NATIONAL QUALITY FORUM

Resource Use Measure Evaluation Form Version 2.0

This form contains the information submitted by measure developers/stewards, organized according to NQF's measure evaluation criteria and process. For more information about Resource Use Measures and the Resource Use measure evaluation criteria, please visit the Cost & Resource Use Project Page.

Developer submission items are indicated by Blue Text
Questions to be answered by the Steering Committee about the criteria are indicated by Red Text

NQF Generic Rating Scale (for use unless otherwise indicated)
High - Based on the information submitted, there is high confidence (or certainty) that the criterion is met
Moderate - Based on the information submitted, there is moderate confidence (or certainty) that the criterion is met
Low - Based on the information submitted, there is low confidence (or certainty) that the criterion is met
Insufficient - There is insufficient information submitted to evaluate whether the criterion is met (e.g., blank, incomplete, or not relevant, responsive, or specific to the particular question)

Reviewer Name: **Date:**

Descriptive Measure Information

Measure Number and Name: #2158 Payment-Standardized Medicare Spending Per Beneficiary (MSPB)
Steward: Centers for Medicare and Medicaid Services
Description: The MSPB Measure assesses the cost of services performed by hospitals and other healthcare providers during an MSPB hospitalization episode, which comprises the period immediately prior to, during, and following a patient's hospital stay. Beneficiary populations eligible for the MSPB calculation include Medicare beneficiaries enrolled in Medicare Parts A and B who were discharged from short-term acute hospitals during the period of performance.
Resource Use Measure Type: Per episode
Data Source: Administrative claims
Level of Analysis: Facility
Costing Method: Standardized pricing
Target Population: Senior Care
Resource Use Service Categories: Inpatient services: Inpatient facility services; Inpatient services: Evaluation and management; Inpatient services: Procedures and surgeries; Inpatient services: Imaging and diagnostic; Inpatient services: Lab services; Inpatient services: Admissions/discharges; Ambulatory services: Outpatient facility services; Ambulatory services: Emergency Department; Ambulatory services: Evaluation and management; Ambulatory services: Procedures and surgeries; Ambulatory services: Imaging and diagnostic; Ambulatory services: Lab services; Durable Medical Equipment (DME)

1. Importance to Measure and Report

Resource use measures will be evaluated based on the extent to which the specific measure focus is important to making significant contributions toward understanding healthcare costs for a specific high-impact aspect of healthcare where there is variation or a demonstrated high-impact aspect of healthcare (e.g., affects large numbers, leading cause of morbidity/mortality, variation in resource use [current and/or future], severity of illness, and patient/societal consequences of poor quality) or overall poor performance. Candidate consensus standards must be judged to be important to measure and report in order to be evaluated against the remaining criteria.

1a. High Priority The measure focus addresses: A specific national health Goal/Priority identified by DHHS or the National Priorities	**To what extent does the summary of evidence of high**

Partnership convened by NQF:
OR
A demonstrated high-impact aspect of healthcare (e.g., affects large numbers, leading cause of morbidity/mortality, high resource use [current and/or future], severity of illness, and patient/societal consequences of poor quality).

IM.1. Demonstrated High Impact Aspect of Healthcare
Affects large numbers; High resource use
If other: N/A

IM.1.1. Summary of Evidence of High Impact *(Provide epidemiologic or resource use data)*
NQF's Measure Application Partnership (MAP) has already determined the MSPB Measure is an important measure that has potential for high impact. A 2012 NQF Pre-rulemaking report stated that "MAP strongly supports the direction of this measure pending additional specification and testing." [1] Similarly, the January 2013 MAP pre-rulemaking draft report states, "Recognizing the need for more measures addressing affordability, MAP agreed that additional cost measures should be included in the program measure set. MAP supported the Medicare Spending per Beneficiary measure". [2] The content below contains further evidence of the high impact nature of this measure. The scientific acceptability section discussed later in this application provides the additional specification and testing needed to meet NQF's stringent quality measure standard.
The growth of health care expenditures has put enormous strain on federal and state budgets, employers and families. Health expenditures in the United States neared $2.6 trillion in 2010, over ten times the $256 billion spent in 1980. [3] Although the rate of growth in recent years has slowed relative to the late 1990s and early 2000s, health care spending is still projected to grow faster than national income over the foreseeable future. [4] Further, CBO projects that federal spending on Medicare, Medicaid, and CHIP will increase from 5.6 percent of GDP in 2011 to 19.4 percent of GDP in 2085. [5] The most recent U.S. economic recession has put even more attention on health spending and affordability. [3] Since 2001, employer-sponsored health coverage for family premiums have increased by 113% and to address the rising cost employers have been shifting an increasing share of the cost burden on employees. [6] The aging of the baby boomer generation into retirement will cause Medicare to direct an increasing proportion of the health care resources in the U.S. [1], [7] Due to this enrollment growth as well as the growth in Medicare per capita spending, federal and state healthcare budgets are strained. In total, health spending accounted for 17.9% of the Nation's Gross Domestic Product (GDP) in 2010. [8]
Despite the fact that the U.S. leads the world in health expenditures per capita, the value that patients receive for these expenditures may be below that of other countries. [9] In particular, one source of inefficiency that creates rising healthcare costs includes payment systems that reward medical inputs rather than outcomes. [10] Transforming Medicare and other public and private insurers from systems that reward volume of service to ones that reward efficient, effective care and reduce delivery system fragmentation offers the possibility of reducing cost and improving patient outcomes.
To advance this transformation, CMS instituted the MSPB Measure. Recent legislation—specifically Section 1886(o)(2)(B)(ii) of the Social Security Act, as established by Section 3001 of the Patient Protection and Affordable Care Act (Affordable Care Act)—requires that CMS implement a measure of Medicare Spending Per Beneficiary as part of it Hospital Value-Based Purchasing (VBP) initiatives. By measuring the cost of care through a measure of Medicare Spending Per Beneficiary, CMS aims to recognize hospitals that can provide high quality care at a lower cost to Medicare.

Citations available in Appendix B

impact support the categories listed in IM.1.?

☐ **High**
☐ **Moderate**
☐ **Low**
☐ **Insufficient**

1b. Opportunity for Improvement

Demonstration of resource use or cost problems and opportunity for improvement, i.e., data demonstrating variation in the delivery of care across providers and/or population groups (disparities in care).

To what extent does the information presented demonstrate this measurement area as a cost problem or that there is variation in resource across entities?

☐ **High**
☐ **Moderate**
☐ **Low**
☐ **Insufficient**

IM.2.1. **Briefly explain the benefits (improvements in performance) envisioned by use of this measure.**

Care coordination helps ensure a patient's needs and preferences for care are understood, and that those needs and preferences are shared between providers, patient, and families as a patient moves from one healthcare setting to another. People with chronic conditions, such as diabetes and hypertension, often receive care in multiple settings from numerous providers. As a result, care coordination among different providers is required to avoid waste, over-, under-, or misuse of prescribed medications and conflicting plans of care.

The MSPB Measure is designed to promote higher quality care for beneficiaries by financially incentivizing hospitals to improve care coordination, deliver efficient, effective care, and reduce delivery system fragmentation. For instance, hospitals can decrease (i.e., improve) their MSPB Amount through actions such as: 1) improving coordination with post-acute providers to reduce the likelihood of hospital readmissions, 2) identifying unnecessary or low-value post-acute services and reduce or eliminate these services, or 3) shifting post-acute care from more expensive services (e.g., skilled nursing facilities) to less expensive services (e.g., home health) in cases that would not affect patient outcomes.

CMS includes the MSPB Measure within the Hospital VBP program as a measure of efficiency; the Hospital VBP program, however, also provides financial incentives to hospitals based on their performance on additional quality measures. By measuring the cost of care through the MSPB Measure in combination with these other quality measures, CMS aims to incentivize value in healthcare by recognizing hospitals that can provide high quality care at a lower cost to Medicare.

IM.2.2. **Summary of Data Demonstrating Performance Gap** *(Variation or overall less than optimal performance across providers)*

Improved care coordination in the time period surrounding a hospital admission offers the possibility of reducing post-acute care cost and also decreasing the probability of a hospital readmission. Reducing post-acute care cost is of significant interest to policymakers as increased post-acute care utilization has been one of the key drivers of healthcare spending growth in recent years. From 2004 to 2010, long-term care costs have grown 4.7% to 6.6% per year, or a total increase of 31% to 47%, depending on the type of care. From 2008 to 2010, home health care costs increased an average of 13% - up from the 5% increase from 2006-2008. [1] Yet a number of studies have found that hospitals can identify individuals at high risk of permanent skilled nursing facility placement at the time of hospital discharge. [2] Improved discharge planning may improve the chances that these patients can return home.

In a 2007 report to Congress, the Medicare Payment Advisory Commission (MedPAC) estimated that in 2005, 17.5% of hospital patients were readmitted within 30 days of discharge and that 76% of these readmissions were potentially preventable. [3] Readmissions within 30 days of discharge cost Medicare more than $17 billion annually. [4]

Numerous studies have also found an association between quality of inpatient or transitional care and readmission rates for a wide range of conditions. [5], [6], [7], [8], [9], [10], [11], [12]. Randomized controlled trials, however, have shown that improvement in care coordination—in particular, improved discharge planning—can directly reduce readmission rates. [13], [14], [15], [16], [17], [18].

The MSPB Measure can be one mechanism to alter provider payments from volume-based to outcomes/efficiency based payments. The fee-for-service system of provider payment is also increasingly viewed as an obstacle to achieving effective, coordinated, and efficient care as it rewards the overuse of services, duplication of services, use of costly specialized services, and

involvement of multiple physicians in the treatment of individual patients. It does not reward the prevention of hospitalization or re-hospitalization, effective control of chronic conditions, or care coordination. Pay for performance is one strategy for moving from payment based solely on the quantity of services rendered to payment based on the quality or efficiency of care. Most designs reward clinically high-quality care or patient-centered care; few reward care coordination or increased efficiency over time in the treatment of a particular condition. [19], [20] IM.2.4. **Summary of Data on Disparities by Population Group** *(for example by race/ethnicity, gender, age, insurance status, socioeconomic status, and/or disability, etc. If you do not have data on your specific measure, perform a literature search/review and report data for the measure or similar appropriate concept.)* The MSPB Measure gauges care provided in the period immediately prior to, during, and in the 30 days after a hospital discharge; a number of studies have shown that socioeconomic status affects the amount of resources used during the period in which patients are hospitalized as well as during post-acute care. Whereas one quarter of Medicare beneficiaries with incomes less than $20,000 percent used inpatient services in a given year, only 17 percent of patients earning over $30,000 per year used inpatient services. Beneficiaries with incomes below $20,000 are also twice as likely to use home health services as Medicare beneficiaries earning more than $30,000. [1] End-of-life care for black and Hispanic beneficiaries is substantially different than the end-of-life hospital services that white Medicare beneficiaries receive. Much of the variation is due to differences in utilization levels among hospitalized patients. Blacks and Hispanics are significantly more likely to be admitted to the ICU than whites, and minorities also receive significantly more intensive procedures, such as resuscitation and cardiac convers, mechanical ventilation, and gastrostomy for artificial nutrition. [2] Further, there also exists significant regional variation in the inpatient procedures received by patients of different races. Whites, for example, get almost three times as many carotid endarterectomies as blocks, and 30 percent more angiograms. On the other hand, blacks have higher rates of admission to the ICU in their last six months of life. On average, black enrollees have more money spent on them, particularly near the end of life, but receive less highly effective interventions. [3] In addition, a number of studies have shown that the quality of post-acute care varies across patient socioeconomic status. For example, an analysis of 30-day readmission rates revealed that among elderly Medicare beneficiaries, black patients were more likely to be readmitted after hospitalization for acute myocardial infarction (AMI), congestive heart failure (CHF), and pneumonia, a gap that was related to both race and to the site where care was received. Specifically, black patients had higher readmission rates than white patients across all three conditions, and patients from minority-serving hospitals had higher readmission rates than non-minority-serving hospitals. [4] ***Citations available in Appendix B***	
1c. Measure Intent The intent of the resource use measure and the measure construct are clearly described. **AND** The resource use service categories (i.e., types of resources/costs) that are included in the resource use measure are consistent with and representative of the intent of the measure. IM.3.1. **Describe intent of the measure and its components/ Rationale (including any citations) for analyzing variation in resource use in this way.** The Medicare Spending Per Beneficiary efficiency measure aims to incentivize hospitals to coordinate care and reduce unnecessary utilization during the period immediately prior to, during, and in the 30 days after a hospital discharge. Currently, Medicare's prospective payment system (PPS) reimburses hospitals on a case mix-adjusted, flat-rate basis, incentivizing hospitals to serve patients as efficiently as possible. Hospitals, however, could also have an incentive to discharge patients early to reduce their own cost. Such early discharge of patients decreases quality of care and increases costs to Medicare. For example, early discharge of patients has	**To what extent do the categories of costs represented by the resource use service categories (listed in S.7.7.) support the stated intent of the measure? (i.e., are all of the resource use service categories represented that should be? Are any missing?)** ☐ **High** ☐ **Moderate**

been shown to lead to avoidable re-hospitalizations. [1] It has been estimated that readmissions within 30 days of discharge cost Medicare more than $17 billion annually. [2] A 2006 Commonwealth Fund report further estimated that if national readmission rates were lowered to the levels achieved by the top performing regions, Medicare would save $1.9 billion annually. [3] Improved care coordination between acute and post-acute providers could stem the rising cost of post-acute care through avenues such as reducing unnecessary hospital readmission. From 2004 to 2010, long-term care costs have grown by 31% to 47% (i.e., 4.7% to 6.6% per year), depending on the type of care; from 2008 to 2010, home health care costs increased an average of 13% - up from the 5% increase from 2006-2008. [4] Unlike other measures reported on Hospital Compare, the MSPB Measure is not condition-specific; because a hospital's MSPB Measure is based on all Medicare Part A and Part B claims data for episodes during the period of performance, the MSPB Measure evaluates hospitals' efficiency across all conditions. The all-cause nature of the MSPB measure allows it to be applicable to a larger number of hospitals, maximizing its impact. The effect of patient health status and demographics on episode spending is accounted for by the MSPB's risk-adjustment methodology. Using this all-cause efficiency measure in conjunction with existing quality measures available on Hospital Compare and within the CMS Hospital VBP system, the MSPB Measure can identify efficient providers that provide high-quality, low-cost care. [5] NQF precedent defines efficient care to be a measure of cost of care associated with a specified level of quality of care. [6] One can measure whether hospitals provide efficient care by using the MSPB measure in concert with a variety of quality of care measures already developed as part of Hospital Compare [5]. For the May 15, 2010 to February 14, 2011 period of performance, the MSPB Measure will be calculated from the claims of over 806,000 Medicare beneficiaries and will affect 3,396 hospitals. • [1] Ashton CM, Del Junco DJ, Souchek J, Wray NP and Mansyur CL. "The Association between the Quality of Inpatient Care and Early Readmission: A Meta-Analysis of the Evidence." Medical Care , Vol. 35, No. 10 (Oct., 1997), pp. 1044-1059 • [2] Jencks SF, et al. "Rehospitalizations among patients in the Medicare fee-for-service program." New England Journal of Medicine 2009; 360(14): 1418-28. • [3] "Why Not the Best? Results from a National Scorecard on U.S. Health System Performance. Fund Report. Harrisburg, PA: The Commonwealth Fund, 2006. • [4] "Long-Term Care Cost Study." Prudential Research Report. 2010. • [5] U.S. Department of Health & Human Services. Hospital Compare. www.hospitalcompare.hhs.gov. • [6] National Quality Forum. "Resource Use Measurement White Paper." S.7.7. **Resource Use Service Categories (Units)** *(Select all categories that apply)* Inpatient services: Inpatient facility services; Inpatient services: Evaluation and management; Inpatient services: Procedures and surgeries; Inpatient services: Imaging and diagnostic; Inpatient services: Lab services; Inpatient services: Admissions/discharges; Ambulatory services: Outpatient facility services; Ambulatory services: Emergency Department; Ambulatory services: Evaluation and management; Ambulatory services: Procedures and surgeries; Ambulatory services: Imaging and diagnostic; Ambulatory services: Lab services; Durable Medical Equipment (DME) **If other:** N/A	☐ **Low** ☐ **Insufficient**

1. Overall Importance to Measure and Report

1a. High Impact	H	M	L	I
1b. Opportunity for Improvement	H	M	L	I
1c. Measure Intent	H	M	L	I

Based on your rating of the subcriteria, make a summary determination of the extent to which the criterion of **Importance to Measure and Report** has been met. Please provide a rationale based on specific subcriteria.

Rationale:

☐ **High**
☐ **Moderate**
☐ **Low**
☐ **Insufficient**

2. Scientific Acceptability of the Measure Properties

Extent to which the measure, as specified, produces consistent (reliable) and credible (valid) results about the cost or resources used to deliver care. **Measures must be judged** to meet the subcriteria for both reliability and validity to pass this criterion and be evaluated against the remaining criteria.

Construction Logic

S.7.1. **Brief Description of Construction Logic**

The MSPB Measure assesses the cost to Medicare of services performed by hospitals and other healthcare providers during an MSPB episode. An MSPB episode is risk adjusted and includes Medicare payments for services provided to a beneficiary with start date falling between 3 days prior to an IPPS hospital admission (index admission) through 30 days post-hospital discharge.

S.7.2. **Construction Logic** *(Detail logic steps used to cluster, group or assign claims beyond those associated with the measure's clinical logic.)*

The MSPB Measure is calculated according to the following eight steps:

Step 1: Standardize Claims Payments. To capture differences in beneficiary resource use that a hospital can influence through appropriate practices and care coordination, the MSPB Measure removes local or regional price differences, which are sources of variation not directly related to decisions to utilize care. The MSPB Measure relies on a detailed price-standardization methodology to exclude geographic payment rate differences; in other words, the MSPB Measure adjusts observed payments for Medicare geographic adjustment factors, such as the hospital wage index and geographic practice cost index (GPCI). Specifically, the price-standardization methodology:

- Eliminates adjustments made to national payment amounts to reflect differences in regional labor costs and practice expenses (measured by hospital wage indexes and geographic practice cost indexes);
- Substitutes a national amount in the case of services paid on the basis of state fee schedules;
- Eliminates Medicare's payments to hospitals for graduate indirect medical education (IME) and for serving a disproportionate population of poor and uninsured (i.e., disproportionate share payments (DSH));
- Maintains differences that exist in actual payments resulting from: (i) the choice of setting in which a services is provided, (ii) the choice about who provides the service, (iii) the choice as to whether to provide multiple services in the same encounter, and (iv) differences in provider experience with regard to outlier cases; and
- Treats outlier payments as a given rather than trying to determine what outlier payment would have been in a standardized world. Actual outlier payments are adjusted for differences in wages using the wage index.

Step 2: Calculate Price-Standardized Episode Spending. Standardized spending during an episode is calculated as the sum of all the standardized Medicare claims payments made during the MSPB episode (i.e., between 3 days prior to the hospital admission until 30 days after discharge). [1]

Step 3: Calculate Expected Episode Spending. To estimate the relationship between the independent variables to be described in S.9.3. (i.e., age, HCC, enrollment status, comorbidity interactions, long-term care) and standardized episode cost, the MSPB methodology uses an ordinary least squares (OLS) regression. Using a separate model for episodes within each major diagnostic

category (MDC), these variables are regressed on standardized episode cost. The MDC is determined by the MS-DRG of the index hospital stay. [2] The predicted values from this regression are used to measure the spending levels one would expect for each episode given the patient demographics and health status.

Step 4: Truncate Predicted Values. Although including a large number of variables in the regression more accurately captures beneficiary case mix, including a larger number of variables can produce some extreme predicted values due to having only a few outlier individuals in a given cell. To prevent creating extreme predicted values, this step truncates (a.k.a. 'bottom-codes') predicted values at the 0.5th percentile. [3], [4] This step also renormalizes the predicted values to ensure that the average expected episode spending levels for each MS-DRG is the same before and after truncating. This normalization occurs by multiplying the truncated predicted values by the ratio of the average predicted spending levels and the average truncated predicted spending levels.

Step 5: Calculate Residuals. The residuals for each episode are calculated as the difference between the standardized episode spending level in Step 2 and the truncated predicted value of spending for that episode calculated in Step 4. If the variable Y_ijm represents standardized spending levels for episode i for hospital j of MS-DRG type m, and Y(hat)_ijm equals the predicted spending levels from Step 3, then one can calculate the residual mathematically as: Residual_ijm = Y_ijm - Y(hat)_ijm.

Step 6: Exclude Outliers. To mitigate the effect of high-cost outliers on each hospital's MSPB Measure score, MSPB episodes whose residuals fall above the 99th percentile or below the 1st percentile of the distribution of residuals within each index admission MS-DRG are excluded from the MSPB calculation. Excluding outliers based on residuals eliminates the episodes that deviate most from their predicted values in absolute terms.

Step 7: Calculate the MSPB Amount for Each Hospital. The MSPB Amount for each hospital depends on three factors: i) the ratio of the average standardized episode spending level from Step 2, ii) the average expected standardized episode spending for each hospital calculated in Step 3, and iii) the average standardized episode spending across all hospitals. To calculate the MSPB Amount for each hospital, one simply finds the ratio of the average standardized episode spending to the average expected standardized episode spending, and then multiplies this ratio by the average episode spending level across all hospitals. Mathematically, the MSPB Amount is calculated as: MSPB Amount_j = [(1/n_j)(the sum of Y_ij over all elements i in the set {I_j})]/](1/n_j)(the sum of Y(hat)_ij over all elements i in the set {I_j})] x [(1/n)(the sum of Y_ij over all i)] where Y_ij is the standardized spending for episode i in hospital j; Y(hat)_ij is the expected standardized spending for episode i in hospital j, using the truncated predicted values from the risk-adjustment regression in Step 3; n_j is the number of episodes for hospital j; n is the number of episodes across all hospitals in the U.S.; and "all elements i in the set {I_j}" indicates all episdoes i in the set of episodes attributed to hospital j.

In words, this equation defines the MSPB Amount for hospital j as the average spending level for a hospital divided by the expected episode spending level for that hospital, multiplied by the average spending over all episodes across all hospitals. Defining a hospital's MSPB Amount by calculating the ratio of the hospital's standardized payment total to its expected standardized payment total is a familiar methodology for implementing risk adjustment. The MSPB Amount represents the per-episode spending level for a hospital j assuming its composition of episodes matches that of the national average.

To enhance the usability of the measure for public reporting purposes, one can normalize the MSPB Amount to create the MSPB Measure. The MSPB Measure compares a hospital's efficiency level to the efficiency level across of the typical hospital. To perform this normalization, one relies on the following step:

Step 8: Calculate the MSPB Measure. The MSPB Measure for hospital j is calculated as the ratio of the MSPB Amount for a hospital (calculated in Step 7) divided by the median MSPB Amount across all hospitals: MSPB Measure_j = (MSPB Amount_j)/[med(MSPB Amount_j)].

The median MSPB Amount for hospital j is a weighted median, where the weights are the number of episodes in each hospital. [5] For public reporting purposes, one can limit the MSPB Measure values reported only to hospitals with a sufficient number of episodes as described in the final step below.

To reduce the likelihood that a hospital's MSPB score would be affected by only a few high-cost outliers, hospitals with less than a certain number episodes will not have their MSPB Measure publicly reported. In response to (2a2.2) of this measure submission form, Acumen evaluated changing the minimum number of MSPB cases required to be classified as a "hospital" under the Hospital Value-Based Purchasing (VBP) program. In sum, Acumen determined that as the minimum episode threshold increases, there is a trade-off between the size of the confidence interval for the 'average' hospital and the number of hospitals receiving an MSPB score.

•[1] Price-standardization uses similar methodology as adopted by IOM. http://iom.edu/Activities/HealthServices/GeographicVariation/Data-Resources.aspx

•[2] Certain MS-DRG's related to procedures (e.g., transplants) fall into the Pre-MDC category. For risk adjustment purposes, these episodes are grouped into one of the remaining MDCs based on the primary diagnosis code of the index admission.

•[3] In this form, "truncate" is equivalent "Winsorize." Winsorization is a statistical transformation that limits extreme values in data to reduce the effect of possibly spurious outliers. Thus, all predicted values below the 0.5th percentile are assigned the value of the 0.5th percentile.

•[4] To ensure that the lowest predicted values within an MS-DRG are adjusted even for MS-DRGs with few episodes, this methodology first sets the lowest predicted value within the MS-DRG to the second lowest predicted value within the MS-DRG before truncating at the 0.5th percentile.
•[5] For example, if there are 2 hospitals and one hospital had an MSPB of 1.5 and another had one of 0.5 but the first had 4 episodes and the second only 1, then the median would be 1.5.

