPLETE RUPTURE OF ROTATOR CUFF
	728.0		INFECTIVE MYOSITIS
	728.10		CALCIFICATION AND OSSIFICATION, UNSPECIFIED
	728.11		PROGRESSIVE MYOSITIS OSSIFICANS
	728.12		TRAUMATIC MYOSITIS OSSIFICATIONS
	728.13		POST OP HETEROTOPIC CALCIFICATION
	728.19		OTHER MUSCULAR CALCIFICATION AND OSSIFICATION
	728.2		MUSCULAR WASTING AND DISUSE ATROPHY
	728.3		OTHER SPECIFIC MUSCLE DISORDERS
	728.4		LAXITY OF LIGAMENT
	728.5		HYPERMOBILITY SYNDROME
	728.6		CONTRACTURE OF PALMAR FASCIA
	730.00		AC OSTEOMYELITIS-

			UNSPEC
	730.01		AC OSTEOMYELITIS-SHLDER
	730.02		AC OSTEOMYELITIS-UP/ARM
	730.03		AC OSTEOMYELITIS-FOREAR
	730.04		AC OSTEOMYELITIS-HAND
	730.08		AC OSTEOMYELITIS NEC
	730.09		AC OSTEOMYELITIS-MULT
	730.10		CHR OSTEOMYELITIS-UNSP
	730.11		CHR OSTEOMYELIT-SHLDER
	730.12		CHR OSTEOMYELIT-UP/ARM
	730.13		CHR OSTEOMYELIT-FOREARM
	730.14		CHR OSTEOMYELIT-HAND
	730.18		CHR OSTEOMYELIT NEC
	730.19		CHR OSTEOMYELIT-MULT
	730.20		OSTEOMYELITIS NOS-UNSPE
	730.21		OSTEOMYELITIS NOS-SHLDE
	730.22		OSTEOMYELITIS NOS-UP/AR
	730.23		OSTEOMYELIT NOS-FOREARM
	730.24		OSTEOMYELITIS NOS-HAND
	730.28		OSTEOMYELIT NOS-OTH SIT
	730.29		OSTEOMYELITIS NOS-MULT
	730.30		PERIOSTITIS-UNSPEC
	730.31		PERIOSTITIS-SHLDER
	730.32		PERIOSTITIS-UP/ARM
	730.33		PERIOSTITIS-FOREARM
	730.34		PERIOSTITIS-HAND
	730.38		PERIOSTITIS NEC
	730.39		PERIOSTITIS-MULT
	730.70	M	POLIO OSTEOPATHY-UNSPEC
	730.71	M	POLIO OSTEOPATHY-SHLDER
	730.72	M	POLIO OSTEOPATHY-UP/ARM
	730.73	M	POLIO OSTEOPATHY-FOREAR
	730.74	M	POLIO OSTEOPATHY-HAND
	730.78	M	POLIO OSTEOPATHY NEC
	730.79	M	POLIO OSTEOPATHY-MULT

	730.80	M	BONE INFECT NEC-UNSPEC
	730.81	M	BONE INFECT NEC-SHLDER
	730.82	M	BONE INFECT NEC-UP/ARM
	730.83	M	BONE INFECT NEC-FOREARM
	730.84	M	BONE INFECT NEC-HAND
	730.88	M	BONE INFECT NEC-OTH SIT
	730.89	M	BONE INFECT NEC-MULT
	730.90		BONE INFEC NOS-UNSP SIT
	730.91		BONE INFECT NOS-SHLDER
	730.92		BONE INFECT NOS-UP/ARM
	730.93		BONE INFECT NOS-FOREARM
	730.94		BONE INFECT NOS-HAND
	730.98		BONE INFECT NOS-OTH SIT
	730.99		BONE INFECT NOS-MULT
	731.0		OSTEITIS DEFORMANS W/O BN TUMR
	731.1	M	OSTEITIS DEFORMANS DZ CLASS ELSW
	731.2		HYPERTROPH PULM OSTEOARTHROPATHY
	731.8	M	OTH BONE INVOLVEMENT DZ CLASS ELSW
	732		OSTEOCHONDROPATHIES
	733.10		PATHOLOGIC FRACTURE UNSPEC
	733.11		PATHOLOGIC FRACTURE HUMERUS
	733.12		PATHOLOGIC FRACTURE DISTAL RADIUS ULNA
	733.13		PATHOLOGIC FRACTURE OF VERTEBRAE
	733.19		PATHOLOGIC FRACTURE OTH SPEC SITE
	800		FRACTURE OF VAULT OF SKULL
	801		FRACTURE OF BASE OF SKULL
	802		FRACTURE OF FACE BONES
	803		OTHER&UNQUALIFIED SKULL FRACTURES
	804		MX FX INVLV SKULL/FACE W/OTH BNS
	805		FX VERT COLUMN W/O SP CRD INJR
	807		FRACTURE RIB STERNUM LARYNX&TRACHEA
	809		ILL-DEFINED FRACTURES

			BONES TRUNK
	810		FRACTURE OF CLAVICLE
	811		FRACTURE OF SCAPULA
	812		FRACTURE OF HUMERUS
	813		FRACTURE OF RADIUS AND ULNA
	814		FRACTURE OF CARPAL BONE
	815		FRACTURE OF METACARPAL BONE
	816		FRACTURE ONE OR MORE PHALANGES HAND
	817		MULTIPLE FRACTURES OF HAND BONES
	818		ILL-DEFINED FRACTURES OF UPPER LIMB
	819		MX FX UP LIMBS&LIMBS W/RIB&STERNUM
	831		DISLOCATION OF SHOULDER
	832		DISLOCATION OF ELBOW
	833		DISLOCATION OF WRIST
	837		DISLOCATION OF ANKLE
	838		DISLOCATION OF FOOT
	846		SPRAINS&STRAINS SACROILIAC REGION
	847		SPRAINS&STRAINS OTH&UNS PART BACK
Psych 1 - Affective and other psychoses, depression	295		SCHIZOPHRENIA
	296		AFFECTIVE PSYCHOSES
	297		DELUSIONAL DIS
	298		OTH PSYCHOSES
	311		DEPRESSIVE DISORDER NEC
Psych 2 - Degenerative and other organic psychiatric disorders	331.0		ALZHEIMER'S DISEASE
	331.11		PICK'S DISEASE
	331.19		OTH FRONTO-TEMPORAL DEMENTIA
	331.2		SENILE DEGENERAT BRAIN
	331.3		COMMUNICAT HYDROCEPHALUS
	331.4		OBSTRUCTIV HYDROCEPHALUS

	331.7	M	CEREB DEGEN IN OTH DIS
	331.81		REYE'S SYNDROME
	331.82		DEMENTIA WITH LEWY BODIES
	331.89		CEREB DEGENERATION NEC
	331.9		CEREB DEGENERATION NOS
	290.0	M	SENILE DEMENTIA, UNCOMPLICATED
	290.10	M	PRESENILE DEMENTIA UNCOMP
	290.11	M	PRESENILE DEMENTIA WITH DELIRIUM
	290.12	M	PRESENILE DEMENTIA WITH DELUSIONAL FEATURES
	290.13	M	PRESENILE DEMENTIA WITH DEPRESSIVE FEATURES
	290.20	M	SENILE DEMENTIA WITH DELUSIONAL FEATURES
	290.21	M	SENILE DEMENTIA WITH DEPRESSIVE FEATURES
	290.3	M	SENILE DEMENTIA WITH DELIRIUM
	290.40	M	VASCULAR DEMENTIA, UNCOMPLICATED
	290.41	M	VASCULAR DEMENTIA, WITH DELIRIUM
	290.42	M	VASCULAR DEMENTIA, WITH DELUSIONS
	290.43	M	VASCULAR DEMENTIA, WITH DEPRESSED MOOD
	291.1		ALCOHOL PSYCHOSIS
	291.2		ALCOHOL DEMENTIA
	292.8		DRUG PSYCHOSES
	294.0	M	AMNESTIC DISORD OTH DIS
	294.1	M	DEMENTIA
	294.8		MENTAL DISOR NEC OTH DIS
	294.9		MENTAL DISOR NOS OTH DIS
Pulmonary disorders	491		CHRONIC BRONCHITIS
	492		EMPHYSEMA
	493.2		ASTHMA
	496		CHRONIC AIRWAY OBSTRUCTION NEC

Skin 1 -Traumatic wounds, burns and post-operative complications	870		OPEN WOUND OF OCULAR ADNEXA
	872		OPEN WOUND OF EAR
	873		OTHER OPEN WOUND OF HEAD
	874		OPEN WOUND OF NECK
	875		OPEN WOUND OF CHEST
	876		OPEN WOUND OF BACK
	877		OPEN WOUND OF BUTTOCK
	878		OPEN WND GNT ORGN INCL TRAUMAT AMP
	879		OPEN WOUND OTH&UNSPEC SITE NO LIMBS
	880		OPEN WOUND OF SHOULDER&UPPER ARM
	881		OPEN WOUND OF ELBOW FOREARM&WRIST
	882		OPEN WOUND HAND EXCEPT FINGER ALONE
	883		OPEN WOUND OF FINGER
	884		MX&UNSPEC OPEN WOUND UPPER LIMB
	885		TRAUMATIC AMPUTATION OF THUMB
	886		TRAUMATIC AMPUTATION OTHER FINGER
	887		TRAUMATIC AMPUTATION OF ARM&HAND
	890		OPEN WOUND OF HIP AND THIGH
	891		OPEN WOUND OF KNEE, LEG , AND ANKLE
	892		OPEN WOUND OF FOOT EXCEPT TOE ALONE
	893		OPEN WOUND OF TOE
	894		MX&UNSPEC OPEN WOUND LOWER LIMB
	895		TRAUMATIC AMPUTATION OF TOE
	896		TRAUMATIC AMPUTATION OF FOOT
	941		BURN OF FACE, HEAD, AND NECK
	942		BURN OF TRUNK
	943		BURN UPPER LIMB EXCEPT WRIST&HAND

	944		BURN OF WRIST AND HAND
	945		BURN OF LOWER LIMB
	946		BURNS OF MULTIPLE SPECIFIED SITES
	948		BURN CLASS ACCORD-BODY SURF INVOLVD
	949		BURN, UNSPECIFIED SITE
	927		CRUSHING INJURY OF UPPER LIMB
	951		INJURY TO OTHER CRANIAL NERVE
	955.0		INJURY TO AXILLARY NERVE
	955.1		INJURY TO MEDIAN NERVE
	955.2		INJURY TO ULNAR NERVE
	955.3		INJURY TO RADIAL NERVE
	955.4		INJURY TO MUSCULOCUTANEOUS NERVE
	955.5		INJURY TO CUTANEOUS SENSORY NERVE, UPPER LIMB
	955.6		INJURY TO DIGITAL NERVE
	955.7		INJURY TO OTHER SPECIFIED NERVE(S) SHOULDER GIRDLE AND UPPER LIMB
	955.9		INJURY TO UNSPEC NERVE(S) SHOULDER GIRDLE AND UPPER LIMB
	956.2		INJURY TO POSTERIOR TIBIAL NERVE
	956.3		INJURY TO PERONEAL NERVE
	956.4		INJURY TO CUTANEOUS SENSORY NERVE, LOWER LIMB
	956.5		INJURY TO OTHER SPECIFIED NERVE(S) OF PELVIC GIRDLE AND LOWER LIMB
	956.9		INJURY TO UNSPECIFIED NERVE OF PELVIC GIRDLE AND LOWER LIMB
	998.1		HEMORR/HEMAT/SEROMA COMP PROC NEC
	998.2		ACC PUNCT/LACRATION DURING PROC NEC
	998.3		DISRUPTION OF OPERATION WOUND NEC
	998.4		FB ACC LEFT DURING

			PROC NEC
	998.5		POSTOPERATIVE INFECTION NEC
	998.6		PERSISTENT POSTOPERATIVE FIST NEC
	998.83		NON-HEALING SURGICAL WOUND NEC
Skin 2 - Ulcers and other skin conditions	440.23		ATHEROSCLER-ART EXTREM W/ULCERATION
	707.1		ULCER LOWER LIMBS EXCEPT DECUBITUS
	707.8		CHRONIC ULCER OTHER SPECIFIED SITE
	707.9		CHRONIC ULCER OF UNSPECIFIED SITE
	681		CELLULITIS&ABSCESS OF FINGER&TOE
	683		ACUTE LYMPHADENITIS
	684		IMPETIGO
	685		PILONIDAL CYST
	686		OTH LOCAL INF SKIN&SUBCUT TISSUE
	440.24		ATHERSCLER-ART EXTREM W/GANGRENE
	785.4	M	GANGRENE
	565		ANAL FISSURE AND FISTULA
	566		ABSCESS OF ANAL AND RECTAL REGIONS
	682		OTHER CELLULITIS AND ABSCESS
	680		CARBUNCLE AND FURUNCLE

*We are aware that some of these codes or code categories involve manifestation codes. The ICD-9-CM Official Guidelines for Coding and Reporting requires that the underlying disease or condition code be sequenced first followed by the manifestation code. The underlying disease codes associated with the manifestation codes are not listed in Table 2b, and these underlying codes were not specified in the analysis process. However, when reporting certain conditions that have both an underlying etiology and body system manifestations due to the underlying etiology, the appropriate sequencing must be followed according to the ICD-9-CM Coding Guidelines. Equally important, the reported etiology must be valid for the manifestation specified.

**Note: "ICD-9-CM Official Guidelines for Coding and Reporting" dictate that a three-digit code is to be used only if it is not further subdivided. Where fourth-digit subcategories and/or fifth-digit subclassifications are provided, they must be assigned. A code is invalid if it has not been coded to the full number of digits required for that code. Codes with three digits are included

in ICD-9-CM as the heading of a category of codes that may be further subdivided by the use of fourth and/or fifth digits, which provide greater detail. The category codes listed in Table 2b include all the related 4-and 5-digit codes.

d. Determining the Case-Mix Weights

In the case-mix model adopted in July 2000, we examined the sum of scores for the clinical dimension of the system, and the sum of scores for the functional dimension, and determined ranges of scores to assign a severity level. For example, in the original case-mix model adopted in July 2000, severity levels ranged from minimum to high for the clinical dimension. Severity levels were used to derive regression coefficients for calculating case-mix relative weights. The calculated coefficients from this regression, which we call the payment regression, were displayed in the July 3, 2000 **Federal Register** (65 FR 41201) ("Regression Coefficients for Calculating Case-Mix Relative Weights").

Now using the proposed four-equation case-mix model, we again derived severity levels for the clinical, functional, and services utilization dimensions. We classified activities of daily living variables as functional variables, diagnostic, interaction, and other OASIS variables as clinical variables, and therapy-related variables (threshold variables and visit count variables) as services utilization variables. For each episode in the sample, we summed the variables' scores by dimension. Then, we examined the range of summed scores within each equation and threshold group of the sample, in order to determine severity level intervals. We determined how many severity

levels to define for each of the equation/threshold groups based on the relative number of episodes in a potential severity level, and on the clustering of summed scores. In addition, for the services utilization dimension, which is based only on therapy visit utilization, we defined severity intervals based on relatively small aggregates (ones, twos, and threes) of therapy visits above the six-visit threshold up to 13 visits (equations 1 and 3) and above the 14-visit therapy threshold, up to 19 therapy visits (equations 2 and 4). Our goal was to ensure payment graduation due to added numbers of therapy visits between thresholds, without creating too many severity levels.

Table 3: Severity Group Definitions: Four-Equation Model

Dimension		1st & 2nd Episodes		3rd+ Episodes		All Episodes
		0 to 13 therapy visits	14 to 19 therapy visits	0 to 13 therapy visits	14 to 19 therapy visits	20+ therapy visits
	Equation->	1	2	3	4	(2&4)
	Severity Levels:					
Clinical	C1	0 to 4	0 to 4	0 to 2	0 to 4	0 to 4
	C2	5 to 9	5 to 12	3 to 4	5 to 12	5 to 12
	C3	10+	13+	5+	13+	13+
Functional	F1	0 to 3	0 to 5	0 to 8	0 to 8	0 to 5
	F2	4 to 5	6 to 8	9 to 13	9 to 13	6 to 8
	F3	6+	9+	14+	14+	9+
Services Utilization (number of therapy visits)	S1	0 to 5	14 to 15	0 to 5	14 to 15	20+ (One Group)
	S2	6	16 to 17	6	16 to 17	
	S3	7 to 9	18 to 19	7 to 9	18 to 19	
	S4	10		10		
	S5	11 to 13		11 to 13		

We derived the relative payment weights for the proposed four-equation model using the same kind of payment regression we employed in July 2000. The sample episodes were classified into severity levels as just described. We defined indicator variables for the payment regression based on these severity classifications. The major difference between the July 2000 payment regression and the one in this proposal is that additional indicator variables were defined to identify the episodes classified into each equation of the four-equation model, as well as certain thresholds and therapy visit intervals. Including the indicator variables allows us to combine information derived from the four equation model into a single payment regression equation. For example, an indicator variable was created for the group of later episodes below 14 therapy visits and, within this group, indicator variables were created for the six-visit therapy threshold and successive therapy-visit aggregates. See the table of regression coefficients (Table 4) for the remaining indicator variables; the indicator variables for the underlying four equations are denoted by the terms "constant" and "intercept." An additional indicator variable denoted by a constant was used for all episodes with at least 20 therapy visits; it is explained further below.

As with the original HH PSS rule, regression coefficients in Table 4 represent the average addition to resource cost due to each severity level. (To show the coefficients in actual, as opposed to resource cost, dollars, the coefficients were scaled by a multiplier representing the ratio of the HH PPS average payment level to the Abt Associates average resource cost level.) However, the severity level coefficients in Table 4 are specific to the classification of the episode in the four-equation model; for example, only for early episodes below 14 therapy visits are the severity level coefficients $861.74 for the third clinical severity level, and $219.44 for the second functional severity level.

The lowest-severity case-mix group is the base group for the payment regression, whose predicted cost is the regression intercept value of $1,265.18. This group consists of the lowest clinical, functional, and services utilization severity levels for episodes classified as early episodes below the 14-visit therapy threshold (Equation 1 of the four-equation model). The service severity level for this group is severity level 1 (S1), which comprises episodes of 0 to 5 therapy visits.

To use the results of the payment regression for determining payments, find the severity level coefficients for the applicable equation and add those amounts to the regression intercept and to the constant for the applicable equation. There is no constant for the first equation/group, the early episodes below the 14-visit therapy threshold; for this group, the constant is the regression intercept. For example, later episodes below the 14-visit therapy threshold with clinical severity level 2, functional severity level 1, and service severity level 2 have the following scaled coefficients summed to represent the resource cost: $1,265.18 for the regression intercept; $139.26 for the second clinical severity level; $645.90 for the second service severity level (6 therapy visits); and $210.94, a constant amount for all later episodes below 14 therapy visits. The constant incorporates the predicted average resource cost for the lowest functional severity group. The predicted average resource cost, $2,261.28, is the sum of these four coefficients from the regression. Table 5 shows the results of the computational procedure for all combinations of severity levels within each equation/threshold group.

Table 4: Regression Coefficients for Calculating Case-Mix

Relative Weights

Table 4: Regression Coefficients for Calculating Case-Mix Relative Weights	
Intercept (constant for all case mix groups)	$1,265.18
1st and 2nd Episodes, 0 to 13 Therapy Visits	
C2	$380.66
C3	$861.74
F2	$219.44
F3	$379.06
S2 (6 therapy visits)	$499.96
S3 (7-9 therapy visits)	$935.02
S4 (10 therapy visits)	$1,375.38
S5 (11-13 therapy visits)	$1,755.92
1st and 2nd Episodes, 14 to 19 Therapy Visits	
Constant	$2,171.56
C2	$534.70
C3	$1,246.47
F2	$268.36
F3	$425.68
S2 (16-17 therapy visits)	$425.49
S3 (18-19 therapy visits)	$698.92
3rd+ Episodes, 0 to 13 Therapy Visits	
Constant	$210.94
C2	$139.26
C3	$613.76
F2	$414.74
F3	$818.25
S2 (6 therapy visits)	$645.90
S3 (7-9 therapy visits)	$1,083.30
S4 (10 therapy visits)	$1,507.60
S5 (11-13 therapy visits)	$1,890.78
3rd+ Episodes, 14 to 19 Therapy Visits	
Constant	$2,178.93
C2	$672.65
C3	$1,392.59
F2	$390.72
F3	$687.07

S2 (16-17 therapy visits)	$292.06
S3 (18-19 therapy visits)	$712.62
All Episodes, 20+ Therapy Visits	
Constant	$3,996.82
C2	$578.49
C3	$1,383.67
F2	$485.73
F3	$1,043.13

Note: Regression coefficients were scaled by multiplier representing the ratio of the HH PS average payment level to the Abt Associates average resource cost level.

The payment regression in Table 4 reflects a decision to group together early and later episodes for purposes of deriving the payment regression coefficients for episodes at or above the 20-visit therapy threshold. This has the advantage of producing a lower number of case-mix groups than we would have had without grouping. Earlier analysis had revealed that the coefficients, predicted average resource cost, and relative weights of the case-mix groups for episodes of 20 or more therapy visits in Equations 2 (early episodes) and 4 (later episodes) had very similar values. Specifically, of the 9 case groups defined for these noted episodes in each equation (a total of 18 groups), the relative weights did not differ by more than 3.5 percent for 7 pairs of groups; in the remaining two pairs of groups, the difference was slightly more than 7 percent. Because of the virtually identical values, we specified our payment regression procedure to produce a single set of case-mix groups for all episodes in the

20-visit threshold group, with the result that the relative case-mix weights do not differ according to whether the episode is early or later. This final step produced a total of 153 case-mix groups.

The predicted average resource cost for each case-mix group is shown in Table 5. As with the coefficients in Table 4, these values are scaled up from the resource cost values used to model the case-mix, using a single multiplier. The multiplier allows us to report the coefficients and the predicted average resource cost using dollars of the same magnitude as the payments we would make. It does not change the relationships among the predicted average resource costs, which are the values that determine the relative case mix weights.

We used the predicted average resource costs for the 153 case-mix groups to calculate the relative case-mix weights. The relative case-mix weight for a case-mix group is simply the predicted average resource cost for the group divided by the sample's overall average resource cost. Table 5 shows the final relative case-mix weights, after we applied two further adjustments, the budget neutrality adjustment and the adjustment for nominal changes in case-mix coding, which are explained further in this section II.A.2.c.

Table 5: Case Mix Groups, Average Cost, and Case Mix Weight

Severity Level for Each Dimension				
Clinical	Functional	Services Utilization	Average Cost	Case mix weight
1st and 2nd Episodes, 0 to 13 Therapy Visits+C47				
C1	F1	S1	$1,265.18	0.5549
C1	F1	S2	$1,765.14	0.7742
C1	F1	S3	$2,200.21	0.9650
C1	F1	S4	$2,640.57	1.1582
C1	F1	S5	$3,021.10	1.3251
C1	F2	S1	$1,484.63	0.6512
C1	F2	S2	$1,984.59	0.8705
C1	F2	S3	$2,419.65	1.0613
C1	F2	S4	$2,860.01	1.2544
C1	F2	S5	$3,240.54	1.4213
C1	F3	S1	$1,644.25	0.7212
C1	F3	S2	$2,144.20	0.9405
C1	F3	S3	$2,579.27	1.1313
C1	F3	S4	$3,019.63	1.3244
C1	F3	S5	$3,400.16	1.4914
C2	F1	S1	$1,645.84	0.7219
C2	F1	S2	$2,145.80	0.9412
C2	F1	S3	$2,580.86	1.1320
C2	F1	S4	$3,021.22	1.3251
C2	F1	S5	$3,401.76	1.4921
C2	F2	S1	$1,865.28	0.8181
C2	F2	S2	$2,365.24	1.0374
C2	F2	S3	$2,800.30	1.2282
C2	F2	S4	$3,240.66	1.4214
C2	F2	S5	$3,621.20	1.5883
C2	F3	S1	$2,024.90	0.8881
C2	F3	S2	$2,524.86	1.1074
C2	F3	S3	$2,959.92	1.2983
C2	F3	S4	$3,400.28	1.4914
C2	F3	S5	$3,780.82	1.6583
C3	F1	S1	$2,126.92	0.9329
C3	F1	S2	$2,626.88	1.1522
C3	F1	S3	$3,061.95	1.3430
C3	F1	S4	$3,502.30	1.5362
C3	F1	S5	$3,882.84	1.7031
C3	F2	S1	$2,346.36	1.0291
C3	F2	S2	$2,846.32	1.2484
C3	F2	S3	$3,281.39	1.4393
C3	F2	S4	$3,721.75	1.6324

C3	F2	S5	$4,102.28	1.7993
C3	F3	S1	$2,505.98	1.0992
C3	F3	S2	$3,005.94	1.3184
C3	F3	S3	$3,441.01	1.5093
C3	F3	S4	$3,881.36	1.7024
C3	F3	S5	$4,261.90	1.8693
1st and 2nd Episodes, 14 to 19 Therapy Visits				
C1	F1	S1	$3,436.74	1.5074
C1	F1	S2	$3,862.24	1.6940
C1	F1	S3	$4,135.66	1.8140
C1	F2	S1	$3,705.10	1.6251
C1	F2	S2	$4,130.60	1.8117
C1	F2	S3	$4,404.02	1.9317
C1	F3	S1	$3,862.42	1.6941
C1	F3	S2	$4,287.92	1.8807
C1	F3	S3	$4,561.34	2.0007
C2	F1	S1	$3,971.44	1.7419
C2	F1	S2	$4,396.94	1.9285
C2	F1	S3	$4,670.36	2.0485
C2	F2	S1	$4,239.80	1.8596
C2	F2	S2	$4,665.29	2.0463
C2	F2	S3	$4,938.72	2.1662
C2	F3	S1	$4,397.12	1.9286
C2	F3	S2	$4,822.61	2.1153
C2	F3	S3	$5,096.04	2.2352
C3	F1	S1	$4,683.21	2.0541
C3	F1	S2	$5,108.71	2.2407
C3	F1	S3	$5,382.14	2.3607
C3	F2	S1	$4,951.57	2.1718
C3	F2	S2	$5,377.07	2.3584
C3	F2	S3	$5,650.49	2.4784
C3	F3	S1	$5,108.89	2.2408
C3	F3	S2	$5,534.39	2.4274
C3	F3	S3	$5,807.81	2.5474
3rd+ Episodes, 0 to 13 Therapy Visits				
C1	F1	S1	$1,476.12	0.6474
C1	F1	S2	$2,122.02	0.9307
C1	F1	S3	$2,559.43	1.1226
C1	F1	S4	$2,983.72	1.3087
C1	F1	S5	$3,366.90	1.4768
C1	F2	S1	$1,890.87	0.8294
C1	F2	S2	$2,536.77	1.1127
C1	F2	S3	$2,974.17	1.3045
C1	F2	S4	$3,398.46	1.4906

C1	F2	S5	$3,781.65	1.6587
C1	F3	S1	$2,294.37	1.0063
C1	F3	S2	$2,940.27	1.2896
C1	F3	S3	$3,377.68	1.4815
C1	F3	S4	$3,801.97	1.6676
C1	F3	S5	$4,185.16	1.8357
C2	F1	S1	$1,615.38	0.7085
C2	F1	S2	$2,261.28	0.9918
C2	F1	S3	$2,698.68	1.1837
C2	F1	S4	$3,122.98	1.3698
C2	F1	S5	$3,506.16	1.5378
C2	F2	S1	$2,030.13	0.8904
C2	F2	S2	$2,676.03	1.1737
C2	F2	S3	$3,113.43	1.3656
C2	F2	S4	$3,537.72	1.5517
C2	F2	S5	$3,920.91	1.7198
C2	F3	S1	$2,433.63	1.0674
C2	F3	S2	$3,079.53	1.3507
C2	F3	S3	$3,516.93	1.5426
C2	F3	S4	$3,941.23	1.7287
C2	F3	S5	$4,324.41	1.8967
C3	F1	S1	$2,089.88	0.9166
C3	F1	S2	$2,735.78	1.1999
C3	F1	S3	$3,173.18	1.3918
C3	F1	S4	$3,597.48	1.5779
C3	F1	S5	$3,980.66	1.7460
C3	F2	S1	$2,504.63	1.0986
C3	F2	S2	$3,150.53	1.3819
C3	F2	S3	$3,587.93	1.5737
C3	F2	S4	$4,012.22	1.7598
C3	F2	S5	$4,395.41	1.9279
C3	F3	S1	$2,908.13	1.2755
C3	F3	S2	$3,554.03	1.5588
C3	F3	S3	$3,991.43	1.7507
C3	F3	S4	$4,415.73	1.9368
C3	F3	S5	$4,798.91	2.1049
3rd+ Episodes, 14 to 19 Therapy Visits				
C1	F1	S1	$3,444.11	1.5106
C1	F1	S2	$3,736.18	1.6387
C1	F1	S3	$4,156.74	1.8232
C1	F2	S1	$3,834.83	1.6820
C1	F2	S2	$4,126.89	1.8101
C1	F2	S3	$4,547.46	1.9946
C1	F3	S1	$4,131.18	1.8120

C1	F3	S2	$4,423.25	1.9401
C1	F3	S3	$4,843.81	2.1246
C2	F1	S1	$4,116.76	1.8057
C2	F1	S2	$4,408.83	1.9338
C2	F1	S3	$4,829.39	2.1182
C2	F2	S1	$4,507.48	1.9770
C2	F2	S2	$4,799.54	2.1051
C2	F2	S3	$5,220.10	2.2896
C2	F3	S1	$4,803.83	2.1070
C2	F3	S2	$5,095.89	2.2351
C2	F3	S3	$5,516.45	2.4196
C3	F1	S1	$4,836.70	2.1214
C3	F1	S2	$5,128.77	2.2495
C3	F1	S3	$5,549.33	2.4340
C3	F2	S1	$5,227.42	2.2928
C3	F2	S2	$5,519.48	2.4209
C3	F2	S3	$5,940.04	2.6054
C3	F3	S1	$5,523.77	2.4228
C3	F3	S2	$5,815.83	2.5509
C3	F3	S3	$6,236.39	2.7354
All Episodes, 20+ Therapy Visits				
C1	F1	S1	$5,262.00	2.3080
C1	F2	S1	$5,747.74	2.5210
C1	F3	S1	$6,305.13	2.7655
C2	F1	S1	$5,840.50	2.5617
C2	F2	S1	$6,326.23	2.7748
C2	F3	S1	$6,883.63	3.0192
C3	F1	S1	$6,645.67	2.9149
C3	F2	S1	$7,131.41	3.1279
C3	F3	S1	$7,688.80	3.3724

*Note: Case-mix weight is after applying budget neutrality adjustment factor (see text for description of adjustment of the weights). Predicted average cost is calculated from the regression coefficients in Table 4.

The budget neutrality adjustment to the relative case-mix weights is required to achieve no change in outlays when moving from the original case-mix system to the proposed new case-mix system. The process of revising the case-mix system results in relative weights with an average

value of 1.0 over all 1,656,551 sample episodes we used to represent the totality of reimbursable episodes in the first year of the new case-mix system. The budget neutrality adjustment restores the average case-mix weight that results from the revision process to the average level observed before implementing the proposed new case-mix system. To implement the budget neutrality adjustment, we used the constant budget neutrality factor to increase the weights for all 153 case-mix groups to the prior average level. The resulting adjusted case-mix weights prevent total payments under the proposed revised HH PPS system from dropping below a budget-neutral level. The budget neutrality adjustment factor is 1.194227193.

Based upon our review of trends in the national average case-mix index (CMI), we are proposing an additional adjustment to the HH PPS national standardized rate to account for case-mix upcoding that is not due to change in the underlying health status of home health users. Section 1895(b)(3)(B)(iv) of the Act specifically provides the Secretary with the authority to adjust the standard payment amount (or amounts) if the Secretary determines that the case-mix adjustments resulted (or would likely result in) a change in aggregate payments that are the result of

changes in the coding or classification of different units of services that do not reflect real changes in case-mix. The Secretary may then adjust the payment amount to eliminate the effect of the coding or classification changes that do not reflect real changes in case-mix. To identify whether such an adjustment factor was needed, we first determined the current average case-mix weight per paid episode.

The most recent available data from which to compute an average case-mix weight, or case mix index, under the HH PPS is from 2003. Using the most current available data from 2003, the average case-mix weight per episode for initial episodes is 1.233. To proceed with this analysis, next we determined the baseline year needed to evaluate the trend in the average case-mix per episode.

There are two different baseline years that could be used to measure the increase in case-mix:

1. A cohort admitted to home care from October 1997 to April 1998 (the Abt case-mix study sample which was used to develop the current case-mix model). There are several advantages to using data from this period of time as the baseline from which we measure the increase in case-mix. This time period is free from any anticipatory response to

the HH PPS, and data from this time period were used to develop the original HH PPS model. Also, this is the only nationally representative dataset from the 1997-1998 time period that measures patient characteristics using an OASIS assessment form comparable to the one adopted for the HH PPS. Because the Abt case mix dataset was used to determine the current set of case-mix weights, the average case-mix weight in the sample equals 1.0. The sample's value of 1.0 provides a starting point from which to measure the increase in case-mix. The increase in the average case-mix using this time period as the baseline results in a 23.3 percent increase (from 1.0 to 1.233).

However, agencies included in the sample were volunteers for the study and cannot be considered a perfectly representative, unbiased sample. Furthermore, the response to Balanced Budget Act of 1997 provisions such as the home health interim payment system (HH IPS) during this period might produce data from this sample that reflect a case-mix in flux; for example, venipuncture patients were suddenly no longer eligible, and long-term-care patients were less likely to be admitted. Therefore, we are not confident the trend in the CMI between the time of the Abt Associates study and 2003 reflects only changes in nominal

coding practices, as will be explained in more detail further below in this section. Therefore, we are not proposing to use this baseline year to determine the baseline.

2. 12 months ending September 30, 2000 (HH IPS Baseline).

Analysis of a 1 percent sample of initial episodes from the 1999-2000 data under the HH IPS revealed an average case-mix weight of 1.125. Standardized to the distribution of agency type (freestanding proprietary, freestanding not-for-profit, hospital-based, government, and SNF-based) that existed in 2003 under the HH PPS, the average weight was 1.134. We note this time period is likely not free from anticipatory response to the HH PPS, because we published our initial HH PPS proposal on October 28, 1999. The increase in the average case-mix using this time period as the baseline results in an 8.7 percent increase (from 1.134 to 1.233; 1.233-1.134=0.099; 0.099/1.134=0.087; 0.087*100=8.7%).

Since the HH IPS, reported severity has increased as episodes have shifted from low severity groups to high severity groups. Concurrently, there has been a reduction in resource utilization. For example, the number of visits

per episode has significantly declined under the HH PPS since 1999. This decline is illustrated in Table 6.

Table 6: Average Number of Home Health Visits Per Episode

Year	Total Home Health Visits (excluding LUPAs)
1997	36.04
1998	31.56
IPS	25.51
2001	21.78
2002	21.44
2003	20.98

We believe that change in case-mix between the time of the Abt Associates case-mix study and the end of the HH IPS period reflected substantial change in real case mix. First, throughout most of this period, HHAs had no incentive to bring about nominal changes in case-mix because case-mix was not a part of the payment system at that time.

Dramatic changes in the home health benefit also became evident under the HH IPS as a result of provisions of the Balanced Budget Act of 1997. Venipuncture patients were suddenly no longer eligible; members of this group often had multiple comorbidities and commonly used substantial amounts of personal care. In addition, according to a study in the literature, beneficiaries age 85 and older, as well as beneficiaries dually eligible for Medicare and Medicaid,

were slightly less likely to be admitted to home care (McCall et al., 2003). Both of these groups are associated with high needs for personal care services, suggesting that long-term care patients were less likely to be admitted under the HH IPS. The agency closure rates in States associated with high utilization (for example, Louisiana, Oklahoma, and Texas) also suggests that admissions among long-term care patients experienced decline. The OASIS data comparing the case-mix sample and the HH IPS period exhibit some consistency with these ideas, in that they indicate substantial decline in admission of the kinds of patients likely to be long-term homebound beneficiaries with chronic medical care needs--patients with diabetes, impaired vision, parenteral nutrition, bowel and urinary incontinence, behavioral problems, toileting dependency, and more-severe transferring dependency.

Various studies are consistent with the incentives created by the HH IPS per-beneficiary cost cap-particularly an incentive to admit many different patients with low care needs and/or for short periods to keep per-beneficiary costs low (MedPac, 1999; GAO, 1998; GAO, 1999; Smith et al., 1999).

An important implication of these studies and our comparative OASIS data is that patients with intensive or lengthy needs for nursing and personal care services as

opposed to short-term or rehabilitative needs were less likely to be found in the national home care caseload as a result of the HH IPS. This would mean that a larger share of patients in the caseload would have acute, post-acute, and rehabilitative needs. Practice patterns began to change concomitantly with the share of visits shifting towards rehabilitation services and, to a lesser extent skilled nursing. In 1997 through 1998, the average number of therapy visits per 60-day period was about 3, whereas by the last year of the HH IPS it rose to 4.4, with growth moderating thereafter. Skilled nursing visits declined from more than 12 at the beginning of the HH IPS, and stabilized at slightly more than 9 under the HH PPS. Aide visits declined by 44 percent from 1997 to 2000, the last year of the HH IPS, and continued to decline at a slower rate under the HH PPS. An issue in interpreting these trends in the utilization data is the uncertainty about how much of the startling change in therapy provision was driven by patient case-mix, and how much was driven by an anticipatory response of the practice pattern itself to our proposals for the original HH PPS case-mix system. By using a 10-visit therapy threshold, the proposal installed a substantial payment increase for high-therapy episodes. If providers started responding to the incentives in the anticipated HH

PPS even before it became effective, then our measure of case-mix change between the time of the Abt Associates case-mix study sample and the HH IPS baseline is affected by provider behavioral change that is not strictly reflective of the case-mix of the treated population.

In contrast to the 13.4 percent increase that we consider a real case-mix change, we believe that the 8.7 percent increase in the national case-mix index between the HH IPS baseline and CY 2003 cannot be considered a real increase in case-mix. The trend data on visits (Table 6), resource data (presented below), and our analysis of changes in rates of health characteristics on OASIS assessments and changes in reporting practices (presented in section II.A.3.c of this proposed rule) all lead to the conclusion that the underlying case-mix of the population of home health users actually was essentially stable between the IPS baseline and CY 2003. Our research shows that HHAs have reduced services (see Tables 6 and 7) while the CMI continued to rise (see Table 7). We would normally expect growth in the CMI to be accompanied by more consumption of services; but, to the contrary, we measure slightly lower resource consumption. This is indicated by the data in Table 7 that illustrates, by quarter, the average resource

cost per episode as well as the average CMI for initial (admissions) episodes and all episodes. (Note: In Table 7, the CMI data for the HH IPS quarters are not adjusted for distribution of agency types; that is, they do not reflect the adjustment to the HH IPS baseline that we cited earlier, which caused the HH IPS baseline to increase to 1.134 from 1.125). In addition, in Table 7, the average resource cost is not adjusted for wage inflation. If the average resource cost had been adjusted for wage inflation, there would be an even larger reduction in resource cost between the HH IPS and HH PPS.)

Table 7: Average Resource Cost and CMI

Period	Average Resources	CMI Admissions	CMI All
HH IPS			
1999Q4	$477.06	1.1278	1.0823
2000Q1	$467.70	1.1074	1.0815
2000Q2	$466.59	1.1223	1.0982
2000Q3	$469.52	1.1453	1.1138
HH PPS			
2000Q4	N/A	N/A	N/A
2001Q1	$432.84	1.1841	1.1622
2001Q2	$440.73	1.1910	1.1774
2001Q3	$445.59	1.1965	1.1724
2001Q4	$446.93	1.2003	1.1818

2002Q1	$452.48	1.2052	1.1800
2002Q2	$453.89	1.1999	1.1835
2002Q3	$456.69	1.2099	1.1832
2002Q4	$460.10	1.2213	1.1957
2003Q1	$453.74	1.2152	1.1889
2003Q2	$459.97	1.2295	1.2018
2003Q3	$458.86	1.2302	1.2002
2003Q4	$462.59	1.2465	1.2159

According to the data in Table 7, in Year 2 (2002) of HH PPS, home health resources per episode for new admissions were approximately 2 percent lower than they were in the year immediately before implementation of HH PPS. At the same time, the national case-mix index for new admissions rose by approximately 0.02 per year. (The national case-mix index for all episodes, new and continuing, rose by approximately 0.01 per year.) By Year 3 (2003) of the HH PPS, home health resources per admission episode rose slightly above the Year 2 level, and then stabilized at levels similar to the HH IPS. The national CMI for new admissions continued to rise by about 0.02 per year (with the CMI for all episodes rising by about 0.01 per year).

Therefore, based upon our trend analysis described above, we believe the change in the case-mix index between

the Abt case-mix sample (a cohort admitted between October 1997 and April 1998) and the HH IPS period (the 12 months ending September 30, 2000) is due to real case-mix change. We take this view, even though we understand that there may be some issue as to whether this period was affected by nominal case-mix change due to providers' anticipating, in the last year of HH IPS, the forthcoming case-mix system, with its incentives to intensify rehabilitation services. This change from these two periods is from 1.00 to 1.134, an increase of 13.4 percent. However, we are not proposing to adjust for case-mix change based on this change in values. However, we are proposing that the 8.7 percent of case-mix change that occurred between the 12 months ending September 30, 2000 (HH IPS baseline, CMI=1.134), and the most recent available data from 2003 (CMI=1.233), be considered a nominal change in the CMI that does not reflect a "real" change in case-mix.

In addition to the trend analysis above, we conducted several additional kinds of analyses of data and documentary materials related to home health case mix coding change. These analyses are described in detail in section II.A.3.e. The results support our view that the change in the CMI since the HH IPS baseline mostly reflects provider responses

to the changes that accompanied the HH PPS, including particulars of the payment system itself and changes to OASIS reporting requirements. Our analyses indicated generally modest changes in overall OASIS health characteristics between the two periods noted above, a specific pattern of changes in scaled OASIS responses that is not indicative of material worsening of presenting health status, various changes in the OASIS reporting instructions that help account for numerous coding changes we observe, and a large increase in post-surgical patients with their traditionally lower case-mix index.

Our past experience establishing other prospective payment systems also led us to believe a proposal to make this adjustment for nominal change in case-mix is warranted. In other systems, Medicare payments were almost invariably found to be affected by nominal case-mix change. We are considering several options for implementing this case-mix adjustment. These options include incorporating the entire -8.7 percent adjustment in CY 2008, incorporating an adjustment of -5.0 percent in CY 2008 and an adjustment of -2.7 percent in CY 2009, and incorporating an adjustment of -4.35 percent in CY 2008 and an adjustment of -4.35 percent in CY 2009. However, because of the potential impact our

proposed adjustment may have on providers, we are proposing and requesting comment on whether to adjust for the nominal increase in national average CMI by gradually reducing the national standardized 60-day episode payment rate over 3 years. During that period we would continue to update our estimate of nominal case-mix change and adjust the national standardized 60-day episode payment rate accordingly for any nominal change in case-mix that might occur. We propose to implement a 3-year phase-in of the total downward adjustment for nominal changes in case-mix by reducing the national standardized 60-day episode payment rate by 2.75 percent each year up to and including CY 2010. This annual reduction percent is based on our current estimate of the nominal change in case-mix that has occurred between the HH IPS baseline (+0.099) and 2003. However, if, at the time of publication of the final CY 2008 HH PPS rule, updates of the national claims data to 2005 indicate that the nominal change in case-mix between the HH IPS baseline and 2005 is not +0.099, we would revise the percentage reduction in the next year's update. The revision would be determined by the ratio of the updated 3-year annual reduction factor to the previous year's annual reduction factor. For example, the scheduled annual reduction factor is now estimated to be 0.9725 (equivalent to a 2.75 percent reduction); for CY 2008

we would multiply this reduction factor by the ratio of the updated reduction factor to 0.9725. For the CY 2010 rule, which governs the third and final year of the case-mix adjustment transition period, we would obtain the CY 2007 national average CMI to compute the updated value for nominal case-mix adjustment. Again, we would form the ratio of the updated adjustment factor to the previous year's effective adjustment factor. The annual updating procedure avoids a large reduction for the final year of the phase-in, in the event that the CY 2007 national average case-mix index reflects continued growth since CY 2005. The calculation of the adjusted national prospective 60-day episode payment rate for case-mix and area wage levels is set forth in §484.220. We are proposing to revise §484.220 to address changes to case-mix that are not a real change in case-mix.

CMS proposes to adjust the national prospective 60-day episode payment rate to account for the following:

- HHA case-mix using a case-mix index to explain the relative resource utilization of different patients. To address changes to the case-mix that were a result of changes in the coding or classification of different units of service that did not reflect real changes in case-mix, the national prospective 60-day episode payment rate will be adjusted downward as follows:

- For CY 2008 the adjustment is 2.75 percent.

- For CY 2009 and CY 2010, the adjustment is 2.75 percent in each year.

- Geographic differences in wage levels using an appropriate wage index based on the site of service of the beneficiary.

We plan to continue to monitor changes in the national average CMI to determine if any adjustment for nominal change in case-mix is warranted in the future.

Accordingly, based upon our analysis and conclusions, we are proposing a new set of case-mix weights that reflect the four-equation model and a payment adjustment for the nominal change in the case-mix index described above. We arrived at these weights, listed in Table 5, by first determining relative weights for each of the 153 groups using the four-equation model and the payment regression. The definition for each of these groups based on clinical, functional, and service severity levels is described in Table 5. Each of these relative weights was adjusted by multiplying it by an adjustment factor to make the proposed payments budget-neutral to current estimated payments for CY 2008. This budget neutrality factor raised the proposed

average case-mix weight to the case-mix index reflected by the most recent data available from 2003. The proposed budget-neutrality factor for 2008 is 1.194227193. Each budget neutral, adjusted, weight in Table 5 was calculated in the following manner: Relative Weight x 1.194227193.

References to literature cited in this section:

N. McCall et al., "Utilization of Home Health Services before and after the Balanced Budget Act of 1997: What Were the Initial Effects?" *Health Services Research,* Feb. 2003: 85-106.

MedPac, *Report to the Congress: Selected Medicare Issues*, June 1999: 105-115.

General Accounting Office (GAO), "Medicare Home Health Benefit: Impact of Interim Payment System and Agency Closures on Access to Services," GAO/HEHS-98-238, Sept. 1998.

General Accounting Office (GAO), "Medicare Home Health Agencies: Closures Continue, with Little Evidence Beneficiary Access Is Impaired," GAO/HEHS-99-120, May 1999.

B.M. Smith et al., "An Examination of Medicare Home Health Services: A Descriptive Study of the Effects of the Balanced Budget Act Interim Payment System on Access to and Quality of Care," Center for Health Services Research and Policy, George Washington University, Sept. 1999.

3. Description and Analysis of Case-Mix Coding Change under the HH PPS

As stated in section II.A.2.c of this proposed rule, under section 1895(b)(3)(B)(iv) of the Act, we are proposing a reduction in HH PPS national standardized 60-Day episode payment rate to offset a change in coding practice that has

resulted in significant growth in the national case-mix index (CMI) since the inception of the HH PPS that is not related to "real" change in case mix. The factor was determined by calculating the change in the national CMI between the HH IPS and the HH PPS.

In this section II.A.3, for purposes of illuminating the sources of CMI increase in terms of the case-mix system itself, we identify the severity levels with the largest growth between the two periods. We will provide, in Table 8, the percentage change in volume for each of the 80 case-mix groups, and summary statistics of the changes. Table 9 shows the rates of all OASIS assessment items in the two time periods. We will explain below our inferences from Table 9 about the comparative health status of the populations treated in the two time periods. Subsequent to that, we will explain our analysis of the changes to OASIS reporting instructions that were likely to have affected reported case mix. We also describe analyses we performed to quantify the effect on the CMI of increases in post-surgical episodes in the national caseload, and our interpretation of the analyses. We conclude with a summary and interpretation of our key findings from the descriptive analysis of OASIS assessment data, analysis of OASIS reporting instructions, and analysis of changes in post-surgical volume.

In making these analyses, we reviewed data from two samples. The first, the HH IPS sample, is the same sample used in section II.A.2.c of this proposed rule for determining the IPS baseline that we used to determine the proposed adjustment for nominal change in case-mix. The HH IPS sample is a 1 percent random sample of claims (total number of 18,480) with its matched start of care OASIS assessments from the 12 months immediately preceding HH PPS. We matched the assessments to determine what the patient's case-mix group would have been had HH PPS been in effect. To simulate 60-day episodes from actual claims we used the same method that was used to create the initial development sample for the HH PPS case-mix system. In performing the simulation, we took into account the timing of the start of care in relation to previous service periods, and used only 60-day periods that would have corresponded to initial episodes in a sequence of adjacent episodes that consisted of one or more simulated episodes. We considered initial episodes as the first episodes that follow periods of at least 60 days without receiving home health service.

The second sample is a 20 percent sample of FY 2003 claims for initial episodes again matched to start of care OASIS assessments. In both samples, we corrected any initial errors in determining the beneficiary's pre-admission location that affected the HHRG before

determining the HHRG. We made the correction by consulting the sample member's claims history for information about previous inpatient stays.

a. Change in Case-Mix Group Frequencies

Table 8 presents the share of the population assigned to each severity level of the case-mix system's three dimensions (clinical, functional, and service). The table indicates there was a strong shift away from the lowest-severity case-mix groups towards higher severity level between the two sample periods. Growth of the two highest severity levels of the clinical domain was approximately 23 percent; for every 100 beneficiaries, 8 additional beneficiaries were classified to the highest two clinical dimensions in 2003 compared to the HH IPS period.

Growth of the functional severity levels F2 and F3 totaled 12 percent. The 12 percent growth in share was concentrated in F2. Share growth for F2 and F3 was offset by a decline for the two lowest functional severity levels and, potentially, a tiny decline in share for the severest functional level, F4. Notwithstanding the small decrease in the share assigned to F4, for every hundred beneficiaries, about 7 additional beneficiaries were classified to the higher severity levels F2 and F3.

The data also indicate that the proportion of patients with a prior SNF or rehabilitation facility discharge in the

14 days before admission, but no hospital discharge in that period, grew by 25 percent for episodes below the 10-visit therapy threshold, and 64 percent for episodes above the 10-visit therapy threshold. These patients receive a higher case-mix score than patients from all other pre-admission locations on the OASIS (including no inpatient discharge).

In addition, the table indicates growth in the high-therapy groups (levels S2 and S3) of 30 percent. This means that for every hundred beneficiaries, 8 additional beneficiaries were assigned to receive at least 10 therapy visits in 2003 compared to the HH IPS period. Under the HH PPS, approximately 35 percent of patients in their initial episode received at least 10 therapy visits.

Table 8: Comparison of Severity Level Prevalence, HH IPS Sample and 2003 HH PPS Sample

		HH IPS	HH PPS 2003	Difference
All C0	Min	29.69%	22.07%	-7.62%
All C1	Low	36.49%	36.19%	-0.31%
All C2	Mod	28.91%	35.50%	6.58%
All C3	High	4.91%	6.25%	1.34%
All F0	Min	9.27%	6.15%	-3.12%
All F1	Low	28.57%	25.40%	-3.17%
All F2	Mod	45.18%	51.30%	6.12%
All F3	High	10.39%	10.83%	0.44%
All F4	Max	6.60%	6.33%	-0.27%

All S0	Min	65.74%	55.87%	-9.87%
All S1	Low	7.40%	9.22%	1.83%
All S2	Mod	19.94%	23.59%	3.64%
All S3	High	6.92%	11.32%	4.40%

Table 9 shows the shares of total episodes for the complete set of 80 original case-mix groups, during both the HH IPS and the HH PPS FY 2003. Table 9 also displays each group's case-mix weight. Ten groups had no change in their share of episodes between the HH IPS period and the HH PPS period in the table. Of the remaining 70 groups, 38 groups, slightly more than half, had a larger share of total episodes under HH PPS than the HH IPS. However, decline in share of total episodes was associated with minimal or low clinical severity (C0 and C1). Only 8 of 40 groups with moderate (C2) or high (C3) clinical severity had decrease in their share of episodes under HH PPS, with most of the remaining moderate or high clinical severity groups having a share increase. As noted above, growth in functional severity level F2 almost entirely offset the loss of population from groups F0 and F1. Only three of 16 groups in the functional severity level F2 experienced a decline in episode shares, and this was concentrated entirely in the two lowest clinical severity groups.

We summarized the association between case-mix group severity and change in episode share by calculating the rate ratio for growth in episode shares. We sorted the groups by

case-mix weight and divided the groups into the top 40 weights of the 80-group case-mix system and the remaining 40 weights. The rate ratio was determined by dividing the growth in total share of the top 40 weights by the growth in total share for the remaining 40 weights. The groups with the 40 smallest weights have mostly reductions in episode shares (24 of 40 have reductions), and the groups with the largest 40 weights have mostly increases in episode shares (24 of 40 groups). The rate ratio for positive changes was 1.71, which means that as a group the top 40 case-mix weights were about 70 percent more likely than the bottom 40 to have an increase in share of total episodes.

Table 9: Comparison of Case-Mix Group Shares, HH IPS Sample and 2003 HH PPS Sample

Case-mix group	Case-mix description by domains				Relative weight	HH IPS sample population percent	HH PPS 2003 sample population percent	Difference
C0F0S0	Clinical=Min,Functional=Min,Service=Min				0.5265	4.17%	2.44%	-1.73%
C0F0S1	Clinical=Min,Functional=Min,Service=Low				0.6074	0.21%	0.14%	-0.07%
C0F0S2	Clinical=Min,Functional=Min,Service=Mod				1.4847	0.16%	0.09%	-0.07%
C0F0S3	Clinical=Min,Functional=Min,Service=High				1.7364	0.02%	0.02%	0.00%
C0F1S0	Clinical=Min,Functional=Low,Service=Min				0.6213	8.32%	5.79%	-2.53%
C0F1S1	Clinical=Min,Functional=Low,Service=Low				0.7022	0.84%	0.81%	-0.03%
C0F1S2	Clinical=Min,Functional=Low,Service=Mod				1.5796	1.29%	0.94%	-0.35%
C0F1S3	Clinical=Min,Functional=Low,Service=High				1.8313	0.41%	0.40%	-0.01%
C0F2S0	Clinical=Min,Functional=Mod,Service=Min				0.7249	7.80%	5.43%	-2.37%
C0F2S1	Clinical=Min,Functional=Mod,Service=Low				0.8058	1.00%	1.23%	0.23%
C0F2S2	Clinical=Min,Functional=Mod,Service=Mod				1.6831	2.58%	2.23%	-0.35%
C0F2S3	Clinical=Min,Functional=Mod,Service=High				1.9348	0.96%	1.20%	0.24%
C0F3S0	Clinical=Min,Functional=High,Service=Min				0.7629	0.92%	0.48%	-0.44%
C0F3S1	Clinical=Min,Functional=High,Service=Low				0.8438	0.05%	0.09%	0.04%
C0F3S2	Clinical=Min,Functional=High,Service=Mod				1.7212	0.42%	0.36%	-0.06%
C0F3S3	Clinical=Min,Functional=High,Service=High				1.9728	0.14%	0.14%	0.00%
C0F4S0	Clinical=Min,Functional=Max,Service=Min				0.9305	0.22%	0.14%	-0.08%
C0F4S1	Clinical=Min,Functional=Max,Service=Low				1.0114	0.03%	0.02%	-0.01%
C0F4S2	Clinical=Min,Functional=Max,Service=Mod				1.8887	0.11%	0.10%	-0.01%
C0F4S3	Clinical=Min,Functional=Max,Service=High				2.1404	0.04%	0.03%	-0.01%
C1F0S0	Clinical=Low,Functional=Min,Service=Min				0.6221	2.47%	1.73%	-0.74%
C1F0S1	Clinical=Low,Functional=Min,Service=Low				0.703	0.11%	0.09%	-0.02%
C1F0S2	Clinical=Low,Functional=Min,Service=Mod				1.5803	0.08%	0.09%	0.01%
C1F0S3	Clinical=Low,Functional=Min,Service=High				1.832	0.02%	0.02%	0.00%

C1F1S0	Clinical=Low,Functional=Low,Service=Min				0.7169	7.53%	6.52%	-1.01%
C1F1S1	Clinical=Low,Functional=Low,Service=Low				0.7978	0.78%	0.95%	0.17%
C1F1S2	Clinical=Low,Functional=Low,Service=Mod				1.6752	1.48%	1.66%	0.18%
C1F1S3	Clinical=Low,Functional=Low,Service=High				1.9269	0.38%	0.62%	0.24%
C1F2S0	Clinical=Low,Functional=Mod,Service=Min				0.8205	11.06%	10.08%	-0.98%
C1F2S1	Clinical=Low,Functional=Mod,Service=Low				0.9014	1.47%	2.04%	0.57%
C1F2S2	Clinical=Low,Functional=Mod,Service=Mod				1.7787	4.37%	5.37%	1.00%
C1F2S3	Clinical=Low,Functional=Mod,Service=High				2.0304	1.58%	2.74%	1.16%
C1F3S0	Clinical=Low,Functional=High,Service=Min				0.8585	1.92%	1.37%	-0.55%
C1F3S1	Clinical=Low,Functional=High,Service=Low				0.9394	0.25%	0.24%	-0.01%
C1F3S2	Clinical=Low,Functional=High,Service=Mod				1.8168	1.16%	1.12%	-0.04%
C1F3S3	Clinical=Low,Functional=High,Service=High				2.0684	0.32%	0.48%	0.16%
C1F4S0	Clinical=Low,Functional=Max,Service=Min				1.0261	0.88%	0.54%	-0.34%
C1F4S1	Clinical=Low,Functional=Max,Service=Low				1.107	0.04%	0.06%	0.02%
C1F4S2	Clinical=Low,Functional=Max,Service=Mod				1.9843	0.48%	0.36%	-0.12%
C1F4S3	Clinical=Low,Functional=Max,Service=High				2.236	0.11%	0.11%	0.00%
C2F0S0	Clinical=Mod,Functional=Min,Service=Min				0.7965	1.66%	1.26%	-0.40%
C2F0S1	Clinical=Mod,Functional=Min,Service=Low				0.8774	0.07%	0.07%	0.00%
C2F0S2	Clinical=Mod,Functional=Min,Service=Mod				1.7548	0.13%	0.08%	-0.05%
C2F0S3	Clinical=Mod,Functional=Min,Service=High				2.0065	0.01%	0.02%	0.01%
C2F1S0	Clinical=Mod,Functional=Low,Service=Min				0.8914	4.91%	4.69%	-0.22%
C2F1S1	Clinical=Mod,Functional=Low,Service=Low				0.9723	0.48%	0.62%	0.14%
C2F1S2	Clinical=Mod,Functional=Low,Service=Mod				1.8496	1.12%	1.31%	0.19%
C2F1S3	Clinical=Mod,Functional=Low,Service=High				2.1013	0.31%	0.48%	0.17%
C2F2S0	Clinical=Mod,Functional=Mod,Service=Min				0.9949	6.90%	8.43%	1.53%
C2F2S1	Clinical=Mod,Functional=Mod,Service=Low				1.0758	1.19%	1.76%	0.57%
C2F2S2	Clinical=Mod,Functional=Mod,Service=Mod				1.9532	3.38%	5.63%	2.25%
C2F2S3	Clinical=Mod,Functional=Mod,Service=High				2.2048	1.46%	3.02%	1.56%
C2F3S0	Clinical=Mod,Functional=High,Service=Min				1.0329	2.03%	1.98%	-0.05%
C2F3S1	Clinical=Mod,Functional=High,Service=Low				1.1139	0.28%	0.38%	0.10%
C2F3S2	Clinical=Mod,Functional=High,Service=Mod				1.9912	1.48%	1.91%	0.43%

C2F3S3	Clinical=Mod,Functional=High,Service=High				2.2429	0.52%	0.93%	0.41%
C2F4S0	Clinical=Mod,Functional=Max,Service=Min				1.2005	1.73%	1.48%	-0.25%
C2F4S1	Clinical=Mod,Functional=Max,Service=Low				1.2814	0.16%	0.16%	0.00%
C2F4S2	Clinical=Mod,Functional=Max,Service=Mod				2.1588	0.83%	0.95%	0.12%
C2F4S3	Clinical=Mod,Functional=Max,Service=High				2.4105	0.25%	0.34%	0.09%
C3F0S0	Clinical=High,Functional=Min,Service=Min				1.1973	0.17%	0.09%	-0.08%
C3F0S1	Clinical=High,Functional=Min,Service=Low				1.2782	0.00%	0.01%	0.01%
C3F0S2	Clinical=High,Functional=Min,Service=Mod				2.1556	0.01%	0.01%	0.00%
C3F0S3	Clinical=High,Functional=Min,Service=High				2.4073	0.00%	0.00%	0.00%
C3F1S0	Clinical=High,Functional=Low,Service=Min				1.2922	0.61%	0.47%	-0.14%
C3F1S1	Clinical=High,Functional=Low,Service=Low				1.3731	0.05%	0.07%	0.02%
C3F1S2	Clinical=High,Functional=Low,Service=Mod				2.2504	0.04%	0.06%	0.02%
C3F1S3	Clinical=High,Functional=Low,Service=High				2.5021	0.02%	0.02%	0.00%
C3F2S0	Clinical=High,Functional=Mod,Service=Min				1.3957	0.85%	1.14%	0.29%
C3F2S1	Clinical=High,Functional=Mod,Service=Low				1.4766	0.11%	0.23%	0.12%
C3F2S2	Clinical=High,Functional=Mod,Service=Mod				2.354	0.31%	0.45%	0.14%
C3F2S3	Clinical=High,Functional=Mod,Service=High				2.6056	0.15%	0.32%	0.17%
C3F3S0	Clinical=High,Functional=High,Service=Min				1.4337	0.47%	0.61%	0.14%
C3F3S1	Clinical=High,Functional=High,Service=Low				1.5147	0.13%	0.12%	-0.01%
C3F3S2	Clinical=High,Functional=High,Service=Mod				2.392	0.20%	0.39%	0.19%
C3F3S3	Clinical=High,Functional=High,Service=High				2.6437	0.08%	0.22%	0.14%
C3F4S0	Clinical=High,Functional=Max,Service=Min				1.6013	1.11%	1.18%	0.07%
C3F4S1	Clinical=High,Functional=Max,Service=Low				1.6822	0.15%	0.15%	0.00%
C3F4S2	Clinical=High,Functional=Max,Service=Mod				2.5596	0.31%	0.49%	0.18%
C3F4S3	Clinical=High,Functional=Max,Service=High				2.8113	0.14%	0.22%	0.08%

b. Health Characteristics Reported on the OASIS

To further our understanding of the relative roles of case-mix change and coding changes that might be responsible for the .0991 increase of the national HHRG CMI, we analyzed the HH IPS and HH PPS samples' health characteristics, based on the start-of-care OASIS assessment. We compared the proportion of start-of-care assessments that had each OASIS characteristic, using data from our HH IPS and HH PPS 2003 samples. We used the wound-related OASIS data to compute statistics on changes in numbers of wounds. The results are shown in Table 10 and discussed below. (Items scored in the HH PPS 80 group case-mix system are shown in bold.)