Click here to go to the Construction Logic Attachment

S.7.3. **Concurrency of clinical events, measure redundancy or overlap, disease interactions** *(Detail the method used for identifying concurrent clinical events, how to manage them, and provide the rationale for this methodology.)*
We do not provide The MSPB Measure methodology does not separate concurrent events.
The MSPB Measure methodology defines an MSPB episode as all claims with start date falling between 3 days prior to an IPPS hospital admission (index admission) through 30 days post hospital discharge. It includes the period 3 days prior-hospital admission and 30 days post-hospital discharge to emphasize the importance of care transitions and care coordination in improving patient care. Please refer to S.8.4., which details the rationale for the construction of the MSPB episode, for a discussion of the advantages of this approach.
Although it is likely that a hospital will have some MSPB episodes whose costs are inflated by unrelated events, most hospitals have a large number of MSPB episodes (the median number of episodes for the period of May 1, 2011 to December 1, 2011 is 885), so averaged across a large number of episodes such random, post-acute events should have a fairly small effect on hospitals' overall MSPB Measure value.

S.7.4. **Complementary services** *(Detail how complementary services have been linked to the measure and provide rationale for this methodology.)*
To promote MSPB episode consistency regardless of where complementary services take place and to incorporate payments for services that may appear on the face of a claim to be unrelated to the original admission, a 3-day window prior to the index admission is included at the start of the MSPB episode. For additional discussion, please refer to S.8.4., which details the rationale for the construction of the MSPB episode.

S.7.5. **Clinical hierarchies** *(Detail the hierarchy of codes or condition groups used and provide rationale for this methodology.)*
Clinical hierarchies are embedded in the risk adjustment model; see S.9.5. for more details. The MSPB risk-adjustment methodology is discussed in additional detail in S.9.3. and S.9.4.

S.7.6. **Missing Data** *(Detail steps associated with missing data and provide rationale for this methodology (e.g., any statistical techniques to impute missing data)*
We do not provide All the data used to calculate hospitals' MSPB Measure values are included on Medicare claims data. The data fields used to calculate the MSPB Measure (e.g., payment amounts, DRGs, diagnosis and procedure codes, etc.) are included in all Medicare claims because hospitals only receive payments for complete claims. The quality of the diagnostic information on claims, however, is only as reliable as the information completed by providers. Because claims are not paid without the appropriate diagnostic information, missing data is not an issue. Additional information regarding the reliability of diagnostic information on claims is available in 2a2.2.

S.7.7. **Resource Use Service Categories (Units)** *(Select all categories that apply)*
Inpatient services: Inpatient facility services; Inpatient services: Evaluation and management; Inpatient services: Procedures and surgeries; Inpatient services: Imaging and diagnostic; Inpatient services: Lab services; Inpatient services: Admissions/discharges; Ambulatory services: Outpatient facility services; Ambulatory services: Emergency Department; Ambulatory services: Evaluation and management; Ambulatory services: Procedures and surgeries; Ambulatory services: Imaging and diagnostic; Ambulatory services: Lab services; Durable Medical Equipment (DME)
If other: N/A

2a1. The measure is well defined and precisely specified so that it can be implemented consistently within and across organizations and allow for comparability. Electronic health record (EHR) measure specifications are based on the quality data model (QDM).	**To what extent is the construction logic well defined and precisely specified?** ☐ **High/Moderate** *(Specifications are unambiguous)* ☐ **Low** *(One or more specifications are ambiguous)*
2b1. The measure specifications are consistent with the measure intent described under criterion 1c and captures the most inclusive target population.	**To what extent is the clinical logic consistent with the measure intent and captures the broadest target population?** ☐ **High/Moderate** *(Measure specifications are consistent with the measure intent and captures the broadest target population)* ☐ **Low** *(Measure specifications do not reflect the measure intent)*

Clinical Logic

S.8.1. **Brief Description of Clinical Logic** *(Briefly describe your clinical logic approach including clinical topic area, whether or not you account for comorbid and interactions, clinical hierarchies, clinical severity levels and concurrency of clinical events.)*

Objective: The MSPB Measure aims to improve care coordination in the period between 3 days prior to an acute inpatient hospital admission through the period 30 days after discharge.

Clinical Topic Area: Inpatient Admissions, all conditions

Accounting for Comorbidities: Application of a variant of the CMS-HCC risk adjustment model. The model includes a select number of interaction terms between comorbidities.

Measure of Episode Severity: Risk Adjustment model includes indicators for the MS-DRG of the index admission.

Concurrency of Clinical Events. The MSPB Episode spans the period 3 days prior to the index hospital admission through 30 days post-discharge. All events that occur during this time period are included in the MSPB episode.

S.8.2. **Clinical Logic** *(Detail any clustering and the assignment of codes, including the grouping methodology, the assignment algorithm, and relevant codes for these methodologies.)*

Objective: The MSPB Measure aims to improve care coordination in the period between 3 days prior to an acute inpatient hospital admission through the period 30 days after discharge.

Controlling for Comorbid Conditions and Interactions: The MSPB Measure accounts for comorbid conditions and interactions by broadly following the CMS-HCC risk-adjustment methodology, which is derived from Medicare Part A and B claims and is used in the Medicare Advantage (MA) program. Diagnosis codes on claims that occur during the 90-day period prior to the start of an MSPB episode are used to create HCC indicators. When applying the CMS-HCC framework to the MSPB Measure, the risk adjustment model is stratified by Major Diagnostic Category (MDC), which allows the effect of beneficiary health status and demographics on episode spending levels to vary by the MDC of the MSPB index admission. The MSPB Measure accounts for comorbid interactions by incorporating a number of health status interactions as currently used within the CMS-HCC model. The model includes paired-condition interactions, (e.g., chronic obstructive pulmonary disease (COPD) and congestive heart failure (CHF)) triple-interactions (e.g., diabetes mellitus, congestive heart failure, and renal failure) and interactions between conditions and disability status (e.g., disabled and cystic fibrosis). The full list of variables used in the risk adjustment model can be found in S.9.4.

Episode Severity: To control for the severity of the hospital admission, the risk adjustment model also controls for the MS-DRG of the index hospitalization. The full list of variables used in the risk adjustment model can be found in S.9.4.

Concurrent Clinical Conditions: To simplify the clinical logic and avoid the issue of attributing claims to MSPB episodes in the case of concurrent clinical events, all claims that begin during the period 3 days prior to the index admission through 30 days after discharge are included in a given MSPB episode.

Attribution: MSPB episodes are in turn assigned to the hospital of the index admission. Admissions which occur within 30 days of discharge from another index admission are not considered to be index admissions. In other words, if multiple hospitalizations appear during an episode window, the first hospitalization is consider the index admission and the hospital at which the first hospital admission occurred is assigned the episode; any subsequent hospitalizations that occur within the 30 day post-discharge window are considered re-hospitalizations.

Cost Calculation: The MSPB Amount includes the cost of services performed by hospitals and other healthcare providers during an

MSPB episode, which is comprised of the period 3 days prior to an inpatient PPS hospital admission (index admission) through 30 days post-hospital discharge. All costs are price-standardized to control for geographic variation in Medicare reimbursement rates. Risk adjusted costs are calculated as the average cost of an MSPB nationally, plus the difference between an episode's price-standardized episode cost and its expected cost produced from the risk adjustment model described above.
Clustering: None.
Any episodes where at any time during the episode, the beneficiary is enrolled in a Medicare Advantage plan; the beneficiary becomes deceased; or Medicare is the secondary payer will be excluded from the MSPB calculation. Regarding beneficiaries whose primary insurance becomes Medicaid during an episode due to exhaustion of Medicare Part A benefits, Medicaid payments made for services rendered to these beneficiaries are excluded; however, all Medicare Part A payments made before benefits are exhausted and all Medicare Part B payments made during the episode are included.

S.8.3. **Evidence to Support Clinical Logic Described in S.8.2 Describe the rationale, citing evidence to support the grouping of clinical conditions in the measurement population(s) and the intent of the measure** *(as described in IM3)*
The MSPB Measure methodology defines an MSPB episode as all claims with start dates falling between 3 days prior to an IPPS hospital admission (index admission) through 30 days post-hospital discharge and does not separate concurrent events. It includes the period 3 days prior-hospital admission and 30 days post-hospital discharge to emphasize the importance of care transitions and care coordination in improving patient care and reducing unnecessary readmissions. This episode definition is consistent with MedPAC's response to the FY 2012 IPPS proposed rule, in which they recommended that "both CMS and MedPAC should focus on creating parallel incentives for hospitals and post-acute care providers to work to reduce readmissions. The end goal is to align incentives across the sectors to encourage cooperation among providers to improve the quality of the episode of care, reduce the cost of the episode of care, and reduce the number of unnecessary inpatient episodes" (http://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/AcuteInpatientPPS/FY-2012-IPPS-Final-Rule-Home-Page.html). The advantages of this approach are twofold. First, this approach is simple, as costs of Medicare services do not need to be divided into separate clinical events. Take for example, a Medicare beneficiary who is hospitalized for Acute Myocardial Infarction (AMI) and then has a doctor's visit in the 30 days post hospital discharge period where the doctor follows up on the AMI hospitalization as well as other conditions. Under the MSPB Measure methodology, costs do not need to be divided between those more relevant and those less relevant to the episode. Second, this approach incorporates payments for services due to care complications that may appear on the face of a claim to be unrelated to the original admission. For example, if a beneficiary is admitted for AMI, but develops pneumonia due to poor care coordination, these costs will be captured in the episode generated by the AMI admission. Additionally, NQF already has endorsed a number of 30-day all-cause measures. For example, NQF already endorses the Hospital-Wide All-Cause Unplanned Readmission Measure (NQF #1789), which estimates the hospital-level, risk-standardized rate of unplanned, all-cause readmission after admission for any eligible condition within 30 days of hospital discharge for patients aged 19 and older. (https://www.qualitynet.org/dcs/ContentServer?cid=1228772504318&pagename=QnetPublic%2FPage%2FQnetTier4&c=Page).

S.8.4. **Measure Trigger and End mechanisms** *(Detail the measure's trigger and end mechanisms and provide rationale for this methodology)*
Trigger Event: Inpatient admission, with the exception of acute-to-acute transfer cases
Start Date: 3 days prior to index inpatient admission
End Date: 30 days after discharge from the index hospital admission
As discussed in S.8.2., an MSPB episode is defined as all claims with start date falling between 3 days prior to an inpatient PPS hospital admission (index admission) through 30 days post hospital discharge. In other words, the MSPB Measure's trigger is an inpatient PPS hospital admission, and the start is 3 days prior to an index admission, while the end is 30 days post hospital discharge. Admissions that occur within 30 days of discharge from another index admission and admissions during which a beneficiary is transferred from one acute hospital to another are not considered to be index admissions. Hospitalizations that occur within the 30-day post discharge window of the index admission are attributed to the index admissions. On the other hand, hospitalizations that begin more than 30 days after the beneficiary is discharged from a hospital trigger a new MSPB episode as an index admission. Diagnostic services and non-diagnostic services related to the reason for admission are captured in the inpatient DRG payment for the hospitalization when they are performed by the hospital during the 3 days prior to admission (http://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/AcuteInpatientPPS/Three_Day_Payment_Window.html); however, if, during the 3 days prior to a hospital admission, a beneficiary receives diagnostic services from a provider other than the hospital or non-diagnostic services that appear on the claim to be unrelated to the reason for admission, those services are separately payable under Medicare. To promote MSPB episode consistency regardless of where these complementary services take place and to incorporate payments for services that may appear on the face of a claim to be unrelated to the original admission (as

described in section S.8.2), a 3-day window prior to the index admission is included at the start of the MSPB episode. The MSPB time frame also includes services that take place during the time period 30 days post-hospital discharge in order to emphasize the importance of care transitions and care coordination in improving patient care. As a result, services whose claim start dates fall between 3 days prior to an index admission through 30 days post hospital discharge are attributed to that index admission.
The advantages of this measure trigger and end mechanism are twofold. First, this approach is simple and easily-implementable since it includes all claims during the MSPB episode. An alternative would be to create separate episodes for each type of hospital admission. Although episode-based approaches are attractive for a number of purposes, the MSPB aims to evaluate overall hospital efficiency level across all types of care and creating are over 700 types of hospitals admission episodes (i.e., there are over 700 MS-DRGs) is not practical. Second, the MSPB approach incorporates costs due to care complications unrelated to the original admission, encouraging hospital care coordination. For example, if a beneficiary is admitted for AMI but develops pneumonia due to poor care coordination, these costs will be captured in the episode generated by the initial AMI index admission.

S.8.5. **Clinical severity levels** *(Detail the method used for assigning severity level and provide rationale for this methodology)*
Clinical Severity levels are embedded in the risk adjustment model, as described in S.9.2. through S.9.5.

S.8.6. **Comorbid and interactions** *(Detail the treatment of co-morbidities and disease interactions and provide rationale for this methodology.)*
Co-morbidities and disease interactions are accounted for in the MSPB Measure risk-adjustment methodology, as discussed in S.9.3. and S.9.4. As described in S.8.2., episodes where the beneficiary is not enrolled in both Medicare Part A and Medicare Part B for the 90 days prior to the episode are excluded because information on comorbidities for these beneficiaries will be incomplete. The 90-day period prior to the start of an episode is used to measure the conditions which most directly impact beneficiaries' health status at the time of the hospital admission and to capture beneficiaries' comorbidities in the risk adjustment. Additionally, because the relationship between comorbidities' episode cost may be non-linear in some cases (i.e., beneficiaries may also have more than one disease during a hospitalization episode), the model also takes into account a limited set of interactions between HCCs and/or enrollment status variables. Example variable interaction terms include Diabetes Mellitus/Congestive Heart Failure, Renal Failure/Congestive Heart Failure, and Disability/Opportunistic Infections (for a complete list of these variable interaction terms and other risk-adjustment variables, please refer to S.9.3 and S.9.4.). The MSPB Measure risk-adjustment methodology includes only a limited set of interaction terms for two reasons. First, inclusion of too many interaction terms will over-fit the model. Second, the MSPB Measure risk-adjustment methodology broadly follows the established CMS-HCC risk-adjustment methodology, which uses similar interaction terms.

2a1. The measure is well defined and precisely specified so that it can be implemented consistently within and across organizations and allow for comparability. Electronic health record (EHR) measure specifications are based on the quality data model (QDM).	**To what extent is the clinical logic well defined and precisely specified?** ☐ **High/Moderate** *(Specifications are unambiguous)* ☐ **Low** *(One or more specifications are ambiguous)*
2b1. The measure specifications are consistent with the measure intent described under criterion 1c and captures the most inclusive target population	**To what extent is the clinical logic consistent with the measure intent and captures the broadest target population?** ☐ **High/Moderate** *(Measure specifications are consistent with the measure intent and captures the broadest target population)* ☐ **Low** *(Measure specifications do not reflect the measure intent)*

Adjustments for Comparability – Inclusion/Exclusion Criteria

S.9.1. **Inclusion and Exclusion Criteria Detail initial inclusion/exclusion criteria and data preparation steps** *(related to clinical exclusions, claim-line or other data quality, data validation, e.g. truncation or removal of low or high dollar claim, exclusion of ESRD patients)*
The MSPB Measure calculation includes five types of exclusions:
• [1] Any episodes without all observable claims or a complete episode window are excluded (i.e., episodes in which Medicare is the

secondary payer, episodes in which the beneficiary is enrolled in a Medicare Advantage plan, episodes in which the beneficiary is enrolled only in Medicare Part A, episodes in which the beneficiary becomes deceased). Episodes in which the beneficiary is enrolled only in Medicare Part A, for example, are excluded because these beneficiaries may receive services not observed in the data. Similarly, episodes in which the beneficiary dies at any point during the episode and episodes in which the patient dies are—by definition—truncated episodes and do not have a complete episode window are excluded. Including episodes without all observable claims or a complete episode window could potentially make hospitals seem efficient not due to any action of their own, but because the data is missing services that would be included in the MSPB Measure calculation.

• [2] Regarding beneficiaries whose primary insurance becomes Medicaid during an episode due to exhaustion of Medicare Part A benefits, Medicaid payments made for services rendered to these beneficiaries are excluded; however, all Medicare Part A payments made before benefits are exhausted and all Medicare Part B payments made during the episode are included.

• [3] Any episode in which the index admission inpatient claim has a $0 actual payment or a $0 standardized payment is excluded; $0 inpatient admissions may represent errors in the data, or payment corrections rather than actual services rendered.

• [4] Due to the uncertainty surrounding attributing episodes to hospitals in cases where the patient was transferred between acute hospitals during the index admission, acute-to-acute transfers during the index admission (where a transfer is defined based on the claim discharge code) are not considered index admissions for the purposes of the MSPB Measure. In other words, these cases will not generate new MSPB episodes; neither the hospital which transfers a patient to another short-term acute hospital, nor the receiving short-term acute hospital will have an index admission attributed to them. Although this exclusion decreases the number of eligible episodes by about 5 percent, it avoids the problem of assigning responsibility to an MSPB episode in a case where multiple hospitals treat the patient during the index admission.

• [5] In response to stakeholder comments, the FY 2012 IPPS Final Rule states that the MSPB Measure will "exclude statistical outliers from the calculation" (76 FR 51626: www.gpo.gov/fdsys/pkg/FR-2011-08-18/pdf/2011-19719.pdf). To mitigate the effect of high-cost outliers on each hospital's MSPB Measure score, MSPB episodes whose relative scores fall above the 99th percentile or below the 1st percentile of the distribution of residuals within each index admission MS-DRG are excluded from the MSPB calculation. Excluding outliers based on residuals eliminates the episodes that deviate most from their predicted values in absolute terms.

When the MSPB Measure is applied to Medicare FFS patients, exclusions are identified based on the following variables.

• [1] Episodes where Medicare is the secondary payer: if a beneficiary was the primary payer any time during the MSPB episode, the beneficiary was excluded (i.e., if bene_prmry_pyr_entlmt_strt_dt (start date of primary payer enrollment) bene_prmry_pyr_entlmt_end_dt (end date of primary payer enrollment) fell within the episode). In addition, an index hospitalization with death discharge code (STUS_CD "20" "41") was excluded. Similarly if a beneficiary's death was within an MSPB episode, the episode was excluded as well.

• [2] The MSPB Measure is calculated using only Medicare Part A and Part B claims; as a result no Medicaid claims are included in the MSPB Measure calculation.

• [3] Only when the Claim Payment Amount (Pmt_Amt) for the IP stay is greater than 0 OR Standard_allowed_amt is greater than 0 is the amount included in the MSPB Measure calculation.

• [4] An IP stay with discharge code (STUS_CD) in "02" "43" "66" or an IP stay with admission code (SRC_ADMS) in "04" is considered to be a transfer. Any IP stays with the same admsn_dt as the transfer stay or with the admsn_dt same as the dschrgdt of the transfer IP stay is also considered to be a transfer. An acute hospital is defined as those with provider variable's third position "0". Cancer hospitals, MD Hospitals (provider variable starting with "21"), emergency hospitals (provider variable last position "E" OR "F"), and Veteran's Hospitals (provider variable position "V") are also excluded.

2b.3. Exclusion Analysis

Click here to go to the developer submission for Exclusion Analysis (2b3)

2a1. The measure is well defined and precisely specified so that it can be implemented consistently within and across organizations and allow for comparability. Electronic health record (EHR) measure specifications are based on the quality data model (QDM).	**To what extent are the inclusion/exclusion criteria well defined and precisely specified?** ☐ **High/Moderate** *(Specifications are unambiguous)* ☐ **Low** *(One or more specifications are ambiguous)*

2b1.The measure specifications are consistent with the measure intent described under criterion 1c and captures the most inclusive target population.	**To what extent is the clinical logic consistent with the measure intent and captures the broadest target population?** ☐ **High/Moderate** *(Measure specifications are consistent with the measure intent and captures the broadest target population)* ☐ **Low** *(Measure specifications do not reflect the measure intent)*
2b3. Exclusions are supported by the clinical evidence. **AND/OR** There is a rationale or analysis demonstrating that the measure results are sufficiently distorted due to the magnitude and/or frequency of the non-clinical exclusions; **AND** Measure specifications for scoring include computing exclusions so that the effect on the measure is transparent (i.e., impact clearly delineated, such as number of cases excluded, exclusion rates by type of exclusion); **AND** If patient preference (e.g., informed decision-making) is a basis for exclusion, there must be evidence that the exclusion impacts performance on the measure; in such cases, the measure must be specified so that the information about patient preference and the effect on the measure is transparent (e.g., numerator category computed separately, denominator exclusion category computed separately).	**To what extent are the inclusion/exclusion criteria supported by the clinical evidence or supported by evidence of sufficient frequency and impact on performance results?** ☐ **High** ☐ **Moderate** ☐ **Low** ☐ **Insufficient**

Adjustments for Comparability – Risk Adjustment

S.9.2. **Risk Adjustment Type** *(Select type)*

Statistical risk model

S.9.3. **Statistical risk model method and variables** *(Name the statistical method - e.g., logistic regression and list all the risk factor variables.)*

The model generally follows the CMS hierarchical condition category (HCC) risk-adjustment methodology. This model measures comorbid factors using diagnosis information from Medicare Part A and B claims. CMS uses a variant of the HCC risk-adjustment model in many payment systems including: the Medicare Advantage (MA) Capitation Payment program (implemented in 2004, fully phased-in in 2007), the Shared Savings Program Accountable Care Organizations (implemented in 2012), and the Medicare Physician Quality and Resource Use Reports (implemented in 2009). [1]

Just like the CMS-HCC model, the MSPB risk-adjustment approach uses a linear ordinary least squares (OLS) regression model. The independent variables used in the risk-adjustment model include beneficiary age, health status (as measured by hierarchical condition categories (HCCs)), disability-status, end-stage renal disease (ESRD) status, residence in a long-term care facility, and indicators for the MS-DRG of the index hospital admission. All variables are calculated using Medicare claims data during the period 90 days prior to the start of an episode. No risk-adjustment factors are determined using information contemporaneous with the MSPB episode to avoid circularity problems that would—by construction—cause the risk-adjustment factors to be correlated with episode spending. For a detailed list of explanatory variables in the risk-adjustment model, please the attached response to S.9.4.

The OLS model is stratified based on the MDC of the index admission. The use of separate models by MDC permits the effect of risk factors on episode spending to vary based on the bodily system treated during the index admission. More precisely, this approach allows the coefficient on each risk adjuster to vary by MDC.

DETAILED SPECIFICATIONS:

Although broadly relying on the CMS-HCC framework, MSPB risk-adjustment model, however, is tailored for this specific quality measure. To account for case-mix variation and other factors, the MSPB risk-adjustment methodology adjusts the MSPB Measure for five broad risk factors. These include:

•Beneficiary age
•Severity of illness using 70 HCC indicators
•Enrollment in Medicare due to disability or ESRD
•Whether the beneficiary recently required long-term care, and
•MS-DRG of the index hospitalization.

Although the CMS-HCC risk-adjustment model used in the MA setting includes 24 age/sex variables, the MSPB methodology does not adjust for patient sex; thus it only includes 12 age categorical variables in the risk-adjustment methodology. This policy is consistent with NQF's position on not adjusting for potential demographic (sex or race) or socioeconomic factors; including sex as a risk adjuster would mean that hospitals would be held to different standards of care based on the patient's sex. For similar reasons, beneficiary race is also not included as a risk adjuster. Thus, the only demographic variable included in the risk-adjustment model is beneficiary age.

Severity of illness HCC indicators are created based on Medicare Part A and Medicare Part B diagnosis code information during the time 90 days prior to the start of an episode (i.e., 93 days prior to the date of the index admission). Patients without a full 90-day look-back period have their episodes excluded from the MSPB Measure. This 90-day period prior to the start of an episode is used to measure beneficiary health status, which is used in the risk-adjustment model; this look-back period ensures that each beneficiary's claims record contains sufficient fee-for-service data both for measuring spending levels and for risk-adjustment purposes. As the length of the look-back period increases, there is a trade-off between the number of comorbidities captured and the number of false positives (i.e., diagnoses captured that may have been resolved). A longer look-back period, for example, will capture more comorbidities, while a shorter look-back period will capture fewer false positives. A longer look-back period will also decrease the number of episodes eligible to be included in the MSPB Measure calculation in the cases where a beneficiary would be required to have 365 of pre-admission Medicare enrollment to be included in the measure. Based on our analysis (see 2b4), increasing the look-back period to 365 days would not only decrease the number of valid episodes, but also would worsen the model fit. Based on these results, a 90-day look-back window is selected for the generation of the independent variables used in this risk-adjustment model.

The MSPB risk-adjustment methodology also includes status indicator variables for whether the beneficiary qualifies for Medicare through Disability or End-Stage Renal Disease (ESRD); one can view these enrollment status variables as two additional severity of illness measures, however, these variables are generated from enrollment rather than diagnosis information.