Table 10: Comparison of rates of response categories on OASIS Start of Care Assessments, HH IPS Sample and 2003 HH PPS Sample				
		IPS	PPS 2003	Difference
M0175	Used hospital past 14 Dys:	58%	54%	-4%
M0175	Used inp rehab past 14 Dys	11%	13%	2%
M0175	Used NH Past 14 Dys	5%	9%	4%
M0200	Medical or treatment regimen change past 14 dys	79%	85%	6%
M0220	Prior Cond(1) Urinary Incont	15%	20%	5%
M0220	Prior Cond(2) catheter	2%	2%	0%
M0220	Prior Cond(3) Intractable pain	7%	9%	2%
M0220	Prior Cond(4) Impaired decision making	11%	12%	1%
M0220	Prior Cond(5) Disruptive	1%	1%	0%
M0220	Prior Cond(6) Memory loss	9%	9%	0%
M0220	Prior Cond(7) None of the above	60%	57%	-3%
M0220	Prior Cond (8) Unknown	8%	6%	-2%
M0230	Orthopedic Diagnosis Group	15%	22%	7%
M0230	Diabetes Diagnosis Group	4%	6%	2%
M0230	Neurological Diagnosis Group	8%	8%	0%
M0230	Burns/Trauma Diagnosis Group	4%	2%	-2%
M0230	0 - Asymptomatic, no treatment needed at this time	1%	0%	-1%
M0230	1 - Symptoms well controlled with current therapy	8%	3%	-5%
M0230	2 - Symptoms controlled with difficulty, affecting daily functioning; patient needs ongoing monitoring	62%	61%	-1%

M0230	3 - Symptoms poorly controlled, patient needs frequent adjustment in treatment and dose monitoring	25%	31%	6%
M0230	4 - Symptoms poorly controlled, history of rehospitalizations	5%	5%	0%
M0240	0 - Asymptomatic, no treatment needed at this time	2%	1%	-1%
M0240	1 - Symptoms well controlled with current therapy	22%	12%	-10%
M0240	2 - Symptoms controlled with difficulty, affecting daily functioning	57%	62%	5%
M0240	3 - Symptoms poorly controlled, patient needs frequent adjustment	16%	23%	7%
M0240	4 - Symptoms poorly controlled, history of rehospitalizations	3%	3%	0%
M0250	Therapies received at home: intravenous	2%	2%	0%
M0250	Therapies received at home: parenteral nutrition	0%	0%	0%
M0250	Therapies received at home: enteral nutrition	2%	1%	-1%
M0250	Therapies received at home: none of the above	96%	96%	0%
M0260	Overall prognosis: Poor: little or no recovery is expected	8%	8%	0%
M0260	Overall prognosis: Good/Fair: partial to full recovery is expected	90%	91%	1%
M0260	Overall prognosis: Unknown	3%	2%	-1%
M0270	Rehabilitative prognosis: Guarded	21%	21%	0%
M0270	Rehabilitative prognosis: Good	76%	77%	1%
M0270	Rehabilitative prognosis: Unknown	3%	2%	-1%
M0280	Life expectancy is greater than 6 months	98%	93%	-5%
M0280	Life expectancy is 6 months or fewer	2%	7%	5%
M0290	High risk factors: smoking	8%	7%	-1%
M0290	High risk factors: obesity	12%	14%	2%
M0290	High risk factors: alcoholism	2%	1%	-1%
M0290	High risk factors: drug dependency	0%	1%	1%

M0290	High risk factors: none of the above	76%	76%	0%
M0290	High risk factors: unknown	4%	2%	-2%
M0300	Current residence - Patient's owned or rented residence	78%	78%	0%
M0300	Current residence - Family member's residence	14%	14%	0%
M0300	Current residence - Boarding home or rented room	1%	1%	0%
M0300	Current residence - Board and care or assisted living facility	6%	7%	1%
M0300	Current residence- Other (specify)	1%	1%	0%
M0340	Patient lives alone	32%	30%	-2%
M0340	Patient lives with spouse	37%	37%	0%
M0340	Patient lives with other family	26%	28%	2%
M0340	Patient lives with friend	1%	1%	0%
M0340	Patient lives with paid help	7%	8%	1%
M0340	Patient lives with other	2%	1%	-1%
M0350	Assisting person: relative/friend	52%	54%	2%
M0350	Assisting person: home resident	51%	56%	5%
M0350	Assisting person: paid help	17%	19%	2%
M0350	Assisting person: none of the above	4%	2%	-2%
M0360	Primary caregiver - No one person	17%	16%	-1%
M0360	Primary caregiver - Spouse or significant other	30%	30%	0%
M0360	Primary caregiver - Daughter or son	31%	32%	1%
M0360	Primary caregiver - Other family member	9%	9%	0%
M0360	Primary caregiver - Friend or neighbor or community or church member	3%	3%	0%
M0360	Primary caregiver - Paid help	9%	10%	1%
M0360	Primary caregiver - Unknown	0%	0%	0%
M0370	How often receive primary caregiver assist: Several times during day and night	50%	48%	-2%
M0370	How often receive primary caregiver assist: Several times during day	33%	35%	2%

M0370	How often receive primary caregiver assist: Once daily	6%	7%	1%
M0370	How often receive primary caregiver assist: Three or more times per week	7%	6%	-1%
M0370	How often receive primary caregiver assist: One to two times per week	3%	3%	0%
M0370	How often receive primary caregiver assist: Less often than weekly	1%	1%	0%
M0370	How often receive primary caregiver assist: Unknown	1%	0%	-1%
M0380	Type of primary caregiver assistance: ADL assistance	61%	64%	3%
M0380	Type of primary caregiver assistance: IADL assistance	92%	95%	3%
M0380	Type of primary caregiver assistance: environmental	85%	91%	6%
M0380	Type of primary caregiver assistance: psychosocial	89%	93%	4%
M0380	Type of primary caregiver assistance: medical care	74%	79%	5%
M0380	Type of primary caregiver assistance: financial/legal	27%	25%	-2%
M0380	Type of primary caregiver assistance: health care	23%	21%	-2%
M0380	Type of primary caregiver assistance:			0%
M0390	Vision: Normal vision: sees adequately in most situations	72%	72%	0%
M0390	Vision: Partially impaired: cannot see medication labels or newsprint	25%	25%	0%
M0390	Vision: severely impaired: cannot locate objects without hearing or touching or patient nonresponsive	3%	2%	-1%
M0400	Hearing: No observable impairment	63%	62%	-1%
M0400	Hearing: With minimal difficulty	28%	30%	2%
M0400	Hearing: Has moderate difficulty	6%	6%	0%
M0400	Hearing: Has severe difficulty	2%	2%	0%
M0400	Hearing: Unable to hear and understand familiar words or common expressions	1%	0%	-1%

	consistently, or patient nonresponsive.			
M0410	Speech: Expresses complex ideas, feelings, and needs clearly, completely	69%	68%	-1%
M0410	Speech: Minimal difficulty in expressing ideas and needs	21%	23%	2%
M0410	Speech: Expresses simple ideas or needs with moderate difficulty	6%	6%	0%
M0410	Speech: Has severe difficulty expressing basic ideas or needs and requires maximal assistance or guessing by listener.	3%	2%	-1%
M0410	Speech: Unable to express basic needs even with maximal prompting	1%	1%	0%
M0410	Speech: Patient nonresponsive or unable to speak.	1%	0%	-1%
M0420	Freq of pain: Patient has no pain or pain does not interfere with activity or movement	41%	36%	-5%
M0420	Freq of pain: Less often than daily	12%	12%	0%
M0420	Freq of pain: Daily, but not constantly	39%	44%	5%
M0420	Freq of pain: All of the time	7%	9%	2%
M0430	Intractable pain	10%	13%	3%
M0440	Skin lesion/open wound	36%	51%	15%
M0445	Pressure ulcer	5%	7%	2%
M0450	Num Pressure ulcers: Stage 1 (if patient has any pressure ulcers)			
M0450	0	74%	73%	-1%
M0450	1	19%	20%	1%
M0450	2	5%	5%	0%
M0450	3	1%	1%	0%
M0450	4	1%	1%	0%
M0450	Num Pressure ulcers: Stage 2 (if patient has any pressure ulcers)			
M0450	0	38%	39%	1%
M0450	1	43%	41%	-2%

M0450	2	13%	14%	1%
M0450	3	4%	3%	-1%
M0450	4	2%	3%	1%
M0450	Num Pressure ulcers: Stage 3 (if patient has any pressure ulcers)			
M0450	0	79%	82%	3%
M0450	1	16%	13%	-3%
M0450	2	4%	3%	-1%
M0450	3	1%	1%	0%
M0450	4	0%	0%	0%
M0450	Num Pressure ulcers: Stage 4 (if patient has any pressure ulcers)			
M0450	0	93%	95%	2%
M0450	1	5%	4%	-1%
M0450	2	1%	1%	0%
M0450	3	0%	0%	0%
M0450	4	1%	0%	-1%
M0450	At least one unobserved pressure ulcer (if patient has any pressure ulcers)	7%	9%	2%
M0460	Stage most problematic pressure ulcer: Stage 1	1%	1%	0%
M0460	Stage most problematic pressure ulcer: Stage 2	3%	4%	1%
M0460	Stage most problematic pressure ulcer: Stage 3	1%	1%	0%
M0460	Stage most problematic pressure ulcer: Stage 4	0%	0%	0%
M0460	Stage most problematic pressure ulcer: No observable pressure ulcer	95%	94%	-1%
M0464	Status most problematic pressure ulcer: Fully granulating	1%	1%	0%
M0464	Status most problematic pressure ulcer: Early and partial granulation	3%	3%	0%
M0464	Status most problematic pressure ulcer: Not healing	2%	2%	0%

M0468	Stasis ulcer	3%	2%	-1%
M0470	Num observable stasis ulcers (if patient has any stasis ulcers)			
M0470	0	4%	6%	2%
M0470	1	47%	49%	1%
M0470	2	20%	20%	0%
M0470	3	9%	9%	0%
M0470	4	19%	16%	-3%
M0474	At least one unobserved stasis ulcer (if patient has any stasis ulcers)	4%	6%	2%
M0476	Status most problematic stasis ulcer: Fully granulating	0%	0%	0%
M0476	Status most problematic stasis ulcer: Early and partial granulation	1%	1%	0%
M0476	Status most problematic stasis ulcer: Not healing	1%	1%	0%
M0482	Surgical wound	23%	30%	7%
M0484	No. of observable surgical wounds (if patient has any surgical wounds)			
M0484	0	7%	5%	-2%
M0484	1	60%	63%	3%
M0484	2	15%	14%	-1%
M0484	3	7%	7%	0%
M0484	4	10%	10%	0%
M0486	At least one nonbservable surgical wound (if patient has any surgical wounds)	11%	9%	-2%
M0488	Status most problematic surgical wound: Fully granulating	8%	8%	0%
M0488	Status most problematic surgical wound: Early and partial granulation	12%	18%	6%
M0488	Status most problematic surgical wound: Not healing	1%	2%	1%
M0490	When dyspneic: Never, patient is not short of breath	36%	36%	0%
M0490	When dyspneic: When walking more than 20 feet, climbing stairs	27%	25%	-2%

M0490	When dyspneic: With moderate exertion (e.g., while dressing, using commode or bedpan, walking distances less than 20 feet)	21%	23%	2%
M0490	When dyspneic: With minimal exertion (e.g., while eating, talking, or performing other ADLs) or with agitation	13%	13%	0%
M0490	When dyspneic: At rest (during day or night)	3%	3%	0%
M0500	Respiratory treatments at home: oxygen	11%	12%	1%
M0500	Respiratory treatments at home: ventilator	0%	0%	0%
M0500	Respiratory treatments at home: airway pressure	0%	1%	1%
M0500	Respiratory treatments at home: none	89%	87%	-2%
M0510	Urinary tract infection in past 14 dys: No	90%	91%	1%
M0510	Urinary tract infection in past 14 dys: Yes	8%	8%	0%
M0510	Urinary tract infection in past 14 dys: Patient on prophylactic treatment	0%	1%	1%
M0510	Urinary tract infection in past 14 dys: Unknown	1%	1%	0%
M0520	Urinary incontinence: No incontinence or catheter	73%	66%	-7%
M0520	Urinary incontinence: Patient is incontinent	23%	31%	8%
M0520	Urinary incontinence: Patient requires a urinary catheter	4%	4%	0%
M0530	Urinary incontinence occurs: Timed-voiding defers incontinence	28%	25%	-3%
M0530	Urinary incontinence occurs: During the night only	8%	7%	-1%
M0530	Urinary incontinence occurs: During the day and night	64%	67%	3%
M0540	Bowel incontinence: Very rarely or never has bowel incontinence	88%	87%	-1%
M0540	Bowel incontinence: Less than once weekly	2%	3%	1%
M0540	Bowel incontinence: One to three times weekly	3%	4%	1%

M0540	Bowel incontinence: Four to six times weekly	1%	2%	1%
M0540	Bowel incontinence: On a daily basis	3%	3%	0%
M0540	Bowel incontinence: More often than once daily	1%	1%	0%
M0540	Bowel incontinence: Patient has ostomy for bowel elimination	2%	2%	0%
M0540	Bowel incontinence: Unknown	0%	0%	0%
M0550	Bowel ostomy: Patient does not have an ostomy for bowel elimination.	98%	98%	0%
M0550	Bowel ostomy: not related to an inpatient stay and did not necessitate change in medical or treatment regimen.	1%	1%	0%
M0550	Bowel ostomy: related to an inpatient stay or did necessitate change in medical or treatment regimen.	1%	1%	0%
M0560	Cognitive functioning: Alert/oriented	69%	65%	-4%
M0560	Cognitive functioning: Requires prompting	19%	23%	4%
M0560	Cognitive functioning: Requires assistance and some direction	8%	8%	0%
M0560	Cognitive functioning: Requires considerable assistance	3%	3%	0%
M0560	Cognitive functioning: Totally dependent	1%	1%	0%
M0570	When confused: Never	62%	57%	-5%
M0570	When confused: In new or complex situations only	25%	30%	5%
M0570	When confused: On awakening or at night only	2%	2%	0%
M0570	When confused: During the day and evening, but not constantly	8%	8%	0%
M0570	When confused: Constantly	3%	3%	0%
M0570	When confused: Patient nonresponsive	0%	0%	0%
M0580	When anxious: None of the time	61%	59%	-2%
M0580	When anxious: Less often than daily	22%	23%	1%
M0580	When anxious: Daily, but not constantly	15%	16%	1%
M0580	When anxious: All of the time	1%	2%	1%

M0580	When anxious: Patient nonresponsive	0%	0%	0%
M0590	Depressive feelings reported/observed: mood	19%	21%	2%
M0590	Depressive feelings reported/observed: sense of failure	1%	1%	0%
M0590	Depressive feelings reported/observed: hopelessness	2%	2%	0%
M0590	Depressive feelings reported/observed: recurrent thoughts of death	1%	1%	0%
M0590	Depressive feelings reported/observed: thoughts of suicide	0%	0%	0%
M0590	Depressive feelings reported/observed: none	80%	78%	-2%
M0610	Behaviors demonstrated at least once/week: memory deficit	12%	13%	1%
M0610	Behaviors demonstrated at least once/week: impaired decision-making	10%	13%	3%
M0610	Behaviors demonstrated at least once/week: verbal disruption	1%	1%	0%
M0610	Behaviors demonstrated at least once/week: physical aggression	1%	1%	0%
M0610	Behaviors demonstrated at least once/week: socially inappropriate	1%	1%	0%
M0610	Behaviors demonstrated at least once/week: delusions	1%	1%	0%
M0610	Behaviors demonstrated at least once/week: none of the above	82%	80%	-2%
M0620	Frequency of behavior problems: Never	93%	91%	-2%
M0620	Frequency of behavior problems: Less than once a month	1%	1%	0%
M0620	Frequency of behavior problems: Once a month	0%	0%	0%
M0620	Frequency of behavior problems: Several times each month	1%	1%	0%
M0620	Frequency of behavior problems: Several times a week	2%	2%	0%
M0620	Frequency of behavior problems: At least daily	3%	4%	1%
M0630	Receive psychiatric nursing	2%	1%	-1%

M0640	Current grooming: Able to groom self with or without assistive devices	48%	49%	1%
M0640	Current grooming: Grooming utensils must be placed within reach	21%	24%	3%
M0640	Current grooming: Someone must assist the patient to groom self.	22%	20%	-2%
M0640	Current grooming: Patient dependent in grooming	8%	7%	-1%
M0640	Prior grooming: Able to groom self with or without assistive devices	71%	65%	-6%
M0640	Prior grooming: Grooming utensils must be placed within reach	11%	15%	4%
M0640	Prior grooming: Someone must assist the patient to groom self.	11%	12%	1%
M0640	Prior grooming: Patient dependent in grooming	6%	6%	0%
M0650	Current dress upper body: without assistance.	43%	41%	-2%
M0650	Current dress upper body: no assistance if clothing is laid out or handed to patient	24%	26%	2%
M0650	Current dress upper body: Someone must help the patient	25%	25%	0%
M0650	Current dress upper body: completely dependent	9%	8%	-1%
M0650	Prior dress upper body: without assistance.	69%	62%	-7%
M0650	Prior dress upper body: no assistance if clothing is laid out or handed to patient	12%	15%	3%
M0650	Prior dress upper body: Someone must help the patient	12%	15%	3%
M0650	Prior dress upper body: completely dependent	6%	7%	1%
M0660	Current dress lower body: without assistance.	35%	32%	-3%
M0660	Current dress lower body: no assistance if clothing is laid out or handed to patient	16%	16%	0%
M0660	Current dress lower body: Someone must help the patient	37%	40%	3%
M0660	Current dress lower body: completely	12%	12%	0%

	dependent			
M0660	Prior dress lower body: without assistance.	66%	58%	-8%
M0660	Prior dress lower body: no assistance if clothing is laid out or handed to patient	9%	11%	2%
M0660	Prior dress lower body: Someone must help the patient	15%	20%	5%
M0660	Prior dress lower body: completely dependent	8%	9%	1%
M0670	Current bathing: Able to bathe self in shower or tub independently.	15%	11%	-4%
M0670	Current bathing: With the use of devices, is able to bathe independently	10%	12%	2%
M0670	Current bathing: Able to bathe with assistance of another person	28%	28%	0%
M0670	Current bathing: Participates in bathing self but requires presence of another	21%	24%	3%
M0670	Current bathing: Unable to use shower or tub, is bathed in bed or bedside chair	19%	20%	1%
M0670	Current bathing: Unable to participate and is totally bathed by another	7%	6%	-1%
M0670	Prior bathing: Able to bathe self in shower or tub independently.	51%	40%	-11%
M0670	Prior bathing: With the use of devices, is able to bathe independently	10%	13%	3%
M0670	Prior bathing: Able to bathe with assistance of another person	13%	15%	2%
M0670	Prior bathing: Participates in bathing self but requires presence of another	11%	15%	4%
M0670	Prior bathing: Unable to use shower or tub, is bathed in bed or bedside chair	8%	10%	2%
M0670	Prior bathing: Unable to participate and is totally bathed by another	5%	5%	0%
M0680	Current toileting: Independent with or without a device	66%	63%	-3%
M0680	Current toileting: When reminded or assisted	20%	24%	4%
M0680	Current toileting: Only able to use a bedside commode (with/without assist)	6%	6%	0%

M0680	Current toileting: Only able to use a bedpan/urinal independently	1%	1%	0%
M0680	Current toileting: Is totally dependent in toileting	6%	6%	0%
M0680	Prior toileting: Independent with or without a device	79%	73%	-6%
M0680	Prior toileting: When reminded or assisted	11%	15%	4%
M0680	Prior toileting: Only able to use a bedside commode (with/without assist)	4%	4%	0%
M0680	Prior toileting: Only able to use a bedpan/urinal independently	1%	1%	0%
M0680	Prior toileting: Is totally dependent in toileting	4%	5%	1%
M0690	Current transferring: Able to independently transfer.	40%	29%	-11%
M0690	Current transferring: With minimal assistance or with use of device.	47%	59%	12%
M0690	Current transferring: Unable to transfer but able to bear weight and pivot	7%	7%	0%
M0690	Current transferring: Unable to transfer and is unable to bear weight or pivot	2%	2%	0%
M0690	Current transferring: Bedfast, unable to transfer but can turn, position in bed	1%	1%	0%
M0690	Current transferring: Bedfast, unable to transfer and unable to turn/position	2%	2%	0%
M0690	Prior transferring: Able to independently transfer.	65%	53%	-12%
M0690	Prior transferring: With minimal assistance or with use of device.	25%	36%	11%
M0690	Prior transferring: Unable to transfer but able to bear weight and pivot	4%	5%	1%
M0690	Prior transferring: Unable to transfer and is unable to bear weight or pivot	1%	2%	1%
M0690	Prior transferring: Bedfast, unable to transfer but can turn, position in bed	1%	1%	0%
M0690	Prior transferring: Bedfast, unable to transfer and unable to turn/position	1%	2%	1%
M0700	Current ambulation: needs no human assistance or assistive device	18%	13%	-5%

M0700	Current ambulation: Requires use of a device	58%	61%	3%
M0700	Current ambulation: Able to walk only with supervision/assistance of another	14%	16%	2%
M0700	Current ambulation: Chairfast, unable to ambulate but able to wheel self	3%	4%	1%
M0700	Current ambulation: Chairfast, unable to ambulate and is unable to wheel self	5%	4%	-1%
M0700	Current ambulation: Bedfast, unable to ambulate or be up in a chair	2%	1%	-1%
M0700	Prior ambulation: needs no human assistance or assistive device	49%	40%	-9%
M0700	Prior ambulation: Requires use of a device	36%	41%	5%
M0700	Prior ambulation: Able to walk only with supervision/assistance of another	6%	10%	4%
M0700	Prior ambulation: Chairfast, unable to ambulate but able to wheel self	3%	3%	0%
M0700	Prior ambulation: Chairfast, unable to ambulate and is unable to wheel self	3%	3%	0%
M0700	Prior ambulation: Bedfast, unable to ambulate or be up in a chair	1%	1%	0%
M0710	Current feeding: Able to independently feed self	72%	65%	-7%
M0710	Current feeding: Able to feed self independently but requires assistance	23%	30%	7%
M0710	Current feeding: Unable to feed self and must be assisted throughout the meal	4%	4%	0%
M0710	Current feeding: Able to feed orally and also uses nasogastric tube/gastrostomy	0%	0%	0%
M0710	Current feeding: Unable to feed orally and also uses nasogastric tube or gastrostomy	1%	1%	0%
M0710	Current feeding: Unable to take in nutrients orally or by tube feeding	0%	0%	0%
M0710	Prior feeding: Able to independently feed self	82%	74%	-8%
M0710	Prior feeding: Able to feed self independently but requires assistance	14%	20%	6%
M0710	Prior feeding: Unable to feed self and must be assisted throughout the meal	3%	3%	0%

M0710	Prior feeding: Able to feed orally and also uses nasogastric tube/gastrostomy	0%	0%	0%
M0710	Prior feeding: Unable to feed orally and also uses nasogastric tube or gastrostomy	0%	1%	1%
M0710	Prior feeding: Unable to take in nutrients orally or by tube feeding	0%	0%	0%
M0720	Current meal prep: Plan and prepare all light meals or reheat delivered meals	28%	26%	-2%
M0720	Current meal prep: Unable to prepare light meals on a regular basis	37%	35%	-2%
M0720	Current meal prep: Unable to prepare any meals or reheat delivered meals	35%	38%	3%
M0720	Prior meal prep: Plan and prepare all light meals or reheat delivered meals	59%	51%	-8%
M0720	Prior meal prep: Unable to prepare light meals on a regular basis	17%	19%	2%
M0720	Prior meal prep: Unable to prepare any meals or reheat delivered meals	22%	28%	6%
M0730	Current transport: Able to independently drive a regular or adapted car; or uses a regular or handicap-accessible public bus	2%	1%	-1%
M0730	Current transport: Able to ride in a car only when driven by another; or able to use a bus or handicap van only when assisted or accompanied by another	93%	95%	2%
M0730	Current transport: Unable to ride in a car, taxi, bus, or van, and requires transportation by ambulance.	5%	4%	-1%
M0730	Prior transport: Able to independently drive a regular or adapted car; or uses a regular or handicap-accessible public bus	32%	27%	-5%
M0730	Prior transport: Able to ride in a car only when driven by another; or able to use a bus or handicap van only when assisted or accompanied by another	63%	67%	4%
M0730	Prior transport: Unable to ride in a car, taxi, bus, or van, and requires transportation by ambulance.	4%	4%	0%
M0740	Current laundry: Able to independently take care of all laundry tasks.	5%	4%	-1%

M0740	Current laundry: Able to do only light laundry	22%	20%	-2%
M0740	Current laundry: Unable to do any laundry	72%	76%	4%
M0740	Prior laundry: Able to independently take care of all laundry tasks.	38%	31%	-7%
M0740	Prior laundry: Able to do only light laundry	20%	20%	0%
M0740	Prior laundry: Unable to do any laundry	40%	47%	7%
M0750	Current housekeeping: Able to independently perform all housekeeping tasks	3%	2%	-1%
M0750	Current housekeeping: Able to perform only light housekeeping	20%	20%	0%
M0750	Current housekeeping: Able to perform housekeeping with intermittent assist	6%	5%	-1%
M0750	Current housekeeping: Unable to consistently perform tasks unless assisted	19%	16%	-3%
M0750	Current housekeeping: Unable to effectively participate in any housekeeping	52%	57%	5%
M0750	Prior housekeeping: Able to independently perform all housekeeping tasks	34%	28%	-6%
M0750	Prior housekeeping: Able to perform only light housekeeping	20%	21%	1%
M0750	Prior housekeeping: Able to perform housekeeping with intermittent assist	4%	4%	0%
M0750	Prior housekeeping: Unable to consistently perform tasks unless assisted	9%	8%	-1%
M0750	Prior housekeeping: Unable to effectively participate in any housekeeping	30%	37%	7%
M0760	Current shopping: Able to plan for shopping needs, independently perform	2%	1%	-1%
M0760	Current shopping: Able to go shopping, but needs some assistance	12%	11%	-1%
M0760	Current shopping: Unable to go shopping, but is able to identify items needed, place orders, and arrange home delivery.	48%	51%	3%
M0760	Current shopping: Needs someone to do all shopping and errands	39%	37%	-2%

M0760	Prior shopping: Able to plan for shopping needs, independently perform	33%	27%	-6%
M0760	Prior shopping: Able to go shopping, but needs some assistance	22%	22%	0%
M0760	Prior shopping: Unable to go shopping, but is able to identify items needed, place orders, and arrange home delivery.	19%	22%	3%
M0760	Prior shopping: Needs someone to do all shopping and errands	24%	27%	3%
M0770	Current telephone: Able to dial numbers and answer calls	73%	73%	0%
M0770	Current telephone: Able to use specially adapted phone, call essential numbers	5%	6%	1%
M0770	Current telephone: Able to answer, normal conversation but difficulty placing calls	6%	6%	0%
M0770	Current telephone: Able to answer only some of the time or is able to carry on only a limited conversation	5%	5%	0%
M0770	Current telephone: Unable to answer the telephone at all but can listen if assisted with equipment	3%	3%	0%
M0770	Current telephone: Totally unable to use the telephone	6%	5%	-1%
M0770	Current telephone: Patient does not have a telephone	1%	2%	1%
M0770	Prior telephone: Able to dial numbers and answer calls	77%	75%	-2%
M0770	Prior telephone: Able to use specially adapted phone, call essential numbers	4%	5%	1%
M0770	Prior telephone: Able to answer, normal conversation but difficulty placing calls	5%	5%	0%
M0770	Prior telephone: Able to answer only some of the time or is able to carry on only a limited conversation	4%	4%	0%
M0770	Prior telephone: Unable to answer the telephone at all but can listen if assisted with equipment	3%	3%	0%
M0770	Prior telephone: Totally unable to use the telephone	5%	5%	0%

M0770	Prior telephone: Patient does not have a telephone	1%	2%	1%
M0780	Current oral meds: Able to independently take the correct oral meds and proper dosage at the correct times	44%	43%	-1%
M0780	Current oral meds: Able to take meds at the correct times with help	33%	33%	0%
M0780	Current oral meds: Unable to take medication unless administered by someone else	22%	23%	1%
M0780	Current oral meds: No oral medications prescribed	1%	1%	0%
M0780	Prior oral meds: Able to independently take the correct oral meds and proper dosage at the correct times	58%	52%	-6%
M0780	Prior oral meds: Able to take meds at the correct times with help	22%	23%	1%
M0780	Prior oral meds: Unable to take medication unless administered by someone else	17%	22%	5%
M0780	Prior oral meds: No oral medications prescribed	1%	1%	0%
M0790	Current inhalant meds: Able to independently take the correct medication and proper dosage at the correct times	12%	12%	0%
M0790	Current inhalant meds: Able to take medication at the correct times if helped	6%	6%	0%
M0790	Current inhalant meds: Unable to take meds unless administered by someone else	3%	4%	1%
M0790	Current inhalant meds: No inhalant/mist medications prescribed	79%	79%	0%
M0790	Prior inhalant meds: Able to independently take the correct medication and proper dosage at the correct times	13%	12%	-1%
M0790	Prior inhalant meds: Able to take medication at the correct times if helped	4%	4%	0%
M0790	Prior inhalant meds: Unable to take meds unless administered by someone else	3%	3%	0%
M0790	Prior inhalant meds: No inhalant/mist medications prescribed	78%	78%	0%

M0800	Current injectable meds: Able to independently take the correct medication and proper dosage at the correct times	5%	5%	0%
M0800	Current injectable meds: Able to take medication at the correct times if helped	3%	3%	0%
M0800	Current injectable meds: Unable to take meds unless administered by someone else	7%	8%	1%
M0800	Current injectable meds: No injectable medications prescribed	85%	84%	-1%
M0800	Prior injectable meds: Able to independently take the correct medication and proper dosage at the correct times	6%	5%	-1%
M0800	Prior injectable meds: Able to take medication at the correct times if helped	2%	2%	0%
M0800	Prior injectable meds: Unable to take meds unless administered by someone else	5%	6%	1%
M0800	Prior injectable meds: No injectable medications prescribed	84%	84%	0%
M0810	Patient's equipment management: Independent	3%	3%	0%
M0810	Patient's equipment management: Independent if someone else sets up	3%	4%	1%
M0810	Patient's equipment management: Requires considerable assistance but independently completes portions of the task	2%	2%	0%
M0810	Patient's equipment management: Is only able to monitor equipment and must call someone else to manage the equipment	1%	1%	0%
M0810	Patient's equipment management: Completely dependent	5%	5%	0%
M0810	Patient's equipment management: No equipment of this type used in care	85%	85%	0%
M0820	Caregiver equipment management: Independent	46%	48%	2%
M0820	Caregiver equipment management: Independent if someone else sets up	19%	23%	4%
M0820	Caregiver equipment management: Requires considerable assistance but independently completes significant portions of the task	5%	5%	0%

M0820	Caregiver equipment management: Caregiver is only able to complete small portions of task	4%	4%	0%
M0820	Caregiver equipment management: Completely dependent	8%	8%	0%
M0820	Caregiver equipment management: No caregiver	14%	10%	-4%
M0820	Caregiver equipment management: Unknown	5%	3%	-2%
M0825	Ten or more therapy visits (based on Medicare claims)	27%	35%	8%

In general, the results showed that health characteristics as measured by the OASIS items were stable or changed little. Exceptions to the general findings were indications that the HH PPS population included:

- More post-acute and more post-surgical patients;
- More patients that had a recent history of post-acute institutional care;
- More patients with a recent change in medical or treatment regimen;
- More patients in the orthopedic diagnosis group defined under the PPS system's clinical dimension; and
- More patients assessed with dependencies in Activities of Daily Living (ADLs) and Instrumental Activities of Daily Living (IADLs) as of 14 days before the assessment. The proportion of patients using at least 10 therapy visits also rose noticeably.

Otherwise, the rate comparisons of OASIS items are generally unremarkable. Several measures usually reflective of a more compromised health status, including ADL limitations, incontinence, pain, short life expectancy, and diagnosis severity had a somewhat higher rate in the HH PPS sample than the HH IPS sample. However, various physiologic measures and risk factors showed little or no change, including urinary tract infection, visual and aural functioning, dyspnea, bowel ostomy, bowel incontinence, obesity, alcoholism, drug dependence, depressive symptoms, behavioral problem frequency, use of home oxygen, infusion therapy, and nutritional therapies. In addition, the

probability that a patient used psychiatric nursing was reduced, from 2 percent to 1 percent.

The current HH PPS case-mix system recognizes four types of diagnoses for purposes of assigning patients to case-mix groups: diabetes, orthopedic conditions, neurological conditions, and burns and trauma. These diagnoses were found to be associated with higher-than-average resource costs in the original case-mix research. The data in Table 10 indicate that the share of patients assigned to the four case-mix diagnosis groups grew by 23 percent. This change was due to an additional 7 per hundred patients assigned to the orthopedic diagnosis group, and an additional 2 per hundred assigned to the diabetes diagnosis group. The share of patients assigned to the neurological diagnosis group remained unchanged (at 8 per hundred), and the share of patients assigned to the burns/trauma diagnosis group declined by 2 per hundred.

There are two important reasons why we believe these changes reflect mostly nominal, as opposed to real, underlying case-mix change. First, the notable increase in the proportion of orthopedic diagnoses is due at least in part to the listing of the diagnosis code for abnormality of gait in this diagnosis group. The diagnosis code for abnormality of gait (781.2) is commonly used to indicate that the primary reason for the home health treatment is rehabilitation services (for example, physical therapy). Detailed analysis shows that this use of this code grew by 50 percent between the HH IPS period and the early years of

the HH PPS. We believe agencies had an incentive to use this code on Medicare claims to support treatment plans that included large amounts of rehabilitation services. This code could be used even if the underlying condition was not orthopedic. Second, the decline in burns/trauma assignment may be due in part to agencies' early confusion about how to use the ICD-9-CM coding system when a patient has an open wound not due to an injury. We believe traumatic open wounds were thus overreported early in HH PPS. However, with educational efforts initiated by CMS and the home health industry after HH PPS began, understanding and application of the coding instructions for traumatic wound diagnoses improved, resulting in a lower, and more accurate, rate of reported burns/trauma cases, which we believe is now more representative and not an actual change in case-mix.

Other wound-related items varied in the types of change they experienced. The basic wound-related item measuring the presence of a skin disturbance or lesion (M0440) increased by 15 percentage points; however, this measure is general and covers a broad range of both clinically significant and insignificant problems. We note the three detailed series of OASIS items following M0440, that is, surgical wounds, pressure ulcers, and stasis ulcers, had varying results. The proportion of patients with pressure ulcers increased from 5.4 percent to 6.6 percent with more than half of the pressure ulcers at Stage 2. (Pressure ulcers are staged using four levels, 1 to 4, in order of increasing severity.) The average number of pressure ulcers

per hundred patients increased from 9.2 to 11.1. Pressure ulcers per 100 persons with any pressure ulcers were 1.70 in the HH IPS sample and 1.68 in HH PPS sample. Excluding the approximately 5 percent of pressure ulcers that were unobservable, the average number of stage 1 and stage 2 pressure ulcers per patient with pressure ulcers did not change; the number of stage 3 and stage 4 pressure ulcers per patient with pressure ulcers declined by 13 percent and 27 percent, respectively. In terms of the overall population, stage 1 and stage 2 pressure ulcers per beneficiary increased by about 23 percent between the HH IPS and HH PPS; stage 3 pressure ulcers per beneficiary increased 7 percent; and stage 4 pressure ulcers decreased by 11 percent. There was no change in the item measuring the healing status of the most problematic pressure ulcer.

Review of these data suggest to us that the population of home health beneficiaries was more likely to include pressure ulcer patients under HH PPS, that such patients had about the same number of pressure ulcers per person in both periods, and that the pressure ulcer stage tended to be of lower severity, on average, under HH PPS compared to the HH IPS. We note that under OASIS coding policy, there is "no reverse staging" of pressure ulcers, which means that a healed pressure ulcer could be recorded and contribute to the statistics. Therefore, because of such policy, from these statistics it is difficult to draw conclusions about change in the burden of care related to pressure ulcers under the HH PPS.

We also found little change in numbers of stasis ulcers reported or their overall seriousness. The proportion of patients with any stasis ulcers was 3 percent under the HH IPS and 2 percent under HH PPS. Furthermore, while some patients have more than one stasis ulcer, the number of stasis ulcers per 100 patients decreased from approximately 5.0 to 4.5. The status of the most problematic stasis ulcer (if any) did not change. The stasis ulcer decline may be attributable in part to improved knowledge among agency clinical staff in distinguishing among different types of ulcers.

Based on the HH IPS and the HH PPS samples, the case-mix of the population of home health beneficiaries clearly shifted towards more post-surgical patients, with a possible indication that the average patient's healing status worsened. The proportion of patients with any surgical wounds increased from 22.7 percent to 30.0 percent. The number of surgical wounds per hundred patients increased from 37.4 to 49.2, due entirely to the increased numbers of post-surgical patients; there was no change in the estimated average number of surgical wounds per person with any surgical wound (our estimate assumed patients recorded as having at least one unobservable surgical wound had only one such wound). There was a 6 percentage point increase in the probability that the most problematic surgical wound's healing status would be in an early stage of healing (indicated on the OASIS by the response category "early/partial granulation," which refers to the type of

newly forming tissue which may be visible in a healing wound), and a 1 percentage point increase in the probability that the wound's healing status would be "not healing". This amounts to a 13 percent increase in the share of most-problematic surgical wounds assigned to the two less-favorable healing categories, early and partial granulation or not healing.

Our review of current functional measures also showed mixed results, with some (grooming, upper body dressing, meal preparation, laundry, telephone use, independence with inhalant, and injective medications) exhibiting minor or little change. Other measures experienced negative and sometimes substantial change (transferring, ambulation, feeding, and housekeeping). In both the HH IPS and the HH PPS sample periods, prior functional measures were almost invariably reflective of a better average prior status (as of the 14 days before the assessment) compared to the current status. However, in the HH PPS sample, the overall difference between prior and current status is less than in the HH IPS sample. In other words, average current status is reported as generally more functionally impaired under HH PPS than under the HH IPS, and accordingly, average prior status reflects a different relationship to current status in the two sample periods. We believe this pattern may reflect better understanding of the definition and interpretation of the prior status items as agencies became more familiar with the assessment.

We also found that quite a few items with scaled responses indicated a decline in the numbers of patients at the best end of the scale (for example, independent in bathing), as well as a decline or stability in the numbers (usually very small numbers) at the worst end of the scale (for example, totally dependent in bathing). Often, the decline in numbers of patients at the best end was offset by increased numbers rated just below the best end of the scale. This pattern was evident with measures of primary and secondary diagnosis symptom severity, cognitive functioning, confusion, hearing, speech, current upper and lower body dressing, current bathing, current toileting, current transferring, current ambulation, and several of the prior function-related items.

Table 10 results indicated a pattern of change in functional severity away from the two lowest severity groups and towards the middle severity group. The shift towards the middle severity group could be explainable by seemingly minimal changes in a person's ADL ratings. The examples below show how an incremental change in reported dependency on a single functional item in the HHRG system could change the case-mix group functional severity to F2 from F1. For a hypothetical individual in the second-lowest functional severity group (F1), a single added limitation (that is, going from independence to a minimal limitation) could result in the individual moving from severity category F1 into severity category F2. Similarly, in the case of transferring or locomotion, a score change that is due only

to going from one level of limitation to the next worst level could possibly result in the individual moving from severity category F1 into severity category F2.

The three prognosis-related items also showed mixed results, with the overall and rehabilitative prognosis items changing minimally and the life expectancy item indicating a more than two-fold increase in the proportion of the population of home health beneficiaries with a life expectancy below 6 months. We believe that as agencies increasingly recognized that the life expectancy item was used in measuring adverse events under the Outcome-based Quality Improvement (OBQM) system, which commenced in the early years of HH PPS, agencies became more careful to record the prognosis accurately.

We discuss below some of the influences on the reporting of the OASIS health characteristics since the HH PPS began. Our conclusion from review of the changes in rates of OASIS characteristics, however, is that it is far from certain that the essential health status and service needs of the population of home health beneficiaries changed dramatically under the HH PPS. A very substantial majority of the OASIS characteristics rates noted for 2003 in Table 10 were within 2 percentage points of their initial value at the HH IPS baseline. Also, few OASIS items experienced more than moderate adverse change. Included within our analysis of adverse changes were several items unrelated to the HHRG system, including diagnosis symptom severity, recent regimen or treatment change, feeding,

housekeeping, laundry, life expectancy, and various prior functional status items. Items with adverse change that are related to the HHRG system include use of post-acute institutional care, orthopedic cases, incontinence, pain, surgical wound healing status, and transferring.

c. Impact of the Context of OASIS Reporting

As noted above, some items with adverse changes are related to the HHRG system. We believe that some of these changes are a likely result of more care being taken in conducting the assessment. Agencies were exposed to OASIS training and educational initiatives in the early HH PPS period and, beginning with the HH PPS, agencies had an incentive to ensure they did not overlook items that could affect the HHRG. The new emphasis on proper application of OASIS guidelines was later reinforced when CMS began to implement outcome-based quality reporting (OBQI) in early 2002.

We further believe that, to some extent, incentives brought by the payment and quality program changes interacted with the subjective aspects of the assessment process to cause nominal coding change. The process of coding, especially diagnosis coding and determining certain rating scales, entails some discretion by the agency. With diagnosis coding, patients may have more than one diagnosis that can reasonably be called the primary diagnosis. The significant growth in orthopedic diagnosis codes partly reflects the ambiguity in the diagnosis assignment process itself, particularly in the context of a system where

financial incentives to choose one diagnosis over another may be operating. Furthermore, scales of ADL functioning can be difficult to apply with some patients because of daily variability in their status and the multiple dimensions of the functional item. This difficulty may also result in a bias towards selecting a more-severe rating in the context of the financial incentives of the HH PPS. We believe that such bias was likely reinforced by the financial incentive created by the 10-visit therapy threshold. As a result of that incentive, high-therapy treatment plans became more common under HH PPS. OASIS coding practices regarding "functional status" could have changed in ways to make coding more harmonious with the new emphasis on therapy in treatment plans.

Not only is the process of coding likely subject to discretion, several issuances providing official guidance on specific OASIS items released early in the HH PPS could have caused some clinicians to downgrade patients in their assessment of the specific item. Instructions regarding the dressing, bathing, toileting, transferring, and locomotion items, assessment items all used in the HH PPS case-mix system, were amended in August 2000 in such a way that the concept of performing the function safely was highlighted prominently in the item-by-item instructions. (See M0650 to M0700 in Chapter 8 at http://www.cms.hhs.gov/apps/hha/usermanu.asp).

This change alone arguably emphasized the concept that "safety" is a consideration in assessing the patient's

ability to perform the activity and in determining the functional item on the OASIS. Thus, it seems a likely contributing factor in explaining why the OASIS data in Table 10 show a strong tendency for several ADL statistics to shift away from the completely independent level. In terms of impact on the patient's case-mix group, it should be noted that the case-mix score for most of these items becomes a positive value if the assessing clinician selects any response category other than the one indicating that the patient is able to function independently. (Note: Selecting "unknown" does not add to the case-mix score.)

Another change in OASIS instructions affected the pain item, M0420, in August 2000. The section on Assessment Strategies offered additional strategies for assessing pain in a nonverbal patient, such as facial expression and physiological indicators (for example, perspiration, pallor). If many clinicians were not using these strategies during the HH IPS period, it is likely that fewer patients would have been assessed to have pain. The strategies section also introduced the term "well controlled" in referring to pain assessment, by adding the following sentence: "Pain that is well controlled with treatment may not interfere with activity or movement at all." If, as a result of this guidance, clinicians began taking into account patient adherence to pain medication, one result could have been more patients were assessed with pain. Adherence to pain medication is an important issue in medicine, because many patients experience side effects that

may cause them to trade off pain control for diminution of side effects.

The assessment instructions for incontinence were also amended in August 2000. The Assessment Strategies section for M0520 included a new statement: "Urinary incontinence may result from multiple causes, including physiologic reasons, cognitive impairments, or mobility problems." This clarification could have potentially sensitized clinicians to the idea that the definition of incontinence is not simply about physiologic status (that is, bladder control), but instead involves considerations such as mobility and cognition that can intervene to produce wetting on clothing. Because more patients were assessed as incontinent in the HH PPS period according to M0520 (which is not used in the case-mix system), the OASIS skip pattern drew more responses for M0530, the case-mix item used to assess the type of incontinence. A similar change in the Assessment Strategies section was made for M0540, bowel incontinence, with the potentially similar impact of increasing the reported rate.

Finally, two changes to the OASIS manual in August 2000 could have expanded the number of patients reported to have surgical wounds. The first change affecting surgical wounds was to expand the definition to read: "Medi-port sites and other implanted infusion devices or venous access devices are considered surgical wounds." The possible impact on the national case-mix index of broadening this instruction is that more openings in the skin would be considered surgical wounds, requiring more assessments to respond to OASIS item

M0488, a case-mix variable, provided that the site is the most problematic surgical wound under the expanded definition. It is possible for the healing status of these types of openings to be "fully granulating" (with no case-mix score available), at a stage of "early or partial granulation" (a score of 7), or even "not healing" (a score of 15). For example, a central line site being held open by the line itself may not reach a fully granulating state, or a site that has become infected may be assessable as "not healing." Before these clarifications, it may not have occurred to many assessing clinicians to classify these device-related sites as surgical wounds, so it seems reasonable to assume that more surgical wounds would be reported after the manual change, and to assume that some of these would add to the higher rates of wounds reported to be not healing or in early healing stages.

The second manual change was a new bulleted item in the OASIS response-specific instructions: "A muscle flap performed to surgically replace a pressure ulcer is a surgical wound and is no longer a pressure ulcer." We note it is not uncommon for home health patients to be admitted after hospitalization for pressure ulcer procedures, such as debridements or grafts. While the OASIS manual change noted that debridements do not change the classification of the pressure ulcer to a surgical wound, the muscle flap does change the classification. Again, we would expect this technical clarification to have added to the reported number of surgical wounds.

Another OASIS manual change added the statement that "A PICC line is not a surgical wound, as it is peripherally inserted, although it is considered a skin lesion (see M0440)." The PICC line is a common method of delivering antibiotic treatment intravenously at home. However, using the same reasoning about the perception of device-related openings before the issuance of the August 2000 manual, we believe it is unlikely that the peripherally inserted central catheters (PICC) line clarification caused reduction in reported surgical wounds as it would not have originally occurred to many assessing clinicians to have classified it as such in the first place.

The changes to the OASIS manual instructions noted in this section present concrete potential causes of increased OASIS reporting rates for case-mix items measuring ADL dependencies, pain, incontinence, and surgical wounds. While it is difficult to know with data available how much of the reported increase is traceable to these clarifications, we believe that in the environment at the time the HH PPS was initiated, which included strong efforts in the public and private sectors to educate home health agencies on the proper application of OASIS, the changes must have had some impact. To the extent that the result was a new approach to classifying patients for purposes of the OASIS items involved, we note the increased item reporting rates may not represent an actual material change in the health status of the population under treatment in home care. Given the potential impact of OASIS reporting

instructions on case-mix, we will continue to monitor appropriate requirements in an effort to promote effectiveness in the HH PPS payment methodology. Clarifications to the "OASIS Implementation Manual" are issued administratively through normal operating procedures.

- **Impact of more post-surgical patients**

We also reviewed the increase in rates of post-surgical patients that occurred under the HH PPS to improve our understanding of how this increase contributed to the growth in the case-mix index between the IPS baseline and the 2003 HH PPS period. Being a patient with a surgical wound does not in and of itself increase the case-mix score. However, if the surgical wound is not assigned to the best healing status on the OASIS assessment, the score will increase. Therefore, an increase in the proportion of post-surgical patients makes more episodes eligible for an addition to the score based on the healing status. Furthermore, data shown in Table 10 indicate that under the HH PPS, post-surgical patients were more likely to be assessed with a healing status that impacts upon a case-mix score. Because surgical patients have historically had other characteristics associated with relatively low resource use, we hypothesized that a higher occurrence of surgical wound patients would not necessarily lead to a rise in the overall CMI.

We analyzed the extent to which the severity of HHRG-related OASIS items is due to the increased presence of

post-surgical patients, of whom many would have mobility restrictions, pain, and an evolving surgical wound status in the early post-acute phase. First, we analyzed the relationship between having a surgical wound and having a characteristic indicative of increased severity. Second, we recalculated the average case-mix change under two alternative assumptions: (1) the higher share of post-surgical cases is entirely responsible for the changed CMI; (2) growth in the CMI for post-surgical patients was the same as growth in the CMI for non-surgical patients. The second assumption would reveal the potential effect of a faster worsening of presenting health status through time among post-surgical patients compared to non-surgical patients.

As expected, post-surgical patients exhibited certain characteristics at different rates. Specifically, compared to non-surgical patients, they were slightly less likely to have no home therapies (M0250), about 40 percent more likely to have frequent pain (M0420), nearly three times as likely to have a bowel ostomy, nearly twice as likely to have come from an inpatient rehabilitation facility and to have intractable pain, and 15 percent less likely to be independent in lower body dressing. Many other characteristics were less prevalent among post-surgical patients, such as having any pressure or stasis ulcers; dyspnea; urinary and bowel incontinence; behavioral problems (M0610); upper body dressing, toileting, and ambulation functional limitations.

If we make the first assumption, that the only cause of change in the national CMI under the HH PPS was the increased share of post-surgical patients in the population of home health users, then the national case-mix under the HH PPS sample should have been slightly below the CMI of the HH IPS sample. This is because the CMI for post-surgical patients is smaller than the CMI for non-surgical patients, and because even under the HH PPS the share of post-surgical patients is a minority of all patients. However, in actuality, as stated in section II.A.2.b of this proposed rule, the national CMI increased by 0.099 between the HH IPS sample and the 2003 HH PPS sample.

Post-surgical patients' CMI grew slightly faster than non-surgical patients' CMI over this period. This may represent a change in the mix of post-surgical patients, or it may represent stronger effects of changed coding practices on post-surgical patients than on non-surgical patients. If we make the second assumption—that the growth rate of post-surgical patients' case mix was the same as the growth rate of non-surgical patients' case mix--then the increase in the national CMI should have been marginally smaller than 0.099 (smaller by about one-half of 1 percent). Because our second assumption caused a very small reduction in the CMI increase, we conclude that only a very small portion of the substantial growth in CMI might be attributable to having more severe surgical patients under HH PPS compared to HH IPS.

We believe one possible contributing factor in the slightly faster growth in the CMI for surgical patients was uncertainty about how to assess the healing status of a surgical wound. As noted above, twice as many surgical wounds judged "most problematic" were assigned a status of "not healing" under the HH PPS than under the HH IPS. Fifty percent more surgical wounds were assigned a status of "early and partial granulation," under the HH PPS. A recent clarification in the guidance for assessing healing status is significant, we believe, in understanding this change. In July 2006 the Wound Ostomy and Continence Nurses Society (WOCN), a national source of expertise in wound assessment, and one that CMS encouraged agencies to consult, issued a change in guidance on surgical wound assessment. Before that time, criteria for a status of "non-healing" in a wound closed by primary intention were the following: "incisional separation OR incisional necrosis OR signs or symptoms of infection OR no palpable healing ridge" (WOCN Society OASIS Guidance Document—Spring 2001). Criteria for a status of "fully granulating/healing" were: "incision well-approximated with complete epithelialization of incision; no signs or symptoms of infection; healing ridge well-defined." The July 2006 revision removed all references to a "healing ridge" due to the lack of scientific evidence supporting its use as a sign of wound healing. Many surgical wounds will not exhibit a healing ridge, though the wound is actually healing. To the extent that assessing clinicians paid heightened attention to the

now-outdated WOCN guidance in adapting to the HH PPS, it is likely that they applied the pre-2006 criteria, with the result that the national OASIS rate for the healing status of surgical wounds indicated more wounds "not healing" or at a stage of "early and partial granulation."

In summary, based upon our above discussion of review of the data on OASIS items and our discussion of reasons for coding change, we conclude that growth in the national average CMI reflects, to a very large extent, coding practice changes against a background of new financial incentives. The impact of these forces is evidenced by mostly incremental changes in home health population rates of case-mix relevant items and not to actual changes in health status. Other than the increase in reported numbers of surgical wound patients, changes in numbers and characteristics of wound care patients documented on the OASIS were modest. While there was substantially more use of aggressive treatment plans involving at least 10 therapy visits, the pattern of decline in many ADL, IADL and other scale ratings is suggestive of added numbers of .marginally limited patients, not severely limited patients. Moreover, scale ratings for ADL measures, an important part of the case-mix system, were likely affected by the manual changes noted above emphasizing that safety is a consideration in determining the rating. Lastly, we found that the higher rate of reported post-surgical patients does not contribute to CMI change. Accordingly, as noted previously, we are

proposing to adjust the national standardized 60-day episode payment amount to reflect the nominal change in the CMI.

4. Partial Episode Payment Adjustment (PEP Adjustment) Review

In our July 3, 2000 final rule (65 FR 41128), we described a PEP adjustment under the PPS. The PEP adjustment provides a simplified approach to the episode definition and accounts for key intervening events in a patient's care defined as a beneficiary elected transfer, or a discharge and return to the same HHA that warrants a new start of care for payment purposes, OASIS, and physician certification of the new plan of care. When a new 60-day episode begins, the original national standardized 60-day episode payment rate is proportionally adjusted to reflect the length of time the beneficiary remained under the agency's care before the intervening event. The proportional payment is the PEP adjustment.

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

60-day episode payment rate. This method of proration in relation to the span of days between the first and last billable service date assumes that the rate of visits through time is constant during the episode period.

Since the July 2000 final rule, we have received comments and correspondence pertaining to the PEP adjustment. These have guided our research efforts since the HH PPS has been in place. Through a contract with Abt Associates, descriptive analysis has been conducted on a large sample of claims linked to OASIS assessments from the first 3 years of the HH PPS in an effort to better understand the patient characteristics associated with PEP-adjusted episodes and the circumstances under which PEP-adjusted episodes occur. Analysis of patient characteristics revealed no appreciable differences between patients in normal episodes and patients in PEP episodes with regard to conditions or clinical characteristics. (Normal episodes are defined as home health episodes of care that are not subject to any of the payment systems adjustments (for instance, LUPAs, PEPs, SCICs).) The mix of visits for PEP episodes is similar to that of normal episodes.

Additionally, analysis of a 20 percent sample of 2003 episodes showed that approximately 3 percent of all episodes were PEP-adjusted. Of those, three types of PEP-adjusted episodes were identified: approximately 55 percent of

PEP-adjusted episodes involved a discharge and return to the same HHA; about 42 percent involved transfers to other agencies; and approximately 3 percent involved a move to managed care. Regarding the circumstances under which PEP-adjusted episodes occur, analysis showed the incidence of inpatient utilization during the 60 days following the first day of a PEP-adjusted episode was 14.5 percent which is lower than the incidence during normal episodes (21.4 percent). The lower incidence of hospitalizations for patients with PEP-adjusted episodes may indicate that these patients are in better health than the average home health patient. Along with the patient characteristics we examined, this seems to suggest that patients experiencing PEP episodes are not necessarily very different from the overall population of home health beneficiaries.

As part of our research efforts, we also examined the different components that make up PEP episodes. Our analysis showed that PEP-adjusted episodes have significantly shorter service periods on average (approximately 23.4 days) than all episodes other than LUPAs and SCIC episodes (42.0 days). The average of 23.4 days was calculated by dividing PEP episodes into their four components. The number of days between the start of the episode and the first billable visit averaged 0.2 days, or 0.4 percent of a full 60-day episode. The paid days, or the days between the first billable and last billable visit

days, averaged 23.4 days or 38.9 percent of a full 60-day episode. The number of days between last billable visit to the new episode from-date averaged 17.9 days, or 29.9 percent of a full 60-day episode. Finally, the number of days between the from-date of the new episode from-date to the first episode's original day 60 averaged 18.5 days or 30.8 percent of a full 60-day episode. Under the current system, payment for a PEP episode is adjusted to reflect the paid days only (23.4 days on average).

We further examined the number of visits that occurred during PEP episodes. We found that an average of 13.8 visits occur during PEP episodes. We recognize that this average represents 75 percent of the average number of visits for normal episodes, while the number of paid days represents less than 40 percent of the normal 60-day episode. Thus, the average proration fraction is about 40 percent of the normal episode payment while the number of visits is approximately 75 percent of the number delivered during the average normal episode. Additionally, the average number of minutes per visit during a PEP episode is slightly longer than that of a normal episode for most types of visits. Both results provide evidence that there is some front-loading of visits compared to normal episodes, causing PEP episodes to have a faster average rate of visits during the span of days used to prorate the episode payment. Because the PEP adjustment proration methodology does not

take visit occurrence into account, commenters have argued that, PEP episodes appear to be systematically "underpaid".

As we described in the July 3, 2000 final rule, the decision to use the span of billable visit dates was made because of the HHA's involvement in decisions influencing the intervening events for a beneficiary who elected transfer or discharge and returned to the same HHA during the same 60-day episode period. Agencies have some flexibility in discharge decisions that affect the likelihood of incurring a partial episode, whether or not a hospital stay intervenes. They also have indirect influence on a beneficiary's decision to transfer to another home care provider through the quality of care they provide. Current data suggest that PEP episodes are rare and, therefore, the current PEP policy may be serving as a deterrent to premature discharge. We believe that the PEP adjustment is provided in a manner that maintains the opportunity for Medicare patients to choose the provider with which they feel most comfortable. Therefore, we are proposing that the current system of proportional payments based on billable visit dates continue to be the payment methodology for PEP episodes. It should also be noted that in many cases, an HHA receives payment for an additional full episode which it might not have received had the first episode not been subject to a PEP adjustment. We will continue to research the nature of HHA resource use during and following PEP

episodes, as well as explore alternative methodologies for payment adjustment.

At this time, our analysis of PEP episodes does not suggest a more appropriate alternative payment policy. We believe that many alternative proration rules that we could devise would likely introduce adverse incentives into the HH PPS. For example, a proposal to pay PEP episodes amounts proportional to the average visit accrual rate we observe for PEP episodes would provide agencies with a financial incentive to reduce visits in the first few weeks of the episode and/or to time the date discharge in relation to the new, prorated schedule of payments. For many types of patients, such a delivery pattern would likely worsen patient outcomes. We would like to solicit suggestions and comments from the public on this matter to guide our continued efforts to improve the PEP adjustment policy.

5. Low-Utilization Payment Adjustment (LUPA) Review

In our July 3, 2000 final rule (65 FR 4117), we described a low-utilization payment to be implemented under the HH PPS. The LUPA was established to reduce the national standardized 60-day episode payment rate regardless if the episode is adjusted as a PEP adjustment or SCIC adjustment when minimal services are provided during a 60-day episode. LUPAs are episodes with four or fewer visits. Payments under a LUPA episode are made on a per-visit basis by discipline. For the July 2000 final rule, the per-visit

rates were determined from the audited cost report sample we used to design the HH PPS. (The same rates were used in calculating the standard episode amount.)

The per-visit amounts include payment for (1) non-routine medical supplies (NRS) paid under a home health plan of care, (2) NRS possibly unbundled to Part B, and (3) a per-visit ongoing OASIS reporting adjustment as discussed in the July 3, 2000 final rule (65 FR 41180). The LUPA payment rates are not case-mix adjusted. As discussed in the July 3, 2000 HH PPS final rule, a 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 per-visit rates originally listed in the July 2000 rule have been updated in the same manner as the standard episode amount. Additionally, the payments are adjusted by the wage index in the same manner as the standard episode amount.

As part of our ongoing research of the HH PPS and to analyze the general appropriateness of an adjustment for low-utilization episodes, Abt Associates analyzed a 20 percent sample of home health episodes covering more than three years of experience under the HH PPS. The analysis file was the Fu Associates analytical file linking OASIS with home health claims. This allowed the grouping of LUPAs

into categories for analysis of patient characteristics. There were approximately 179,845 LUPA episodes in this file, accounting for approximately 13 percent of episodes.

The analysis revealed minor differences between patients in LUPA episodes and patients in normal episodes. Although, overall, patients in LUPA episodes on average had somewhat lower clinical and functional severity, a substantial number of patients were in high severity groups. LUPA episodes were also just as likely as normal episodes to include a hospital stay during the 60-day episode. We believe that some LUPAs result from the hospitalization of the patient before a significant number of visits have been delivered.

One indication from these data is that LUPAs are serving as a low-end outlier payment for certain episodes that incur unexpectedly low costs. Other LUPAs result from expected care patterns for patients with conditions such as neurogenic bladder and pernicious anemia. The incidence of LUPAs has changed little since the HH PPS began, which suggests that LUPA episodes are not excessively vulnerable to incentives to manipulate care plans for payment purposes. However, we continue to believe that the distinction between LUPAs and full episodes requires sustained monitoring through medical review and other activities. Further, we are aware of the potential for inappropriate admissions into

LUPA episodes among patients with questionable medical necessity for home health care.

Since the HH PPS went into effect, we have received comments and correspondence pertaining to the LUPA policy. In particular, these have focused on the suggestion that LUPA payment rates do not adequately account for the front-loading of costs in an episode. Further, commenters suggested that because of the small number of visits in a LUPA episode, HHAs have little opportunity to spread the costs of lengthy initial visits over a full episode. CMS has also received comments regarding the appropriateness of the 4-visit threshold for LUPAs. CMS is not proposing to modify the 4-visit threshold for LUPA episodes in this proposed rule. We did look at, and consider, the 4-visit threshold and possible alternatives to that threshold in our analysis of LUPA episodes. Increasing the 4-visit threshold to some number greater than 4 would result in a HH PPS in which we have an even greater percentage of LUPA, which are per-visit reimbursed episodes and could be interpreted as a move closer toward a per-visit payment system. This is not the direction we want to go with a bundled prospective payment system as is the HH PPS. Conversely, decreasing the 4-visit threshold to some number less than 4 would result in an overpayment of episodes, in that episodes with 4 visits would then receive a full episode payment. As a result, we have concentrated our efforts to address the payment of

certain types of LUPA episodes, in particular, LUPA episodes occurring as the only episode and circumstances where a LUPA episode is the initial episode in a sequence of adjacent episodes.

To examine this assertion, Abt Associates conducted a descriptive analysis of LUPA episodes. Of particular interest are the findings pertaining to the average visit length of LUPAs occurring in the initial episode of a sequence of adjacent episodes or occurring as the only episode (constituting approximately 59 percent of all LUPA episodes). An examination of visit log data predating the HH PPS, used for the original Abt case-mix study (July 2000 Final Rule), revealed that the average visit length for nursing for an initial assessment is, on average, twice as long as the length for other nursing visits. Likewise, an initial assessment visit made by a physical therapist averaged 25 percent more than other physical therapy visits. These estimates paralleled findings from a 2001 Government Accountability Office (GAO) study that reported that the OASIS added an average of 40 minutes to a typical start of care visit. We found that the average visit lengths in initial and only episode LUPAs are 16 to 18 percent higher than the average visit length in initial non-LUPA episodes. In comparison, the average visit length for LUPA episodes that occurred between initial and ending episodes in a sequence of adjacent episodes (approximately 24 percent of

all LUPAs) or at the end of a sequence of adjacent episodes (approximately 17 percent of all LUPAs) is less than or about equal to average visit lengths for corresponding non-LUPA episodes.

The results of this data analysis suggest that initial and only episode LUPAs require longer visits, on average, than non-LUPA episodes, and that the longer average visit length is due to the start of care visit, when the case is opened and the initial assessment takes place. We agree with commenters to the extent that these analyses of initial and only episode LUPA episodes indicate that payments for such episodes may not offset the full cost of initial visits. This is likely due to the fact that the LUPA per-visit payment rates were originally set based on the costs of an average visit, not the costs of the subset of visits incurred by patients receiving four or fewer visits during an initial or only episode LUPA; for these patients, a large share of total visits comprises initial visits. However, the comparisons of average minutes per visit for LUPA episodes occurring within or at the end of a sequence of episodes do not support a proposal for payment increases for those types of LUPAs.

Based upon our initial review that initial or only episode LUPAs may not reflect the full costs incurred for the visits delivered, we then conducted further analysis to determine an appropriate payment increase for initial or only episode LUPAs. Analyzing a 10 percent sample of 2003

episodes, we found that 75 percent of LUPA episodes involved nursing without physical therapy while 15 percent of LUPAs involved physical therapy without skilled nursing. Almost all of the remaining 10 percent of episodes involved a mix of physical therapy and skilled nursing. Although the discipline that delivered the initial visit may not be identified in the sample file, for deriving payment rates based upon our analysis noted above, we have assumed the share of initial assessment visits from skilled nursing is 80 percent and the share of initial assessment visits from physical therapy is 20 percent. We then used these percentages to calculate the estimated value of 40 minutes added to the initial visit for start of care episodes. We relied upon the GAO report noted above, as the basis for the estimate of 40 minutes. For this calculation, we multiplied the current per-visit rate by the percentage increase in the average visit length. The average visit length was calculated from all non-LUPA episodes in the Abt sample file. Specifically, we multiplied, for the value of extra skilled nursing visits, the LUPA base rate of $105.07 for skilled nursing (trended forward from the original rate of $98.85) by the percentage over average skilled nursing visit length (0.860215) and by the share of initial assessment visits from skilled nursing (0.80). The product was $72.31. Next, we multiplied, for the value of extra physical therapy minutes, the LUPA base rate of $114.89 for physical therapy

(trended forward to CY 2008 from the original rate of $108.08) by the percentage over average physical therapy visit length (0.858369) and by the share of initial assessment visits from physical therapy (0.20). The product was $19.72. Finally, we summed these weighted values to calculate a total average value of $92.03 ($72.31 + $19.72 = $92.03).

In the July 3, 2000, HH PPS final rule (65 FR 41187), we adjusted the per-visit rate by 1.05 to account for outlier payments. Therefore, we are proposing to multiply the $92.03 by 1.05 and then reduce this amount to account for the estimated percentage of outlier payments as a result of the current FDL ratio of 0.67 (see section II.A.8. of this proposed regulation), resulting in an amount of $92.63.

Given the findings from the descriptive analysis of LUPA episodes and total average value of excess visit length for initial visits in certain LUPA episodes, we propose an increase of $92.63 for LUPA episodes that occur as the only episode or the initial episode during a sequence of adjacent episodes. Again, as defined in section II.A.2 of this proposed rule, a sequence of adjacent episodes is defined as a series of claims with no more than 60 days between the end of one episode and the beginning of the next episode (except for episodes that have been PEP-adjusted). In §484.230, we are proposing to add a third, fourth, and fifth sentence

after the second sentence to define the term "sequence of adjacent episodes" for the purpose of identifying situations where the LUPA is the beneficiary's only episode or the initial episode in a sequence of adjacent episodes. We propose to pay an additional low-utilization payment adjustment LUPA episodes which are either the only episode or the initial episode in a sequence of adjacent episodes, and note the additional payment for such LUPA episodes will be updated annually by the home health market basket percentage increase. As with the other components of the LUPA methodology, this increase for situations where a LUPA is the only episode or the initial episode in a sequence of adjacent episodes will be wage-adjusted. We believe this increase allows HHAs fair compensation for the cost of lengthier start of care visits in LUPA episodes. To maintain budget neutrality, we further propose that the national standardized 60-day episode payment rate be reduced. We determined the budget neutral national standardized 60-day episode payment rate that compensates for the extra payment of $92.63, as well as for other proposed changes in this proposed rule, from simulating the new payment system on our 2003 claims sample. The results are shown in the section II. D.

We are soliciting comments on our methodology for arriving at an adjustment to achieve fair compensation for the cost of lengthier start of care visits in LUPA episodes.

An alternative methodology is basing the estimated additional time on claims-based reports of lengths of the first visit in initial and only episode LUPAs. We expect to test the adequacy of such an alternative methodology using a large, representative CY 2005 claims sample that would be available before the final rule. We are specifically soliciting comments on alternative methodologies.