Patients who reside in long-term care facilities typically require more intensive care—particularly more intensive post-acute care—than beneficiaries who live in the community even for patients that may have illness severity measures. Thus, the risk-adjustment method also includes an indicator of whether a beneficiary resides in a long-term care facility as non-diagnostic measures of severity of illness.

This measure assumes that the reason the patient is admitted to the hospital is largely outside the control of the hospital; thus, the risk-adjustment measure also includes MS-DRG indicator variables as well. Additionally, the reason for admission directly affects payments and is predictive of post-acute care.

The relationship between comorbidities' episode cost may be non-linear in some cases. For instance, the marginal expected episode cost from having diabetes and congestive heart failure (CHF) may not be equal to the sum of the marginal expected cost from having diabetes and the marginal expected cost from having CHF. To account for these non-linearities, the MSPB risk-adjustment model also incorporates a series of interactions terms between HCCs and/or enrollment status variables that are included in the MA model.

The final set of explanatory variables in the risk-adjustment model can be found in the "MSPB Measure Information Form" available at the measure-specific web page URL identified in S.1 (see S.9.4.).

For your reference, the "Additional Information" appendix beginning on page 24 of the attached "Scientific Acceptability" section also includes regression coefficients and standard error of the covariates used in the risk-adjustment models. There are 26 tables, one for each risk adjustment by MDC.

• [1] Centers for Medicare and Medicaid Services, Office of the Actuary. "Announcement of Calendar Year (CY) 2009 Medicare Advantage Capitation Rates and Medicare Advantage and Part D Payment Policies." April 2008. http://www.cms.gov/MedicareAdvtgSpecRateStats/Downloads/Announcement2009.pdf

S.9.4. **Detailed Risk Model Specifications** *available at measure-specific Web page URL identified in S.1 OR in attached data dictionary/code list Excel or csv file.*

Available at measure-specific web page URL identified in S.1

S.9.5. **Stratification Details/Variables** *(All information required to stratify the measure results including the stratification variables, definitions, specific data collection items/responses, code/value sets)*

The risk-adjustment model is stratified by major diagnostic category (MDC). MDCs are aggregations of Diagnosis Related Groups

(MS-DRG), which CMS uses to classify acute inpatient admissions.
The MS-DRG/MDC crosswalk is available for order here:

http://solutions9.3m.com/wps/portal/!ut/p/c1/04_SB8K8xLLM9MSSzPy8xBz94NS8-NBg_Qj9KLP4IC8Py1BTI2MD9zAvFwMjYzMzCxNHd2OTACP9ggxHRQBm3gTM/

2b.4. Risk Adjustment Statistics
Click here to go to the developer submission for Risk Adjustment (2b4)

2a1. The measure is well defined and precisely specified so that it can be implemented consistently within and across organizations and allow for comparability. Electronic health record (EHR) measure specifications are based on the quality data model (QDM).	**To what extent is the risk adjustment strategy well defined and precisely specified?** ☐ **High/Moderate** *(Specifications are unambiguous)* ☐ **Low** *(One or more specifications are ambiguous)*
2b1. The measure specifications are consistent with the measure intent described under criterion 1c and captures the most inclusive target population	**To what extent is the clinical logic consistent with the measure intent and captures the broadest target population?** ☐ **High/Moderate** *(Measure specifications are consistent with the measure intent and captures the broadest target population)* ☐ **Low** *(Measure specifications do not reflect the measure intent)*
2b4. An evidence-based risk-adjustment strategy (e.g., risk models, risk stratification) is specified; is based on factors that influence the measured outcome (but not factors related to disparities in care or the quality of care) and are present at start of care; and has demonstrated adequate discrimination and calibration **OR** Rationale/data support no risk-adjustment/-stratification.	**To what extent are the risk adjustment factors present at the start of care with adequate discrimination and calibration?** ☐ **High** ☐ **Moderate** ☐ **Low** ☐ **Insufficient**

Adjustments for Comparability – Costing Method
S.9.6. Costing method *Detail the costing method including the source of cost information, steps to capture, apply or estimate cost information, and provide rationale for this methodology.*
Standardized pricing
S.9.6a. Describe the Costing method
As discussed in S.7.2., the MSPB Measure removes sources of variation which are not directly related to decisions to utilize care, such as local or regional price differences, to capture differences in beneficiary resource use that a hospital can influence through appropriate practices and care coordination. The MSPB Measure relies on a detailed price standardization methodology to exclude geographic payment rate differences; in other words, the MSPB Measure adjusts observed payments for Medicare geographic adjustment factors. A detailed price standardization description is available at the URL provided in S.1.

http://www.qualitynet.org/dcs/ContentServer?c=Page&pagename=QnetPublic%2FPage%2FQnetTier4&cid=1228772057350

S.9.6b. Attach pricing table here *(Select Actual Prices Paid, Relative Value Units [RVUs], Other, or We do not provide specifications for a costing method)*

Pricing Table not provided

2a1. The measure is well defined and precisely specified so that it can be implemented consistently within and across organizations and allow for comparability. Electronic health record (EHR) measure specifications are based on the quality data model (QDM).	**To what extent is the costing method well defined and precisely specified?** ☐ **High/Moderate** *(Specifications are unambiguous)* ☐ **Low** *(One or more specifications are ambiguous)*
2b1. The measure specifications are consistent with the measure intent described under criterion 1c and captures the most inclusive target population	**To what extent is the clinical logic consistent with the measure intent and captures the broadest target population?** ☐ **High/Moderate** *(Measure specifications are consistent with the measure intent and captures the broadest target population)* ☐ **Low** *(Measure specifications do not reflect the measure intent)*

Adjustments for Comparability – Scoring

S.10. **Type of Score** *(Select the most relevant)*

Ratio; Attachment

Click here to go to the sample score report

S.11. **Interpretation of Score** *(Classifies interpretation of a ratio score(s) according to whether higher or lower resource use amounts is associated with a higher score, a lower score, a score falling within a defined interval, or a passing score, etc.)*

An MSPB Measure of 1 indicates that a hospital had average risk-adjusted spending levels which are equal to those of the median hospital. An MSPB Measure of greater than 1 indicates that a hospital had higher than average risk-adjusted spending levels compared to those of the median hospital. For example, an MSPB Measure of 1.1 indicates that the hospital had average risk-adjusted spending levels that are 10 percent higher than the median hospital. On the other hand, an MSPB Measure of less than 1 indicates that a hospital had lower than average risk-adjusted spending levels compared to those of the median hospital. For example, an MSPB Measure of 0.9 indicates that the hospital had average risk-adjusted spending levels that are 10 percent lower than the median hospital.

S.12. **Detail Score Estimation** *(Detail steps to estimate measure score.)*

A hospitals' MSPB Measure score is calculated as a hospital's average MSPB Amount divided by the median MSPB Amount across all hospitals. A hospital's MSPB Amount is defined as the sum of standardized, risk-adjusted spending across all of a hospital's eligible episodes divided by the number of episodes for that hospital. S.7.2. provides additional details describing the eight steps used to calculate hospitals' MSPB Measure values.

2a1. The measure is well defined and precisely specified so that it can be implemented consistently within and across organizations and allow for comparability. Electronic health record (EHR) measure specifications are based on the quality data model (QDM).	**To what extent is the scoring method well defined and precisely specified?** ☐ **High/Moderate** *(Specifications are unambiguous)* ☐ **Low** *(One or more specifications are ambiguous)*
2b1. The measure specifications are consistent with the measure intent described under criterion 1c and captures the most inclusive target population	**To what extent is the clinical logic consistent with the measure intent and captures the broadest target population?** ☐ **High/Moderate** *(Measure specifications are consistent with the measure intent and captures the broadest target population)* ☐ **Low** *(Measure specifications do not reflect the measure intent)*

2b5. Data analysis demonstrates that methods for scoring and analysis of the specified measure allow for identification of statistically significant and practically/clinically meaningful differences in performance.	**To what extent does the scoring method allow for identification of statistically significant and practically/clinically meaningful differences in performance?** ☐ **High** ☐ **Moderate** ☐ **Low** ☐ **Insufficient**
Comparability of Multiple Data Sources ***Measure not specified for multiple data sources – Not Applicable***	
2b6. If multiple data sources/methods are specified, there is demonstration that they produce comparable results.	**To what extent do the multiple data sources/methods produce comparable results?** ☐ **High** ☐ **Moderate** ☐ **Low** ☐ **Insufficient** ☐ **Not Applicable**
Reliability Testing ***Click here to go to the developer submission for Reliability Testing (2a2)***	
2a2. Reliability testing demonstrates the measure data elements are repeatable, producing the same results a high proportion of the time when assessed in the same population in the same time period and/or that the measure score is precise.	☐ **High** *(Data element **AND** measure score reliability testing done and is acceptable)* ☐ **Moderate** *(Data element **OR** measure score reliability testing is done and acceptable)* ☐ **Low** *(There is empirical evidence of Unreliability for either data elements or measure score)* ☐ **Insufficient** *(Inappropriate method or scope of reliability testing)*
Validity Testing ***Click here to go to the developer submission for Validity Testing (2b2)***	

2b2. Validity testing demonstrates that the measure data elements are correct and/or the measure score correctly reflects the quality of care provided, adequately identifying differences in quality.	☐ **High** *(Data element **AND** measure score were tested with the appropriate method, scope and the results are within acceptable norms **AND** Threats to validity are empirically assessed and adequately addressed; measure results are not biased)* ☐ **Moderate** *(Data element **OR** measure score were tested with the appropriate method, scope and the results are within acceptable norms **OR** face validity was systematically assessed **AND** Threats to validity are empirically assessed and adequately addressed; measure results are not biased)* ☐ **Low** *(Statistical results of the testing of data element OR measure score are outside of acceptable norms **OR** Threats to validity have not been addressed and the measure score is bias.)* ☐ **Insufficient** *(Inappropriate method or scope of testing; inadequate assessment of face validity)*

2a. Overall Reliability

2a1. Construction Logic	**H/M**		**L**	
2a1. Clinical Logic	**H/M**		**L**	
2a1. Adjustments for Comparability – Inclusion/Exclusion Criteria	**H/M**		**L**	
2a1. Adjustments for Comparability – Risk Adjustment	**H/M**		**L**	
2a1. Adjustments for Comparability – Costing Method	**H/M**		**L**	
2a1. Adjustments for Comparability – Scoring	**H/M**		**L**	
2a2. Reliability Testing	**H**	**M**	**L**	**I**

Based on your ratings for the above criteria, how would you rate the overall reliability of this measure? How well overall has the developer demonstrated the measure results are repeatable and can be implemented consistently?

☐ **High** *(Specifications are unambiguous; data element **AND** measure score reliability testing done and is acceptable)*
☐ **Moderate** *(Specifications are unambiguous and data element **OR** measure score reliability testing is done and acceptable)*
☐ **Low** *(One or more specifications are ambiguous **OR** there is empirical evidence of unreliability for either data elements or measure score)*
☐ **Insufficient** *(Inappropriate method or scope of reliability testing)*

Rationale:

2b. Overall Validity

2b1. Construction Logic	H/M L
2b1. Clinical Logic	H/M L
2b1. Adjustments for Comparability – Inclusion/Exclusion Criteria	H/M L
2b3. Exclusions	H M L I
2b1. Adjustments for Comparability – Risk Adjustment	H/M L
2b4. Risk Adjustment	H M L I
2b1. Adjustments for Comparability – Costing Method	H/M L
2b1. Adjustments for Comparability – Scoring	H/M L
2b5. Significant Differences in Performance	H M L I
2b6. Comparability of Multiple Data Sources	H M L I NA
2b2. Validity Testing	H M L I

Based on your ratings for the above criteria, how would you rate the overall validity of this measure? How well overall has the developer demonstrated this measure is valid?

☐ **High** *(Data element **AND** measure score were tested with the appropriate method, scope and the results are within acceptable norms **AND** Threats to validity are empirically assessed and adequately addressed; measure results are not biased)*
☐ **Moderate** *(Data element **OR** measure score were tested with the appropriate method, scope and the results are within acceptable norms **OR** face validity was systematically assessed **AND** Threats to validity are empirically assessed and adequately addressed; measure results are not biased)*
☐ **Low** *(Statistical results of the testing of data element **OR** measure score are outside of acceptable norms **OR** Threats to validity have not been addressed and the measure score is bias.)*
☐ **Insufficient** *(Inappropriate method or scope of testing; inadequate assessment of face validity)*

Rationale:

2c. Disparities in Care

If disparities in care have been identified, measure specifications, scoring, and analysis allow for identification of disparities through stratification of results (e.g., by race, ethnicity, socioeconomic status, gender)
OR
Rationale/data justifies why stratification is not necessary or not feasible.

SA.10.1. **If measure is stratified for disparities, provide stratified results** *(Scores by stratified categories/cohorts)*
N/A

SA.10.2. **If disparities have been reported/identified, but measure is not specified to detect disparities, please explain.**
Although poor MSPB scores could be due to low quality care, it could also be the case that unobservable factors (e.g., large populations of patients for whom English is a second language, low

To what extent do the measure specifications, scoring, and analysis allow for identification of disparities through stratification of results (Refer to item IM2.4 for summary of disparities data)?

☐ **High**
☐ **Moderate**
☐ **Low**

adherence to treatment regimens) cause these hospitals to perform worse.

To identify hospitals that treat a large number of socioeconomically disadvantaged patients, the following analysis classifies hospitals by their Disproportionate Share Hospital (DSH) percentage. The Medicare DSH percentage is equal to the sum of the percentage of Medicare inpatient days attributable to patients entitled to both Medicare Part A and Supplemental Security Income and the percentage of total inpatient days attributable to patients eligible for Medicaid but not eligible for Medicare Part A.

Table X stratifies hospitals' MSPB Measure performance by DSH percentage. The table shows that hospitals with a DSH percentage over 65 have an average MSPB Measure value of 0.979. This value is close to that of hospitals with a DSH percentage from 0-25, which have an average MSPB Measure value of 0.982. The distribution of average MSPB Amounts for all DSH percentage stratifications is also similar. Additionally, the correlation of MSPB Measure values with DSH percentage is near zero: 0.005. These results suggest that MSPB Measure performance is not correlated with a hospital's DSH status.

Table X: Impact Analysis by DSH Percentage

	N	Average MSPB Measure	Min	Percentiles					Max	Avg MSPB Amount
				10th	25th	50th	75th	90th		
DSH Percentage										
0-25	1,668	0.982	0.56	0.87	0.94	0.99	1.03	1.08	1.73	17,657
25-50	1,377	0.979	0.48	0.88	0.93	0.98	1.03	1.08	1.32	17,612
50-65	167	1.000	0.64	0.88	0.94	1.00	1.04	1.12	1.49	17,983
Over 65	171	0.979	0.32	0.84	0.90	0.99	1.06	1.12	1.44	17,615
Uncategorized	13	1.026	0.80	0.80	0.92	0.96	1.00	1.11	2.07	18,449

On the other hand, recall from Questions 2b3.1, 2b3.2, and 2b3.3 that MSPB episodes for beneficiaries who are eligible for Medicare and Medicaid (dual-eligible beneficiaries) cost, on average, $859 more than episodes for non-dual-eligible beneficiaries. Similarly, average expected cost of episodes with dual-eligible beneficiaries is $128 and $84 more expensive before and after excluding MSPB outlier episodes, respectively. Because Medicaid eligibility is highly correlated with income, Medicaid eligibility can be considered a proxy for socioeconomic status. As such, these results suggest that socioeconomically disadvantaged beneficiaries, as identified by dual-eligibility, may have higher average episode costs than non-socioeconomically disadvantaged beneficiaries, as identified by non-dual-eligibility, even after risk adjustment for other factors. At the hospital level, however, hospitals with higher percentages of dual-eligible episodes have similar MSPB Measure values; hospitals with dual-eligible episodes accounting for less than 25 percent of total episodes have an average MSPB Measure value of 0.980, while hospitals with dual-eligible episodes accounting for more than 75 percent of total episodes have a slightly higher average MSPB Measure value of 0.982. The correlation between the MSPB measure and the percentage of a hospital's episodes that are for dual-eligible beneficiaries is only 0.007. These findings present a mixed conclusion: while dual-eligible beneficiaries are more expensive per episode, hospitals with higher shares of duals and higher DSH percentages do not generally have worse MSPB measures than other hospitals.

Dual-eligible beneficiaries are not excluded from the MSPB Measure. First, care for dual-eligible beneficiaries represents a substantial portion of MSPB episodes and Medicare payments. In fact, 30% of episodes are flagged as dual-eligible beneficiaries, and 18% of hospitals assigned an MSPB Measure have a beneficiary population consisting of at least 50% dual-eligible

☐ **Insufficient**

beneficiaries. Revising the MSPB Measure to exclude MSPB episodes for Medicare beneficiaries who are dual-eligible would result in large changes to MSPB Measure values; Table Y shows that only 43 percent of hospitals would experience a change in their MSPB Measure values of less than 1 percent.

CMS adopted a position in the FY 2012 IPPS Final Rule that the MSPB Measure is risk adjusted based on beneficiaries' underlying health status, not socioeconomic factors, such as race or dual-eligible status to be consistent with NQF's position on not adjusting for socioeconomic factors (76 FR 51524-25). Again, because Medicaid eligibility is highly correlated with income, Medicaid eligibility can be considered a proxy for socioeconomic status; as a result, dual-eligibility was not included as a risk adjuster. If one were to include an indicator for dual-eligible status in the risk adjustment model, most hospitals experience only a small change in their MSPB Measure values; Table Z shows that 88% of hospitals experience a gain or loss in the MSPB Measure values of less than 1%. In addition, controlling for dual-eligible status leads to a very small improvement (one tenth of one percent) in the R-squared value of the regression.

Table Y: Impact Analysis, Excluding Dual-Eligible Beneficiaries

MSPB Measure Difference	# of Hospitals	% of Hospitals
All	**3,386**	**100**
> 0.10	37	1.1
0.03 to 0.10	230	6.8
0.01 to 0.03	672	19.8
0.00 to 0.01	**790**	**23.3**
-0.01 to 0.00	**667**	**19.7**
-0.03 to -0.01	585	17.3
-0.10 to -0.03	346	10.2
< -0.10	59	1.7

Table Z: Impact Analysis, Including Dual-Eligible Risk Adjuster

MSPB Measure Difference	# of Hospitals	% of Hospitals
All	**3,396**	**100**
> 0.10	0	0.0
0.03 to 0.10	5	0.1
0.01 to 0.03	34	1.0
0.00 to 0.01	**1,150**	**44.5**
-0.01 to 0.00	**1,469**	**43.3**
-0.03 to -0.01	366	10.8
-0.10 to -0.03	12	0.4
< -0.10	0	0.0

3. Feasibility

Extent to which the required data are readily available or could be captured without undue burden, and can be implemented for performance measurement.

3a. Byproduct of Care Processes

For clinical measures, the required data elements are routinely generated and used during care delivery (e.g., blood pressure, lab test, diagnosis, medication order).

F.1. **Data Elements Generated as Byproduct of Care Processes.**

Coded by someone other than person obtaining original information (e.g., DRG, ICD-9 codes on claims)

If other:

To what extent are the data elements generated as byproducts of care processes?

☐ High
☐ Moderate
☐ Low
☐ Insufficient

3b. Electronic Sources

The required data elements are available in electronic health records or other electronic sources. If the required data are not in electronic health records or existing electronic sources, a credible, near-term path to electronic collection is specified.

F.2. **To what extent are the specified data elements available electronically in defined fields?**

ALL data elements are in defined fields in electronic claims

To what extent are the data elements available in electronic health records or other electronic sources?

☐ High
☐ Moderate
☐ Low
☐ Insufficient

3c. Data Collection Strategy

Demonstration that the data collection strategy (e.g., source, timing, frequency, sampling, patient confidentiality, costs associated with fees/licensing of proprietary measures) can be implemented (e.g., already in operational use, or testing demonstrates that it is ready to put into operational use).

F.4. **Describe what you have learned/modified as a result of testing and/or operational use of the measure regarding data collection, availability of data, missing data, timing and frequency of data collection, sampling, patient confidentiality, time and cost of data collection, other feasibility/implementation issues.**

CMS uses Medicare claims data that hospitals submit to CMS for payment to calculate the MSPB Measure. As a result, the required data are readily available and retrievable without undue burden. In fact, Acumen has already acquired all the data needed and has already calculated the MSPB Measure. These claims data used are maintained by CMS's Office of Information System. These data undergo additional quality assurance checks during measure development and maintenance. Specifically, CMS has in place several hospital auditing programs used to assess overall claims code accuracy, ensure appropriate billing, and for overpayment recoupment. CMS routinely conducts data analyses to identify potential problem areas and detect fraud. CMS also audits important data fields, including diagnosis and procedure codes, as well as other elements that are consequential to payment. Specifically, CMS works with Program Safeguard Contractors (PSCs)/Zone Program Integrity Contractors (ZIPCs) to ensure program integrity; the agency also uses Comprehensive Error Rate Testing (CERT) Contractors to ensure that Medicare payments are correct. Between 2000 and 2010, CERT estimates that improper payment ranged from 4 to 12 percent of total payments each year. (Comprehensive Error Rate Testing (CERT) Program: http://www.cms.gov/Research-Statistics-Data-and-Systems/Monitoring-Programs/CERT/Downloads/CERT_101.pdf)

During the data preview for the MSPB Measure, each hospital receives a Hospital-Specific Report

To what extent can the data collection strategy be implemented?

☐ High
☐ Moderate
☐ Low
☐ Insufficient

(HSR) that provides information on the hospital's performance on the MSPB Measure, as well as three supplementary hospital-specific data files (an index admission file, a beneficiary risk score file, and an MSPB episode file) related to the hospital's MSPB Measure. Together, these files provide an overview of how the hospital performed on the MSPB Measure as well as a summary of how hospitals in the state and in the nation performed. For example, each hospital's files provide the number of eligible admissions, average spending per episode, MSPB Amount, and MSPB Measure for the hospital as well as for the state and the nation. Additionally, each hospital's MSPB spending is broken into three categories (i.e., 3 days prior to index admission, during-index admission, and 30 days after hospital discharge), and within these categories, spending levels are broken down by claim type. For comparison, the state and national values for these breakdowns are given to hospitals as well. Further, each hospital's average spending and average expected spending (based on beneficiary age and health status) breakdowns by Major Diagnostic Category (MDC) are presented in the hospital's HSR alongside analogous values at the state and national levels to allow the hospital to compare its case mix against the state and the nation. In addition to helping hospitals verify their MSPB Measure scores and identify opportunities to improve efficiency, providing these files allows us to better communicate MSPB scores to hospitals and allows hospitals to provide informed feedback to Acumen and CMS. During the 30-day preview periods, Acumen and CMS received no reports of errors in the measure's calculation.

F.5. **Describe any fees, licensing, or other requirements to use any aspect of the measure as specified.**

There are no fees, licensing, or other requirements for use of the MSPB Measure values and MSPB Measure spending breakdowns made publicly available on Hospital Compare.

F.5.a. **If there are any fees associated with the use of this measure as specified, attach the fee schedule here**

3. Overall Feasibility

3a. Byproduct of Care Processes	H	M	L	I
3b. Electronic Sources	H	M	L	I
3c. Data Collection Strategy	H	M	L	I

Based on your rating of the subcriteria, make a summary determination of the extent to which the criterion of **Feasibility** has been met. Please provide a rationale based on specific subcriteria.

Rationale:

☐ **High**
☐ **Moderate**
☐ **Low**
☐ **Insufficient**

4. Usability and Use

Extent to which potential audiences (e.g., consumers, purchasers, providers, policymakers) are using or could use performance results for both accountability and performance improvement to achieve the goal of high-quality, efficient healthcare for individuals or populations.

4a. Accountability and Transparency

Performance results are used in at least one accountability application within three years after initial endorsement and are publicly reported within six years after initial endorsement (or the data on performance results are available). If not in use at the time of initial endorsement, then a

To what extent have performance results been used in

credible plan for implementation within the specified timeframes is provided.

U.1. Current and Planned Use

NQF-endorsed measures are expected to be used in at least one accountability application within 3 years and publicly reported within 6 years of initial endorsement in addition to performance improvement.