6. Significant Change in Condition (SCIC) Review

The SCIC adjustment occurs when a beneficiary experiences a SCIC during the 60-day episode that was not envisioned in the original plan of care. In our final rule published July 3, 2000 in the **Federal Register** (65 FR 41128), we established the SCIC adjustment to be the proportional payment adjustment reflecting the time both before and after the patient experienced a SCIC during the 60-day episode. 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 and obtain the necessary physician orders reflecting the significant change in treatment in the patient's plan of care.

Currently, the SCIC adjustment is calculated in two parts. The first part of the SCIC adjustment reflects the adjustment to the level of payment before 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 SCIC 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 before the SCIC that required an OASIS, physician orders indicating the need for a change in the treatment plan, and the new case-mix assignment for the remainder 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 a SCIC during the 60-day episode that required the new case-mix assignment. 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 SCIC and continuing until another significant change or until the end of the 60-day episode. Once the HHA completes the OASIS, determines the new case-mix assignment, and obtains the necessary physician change orders reflecting the need for a new course of treatment, 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 SCIC through the balance of the 60-day episode (or until the next significant change, if any) as a proportion of 60 multiplied by the new episode payment level resulting from the significant change.

Since we proposed the SCIC adjustment in October 1999 (64 FR 58134), we have received comments and correspondence regarding the appropriateness and the complexity of the SCIC adjustment methodology. These suggestions expressed concerns that SCIC adjustments may be difficult to apply appropriately. Additionally, analysis of HHA margins using a sample of approximately 2,500 cost reports suggested that SCIC episodes did not necessarily account for the cost associated with a patient in a SCIC episode. These concerns guided our descriptive analysis of SCIC episodes and our investigation of possible alternatives to SCIC adjustment.

The SCIC policy was designed and implemented primarily to protect HHAs from receiving a lower, inadequate payment for a patient that unexpectedly got worse and became more expensive to the agency during the course of a 60-day episode. While it is also possible that a patient could become unexpectedly better, resulting in a patient needing far fewer resources and costing the agency less, such instances were expected to be few. For patients who experienced an unexpected adverse significant change in condition, but the agency would actually receive lower

payments when applying the computation for deriving a SCIC payment, agencies were instructed that they did not have to report a SCIC.

Abt Associates, under contract to CMS to conduct analysis and simulation of refinements to HH PPS, first conducted several descriptive analyses examining the payment accuracy for SCIC-adjusted episodes. As with the LUPA, they used the Fu Associates' large analytic file consisting of home health claims linked to OASIS. Analyses included examination of trends in rates and other utilization statistics relating to SCIC episodes, OASIS characteristics for SCIC episodes, and estimation of margins for SCIC episodes.

Results of the analyses indicated that SCIC episodes have been declining since HH PPS began. Approximately 3.7 percent of episodes were reported as SCIC episodes in the first quarter of the HH PPS (October 1, 2000, to December 31, 2000); they decreased to 2.1 percent of episodes by the first quarter of CY 2004. SCIC episodes tended to be longer than the average episode (excluding LUPAs), and were more likely to occur in facility-based agencies and rural agencies. There was some evidence that the percentage of episodes in the highest category of the services utilization dimension of the case-mix system increased for SCIC episodes over time. SCIC episodes had a higher likelihood of using at least 10 therapy visits, and

this excess grew over time. Overall, patients experiencing SCIC episodes differed little in terms of case-mix characteristics from the average home health patient, except for a higher incidence of dyspnea, ADL limitations, and those recently discharged from acute care.

The margin analysis suggested that, on average, SCIC episodes had negative margins, even though the SCIC payment policy allows agencies to avoid declaring a SCIC if an episode that experiences an adverse significant change in condition would be paid less than the original case-mix adjusted payment. One reason for the negative margin estimate appears to be that in some cases agencies inappropriately applied the SCIC adjustment for patients experiencing a significant adverse change, when in doing so the agency actually received lower payments for those patients. Also, the proportional payment policy, which reduces payment in proportion to the number of days between the last visit before the significant change in condition and the first visit following the significant change, results in increasingly lower payments as the number of days between the last and next visit increases. In contrast, a normal episode payment is not affected by periods when visits do not occur.

As noted above, we believe that HHAs have had difficulty in interpreting when to apply the SCIC adjustment policy. Agencies also reported additional administrative

burdens from adhering to the policy. Furthermore, there has been a 2 percent decline in use of the SCIC adjustments since the implementation of the HH PPS. We have received comments that stated eliminating the SCIC policy altogether might be better than having a SCIC policy that is difficult to understand and adhere to. Given these concerns, we decided to focus our analysis on simulating the impact of eliminating the SCIC adjustment policy. We performed this simulation by re-pricing SCIC claims to use the first HHRG during the episode for determining the payment, and eliminating any proration. We then compared the total expenditures before and after making this change.

The results of eliminating the SCIC policy suggested little impact on outlays—an increase of 0.5 percent of total payments. The difference in total payments was less than one-half of one percent for all categories of agencies (urban versus rural, by size, and ownership).

Based on these findings, we are proposing to eliminate the SCIC adjustment from the HH PPS. Specifically, we are proposing in §484.205 to remove paragraph (e) concerning the SCIC adjustment policy from the HHA PPS. We are also proposing to redesignate paragraph (f) as paragraph (e). In addition, we are proposing to amend our regulations at §484.205 by removing paragraph (a)(3) and redesignating paragraph (a)(4) as paragraph (a)(3). Furthermore, we proposing to revise paragraph (b) introductory text, to read

as follows: "(b) Episode payment. The national prospective 60-day episode payment represents payment in full for all costs associated with furnishing home health services previously paid on a reasonable cost basis (except the osteoporosis drug listed in section 1861(m) of the Act as defined in section 1861(kk) of the Act) 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 reflecting beneficiary eligibility, medical necessity determinations, and HHRG assignment. DME provided as a home health service as defined in section 1861(m) of the Act continues to be paid the fee schedule amount." We are also proposing to remove §484.237 relating to the methodology used for the calculation of the significant change in condition payment adjustment.

Episodes that are currently SCIC adjusted would be treated as normal episodes and will receive payment for the entire 60-day period based on the initial, and only, HHRG code. The national standardized 60-day episode payment rate in section II.A.2.c of the proposed rule takes into account this proposed change in SCIC policy and is, therefore, slightly lower than it would have been without proposing this change. We believe the elimination of the SCIC adjustment policy would have a minor impact on home health agency operations and revenues, because SCIC episodes are

very infrequent. Our estimate of the cost of eliminating the SCIC policy, implemented in a budget neutral manner as a reduction to the national standardized 60-day payment rate, is presented in section II.D and reported in the accompanying table (Table 23b). The estimated reduction is $15.71. We discussed this proposal at a meeting with the contractor's TEP in March 2006. We received favorable feedback noting that our proposal would be an appropriate simplification of the HH PPS.

7. Non-Routine Medical Supply (NRS) Amounts Review

As described in the HH PPS final rule published in the **Federal Register** (65 FR 41180) and modified in the June 1, 2001, correction notice (66 FR 32777), the NRS amounts included in the per-episode payment and initially paid on a reasonable cost basis under a home health plan of care, were calculated by summing the NRS costs using audited cost reports from 1997. The NRS costs for all the providers in that audited cost report sample were then weighted to represent the national population and updated to FY 2001. That weighted total was divided by the number of episodes for the providers in the audited cost report sample, to obtain the average cost per episode of NRS reported as costs on the cost report. This amount was $43.54.

The possible unbundled NRS, billed under Medicare Part B and not reflected in on the home health cost report, were also included in the HH PPS national standardized

60-day episode payment rate by summing the allowed charges for 176 Healthcare Common Procedure Coding System (HCPCS) codes, reflecting NRS codes, in CY 1998 for beneficiaries under a home health plan of care. That total was divided by the total number of episodes in CY 1998 from the episode database, to obtain the average cost of unbundled NRS per episode. This amount was $6.08.

The total of the two amounts $43.54 and $6.08, or $49.62, was added to the national total prospective payment amount per 60-day episode for CY 2001 (before standardization). The standardized amount has been subsequently updated annually.

Since the proposal and adoption of this methodology for payment of NRS, we have received comments expressing concern about the cost of supplies for certain patients with "high" supply costs. In particular, commenters were concerned about the adequacy of payment for some patients with pressure ulcers, stasis ulcers, other ulcers, wounds, burns or trauma, cellulitis, and skin cancers.

In general, NRS use is unevenly distributed across episodes of care in home health. While most patients do not use NRS, many use a small amount, and a small number of patients use a large amount of NRS. The payment for NRS included in the HH PPS standardized payment rate does not reflect this distributional variation. Furthermore, the current case-mix adjustment of the standardized amount,

which effectively adjusts the NRS payment we originally included, may not be the most appropriate way to account for NRS costs.

In order to investigate the performance of the payment methodology for NRS and to explore an approach to case-mix adjustment of the NRS component of the payment, our contractor, Abt Associates, performed several analyses of the current system. The analysis file was constructed by Abt Associates from a sample of 2001 cost reports, which were needed to determine cost-to-charge ratios. The cost reports were then linked to claims. The claims came from an analytic file constructed by Fu Associates that links home health claims and OASIS.

The cost report sample was analyzed to detect or correct extremely implausible cost data (that is, if cost report erroneously inverted ratio of costs to charges, this was corrected). Many cost reports were dropped after this initial analysis because the cost-to-charge ratio for nonroutine medical supplies was zero. Then, we retrieved Medicare claims for patients admitted to the agencies with remaining cost reports, in order to ensure that the cost report totals for non-routine supplies were consistent with total charges for non-routine supplies that we obtained from the provider's claims. Additional cost reports were dropped from the sample at this step. At the end of this process, from an initial sample of 2,864 cost reports, 1,207 cost reports were considered usable.

The cost report data were then merged with a random sample of data from 496,237 "normal" home health episodes from the same set of agencies used in the sample data. Normal episodes were defined as episodes that did not include additional adjustments such as LUPAs or PEP adjustments. "Cost-to-charge" ratios generated from the cost reports were used to estimate NRS costs for the episodes in the sample.

The exploration of case-mix adjustment for NRS costs was conducted in a manner similar to the way Abt Associates developed the initial case-mix model. We created regression equations that used OASIS measures to predict episode-level NRS costs. One equation used the current case-mix variables. This equation explained approximately 10 percent of the variation in NRS costs in this data sample. This provided a baseline against which to judge the performance of set variables that differ from the set used in the current HH PPS case-mix system.

Models were developed after creating additional variables from OASIS items and targeting certain conditions expected to be predictors of NRS use based on clinical considerations. Many of these conditions were skin-related.

The end result of the model exploration process was two versions of the "best-fitting" variable set. This best fitting variable set consisted of more than two dozen indicators for diagnoses, wound conditions, and certain

prosthetics captured on the OASIS. The variables could be used as the basis for improved prediction of NRS costs. These variables represent measurable conditions that have been the subject of extensive education by CMS in its administration of the OASIS system, and by others such as the ICD-9-CM coding committee with its interest in coding accuracy. Therefore, we believe this variable set would be the basis for a methodology to account for NRS costs that is feasible to administer and does not create significant new payment concerns.

The first alternative model using the best-fitting variables divided episodes into two episode groups, with one group containing first and second episodes (early), and the second containing third and later episodes (later). The second alternative model does not distinguish between early and later episodes. These "best fit" models were then used to construct a scoring system. Each condition in the best-fit models was assigned one point for each $5 increment in NRS cost as determined from the model results. For example, if a variable representing a clinical condition predicted a $50 increase in cost, an episode with that variable would be given 10 points. We summed the condition-specific scores for each episode. We then placed those sums into five severity groups. For the model that separated early from later episodes we defined 10 severity groups, five for early episodes and 5 for later episodes.

This system explained about 13.7 percent of NRS cost variation in the sample. The model that pooled all episodes had 5 severity groups and explained 13.0 percent of the variation in NRS costs.

We note, because there is a limited performance advantage of the two-episode group model over the single model, we are proposing to use the simpler model that pays all episodes, whether early or later episodes, using the same set of severity groups. Table 11 shows the relative weights and payment weights for the five severity levels in the proposed NRS model, and Table 12a sets forth the NRS scores for the five-group model. We will continue to evaluate the ICD-9-CM codes listed for each group (Table 12b) to ensure as much as possible that condition-related scores are based on ICD-9-CM codes that are specific, unambiguous, and use diagnostic criteria widely accepted within the medical community. In addition to refining the list of conditions contained within each diagnostic groups (Table 12b), we intend to continue to study ways of improving the statistical performance of all the variables represented in Table 12a. We solicit public comment to help inform our efforts. We also intend to update the data base upon which our payment proposal for NRS is based. Our ability to update the data files will depend on the quality of data available in claims and cost reports for succeeding years. If the data are not found to be

sufficiently complete and accurate, we would use the existing data for any final revisions that result from further analysis and public comments.

In addition to computing the R-square statistic as a summary of the system's performance, we examined the improvements in payment accuracy for NRS costs per episode, according to selected characteristics of the episode. The magnitude of change is difficult to report with a high degree of certainty because of the limited data resources available for these analyses.

We found that under our proposal NRS payments for episodes reporting no NRS charges on the episode claim would better reflect the absence of NRS costs incurred in such an episode, by having their payment for NRS reduced. For the remaining claims--those reporting any amount of NRS costs—- on average we estimate that NRS payments would come significantly closer to their estimated NRS costs under the proposed new system of accounting for NRS. For the subgroups of episodes with the OASIS conditions listed in Table 11, under our proposal, the difference between the estimate of average NRS costs incurred and the proposed amount to account for those NRS costs would decrease in a similar manner, with some differences becoming even smaller.

However, our ability to predict NRS cost remains limited. We have not yet developed a statistical model that has performed with a high degree of predictive accuracy. Some of the reasons for this result include the limited data

available to model NRS costs, and the likelihood that OASIS does not have any measures available for some kinds of NRS. Nevertheless, we are proposing to change the payment system because the majority of episodes do not incur any NRS costs, and the current payment system overcompensates these episodes. Further, we believe the proposed approach is appropriate to the extent that we have developed a way to account for NRS costs that is based on measurable conditions, is feasible to administer, and offers HHAs some protection against episodes with extremely high NRS costs. As we noted earlier in this section, we will continue to look into ways to improve the predictive model we are proposing to account for NRS costs. We solicit suggestions and comments from the public on this matter.

In the course of conducting the NRS analysis, we discovered a possible source of error in reporting on claims. Data analysis suggested that enteral nutrition patients were incurring higher NRS costs than average and, in our model, could be assigned a moderate score for NRS cost. However, we did not find evidence from our analyses that any category of NRS other than enteral supplies would systematically account for the NRS finding in the model for enteral nutrition patients. These patients often have a very compromised health status, including skin and other conditions that are already accounted for in our model. Further, we explored other possibilities to determine if information was missing from the model. If available, such

information could be added to the model to explain the scores we found for the enteral nutrition variable. However, we did not gather any information that produced any additional hypotheses. An important remaining hypothesis is that some providers are reporting enteral supplies charges for these patients in error; in fact, at least one large provider has indicated this was the case. We are proposing to exclude the enteral nutrition variable from the model to ensure compliance with the statute and regulations governing enteral nutrition, as noted below; but, we welcome comments on this issue.

As we stated in the final HH PPS rule dated July 3, 2000 (65 FR 41139), "Part B services such as parenteral or enteral nutrition are neither currently covered as home health services nor defined as non-routine medical supplies. Parenteral or enteral nutrition would therefore not be subject to the requirements governing home health consolidated billing."

If the patient requires medical supplies that are currently covered and paid for under the Medicare home health benefit during a certified episode under HH PPS, the billing for those medical supplies falls under the auspices of the HHA due to the consolidated billing requirements. As parenteral and enteral nutrition are not covered or paid for under the Medicare home health benefit, they should be billed separately by the supplier or provider. Because we assumed that some providers are reporting these supplies in error, we believe it is important to again to note the

Medicare coverage requirements for parenteral and enteral nutrition to prevent any potential future reporting errors.

Medicare's coverage guidelines for enteral nutrition state: "Coverage of nutritional therapy as a Part B benefit is provided under the prosthetic device benefit provision which requires that the patient must have a permanently inoperative internal body organ or function thereof. Therefore, enteral and parenteral nutritional therapy is not covered under Part B in situations involving temporary impairments." The National Coverage Decision (NCD) provides guidance in applying the definition of temporary impairment: "Coverage of such therapy, however, does not require a medical judgment that the impairment giving rise to the therapy will persist throughout the patient's remaining years. If the medical record, including the judgment of the attending physician, indicates that the impairment will be of long and indefinite duration, the test of permanence is considered met." (See Medicare National Coverage Determinations [NCD] Manual, Pub. 100-03, Section 180.2, Chapter 1 (Part 3). Section 1842(s) of the Act implements the fee schedule for parenteral and enteral nutrition (PEN) nutrients, equipment and supplies. The general payment rules for PEN effective on or after January 1, 2002, are stipulated in §414.102 and §414.104.

The following is the list of HCPCS codes which may be used to claim reimbursement for enteral nutrition. Providers may claim reimbursement for it on the UB-92 claim form if they report the appropriate HCPCS code and revenue

center code. Payment is made by the RHHI under the Medicare Fee Schedule.

Enteral Items and Services

A5200	PERCUTANEOUS CATHETER/TUBE ANCHORING DEVICE, ADHESIVE SKIN ATTACHMENT
A9270	NON-COVERED ITEM OR SERVICE
B4034	ENTERAL FEEDING SUPPLY KIT; SYRINGE, PER DAY
B4035	ENTERAL FEEDING SUPPLY KIT; PUMP FED, PER DAY
B4036	ENTERAL FEEDING SUPPLY KIT; GRAVITY FED, PER DAY
B4081	NASOGASTRIC TUBING WITH STYLET
B4082	NASOGASTRIC TUBING WITHOUT STYLET
B4083	STOMACH TUBE - LEVINE TYPE
B4086	GASTROSTOMY / JEJUNOSTOMY TUBE, ANY MATERIAL, ANY TYPE, (STANDARD OR LOW PROFILE), EACH
B4100	FOOD THICKENER, ADMINISTERED ORALLY, PER OUNCE
B4102	ENTERAL FORMULA, FOR ADULTS, USED TO REPLACE FLUIDS AND ELECTROLYTES (E.G. CLEAR LIQUIDS), 500 ML = 1 UNIT
B4103	ENTERAL FORMULA, FOR PEDIATRICS, USED TO REPLACE FLUIDS AND ELECTROLYTES (E.G. CLEAR LIQUIDS), 500 ML = 1 UNIT
B4104	ADDITIVE FOR ENTERAL FORMULA (E.G. FIBER)
B4149	ENTERAL FORMULA, MANUFACTURED BLENDERIZED NATURAL FOODS WITH INTACT NUTRIENTS, INCLUDES PROTEINS, FATS, CARBOHYDRATES, VITAMINS AND MINERALS, MAY INCLUDE FIBER, ADMINISTERED THROUGH AN ENTERAL FEEDING TUBE, 100 CALORIES = 1 UNIT
B4150	ENTERAL FORMULA, NUTRITIONALLY COMPLETE WITH INTACT NUTRIENTS, INCLUDES PROTEINS, FATS, CARBOHYDRATES, VITAMINS AND MINERALS, MAY INCLUDE FIBER, ADMINISTERED THROUGH AN ENTERAL FEEDING TUBE, 100 CALORIES = 1 UNIT
B4152	ENTERAL FORMULA, NUTRITIONALLY COMPLETE, CALORICALLY DENSE (EQUAL TO OR GREATER THAN 1.5 KCAL/ML) WITH INTACT NUTRIENTS, INCLUDES PROTEINS, FATS, CARBOHYDRATES, VITAMINS AND MINERALS, MAY INCLUDE FIBER, ADMINISTERED THROUGH AN ENTERAL FEEDING TUBE, 100 CALORIES = 1 UNIT
B4153	ENTERAL FORMULA, NUTRITIONALLY COMPLETE, HYDROLYZED PROTEINS (AMINO ACIDS AND PEPTIDE CHAIN), INCLUDES FATS, CARBOHYDRATES, VITAMINS AND MINERALS, MAY INCLUDE FIBER, ADMINISTERED THROUGH AN ENTERAL FEEDING TUBE, 100 CALORIES = 1 UNIT
B4154	ENTERAL FORMULA, NUTRITIONALLY COMPLETE, FOR SPECIAL METABOLIC NEEDS, EXCLUDES INHERITED DISEASE OF METABOLISM, INCLUDES ALTERED COMPOSITION OF PROTEINS, FATS, CARBOHYDRATES, VITAMINS AND/OR MINERALS, MAY INCLUDE FIBER, ADMINISTERED THROUGH AN ENTERAL FEEDING TUBE, 100 CALORIES = 1 UNIT
B4155	ENTERAL FORMULA, NUTRITIONALLY INCOMPLETE/MODULAR NUTRIENTS, INCLUDES SPECIFIC NUTRIENTS, CARBOHYDRATES (E.G. GLUCOSE POLYMERS), PROTEINS/AMINO ACIDS (E.G. GLUTAMINE, ARGININE), FAT (E.G. MEDIUM CHAIN TRIGLYCERIDES) OR COMBINATION, ADMINISTERED THROUGH AN ENTERAL FEEDING TUBE, 100 CALORIES = 1 UNIT
B4157	ENTERAL FORMULA, NUTRITIONALLY COMPLETE, FOR SPECIAL METABOLIC NEEDS FOR INHERITED DISEASE OF METABOLISM, INCLUDES PROTEINS, FATS, CARBOHYDRATES, VITAMINS AND MINERALS, MAY INCLUDE FIBER, ADMINISTERED THROUGH AN ENTERAL FEEDING TUBE, 100 CALORIES = 1 UNIT
B4158	ENTERAL FORMULA, FOR PEDIATRICS, NUTRITIONALLY COMPLETE WITH INTACT NUTRIENTS, INCLUDES PROTEINS, FATS, CARBOHYDRATES, VITAMINS AND MINERALS, MAY INCLUDE FIBER AND/OR IRON, ADMINISTERED THROUGH AN ENTERAL FEEDING TUBE, 100 CALORIES = 1 UNIT
B4159	ENTERAL FORMULA, FOR PEDIATRICS, NUTRITIONALLY

	COMPLETE SOY BASED WITH INTACT NUTRIENTS, INCLUDES PROTEINS, FATS, CARBOHYDRATES, VITAMINS AND MINERALS, MAY INCLUDE FIBER AND/OR IRON, ADMINISTERED THROUGH AN ENTERAL FEEDING TUBE, 100 CALORIES = 1 UNIT
B4160	ENTERAL FORMULA, FOR PEDIATRICS, NUTRITIONALLY COMPLETE CALORICALLY DENSE (EQUAL TO OR GREATER THAN 0.7 KCAL/ML) WITH INTACT NUTRIENTS, INCLUDES PROTEINS, FATS, CARBOHYDRATES, VITAMINS AND MINERALS, MAY INCLUDE FIBER, ADMINISTERED THROUGH AN ENTERAL FEEDING TUBE, 100 CALORIES = 1 UNIT
B4161	ENTERAL FORMULA, FOR PEDIATRICS, HYDROLYZED/AMINO ACIDS AND PEPTIDE CHAIN PROTEINS, INCLUDES FATS, CARBOHYDRATES, VITAMINS AND MINERALS, MAY INCLUDE FIBER, ADMINISTERED THROUGH AN ENTERAL FEEDING TUBE, 100 CALORIES = 1 UNIT
B4162	ENTERAL FORMULA, FOR PEDIATRICS, SPECIAL METABOLIC NEEDS FOR INHERITED DISEASE OF METABOLISM, INCLUDES PROTEINS, FATS, CARBOHYDRATES, VITAMINS AND MINERALS, MAY INCLUDE FIBER, ADMINISTERED THROUGH AN ENTERAL FEEDING TUBE, 100 CALORIES = 1 UNIT
B9000	ENTERAL NUTRITION INFUSION PUMP - WITHOUT ALARM
B9002	ENTERAL NUTRITION INFUSION PUMP - WITH ALARM
B9998	NOC FOR ENTERAL SUPPLIES
E0776	IV POLE

Notwithstanding our proposal to exclude enteral nutrition from the list of conditions included as NRS, we now describe our proposed revision to the payment methodology to account for NRS costs. We propose to account for NRS costs based on five severity groups and a national conversion factor. Table 12a shows the condition-specific scores derived from the NRS model. Table 12b shows the ICD-9-CM diagnosis codes used to define conditions that are based on diagnosis codes. The sum of scores for each episode is then used to group episodes into one of five severity groups, as follows: Group 0 if the sum is zero; group 1 for 1 to 16; group 2 for 17 to 34; group 3 for 35 to 59; and group 4 for 60 or more. We defined these five scoring levels from examining the distribution of scores in our analysis sample. Most of the episodes (64 percent, see

Table 11) fell into the group with a score of zero (that is, no conditions listed in Table 12b were reported on the OASIS assessment). For purposes of payment, relative weights were calculated for each severity group based on the estimated average NRS cost, divided by the overall average in the sample. The relative weights are listed below in Table 11.

To derive payment, each relative weight is multiplied by the conversion factor. We calculated the conversion factor by inflating the original allowance included in the episode base rate ($49.62) by the total percentage increase since October 2000 using the statutory market basket updates. We take the inflated conversion factor of $53.91 and multiply it by 1.05 to account for the initial outlier payment noted in the July 3, 2000 final rule (65 FR 41187). We then take that product and multiply it by 0.958614805 to account for the estimated percentage of outlier payments as a result of the current FDL ratio of 0.67. To further adjust for the nominal change in case-mix, we multiply the $54.26 by 0.9725 for a proposed NRS conversion factor of $52.77. Because the market for most NRS is national, we do not propose to have a geographic adjustment to the conversion factor. We plan to continue to monitor NRS costs to determine if any adjustment for the NRS weights is warranted in the future.

We determined the budget-neutral national standardized 60-day episode payment rate that compensates for the payments for NRS under the proposed new case-mix-adjusted HH PPS as part of the simulation of all proposed changes on our 2003 claims sample. The results are shown in the section II.D.

For an example of calculating a HH PPS payment using the NRS proposed payment methodology see section II.D.

We do not propose to apply the five-level NRS payment approach to LUPA episodes. In the original design of the HH PPS, $1.94 was built into the per-visit rates used to pay for visits in a LUPA episode. This amount was the sum of $1.71, the average cost per visit for NRS reported as costs on the cost report, and $.23, the average cost per visit for NRS possibly unbundled and billed separately to Part B and reimbursed on the fee schedule. Recent analysis shows that NRS charges for non-LUPA episodes are almost 3 times higher than that for LUPA episodes. In general, approximately 1 in 5 LUPAs report NRS while 1 in 3 non-LUPA episodes report NRS. Our proposal is to redistribute the $53.96 currently paid to all non-LUPA episodes. Given that LUPA episodes, by nature, are of extremely low visit volume, we do not propose to redistribute that $1.94 now paid to LUPA episodes. We believe an attempt to develop a model for redistributing the small amount of NRS payments ($1.94) paid to LUPA episodes would be unproductive.

Furthermore, we are also concerned that additional payment for LUPAs to account for NRS costs could promote increases in medically unnecessary home health episodes. In proposing refinements for LUPA payments, as discussed in the section II.A.5 of this proposed rule, we are aware of the potential for increases in medically unnecessary LUPA episodes that could result from our proposal for increased LUPA payment for only or initial LUPA episodes. Providing for additional NRS payments for such LUPAs could only adversely add to this potential. Consequently, we are not proposing any additional payments for NRS costs for LUPA episodes. However, we are specifically soliciting comment on alternative approaches for NRS payment in LUPAs.

We also considered proposing an outlier policy for NRS costs, but we believe one is not administratively feasible at this time. An outlier policy for NRS costs would depend on having an infrastructure, including a reporting system for the extensive range of nonroutine supplies used in home health care, and a basis for assigning allowable costs for those supply items. At this time, this kind of infrastructure is not sufficiently developed. Many types of NRS cannot be coded under the existing reporting system, the HCPCS system, and reliable cost data are limited. Therefore, at this time, we also believe an outlier policy for NRS cost would be premature. We also recognize the additional administrative burdens on agencies that would

exist under such an outlier policy.

While we are not proposing an outlier policy for NRS costs, we nonetheless urge agencies to provide cost data on cost reports and charge data on all claims (including LUPA claims) with the utmost precision for possible future use in developing payment proposals for NRS under the HH PPS.

Table 11: Proposed Relative Weights for Non-routine Medical Supplies

Severity Level	Percentage of Episodes	Points (Scoring)	Relative Weight	Payment Amount
0	63	0	0.2456	$12.96
1	17	1 – 16	1.0356	$54.65
2	12	17 – 34	2.0746	$109.48
3	5	35 – 59	4.0776	$215.17
4	3	60+	6.9612	$367.34

Note: Proposed conversion factor = $52.77.

Table 12a: NRS Case-Mix Adjustment Variables and Scores

	Description	Score
SELECTED SKIN CONDITIONS:		
1	Primary diagnosis = Anal fissure, fistula and abscess	19
2	Primary diagnosis = Cellulitis and abscess	13
3	Primary diagnosis = Gangrene	11
4	Primary diagnosis = Malignant neoplasms of skin	16
5	Primary diagnosis = Non-pressure and non-stasis ulcers	9
6	Primary diagnosis = Other infections of skin and subcutaneous tissue	19
7	Primary diagnosis = Post-operative Complications 1	32
8	Primary diagnosis = Post-operative Complications 2	22
9	Primary diagnosis = Traumatic Wounds and Burns	16
10	Other diagnosis = Anal fissure, fistula and abscess	9
11	Other diagnosis = Cellulitis and abscess	6
12	Other diagnosis = Gangrene	11
13	Other diagnosis = Non-pressure and non-stasis ulcers	8
14	Other diagnosis = Other infections of skin and subcutaneous tissue	7
15	Other diagnosis = Post-operative Complications 1	15
16	Other diagnosis = Post-operative Complications 2	15
17	Other diagnosis = Traumatic Wounds and Burns	7
18	M0450 = 1 pressure ulcer, stage 1 or 2	12
19	M0450 = 2 or 3 pressure ulcers, stage 1 or 2	20
20	M0450 = 4+ pressure ulcers, stage 1 or 2	31
21	M0450= 1 or 2 pressure ulcers, stage 3 or 4	41
22	M0450= 3 pressure ulcers, stage 3 or 4	75
23	M0450= 4+ pressure ulcers, stage 3 or 4	80
24	M0450= 5+ pressure ulcers, stage 3 or 4	143
25	M0450e = 1(unobserved pressure ulcer(s))	18

26	M0476 = 2 (status of most problematic stasis ulcer: early/partial granulation)	18
27	M0476 = 3 (status of most problematic stasis ulcer: not healing)	28
28	M0488 = 3 (status of most problematic surgical wound: not healing)	18
29	M0488 = 2 (status of most problematic surgical wound: early/partial granulation)	5
OTHER CLINICAL FACTORS:		
30	M0550=1(ostomy not related to inpt stay/no regimen change)	21
31	M0550=2 (ostomy related to inpt stay/regimen change)	35
32	Any "Selected Skin Conditions" (see rows 1 to 29 above) AND M0550=1(ostomy not related to inpt stay/no regimen change)	24
33	Any "Selected Skin Conditions" (see rows 1 to 29 above) AND M0550=2 (ostomy related to inpt stay/regimen change)	8
34	M0250 (Therapy at home) =1 (IV/Infusion)	11
35	M0470 = 2 or 3 (2 or 3 stasis ulcers)	17
36	M0470 = 4 (4 stasis ulcers)	34
37	M0520 = 2 (patient requires urinary catheter)	17

Table 12b : ICD-9-CM Diagnoses Included in the Diagnostic Categories for the Nonroutine Supplies (NRS) Case-Mix Adjustment Model

Diagnostic Category	ICD-9-CM Code*	Short Description of ICD-9-CM Code
Anal fissure, fistula and abscess	565	ANAL FISSURE AND FISTULA
	566	ABSCESS OF ANAL AND RECTAL REGIONS
Cellulitis and abscess	681	CELLULITIS&ABSCESS OF FINGER&TOE
	682	OTHER CELLULITIS AND ABSCESS
Gangrene	440.24	ATHERSCLER-ART EXTREM W/GANGRENE
	785.4	GANGRENE
Malignant neoplasms of skin	172	MALIGNANT MELANOMA OF SKIN
	173	OTHER MALIGNANT NEOPLASM OF SKIN
Non-pressure and non-stasis ulcers	440.23	ATHEROSCLER-ART EXTREM W/ULCERATION
	707.1	ULCER LOWER LIMBS EXCEPT DECUBITUS
	707.8	CHRONIC ULCER OTHER SPECIFIED SITE
	707.9	CHRONIC ULCER OF UNSPECIFIED SITE
Other infections of skin and subcutaneous tissue	680	CARBUNCLE AND FURUNCLE

	683	ACUTE LYMPHADENITIS
	684	IMPETIGO
	685	PILONIDAL CYST
	686	OTH LOCAL INF SKIN&SUBCUT TISSUE
Post-operative Complications 1	998.1	HEMORR/HEMAT/SEROMA COMP PROC NEC
	998.2	ACC PUNCT/LACERATION DURING PROC NEC
	998.3	DISRUPTION OF OPERATION WOUND NEC
	998.4	FB ACC LEFT DURING PROC NEC
Post-operative Complications 2	998.5	POSTOPERATIVE INFECTION NEC
	998.6	PERSISTENT POSTOPERATIVE FIST NEC
	998.83	NON-HEALING SURGICAL WOUND NEC
Traumatic Wounds and Burns	870	OPEN WOUND OF OCULAR ADNEXA
	872	OPEN WOUND OF EAR
	873	OTHER OPEN WOUND OF HEAD
	874	OPEN WOUND OF NECK
	875	OPEN WOUND OF CHEST
	876	OPEN WOUND OF BACK
	877	OPEN WOUND OF BUTTOCK
	878	OPEN WND GNT ORGN INCL TRAUMAT AMP
	879	OPEN WOUND OTH&UNSPEC SITE NO LIMBS
	880	OPEN WOUND OF SHOULDER&UPPER ARM
	881	OPEN WOUND OF ELBOW FOREARM&WRIST
	882	OPEN WOUND HAND EXCEPT FINGER ALONE
	883	OPEN WOUND OF FINGER
	884	MX&UNSPEC OPEN WOUND UPPER LIMB
	885	TRAUMATIC AMPUTATION OF THUMB
	886	TRAUMATIC AMPUTATION OTHER FINGER
	887	TRAUMATIC AMPUTATION OF ARM&HAND
	890	OPEN WOUND OF HIP AND THIGH
	891	OPEN WOUND OF KNEE, LEG , AND ANKLE
	892	OPEN WOUND OF FOOT EXCEPT TOE ALONE
	893	OPEN WOUND OF TOE
	894	MX&UNSPEC OPEN WOUND LOWER LIMB
	895	TRAUMATIC AMPUTATION OF TOE
	896	TRAUMATIC AMPUTATION OF FOOT
	897	TRAUMATIC AMPUTATION OF LEG
	941	BURN OF FACE, HEAD, AND NECK
	942	BURN OF TRUNK
	943	BURN UPPER LIMB EXCEPT WRIST&HAND

	944	BURN OF WRIST AND HAND
	945	BURN OF LOWER LIMB
	946	BURNS OF MULTIPLE SPECIFIED SITES
	948	BURN CLASS ACCORD-BODY SURF INVOLVD
	949	BURN, UNSPECIFIED SITE

*Note: "ICD-9-CM Official Guidelines for Coding and Reporting" dictate that a three-digit code is to be used only if it is not further subdivided. Where fourth-digit subcategories and/or fifth-digit subclassifications are provided, they must be assigned. A code is invalid if it has not been coded to the full number of digits required for that code. Codes with three digits are included in ICD-9-CM as the heading of a category of codes that may be further subdivided by the use of fourth and/or fifth digits, which provide greater detail. The category codes listed in Table 12b include all the related 4-and 5-digit codes.

8. Outlier Payment Review

Section 1895(b)(5) of the Act allows for the provision of an addition or adjustment to the regular 60-day case-mix and wage-adjusted episode payment amount in the case of episodes that incur unusually large costs due to patient home health care needs. This section further stipulates that total outlier payments in a given CY may not exceed 5 percent of total projected estimated HH PPS payments.

In the July 2000 final rule, we described a method for determining outlier payments. Under this system, outlier payments are made for episodes whose estimated cost exceeds a threshold amount. The episode's estimated cost is the sum of the national wage-adjusted per-visit payment amounts for all visits delivered during the episode. The outlier threshold for each case-mix group, PEP adjustment, or total SCIC adjustment is defined as the national standardized 60-day episode payment rate, PEP adjustment, or

total SCIC adjustment for that group plus a fixed dollar loss (FDL) amount. Both components of the outlier threshold are wage-adjusted.

The wage-adjusted FDL amount represents the amount of loss that an agency must experience before an episode becomes eligible for outlier payments. The FDL is computed by multiplying the wage-adjusted national standardized 60-day episode payment amount by the FDL ratio, which is a proportion expressed in terms of the national standardized episode payment amount. The outlier payment is defined to be a proportion of the wage-adjusted estimated costs beyond the wage-adjusted threshold. The proportion of additional costs paid as outlier payments is referred to as the loss-sharing ratio. The FDL ratio and the loss-sharing ratio were selected so that the estimated total outlier payments would not exceed the 5 percent level.

For a given level of outlier payments, there is a trade-off between the values selected for the FDL ratio and the loss-sharing ratio. A high FDL ratio reduces the number of episodes that may receive outlier payments, but makes it possible to select a higher loss-sharing ratio and, therefore, increase outlier payments for outlier episodes. Alternatively, a lower FDL ratio means that more episodes may qualify for outlier payments, but outlier payments per episode must be lower. As a result of public comments on the October 28, 1999 proposed rule, and in our July 2000

final rule, we made the decision to attempt to cover a relatively high proportion of the costs of outlier cases for the most expensive episodes that would qualify for outlier payments within the 5 percent constraint.

We chose a value of 0.80 for the loss-sharing ratio, which is relatively high, but preserves incentives for agencies to attempt to provide care efficiently for outlier cases. It was also consistent with the loss-sharing ratios used in other Medicare PPS outlier policies. Having made this decision, we estimated the value of the FDL ratio that would yield estimated total outlier payments that were projected to be no more than 5 percent of total HH PPS payments. The resulting value for the FDL ratio was 1.13.

When the data became available, we performed an analysis of CY 2001 home health claims data. This analysis revealed that outlier episodes represented approximately 3 percent of total episodes and 3 percent of total HH PPS payments. Additionally, we performed the same analysis on CY 2002 and CY 2003 home health claims data and found the number of outlier episodes and payments held at approximately 3 percent of total episodes and total HH PPS payments, respectively. Based on these analyses and comments we received, we decided that an update to the FDL ratio would be appropriate.

To that end, for the October 2004 final rule, we performed data analysis on CY 2003 HH PPS analytic data. The results of this analysis indicated that a FDL ratio of 0.70 is consistent with the existing loss-sharing ratio of 0.80 and a projected target percentage of estimated outlier payments of no more than 5 percent. Consequently, we updated the FDL ratio from the initial ratio of 1.13 to the FDL ratio of 0.70. Our analysis showed that reducing the FDL ratio from 1.13 to 0.70 would increase the percentage of episodes that qualified for outlier episodes from 3.0 percent to approximately 5.9 percent. A FDL ratio of 0.70 also better met the estimated 5 percent target of outlier payments to total HH PPS payments. We believed that this updated FDL ratio of 0.70 preserved a reasonable degree of cost sharing, while allowing a greater number of episodes to qualify for outlier payments.

Our CY 2006 update to the HH PPS rates (70 FR 68132) changed the FDL ratio from 0.70 to 0.65 to allow even more home health episodes to qualify for outlier payments and to better meet the estimated 5 percent target of outlier payments to total HH PPS payments. For the CY 2006 update, we used CY 2004 home health claims data.

In our CY 2007 update to the HH PPS rates (71 FR 65884) we again changed the FDL ratio from 0.65 to 0.67 to better meet the estimated 5 percent target of outlier payments to

total HH PPS payments. For the CY 2007 update, we used CY 2005 home health claims data.

Under the HH PPS, outlier payments have thus far not exceeded 5 percent of total HH PPS payments. However, preliminary analysis shows that outlier payments, as a percentage of total HH PPS payments, have increased on a yearly basis. With outlier payments having increased in recent years, and given the unknown effects that the proposed refinements of this rule may have on outliers, we are proposing to maintain the FDL ratio of 0.67. By maintaining the FDL ratio of 0.67, we believe we will continue to meet the statutory requirement of having an outlier payment outlay that does not exceed 5 percent of total HH PPS payments, while still providing for an adequate number of episodes to qualify for outlier payments. Some preliminary analysis shows the FDL ratio could be as low as 0.42 in a refined HH PPS. We believe that analysis of more recent data could indicate that a change in the FDL ratio is appropriate. Consequently for the final rule, we will rely on the latest data and best analysis available at the time to estimate outlier payments and update the FDL ratio if appropriate.

Because payment for NRS was included in the base rate of the national standardized 60-day episode payment rate, under the refined system proposed in this proposed rule,

both the proposed national standardized 60-day episode payment rate and the proposed computed NRS amount contribute towards reaching the outlier threshold in the outlier payment calculation.

B. Rebasing and Revising of the Home Health Market Basket

1. Background

Section 1895(b)(3)(B) of the Act, as amended by section 701(b)(3) of the MMA, requires the standard prospective payment amounts to be adjusted by a factor equal to the applicable home health market basket increase for CY 2008.

Effective for cost reporting periods beginning on or after July 1, 1980, we developed and adopted an HHA input price index (that is, the home health "market basket"). Although "market basket" technically describes the mix of goods and services used to produce home health care, this term is also commonly used to denote the input price index derived from that market basket. Accordingly, the term "home health market basket" used in this document refers to the HHA input price index.

The percentage change in the home health market basket reflects the average change in the price of goods and services purchased by HHAs in providing an efficient level of home health care services. We first used the home health market basket to adjust HHA cost limits by an amount that reflected the average increase in the prices of the goods

and services used to furnish reasonable cost home health care. This approach linked the increase in the cost limits to the efficient utilization of resources. For a greater discussion on the home health market basket, see the notice with comment period published in the **Federal Register** on February 15, 1980 (45 FR 10450, 10451), the notice with comment period published in the **Federal Register** on February 14, 1995 (60 FR 8389, 8392), and the notice with comment period published in **Federal Register** on July 1, 1996 (61 FR 34344, 34347). Beginning with the FY 2002 HH PPS payments, we used the home health market basket to update payments under the HH PPS. We last rebased the home health market basket effective with the CY 2005 update. For more information on the HH PPS home health market basket, see our proposed rule published in the **Federal Register** on June 2, 2004 (69 FR 31251, 31255).

The home health market basket is a fixed-weight Laspeyres-type price index; its weights reflect the cost distribution for the base year while current period price changes are measured. The home health market basket is constructed in three steps. First, a base period is selected and total base period expenditures are estimated for mutually exclusive and exhaustive spending categories based upon the type of expenditure. Then the proportion of total costs that each spending category represents is

determined. These proportions are called cost or expenditure weights.

The second step essential for developing an input price index is to match each expenditure category to an appropriate price/wage variable, called a price proxy. These proxy variables are drawn from publicly available statistical series published on a consistent schedule, preferably at least quarterly.

In the third and final step, the price level for each spending category is multiplied by the expenditure weight for that category. The sum of these products for all cost categories yields the composite index level in the market basket in a given year. Repeating the third step for other years will produce a time series of market basket index levels. Dividing one index level by an earlier index level will produce rates of growth in the input price index.

We described the market basket as a fixed-weight index because it answers the question of how much more or less it would cost, at a later time, to purchase the same mix of goods and services that was purchased in the base period. As such, it measures "pure" price changes only. The effects on total expenditures resulting from changes in the quantity or mix of goods and services purchased subsequent to the base period are, by design, not considered.

2. Rebasing and Revising the Home Health Market Basket

We believe that it is desirable to rebase the home health market basket periodically so the cost category weights reflect changes in the mix of goods and services that HHAs purchase in furnishing home health care. We based the cost category weights in the current home health market basket on FY 2000 data. We are proposing to rebase and revise the home health market basket to reflect FY 2003 Medicare cost report data, the latest available and most complete data on the structure of HHA costs.

The terms "rebasing" and "revising," while often used interchangeably, actually denote different activities. The term "rebasing" means moving the base year for the structure of costs of an input price index (that is, in this exercise, we are proposing to move the base year cost structure from FY 2000 to FY 2003). The term "revising" means changing data sources, cost categories, and/or price proxies used in the input price index.

For this proposed revising and rebasing, we modified the wages and salaries and benefits cost categories in order to reflect a new data source on the occupational mix of HHAs. We mainly relied on this alternative proposed data source to construct the cost weights for the blended wage and benefit index. We are not proposing any changes to the price proxies used in the HH market basket or the HH blended wage and benefit proxies.

The weights for this proposed revised and rebased home health market basket are based off of the cost report data for freestanding HHAs, whose cost reporting period began on or after October 1, 2002 and before October 1, 2003. Using this methodology allowed our sample to include HHA facilities with varying cost report years including, but not limited to, the federal fiscal or calendar year. We refer to the market basket as a fiscal year market basket because the base period for all price proxies and weights are set to FY 2003. For this proposed rebased and revised market basket, we reviewed HHA expenditure data for the market basket cost categories.

We proposed to maintain our policy of using data from freestanding HHAs because they better reflect HHAs actual cost structure. Expense data for a hospital-based HHA are affected by the allocation of overhead costs over the entire institution (including but not limited to hospital, hospital-based skilled nursing facility, and hospital-based HHA). Due to the method of allocation, total expenses will be correct, but the individual components' expenses may be skewed. Therefore, if data from hospital-based HHAs were included, the resultant cost structure could be unrepresentative of the average HHA costs.

Data on HHA expenditures for nine major expense categories (wages and salaries, employee benefits, transportation, operation and maintenance, administrative and general, insurance, fixed capital, movable capital, and

a residual "all other") were tabulated from the FY 2003 Medicare HHA cost reports. As prescription drugs and DME are not payable under the HH PPS, we excluded those items from the home health market basket and from the expenditures. Expenditures for contract services were also tabulated from these FY 2003 Medicare HHA cost reports and allocated to wages and salaries, employee benefits, administrative and general, and other expenses. After totals for these cost categories were edited to remove reports where the data were deemed unreasonable (for example, when total costs were not greater than zero), we then determined the proportion of total costs that each category represents. The proportions represent the major rebased home health market basket weights.

We determined the weights for subcategories (telephone, postage, professional fees, other products, and other services) within the combined administrative and general and other expenses using the latest available (1997 Benchmark) U.S. Department of Commerce, Bureau of Economic Analysis (BEA) Input-Output (I-O) Table, from which we extracted data for HHAs. The BEA I-O data, which are updated at 5-year intervals, were most recently described in the Survey of Current Business article, "Benchmark Input-Output Accounts of the U.S., 1997" (December 2002). These data were aged from 1997 to 2003 using relevant price changes.

The methodology we used to age the data applied the annual price changes from the price proxies to the appropriate cost categories. We repeated this practice for each year.

This work resulted in the identification of 12 separate cost categories, the same number found in the FY 2000-based home health market basket. The differences between the major categories for the proposed FY 2003-based index and those used for the current FY 2000-based index are summarized in Table 13. We have allocated the contracted services weight to the wages and salaries, employee benefits, and administrative and general and other expenses cost categories in the proposed FY 2003-based index as we did in the FY 2000-based index.

Table 13: Comparison Of 2000-Based and Proposed 2003-Based Home Health Market Baskets Major Cost Categories and Weights

Cost Categories	2000-Based Home Health Market Basket	Proposed 2003-Based Home Health Market Basket
Wages and Salaries, including allocated contract services' labor	65.766	64.484
Employee Benefits, including allocated contract services' labor	11.009	12.598
All Other Expenses including allocated contract services' labor	23.225	22.918
Total	100.000	100.000

The complete proposed 2003-based cost categories and weights are listed in Table 14.

Table 14: Cost Categories, Weights, and Price Proxies in Proposed 2003-Based Home Health Market Basket

Cost Categories	Weight	Price Proxy
Compensation, including allocated contract services' labor	77.082	
Wages and Salaries, including allocated contract services' labor	64.484	Proposed Home Health Occupational Wage Index
Employee Benefits, including allocated contract services' labor	12.598	Proposed Home Health Occupational Benefits Index
Operations & Maintenance	0.694	CPI-U Fuel & Other Utilities
Administrative & General & Other Expenses including allocated contract services' labor	16.712	
Telephone	0.785	CPI-U Telephone Services
Postage	0.605	CPI-U Postage
Professional Fees	1.471	ECI for Compensation for Professional and Technical Workers
Other Products	7.228	CPI-U All Items Less Food and Energy
Other Services	6.622	ECI for Compensation for Service Workers
Transportation	2.494	CPI-U Private Transportation
Capital-Related	3.018	
Insurance	0.510	CPI-U Household Insurance
Fixed Capital	1.618	CPI-U Owner's Equivalent Rent
Movable Capital	0.890	PPI Machinery & Equipment
Total	100.000	**

**Figures may not sum to total due to rounding

After we computed the FY 2003 cost category weights for the proposed rebased home health market basket, we selected the most appropriate wage and price indexes to proxy the rate of change for each expenditure category. These price proxies are based on Bureau of Labor Statistics (BLS) data and are grouped into one of the following BLS categories:

- Employment Cost Indexes--Employment Cost Indexes (ECIs) measure the rate of change in employee wage rates and employer costs for employee benefits per hour worked. These indexes are fixed-weight indexes and strictly measure the change in wage rates and employee benefits per hour. They are not affected by shifts in skill mix. ECIs are superior to average hourly earnings as price proxies for input price indexes for two reasons: (a) they measure pure price change; and (b) they are available by occupational groups, not just by industry.

- Consumer Price Indexes--Consumer Price Indexes (CPIs) measure change in the prices of final goods and services bought by the typical consumer. Consumer price indexes are used when the expenditure is more similar to that of a purchase at the retail level rather than at the wholesale level, or if no appropriate Producer Price Indexes (PPIs) were available.

- Producer Price Indexes--PPIs are used to measure price changes for goods sold in other than retail markets. For example, a PPI for movable equipment is used rather than a CPI for equipment. PPIs in some cases are preferable price proxies for goods that HHAs purchase at wholesale levels. These fixed-weight indexes are a measure of price change at the producer or at the intermediate stage of production.

We evaluated the price proxies using the criteria of reliability, timeliness, availability, and relevance. Reliability indicates that the index is based on valid statistical methods and has low sampling variability. Widely accepted statistical methods ensure that the data were collected and aggregated in way that can be replicated. Low sampling variability is desirable because it indicates that sample reflects the typical members of the population. (Sampling variability is variation that occurs by chance because a sample was surveyed rather than the entire population.) Timeliness implies that the proxy is published regularly, preferably at least once a quarter. The market baskets are updated quarterly and therefore it is important the underlying price proxies be up-to-date, reflecting the most recent data available. We believe that using proxies that are published regularly (at least quarterly, whenever possible) helps ensure that we are using the most recent data available to update the market basket. We strive to use publications that are disseminated

frequently because we believe that this is an optimal way to stay abreast of the most current data available. Availability means that the proxy is publicly available. We prefer that our proxies are publicly available because this will help ensure that our market basket updates are as transparent to the public as possible. In addition, this enables the public to be able to obtain the price proxy data on a regular basis. Finally, relevance means that the proxy is applicable and representative of the cost category weight to which it is applied. The CPIs, PPIs, and ECIs selected by us to be proposed in this regulation meet these criteria. Therefore, we believe that they continue to be the best measure of price changes for the cost categories to which they would be applied.

As part of the revising and rebasing of the home health market basket, we are proposing to revise and rebase the home health blended wage and salary index and the home health blended benefits index.

We would use these blended indexes as price proxies for the wages and salaries and the employee benefits portions of the proposed FY 2003-based home health market basket, as we did in the FY 2000-based home health market basket. The price proxies for these two cost categories are the same as those used in the FY 2000-based home health market basket but with occupational weights reflecting the FY 2003 occupational mix in HHAs. These proxies are a combination of health industry specific and economy-wide proxies.

3. Price Proxies Used to Measure Cost Category Growth

- Wages and salaries, including an allocation for contract services' labor: For measuring price growth in the FY 2003-based home health market basket, as we did in the FY 2000-based index, five price proxies would be applied to the four occupational subcategories within the wages and salaries component, and would be weighted to reflect the HHA occupational mix. This approach was used because there is not a wage proxy for home health care workers that reflects only wage changes and not both wage and skill mix changes. The professional and technical occupational subcategory is represented by a 50-50 blend of hospital industry and economy-wide price proxies. Therefore, there are five price proxies used for the four occupational subcategories. The percentage change in the blended wages and salaries price is applied to the wages and salaries component of the home health market basket, which is described in Table 15.

Table 15: Proposed Home Health Occupational Wages and Salaries Index (Wages and Salaries Component of the Proposed FY 2003-Based Home Health Market Basket)

Cost Category	2000 Weight	2003 Weight	Price Proxy
Skilled Nursing & Therapists & Other Professional/ Technical, including an allocation for contract services'	53.816	50.812	• 50 percent ECI for Wages & Salaries in Private Industry for Professional, Specialty & Technical Workers • 50 percent ECI for

labor			Wages & Salaries for Civilian Hospital Workers
Managerial/ Supervisory, including an allocation for contract services' labor	7.431	9.007	ECI for Wages & Salaries in Private Industry for Executive, Administrative & Managerial Workers
Clerical, including an allocation for contract services' labor	6.822	7.596	ECI for Wages & Salaries in Private Industry for Administrative Support, Including Clerical Workers
Service, including an allocation for contract services' labor	31.931	32.584	ECI for Wages & Salaries in Private Industry Service Occupations
Total	100.000	100.000	

Beginning with the FY 2001 Medicare cost report, the occupational specific wage and benefit expenditure data was no longer collected in the cost report. Previously, we used these data to estimate weights for the home health blended wage and salary index and the home health blended benefits index. We believed the options to obtain these data were:

- To obtain the home health occupational specific expenditure data from an alternative source, or
- To propose a change to the home health wages and salaries and the home health benefits proxy used in the market basket.

However, there is no publicly available data source that tracks wage and salary price growth for the home health industry while holding skill mix constant. There is also no publicly available data source that tracks benefit price growth for the home health industry while holding skill mix constant. Therefore, option 2 was not an viable solution. Next, we investigated if there was home health occupational specific expenditure data from an alternative source other than the Medicare cost reports. We believe an alternative source exists in the form of data from the November 2003 National industry-specific occupational employment and wage estimates published by the BLS Office of Occupational Employment Statistics (OES). Accordingly, we propose to use that data to determine weights for the home health specific blended wage and benefits proxy. Detailed information on the methodology for the national industry-specific occupational employment and wage estimates survey can be found at http://www.bls.gov/oes/current/oes_tec.htm.

Therefore, the needed data on HHA expenditures for the four occupational subcategories (managerial, professional and technical, service, and clerical) for the wages and salaries component were tabulated from the November 2003 OES data for North American Industrial Classification System (NAICS) 621600, Home Health Care Services. We assigned the occupations to the groups in a manner consistent with the occupational groupings used in the Medicare cost report.

Table 16 shows the specific occupational assignments to the four CMS designated subcategories.

Table 16: CMS Occupational Groupings for NAICS 621600 Home Health Care Services

	MANAGERIAL
11-0000	Management occupations
	P&T AND HOSPITAL
13-0000	Business and financial operations occupations
15-0000	Computer and mathematical occupations
17-0000	Architecture and engineering occupations
19-0000	Life, physical, and social science occupations
21-0000	Community and social services occupations
23-0000	Legal occupations
25-0000	Education, training, and library occupations
27-0000	Arts, design, entertainment, sports, and media occupations
29-0000	Healthcare practitioners and technical occupations
33-0000	Protective service occupations
35-0000	Food preparation and serving related occupations
37-0000	Building and grounds cleaning and maintenance occupations
41-0000	Sales and related occupations
49-0000	Installation, maintenance, and repair occupations
51-0000	Production occupations
53-0000	Transportation and material moving occupations
	CLERICAL
43-0000	Office and administrative support occupations
	SERVICES
31-0000	Healthcare support occupations
39-0000	Personal care and service occupations

Total expenditures by occupation were calculated by taking the OES number of employees multiplied by the OES annual average salary. The wage and salary expenditures were aggregated based on the groupings in table 14. Next, contract labor expenditures were obtained from the 1997 I-O for the home health industry, NAICS 621600 and aged forward to FY 2003 using the PPI for employment services. We then proportionally allocated the contract labor to each of the four subcategories. We determined the proportion of total wage costs (contract wages plus industry wages) that each subcategory represents. These proportions represent the major rebased and revised home health blended wage and salary index weights.

We did not propose a change from our current blended measure because we believe it reflects the competition between HHAs and hospitals for registered nurses, while still capturing the overall wage trends for professional and technical workers.

- Employee benefits, including an allocation for contract services' labor: For measuring employee benefits price growth in the FY 2003-based home health market basket, price proxies are applied to the four occupational subcategories within the employee benefits component, weighted to reflect the home health occupational mix. The professional and technical occupational subcategory is represented by a blend of hospital industry and economy-wide

price proxies. Therefore, there are five price proxies for four occupational subcategories. The percentage change in the blended price of home health employee benefits is applied to this component, which is described in Table 17.

Table 17: Proposed Home Health Occupational Benefits Index (Employee Benefits Component of the Proposed 2003-Based Home Health Market Basket)

Cost Category	**2000 Weight**	**2003 Weight**	**Price Proxy**
Skilled Nursing & Therapists & Other Professional/ Technical, including an allocation for contract services' labor	53.492	50.506	• 50 percent ECI for Benefits in Private Industry for Professional, Specialty & Technical Workers • 50 percent ECI for Benefits for Civilian Hospital Workers
Managerial/ Supervisory, including an allocation for contract services' labor	7.232	8.766	ECI for Benefits in Private Industry for Executive, Administrative & Managerial Workers
Clerical, including an allocation for contract services' labor	6.941	7.698	ECI for Benefits in Private Industry for Administrative Support, Including Clerical Workers
Service, including an allocation for contract services' labor	32.362	33.024	ECI for Benefits in Private Industry Service Occupations
Total	100.000	100.000	

After conducting research we could find no data source

that exists for benefit expenditures by occupation for the home health industry. Thus, to construct weights for the home health occupational benefits index we calculated the ratio of benefits to wages and salaries from the 2000 Home health occupational wages and occupational benefits indices for the four occupational subcategories. We then applied the benefit-to-wage ratios to each of the four occupational subcategories from the 2003 OES wage and salary weights. For example, the ratio of benefits to wages from the 2000 home health occupational wage and benefit indexes for home health managers is 0.973. We apply this ratio to the 2003 OES weight for wages and salaries for home health managers, 9.007, to obtain a benefit weight in the home health occupational benefit index for home health managers of 8.766 percent.

We are proposing to continue to use the same 50-50 split for benefits for professional and technical workers (50 percent hospital workers and 50 percent professional and technical workers) as we did in the FY 2000-based market basket.

- Operations and Maintenance: The percentage change in the price of fuel and other utilities as measured by the Consumer Price Index is applied to this component. The same proxy was used for the FY 2000-based market basket.

- Telephone: The percentage change in the price of telephone service as measured by the Consumer Price Index is applied to this component. The same proxy was used for the FY 2000-based market basket.

- Postage: The percentage change in the price of postage as measured by the Consumer Price Index is applied to this component. The same proxy was used for the FY 2000-based market basket.

- Professional Fees: The percentage change in the price of professional fees as measured by the ECI for compensation for professional and technical workers is applied to this component. The same proxy was used for the 2000-based market basket.

- Other Products: The percentage change in the price for all items less food and energy as measured by the Consumer Price Index is applied to this component. The same proxy was used for the FY 2000-based market basket.

- Other Services: The percentage change in the employment cost index for compensation for service workers is applied to this component. The same proxy was used for the FY 2000-based market basket.

- Transportation: The percentage change in the price of private transportation as measured by the Consumer Price Index is applied to this component. The same proxy was used for the FY 2000-based market basket.

- Insurance: The percentage change in the price of household insurance as measured by the Consumer Price Index is applied to this component. The same proxy was used for the FY 2000-based market basket.

- Fixed capital: The percentage change in the price of an owner's equivalent rent as measured by the Consumer Price Index is applied to this component. The same proxy was used for the FY 2000-based market basket.

- Movable Capital: The percentage change in the price of machinery and equipment as measured by the Producer Price Index is applied to this component. The same proxy was used for the FY 2000-based market basket.

As we did in the FY 2000-based home health market basket, we allocated the Contract Services' share of home health agency expenditures among wages and salaries, employee benefits, administrative and general and other expenses.

Table 18 summarizes the proposed FY 2003-based proxies and compares them to the FY 2000-based proxies.

Table 18: Comparison Of Price Proxies Used in the 2000-Based and the Proposed 2003-Based Home Health Market Baskets

Cost Category	**2000-Based Price Proxy**	**2003-Based Proposed Price Proxy**
Compensation, including allocated contract		

services' labor		
Wages and Salaries, including allocated contract services' labor	Same	Home Health Agency Occupational Wage Index
Employee Benefits, including allocated contract services' labor	Same	Home Health Agency Occupational Benefits Index
Operations and Maintenance	Same	CPI-Fuel and Other Utilities
Administrative & General & Other Expenses, including allocated contract services' labor		
Telephone	Same	CPI-U Telephone
Postage	Same	CPI-U Postage

Cost Category	2000-Based Price Proxy	2003-Based Proposed Price Proxy
Professional Fees	Same	ECI for Compensation for Professional and Technical Workers
Other Products	Same	CPI-U for All Items Less Food and Energy
Other Services	Same	ECI for Compensation for Service Workers
Transportation	Same	CPI-U Private Transportation
Capital-Related		
Insurance	Same	CPI-U Household Insurance
Fixed Capital	Same	CPI-U Owner's Equivalent Rent
Movable Capital	Same	PPI Machinery and Equipment
Contract Services	Same	Contained within Wages & Salaries, Employee Benefits, Administrative & General & Other Expenses; see those price proxies

4. Rebasing Results

A comparison of the yearly changes from CY 2005 to CY 2008 for the FY 2000-based home health market basket and the proposed FY 2003-based home health market basket is shown in Table 19. The average annual increase in the two market baskets is similar, and in no year is the difference greater than 0.1 percentage point.

Table 19: Comparison Of The 2000-Based Home Health Market Basket and the Proposed 2003-Based Home Health Market Basket, Percent Change, 2005-2008

Fiscal Years Beginning October 1	Home Health Market Basket, 2000-Based	Proposed Home Health Market Basket, 2003-Based	Difference (Proposed 2003-Based less 2000-Based)
Historical: CY 2005	3.1	3.1	0.0.
CY 2006	3.2	3.1	-0.1
CY 2007	3.1	3.1	0.0
CY 2008	2.9	2.9	0.0
Average Change: 2005-2008	3.1	3.1	0.0

Source: Global Insights, Inc, 4th Qtr, 2006;

Table 20 shows that the forecasted rate of growth for CY 2008, beginning January 1, 2008, for the proposed rebased and revised home health market basket is 2.9 percent, while the forecasted rate of growth for the current 2000-based home health market basket is also 2.9 percent. As previously mentioned, we rebase the home health market basket periodically so the cost category weights continue to reflect changes in the mix of goods and services that HHAs purchase in furnishing home health care.

Table 20: Forecasted Annual Percent Change in the Current and Proposed Revised and Rebased Home Health Market Baskets

Calendar Year Beginning January 1	Home Health Market Basket, 2000-Based	Proposed Home Health Market Basket, 2003-Based	Difference (Proposed 2003-Based Less 2000-Based)
January 2008, CY 2008	2.9	2.9	0.0

Source: Global Insights, Inc, 4th Qtr, 2006;

Table 21 shows the percent changes for CY 2008 for each cost category in the home health market basket.

Table 21: CY 2008 Forecasted Annual Percent Change for All Cost Categories in the Proposed 2003-Based Home Health Market Basket

Cost Categories	Weight	Price Proxy	Forecasted Annual Percent Change for CY 2008
Total	100.00		2.9
Compensation	77.082		3.1
Wages and Salaries	64.484	Proposed Home Health Occupational Wage Index	2.9
Employee Benefits	12.598	Proposed Home Health Occupational Benefits Index	3.8
Operations & Maintenance	0.694	CPI-U Fuel & Other Utilities	3.2
Administrative & General & Other Expenses	16.712		2.6
Telephone	0.785	CPI-U Telephone Services	0.8
Postage	0.605	CPI-U Postage	4.8
Professional Fees	1.471	ECI for Compensation for Professional and Technical Workers	3.0
Other Products	6.622	CPI-U All Items Less	2.0

		Food and Energy	
Other Services	7.228	ECI for Compensation for Service Workers	3.1
Transportation	2.494	CPI-U Private Transportation	0.5
Capital-Related	3.018		1.8
Insurance	0.510	CPI-U Household Insurance	2.6
Fixed Capital	1.618	CPI-U Owner's Equivalent Rent	2.6
Movable Capital	0.890	PPI Machinery & Equipment	-0.3

Source: Global Insights, Inc, 4th Qtr, 2006;

5. Labor-Related Share

In the 2000-based home health market basket the labor-related share was 76.775 percent while the remaining non-labor-related share was 23.225 percent. In the proposed revised and rebased home health market basket, the labor-related share would be 77.082 percent. The labor-related share includes wages and salaries and employee benefits. The proposed non-labor-related share would be 22.918 percent. The increase in the labor-related share using the FY 2003-based HH market basket is primarily due to the increase in the benefit cost weight. Our preliminary analysis of Medicare cost report data for skilled nursing facilities and acute care hospitals also shows a similar upward trend for the SNF and hospital benefit cost weights from FY 2000 to FY 2003.