Planned	Current	For Current use, Provide URL
Payment Program	Public Reporting Quality Improvement with Benchmarking (external benchmarking to multiple organizations) Quality Improvement (Internal to the specific organization)	http://www.medicare.gov/hospitalcompare/?AspxAutoDetectCookieSupport=1; http://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/hospital-value-based-purchasing/index.html http://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/hospital-value-based-purchasing/index.html http://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/hospital-value-based-purchasing/index.html

U.1.1. For each CURRENT use, checked above, provide:

- Name of program and sponsor
- Purpose
- Geographic area and number and percentage of accountable entities and patients included

Public Reporting (Current):
Program Name: Hospital Compare(http://www.medicare.gov/hospitalcompare/?AspxAutoDetectCookieSupport=1)
Sponsor: CMS
Purpose: Hospital Compare has information about the quality of care at over 4,000 Medicare-certified hospitals across the country. The public can use Hospital Compare to find hospitals and compare the quality of their care. Specifically, hospitals' MSPB Measure values will be publicly reported on the Hospital Compare website. However, only hospitals with 25 or more eligible episodes will have their MSPB values posted. This requirement reduces the likelihood that a hospital's MSPB Measure is skewed by a few high- or low-cost episodes.
Geographic Area: U.S.
Number/Percentage of Accountable Entities: 3,324 hospitals out of 3,376 hospitals eligible to receive an MSPB Measure value (98.5%) during the May 1, 2011 - December 31, 2011 period of performance
Number/Percentage of Patients Hospitalized in the Period of Performance: 3,109,463 beneficiaries out of 3,116,543 (9.8%) in the May 15, 2010 - February 14, 2011 period of performance
Quality Improvement with Benchmarking (External Benchmarking to Multiple Organizations)

accountability applications or a credible plan for use has been provided?

☐ **High**
☐ **Moderate**
☐ **Low**
☐ **Insufficient**

Program Name: Hospital Value-Based Purchasing (http://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/hospital-value-based-purchasing/index.html)
Sponsor: CMS
Purpose: Section 3001 of the Patient Protection and Affordable Care Act (ACA) establishes the Hospital Value-Based Purchasing (VBP) program. The Hospital VBP program provides financial incentives to subsection (d) hospitals based on their performance on selected quality measures. Section 1886(o)(2)(B)(ii) of the Social Security Act, 3001 of the Patient Protection and Affordable Care Act requires that CMS implement a measure of Medicare Spending Per Beneficiary as part of it Hospital Value-Based Purchasing (VBP) initiatives. The hospital performance score for a performance period will be determined using a higher of its achievement or improvement score for the MSPB Measure as described in the FY 2012 IPPS Final Rule at 76 FR 51654-56. The MSPB Measure score will be incorporated into the HVBP Program as part of the Efficiency domain. Because the MSPB Measure is the only measure currently in the Efficiency domain, the total points earned for the domain would be the points earned on the MSPB Measure. Each hospital's Total Performance Score (TPS), used to calculate each hospital's incentive payment, is calculated by combining its component domain scores. A hospital's achievement score is calculated from a comparison of the hospital's MSPB Measure value against the median MSPB Measure value across all hospitals during the period of performance.
Geographic Area: U.S.
Number/Percentage of Accountable Entities: 3,375 hospitals received MSPB Measure values out of 3,506 hospitals in the FY 2015 Hospital VBP program (96.3%)
Number/Percentage of Patients: N/A
Quality Improvement (Internal to the specific organization)

Program Name: Hospital Value-Based Purchasing (http://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/hospital-value-based-purchasing/index.html)
Sponsor: CMS
Purpose: Section 3001 of the Patient Protection and Affordable Care Act (ACA) establishes the Hospital Value-Based Purchasing (VBP) program. The Hospital VBP program provides financial incentives to subsection (d) hospitals based on their performance on selected quality measures. Section 1886(o)(2)(B)(ii) of the Social Security Act, 3001 of the Patient Protection and Affordable Care Act requires that CMS implement a measure of Medicare Spending Per Beneficiary as part of it Hospital Value-Based Purchasing (VBP) initiatives. The hospital performance score for a performance period will be determined using a higher of its achievement or improvement score for the MSPB Measure as described in the FY 2012 IPPS Final Rule at 76 FR 51654-56. The MSPB Measure score will be incorporated into the HVBP Program as part of the Efficiency domain. Because the MSPB Measure is the only measure currently in the Efficiency domain, the total points earned for the domain would be the points earned on the MSPB Measure. Each hospital's Total Performance Score (TPS), used to calculate each hospital's incentive payment, is calculated by combining its component domain scores. A hospital's improvement score is calculated from a comparison of the hospital's MSPB Measure value during a period of performance against the MSPB Measure value during a baseline period. Additionally, CMS provides each eligible hospital a confidential Hospital-Specific Report (HSR) that provides information on its performance on the MSPB Measure. These reports, along with the accompanying confidential data files, can be used by hospitals to validate the calculation of their MSPB Measure values.
Geographic Area: U.S.
Number/Percentage of Accountable Entities: 3,375 hospitals received MSPB Measure values out of 3,506 hospitals in the FY 2015 Hospital VBP program (96.3%); additionally, 3,322 hospitals out of 3,376 hospitals eligible to receive an MSPB Measure score (98.4%) received HSRs for the May 1, 2011 to December 31, 2011 period of performance
Number/Percentage of Patients: N/A

U.1.2. **If not currently publicly reported OR used in at least one other accountability application**

(e.g., payment program, certification, licensing) what are the reasons? N/A U.1.3. **If not currently publicly reported OR used in at least one accountability application, provide a credible plan for implementation within the expected timeframes -- any accountability application within 3 years and publicly reported within 6 years of initial endorsement.** N/A	
4b. Improvement Progress toward achieving the goal of high-quality, efficient healthcare for individuals or populations is demonstrated. If not in use for performance improvement at the time of initial endorsement, then a credible rationale describes how the performance results could be used to further the goal of high-quality, efficient healthcare for individuals or populations. U.2.1. **Provide data that demonstrate improvement in performance and/or health.** N/A U.2.2. **If no improvement was demonstrated, what are the reasons? If not in use for performance improvement at the time of initial endorsement, provide a credible rationale that describes how the performance results could be used to further the goal of high-quality, efficient healthcare for individuals or populations.** N/A	**To what extent has progress toward high-quality, efficient healthcare been demonstrated or a credible rationale has been provided?** ☐ **High** ☐ **Moderate** ☐ **Low** ☐ **Insufficient**
4c. Unintended Consequences The benefits of the performance measure in facilitating progress toward achieving high-quality, efficient healthcare for individuals or populations outweigh evidence of unintended negative consequences to individuals or populations (if such evidence exists). U.3. **Were any unintended negative consequences to individuals or populations identified during testing; OR has evidence of unintended negative consequences to individuals or populations been reported since implementation? If so, identify the negative unintended consequences and describe how benefits outweigh them or actions taken to mitigate them.** No unintended consequences to individuals or populations have been identified during testing, and no evidence of unintended negative consequences to individuals or populations have been reported since implementation.	**To what extent do the benefits of the measure outweigh any evidence of unintended negative consequences?** ☐ **High** ☐ **Moderate** ☐ **Low** ☐ **Insufficient**
4d. Measure Deconstruction Data and result detail are maintained such that the resource use measure, including the clinical and construction logic for a defined unit of measurement can be deconstructed to facilitate transparency and understanding.	**Based on your review of the specifications, to what extent can the measure be deconstructed to facilitate transparency and understanding for those being measured (e.g., clinicians, hospitals) and those using the measure results (e.g., consumers, purchasers)?** ☐ **High**

	☐ **Moderate** ☐ **Low** ☐ **Insufficient**

4. Overall Usability and Use

4a. Accountability and Transparency	**H**	**M**	**L**	**I**
4b. Improvement	**H**	**M**	**L**	**I**
4c. Unintended Consequences	**H**	**M**	**L**	**I**
4d. Measure Deconstruction	**H**	**M**	**L**	**I**

Based on your rating of the subcriteria, make a summary determination of the extent to which the criterion of **Usability and Use** has been met. Please provide a rationale based on specific subcriteria.

Rationale:

☐ **High**
☐ **Moderate**
☐ **Low**
☐ **Insufficient**

5. Comparison to Related or Competing Measures

If a measure meets the above criteria and there are endorsed or new related measures (either the same measure focus or the same target population) or competing measures (both the same measure focus and the same target population), the measures are compared to address harmonization and/or selection of the best measure.

5a. Harmonization

The measure specifications are harmonized with related measures;
OR
The differences in specifications are justified

H.1. If there are related measures (conceptually, either same measure focus or target population) or competing measures (conceptually both the same measure focus and same target population), select the NQF # and title of all related and/or competing measures.
N/A

H.1.1. If this measure conceptually addresses EITHER the same measure focus OR the same target population as NQF-endorsed measure(s): Are the measure specifications completely harmonized?
N/A

H.1.2. If the measure specifications are not completely harmonized, identify the differences, rationale, and impact on interpretability and data collection burden.
N/A

5b. Competing Measures

The measure is superior to competing measures (e.g., is a more valid or efficient way to measure);
OR
Multiple measures are justified.

H.1. If there are related measures (conceptually, either same measure focus or target population) or competing measures (conceptually both the same measure focus and same target population), select the NQF # and title of all related and/or competing measures.

N/A

H.1.3. If this measure conceptually addresses both the same measure focus and the same target population as NQF-endorsed measure(s): Describe why this measure is superior to competing measures (e.g., a more valid or efficient way to measure quality); OR provide a rationale for the additive value of endorsing an additional measure. (Provide analyses when possible.)

The MSPB Measure evaluates hospitals' efficiency relative to the efficiency of the median hospital. The target population is Medicare beneficiaries enrolled in Medicare Parts A and B who were discharged from short-term acute hospitals. There are currently no NQF-endorsed measures that address both this same measure focus AND this same target population.

Preliminary Recommendation for Endorsement

In this section we ask for your preliminary recommendation for this measure on its overall suitability for endorsement. Based on your individual rating of each of the four major criteria, provide your initial recommendation for endorsement for this measure.

Based on your individual rating of all the criteria, does the measure meet the criteria to be suitable for endorsement?

1. Importance to Measure and Report	H	M	L	I
2a. Overall Reliability	H	M	L	I
2b. Overall Validity	H	M	L	I
2c. Disparities in Care	H	M	L	I
3. Feasibility	H	M	L	I
4. Usability and Use	H	M	L	I

Rationale:

☐ **Yes**
☐ **No**

Appendix A

Reporting Guidelines (Optional)

S.13.1. **Describe discriminating results approach** *Detail methods for discriminating differences (reporting with descriptive statistics--e.g., distribution, confidence intervals).*

The distribution of hospitals' MSPB Measure scores for the period of May 15, 2010 through February 14, 2011 is as follows:
Maximum: 2.07
90th Percentile: 1.08
75th Percentile: 1.03
50th Percentile: 0.99
25th Percentile: 0.93
10th Percentile: 0.87
Minimum: 0.32

This distribution of hospitals' MSPB Measure values is provided to hospitals as part of their hospital specific reports (HSRs). Recall from S.7.2. that the denominator of the MSPB Measure is weighted by the number of episodes; as a result, the median hospital MSPB Measure score is not necessarily always equal to one.

For public reporting purposes, hospitals' MSPB Measure values are currently displayed on Hospital Compare. Currently, however, CMS is working to display state and national MSPB Measure averages as well. [Note that only hospitals with at least 25 eligible admissions have their MSPB score published on Hospital Compare].

Because CMS uses the full population of Medicare Parts A and B claims data to calculate the MSPB Measure and due to the large sample sizes, confidence intervals are of limited value. The calculated MSPB Measure represents the true measure for the time period of interest; in this case, the interpretation of the confidence interval is not entirely clear. Further, most hospitals have a large number of episodes and thus any reported confidence intervals calculated using standard statistical methods would be fairly narrow. About 96% of hospitals have 50 or more episodes and 93% of hospitals have 100 or more MSPB episodes.

S.13.2. **Detail attribution approach** *Detail the attribution rules used for attributing resources/costs to providers (e.g., a proportion of total measure cost or frequency of visits during the measure's measurement period) and provide rationale for this methodology.*

The MSPB episode is attributed to the hospital on the trigger inpatient claim for the index hospital admission that begins an MSPB episode. Specifically, for any period of performance selected, the first set of hospitalizations that can be included in the MSPB Measure are those that begin on the fourth day of the period of performance. This permits sufficient data for the 3-day pre-hospitalization period. Hospitalizations eligible to start an MSPB episode also must end in a discharge 30 days prior to the end of the period of performance to permit the collection of claim information during the post-discharge period. For instance, for the current MSPB figures available on Hospital Compare, the period of performance is May 1, 2011 to December 31, 2011. In this case, hospitalizations that start on May 4 and have a discharge date before December 1 are eligible to be included as index admissions. As discussed in S.9.1., however, due to the uncertainty surrounding attributing episodes to hospitals in cases where the patient was transferred between acute hospitals during the index admission, acute-to-acute transfers during the index admission are not considered index admissions for the purposes of the MSPB Measure. In other words, these cases will not generate new MSPB episodes; neither the hospital which transfers a patient to another short-term acute hospital, nor the receiving short-term acute hospital will have an index admission attributed to them.

S.13.3. **Identify and define peer group** *Identify the peer group and detail how peer group is identified and provide rationale for this methodology.*

All short-term acute hospitals.

In the current MSPB approach, only short-term acute episodes paid via Medicare inpatient prospective payment system (IPPS) are included in the measure. Only claims for beneficiaries admitted to short-term acute hospitals during the period of performance are included in the calculation of the MSPB Measure. Short-term acute hospitals are hospitals in the 50 States and D.C. other than: psychiatric hospitals, rehabilitation hospitals and long-term care hospitals. The measure also excludes inpatient facilities whose patients are predominantly under 18 years old, hospitals whose average inpatient length of stay exceeds 25 days, and hospitals involved extensively in treatment for or research on cancer. [1] The claims for inpatient admissions to short-term acute hospitals are grouped into "stays" by beneficiary, admission date, and provider.

Although this measure was developed for public reporting and incentive payment programs for hospitals that Medicare pays under the IPPS system, one can readily expand this measure to include hospitals outside of the IPPS system, such as hospitals in Maryland

and other non-IPPS hospitals. To incorporate these hospitals into the IPPS requires price-standardizing their reimbursements in a way that measures what they would have been paid if Medicare had reimbursed them under an IPPS framework. Because Maryland hospitals, for example, report MS-DRGs, one can assign the IPPS payment rates to each MS-DRG to standardize the inpatient admission to hospitals in Maryland hospitals. These hospitals, however, do report outlier payments on their claims. One can utilize cost and charge data and cost-to-charge ratios from hospital claims and cost reports to estimate what outlier payment these non-IPPS hospitals would have received if they were to be paid under IPPS. The methodology to implement this updated price standardization has already been created and can be readily implemented. In fact, implementing this methodology has little effect on hospitals' MSPB Measure values for the May 1, 2011 – December 31, 2011 period of performance; approximately 98% of current hospitals' MSPB Measure values change by ±0.01 when including Maryland hospitals. [2]

• [1] The MSPB uses the CMS definition of a cancer hospital: http://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/AcuteInpatientPPS/PPS_Exc_Cancer_Hospasp.html

• [2] These results reflect the effects of including Maryland hospitals and Railroad Retirement Board (RRB) beneficiaries in the MSPB risk adjustment.

S.13.4. **Sample size** ***Detail the sample size requirements for reporting measure results.***

For the May 15, 2010 to February 14, 2011 period of performance, hospitals' MSPB Measure scores were publicly reported on Hospital Compare for hospitals with 10 or more eligible episodes. Out of 3,396 IPPS hospitals eligible for a MSPB Measure score, only 28 were not reported on Hospital Compare because they did not meet this minimum threshold. For the May 1, 2011 to December 31, 2011 period of performance, however, hospitals' MSPB Measure scores will be publicly reported on Hospital Compare for hospitals with 25 or more eligible episodes. Only 0.82 percent of hospitals did not have at least 25 admissions during this period. 2a2.3 presents analyses supporting this minimum number of cases required for the MSPB Measure.

S.13.5. **Define benchmarking and comparative estimates** *Detail steps to produce benchmarking and comparative estimates and provide rationale for this methodology.*

The MSPB Measure itself is not calculated using benchmarks but is a comparison between a given hospital's MSPB Amount and that of the median hospital nationally. The measure is expressed as a ratio to that national amount, wherein a measure rate of less than one indicates lower Medicare spending than the national median, a ratio of one indicates spending that is equivalent to the national median, and a rate of greater than one indicates spending that is greater than the national median.

The MSPB Measure can be scored against benchmarks for the purpose of inclusion in incentive payment or other performance measurement programs. In this way, value in healthcare can be recognized and incentivized. The Hospital Value-Based Purchasing (VBP) Program provides financial incentives to short-term acute hospitals based on their performance on selected quality measures. By measuring the cost of care through the MSPB Measure, CMS aims to recognize hospitals that can provide high quality care at a lower cost to Medicare. Combined with the other quality measures that comprise the Total Performance Score (TPS) under the Hospital VBP Program, the MSPB Measure allows CMS to assess the value of care and incentivize both achievement and improvement in efficiency.

Under the Hospital VBP Program, hospital performance on the MSPB measure will be determined using the higher of its achievement or improvement score, as described in the FY 2012 IPPS Final Rule at 76 FR 51654-56. The MSPB measure score will then be included in the hospital's Total Performance Score (TPS) within the new "Efficiency" domain.

For information on how the MSPB Measure score will be incorporated into the Hospital VBP Program, please refer to the FY 2012 IPPS/LTCH PPS final rule: http://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/AcuteInpatientPPS/FY-2012-IPPS-Final-Rule-Home-Page.html

Appendix B

Citations

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Additional Information

Workgroup/Expert Panel involved in measure development
Ad.1 **Provide a list of sponsoring organizations and workgroup/panel members' names and organizations. Describe the members' role in measure development.**

Measure Developer/Steward Updates and Ongoing Maintenance
Ad.3 **Year the measure was first released:** 2012
Ad.4 **Month and Year of most recent revision:** 12/2012
Ad.5 **What is your frequency for review/update of this measure?** Yearly
Ad.6 **When is the next scheduled review/update for this measure?** 07/2013

Ad.7 **Copyright statement:**
Ad.8 **Disclaimers:**
Ad.9 **Additional Information/Comments:**

Measure Testing to Demonstrate Scientific Acceptability of Measure Properties

Measure Title: Medicare Spending Per Beneficiary (MSPB)

Date of Submission: 1/31/2013

Type of Measure: Cost and Resource Use 2012

☐ Composite	☐Outcome
☒Cost/resource	☐Process
☐Efficiency	☐Structure

This Word document template must be used to submit information for measure testing.

- **For all measures, sections 1, 2a2, 2b2, 2b3, 2b5 must be completed**
- **For outcome or resource use measures**, section **2b4** also must be completed
- If specified for **multiple data sources** (e.g., claims and medical records), section **2b6** also must be completed
- Respond to all questions with answers immediately following the question (*unless meet the skip criteria or those that are indicated as optional*).
- Maximum of 10 pages (*incuding questions/instructions; do not change margins or font size; contact project staff if need more pages*)
- All information on testing to demonstrate meeting the criteria for scientific acceptability of measure properties (2a,2b) must be in this form. An appendix for *supplemental* materials may be submitted, but there is no guarantee it will be reviewed.

1. DATA/SAMPLE USED FOR ALL TESTING OF THIS MEASURE

Often the same data are used for all aspects of measure testing. In an effort to eliminate duplication, the first five questions apply to all measure testing. If there are differences by aspect of testing,(e.g., reliability vs. validity) be sure to indicate the specific differences in question 7.

1.1. What type of data was used for testing? (*Check all the sources of data identified in the measure specifications and data used for testing the measure. Testing must be provided for all the types of data specified and intended for measure implementation*)

Measure Specified to Use Data From:	Measure Tested with Data From:
☐abstracted from paper record	☐abstracted from paper record
☐administrative claims	☒administrative claims
☐clinical database/registry	☐clinical database/registry
☐abstracted from electronic health record	☐abstracted from electronic health record
☐eMeasure implemented in electronic health record	☐eMeasure implemented in electronic health record
☐other: Click here to describe	☐other: Click here to describe

1.2. If used an existing dataset, identify the specific dataset (*the dataset used for testing must be consistent with the measure specifications for target population and healthcare entities being measured; e.g., Medicare Part A claims, Medicaid claims, other commercial insurance, nursing home MDS, home health OASIS, clinical registry*).

Medicare Parts A and B claims data from the Common Working File (CWF).

1.3. What are the dates of the data used in testing? May 15, 2010 – February 14, 2011

1.4. What levels of analysis were tested? (*testing must be provided for all the levels specified and intended for measure implementation, e.g., individual clinician, hospital, health plan*)
☐ **individual clinician** ☐ **group/practice** ☒ **hospital/facility/agency** ☐ **health plan**
☐ **other**: Click here to describe

1.5. How many and which measured entities were included in the testing and analysis (by level of analysis and data source)? (*identify the number and descriptive characteristics of measured entities included in the analysis (e.g., size, location, type); if a sample was used, describe how entities were selected for inclusion in the sample*)
3,396 IPPS hospitals received an MSPB Measure value (5/15/2010-2/14/2011 period of performance)

1.6. How many and which patients were included in the testing and analysis (by level of analysis and data source)? (*identify the number and descriptive characteristics of patients included in the analysis (e.g., age, sex, race, diagnosis); if a sample was used, describe how patients were selected for inclusion in the sample*)
3,566,422 beneficiaries. These beneficiaries are enrolled Medicare fee-for-service and were discharged from short-term acute hospitals between (5/15/2010 and 2/14/2011)

1.7. If there are differences in the data or sample used for different aspects of testing (e.g., reliability, validity, exclusions, risk adjustment), identify how the data or sample are different for each aspect of testing reported below.
The data samples used for the different aspects of testing below are identical.

2a2. RELIABILITY TESTING
***Note**: If accuracy/correctness (validity) of data elements was empirically tested, separate reliability testing of data elements is not required – report validity of data elements in 2b2*

2a2.1. What level of reliability testing was conducted? (*may be one or both levels*)
☐ **Critical data elements used in the measure** (*e.g., inter-abstractor reliability*)
☒ **Performance measure score** (e.g., *signal-to-noise*)

2a2.2. For each level checked above, describe the method of reliability testing and what it tests (*describe the steps—do not just name a method; what type of error does it test; what statistical analysis was used*)

Data Element Reliability: Due to CMS's extensive auditing program, we believe that patient demographics, diagnostic information, and payment information are very reliable. As described in F.4., CMS uses various auditing programs used to assess overall claims code accuracy, to ensure appropriate billing, and for overpayment recoupment. CMS also routinely conducts data analysis to identify potential problem areas and detect fraud, and audits important data fields used in our measures.

Measure Reliability: The reliability of a measurement is the degree to which repeated measurements of the same entity agree with each other. For measures of hospital performance, the measured entity is naturally the hospital, and reliability is the extent to which repeated measurements of the same hospital give similar results. To estimate measure reliability, we utilize four approaches: (1) Test/Retest, (2) Seasonality, (3) Reliability Score, and (4) Bootstrapping.

Our first approach to assessing reliability is to consider the extent to which assessments of a hospital using different but randomly selected subsets of patients produces similar measures of hospital performance. That is, we take a "test-retest" approach in which hospital performance is measured once using a random subset of patients, then measured again using a second subset (over the same time period) that excludes the MSPB episodes chosen for the first sample. We examine the correlation, and quintile rank stability between a hospital's MSPB scores calculated from both samples.

Second, because the MSPB Measure values reported on *Hospital Compare* in April 2012 use Medicare claims data from May through February, Acumen conducted a seasonality analysis to examine how MS-DRGs change within a year. Providers that efficiently treat specific DRGs may receive higher MSPB Measure values during a season where the DRG occurs frequently and lower MSPB Measure values during a season where the DRG occurs less frequently. For this specific analysis, we split inpatient claims data with through date in 2010 into two categories: claims with through dates from January through April and claims with through dates from May through December.

Our third approach calculates reliability scores as: $R_j = V_b/(V_b + (V_{w_j}/n_j)$ where R_j is the reliability for Hospital *j*, V_b is the between hospital variance, V_{w_j} is the within hospital variance for hospital *j*, and n_j is the number of MSPB episodes for hospital *j*.

Fourth, Acumen measured how reliability varies based on the number of MSPB episodes a hospital is assigned. This fourth analysis is divided into two parts. The first evaluates how the number of MSPB episodes a hospital receives affects its 95 percent confidence interval. This analysis also informs how CMS should set the minimum number of episode required for public reporting purposes. When increasing the threshold for the minimum number of cases (or hereafter referred to as 'episode'), one decreases the likelihood an outlier episode[1] materially affects a hospital's MSPB score, but also decreases the number of hospitals able to publicly report their MSPB Measure.

Whereas determining the number of hospitals that would be dropped when the minimum episode threshold increases is straight-forward, our second approach for measuring the effect of the minimum episode threshold on the MSPB confidence interval requires additional explanation. Typically, confidence intervals are constructed for commonly used quantities, such as the sample mean in which the distribution of the sample quantity is known, and can be used in the interval calculation. However, the MSPB score is a ratio of weighted means and does not have an easily identifiable statistic that corresponds to dispersion. Further, the MSPB score is not normally distributed, and typical measures of the dispersion of a distribution—such as the standard deviation—will not fully characterize the variation in the MSPB distribution.