Table 22 details the components of the labor-related share for the FY 2000-based and proposed FY 2003-based home health market baskets.

Table 22: Labor-Related Share of Current and Proposed Home Health Market Baskets

Cost Category	2000-Based Market Basket Weight	Proposed 2003-Based Market Basket Weight
Wages and Salaries	65.766	64.484
Employee Benefits	11.009	12.598
Total Labor Related	76.775	77.082
Total Non-Labor Related	23.225	22.918

C. National Standardized 60-Day Episode Payment Rate

The Medicare HH PPS has been effective since October 1, 2000. As set forth in the final rule published July 3, 2000 in the **Federal Register** (65 FR 41128), the unit of payment under the Medicare HH PPS is a national standardized 60-day episode payment rate. As set forth in §484.220, we adjust the national standardized 60-day episode payment rate by a case-mix grouping and a wage index value based on the site of service for the beneficiary. The proposed CY 2008 HH PPS rates use the case-mix methodology proposed in section II.A.2 of this proposed rule and application of the wage index adjustment to the labor portion of the HH PPS rates as set forth in the July 3, 2000 final rule. As stated above, we are proposing to rebase and revise the home health market basket, resulting in a revised and rebased labor related share of 77.082 percent and a

non-labor portion of 22.918 percent. We multiply the national standardized 60-day episode payment rate by the patient's applicable case-mix weight. We divide the case-mix adjusted amount into a labor and non-labor portion. We multiply the labor portion by the applicable wage index based on the site of service of the beneficiary.

For CY 2008, we are proposing to base the wage index adjustment to the labor portion of the HH PPS rates on the most recent pre-floor and pre-reclassified hospital wage index as discussed in section II.B of this proposed rule (not including any reclassifications under section 1886(d)(8)(B)) of the Act.

As discussed in the July 3, 2000 HH PPS final rule, for episodes with four or fewer visits, Medicare pays the national per-visit amount by discipline, referred to as a LUPA. We update the national per-visit amounts by discipline annually by the applicable home health market basket percentage. We adjust the national per-visit amount by the appropriate wage index based on the site of service for the beneficiary as set forth in §484.230. We propose to adjust the labor portion of the updated national per-visit amounts by discipline used to calculate the LUPA by the most recent pre-floor and pre-reclassified hospital wage index, as discussed in section II.D of this proposed rule.

Medicare pays the 60-day case-mix and wage-adjusted episode payment on a split percentage payment approach. The split percentage payment approach includes an initial percentage payment and a final percentage payment as set forth in §484.205(b)(1) and (b)(2). We may base the initial percentage payment on the submission of a request for anticipated payment and the final percentage payment on the submission of the claim for the episode, as discussed in §409.43. The claim for the episode that the HHA submits for the final percentage payment determines the total payment amount for the episode and whether we make an applicable adjustment to the 60-day case-mix and wage-adjusted episode payment. The end date of the 60-day episode as reported on the claim determines which CY rates Medicare will use to pay the claim.

We may also adjust the 60-day case-mix and wage-adjusted episode payment based on the information submitted on the claim to reflect the following:

- A LUPA provided on a per-visit basis as set forth in §484.205(c) and §484.230.

- A PEP adjustment as set forth in §484.205(d) and §484.235.

- An outlier payment as set forth in §484.205(f) and §484.240.

Currently, we may also adjust the episode payment by a SCIC adjustment as set forth in §484.202, but as noted in section II.A.6 of this proposed rule, we are now proposing to remove the SCIC adjustment from HH PPS.

This proposed rule reflects the proposed updated CY 2008 rates that would be effective January 1, 2008.

D. Proposed CY 2008 Rate Update by the Home Health Market Basket Index (With Examples of Standard 60-Day and LUPA Episode Payment Calculations)

Section 1895(b)(3)(B) of the Act, as amended by section 5201 of the DRA, requires for CY 2008 that the standard prospective payment amounts be increased by a factor equal to the applicable home health market basket update for those HHAs that submit quality data as required by the Secretary. The applicable home health market basket update will be reduced by 2 percentage points for those HHAs that fail to submit the required quality data.

- Proposed CY 2008 Adjustments

In calculating the annual update for the CY 2008 national standardized 60-day episode payment rates, we are proposing to first look at the CY 2007 rates as a starting point. The CY 2007 national standardized 60-day episode payment rate is $2,339.00.

In order to calculate the CY 2008 national national standardized 60-day episode payment rate, we are proposing

to first increase the CY 2007 national standardized 60-day episode payment rate ($2,339.00) by the proposed estimated rebased and revised home health market basket update of 2.9 percent for CY 2008.

Given this updated rate, we would then take a reduction of 2.75 percent to account for nominal change in case-mix. We would multiply the resulting value by 1.05 and 0.958614805 to account for the estimated percentage of outlier payments as a result of the current FDL ratio of 0.67 (that is, $2,339.00 * 1.029 * .9725 * 1.05 * 0.958614805), to yield an updated CY 2008 national standardized 60-day episode payment rate of $2,355.96 for episodes that begin in CY 2007 and end in CY 2008 (see Table 23a). For episodes that begin in CY 2007 and end in CY 2008, the new proposed 153 HHRG case-mix model (and associated Grouper) would not yet be in effect. For that reason, we propose that episodes that begin in CY 2007 and end in CY 2008 be paid at the rate of $2,355.96, and be further adjusted for wage differences and for case-mix, based on the current 80 HHRG case mix model. We recognize that the annual update for CY 2008 is for all episodes that end on or after January 1, 2008 and before January 1, 2009. By paying this rate ($2,355.96) for episodes that begin in CY 2007 and end in CY 2008, we will have appropriately recognized that these episodes are entitled to receive the

CY 2008 home health market, even though the new case mix model will not yet be in effect.

Table 23a: Proposed National 60-Day Episode Amounts Updated by the Estimated Home Health Market Basket Update for CY 2008, Before Case-Mix Adjustment, Wage Index Adjustment Based on the Site of Service for the Beneficiary or Applicable Payment Adjustment for Episodes Beginning in CY 2007 and Ending in CY 2008

Total CY 2007 National Standardized 60-Day Episode Payment Rate	Multiply by the Proposed Estimated Home Health Market Basket Update (2.9 Percent)[1]	Reduce by 2.75 Percent for Nominal Change in Case-Mix	Adjusted to Account for the 5 Percent Outlier Policy	Proposed National Standardized 60-Day Episode Payment Rate for Episodes Beginning in CY 2007 and Ending in CY 2008
$2,339.00	X 1.029	X 0.9725	X 1.05 X 0.958614805	$2,355.96

[1]The estimated home health market basket update of 2.9 percent for CY 2008 is based on Global Insight, Inc, 4th Qtr, 2006 forecast with historical data through 3rd Qtr, 2006.

Next, in order to establish new rates based on a proposed new case-mix system, we again start with the CY 2007 national standardized 60-day episode payment rate and increase that rate by the proposed estimated rebased and revised home health market basket update (2.9 percent) ($2,339.00 * 1.029 = $2,406.83). We next have to put dollars associated with the outlier targeted estimates back into the base rate. In the 2000 HH PPS final rule (65 FR 41184), we divided the base rate by 1.05 to account for the outlier target policy. Therefore, we are proposing to

multiply the $2,406.83 by 1.05, resulting in $2,527.17. Next we need to reduce this amount to pay for each of our proposed policies. As noted previously, based upon our proposed change to the LUPA payment, the NRS redistribution, the elimination of the SCIC policy, the amounts needed to account for outlier payments, and the reduction accounting for nominal change in case-mix, we would reduce the national standardized 60-day episode payment rate by $6.46, $40.88, $15.71, $94.02, and $69.50, respectively. This results in a proposed CY 2008 updated national standardized 60-day episode payment rate, for episodes beginning and ending in CY 2008, of $2,300.60 (see Table 23b). These episodes would be further adjusted for case-mix based on the proposed 153 HHRG case-mix model for episodes beginning and ending in CY 2008. As we noted in section II.A.2.d., we increased the case-mix weights by a budget neutrality factor of 1.194227193.

Table 23b: Proposed National 60-Day Episode Amounts Updated by the Estimated Home Health Market Basket Update for CY 2008, Before Case-Mix Adjustment, Wage Index Adjustment Based on the Site of Service for the Beneficiary or Applicable Payment Adjustment for Episodes Beginning and Ending in CY 2008

Total CY 2007 National Standardized 60-Day Episode Payment Rate	Multiply by the Proposed Estimated Home Health Market	Adjusted to Return the Outlier Funds to the National Standardized	Updated and Outlier Adjusted National Standardized 60-Day	Changes to Account for LUPA Adjustment ($6.46), NRS Payment ($40.88), Elimination of SCIC Policy ($15.71), Maintaining a 0.67 FDL Ratio ($94.02), and 2.75	Proposed CY 2008 National Standardized 60-Day Episode Payment Rate for Episodes Beginning and Ending in CY 2008

	Basket Update (2.9 Percent)[1]	**60-Day Episode Payment Rate**	**Episode Payment**	**Percent Reduction for Nominal Change in Case-Mix ($69.50) for Episodes Beginning and Ending in CY 2008**	
$2,339.00	X 1.029	X 1.05	$2,527.17	- $226.57	$2,300.60

[1]The estimated home health market basket update of 2.9 percent for CY 2008 is based on Global Insight, Inc, 4th Qtr, 2006 forecast with historical data through 3rd Qtr, 2006.

Under the HH PPS, NRS payment, which was $49.62 at the onset of the HH PPS, has been updated yearly as part of the national standardized 60-day episode payment rate. As discussed previously in section II.A.7., we propose to remove the current NRS payment amount portion from the national standardized 60-day episode payment rate and add a severity adjusted NRS payment amount subject to case-mix and wage adjustment to the national standardized 60-day episode payment rate. Therefore, to calculate an episode's prospective payment amount, the NRS adjusted payment amount must first be calculated by multiplying the episode's NRS weight (taken from Table 11 of this proposed rule) by the NRS conversion factor. This NRS adjusted payment amount is then added to, and, becomes a part of, the non-adjusted HH PPS standardized prospective payment rate for CY 2008. Then, for any HHRG group, to compute a case-mix adjusted payment, the sum of the non-adjusted national standardized 60-day episode payment rate and the NRS adjusted payment amount are multiplied by the appropriate case-mix weight taken from Table 5. Finally, to compute a wage adjusted national standardized 60-day episode payment rate, that labor-related portion of the national standardized 60-day episode payment rate for CY 2008 is multiplied by the appropriate wage index factor listed in Addendum A. The

product of that calculation is added to the corresponding non-labor-related amount. The resulting amount is the national case-mix and wage adjusted national standardized 60-day episode payment rate for that particular episode. The following example illustrates the computation described above:

Example 1. An HHA is providing services to a Medicare beneficiary in Grand Forks, ND. The national standardized payment rate is $2,300.60 (see Table 23). The HHA determines that the beneficiary is in his or her 3rd episode and thus falls under the C1F3S3 HHRG for 3rd+ episodes with 0 to 13 therapy visits (Case Mix Weight = 1.4815). It is also determined that the beneficiary falls under NRS severity level #4. The NRS Severity Level #4 weight = 6.9612 and the NRS Conversion Factor = $52.77 (see Table 11).

Calculate the Case-Mix Rate:

Case-mix weight from Table 7 for HHRG C1F3S3 for 3rd+ episodes with 0-13 therapy visits	1.4815
National Standardized 60-Day Episode Payment Rate without NRS Amount for CY 2008	$2,300.60
Calculate the Case-Mix Rate:	
($2,300.60 * 1.4815)	**$3,408.34**

Calculate the Wage-Adjusted Labor and Non-Labor Portions of the Payment:

Case-Mix adjusted National Standardized 60-Day Episode Payment Rate without NRS Amount:	$3,408.34
Labor Portion	0.77082
Non-labor Portion	0.22918

Wage Index Value for Grand Forks, North Dakota | 0.7949

Calculate the labor portion of the Case-Mix adjusted National Standardized 60-Day Episode Payment without NRS Amount:

($3,408.34 * .77082) | $2,627.22

Apply the wage index factor for Grand Forks to the labor potion

($2,627.22 * 0.7949) | **$2,088.38**

Calculate the non-labor portion of the Case-Mix adjusted National Standardized 60-Day Episode Payment without NRS Amount:

($3,408.34 * .22918) | **$781.12**

Calculate the Total Prospective Payment Rate:

Case-Mix adjusted Wage Adjusted Labor Portion of the Rate without NRS Amount | $2,088.38

Case-Mix Adjusted Non-Labor Portion of the Rate without NRS Amount | $781.12

Calculate the Total Case-Mix and Wage Adjusted National Standardized 60-Day Episode Payment Rate without NRS Amount

($2,088.38 + $781.12) | **$2,869.50**

Calculate the NRS Amount:

NRS Conversion Factor | $52.77

NRS Severity Level #4 Relative Weight | 6.9612

Calculate the NRS Amount

($52.77* 6.9612) | **$367.34**

Calculate the Total Case-Mix and Wage Adjusted National Standardized 60-Day Episode Payment Rate including NRS Amount

($2,869.50 + $367.34) | $3,236.84

- National Per-visit Amounts Used to Pay LUPAs and Compute Imputed Costs Used in Outlier Calculations

As discussed previously in this proposed rule, the policies governing LUPAs and the outlier calculations set forth in the July 3, 2000 HH PPS final rule will continue (65 FR 41128) with an increase of $92.63 for initial and only episode LUPAs during CY 2008. In calculating the proposed CY 2008 national per-visit amounts used to calculate payments for LUPA episodes and to compute the imputed costs in outlier calculations, we are proposing to start with the CY 2007 per-visit amounts. We propose to increase the CY 2007 per-visit amounts for each home health discipline for CY 2008 by the proposed estimated rebased and revised home health market basket update (2.9 percent), then multiply by 1.05 and 0.958614805 to account for the estimated percentage of outlier payments as a result of the current FDL ratio of 0.67 (see Table 24).

Table 24: Proposed National Per-Visit Amounts for LUPAs (not including the increase in payment for a beneficiary's only episode or the initial episode in a sequence of adjacent episodes) and Outlier Calculations Updated by the Estimated Home Health Market Basket Update for CY 2008, Before Wage Index Adjustment Based on the Site of Service for the Beneficiary

Home Health Discipline Type	Final CY 2007 Per-Visit Amounts Per 60-Day Episode for LUPAs	Multiply by the Proposed Estimated Home Health Market Basket (2.9 Percent)[1]	Adjusted to Account for the 5 Percent Outlier Policy	Proposed CY 2008 Per-Visit Payment Amount Per Discipline
Home Health Aide	$46.24	X1.029	X 1.05 X 0.958614805	$47.91
Medical Social Services	$163.68	X1.029	X 1.05 X 0.958614805	$169.53
Occupational Therapy	$112.40	X1.029	X 1.05 X 0.958614805	$116.42
Physical Therapy	$111.65	X1.029	X 1.05 X 0.958614805	$115.63
Skilled Nursing	$102.11	X1.029	X 1.05 X 0.958614805	$105.76
Speech-Language Pathology	$121.22	X1.029	X 1.05 X 0.958614805	$125.55

[1]The estimated home health market basket update of 2.9 percent for CY 2008 is based on Global Insight, Inc, 4th Qtr, 2006 forecast with historical data through 3rd Qtr, 2006..

Payment for LUPA episodes is changed in that for LUPAs that occur as initial episodes in a sequence of adjacent episodes or as the only episode, we are proposing an increased payment amount (see section II.A.5. of this proposed regulation) to the LUPA payment. Table 24 rates

are before that adjustment and are the rates paid to all other LUPA episodes. LUPA episodes that occur as the only episode or initial episode in a sequence of adjacent episodes are adjusted by including the proposed amount of $92.63 to the LUPA payment before adjusting for wage index.

Example 2. An HHA is providing services to a Medicare beneficiary in rural New Hampshire. During the 60-day episode the beneficiary receives only 3 visits. It is the initial episode during a sequence of adjacent episodes for this beneficiary.

Number of Visits, Visit Type, and Per-Visit Payment Amounts

1 Skilled Nursing Visit	(per-visit payment amount from Table 24)	|	$105.76
2 Home Health Aide Visits	(per-visit payment amount from Table 24)	|	$47.91
Wage Index Value for Rural New Hampshire		|	1.0853
Increase in LUPA episode payment for only or initial episodes in a sequence of adjacent episodes		|	$92.63

Calculate the total wage adjusted adjustment amount for only or initial episodes in a sequence of Adjacent episodes:

Calculate the wage adjusted portion of the $92.63 adjustment for only or initial episodes in a sequence of adjacent episodes: (0.77082 * $92.63)		**|**	**$71.40**
Apply the wage index factor from rural New Hampshire from Addendum A:	**(1.0853 * $71.40)**	**|**	**$77.49**
Calculate the non-labor portion of the $92.63 adjustment for only or initial episodes in a sequence of adjacent episodes: (0.22198 * $92.63)		**|**	**$27.03**
Calculate the total wage adjusted adjustment amount for only or initial episodes in a sequence of Adjacent episodes: ($77.49 + $27.03)		**|**	**$104.52**

Calculate the wage adjusted LUPA payment amount for the skilled nursing portion of the payment:

Calculate the labor portion of the per-visit payment amount for 1 skilled nursing visit: (0.77082 * $105.76)		|	$81.52
Apply the wage index factor from rural New Hampshire from Addendum A	(1.0853 * $81.52)	|	$88.47

Calculate the non-labor portion of the per-visit payment amount for 1 skilled nursing visit (0.22918 * 105.76)		$30.86
Calculate the wage adjusted LUPA payment amount for 1 skilled nursing visit ($88.47 + $30.86)		$119.33
Calculate the wage adjusted LUPA payment amount for the home health aide portion of the payment		
Calculate the labor portion of the per-visit payment amount for 2 home health aide visits: (0.77082 * ($47.91 + $47.91))		$73.86
Apply the wage index factor from rural New Hampshire from Addendum A	(1.0853 * $73.86)	$80.16
Calculate the non-labor portion of the per-visit payment amount for 2 home health aide visits (0.22918 * ($47.91 + $47.91))		$21.96
Calculate the wage adjusted LUPA payment amount for 2 home health aide visits ($80.16 + $21.96)		$102.12
Calculate the LUPA amount for 1-skilled nursing/2-home health aide episode, before applying any increase for the only episode or initial episode in a sequence of adjacent episodes ($119.33 + $102.12)		$221.45
Calculate the Total LUPA payment amount (with proposed increase for an only episode or initial episode in a sequence of adjacent episodes)	**($221.45 + $104.52)**	**$325.97**

Outlier payments are determined and calculated using the same methodology that has been used since the implementation of the HH PPS.

E. Hospital Wage Index

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 HH PPS to account for area wage differences. We apply the appropriate wage index value to the proposed labor portion (77.082 percent; see Table 22) of the HH PPS rates based on the geographic area where the beneficiary received the home health services. As implemented under the HH PPS in the July 3, 2000 HH PPS final rule, each HHA's labor market area is based on definitions of Metropolitan Statistical Areas (MSAs) issued by the OMB.

In the August 11, 2004 IPPS final rule [69 FR 49206], revised labor market area definitions were adopted at §412.64(b), which were effective October 1, 2004 for acute care hospitals. The new standards, Core Based Statistical Areas (CBSAs), were announced by OMB in late 2000 and were

also discussed in greater detail in the July 14, 2005 HH PPS proposed rule. For the purposes of the HH PPS, the term "MSA-based" refers to wage index values and designations based on the previous MSA designations. Conversely, the term CBSA-based" refers to wage index values and designations based on the new OMB revised MSA designations which now include CBSAs. In the November 9, 2005 HH PPS final rule (70 FR 68132), we implemented a 1-year transition policy using a 50/50 blend of the CBSA-based wage index values and the MSA-based wage index values for CY 2006. The one-year transition policy ended in CY 2006. For CY 2008, we propose to use a wage index based solely on the CBSA designations.

1. Background

As implemented under the HH PPS in the July 3, 2000 HH PPS final rule, each HHA's labor market is determined based on definitions of MSAs issued by OMB. In general, an urban area is defined as an MSA or New England County Metropolitan Area (NECMA) as defined by OMB. Under §412.64(b)(1)(ii)(C), a rural area is defined as any area outside of the urban area. The urban and rural area geographic classifications are defined in §412.64(b)(1)(ii)(A) and

§412.64.(b)(1)(II)(C) respectively, and have been used under the HH PPS since implementation.

Under the HH PPS, the wage index value used is based upon the location of the beneficiary's home. As has been our longstanding practice, any area not included in an MSA (urban area) is considered to be non-urban §412.64(b)(1)(ii)(C) and receives the statewide rural wage index value (see, for example, 65 FR 41173).

As discussed previously and set forth in the July 3, 2000 final rule, the statute provides that the wage adjustment factors may be the factors used by the Secretary for purposes of section 1886(d)(3)(E) of the Act for hospital wage adjustment factors. As discussed in the July 3, 2000 final rule, we are proposing again to use the pre-floor and pre-reclassified hospital wage index data to adjust the labor portion of the HH PPS rates based on the geographic area where the beneficiary receives home health services. We believe the use of the pre-floor and pre-reclassified hospital wage index data results in the appropriate adjustment to the labor portion of the costs as required by statute. For the CY 2008 update to home health payment rates, we would continue to use the most recent

pre-floor and pre-reclassified hospital wage index available at the time of publication.

In adopting the CBSA designations, we identified some geographic areas where there are no hospitals, and thus no hospital wage data on which to base the calculation of the home health wage index. Beginning in CY 2006, we adopted a policy that, for urban labor markets without an urban hospital from which a hospital wage index can be derived, all of the urban CBSA wage index values within the State would be used to calculate a statewide urban average wage index to use as a reasonable proxy for these areas. Currently, the only CBSA that would be affected by this policy is CBSA 25980, Hinesville, Georgia. We propose to continue this policy for CY 2008.

2. Update

Currently, the only rural areas where there are no hospitals from which to calculate a hospital wage index are Massachusetts and Puerto Rico. For CY 2006, we adopted a policy in the HH PPS November 9, 2005 final rule (70 FR 68138) of using the CY 2005 pre-floor, pre-reclassified hospital wage index value. In the August 3, 2006 proposed rule, we again proposed to apply the CY 2005 pre-floor/pre-reclassified hospital wage index to

rural areas where no hospital wage data is available. In response to commenters' concerns and in recognition that, in the future, there may be additional rural areas impacted by a lack of hospital wage data from which to derive a wage index, we adopted, in the November 9, 2006 final rule (71 FR 65905), the following methodology for imputing a rural wage index for areas where no hospital wage data are available as an acceptable proxy. The methodology that we implemented for CY 2007 imputed an average wage index value by averaging the wage index values from contiguous CBSAs as a reasonable proxy for rural areas with no hospital wage data from which to calculate a wage index. We believe this methodology best meet our criteria for imputing a rural wage index as well as representing an appropriate wage index proxy for rural areas without hospital wage data. Specifically, such a methodology uses pre-floor, pre-reclassified hospital wage data, is easy to evaluate, is updateable from year to year, and uses the most local data available. In determining an imputed rural wage index, we define “contiguous” as sharing a border. For Massachusetts, rural Massachusetts currently consists of Dukes and Nantucket Counties. We determined that the borders of Dukes and Nantucket counties are “contiguous” with Barnstable and

Bristol counties. We are again proposing to apply this methodology for imputing a rural wage index for those rural areas without rural hospital wage data. While we continue to believe that this policy could be readily applied to other rural areas that lack hospital wage data (possibly due to hospitals converting to a different provider type (such as a CAH) that does not submit the appropriate wage data), we specifically solicit comments on this issue.

However, as we noted in the HH PPS final rule for CY 2007, we did not believe that this policy was appropriate for Puerto Rico. As noted in the August 3, 2006 proposed rule, there are sufficient economic differences between the hospitals in the United States and those in Puerto Rico, including the fact that hospitals in Puerto Rico are paid on blended Federal/Commonwealth-specific rates, that a separate distinct policy for Puerto Rico is necessary. Consequently, any alternative methodology for imputing a wage index for rural Puerto Rico would need to take into account those differences. Our policy of imputing a rural wage index by using an averaged wage index of CBSAs contiguous to that rural area does not recognize the unique circumstances of Puerto Rico. For CY 2008, we again propose to continue to use the most recent wage index previously available for

Puerto Rico which is 0.4047.

The rural and urban hospital wage indexes can be found in Addenda A and B of this proposed rule. For HH PPS rates addressed in this proposed rule, we are using the 2007 pre-floor and pre-reclassified hospital wage index data, as 2008 pre-floor and pre-reclassified hospital wage index data are not yet available. We propose to use the 2008 pre-floor and pre-reclassified hospital wage index (not including any reclassification under section 1886(d)(8)(B) of the Act) to adjust rates for CY 2008 and will publish those wage index values in the final rule.

F. Home Health Care Quality Improvement

Section 5201(c)(2) of the DRA added section 1895(b)(3)(B)(v)(II) to the Act, requiring that "each home health agency shall submit to the Secretary such data that the Secretary determines are appropriate for the measurement of health care quality. Such data shall be submitted in a form and manner, and at a time, specified by the Secretary for purposes of this clause." In addition, section 1895(b)(3)(B)(v)(I) of the Act, as also added by section 5201(c)(2) of the DRA, dictates that "for 2007 and each subsequent year, in the case of a home health agency that does not submit data to the Secretary in accordance

with subclause (II) with respect to such a year, the home health market basket percentage increase applicable under such clause for such year shall be reduced by 2 percentage points."

The OASIS data currently provide consumers and HHAs with 10 publicly-reported home health quality measures which have been endorsed by the National Quality Forum (NQF). Reporting these quality data have also required the development of several supporting mechanisms such as the HAVEN software used to encode and transmit data using a CMS standard electronic record layout, edit specifications, and data dictionary. The HAVEN software includes the required OASIS data set that has become a standard part of HHA operations. These early investments in data infrastructure and supporting software that CMS and HHAs have made over the past several years in order to create this quality reporting structure have been successful in making quality reporting and measurement an integral component of the HHA industry. The 10 measures are--

- Improvement in ambulation/locomotion;
- Improvement in bathing;
- Improvement in transferring;
- Improvement in management of oral medications;

- Improvement in pain interfering with activity;
- Acute care hospitalization;
- Emergent care;
- Improvement in dyspnea;
- Improvement in urinary incontinence; and
- Discharge to community.

We are proposing to continue to use OASIS data and the current 10 quality measures, and to add two additional quality measures based on those data for the CY 2008 HH PPS quality data reporting requirement. Continuing to use the OASIS instrument ensures that providers will not have an additional burden of reporting through a separate mechanism and that the costs associated with the development and testing of a new reporting mechanism can be avoided. Accordingly, for CY 2008, we propose to continue to use submission of OASIS data to meet the requirement that the HHA submit data appropriate for the measurement of health care quality.

We specifically propose to add the following two additional quality measures as data appropriate for measuring health care quality. Adding new measures to the currently available outcome measures could broaden the patient population we can assess, expand the types of

quality care we can measure, and capture an aspect of care directly under providers' control. These two wound measures focus on a prevalent condition among home health beneficiaries. We believe that by adding these two measures, we can address agencies' ability to maintain patients in their homes. These additional NQF endorsed measures that will provide a more complete picture of the level of quality care delivered by HHAs are the following:

- Emergent Care for Wound Infections, Deteriorating Wound Status; and
- Improvement in Status of Surgical Wound.

The data elements used to calculate these measures are already captured by the OASIS instrument and do not require additional reporting or burden to HHAs.

Additionally, section 1895(b)(3)(B)(v)(II) of the Act provides the Secretary with the discretion to submit the required data in a form, manner, and time specified by him. We are proposing for CY 2008 to consider OASIS data submitted by HHAs to CMS for episodes beginning on or after July 1, 2006 and before July 1, 2007 as meeting the reporting requirement for CY 2008. This reporting time period would allow 12 full months of data and would provide us the time necessary to analyze and make any necessary

payment adjustments to the CY 2008 payment rates. HHAs that meet the reporting requirement would be eligible for the full home health market basket percentage increase.

We recognize, however, that the home health conditions of participations (CoPs) in (42 CFR part 484) that require OASIS submission also provide for exclusions from the CoP submission requirement. Generally, agencies excluded from the CoP OASIS submission requirement do not receive Medicare payments as they either do not provide services to Medicare beneficiaries or the patients are not receiving Medicare-covered home health services. Under the CoP, agencies are excluded from the OASIS reporting requirement on individual patients if--

- Those patients are receiving only non-skilled services;
- Neither Medicare nor Medicaid is paying for home health care (patients receiving care under a Medicare or Medicaid Managed Care Plan are not excluded from the OASIS reporting requirement);
- Those patients are receiving pre- or post-partum services; and
- Those patients are under the age of 18 years.

We believe that the rationale behind the exclusion of these agencies from submission of OASIS on patients which are excluded from OASIS CoP submission is equally applicable to HHAs for quality purposes. If an agency is not submitting OASIS for patients excluded from OASIS submission for purposes of a CoP, we believe that the submission of OASIS for quality measures for Medicare purposes is likewise not necessary. Therefore, we propose that those agencies do not need to submit quality measures for reporting purposes for those patients who are excluded from the OASIS CoP submission.

Additionally, we propose that agencies newly certified (on or after May 31, 2007 for payments to be made in CY 2008) be excluded from the quality reporting requirement as data submission and analysis would not be possible for an agency certified this late in the reporting time period. We again propose that in future years, agencies that certify on or after May 31 of the preceding year involved be excluded from any payment penalty for quality reporting purposes for the following CY. We note these exclusions only affect quality reporting requirements and do not affect the agency's OASIS reporting responsibilities under the CoP.

We propose to require that all HHAs, unless covered by these specific exclusions, meet the reporting requirement, or be subject to a 2 percent reduction in the home health market basket percentage increase in accordance with section 895(b)(3)(B)(v)(I) of the Act. The 2 percent reduction would apply to all episode payments beginning on or after January 1, 2008. We provide the proposed reduced payment rates in tables 25 and 26. We would reconcile the OASIS submissions with claims data in order to verify full compliance with the quality reporting requirements.

For episodes that begin in CY 2007 and end in CY 2008, the new proposed 153 HHRG case-mix model (and associated Grouper) would not yet be in effect. For that reason, we propose, for HHAs that do not submit required quality data (for episodes that begin in CY 2007 and end in CY 2008), the following: First, we update the CY 2007 rate of $2,339.00 by the home health market basket percentage update (2.9 percent) minus 2 percent, reduced by 2.75 percent to account for nominal change in case-mix, and multiplied by 1.05 and 0.958614805 to account for the estimated percentage of outlier payments as a result of the current FDL ratio of 0.67 ($2,339.00 * 1.009 * .9725 * 1.05 * 0.958614805), to yield an updated CY 2008 national standardized 60-day

episode payment rate of $2,310.17 for episodes that begin in CY 2007 and end in CY 2008 for HHAs that do not submit required quality data (see Table 25a).

These episodes would be further adjusted for case-mix based on the 80 HHRG case-mix model for episodes beginning in CY 2007 and ending in CY 2008.

Table 25a: For HHAs That Do Not Submit The Required Quality Data-Proposed National 60-Day Episode Amounts Updated by the Estimated Home Health Market Basket Update for CY 2008, Minus 2 Percentage Points, For Episodes that Begin in CY 2007 and End in CY 2008 Before Case-Mix Adjustment, Wage Index Adjustment Based on the Site of Service for the Beneficiary or Applicable Payment Adjustment

Total CY 2007 National Standardized 60-Day Episode Payment Rate	Multiply by the Proposed Estimated Home Health Market Basket Update (2.9 Percent)[1] Minus 2 Percent	Reduce by 2.75 Percent for Nominal Change in Case-Mix	Adjusted to Account for the 5 Percent Outlier Policy	Proposed National Standardized 60-Day Episode Payment Rate for Episodes Beginning in CY 2007 and Ending in CY 2008 for HHAs That Do Not Submit Required Quality Data
$2,339.00	X 1.009	X 0.9725	X 1.05 X 0.958614805	$2,310.17

[1]The estimated home health market basket update of 2.9 percent for CY 2008 is based on Global Insight, Inc, 4th Qtr, 2006 forecast with historical data through 3rd Qtr, 2006.

Next, in order to establish new rates based on a proposed new case-mix system, we again start with the CY 2007 national standardized 60-day episode payment rate

and increase that rate by the proposed estimated rebased and revised home health market basket update (2.9 percent) minus 2 percent ($2,339.00 * 1.009 = $2,360.05). We next have to put dollars associated with the outlier target estimate back into the base rate. In the 2000 HH PPS final rule (65 FR 41184), we divided the base rate by 1.05 to account for outlier payments. Therefore, we are proposing to multiply the $2,360.05 by 1.05, resulting in $2,478.05. Next we need to reduce this amount to pay for each of our proposed policies. To do this, we take the payment adjustment amount to pay for our proposed policies of this rule, determined in Table 23a of $226.57, multiply it by (1/1.029) to take away the 2.9 percent increase, and multiply that number by 1.009 to impose the 0.9 percent update for episodes where HHAs have not submitted the required quality data. This results in a payment adjustment amount of $222.17. Finally, subtract the payment adjustment amount of $222.17 from $2,478.05, for a final rate of $2,255.88 for HHAs that do not submit quality data, for episodes that begin and end in CY 2008.

These episodes would be further adjusted for case-mix based on the 153 HHRG case-mix model for episodes beginning and ending in CY 2008. As we noted in section II.A.2.d., we

increased the case-mix weights by a budget neutrality factor of 1.194227193.

Table 25b: For HHAs That Do Not Submit The Required Quality Data-Proposed National 60-Day Episode Amounts Updated by the Estimated Home Health Market Basket Update for CY 2008, Minus 2 Percentage Points, For Episodes that Begin and End in CY 2008, Before Case-Mix Adjustment, Wage Index Adjustment Based on the Site of Service for the Beneficiary or Applicable Payment Adjustment

Total CY 2007 National Standardized 60-Day Episode Payment Rate	Multiply by the Proposed Estimated Home Health Market Basket Update (2.9 Percent)[1]	Adjusted to Return the Outlier Funds to the National Standardized 60-Day Episode Payment Rate	Updated and Outlier Adjusted National Standardized 60-Day Episode Payment	Changes to Account for LUPA Adjustment ($6.46), NRS Payment ($40.88), Elimination of SCIC Policy ($15.71), Outlier Target ($94.02), and 2.75 Percent Reduction for Nominal Change in Case-Mix ($69.50) = $226.57 ; Minus 2 Percentage Points off of the Home Health Market Basket Update (2.9 Percent)[1] for Episodes Beginning and Ending in CY 2008	Proposed CY 2008 National Standardized 60-Day Episode Payment Rate for Episodes Beginning and Ending in CY 2008
$2,339.00	X 1.009	X 1.05	$2,478.05	- $222.17	$2,255.88

[1]The estimated home health market basket update of 2.9 percent for CY 2008 is based on Global Insight, Inc, 4th Qtr, 2006 forecast with historical data through 3rd Qtr, 2006.

In calculating the proposed CY 2008 national per-visit amounts used to calculate payments for LUPA episodes for HHAs that do not submit required quality data and to compute the imputed costs in outlier calculations for those episodes, we are proposing to start with the CY 2007 per-visit rates. We propose to multiply those amounts by the proposed estimated home health market basket update (2.9 percent) minus 2 percentage points, then multiply by 1.05 and 0.958614805 to account for the estimated percentage of outlier payments as a result of the current FDL ratio of 0.67, to yield the updated per-visit amounts for each home health discipline for CY 2008 for HHAs that do not submit required quality data.

Table 26: For HHAs That Do Not Submit The Required Quality Data-Proposed National Per-Visit Amounts for LUPAs (not including the increase in payment for a beneficiary's only episode or the initial episode in a sequence of adjacent episodes)and Outlier Calculations Updated by the Estimated Home Health Market Basket Update for CY 2008, Minus 2 Percentage Points, Before Wage Index Adjustment Based on the Site of Service for the Beneficiary

Home Health Discipline Type	Final CY 2007 Per-Visit Amounts Per 60-Day Episode for LUPAs	Multiply by the Proposed Estimated Home Health Market Basket (2.9 Percent)[1]	Adjusted to Account for the 5 Percent Outlier Policy	Proposed CY 2008 Per-Visit Payment Amount Per Discipline for A Beneficiary Who Resides In A Non-MSA For HHAs That Do Not Submit Required Quality Data
Home Health Aide	$46.24	X1.009	X 1.05 X 0.958614805	$46.96
Medical Social Services	$163.68	X1.009	X 1.05 X 0.958614805	$166.23
Occupational Therapy	$112.40	X1.009	X 10.5 X 0.958614805	$114.15
Physical Therapy	$111.65	X1.009	X 1.05 X 0.958614805	$113.39
Skilled Nursing	$102.11	X1.009	X 1.05 X 0.958614805	$103.70
Speech-Language Pathology	$121.22	X1.009	X 1.05 X 0.958614805	$123.11

[1]The estimated home health market basket update of 2.9 percent for CY 2008 is based on Global Insight, Inc, 4th Qtr, 2006 forecast with historical data through 3rd Qtr, 2006.

Section 1895(b)(3)(B)(v)(III) of the Act further requires that the "Secretary shall establish procedures for making data submitted under subclause (II) available to the

public." Additionally, the statute requires that "such procedures shall ensure that a home health agency has the opportunity to review the data that is to be made public with respect to the agency before such data being made public." To meet the requirement for making such data public, we are proposing to continue to use the Home Health Compare Web site whereby HHAs are listed geographically.

Currently, the 10 existing quality measures are posted on the Home Health Compare Web site. The Home Health Compare Web site will also include the two proposed additional measures discussed earlier. Consumers can search for all Medicare-approved home health providers that serve their city or zip code and then find the agencies offering the types of services they need as well as the proposed quality measures. See http://www.medicare.gov/HHCompare/Home.asp. HHAs currently have access (through the Home Health Compare contractor) to their own agency's quality data (updated periodically) and we propose to continue this process thus enabling each agency to know how it is performing before public posting of data on the Home Health Compare Web site.

Over the next year, we will be testing patient level process measures for HHAs, as well as continuing to refine

the current OASIS tool in response to recommendations from a TEP conducted to review the data elements that make up the OASIS tool. We expect to introduce these complementary additional measures during CY 2008 to determine if they should be incorporated into the statutory quality measure reporting requirements. We hope to apply these measures to the CY 2010 reporting period. Before usage in the HH PPS, we will test and refine these measures to determine if they can more accurately reflect the level of quality care being provided at HHAs without being overly burdensome with the data collection instrument. To the extent that evidence-based data are available on which to determine the appropriate measure specifications, and adequate risk-adjustments are made, we anticipate collecting and reporting these measures as part of each agency's home health quality plan. We believe that future modifications to the current OASIS tool, refinements to the possible responses as well as adding new process measures will be made. In all cases, we anticipate that any future quality measures should be evidence-based, clearly linked to improved outcomes, and able to be reliably captured with the least burden to the provider. We are also working on developing measures of patient experience in the home health

setting through the development of the Home Health Consumer Assessment of Healthcare Providers and Systems (CAHPS) Survey. We will be working with the Agency for Healthcare Research and Quality (AHRQ) to field test this instrument in summer/fall 2007. We anticipate implementing the Home Health CAHPS Survey in late 2008 for potential application to the CY 2010 pay for reporting requirements.

III. 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 of 1995 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.

Therefore, we are soliciting public comments on each of these issues for the information collection requirements discussed below.

To implement the OASIS changes discussed in sections II.A.(2)(a), II.A.(2)(b), and II.A.(2)(c) of this proposed rule, which are currently approved in §484.55, §484.205, and §484.250, a few items in the OASIS will need to be modified, deleted, or added. The requirements and burden associated with the OASIS are currently approved under OMB control number 0938-0760 with an expiration date of August 31, 2007. We are soliciting public comment on each of the proposed changes for the information collection requirements (ICRs) as summarized and discussed below. For the purposes of soliciting public review and comment, we have placed a current draft of the proposed changes to the OASIS on the CMS Web site at:

http://www.cms.hhs.gov/PaperworkReductionActof1995/PRAL/list.asp#TopOfPage

As discussed in section II.A.(2)(a) of this proposed

rule, in order for the OASIS to have the information necessary to allow the grouper to price-out the claim, we propose to make the following changes to the OASIS to capture whether an episode is an early or later episode:

The creation of a new OASIS item to capture whether a particular assessment, is for an episode considered to be an early episode or a later episode in the patient's current sequence of adjacent Medicare home health payment episodes. As defined in section II.A.1. of this proposed rule, we defined a sequence of adjacent episodes for a beneficiary as a series of claims with no more than 60 days without home care between the end of one episode, which is the 60th day (except for episode that have been PEP-adjusted), and the beginning of the next episode. This definition holds true regardless of whether or not the same HHA provided care for the entire sequence of adjacent episodes. The HHA will chose from the options: "Early" for single episodes or the first or second episode in a sequence of adjacent episodes, "Later" for third or later episodes, "UK" for unknown if the HHA is uncertain as to whether the episode is an early or later episode (the payment grouper software will default to the definition of an "early" episode), and "NA" for not applicable (no Medicare case-mix group to be defined by this

assessment).

As discussed in section II.A.(2)(b) of this proposed rule, we propose to make changes to the OASIS in order to enable agencies to report secondary case-mix diagnosis codes. The proposed changes clarify how to appropriately fill out OASIS items M0230 and M0240, using ICD-9-CM sequencing requirements if multiple coding is indicated for any diagnosis. Additionally, if a V-code is reported in place of a case-mix diagnosis for OASIS item M0230 or M0240, then the new optional OASIS item (which is replacing existing OASIS item M0245) may then be completed. A case-mix diagnosis is a diagnosis that determines the HH PPS case-mix group.

As discussed in section II.A.(2)(c) of this proposed rule, we propose to make changes to the OASIS to capture the projected total number of therapy visits for a given episode. With the projected total number of therapy visits, the payment grouper would be able to group that episode into the appropriate case-mix group for payment. The existing OASIS item M0825 asks an HHA if the projected number of therapy visits would meet the therapy threshold or not. As noted previously, we propose to delete OASIS item M0825 and replace it with a new OASIS item. The OASIS item would ask

the following: "In the plan of care for the Medicare payment episode for which this assessment will define a case-mix group, what is the indicated need for therapy visits (total of reasonable and necessary physical, occupational, and speech-pathology visits combined)?" The HHA would provide the total number of projected therapy visits for that Medicare payment episode, unless not applicable (that is, no case-mix group defined by this assessment). The HHA would enter "000" if no therapy visits were projected for that particular episode.

The burden associated with the proposed changes discussed in sections II.A.(2)(a), II.A.(2)(b), and II.A.(2)(c) of this rule includes possible training of staff, the time and effort associated with downloading a new form and replacing previously pre-printed versions of the OASIS, and utilizing updated vendor software. However, as stated above, CMS would be removing or modifying existing questions in the OASIS data set to accommodate the proposed requirements referenced above. In addition, as a result of the proposed changes of this rule, we expect that the claims processing system is expected to automatically adjust the therapy visits, upward and downward on the final claim, according to the information on the final claim.

Consequently, the HHA would no longer have to withdraw and resubmit a revised claim when the number of therapy visits delivered to the patient is higher than the level report on the RAP. Therefore, CMS believes the burden increase associated with these changes is negated by the removal or modification of several current data items.

We have submitted a copy of this proposed rule to OMB for its review of the information collection requirements described above. These requirements are not effective until OMB has approved them.

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

Centers for Medicare & Medicaid Services,
Office of Strategic Operations and Regulatory Affairs,
Regulations Development Group,
Attn.: Melissa Musotto, CMS-1541-P,
Room C4-26-05, 7500 Security Boulevard,
Baltimore, MD 21244-1850; and

Office of Information and Regulatory Affairs,
Office of Management and Budget,
Room 10235, New Executive Office Building,
Washington, DC 20503,
Attn: Carolyn Lovett, CMS Desk Officer, (CMS-1541-P),

carolyn_lovett@omb.eop.gov. Fax (202) 395-6974.

IV. Response to Comments

Because of the large number of public comments normally receive on **Federal Register** documents, 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 proposed rule, and, when we proceed with subsequent document, we will respond to the comments in the preamble to that document.

V. Regulatory Impact Analysis

[If you choose to comment on issues in this section, please include the caption "REGULATORY IMPACT ANALYSIS" at the beginning of your comments.]

A. Overall Impact

We have examined the impacts of this rule as required by Executive Order 12866 (September 1993, Regulatory Planning and Review), the Regulatory Flexibility Act (RFA) (September 19, 1980, Pub. L. 96-354), section 1102(b) of the Social Security Act, the Unfunded Mandates Reform Act of 1995 (Pub. L. 104-4), and Executive Order 13132.

Executive Order 12866 (as amended by Executive Order 13258, which merely reassigns responsibility of duties) directs agencies to assess all costs and benefits of

available regulatory alternatives and, if 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 in any 1 year). This proposed rule would be a major rule, as defined in Title 5, United States Code, section 804(2), because we estimate the impact to the Medicare program, and the annual effects to the overall economy, would be more than $100 million. The update set forth in this proposed rule would apply to Medicare payments under the HH PPS in CY 2008.

Accordingly, the following analysis describes the impact in CY 2008 only. We estimate that the net impact of the proposals in this rule, including a 2.75 percent reduction to the case-mix weights to account for nominal increase in case-mix, is estimated to be approximately $140 million in CY 2008 expenditures. That estimate incorporates the 2.9 percent home health market basket increase (an estimated additional $410 million in CY 2008 expenditures attributable only to the CY 2008 proposed estimated home health market basket update), an estimated

additional $130 million due to the increase in the HH PPS rates as a result of maintaining a FDL ratio of 0.67, and the 2.75 percent decrease (-$400 million for the first year of a 3-year phase-in) to the HH PPS national standardized 60-day episode rate to account for the nominal increase in case-mix under the HH PPS. Given that we allowed for a FDL ratio of 0.67, all HH PPS rates were adjusted slightly upward by a factor of 0.008614805.. Column 6 of Table 27 displays a 0.95 percent increase in expenditures when comparing the CY 2007 current system to the proposed revised CY 2008 system. This equates to approximately $140 million and is driven primarily by the adjustment made to maintain the FDL ratio at 0.67 and partially by the difference between the 2.9 percent update and the 2.75 percent reduction to the HH PPS rates..

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 small governmental jurisdictions. Most hospitals and most other providers and suppliers are small entities, either by nonprofit status or by having revenues of $6 million to $29 million in any 1 year. For purposes of the RFA, approximately 75 percent of HHAs are considered

small businesses according to the Small Business Administration's size standards with total revenues of $11.5 million or less in any 1 year. Individuals and States are not included in the definition of a small entity. As stated above, this proposed rule would have an estimated positive effect upon small entities that are HHAs.

In addition, 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 100 beds. We have determined that this proposed rule would not have a significant economic impact on the operations of a substantial number of small rural hospitals.

Section 202 of the Unfunded Mandates Reform Act of 1995 also requires that agencies assess anticipated costs and benefits before issuing any rule that may result in expenditure in any 1 year by State, local, or tribal governments, in the aggregate, or by the private sector, of

$110 million. We believe this proposed rule would not mandate expenditures in that amount.

Executive Order 13132 establishes certain requirements that an agency must meet when it promulgates a proposed rule (and subsequent final rule) that imposes substantial direct requirement costs on State and local governments, preempts State law, or otherwise has Federalism implications. We have determined that this proposed rule would not have substantial direct effects on the rights, roles, and responsibilities of States.

B. Anticipated Effects

This proposed rule would update the HH PPS rates contained in the CY 2007 final rule (71 FR 65884, November 9, 2006). The impact analysis of this proposed rule presents the refinement related policy changes proposed in this rule. We use the best data available, but we do not attempt to predict behavioral responses to these changes, and we do not make adjustments for future changes in such variables as days or case-mix.

This analysis incorporates the latest estimates of growth in service use and payments under the Medicare home health benefit, based on the latest available Medicare claims from 2003. We note that certain events may combine

to limit the scope or accuracy of our impact analysis, because such an analysis is future-oriented and, thus, susceptible to forecasting errors due to other changes in the forecasted impact time period. Some examples of such possible events are newly-legislated general Medicare program funding changes made by the Congress, or changes specifically related to HHAs. In addition, changes to the Medicare program may continue to be made as a result of the BBA, the BBRA, the Medicare, Medicaid, and SCHIP Benefits Improvement and Protection Act of 2000, the MMA, the DRA, or new statutory provisions. Although these changes may not be specific to the HH PPS, the nature of the Medicare program is such that the changes may interact, and the complexity of the interaction of these changes could make it difficult to predict accurately the full scope of the impact upon HHAs.

Table 27 represents how home health agencies are likely to be affected by the policy changes described in this rule. For each agency type listed below, Table 27 displays the average case-mix index, both under the current HH PPS case-mix system and the proposed CY 2008 HH PPS case-mix system. For this analysis, we used the most recent data available that linked home health claims and OASIS assessments, a 10 percent sample of episodes occurring in

FY 2003. In Table 27, the average case-mix is the same, in the aggregate, between the current HH PPS system and the proposed revised HH PPS system, due to our application of a budget neutrality factor for the case-mix weights. Column one of this table classifies HHAs according to a number of characteristics including provider type, geographic region, and urban versus rural location. Column two displays the average case-mix weight for each type of agency under the current payment system. Column three displays the average case-mix weight for each type of agency incorporating all of the changes/refinements discussed above. The average case-mix weight for proprietary (for profit) agencies is estimated to decrease from 1.2601 to 1.2227. Comparatively, the average case-mix weight for voluntary non-profit agencies is estimated to increase from 1.1404 to 1.1716. Rural agencies are estimated to experience a decrease in their average case-mix from 1.1583 to 1.1417. It is estimated that urban agencies would see a slight increase in their average case-mix weight from 1.2032 to 1.2074. In particular, the New England, Mid-Atlantic, East North Central, Mountain, and West North Central areas of the country are estimated to see their average case-mix increase under the proposed refinements of this rule. Conversely,

the West South Central, East South Central, Pacific, and South Atlantic areas of the country are estimated to see their average case-mix decrease as a result of proposed refinements of this rule. Both small and large agencies are estimated to see decreases in their average case-mix under the new proposed case-mix system, the only exception being much larger agencies (200+ first episodes), which are estimated to see an increase of their average case-mix from 1.1769 to 1.1920.

For the purposes of analyzing impacts on payments, we performed three simulations and compared them to each other. The first simulation estimated 2007 payments under the current system. The second simulation estimated 2008 payments as though there would be no changes to the payment system other than the rebased and revised home health market basket increase of 2.9 percent. The second simulation produces an estimate of what total payments using the sample data would be in 2008 without making any of the proposed changes described in this proposed rule.

The third simulation estimates what total payments would be in 2008, using the proposed case-mix model, the proposed additional payment for initial and only episode LUPA episodes, the proposed removal of SCIC adjustments, and

the proposed revised approach to making NRS payments. The third simulation also assumed payments would incorporate the rebased and revised home health market basket increase of 2.9 percent, the current outlier threshold determined by a FDL ratio of 0.67, and the 2.75 percent reduction in the national standardized 60-day episode payment rate to account for the proposed nominal change in case-mix. All three simulations used the same CBSA wage index (we used a crosswalk from the MSA reported on the 2003 claims to the CBSA to determine the appropriate wage index). The results of comparing these simulations are displayed in columns four, five, and six of Table 27.

Column four shows the percentage change in estimated total payments in moving from CY 2007 to a CY 2008 system incorporating none of the proposed refinements to the HH PPS except for the rebased and revised home health market basket increase of 2.9 percent. Column five shows the percentage change in estimated total payments in moving from a CY 2008 system that incorporates none of the proposed changes to the HH PPS except for the rebased and revised home health market basket increase of 2.9 percent to the proposed revised CY 2008 system of this rule. Finally, column six shows the percentage change in estimated total payments in moving from

CY 2007 to the proposed revised CY 2008 system of this rule.

In general terms, the percentage change in estimated total payments from CY 2007 to a CY 2008 system that incorporates none of the proposed refinements to the HH PPS except for the rebased and revised home health market basket update of 2.9 percent is approximately the home health market basket increase of 2.9 percent. Some of the classifications of HHAs show a slightly less than 2.9 percent increase in this comparison, which is due to the CY 2007 system incorporating the current labor share, which is slightly less than the labor share being proposed for the CY 2008 system.

When comparing a CY 2008 system that incorporates none of the refinements to the HH PPS except for the rebased and revised home health market basket increase of 2.9 percent with the proposed revised CY 2008 system of this rule, it is estimated that under the proposed revised CY 2008 system of this rule, total estimated payments would decrease by approximately 1.88 percent. Comparatively, the percentage change in estimated total payments from CY 2007 to the proposed revised CY 2008 system of this rule is an increase of just under 1 percent (0.95 percent). All three simulations incorporate a FDL ratio of 0.67. By maintaining

the FDL ratio of 0.67, we believe we will continue to meet the statutory requirement of having an outlier payment outlay that does not exceed 5 percent of total HH PPS payments. In maintaining a 0.67 FDL ratio for CY 2008, in order to maintain budget neutrality (other than the 2.75 percent reduction to the HH PPS rates to account for nominal case-mix change), HH PPS rates are increased slightly, as stated earlier in this section.

In general, voluntary non-profit HHAs (3.56 percent), facility-based HHAs (3.50 percent), government owned HHAs (3.04 percent) and free-standing HHAs (0.10 percent) are estimated to see an increase in the percentage change in estimated total payments from CY 2007 to the proposed revised CY 2008 system. Proprietary HHAs, on the other hand are estimated to see a decrease of 1.90 percent in estimated total payments from CY 2007 to the proposed revised CY 2008 system. The major contributor to this decrease of 1.90 percent is the free-standing proprietary HHAs, which are estimated to see a decrease of slightly more than 2 percent in the percentage change in estimated total payment from CY 2007 to the proposed revised CY 2008 system.

We note that some of these impacts are partly explained by practice patterns associated with certain types of

agencies. For example, LUPA episodes are relatively common among nonprofit agencies and freestanding government-owned agencies. Our proposal for an additional payment for certain LUPA episodes would tend to increase payments for such classes of agencies with higher-than-average LUPA rates, while tending to decrease payments for agencies with comparatively low LUPA rates. Similarly, the proposed elimination of the SCIC policy would tend to favorably affect total payments for agencies with relatively high rates of SCIC episodes, such as facility-based proprietary agencies and facility-based government agencies.

The percentage change in estimated total payments from CY 2007 to a CY 2008 system that incorporates all of the refinements to the HH PPS for rural HHAs is a slight decrease of 0.50 percent, while for urban HHAs an increase of 1.26 percent is expected. Urban agencies have somewhat higher LUPA rates than rural agencies, so urban agencies would be expected to benefit, relative to rural agencies, from the proposal to make an additional payment for certain LUPA episodes. Urban agencies are also more likely to benefit from elimination of the SCIC policy. Urban agencies are less likely to bill a SCIC episode than rural agencies. However, when urban agencies do bill a SCIC episode the

payment is reduced more, on average, than when rural agencies bill a SCIC. The net effect of these two components (relative frequency and payment impact per SCIC episode) is a larger expected reduction for urban agencies under the SCIC adjustment policy. Therefore, while both urban and rural agencies benefit from eliminating the SCIC policy, urban agencies benefit more.

HHAs in the North are expected to experience a percentage change increase of 4.33 percent in estimated total payments from CY 2007 to the proposed revised CY 2008 system. The only region estimated to experience a decrease in the percentage change in estimated total payments from CY 2007 to the proposed revised CY 2008 system is the South. That percentage change is an estimated decrease of 1.84 percent. It is estimated that New England and Mid Atlantic area HHAs will experience percentage change increases of slightly more than 4 percent (New England, 4.10 percent and the Mid-Atlantic, 4.45 percent)in estimated total payments from CY 2007 to the proposed revised CY 2008 system. Conversely, West South Central HHAs are expected to experience a decrease (-3.80 percent)in the percentage change in estimated total payments from CY 2007 to the proposed CY 2008 system. In general, smaller HHAs are

expected to experience a decrease (ranging from -0.63 percent to -2.76 percent) for their percentage change in estimated total payments from CY 2007 to the proposed revised CY 2008 system. Conversely, larger HHAs are estimated to experience an increase (ranging from 0.59 percent to 2.16 percent) in the percent change in estimated total payments from CY 2007 to the proposed CY 2008 system.

Table 27: Impact By Agency Type

	Case Mix Index, Current PPS	Case Mix Index, Proposed Revised PPS	Percent Change, from CY 07, Current PPS, to CY08, Current PPS	Percent Change, from CY08, Current PPS, to CY 08, Proposed Revised PPS	Percent Change, from CY 07, Current PPS, to CY 08, Proposed Revised PPS
Type of Facility:					
Unknown	1.3464	1.2868	2.89%	-6.70%	-4.00%
Free-Standing Vol/NP	1.1502	1.1815	2.90%	0.58%	3.50%
Free-Standing Proprietary	1.2641	1.2234	2.88%	-4.85%	-2.11%
Free-Standing Government	1.1565	1.1865	2.86%	0.51%	3.39%
Facility-Based Vol/NP	1.1287	1.1596	2.89%	0.73%	3.65%
Facility-Based Proprietary	1.1794	1.2092	2.87%	0.26%	3.13%
Facility-Based Government	1.1244	1.1441	2.86%	-0.23%	2.63%
Subtotal: Freestanding	1.2155	1.2057	2.89%	-2.71%	0.10%
Subtotal: Facility-Based	1.1320	1.1615	2.88%	0.59%	3.50%
Subtotal: Vol/NP	1.1404	1.1716	2.90%	0.65%	3.56%
Subtotal: Proprietary	1.2601	1.2227	2.88%	-4.65%	-1.90%
Subtotal: Government	1.1417	1.1670	2.86%	0.17%	3.04%
GRAND TOTAL	1.1942	1.1942	2.89%	-1.88%	0.95%
Type of Facility (Rural Only):					
Unknown	1.2479	1.2209	2.89%	-4.60%	-1.84%
Free-Standing Vol/NP	1.1325	1.1386	2.85%	-1.36%	1.45%
Free-Standing Proprietary	1.2212	1.1528	2.83%	-7.49%	-4.87%
Free-Standing Government	1.1274	1.1563	2.84%	0.52%	3.37%
Facility-Based Vol/NP	1.1107	1.1242	2.84%	-0.49%	2.34%
Facility-Based Proprietary	1.1435	1.1552	2.83%	-1.05%	1.75%
Facility-Based Government	1.1133	1.1269	2.84%	-0.71%	2.11%
Type of Facility (Urban Only):					
Free-Standing Vol/NP	1.1525	1.1872	2.91%	0.80%	3.73%
Free-Standing Proprietary	1.2732	1.2383	2.89%	-4.41%	-1.64%
Free-Standing Government	1.1931	1.2244	2.89%	0.50%	3.40%
Facility-Based Vol/NP	1.1340	1.1701	2.90%	1.04%	3.97%
Facility-Based Proprietary	1.2004	1.2407	2.88%	0.89%	3.80%
Facility-Based Government	1.1402	1.1672	2.88%	0.29%	3.17%
Type of Facility: Urban or Rural					
Unknown	1.2479	1.2209	2.89%	-4.60%	-1.84%
Rural	1.1583	1.1417	2.84%	-3.25%	-0.50%
Urban	1.2032	1.2074	2.90%	-1.60%	1.26%
TOTAL	1.1942	1.1942	2.89%	-1.88%	0.95%
Type Facility: Region					
North	1.0978	1.1397	2.92%	1.37%	4.33%
South	1.2495	1.2158	2.86%	-4.40%	-1.66%
Midwest	1.1680	1.2016	2.88%	0.57%	3.47%
West	1.1797	1.1668	2.93%	-2.77%	0.08%
Other	1.2882	1.3136	2.80%	0.08%	2.88%
TOTAL	1.1942	1.1942	2.89%	-1.88%	0.95%
Type of Facility: Area of the Country					
New England	1.0600	1.1000	2.93%	1.14%	4.10%

	Case Mix Index, Current PPS	Case Mix Index, Proposed Revised PPS	Percent Change, from CY 07, Current PPS, to CY08, Current PPS	Percent Change, from CY08, Current PPS, to CY 08, Proposed Revised PPS	Percent Change, from CY 07, Current PPS, to CY 08, Proposed Revised PPS
Mid Atlantic	1.1172	1.1601	2.92%	1.49%	4.45%
South Atlantic	1.2456	1.2351	2.88%	-2.59%	0.21%
East South Central	1.2659	1.2391	2.84%	-4.28%	-1.57%
West South Central	1.2439	1.1817	2.86%	-6.47%	-3.80%
East North Central	1.1858	1.2226	2.89%	0.66%	3.57%
West North Central	1.1134	1.1370	2.86%	0.26%	3.13%
Mountain	1.2295	1.2687	2.87%	0.75%	3.64%
Pacific	1.1575	1.1213	2.95%	-4.02%	-1.19%
Other	1.2882	1.3136	2.80%	0.08%	2.88%
TOTAL	1.1942	1.1942	2.89%	-1.88%	0.95%
Type of Facility: Size (Number of First Episodes)					
Unknown	1.0500	1.0387	2.87%	-2.30%	0.50%
1 to 5	1.1484	1.0993	2.88%	-5.26%	-2.54%
6 to 9	1.1608	1.1140	2.87%	-5.47%	-2.76%
10 to 14	1.1755	1.1438	2.87%	-4.62%	-1.88%
15 to 19	1.1602	1.1268	2.87%	-4.41%	-1.67%
20 to 29	1.1894	1.1678	2.87%	-3.40%	-0.63%
30 to 49	1.2062	1.1840	2.87%	-3.62%	-0.86%
50 to 99	1.2252	1.2221	2.88%	-2.23%	0.59%
100 to 199	1.2029	1.2024	2.88%	-1.93%	0.89%
200 or More	1.1769	1.1920	2.90%	-0.72%	2.16%
TOTAL	1.1942	1.1942	2.89%	-1.88%	0.95%

C. Accounting Statement

As Required by OMB Circular A-4 (available at *http://* www.whitehouse.gov/omb/circulars/*a004/a-4.pdf*), in Table 28 below, we have prepared an accounting statement showing the classification of the expenditures associated with the provisions of this proposed rule. This table provides our best estimate of the increase in Medicare payments under the HH PPS as a result of the changes presented in this proposed rule based on the data for 8,164 HHAs in our database. All expenditures are classified as transfers to Medicare providers (that is, HHAs).

Table 28: Accounting Statement: Classification of Estimated Expenditures, From CY 2007 to CY 2008[In Millions]

Category	Transfers
Annualized Monetized Transfers..	$140
From Whom to Whom?.....	Federal Government to HHAs

In accordance with the provisions of Executive Order 12866, this regulation was reviewed by the Office of Management and Budget.

List of Subjects in 42 CFR Part 484

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

For the reasons set forth in the preamble, the Centers for Medicare & Medicaid Services would amend 42 CFR chapter IV as set forth below:

PART 484—HOME HEALTH SERVICES

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)).

Subpart E—Prospective Payment System for Home Health Agencies

§484.205 [Amended]

2. Amend §484.205 by—

A. Removing paragraph (a)(3).

B. Redesignating paragraph (a)(4) as paragraph (a)(3).

C. Revising paragraph (b) introductory text.

D. Removing paragraph (e).

E. Redesignating paragraph (f) as paragraph (e).

The revisions read as follows:

§484.205 Basis of payment.

* * * * *

(b) Episode payment. The national prospective 60-day episode payment represents payment in full for all costs

associated with furnishing home health services previously paid on a reasonable cost basis (except the osteoporosis drug listed in section 1861(m) of the Act as defined in section 1861(kk) of the Act) 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 reflecting beneficiary eligibility, medical necessity determinations, and HHRG assignment. DME provided as a home health service as defined in section 1861(m) of the Act continues to be paid the fee schedule amount.

* * * * *

3. Revise §484.220 to read as follows:

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

CMS adjusts the national prospective 60-day episode payment rate to account for the following:

(a) HHA case-mix using a case-mix index to explain the relative resource utilization of different patients. To

address changes to the case-mix that are a result of changes in the coding or classification of different units of service that do not reflect real changes in case-mix, the national prospective 60-day episode payment rate will be adjusted downward as follows:

(1) For CY 2008 the adjustment is 2.75 percent.

(2) For CY 2009 and CY 2010, the adjustment is 2.75 percent in each year.

(b) Geographic differences in wage levels using an appropriate wage index based on the site of service of the beneficiary.

4. Amend §484.230 by adding a third, fourth, and fifth sentence after the second sentence to read as follows:

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

* * * * *

For 2008 and subsequent calendar years, an amount will be added to low-utilization payment adjustments for low-utilization episodes that occur as the beneficiary's only episode or initial episode in a sequence of adjacent episodes. For purposes of the home health PPS, a sequence of adjacent episodes for a beneficiary is a series of claims

with no more than 60 days without home care between the end of one episode, which is the 60th day (except for episodes that have been PEP-adjusted), and the beginning of the next episode. This additional amount will be updated annually after 2008 by a factor equal to the applicable home health market basket percentage.

§484.237 [Removed]

5. Remove §484.237.

Catalog of Federal Domestic Assistance Program No. 93.773, Medicare--Hospital Insurance; and Program No. 93.774, Medicare--Supplementary Medical Insurance Program)

Dated: _____

Leslie V. Norwalk,

Acting Administrator,

Centers for Medicare & Medicaid Services.

Approved: _____

Michael O. Leavitt,

Secretary.

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