In this analysis, Acumen instead uses a non-parametric bootstrap methodology to measure how the confidence interval of the MSPB score changes when the minimum episode threshold increases. This analysis measures the MSPB score for an 'average' hospital, where the 'average' hospital case is considered to be one whose MSPB episode distribution mimics that of the entire population of MSPB episodes. The bootstrap simulates the process of randomly drawing MSPB episodes from the population, and thus approximates the actual shape of the MSPB score distribution from which confidence intervals are determined. By repeatedly calculating an MSPB score for this simulated hospital under differing assumptions on the number of episodes observed, one can create a confidence interval for the MSPB score of this 'average' hospital.

To implement the bootstrap procedure, this analysis examines cases where the 'average' hospital has *X* episodes, where *X* = 1, 2, 3, 5, 10, 25, and 100. The five step methodology used to implement this analysis is as follows: (1) Draw 10,000 random samples (with replacement) each with *X* number of episodes from the original dataset containing MSPB episodes; (2) Calculate MSPB Amount for each sample; (3) Calculate MSPB Measure—normalization of the MSPB Amount—as the MSPB Amount for the hospital divided by the median MSPB Amount across all hospitals; (4) Calculate the 95 percent

confidence interval using the 2.5th and 97.5th percentiles of the MSPB Measure distribution[2]; and (5) Divide the width of this confidence interval by the width of the confidence interval for *X* = 100 episodes.

2a2.3. For each level checked above, what were the statistical results from reliability testing? (e.*g., percent agreement and kappa for the critical data elements; distribution of reliability statistics from a signal-to-noise analysis and association with case volume*)

1. Test/Re-Test: Over 70 percent of hospitals in the lowest-spending quintile in one sample are in the lowest-spending quintile in the next; similarly, over 70 percent of hospitals in the highest-spending quintile in one sample are in the highest-spending quintile in the next. The Spearman rank correlation for a hospital across samples is 0.835.

2. Seasonality Analysis: Between the January 2010 – April 2010 period and the May 2010 – December 2010 period, the average absolute change in the relative frequency of an MS-DRG index admission was 8.9%. Certain lung-related admissions (e.g., pneumonia, COPD, asthma) appear more frequently in the winter.

3. Reliability Score: The MSPB Measure's overall reliability is 0.951. Over 98 percent of hospitals have a reliability score greater than 0.4; 62 percent of hospitals have a reliability score greater than 0.9. Previous work proposed that 0.4 is the lower limit of "moderate" reliability[3]; the MSPB measure exceeds this threshold.

4. Minimum Number of Cases Required for the MSPB Measure: As the minimum episode threshold increases, there is a trade-off between the size of the confidence interval for the 'average' hospital and the number of hospitals receiving an MSPB score. Table 1 in the appendix shows that as the minimum episode threshold, *X,* increases, the confidence interval becomes narrower and more reliable. Specifically, the 95% confidence interval decreases by almost a third as cutoff number is moved from *X = 5* to *X* = 50. However, as the minimum episode threshold increases from *X = 5* to *X = 50*, the number of hospitals that could publicly report this measure included decreases; in fact, at the cutoff *X* = 50 episodes, the share of hospitals included decreases to 95.9%.

2a2.4 What is your interpretation of the results in terms of demonstrating reliability? (i.*e., what do the results mean and what are the norms for the test conducted?*)

1. Quintile Rank Stability Across Groups: Sample selection does not have a material effect on a hospital's MSPB score for different data samples drawn from the same period.

2. Seasonality Analysis: The seasonality analysis indicates that the incidence of different types of hospitalizations (i.e., MS-DRGs) varies across the year, but this variability for the most part is concentrated in DRGs lung-related diseases.

3. Reliability Score: Overall reliability of the MSPB score is extremely high due to the large number of MSPB episodes attributed to most hospitals. Reporting the MSPB Measure for hospitals that have at least 25 attributed episodes provides a balance between reliability and measure inclusiveness.

4. Minimum Number of Cases Required for the MSPB Measure: Based on the empirical results presented in 2a2.3., reporting the MSPB Measure as part of the Hospital VBP program for hospitals that have at least 25 attributed episodes provides a balance between the size of the confidence interval and the number of hospitals receiving and MSPB Measure score.

Return to Measure Evaluation

2b2. VALIDITY TESTING

2b2.1. What level of validity testing was conducted? (*may be one or both levels*)

☐ **Critical data elements**

☒ **Performance measure score**

- ☒ **Empirical validity testing**
- ☒ **Systematic assessment of face validity of performance measure score as an indicator** of quality

or resource use (*i.e., is an accurate reflection of performance quality or resource use and can distinguish performance*)

2b2.2. For each level checked above, describe the method of validity testing and what it tests (*describe the steps—do not just name a method; what was tested, e.g., accuracy of data elements compared to authoritative source, relationship to another measure as expected; what statistical analysis was used)*

The first validity test examines the correlation between hospitals' MSPB scores and the percent of beneficiaries with multiple episodes. This analysis examines whether high-cost hospitals may have below average (i.e., efficient) MSPB Measure values if the MSPB episode definition separates a single episode of care into two or more MSPB episodes. Division of a single episode of care into multiple MSPB episodes occurs when a hospital admission takes place more than 30 days after the initial discharge.

The second test of the validity of the MSPB Measure compares the MSPB Measure against other related outcome measures. Specifically, we will examine whether hospitals with low MSPB scores (i.e., efficient hospitals) are also less likely to have various types of hospital readmissions.

2b2.3. What were the statistical results from validity testing? (*e.g., correlation; t-test, ANOVA*)

1. Beneficiaries with Multiple Episodes: The analysis indicated a positive correlation between MSPB Measure values and the percent of beneficiaries with multiple episodes. The hospital-level correlation between the MSPB Measure and the percent of beneficiaries with multiple episodes was 0.13; when accounting for variation in the MS-DRG of the index admission when measuring readmission rates, the correlation between readmissions and the MSPB Measure increases slightly to 0.16.

2. Correlation with Other Outcome Measures: The MSPB Measure exhibits a positive correlation with a number of hospital readmission measures. The correlation between the MSPB Measure and Heart Attack, Heart Failure, and Pneumonia Readmission Rates are of 0.08, 0.07, and 0.06, respectively.

2b2.4. What is your interpretation of the results in terms of demonstrating validity? (i*.e., what do the results mean and what are the norms for the test conducted?*)

1. Beneficiaries with Multiple Episodes: Hospitals are not likely to be postponing necessary re-admissions—and thus creating a new episode—to improve their MSPB Measure values. High-cost hospitals are *not* more likely to treat beneficiaries with multiple hospitalization episodes.

2. Correlation with Other Outcome Measures: The positive correlation between the MSPB Measure and Heart Attack, Heart Failure, and Pneumonia Readmission Rates indicate that hospitals that are more expensive generally have higher readmission rates. The correlation, however, is weak for all three readmission rates. A weak correlation can be explained by the fact that the MSPB Measure assesses the cost to Medicare of *all* services performed by hospitals and other healthcare providers during an MSPB episode. As a result, a hospital's MSPB Measure value is driven by both acute *and* post-acute spending.

Return to Measure Evaluation

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2b3. EXCLUSIONS ANALYSIS

NA ☐ no exclusions — *skip to #2b5*

2b3.1. Describe the method of testing exclusions and what it tests (*describe the steps—do not just name a method; what was tested, e.g., whether exclusions affect overall performance scores; what statistical analysis was used*)

Acumen evaluated the validity of the inclusion/exclusion criteria by producing impact analyses which show the effect of recalculating the MSPB Measure while independently reversing each of the following inclusion/exclusion criteria: (1) beneficiaries in Medicare Advantage; (2) beneficiaries in

Medicare Part A only; (3) acute-to-acute transfers[4]; (4) death episodes[5]; and (5) outlier episodes[6]. With respect to (3), Acumen's analysis evaluates assigning transfers to the transferring hospital and to the receiving hospital. The first three restrictions occur because of incomplete data or problems attributing episodes to individual hospitals. For (4), we re-calculate the MSPB Measure using beneficiaries who die during the episode. Specifically, Acumen examined the percent of beneficiaries who die during the MSPB episode and after the MSPB episode and whether or not to calculate separate MSPB Measures for beneficiaries who died during the episode versus beneficiaries who did not die. For (5), we examine top-coding/bottom-coding distribution outliers in place of completely excluding them.

Acumen also conducted a number of analyses on *potential* exclusion criteria. These unimplemented exclusions include: (6) beneficiaries discharged against medical advice (AMA) and (7) dual-eligibles. Acumen's analysis evaluates not counting admissions in which the beneficiary was discharged AMA as an index admission. Although excluding patients discharged against medical advice would avoid attributing the costs of non-compliant beneficiaries to a hospital's MSPB Measure value, hospitals would be incentivized to encourage high-cost beneficiaries to leave against medical advice to avoid having their episode included in the hospital's MSPB Measure. We also evaluate (i) including a dual-eligible indicator in the MSPB risk-adjustment and (ii) examining MSPB scores separately for duals/non-duals.

2b3.2. What were the statistical results from testing exclusions? (*include overall number and percentage of individuals excluded, frequency distribution of exclusions across measured entities, and impact on performance measure scores*)

Medicare Advantage or Part A Only: 25% of Medicare beneficiaries are enrolled in Medicare Advantage; about 10 percent of Medicare FFS beneficiaries are enrolled in Part A only.

Transfers: Episodes that include an acute-to-acute transfer account for 5% of total episodes. Episodes containing an acute-to-acute transfer have an average risk-adjusted spending of $25,151 per episode, while the average episode not containing an acute-to-acute transfer has an average risk-adjusted spending of $19,489 per episode. Because transfer episodes cost 29% more than non-transfer episodes on average, excluding transfer episodes eliminates a significant portion of MSPB episodes and Medicare payments. Small rural hospitals are the most likely facilities to transfer to large, urban hospitals (see Tables 2 and 3 in the appendix). Assigning transfer episodes to the transferring hospital has a larger effect on the MSPB Measure than assigning transfer episodes to the receiving hospital. When transfer episodes are assigned to the receiving hospital, 90% of hospitals experience a change in their MSPB Measure values of less than 3 percent, but only 80% of hospitals experience a change in their MSPB Measure values of less than 3 percent when transfer episodes are assigned to the transferring hospital (see Tables 4 and 5 in the appendix)

Death Episodes: In approximately 8.0% of MSPB episodes, the beneficiary dies before the end of the 30-day post-acute period. Death episodes are much more expensive than non-death episodes. Whereas death episodes cost $26,883 on average, non-death episodes cost $19,141, a 40% difference in average episode cost. Since death episodes are typically expensive, including death episodes in the MSPB Measure would increase the skewness of the episode cost distribution. Including death episodes (after outlier episodes have been excluded) increases the ratio of the 99th percentile cost to the median cost by 3 percent. If death is included as a variable in the 'risk-adjustment' model, death episodes are only 16 percent more expensive than non-death episodes.

Outlier Episodes: As an alternative to excluding outlier episodes from the MSPB Measure, outlier episodes can instead be top-coded and/or bottom-coded. Rather than excluding episodes that are outliers, top-coding/bottom-coding assigns outliers the value of an episode at a specified threshold. Tables 6 through 10 in the appendix present the impacts of top-coding/bottom-coding episodes at the 99.9th/0.1th, 99.5th/0.5th, 99.0th/1.0th, 98.0th/2.0th, and 95.0th/5.0th percentiles, respectively, compared to

a baseline that excludes outlier episodes at the 99th and 1st percentiles of the risk-adjusted episode cost distribution. When top-coded/bottom-coded at the 99.9th/0.1th, 99.5th/0.5th, and 99.0th/1.0th percentiles, at least 85 percent of MSPB Measure values change less than 3 percent. However, when top-coded/bottom-coded at the 98.0th/2.0th, and 95.0th/5.0th percentiles, at least 95% of MSPB Measure values change less than 3 percent (see Table 11).

Discharged AMA: Not only do episodes with an AMA discharge code make up a small percent of MSPB episodes (0.7%), AMA episodes have lower risk-adjusted spending than non-AMA episodes. ($13,851 vs. $19,025 for non-AMA). About 99% of hospitals experienced a change in their MSPB Measure values less than one percentage point when excluding AMA episodes (see Table 12).

Dual-Eligibles: 30% of episodes are flagged as dual-eligible beneficiaries; 18% of hospitals assigned an MSPB Measure have a beneficiary population consisting of at least 50% dual-eligible beneficiaries. Dual-eligible beneficiaries have $859 extra spending per episode than non-dual-eligible beneficiaries. If dual eligible are excluded, 43% of hospitals experience a change in their MSPB value of more than 1 percentage point (Table 13); including dual eligible in the risk adjustment model increases the R^2 of the model by less than 0.001 and causes 12% of hospitals to change their MSPB Measure by more than 1 percentage point (Table 14).

2b3.3. What is your interpretation of the results in terms of demonstrating that exclusions are needed to prevent unfair distortion of performance results? (*i.e., the value outweighs the burden of increased data collection and analysis. Note: **If patient preference is an exclusion**, the measure must be specified so that the effect on the performance score is transparent, e.g., scores with and without exclusion*)

Medicare Advantage or Part A Only: Due to missing claims problems, only beneficiaries enrolled in Medicare Parts A and B Fee-for-service are included in the sample.

Transfers: Adding transfers to the MSPB measure would significantly change hospital MSPB scores and make episode attribution more complicated. Assigning transfer episodes to the transferring hospital would avoid giving providers an incentive to transfer high-cost patients to game the system; however, once the transferring hospital transfers the patient, they may have little opportunity to coordinate or affect the patient's post-discharge care. Small rural hospitals, for example, often transfer patients in cases where they do not have the capacity to treat the patient within their current facilities. Assigning transfer episodes to the receiving hospital, however, incentivizes the initial hospital to transfer complex patients to improve their MSPB score. Further, post-acute care coordination may be difficult if the receiving hospital is out of area.[7] Public comment in the FY 2012 IPPS notice of proposed rulemaking voiced concern over attribution in transfer cases. In response, CMS excluded these types of transfers from the finalized MSPB Measure (76 FR 51621).

Death Episodes: In the baseline specification, cases where the beneficiary dies during the episode are not eligible to be included in the MSPB Measure. Episodes during which a beneficiary dies are "truncated"; in other words, costs that might have occurred if the beneficiary had not died are not observed due to death. To avoid including episodes of care with incomplete costs, episodes during which a beneficiary dies are excluded from the MSPB Measure calculation. As shown in 2b3.3., these episodes are typically high cost. In fact, the Dartmouth Atlas also notes that patients with chronic illness in their last two years of life account for about 32% of total Medicare spending, much of it going toward physician and hospital fees associated with repeated hospitalizations.[8] This evidence indicates that including death as a risk adjuster reduces the disparity in death/non-death episode cost. However, if death is a risk adjuster, hospitals could improve their MSPB score by increasing mortality rates. Further, using death as a risk adjuster implies that the risk adjustment model is no longer prospective, since events that occur during an episode now influence the model's expected cost.

Outlier Episodes: Outliers are excluded from the MSPB Measure calculation to avoid cases where a handful of high-cost and low-cost outliers have a disproportionate effect on each hospital's MSPB

Measure score. The distribution of hospital risk-adjusted episode spending is significantly right-skewed: the 99th percentile is almost 4.5 times the value of the median, while the 1st percentile is only approximately 1/2 the value of the median. Excluding outliers based on risk-adjusted cost eliminates the episodes that deviate most from the spending levels one would expect based on patient demographics and severity of illness. Outliers are identified across all episodes rather than within a hospital; thus, some hospitals may have no outlier episodes excluded and others many have many.

Discharged AMA: Episodes with AMA index admissions should be eligible to be considered as index admissions, as the effect of excluding AMA episodes from the MSPB Measure calculation is minimal (as shown in Table 12). Additionally, episodes with an AMA discharge code make up a small percent of MSPB episodes, and AMA episodes on average have lower risk-adjusted spending than non-AMA episodes.

Dual-Eligibles: Medicare beneficiaries who are dually-eligible for Medicare and Medicaid are not excluded from the MSPB Measure to be consistent with NQF's position on not adjusting for potential demographic (sex or race) or socioeconomic factors.

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2b5. IDENTIFICATION OF STATISTICALLY SIGNIFICANT & MEANINGFUL DIFFERENCES IN PERFORMANCE

2b5.1. Describe the method for determining if statistically significant and clinically/practically meaningful differences in performance measure scores among the measured entities can be identified (*describe the steps—do not just name a method; what statistical analysis was used)*

MSPB summary statistics include the percentile distribution of the MSPB score both overall and by hospital type (e.g., urban/rural status, bed size, region, teaching status). Although poor MSPB scores could be due to low quality care, it could also be the case that unobservable factors (e.g., large populations of patients for whom English is a second language, low adherence to treatment regimens) outside of hospitals' control make these hospitals perform worse. To identify hospitals that treat a large number of socioeconomically disadvantaged patients, the following analysis also classifies hospitals by their Disproportionate Share Hospital (DSH) percentage.[9]

2b5.2. What were the statistical results from testing the ability to identify differences in performance measure scores across measured entities? (*at a minimum, the distribution of performance measure scores for the measured entities by decile/quartile, mean, std dev; preferably also number and percentage statistically different from mean or some benchmark, different form expected, etc.*)

Key findings include: (1) the hospital with the highest MSPB score costs Medicare more than six times as much as the lowest cost hospital; (2) hospitals at the 90th percentile MSPB Measure cost Medicare 25 percent more per episode than hospitals at the 10th percentile; (3) rural hospitals out-perform urban hospitals; (4) the average MSPB Measure value in New England and the West South Central regions are the highest for both urban and rural hospitals; (5) teaching hospitals have higher average spending levels, but they also have higher expected spending amounts (due to a sicker patient case mix); and (6) hospitals with a large number of DSH-eligible patients are not significantly less efficient than hospitals with few DSH beneficiaries. Tables 15 through 18 in the appendix present these results.

2b5.3. What is your interpretation of the results in terms of demonstrating the ability to identify statistically significant and clinically/practically meaningful differences in performance across measured entities? (i*.e., what do the results mean and what are the norms for the test conducted?*)

There exists significant variation in spending relative to the typical hospital. For example, hospitals at the 90th percentile use 25 percent more resources per episode than hospitals at the 10th percentile. These figures also vary across hospital characteristics.

2b4. RISK ADJUSTMENT/STRATIFICATION FOR OUTCOME OR RESOURCE USE MEASURES

2b4.1. What method of controlling for differences in case mix is used?

☒ **Statistical risk model with 833 risk factors**

☐ **Stratification by** Click here to enter number of categories **risk categories**

☐ **No risk adjustment or stratification**

☐ **Other,** Click here to enter description

2b4.2. If an outcome or resource use measure is not risk adjusted or stratified, provide rationale and analyses to demonstrate that controlling for differences in patient characteristics (case mix) is not needed to achieve fair comparisons across measured entities.

N/A

2b4.3. Describe the conceptual/clinical and statistical methods and criteria used to select factors used in the statistical risk model or for stratification by risk (*e.g., potential factors identified in literature and/or expert panel; regression analysis; statistical significance of p<0.10; correlation of x or higher*)

To account for case-mix variation and other factors, the MSPB risk-adjustment methodology broadly follows the CMS-HCC risk-adjustment methodology, which CMS uses to estimate Medicare Advantage (MA) premium adjustments.[10] Medicare also uses the HCC model to risk-adjust spending in: the Shared Savings Program Accountable Care Organizations (implemented in 2012) and the Medicare Physician Quality and Resource Use Reports (implemented in 2009). The accuracy of the ICD-9 codes used to create HCCs has also been evaluated in previous studies, and all studies found high positive predictive values for Medicare claims-based diagnosis of acute myocardial infarction (AMI), chronic kidney disease (CKD), heart failure, coronary artery disease, diabetes, hypertension, and stroke with a diagnosis based on structured hospital record review.[11,12,13] A 2003 study found that CMS "administrative data was found to have diagnoses and conditions that were highly specific but that vary greatly by condition in terms of sensitivity."

Severity of illness is measured using 70 HCC indicators derived from the beneficiary's claims during the period 90 days prior to the start of the episode, an indicator of whether the beneficiary recently required long-term care, as well as the MS-DRG of the index hospitalization. The MSPB risk-adjustment methodology also includes status indicator variables for whether the beneficiary qualifies for Medicare through Disability or End-Stage Renal Disease (ESRD) and whether a beneficiary resides in a long-term care facility. Because the relationship between comorbidities' episode cost may be non-linear, the model includes interactions between HCCs and/or enrollment status variables. The MSPB risk-adjustment method does not control for the beneficiary's sex and race, but does include 12 age categorical variables. For a complete list of MSPB risk-adjustment variables, see the "MSPB Measure Information Form" available on QualityNet at the link provided in S.1.

All explanatory variables are calculated during the 90 days prior to the start of an episode. Calculating all health status variables prior to the start of an episode avoids the endogeneity problem which could occur if the diagnosis codes a hospital uses are included in the risk-adjustment model. Using claims data during the episode would incentivize hospitals to inflate the number of co-morbidities (i.e., number of diagnosis codes) that a beneficiary has to make their health status appear worse.

The MSPB risk-adjustment methodology (along with the entire MSPB methodology) was also put through official notice and comment rulemaking. The majority of commenters supported the risk adjustment for age and severity of illness. Some suggested further adjustment for race, sex, or socioeconomic factors, but Acumen and CMS opted to maintain consistency with the NQF's position against adjusting for these factors.

2b4.4. What were the statistical results of the analyses used to select risk factors?

The MSPB Measure broadly replicates the CMS-HCC model. The literature has extensively tested the use of the HCC model as applied to Medicare claims data.[14] Although the variables in the HCC model were chosen to predict annual cost, CMS also uses this risk-adjustment model in a number of other settings (e.g., ACOs and physician QRUR programs). [15]

2b4.5. Describe the method of testing/analysis used to develop and validate the adequacy of the statistical model or stratification approach (*describe the steps—do not just name a method; what statistical analysis was used*)

Because the CMS-HCC model has already been extensively tested, we focus on adapting the CMS-HCC model to the MSPB Measure methodology. To empirical evaluate the MSPB risk-adjustment methodology, we analyzed two specifications of the modified CMS-HCC risk-adjustment methodology by using R^2 to measure model ability to explain variation: (1) evaluate the health status variables in the risk-adjustment by using one year of data prior to calculate comorbidities rather than 90 days; and (2) evaluate options for stratifying the risk-adjustment model (e.g., by MDC, MDC/Institutional Status). To demonstrate the validity of the MSPB risk-adjustment methodology, we (3) calculated the distribution of episode spending and R-squared by decile to examine the model's ability to predict both very low and high cost episodes. Specifically, we created a "risk score" for each episode calculated as the predicted values from each episode divided by the national average predicted value. After arranging episodes into deciles based on the risk score, we calculated the R-squared for each decile using the formula 1-(SSE/SST), where SSE = the sum of (episode observed spending – episode predicted spending) and SST = the sum of (episode observed spending – average overall observed spending).

2b4.6. Statistical Risk Model Discrimination Statistics:

The overall R-squared for the MSPB Measure risk adjustment model described in S.9.2. through S.9.4. is 0.4621. For your reference, the "Additional Information" Appendix beginning on page 24 of the "Scientific Acceptability" section also includes regression coefficients, standard error, and p-values of the covariates used in the risk-adjustment models. Recalling that the risk model relies on the existing CMS-HCC model, more information on discrimination testing for the CMS-HCC model can be found at Pope et al. 2011.[14]

2b4.7. Statistical Risk Model Calibration Statistics:

1. Assessing the use of one year of data prior to the index admission to calculate comorbidities in the risk adjustment methodology rather than 90 days: When changing the HCC "look-back" period from 90 days to 365 days: (i) 6% of episodes are dropped (see Table 19 in the appendix) and (ii) the model fit (i.e., R-squared) decreases from 0.4621 to 0.4601. The impact analysis also reveals that, despite the drop in episodes included and a decrease in model fit, most hospitals experience only a small change in their MSPB Measure values when switching the "look-back" period from 90 days to 365 days; in fact, Table 20 in the appendix shows that 78% of hospitals experience a gain or loss in the MSPB Measure values of less than 1 percentage point.

2. Evaluating options for stratifying the risk adjustment model (e.g., by MDC, MDC/Institutional Status): When stratifying the risk-adjustment model by MDC with a Long-Term Institutional (LTI) indicator (current specification), the R-squared is 0.4621. On the other hand, when stratifying the risk-

adjustment model by MDC, but with separate regressions for institutional and community beneficiaries, the R-squared is 0.4645. When stratifying the risk-adjustment model by MDC, but with separate regressions for MDC type (i.e., MED, SURG), the R-squared is 0.4636. The MDC option was preferred because: (i) the improvement in R-squared is very small when moving to the MDC/Institutional Status specification and (ii) increasing the number of stratifications increases the risk of over-fitting, especially for MDCs with relatively few admissions.

2b4.8. Statistical Risk Model Calibration – Risk decile plots or calibration curves:

3. Calculate the distribution of episode spending and R-squared by decile to show that the MSPB risk adjustment methodology does equally well predicting spending through all values of the model: The R-squared in the 3rd through 9th deciles are lower than overall R-squared in Table A below (includes outlier episodes) as well as Table B below (excludes outlier episodes). The R-squared in the 6th and 7th deciles are relatively low, ranging from approximately 1% to 3%. Additionally, the R-squared is always higher in Table B when outlier episodes are excluded.

Table A: Distribution of Spending and R-Squared by Decile* (Includes Outlier Episodes)

Decile	Episode Count	Min Risk Score	Max Risk Score	Avg. Obs Spending	Avg. Pred Spending**	Difference	R-Squared
1	446,268	-0.38	0.46	$7,442	$7,365	$77	0.7774
2	446,234	0.46	0.56	$9,607	$9,763	-$156	0.5861
3	446,197	0.56	0.65	$11,472	$11,506	-$34	0.3876
4	446,234	0.65	0.74	$13,379	$13,276	$103	0.2365
5	446,260	0.74	0.85	$15,164	$15,114	$50	0.1194
6	446,205	0.85	0.98	$17,452	$17,350	$101	0.0229
7	446,512	0.98	1.14	$20,047	$20,226	-$179	0.0100
8	445,951	1.14	1.31	$23,108	$23,237	-$128	0.0858
9	446,130	1.31	1.66	$27,830	$27,631	$199	0.1680
10	446,339	1.66	20.09	$45,115	$45,148	-$33	0.6903
TOTAL	4,462,330	-0.38	20.09	$19,062	$19,062	$0	0.4621

Note: *Decile are based on risk score calculated as ratio of predicted spending over national average predicted spending.
**Predicted spending is the predicted value from the regression.

Table B: Distribution of Spending and R-Squared by Decile* (Excludes Outlier Episodes)

Decile	Episode Count	Min Risk Score	Max Risk Score	Avg. Obs Spending	Avg. Pred Spending**	Difference	R-Squared
1	437,305	0.04	0.46	$7,087	$7,348	-$262	0.8644
2	437,313	0.46	0.56	$9,140	$9,730	-$590	0.6989
3	437,309	0.56	0.65	$10,905	$11,458	-$553	0.5135
4	437,248	0.65	0.74	$12,776	$13,213	-$436	0.3249
5	437,370	0.74	0.84	$14,596	$15,035	-$439	0.1744
6	437,310	0.84	0.98	$16,887	$17,247	-$360	0.0329
7	437,298	0.98	1.14	$19,566	$20,124	-$558	0.0140
8	437,320	1.14	1.31	$22,534	$23,144	-$609	0.1288
9	436,500	1.31	1.66	$27,237	$27,502	-$265	0.3627
10	438,118	1.66	20.17	$44,304	$45,039	-$735	0.7752
TOTAL	4,373,091	0.04	20.17	$18,506	$18,987	-$481	0.5978

Note: *Deciles are based on risk score calculated as ratio of predicted spending over national average predicted spending.
**Predicted spending is the Winsorized and renormalized predicted value.

2b4.9. Results of Risk Stratification Analysis: N/A

2b4.10. What is your interpretation of the results in terms of demonstrating adequacy of controlling for differences in patient characteristics (case mix)? (i*.e., what do the results mean and what are the norms for the test conducted*)

1. Assessing the use of one year of data prior to the index admission to calculate comorbidities in the risk adjustment methodology rather than 90 days: When the FFS continuous enrollment requirement starts from 365 days prior to the start of the episode instead of 90 days prior to the start of the episode, there is no trade-off between the number of episodes included in the MSPB Measure and the model fit. In fact, both the number of episodes included and the model fit decrease (i.e., get worse).

2. Evaluating options for stratifying the risk adjustment model (e.g., by MDC, MDC/Institutional Status): The R-squared between the different options for stratifying the risk-adjustment model are comparable, indicating that the output is not very different. However, when separate regressions for the community/institutional model or the MED/SURG MDC model are run, degrees of freedom are lost and may cause over-fitting of the model.

3. Calculate the distribution of episode spending and R-squared by decile to show that the MSPB risk adjustment methodology does equally well predicting spending through all values of the model: Based on the distribution of spending and R-squared by decile, we believe that the MSPB risk-adjustment methodology is robust and fit consistently across deciles.

***2b4.11. Optional Additional Testing** (*not required, but would provide additional support of adequacy of risk model, e.g., testing of risk model in another data set; sensitivity analysis for missing data; other methods*)

Limited additional testing was performed because the MSPB Measure risk-adjustment methodology is intended to closely follow the established and extensively tested CMS-HCC risk-adjustment methodology. As previously discussed, however, we did test stratifying the model by MDC/Institutional Status rather than just stratifying the model by MDC. We also tested different look-back periods from the current 90 days.

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APPENDIX: FOOTNOTES

[1] Statistical outlier episodes are excluded from the MSPB calculation to mitigate the effect of high-cost and low-cost outliers on each hospital's MSPB Measure. The MSPB Measure methodology uses "residuals" to define outlier episodes, where a residual equals the standardized episode spending minus the expected episode spending. High-cost outliers are defined as episodes whose residual falls above the 99th percentile of the residual cost distribution within any MS-DRG admission category; similarly, low-cost outliers are defined as episodes whose residual falls below the 1st percentile of the residual cost distribution within any MS-DRG category. For additional details on the definition of statistical outliers for the MSPB Measure, see the response to Question 2a1.20 of this measure submission form.

[2] If a hospital has a true MSPB Measure value of 1.0, a 95% confidence interval indicates that 95% of the time the hospital's MSPB Measure value will fall between the 2.5th and 97.5th percentiles if the hospital gets *X* number of episodes from the original dataset containing MSPB episodes.

[3] Mathematica, Inc. "Memorandum: Reporting Period and Reliability of AHRQ, CMS 30-Day and HAC Quality Measures – Revised." http://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/hospital-value-based-purchasing/Downloads/HVBP_Measure_Reliability-.pdf

[4] Recall from S.9.1. that transfers, defined based on the claim discharge code, are not considered eligible as index admissions. In other words, these cases will not generate new MSPB episodes; neither the hospital which transfers a patient to another short-term acute hospital, nor the receiving short-term acute hospital will have an index admission attributed to them. The rationale for exclusion of these acute-to-acute transfer cases is that CMS wished to perform further analysis of hospital impacts and explore potential unintended consequences of attribution of the MSPB episode to either the transferring or the receiving hospital.

[5] Recall from S.9.1. that any episode where at any time during the episode the beneficiary becomes deceased is excluded from the MSPB calculation.

[6] Recall from S.9.1. that MSPB episodes whose relative scores fall above the 99th percentile or below the 1st percentile of the distribution of residuals (see 2a1.20 for a description of MSPB residuals) within each index admission MS-DRG are excluded from the MSPB calculation.

[7] As an alternative to completely assigning transfer episodes to either the transferring hospital or the receiving hospital, transfer episode costs could be split between both hospitals. A simple 50/50 weighting scheme would be one potential solution. To implement a 50/50 weighting scheme, each hospital receives 50% of the observed cost in the MSPB Amount numerator and 50% of the expected in the denominator of the MSPB Amount risk-adjustment factor (α_j). This weighting scheme, however, does not take into account the length of stay at each hospital or the fact that the receiving hospital is in control of post-discharge spending. More complicated alternative weighting schemes (e.g., assigning a fixed weight to the receiving hospital and splitting the remaining weight based on the relative number of days the patient spends at each hospital) could be tailored to the particular application of the MSPB Measure, but these approaches would also increase the complexity of the MSPB Measure methodology.

[8] http://www.dartmouthatlas.org/keyissues/issue.aspx?con=2944

[9] The Medicare DSH patient percentage is equal to the sum of the percentage of Medicare inpatient days attributable to patients entitled to both Medicare Part A and Supplemental Security Income and the percentage of total inpatient days attributable to patients eligible for Medicaid but not eligible for Medicare Part A.

[10] Centers for Medicare and Medicaid Services, Office of the Actuary. "Announcement of Calendar Year (CY) 2009 Medicare Advantage Capitation Rates and Medicare Advantage and Part D Payment Policies." April 2008. http://www.cms.gov/MedicareAdvtgSpecRateStats/Downloads/Announcement2009.pdf

[11] Kiyota, Uka, et al. "Accuracy of Medicare Claims-Based Diagnosis of Acute Myocardial Infarction: Estimating Positive Predictive Value on the Basis of Review of Hospital Records." American Heart Journal. 148(1): 99-104, July 2004.

[12] Winkelmayer, W. C., et al. "Identification of Individuals with CKD from Medicare Claims Data: A Validation Study." Am J Kidney Dis. 46(2): 225-232, Aug 2005.

[13] Birman-Deych, Elena, et al. "Accuracy of ICD-9-CM Codes for Identifying Cardiovascular and Stroke Risk Factors." Medical Care. 43(5): 480-485, May 2005.

[14] Pope, Gregory C., John Kautter, Melvin J. Ingber, Sara Freeman, Rishi Sekar, and Cordon Newhart. "Evaluation of the CMS-HCC Risk-Adjustment Model: Final Report." RTI International: March 2011.

[15] Department of Health and Human Services, Centers for Medicare and Medicaid Services, Medicare Program; Medicare Shared Savings Program: Accountable Care Organizations, Proposed Rule, Federal Register, April 7, 2011 76(67):19528–654.

APPENDIX: SCIENTIFIC ACCEPTABILITY TABLES

Table 1: Average MSPB Measure and 95% Confidence Interval by Bootstrapping

Minimum Episode Threshold	MSPB Measure			Change in CI Range*	% of Hospitals
	Average	2.5th Pctl	97.5th Pctl		
1	1.00	0.41	2.57	10.29	100.0%
2	1.00	0.50	1.99	7.10	99.9%
3	1.00	0.56	1.76	5.73	99.7%
5	1.00	0.62	1.57	4.49	99.3%
10	1.00	0.71	1.38	3.21	98.9%
25	1.00	0.81	1.23	2.00	97.8%
50	1.00	0.86	1.16	1.43	95.9%
100	1.00	0.90	1.11	1.00	93.0%

* Defined as ratio of (width confidence interval for *X* episodes) / (width confidence interval for 100 episodes)

Table 2: Episodes Breakdown, Assigning Transfer Episodes to the Transferring Hospital

	Transfer Episodes		Non-Transfer Episodes		Transfer Average Episode Spending		Non-Transfer Average Episode Spending	
	#	%	#	%	#	%	#	%
All Hospitals	**233,043**	**4.73%**	**4,698,316**	**95.27%**	**$29,426**	**$25,151**	**$18,731**	**$19,489**
Large Urban	85,956	3.73%	2,215,513	96.27%	$31,038	$26,303	$19,613	$19,993
Other Urban	104,386	5.39%	1,831,578	94.61%	$27,938	$24,573	$18,708	$19,683
Rural Area	42,619	6.15%	650,401	93.85%	$29,825	$24,258	$15,793	$17,229
Uncategorized	82	9.05%	824	90.95%	$25,917	$19,336	$14,659	$16,558
Urban hospitals								
0-99 beds	14,269	6.09%	220,012	93.91%	$29,451	$24,066	$17,052	$18,279
100-199 beds	36,327	4.09%	851,849	95.91%	$30,193	$24,817	$18,173	$18,758
200-299 beds	34,709	3.82%	874,163	96.18%	$29,688	$25,190	$18,865	$19,429
300-499 beds	51,892	4.21%	1,180,797	95.79%	$28,731	$25,279	$19,548	$20,192
500 or more beds	53,145	5.46%	920,270	94.54%	$29,086	$26,246	$20,552	$21,212
Rural hospitals								
0-49 beds	7,387	7.71%	88,407	92.29%	$28,620	$22,812	$13,618	$15,238
50-99 beds	13,256	5.98%	208,600	94.02%	$31,171	$24,637	$15,035	$16,636
100-149 beds	9,355	5.77%	152,763	94.23%	$30,687	$24,388	$16,074	$17,274
150-199 beds	4,957	5.20%	90,335	94.80%	$30,555	$25,157	$17,180	$18,409
200 or more beds	7,664	6.50%	110,296	93.50%	$27,134	$24,257	$17,448	$18,921

Table 3: Episodes Breakdown, Assigning Transfer Episodes to the Receiving Hospital

	Transfer Episodes		Non-Transfer Episodes		Transfer Average Episode Spending		Non-Transfer Average Episode Spending	
	#	%	#	%	#	%	#	%
All Hospitals	**233,043**	**4.73%**	**4,698,316**	**95.27%**	**$29,426**	**$25,151**	**$18,731**	**$19,489**
Large Urban	96,014	4.15%	2,215,513	95.85%	$32,052	$26,763	$19,613	$19,993
Other Urban	115,574	5.94%	1,831,578	94.06%	$28,033	$24,497	$18,708	$19,683
Rural Area	21,437	3.19%	650,401	96.81%	$25,174	$21,472	$15,793	$17,229
Uncategorized	18	2.14%	824	97.86%	$23,743	$14,437	$14,659	$16,558
Urban hospitals								
0-99 beds	8,063	3.54%	220,012	96.46%	$25,387	$21,740	$17,052	$18,279
100-199 beds	26,421	3.01%	851,849	96.99%	$26,103	$22,068	$18,173	$18,758
200-299 beds	33,498	3.69%	874,163	96.31%	$28,162	$24,278	$18,865	$19,429
300-499 beds	65,048	5.22%	1,180,797	94.78%	$29,769	$25,605	$19,548	$20,192
500 or more beds	78,558	7.87%	920,270	92.13%	$32,374	$27,542	$20,552	$21,212
Rural hospitals								
0-49 beds	1,850	2.05%	88,407	97.95%	$20,513	$16,596	$13,618	$15,238
50-99 beds	3,656	1.72%	208,600	98.28%	$24,335	$19,506	$15,035	$16,636
100-149 beds	4,264	2.72%	152,763	97.28%	$25,309	$20,800	$16,074	$17,274
150-199 beds	3,499	3.73%	90,335	96.27%	$26,527	$22,545	$17,180	$18,409
200 or more beds	8,168	6.89%	110,296	93.11%	$25,955	$23,348	$17,448	$18,921

Table 4: Impact Analysis, Assigning Transfer Episodes to the Transferring Hospital

MSPB Measure Difference	# of Hospitals	% of Hospitals
All	**3,404**	**100.0**
> 0.10	25	0.7
0.03 to 0.10	160	4.7
0.01 to 0.03	419	12.3
0.00 to 0.01	**613**	**18.0**
-0.01 to 0.00	**973**	**28.6**
-0.03 to -0.01	1062	31.2
-0.10 to -0.03	149	4.4
< -0.10	3	0.1

Table 5: Impact Analysis, Assigning Transfer Episodes to the Receiving Hospital

MSPB Measure Difference	# of Hospitals	% of Hospitals
All	**3,405**	**100.0**
> 0.10	53	1.6
0.03 to 0.10	455	13.4
0.01 to 0.03	760	22.3
0.00 to 0.01	**718**	**21.1**
-0.01 to 0.00	**812**	**23.8**
-0.03 to -0.01	552	16.2
-0.10 to -0.03	49	1.4
< -0.10	6	0.2

Table 6: Top-Coding 99.9th Percentile and Bottom-Coding 0.1th Percentile vs. Excluding Outliers at 99th and 1st percentiles

MSPB Measure Difference	# of Hospitals	% of Hospitals
All	**3,397**	**100**
> 0.10	42	1.2
0.03 to 0.10	303	8.9
0.01 to 0.03	489	14.4
0.00 to 0.01	**593**	**17.5**
-0.01 to 0.00	**875**	**25.8**
-0.03 to -0.01	973	28.6
-0.10 to -0.03	118	3.5
< -0.10	4	0.1

Table 7: Top-Coding 99.5th Percentile and Bottom-Coding 0.5th Percentile vs. Excluding Outliers at 99th and 1st percentiles

MSPB Measure Difference	# of Hospitals	% of Hospitals
All	**3,397**	**100**
> 0.10	28	0.8
0.03 to 0.10	219	6.4
0.01 to 0.03	490	14.4
0.00 to 0.01	**664**	**19.5**
-0.01 to 0.00	**1032**	**30.4**
-0.03 to -0.01	882	26.0
-0.10 to -0.03	78	2.3
< -0.10	4	0.1

Table 8: Top-Coding 99.0th Percentile and Bottom-Coding 1.0th Percentile vs. Excluding Outliers at 99th and 1st percentiles

MSPB Measure Difference	# of Hospitals	% of Hospitals
All	**3,397**	**100**
> 0.10	17	0.5
0.03 to 0.10	146	4.3
0.01 to 0.03	475	14.0
0.00 to 0.01	**741**	**21.8**
-0.01 to 0.00	**1203**	**35.4**
-0.03 to -0.01	751	22.1
-0.10 to -0.03	61	1.8
< -0.10	3	0.1

Table 9: Top-Coding 98.0th Percentile and Bottom-Coding 2.0th Percentile vs. Excluding Outliers at 99th and 1st percentiles

MSPB Measure Difference	# of Hospitals	% of Hospitals
All	**3,397**	**100**
> 0.10	9	0.3
0.03 to 0.10	77	2.3
0.01 to 0.03	395	11.6
0.00 to 0.01	**907**	**26.7**
-0.01 to 0.00	**1507**	**44.4**
-0.03 to -0.01	463	13.6
-0.10 to -0.03	36	1.1
< -0.10	3	0.1

Table 10: Top-Coding 95.0th Percentile and Bottom-Coding 5.0th Percentile vs. Excluding Outliers at 99th and 1st percentiles

MSPB Measure Difference	# of Hospitals	% of Hospitals
All	**3,397**	**100**
> 0.10	4	0.1
0.03 to 0.10	50	1.5
0.01 to 0.03	314	9.2
0.00 to 0.01	**1304**	**38.4**
-0.01 to 0.00	**1315**	**38.7**
-0.03 to -0.01	348	10.2
-0.10 to -0.03	52	1.5
< -0.10	10	0.3

Table 11: Number of Hospitals with Higher/Lower MSPB Measure Values

	Number of Hospitals				
	99.9th/0.1th	**99.5th/0.5th**	**99.0th/1.0th**	**98.0th/2.0th**	**95.0th/5.0th**
Hospitals with Higher MSPB Measure Value	1,425	1,400	1,378	1,387	1,671
Hospitals with Lower MSPB Measure Value	1,972	1,997	2,019	2,010	1,726

Table 12: Impact Analysis, Excluding Beneficiaries Discharged AMA

MSPB Measure Difference	# of Hospitals	% of Hospitals
All	**3,396**	**100**
> 0.10	0	0.0
0.03 to 0.10	1	0.0
0.01 to 0.03	14	0.4
0.00 to 0.01	**1,411**	**41.5**
-0.01 to 0.00	**1,954**	**57.5**
-0.03 to -0.01	15	0.4
-0.10 to -0.03	1	0.0
< -0.10	0	0.0

Table 13: Impact Analysis, Excluding Dual-Eligible Beneficiaries

MSPB Measure Difference	# of Hospitals	% of Hospitals
All	**3,386**	**100**
> 0.10	37	1.1
0.03 to 0.10	230	6.8
0.01 to 0.03	672	19.8
0.00 to 0.01	**790**	**23.3**
-0.01 to 0.00	**667**	**19.7**
-0.03 to -0.01	585	17.3
-0.10 to -0.03	346	10.2
< -0.10	59	1.7

Table 14: Impact Analysis, Including Dual-Eligible Risk Adjuster

MSPB Measure Difference	# of Hospitals	% of Hospitals
All	**3,396**	**100**
> 0.10	0	0.0
0.03 to 0.10	5	0.1
0.01 to 0.03	34	1.0
0.00 to 0.01	**1,150**	**44.5**
-0.01 to 0.00	**1,469**	**43.3**
-0.03 to -0.01	366	10.8
-0.10 to -0.03	12	0.4
< -0.10	0	0.0

Table 15: Impact Analysis by Geographic Location

	N	Average MSPB Measure	Min	Percentiles					Max	Avg MSPB Amount
				10th	25th	50th	75th	90th		
All Hospitals	**3,396**	**0.982**	**0.32**	**0.87**	**0.93**	**0.99**	**1.03**	**1.08**	**2.07**	**17,656**
Large Urban	1,325	1.011	0.54	0.91	0.96	1.01	1.06	1.11	1.59	18,192
Other Urban	1,103	0.981	0.56	0.90	0.94	0.98	1.02	1.06	1.73	17,640
Rural Area	955	0.941	0.32	0.84	0.89	0.95	0.99	1.03	1.30	16,920
Uncategorized	13	1.026	0.80	0.80	0.92	0.96	1.00	1.11	2.07	18,449
Urban hospitals	**2,428**	**0.997**	**0.54**	**0.90**	**0.95**	**1.00**	**1.04**	**1.09**	**1.73**	**17,941**
0-99 beds	605	0.966	0.54	0.84	0.90	0.96	1.02	1.08	1.73	17,375
100-199 beds	751	1.010	0.70	0.92	0.96	1.00	1.05	1.10	1.49	18,168
200-299 beds	441	1.008	0.70	0.93	0.97	1.01	1.05	1.09	1.22	18,125
300-499 beds	427	1.004	0.72	0.93	0.97	1.00	1.04	1.08	1.25	18,067
500 or more beds	204	1.007	0.78	0.95	0.98	1.00	1.04	1.07	1.19	18,121
Rural hospitals	**955**	**0.941**	**0.32**	**0.84**	**0.89**	**0.95**	**0.99**	**1.03**	**1.30**	**16,920**
0-49 beds	346	0.916	0.32	0.80	0.86	0.93	0.98	1.03	1.30	16,478
50-99 beds	352	0.943	0.65	0.85	0.89	0.94	0.99	1.03	1.30	16,962
100-149 beds	152	0.972	0.81	0.89	0.94	0.97	1.00	1.04	1.21	17,486
150-199 beds	58	0.969	0.53	0.91	0.94	0.98	1.01	1.05	1.09	17,430
200 or more beds	47	0.967	0.83	0.90	0.93	0.96	1.00	1.06	1.12	17,392

Table 16: Impact Analysis by Region

	N	Average MSPB Measure	Min	Percentiles					Max	Avg MSPB Amount
				10th	25th	50th	75th	90th		
Urban by Region										
New England	119	1.025	0.91	0.98	1.00	1.02	1.05	1.08	1.16	18,442
Middle Atlantic	314	1.002	0.56	0.90	0.96	1.01	1.05	1.09	1.43	18,015
South Atlantic	376	1.005	0.56	0.93	0.96	1.00	1.05	1.11	1.20	18,069
East North Central	395	0.998	0.65	0.92	0.96	1.00	1.03	1.07	1.29	17,950
East South Central	151	0.995	0.56	0.93	0.97	1.00	1.02	1.06	1.32	17,901
West North Central	167	0.955	0.80	0.89	0.92	0.95	1.00	1.02	1.11	17,178
West South Central	363	1.032	0.61	0.92	0.98	1.03	1.08	1.14	1.73	18,571
Mountain	163	0.983	0.63	0.90	0.94	0.98	1.02	1.09	1.59	17,681
Pacific	380	0.970	0.54	0.83	0.91	0.97	1.03	1.11	1.49	17,448
Puerto Rico	0	.	.	.	.	.	.	.	.	.
Rural by Region										
New England	24	0.973	0.85	0.87	0.95	0.98	1.00	1.04	1.07	17,494
Middle Atlantic	69	0.932	0.74	0.82	0.87	0.95	0.99	1.04	1.07	16,766
South Atlantic	164	0.937	0.53	0.86	0.90	0.94	0.99	1.02	1.22	16,862
East North Central	121	0.964	0.83	0.88	0.92	0.96	1.00	1.04	1.16	17,332
East South Central	172	0.961	0.48	0.87	0.92	0.97	1.01	1.03	1.30	17,285
West North Central	105	0.904	0.61	0.83	0.87	0.91	0.95	0.98	1.05	16,258
West South Central	187	0.967	0.62	0.84	0.91	0.97	1.03	1.09	1.30	17,391
Mountain	81	0.873	0.32	0.71	0.84	0.89	0.95	0.99	1.23	15,701
Pacific	32	0.894	0.76	0.83	0.86	0.88	0.95	0.96	1.03	16,087
Puerto Rico	0	.	.	.	.	.	.	.	.	.
Uncategorized	13	1.026	0.80	0.80	0.92	0.96	1.00	1.11	2.07	18,449

Table 17: Impact Analysis by Teaching Status

	N	Average MSPB Measure	Min	Percentiles					Max	Avg MSPB Amount
				10th	25th	50th	75th	90th		
Teaching Status										
Teaching	994	0.994	0.70	0.92	0.96	1.00	1.03	1.08	1.23	17,887
Non-Teaching	2,389	0.976	0.32	0.87	0.92	0.98	1.03	1.08	1.73	17,555
Uncategorized	13	1.026	0.80	0.80	0.92	0.96	1.00	1.11	2.07	18,449

Table 18: Impact Analysis by DSH Percentage

	N	Average MSPB Measure	Min	Percentiles					Max	Avg MSPB Amount
				10th	25th	50th	75th	90th		
DSH Percentage										
0-25	1,668	0.982	0.56	0.87	0.94	0.99	1.03	1.08	1.73	17,657
25-50	1,377	0.979	0.48	0.88	0.93	0.98	1.03	1.08	1.32	17,612
50-65	167	1.000	0.64	0.88	0.94	1.00	1.04	1.12	1.49	17,983
Over 65	171	0.979	0.32	0.84	0.90	0.99	1.06	1.12	1.44	17,615
Uncategorized	13	1.026	0.80	0.80	0.92	0.96	1.00	1.11	2.07	18,449

Table 19: Percent of Episodes Dropped

"Look-Back" Period	Number of MSPB Episodes
90 days	4,462,330
365 days	4,175,966
% of MSPB Episodes that get Dropped	**6.4%**

Table 20: Impact Analysis, Switching to 365-Day Look-Back from 90-Day Look-Back

MSPB Measure Difference	# of Hospitals	% of Hospitals
All	**3,396**	**100.0**
> 0.10	5	0.1
0.03 to 0.10	43	1.3
0.01 to 0.03	299	8.8
0.00 to 0.01	**1,376**	**40.5**
-0.01 to 0.00	**1,293**	**38.1**
-0.03 to -0.01	322	9.5
-0.10 to -0.03	53	1.6
< -0.10	5	0.1

APPENDIX: ADDITIONAL INFORMATION

The remainder of this document includes regression coefficients and standard error of the covariates used in the risk-adjustment models described in S.9.2. through S.9.4. There are 26 tables, one for each risk-adjustment by MDC. The **overall** R-squared for the MSPB Measure risk adjustment model is 0.4621; this overall R-squared was calculated as (1-SSE/SST) where SSE=sum[(observed-predicted)^2] and SST=sum[(observed-mean_observed)^2].

Table 21: MDC_1_Nervous System

Coef Name	Label	Coef Value	Std Error	P Value
Intercept		7,218	193	0.00
HCC1	HIV/AIDS	584	411	0.16
HCC2	SEPTICEMIA/SHOCK	1,375	210	0.00
HCC5	OPPORTUNISTIC INFECTIONS	673	590	0.25
HCC7	METASTATIC CANCER AND ACUTE LEUKEMIA	404	189	0.03
HCC8	LUNG, UPPER DIGESTIVE TRACT, AND OTHER SEVERE CANCERS	361	228	0.11
HCC9	LYMPHATIC, HEAD AND NECK, BRAIN, AND OTHER MAJOR CANCERS	994	167	0.00
HCC10	BREAST, PROSTATE, COLORECTAL AND OTHER CANCERS AND TUMORS	-29	105	0.78
HCC15	DIABETES WITH RENAL OR PERIPHERAL CIRCULATORY MANIFESTATION	1,421	127	0.00
HCC16	DIABETES WITH NEUROLOGIC OR OTHER SPECIFIED MANIFESTATION	821	122	0.00
HCC17	DIABETES WITH ACUTE COMPLICATIONS	641	611	0.29
HCC18	DIABETES WITH OPHTHALMOLOGIC OR UNSPECIFIED MANIFESTATION	721	201	0.00
HCC19	DIABETES WITHOUT COMPLICATION	484	68	0.00
HCC21	PROTEIN-CALORIE MALNUTRITION	1,949	200	0.00
HCC25	END-STAGE LIVER DISEASE	780	427	0.07
HCC26	CIRRHOSIS OF LIVER	-833	378	0.03
HCC27	CHRONIC HEPATITIS	48	440	0.91
HCC31	INTESTINAL OBSTRUCTION/PERFORATION	655	233	0.00
HCC32	PANCREATIC DISEASE	409	242	0.09
HCC33	INFLAMMATORY BOWEL DISEASE	-395	329	0.23
HCC37	BONE/JOINT/MUSCLE INFECTIONS/NECROSIS	1,404	264	0.00
HCC38	RHEUMATOID ARTHRITIS AND INFLAMMATORY CONNECTIVE TISSUE DISEASE	369	127	0.00
HCC44	SEVERE HEMATOLOGICAL DISORDERS	1,413	274	0.00

Coef Name	Label	Coef Value	Std Error	P Value
HCC45	DISORDERS OF IMMUNITY	341	310	0.27
HCC51	DRUG/ALCOHOL PSYCHOSIS	557	392	0.16
HCC52	DRUG/ALCOHOL DEPENDENCE	571	388	0.14
HCC54	SCHIZOPHRENIA	2,539	189	0.00
HCC55	MAJOR DEPRESSIVE, BIPOLAR, AND PARANOID DISORDERS	1,170	104	0.00
HCC67	QUADRIPLEGIA, OTHER EXTENSIVE PARALYSIS	-196	385	0.61
HCC68	PARAPLEGIA	2,302	428	0.00
HCC69	SPINAL CORD DISORDERS/INJURIES	1,089	248	0.00
HCC70	MUSCULAR DYSTROPHY	2,935	1,047	0.01
HCC71	POLYNEUROPATHY	669	100	0.00
HCC72	MULTIPLE SCLEROSIS	1,055	273	0.00
HCC73	PARKINSONS AND HUNTINGTONS DISEASES	2,985	130	0.00
HCC74	SEIZURE DISORDERS AND CONVULSIONS	345	94	0.00
HCC75	COMA, BRAIN COMPRESSION/ANOXIC DAMAGE	618	277	0.03
HCC77	RESPIRATOR DEPENDENCE/TRACHEOSTOMY STATUS	4,827	496	0.00
HCC78	RESPIRATORY ARREST	4,452	1,185	0.00
HCC79	CARDIO-RESPIRATORY FAILURE AND SHOCK	805	145	0.00
HCC80	CONGESTIVE HEART FAILURE	280	111	0.01
HCC81	ACUTE MYOCARDIAL INFARCTION	816	268	0.00
HCC82	UNSTABLE ANGINA AND OTHER ACUTE ISCHEMIC HEART DISEASE	43	189	0.82
HCC83	ANGINA PECTORIS/OLD MYOCARDIAL INFARCTION	-51	119	0.67
HCC92	SPECIFIED HEART ARRHYTHMIAS	249	70	0.00
HCC95	CEREBRAL HEMORRHAGE	-177	216	0.41
HCC96	ISCHEMIC OR UNSPECIFIED STROKE	383	100	0.00
HCC100	HEMIPLEGIA/HEMIPARESIS	2,133	142	0.00
HCC101	CEREBRAL PALSY AND OTHER PARALYTIC SYNDROMES	1,551	355	0.00
HCC104	VASCULAR DISEASE WITH COMPLICATIONS	1,244	165	0.00
HCC105	VASCULAR DISEASE	302	67	0.00
HCC107	CYSTIC FIBROSIS	-2,797	3,889	0.47
HCC108	CHRONIC OBSTRUCTIVE PULMONARY DISEASE	125	84	0.14
HCC111	ASPIRATION AND SPECIFIED BACTERIAL	520	264	0.05

Coef Name	Label	Coef Value	Std Error	P Value
	PNEUMONIAS			
HCC112	PNEUMOCOCCAL PNEUMONIA, EMPHYSEMA, LUNG ABSCESS	-299	526	0.57
HCC119	PROLIFERATIVE DIABETIC RETINOPATHY AND VITREOUS HEMORRHAGE	414	260	0.11
HCC130	DIALYSIS STATUS	1,421	280	0.00
HCC131	RENAL FAILURE	153	97	0.11
HCC132	NEPHRITIS	298	584	0.61
HCC148	DECUBITUS ULCER OF SKIN	1,253	199	0.00
HCC149	CHRONIC ULCER OF SKIN, EXCEPT DECUBITUS	1,094	158	0.00
HCC150	EXTENSIVE THIRD-DEGREE BURNS	575	5,093	0.91
HCC154	SEVERE HEAD INJURY	1,104	1,174	0.35
HCC155	MAJOR HEAD INJURY	95	230	0.68
HCC157	VERTEBRAL FRACTURES WITHOUT SPINAL CORD INJURY	1,008	224	0.00
HCC158	HIP FRACTURE/DISLOCATION	556	236	0.02
HCC161	TRAUMATIC AMPUTATION	2,336	667	0.00
HCC164	MAJOR COMPLICATIONS OF MEDICAL CARE AND TRAUMA	210	150	0.16
HCC174	MAJOR ORGAN TRANSPLANT STATUS	699	490	0.15
HCC176	ARTIFICIAL OPENINGS FOR FEEDING OR ELIMINATION	-16	266	0.95
HCC177	AMPUTATION STATUS, LOWER LIMB/AMPUTATION COMPLICATIONS	1,116	342	0.00
Age_Lt_35		-2,181	204	0.00
Age_Lt_45		-2,290	162	0.00
Age_Lt_55		-1,654	123	0.00
Age_Lt_60		-839	138	0.00
Age_Lt_65		-133	129	0.31
Age_Lt_75		711	87	0.00
Age_Lt_80		1,461	86	0.00
Age_Lt_85		2,366	87	0.00
Age_Lt_90		3,112	93	0.00
Age_Lt_95		3,327	118	0.00
Age_Gt_94		3,167	198	0.00
ORIGDS		671	81	0.00
ESRD		3,500	174	0.00
D_HCC5	DISABLED, OPPORTUNISTISTIC INFECTIONS	-287	1,148	0.80
D_HCC44	DISABLED, SEVERE HEMATOLOGICAL DISORDERS	1,323	612	0.03
D_HCC51	DISABLED, DRUG/ALCOHOL PSYCHOSIS	725	580	0.21

Coef Name	Label	Coef Value	Std Error	P Value
D_HCC52	DISABLED, DRUG/ALCOHOL DEPENDENCE	-367	490	0.45
D_HCC107	DISABLED, CYSTIC FIBROSIS	6,448	4,926	0.19
DM_CVD	DIABETES MELLITUS * CEREBROVASCULAR DISEASE	318	148	0.03
CHF_COPD	CONGESTIVE HEART FAILURE*CHRONIC OBSRUCTIVE PULMONARY DISEASE	-80	165	0.63
COPD_CVD_CAD	CHRONIC OBSRUCTIVE PULMONARY DISEASE *CEBROVASCULAR DISEASE*CORONARY	50	378	0.89
RF_CHF_DM	DIABETES MELLITUS * CONGESTIVE HEART* RENAL FAILURE	676	208	0.00
DM_CHF	DIABETES MELLITUS * CONGESTIVE HEART FAILURE	232	165	0.16
RF_CHF	RENAL FAILURE* CONGESTIVE HEART FAILURE	357	232	0.12
DRG_CD=003	ECMO OR TRACH W MV 96+ HRS OR PDX EXC FACE, MOUTH & NECK W MAJ O.R.	150,558	480	0.00
DRG_CD=004	TRACH W MV 96+ HRS OR PDX EXC FACE, MOUTH & NECK W/O MAJ O.R.	124,049	532	0.00
DRG_CD=009	BONE MARROW TRANSPLANT	39,453	9,533	0.00
DRG_CD=010	PANCREAS TRANSPLANT	35,461	3,895	0.00
DRG_CD=011	TRACHEOSTOMY FOR FACE,MOUTH & NECK DIAGNOSES W MCC	19,221	13,475	0.15
DRG_CD=014	ALLOGENEIC BONE MARROW TRANSPLANT	88,165	13,478	0.00
DRG_CD=020	INTRACRANIAL VASCULAR PROCEDURES W PDX HEMORRHAGE W MCC	85,695	986	0.00
DRG_CD=021	INTRACRANIAL VASCULAR PROCEDURES W PDX HEMORRHAGE W CC	54,166	1,408	0.00
DRG_CD=022	INTRACRANIAL VASCULAR PROCEDURES W PDX HEMORRHAGE W/O CC/MCC	28,482	2,164	0.00
DRG_CD=023	CRANIO W MAJOR DEV IMPL/ACUTE COMPLEX CNS PDX W MCC OR CHEMO IMPLANT	61,718	496	0.00
DRG_CD=024	CRANIO W MAJOR DEV IMPL/ACUTE COMPLEX CNS PDX W/O MCC	32,652	607	0.00
DRG_CD=025	CRANIOTOMY & ENDOVASCULAR INTRACRANIAL PROCEDURES W MCC	45,147	281	0.00
DRG_CD=026	CRANIOTOMY & ENDOVASCULAR INTRACRANIAL PROCEDURES W CC	26,292	283	0.00

Coef Name	Label	Coef Value	Std Error	P Value
DRG_CD=027	CRANIOTOMY & ENDOVASCULAR INTRACRANIAL PROCEDURES W/O CC/MCC	15,709	262	0.00
DRG_CD=028	SPINAL PROCEDURES W MCC	54,410	582	0.00
DRG_CD=029	SPINAL PROCEDURES W CC OR SPINAL NEUROSTIMULATORS	24,331	397	0.00
DRG_CD=030	SPINAL PROCEDURES W/O CC/MCC	8,851	383	0.00
DRG_CD=031	VENTRICULAR SHUNT PROCEDURES W MCC	36,190	708	0.00
DRG_CD=032	VENTRICULAR SHUNT PROCEDURES W CC	16,482	449	0.00
DRG_CD=033	VENTRICULAR SHUNT PROCEDURES W/O CC/MCC	7,987	397	0.00
DRG_CD=034	CAROTID ARTERY STENT PROCEDURE W MCC	25,072	724	0.00
DRG_CD=035	CAROTID ARTERY STENT PROCEDURE W CC	7,991	450	0.00
DRG_CD=036	CAROTID ARTERY STENT PROCEDURE W/O CC/MCC	3,871	313	0.00
DRG_CD=037	EXTRACRANIAL PROCEDURES W MCC	23,881	338	0.00
DRG_CD=038	EXTRACRANIAL PROCEDURES W CC	5,800	250	0.00
DRG_CD=039	EXTRACRANIAL PROCEDURES W/O CC/MCC	307	206	0.14
DRG_CD=040	PERIPH/CRANIAL NERVE & OTHER NERV SYST PROC W MCC	36,233	370	0.00
DRG_CD=041	PERIPH/CRANIAL NERVE & OTHER NERV SYST PROC W CC OR PERIPH NEUROSTIM	17,019	312	0.00
DRG_CD=042	PERIPH/CRANIAL NERVE & OTHER NERV SYST PROC W/O CC/MCC	9,818	391	0.00
DRG_CD=052	SPINAL DISORDERS & INJURIES W CC/MCC	22,406	724	0.00
DRG_CD=053	SPINAL DISORDERS & INJURIES W/O CC/MCC	12,475	1,043	0.00
DRG_CD=054	NERVOUS SYSTEM NEOPLASMS W MCC	16,498	340	0.00
DRG_CD=055	NERVOUS SYSTEM NEOPLASMS W/O MCC	12,990	306	0.00
DRG_CD=056	DEGENERATIVE NERVOUS SYSTEM DISORDERS W MCC	15,106	278	0.00
DRG_CD=057	DEGENERATIVE NERVOUS SYSTEM DISORDERS W/O MCC	8,126	211	0.00
DRG_CD=058	MULTIPLE SCLEROSIS & CEREBELLAR ATAXIA W MCC	18,140	698	0.00
DRG_CD=059	MULTIPLE SCLEROSIS & CEREBELLAR ATAXIA W CC	10,681	449	0.00

Coef Name	Label	Coef Value	Std Error	P Value
DRG_CD=060	MULTIPLE SCLEROSIS & CEREBELLAR ATAXIA W/O CC/MCC	6,176	434	0.00
DRG_CD=061	ACUTE ISCHEMIC STROKE W USE OF THROMBOLYTIC AGENT W MCC	36,722	489	0.00
DRG_CD=062	ACUTE ISCHEMIC STROKE W USE OF THROMBOLYTIC AGENT W CC	22,751	348	0.00
DRG_CD=063	ACUTE ISCHEMIC STROKE W USE OF THROMBOLYTIC AGENT W/O CC/MCC	10,642	538	0.00
DRG_CD=064	INTRACRANIAL HEMORRHAGE OR CEREBRAL INFARCTION W MCC	22,498	208	0.00
DRG_CD=065	INTRACRANIAL HEMORRHAGE OR CEREBRAL INFARCTION W CC	15,019	193	0.00
DRG_CD=066	INTRACRANIAL HEMORRHAGE OR CEREBRAL INFARCTION W/O CC/MCC	5,956	199	0.00
DRG_CD=067	NONSPECIFIC CVA & PRECEREBRAL OCCLUSION W/O INFARCT W MCC	8,903	575	0.00
DRG_CD=068	NONSPECIFIC CVA & PRECEREBRAL OCCLUSION W/O INFARCT W/O MCC	3,046	282	0.00
DRG_CD=069	TRANSIENT ISCHEMIA	679	193	0.00
DRG_CD=070	NONSPECIFIC CEREBROVASCULAR DISORDERS W MCC	15,429	270	0.00
DRG_CD=071	NONSPECIFIC CEREBROVASCULAR DISORDERS W CC	8,223	258	0.00
DRG_CD=072	NONSPECIFIC CEREBROVASCULAR DISORDERS W/O CC/MCC	3,168	326	0.00
DRG_CD=073	CRANIAL & PERIPHERAL NERVE DISORDERS W MCC	10,214	289	0.00
DRG_CD=074	CRANIAL & PERIPHERAL NERVE DISORDERS W/O MCC	4,074	218	0.00
DRG_CD=075	VIRAL MENINGITIS W CC/MCC	11,142	576	0.00
DRG_CD=076	VIRAL MENINGITIS W/O CC/MCC	2,413	768	0.00
DRG_CD=077	HYPERTENSIVE ENCEPHALOPATHY W MCC	12,793	515	0.00
DRG_CD=078	HYPERTENSIVE ENCEPHALOPATHY W CC	4,348	450	0.00
DRG_CD=079	HYPERTENSIVE ENCEPHALOPATHY W/O CC/MCC	728	691	0.29
DRG_CD=080	NONTRAUMATIC STUPOR & COMA W MCC	9,439	563	0.00
DRG_CD=081	NONTRAUMATIC STUPOR & COMA W/O MCC	4,082	337	0.00
DRG_CD=082	TRAUMATIC STUPOR & COMA, COMA >1 HR W MCC	26,543	694	0.00
DRG_CD=083	TRAUMATIC STUPOR & COMA, COMA >1 HR W CC	14,134	500	0.00
DRG_CD=084	TRAUMATIC STUPOR & COMA, COMA	5,255	507	0.00

Coef Name	Label	Coef Value	Std Error	P Value
DRG_CD=085	>1 HR W/O CC/MCC TRAUMATIC STUPOR & COMA, COMA <1 HR W MCC	22,750	329	0.00
DRG_CD=086	TRAUMATIC STUPOR & COMA, COMA <1 HR W CC	11,688	255	0.00
DRG_CD=087	TRAUMATIC STUPOR & COMA, COMA <1 HR W/O CC/MCC	4,215	258	0.00
DRG_CD=088	CONCUSSION W MCC	12,091	698	0.00
DRG_CD=089	CONCUSSION W CC	6,868	421	0.00
DRG_CD=090	CONCUSSION W/O CC/MCC	1,041	454	0.02
DRG_CD=091	OTHER DISORDERS OF NERVOUS SYSTEM W MCC	13,394	289	0.00
DRG_CD=092	OTHER DISORDERS OF NERVOUS SYSTEM W CC	6,503	236	0.00
DRG_CD=093	OTHER DISORDERS OF NERVOUS SYSTEM W/O CC/MCC	2,303	255	0.00
DRG_CD=094	BACTERIAL & TUBERCULOUS INFECTIONS OF NERVOUS SYSTEM W MCC	40,662	710	0.00
DRG_CD=095	BACTERIAL & TUBERCULOUS INFECTIONS OF NERVOUS SYSTEM W CC	25,646	761	0.00
DRG_CD=096	BACTERIAL & TUBERCULOUS INFECTIONS OF NERVOUS SYSTEM W/O CC/MCC	17,768	986	0.00
DRG_CD=097	NON-BACTERIAL INFECT OF NERVOUS SYS EXC VIRAL MENINGITIS W MCC	31,200	711	0.00
DRG_CD=098	NON-BACTERIAL INFECT OF NERVOUS SYS EXC VIRAL MENINGITIS W CC	21,194	720	0.00
DRG_CD=099	NON-BACTERIAL INFECT OF NERVOUS SYS EXC VIRAL MENINGITIS W/O CC/MCC	9868.958403	976.390234	0.00
DRG_CD=100	SEIZURES W MCC	10688.87757	235.1161851	0.00
DRG_CD=101	SEIZURES W/O MCC	2363.402905	202.2853584	0.00
DRG_CD=102	HEADACHES W MCC	5091.802316	558.5048376	0.00
DRG_CD=103	HEADACHES W/O MCC	0	0	.
LTI_Indicator		1387.428996	118.793996	0.00

Table 22: MDC_2_Eye

Coef Name	Label	Coef Value	Std Error	P Value
Intercept		7,566	405	0.00
HCC1	HIV/AIDS	1,321	1,420	0.35
HCC2	SEPTICEMIA/SHOCK	1,933	1,177	0.10

Coef Name	Label	Coef Value	Std Error	P Value
HCC5	OPPORTUNISTIC INFECTIONS	-2,345	2,291	0.31
HCC7	METASTATIC CANCER AND ACUTE LEUKEMIA	-62	968	0.95
HCC8	LUNG, UPPER DIGESTIVE TRACT, AND OTHER SEVERE CANCERS	3,149	1,249	0.01
HCC9	LYMPHATIC, HEAD AND NECK, BRAIN, AND OTHER MAJOR CANCERS	1,189	755	0.12
HCC10	BREAST, PROSTATE, COLORECTAL AND OTHER CANCERS AND TUMORS	-450	492	0.36
HCC15	DIABETES WITH RENAL OR PERIPHERAL CIRCULATORY MANIFESTATION	1,891	634	0.00
HCC16	DIABETES WITH NEUROLOGIC OR OTHER SPECIFIED MANIFESTATION	981	657	0.14
HCC17	DIABETES WITH ACUTE COMPLICATIONS	-1,719	2,843	0.55
HCC18	DIABETES WITH OPHTHALMOLOGIC OR UNSPECIFIED MANIFESTATION	493	828	0.55
HCC19	DIABETES WITHOUT COMPLICATION	318	357	0.37
HCC21	PROTEIN-CALORIE MALNUTRITION	3,847	1,131	0.00
HCC25	END-STAGE LIVER DISEASE	-4,802	2,129	0.02
HCC26	CIRRHOSIS OF LIVER	431	1,864	0.82
HCC27	CHRONIC HEPATITIS	5,104	1,937	0.01
HCC31	INTESTINAL OBSTRUCTION/PERFORATION	138	1,374	0.92
HCC32	PANCREATIC DISEASE	3,646	1,376	0.01
HCC33	INFLAMMATORY BOWEL DISEASE	-3,021	1,626	0.06
HCC37	BONE/JOINT/MUSCLE INFECTIONS/NECROSIS	2,377	1,536	0.12
HCC38	RHEUMATOID ARTHRITIS AND INFLAMMATORY CONNECTIVE TISSUE DISEASE	1,481	560	0.01
HCC44	SEVERE HEMATOLOGICAL DISORDERS	1,241	1,252	0.32
HCC45	DISORDERS OF IMMUNITY	3,147	1,248	0.01
HCC51	DRUG/ALCOHOL PSYCHOSIS	-568	2,597	0.83
HCC52	DRUG/ALCOHOL DEPENDENCE	4,668	2,758	0.09
HCC54	SCHIZOPHRENIA	2,548	978	0.01
HCC55	MAJOR DEPRESSIVE, BIPOLAR, AND PARANOID DISORDERS	727	564	0.20
HCC67	QUADRIPLEGIA, OTHER EXTENSIVE PARALYSIS	-5,005	3,041	0.10
HCC68	PARAPLEGIA	3,598	2,700	0.18
HCC69	SPINAL CORD DISORDERS/INJURIES	-84	1,781	0.96
HCC70	MUSCULAR DYSTROPHY	-997	5,381	0.85
HCC71	POLYNEUROPATHY	123	566	0.83

Coef Name	Label	Coef Value	Std Error	P Value
HCC72	MULTIPLE SCLEROSIS	2,018	1,335	0.13
HCC73	PARKINSONS AND HUNTINGTONS DISEASES	1,984	931	0.03
HCC74	SEIZURE DISORDERS AND CONVULSIONS	2,227	666	0.00
HCC75	COMA, BRAIN COMPRESSION/ANOXIC DAMAGE	1,327	4,234	0.75
HCC77	RESPIRATOR DEPENDENCE/TRACHEOSTOMY STATUS	2,301	2,684	0.39
HCC78	RESPIRATORY ARREST	45,243	8,099	0.00
HCC79	CARDIO-RESPIRATORY FAILURE AND SHOCK	884	774	0.25
HCC80	CONGESTIVE HEART FAILURE	846	595	0.16
HCC81	ACUTE MYOCARDIAL INFARCTION	-4,674	2,105	0.03
HCC82	UNSTABLE ANGINA AND OTHER ACUTE ISCHEMIC HEART DISEASE	2,045	1,138	0.07
HCC83	ANGINA PECTORIS/OLD MYOCARDIAL INFARCTION	116	663	0.86
HCC92	SPECIFIED HEART ARRHYTHMIAS	378	371	0.31
HCC95	CEREBRAL HEMORRHAGE	-1,236	1,890	0.51
HCC96	ISCHEMIC OR UNSPECIFIED STROKE	381	701	0.59
HCC100	HEMIPLEGIA/HEMIPARESIS	-837	1,164	0.47
HCC101	CEREBRAL PALSY AND OTHER PARALYTIC SYNDROMES	5,443	2,122	0.01
HCC104	VASCULAR DISEASE WITH COMPLICATIONS	889	890	0.32
HCC105	VASCULAR DISEASE	-199	367	0.59
HCC107	CYSTIC FIBROSIS	4,218	9,091	0.64
HCC108	CHRONIC OBSTRUCTIVE PULMONARY DISEASE	1,083	435	0.01
HCC111	ASPIRATION AND SPECIFIED BACTERIAL PNEUMONIAS	2,710	1,718	0.11
HCC112	PNEUMOCOCCAL PNEUMONIA, EMPHYSEMA, LUNG ABSCESS	-5,868	3,023	0.05
HCC119	PROLIFERATIVE DIABETIC RETINOPATHY AND VITREOUS HEMORRHAGE	-642	746	0.39
HCC130	DIALYSIS STATUS	1,920	1,247	0.12
HCC131	RENAL FAILURE	244	508	0.63
HCC132	NEPHRITIS	-3,677	2,780	0.19
HCC148	DECUBITUS ULCER OF SKIN	3,794	1,066	0.00
HCC149	CHRONIC ULCER OF SKIN, EXCEPT DECUBITUS	3,042	772	0.00
HCC150	EXTENSIVE THIRD-DEGREE BURNS	0	0	.

Coef Name	Label	Coef Value	Std Error	P Value
HCC154	SEVERE HEAD INJURY	0	0	.
HCC155	MAJOR HEAD INJURY	-610	1,121	0.59
HCC157	VERTEBRAL FRACTURES WITHOUT SPINAL CORD INJURY	2,032	1,281	0.11
HCC158	HIP FRACTURE/DISLOCATION	1,630	1,380	0.24
HCC161	TRAUMATIC AMPUTATION	-7,531	4,542	0.10
HCC164	MAJOR COMPLICATIONS OF MEDICAL CARE AND TRAUMA	526	723	0.47
HCC174	MAJOR ORGAN TRANSPLANT STATUS	-617	1,838	0.74
HCC176	ARTIFICIAL OPENINGS FOR FEEDING OR ELIMINATION	1,383	1,532	0.37
HCC177	AMPUTATION STATUS, LOWER LIMB/AMPUTATION COMPLICATIONS	-1,707	1,916	0.37
Age_Lt_35		-1,753	1,107	0.11
Age_Lt_45		-813	778	0.30
Age_Lt_55		-182	604	0.76
Age_Lt_60		-461	719	0.52
Age_Lt_65		613	649	0.35
Age_Lt_75		537	449	0.23
Age_Lt_80		1,284	453	0.00
Age_Lt_85		2,325	455	0.00
Age_Lt_90		3,278	480	0.00
Age_Lt_95		5,431	602	0.00
Age_Gt_94		3,099	948	0.00
ORIGDS		974	429	0.02
ESRD		4,134	797	0.00
D_HCC5	DISABLED, OPPORTUNISTISTIC INFECTIONS	-185	4,883	0.97
D_HCC44	DISABLED, SEVERE HEMATOLOGICAL DISORDERS	6,009	2,848	0.03
D_HCC51	DISABLED, DRUG/ALCOHOL PSYCHOSIS	2,777	3,586	0.44
D_HCC52	DISABLED, DRUG/ALCOHOL DEPENDENCE	-7,126	3,181	0.03
D_HCC107	DISABLED, CYSTIC FIBROSIS	0	0	.
DM_CVD	DIABETES MELLITUS * CEREBROVASCULAR DISEASE	1,330	1,003	0.18
CHF_COPD	CONGESTIVE HEART FAILURE*CHRONIC OBSRUCTIVE PULMONARY DISEASE	-710	859	0.41
COPD_CVD_CAD	CHRONIC OBSRUCTIVE PULMONARY DISEASE *CEBROVASCULAR DISEASE*CORONARY	3,561	3,515	0.31
RF_CHF_DM	DIABETES MELLITUS * CONGESTIVE HEART* RENAL FAILURE	3,787	1,056	0.00

Coef Name	Label	Coef Value	Std Error	P Value
DM_CHF	DIABETES MELLITUS * CONGESTIVE HEART FAILURE	-660	859	0.44
RF_CHF	RENAL FAILURE* CONGESTIVE HEART FAILURE	216	1,266	0.86
DRG_CD=003	ECMO OR TRACH W MV 96+ HRS OR PDX EXC FACE, MOUTH & NECK W MAJ O.R.	113,992	4,014	0.00
DRG_CD=004	TRACH W MV 96+ HRS OR PDX EXC FACE, MOUTH & NECK W/O MAJ O.R.	100,915	4,053	0.00
DRG_CD=010	PANCREAS TRANSPLANT	21,720	4,113	0.00
DRG_CD=012	TRACHEOSTOMY FOR FACE,MOUTH & NECK DIAGNOSES W CC	14,115	8,930	0.11
DRG_CD=113	ORBITAL PROCEDURES W CC/MCC	12,133	561	0.00
DRG_CD=114	ORBITAL PROCEDURES W/O CC/MCC	1,386	726	0.06
DRG_CD=115	EXTRAOCULAR PROCEDURES EXCEPT ORBIT	3,623	504	0.00
DRG_CD=116	INTRAOCULAR PROCEDURES W CC/MCC	4,784	668	0.00
DRG_CD=117	INTRAOCULAR PROCEDURES W/O CC/MCC	-1,153	628	0.07
DRG_CD=121	ACUTE MAJOR EYE INFECTIONS W CC/MCC	2,740	518	0.00
DRG_CD=122	ACUTE MAJOR EYE INFECTIONS W/O CC/MCC	-1,644	622	0.01
DRG_CD=123	NEUROLOGICAL EYE DISORDERS	-1,409	318	0.00
DRG_CD=124	OTHER DISORDERS OF THE EYE W MCC	6,597	504	0.00
DRG_CD=125	OTHER DISORDERS OF THE EYE W/O MCC	0	0	.
LTI_Indicator		3,329	630	0.00

Table 23: Ear, Nose, Mouth and Throat

Coef Name	Label	Coef Value	Std Error	P Value
Intercept		5,754	420	0.00
HCC1	HIV/AIDS	388	673	0.56
HCC2	SEPTICEMIA/SHOCK	1,275	502	0.01
HCC5	OPPORTUNISTIC INFECTIONS	1,126	1,049	0.28
HCC7	METASTATIC CANCER AND ACUTE LEUKEMIA	3,286	291	0.00
HCC8	LUNG, UPPER DIGESTIVE TRACT, AND OTHER SEVERE CANCERS	2,439	434	0.00
HCC9	LYMPHATIC, HEAD AND NECK, BRAIN, AND OTHER MAJOR CANCERS	2,209	219	0.00
HCC10	BREAST, PROSTATE, COLORECTAL AND	78	241	0.75

Coef Name	Label	Coef Value	Std Error	P Value
	OTHER CANCERS AND TUMORS			
HCC15	DIABETES WITH RENAL OR PERIPHERAL CIRCULATORY MANIFESTATION	808	299	0.01
HCC16	DIABETES WITH NEUROLOGIC OR OTHER SPECIFIED MANIFESTATION	515	289	0.07
HCC17	DIABETES WITH ACUTE COMPLICATIONS	2,291	1,539	0.14
HCC18	DIABETES WITH OPHTHALMOLOGIC OR UNSPECIFIED MANIFESTATION	-74	458	0.87
HCC19	DIABETES WITHOUT COMPLICATION	322	147	0.03
HCC21	PROTEIN-CALORIE MALNUTRITION	1,990	429	0.00
HCC25	END-STAGE LIVER DISEASE	1,762	886	0.05
HCC26	CIRRHOSIS OF LIVER	1,408	731	0.05
HCC27	CHRONIC HEPATITIS	664	873	0.45
HCC31	INTESTINAL OBSTRUCTION/PERFORATION	2,014	545	0.00
HCC32	PANCREATIC DISEASE	-766	549	0.16
HCC33	INFLAMMATORY BOWEL DISEASE	134	733	0.85
HCC37	BONE/JOINT/MUSCLE INFECTIONS/NECROSIS	1,045	525	0.05
HCC38	RHEUMATOID ARTHRITIS AND INFLAMMATORY CONNECTIVE TISSUE DISEASE	727	257	0.00
HCC44	SEVERE HEMATOLOGICAL DISORDERS	2,549	492	0.00
HCC45	DISORDERS OF IMMUNITY	1,650	485	0.00
HCC51	DRUG/ALCOHOL PSYCHOSIS	2,971	1,029	0.00
HCC52	DRUG/ALCOHOL DEPENDENCE	1,995	903	0.03
HCC54	SCHIZOPHRENIA	2,210	450	0.00
HCC55	MAJOR DEPRESSIVE, BIPOLAR, AND PARANOID DISORDERS	1,350	246	0.00
HCC67	QUADRIPLEGIA, OTHER EXTENSIVE PARALYSIS	-196	1,034	0.85
HCC68	PARAPLEGIA	4,602	1,382	0.00
HCC69	SPINAL CORD DISORDERS/INJURIES	727	754	0.33
HCC70	MUSCULAR DYSTROPHY	5,655	2,329	0.02
HCC71	POLYNEUROPATHY	846	252	0.00
HCC72	MULTIPLE SCLEROSIS	3,915	857	0.00
HCC73	PARKINSONS AND HUNTINGTONS DISEASES	3,028	408	0.00
HCC74	SEIZURE DISORDERS AND CONVULSIONS	609	301	0.04
HCC75	COMA, BRAIN COMPRESSION/ANOXIC DAMAGE	1,561	1,204	0.20
HCC77	RESPIRATOR	1,267	630	0.04

Coef Name	Label	Coef Value	Std Error	P Value
	DEPENDENCE/TRACHEOSTOMY STATUS			
HCC78	RESPIRATORY ARREST	-622	2,620	0.81
HCC79	CARDIO-RESPIRATORY FAILURE AND SHOCK	949	296	0.00
HCC80	CONGESTIVE HEART FAILURE	546	237	0.02
HCC81	ACUTE MYOCARDIAL INFARCTION	782	618	0.21
HCC82	UNSTABLE ANGINA AND OTHER ACUTE ISCHEMIC HEART DISEASE	93	424	0.83
HCC83	ANGINA PECTORIS/OLD MYOCARDIAL INFARCTION	248	266	0.35
HCC92	SPECIFIED HEART ARRHYTHMIAS	185	150	0.22
HCC95	CEREBRAL HEMORRHAGE	433	831	0.60
HCC96	ISCHEMIC OR UNSPECIFIED STROKE	1,270	329	0.00
HCC100	HEMIPLEGIA/HEMIPARESIS	2,360	521	0.00
HCC101	CEREBRAL PALSY AND OTHER PARALYTIC SYNDROMES	2,230	1,142	0.05
HCC104	VASCULAR DISEASE WITH COMPLICATIONS	1,301	381	0.00
HCC105	VASCULAR DISEASE	978	157	0.00
HCC107	CYSTIC FIBROSIS	-4,809	6,004	0.42
HCC108	CHRONIC OBSTRUCTIVE PULMONARY DISEASE	571	173	0.00
HCC111	ASPIRATION AND SPECIFIED BACTERIAL PNEUMONIAS	-98	551	0.86
HCC112	PNEUMOCOCCAL PNEUMONIA, EMPHYSEMA, LUNG ABSCESS	-1,691	1,040	0.10
HCC119	PROLIFERATIVE DIABETIC RETINOPATHY AND VITREOUS HEMORRHAGE	472	635	0.46
HCC130	DIALYSIS STATUS	1,104	668	0.10
HCC131	RENAL FAILURE	467	227	0.04
HCC132	NEPHRITIS	-787	1,363	0.56
HCC148	DECUBITUS ULCER OF SKIN	1,417	536	0.01
HCC149	CHRONIC ULCER OF SKIN, EXCEPT DECUBITUS	874	364	0.02
HCC150	EXTENSIVE THIRD-DEGREE BURNS	0	0	.
HCC154	SEVERE HEAD INJURY	6,530	3,999	0.10
HCC155	MAJOR HEAD INJURY	-74	625	0.91
HCC157	VERTEBRAL FRACTURES WITHOUT SPINAL CORD INJURY	1,251	553	0.02
HCC158	HIP FRACTURE/DISLOCATION	2,086	616	0.00
HCC161	TRAUMATIC AMPUTATION	4,047	1,683	0.02
HCC164	MAJOR COMPLICATIONS OF MEDICAL	1,447	357	0.00

Coef Name	Label	Coef Value	Std Error	P Value
	CARE AND TRAUMA			
HCC174	MAJOR ORGAN TRANSPLANT STATUS	1,951	711	0.01
HCC176	ARTIFICIAL OPENINGS FOR FEEDING OR ELIMINATION	-412	472	0.38
HCC177	AMPUTATION STATUS, LOWER LIMB/AMPUTATION COMPLICATIONS	1,626	990	0.10
Age_Lt_35		-1,172	442	0.01
Age_Lt_45		-1,399	363	0.00
Age_Lt_55		-1,056	267	0.00
Age_Lt_60		-68	307	0.83
Age_Lt_65		-277	290	0.34
Age_Lt_75		338	186	0.07
Age_Lt_80		1,130	186	0.00
Age_Lt_85		1,868	188	0.00
Age_Lt_90		2,816	202	0.00
Age_Lt_95		3,239	255	0.00
Age_Gt_94		3,878	429	0.00
ORIGDS		667	177	0.00
ESRD		3,440	372	0.00
D_HCC5	DISABLED, OPPORTUNISTISTIC INFECTIONS	230	1,815	0.90
D_HCC44	DISABLED, SEVERE HEMATOLOGICAL DISORDERS	-942	1,029	0.36
D_HCC51	DISABLED, DRUG/ALCOHOL PSYCHOSIS	2,451	1,628	0.13
D_HCC52	DISABLED, DRUG/ALCOHOL DEPENDENCE	-3,181	1,147	0.01
D_HCC107	DISABLED, CYSTIC FIBROSIS	7,472	6,362	0.24
DM_CVD	DIABETES MELLITUS * CEREBROVASCULAR DISEASE	421	494	0.39
CHF_COPD	CONGESTIVE HEART FAILURE*CHRONIC OBSRUCTIVE PULMONARY DISEASE	46	339	0.89
COPD_CVD_CAD	CHRONIC OBSRUCTIVE PULMONARY DISEASE *CEBROVASCULAR DISEASE*CORONARY	-293	1,239	0.81
RF_CHF_DM	DIABETES MELLITUS * CONGESTIVE HEART* RENAL FAILURE	1,134	474	0.02
DM_CHF	DIABETES MELLITUS * CONGESTIVE HEART FAILURE	130	355	0.72
RF_CHF	RENAL FAILURE* CONGESTIVE HEART FAILURE	966	499	0.05
DRG_CD=003	ECMO OR TRACH W MV 96+ HRS OR PDX EXC FACE, MOUTH & NECK W MAJ O.R.	116,017	1,226	0.00

Coef Name	Label	Coef Value	Std Error	P Value
DRG_CD=004	TRACH W MV 96+ HRS OR PDX EXC FACE, MOUTH & NECK W/O MAJ O.R.	98,379	1,672	0.00
DRG_CD=005	LIVER TRANSPLANT W MCC OR INTESTINAL TRANSPLANT	65,313	10,443	0.00
DRG_CD=011	TRACHEOSTOMY FOR FACE,MOUTH & NECK DIAGNOSES W MCC	50,431	613	0.00
DRG_CD=012	TRACHEOSTOMY FOR FACE,MOUTH & NECK DIAGNOSES W CC	29,949	572	0.00
DRG_CD=013	TRACHEOSTOMY FOR FACE,MOUTH & NECK DIAGNOSES W/O CC/MCC	16,695	689	0.00
DRG_CD=129	MAJOR HEAD & NECK PROCEDURES W CC/MCC OR MAJOR DEVICE	14,743	567	0.00
DRG_CD=130	MAJOR HEAD & NECK PROCEDURES W/O CC/MCC	4,570	620	0.00
DRG_CD=131	CRANIAL/FACIAL PROCEDURES W CC/MCC	15,418	619	0.00
DRG_CD=132	CRANIAL/FACIAL PROCEDURES W/O CC/MCC	5,403	697	0.00
DRG_CD=133	OTHER EAR, NOSE, MOUTH & THROAT O.R. PROCEDURES W CC/MCC	11,359	519	0.00
DRG_CD=134	OTHER EAR, NOSE, MOUTH & THROAT O.R. PROCEDURES W/O CC/MCC	1,704	499	0.00
DRG_CD=135	SINUS & MASTOID PROCEDURES W CC/MCC	13,172	938	0.00
DRG_CD=136	SINUS & MASTOID PROCEDURES W/O CC/MCC	2,826	878	0.00
DRG_CD=137	MOUTH PROCEDURES W CC/MCC	6,363	628	0.00
DRG_CD=138	MOUTH PROCEDURES W/O CC/MCC	-309	662	0.64
DRG_CD=139	SALIVARY GLAND PROCEDURES	542	570	0.34
DRG_CD=146	EAR, NOSE, MOUTH & THROAT MALIGNANCY W MCC	23,832	842	0.00
DRG_CD=147	EAR, NOSE, MOUTH & THROAT MALIGNANCY W CC	15,609	663	0.00
DRG_CD=148	EAR, NOSE, MOUTH & THROAT MALIGNANCY W/O CC/MCC	13,527	845	0.00
DRG_CD=149	DYSEQUILIBRIUM	324	405	0.42
DRG_CD=150	EPISTAXIS W MCC	8,604	630	0.00
DRG_CD=151	EPISTAXIS W/O MCC	5	454	0.99
DRG_CD=152	OTITIS MEDIA & URI W MCC	4,167	515	0.00
DRG_CD=153	OTITIS MEDIA & URI W/O MCC	170	421	0.69
DRG_CD=154	OTHER EAR, NOSE, MOUTH & THROAT DIAGNOSES W MCC	10,241	517	0.00
DRG_CD=155	OTHER EAR, NOSE, MOUTH & THROAT DIAGNOSES W CC	4,501	449	0.00
DRG_CD=156	OTHER EAR, NOSE, MOUTH & THROAT DIAGNOSES W/O CC/MCC	808	474	0.09

Coef Name	Label	Coef Value	Std Error	P Value
DRG_CD=157	DENTAL & ORAL DISEASES W MCC	11,539	577	0.00
DRG_CD=158	DENTAL & ORAL DISEASES W CC	4,351	471	0.00
DRG_CD=159	DENTAL & ORAL DISEASES W/O CC/MCC	0	0	.
LTI_Indicator		4,156	301	0.00

Table 24: Respiratory System

Coef Name	Label	Coef Value	Std Error	P Value
Intercept		26,253	112	0.00
HCC1	HIV/AIDS	842	292	0.00
HCC2	SEPTICEMIA/SHOCK	1,557	115	0.00
HCC5	OPPORTUNISTIC INFECTIONS	1,435	231	0.00
HCC7	METASTATIC CANCER AND ACUTE LEUKEMIA	2,122	106	0.00
HCC8	LUNG, UPPER DIGESTIVE TRACT, AND OTHER SEVERE CANCERS	698	85	0.00
HCC9	LYMPHATIC, HEAD AND NECK, BRAIN, AND OTHER MAJOR CANCERS	987	115	0.00
HCC10	BREAST, PROSTATE, COLORECTAL AND OTHER CANCERS AND TUMORS	268	82	0.00
HCC15	DIABETES WITH RENAL OR PERIPHERAL CIRCULATORY MANIFESTATION	1,081	93	0.00
HCC16	DIABETES WITH NEUROLOGIC OR OTHER SPECIFIED MANIFESTATION	836	93	0.00
HCC17	DIABETES WITH ACUTE COMPLICATIONS	1,253	460	0.01
HCC18	DIABETES WITH OPHTHALMOLOGIC OR UNSPECIFIED MANIFESTATION	471	156	0.00
HCC19	DIABETES WITHOUT COMPLICATION	284	49	0.00
HCC21	PROTEIN-CALORIE MALNUTRITION	2,695	104	0.00
HCC25	END-STAGE LIVER DISEASE	1,226	285	0.00
HCC26	CIRRHOSIS OF LIVER	652	239	0.01
HCC27	CHRONIC HEPATITIS	188	280	0.50
HCC31	INTESTINAL OBSTRUCTION/PERFORATION	1,136	141	0.00
HCC32	PANCREATIC DISEASE	413	160	0.01
HCC33	INFLAMMATORY BOWEL DISEASE	299	216	0.17
HCC37	BONE/JOINT/MUSCLE INFECTIONS/NECROSIS	1,026	191	0.00
HCC38	RHEUMATOID ARTHRITIS AND INFLAMMATORY CONNECTIVE TISSUE DISEASE	509	80	0.00

Coef Name	Label	Coef Value	Std Error	P Value
HCC44	SEVERE HEMATOLOGICAL DISORDERS	1,667	157	0.00
HCC45	DISORDERS OF IMMUNITY	1,695	148	0.00
HCC51	DRUG/ALCOHOL PSYCHOSIS	1,023	283	0.00
HCC52	DRUG/ALCOHOL DEPENDENCE	411	246	0.09
HCC54	SCHIZOPHRENIA	2,243	124	0.00
HCC55	MAJOR DEPRESSIVE, BIPOLAR, AND PARANOID DISORDERS	1,529	73	0.00
HCC67	QUADRIPLEGIA, OTHER EXTENSIVE PARALYSIS	173	247	0.48
HCC68	PARAPLEGIA	2,822	347	0.00
HCC69	SPINAL CORD DISORDERS/INJURIES	1,572	241	0.00
HCC70	MUSCULAR DYSTROPHY	805	605	0.18
HCC71	POLYNEUROPATHY	797	79	0.00
HCC72	MULTIPLE SCLEROSIS	747	251	0.00
HCC73	PARKINSONS AND HUNTINGTONS DISEASES	2,557	120	0.00
HCC74	SEIZURE DISORDERS AND CONVULSIONS	516	93	0.00
HCC75	COMA, BRAIN COMPRESSION/ANOXIC DAMAGE	1,270	284	0.00
HCC77	RESPIRATOR DEPENDENCE/TRACHEOSTOMY STATUS	3,463	171	0.00
HCC78	RESPIRATORY ARREST	1,641	452	0.00
HCC79	CARDIO-RESPIRATORY FAILURE AND SHOCK	1,017	56	0.00
HCC80	CONGESTIVE HEART FAILURE	390	74	0.00
HCC81	ACUTE MYOCARDIAL INFARCTION	551	161	0.00
HCC82	UNSTABLE ANGINA AND OTHER ACUTE ISCHEMIC HEART DISEASE	236	127	0.06
HCC83	ANGINA PECTORIS/OLD MYOCARDIAL INFARCTION	-90	82	0.27
HCC92	SPECIFIED HEART ARRHYTHMIAS	418	47	0.00
HCC95	CEREBRAL HEMORRHAGE	2,409	278	0.00
HCC96	ISCHEMIC OR UNSPECIFIED STROKE	1,384	109	0.00
HCC100	HEMIPLEGIA/HEMIPARESIS	2,065	149	0.00
HCC101	CEREBRAL PALSY AND OTHER PARALYTIC SYNDROMES	729	308	0.02
HCC104	VASCULAR DISEASE WITH COMPLICATIONS	1,347	104	0.00
HCC105	VASCULAR DISEASE	760	48	0.00
HCC107	CYSTIC FIBROSIS	-651	1,368	0.63
HCC108	CHRONIC OBSTRUCTIVE PULMONARY DISEASE	281	43	0.00

Coef Name	Label	Coef Value	Std Error	P Value
HCC111	ASPIRATION AND SPECIFIED BACTERIAL PNEUMONIAS	895	105	0.00
HCC112	PNEUMOCOCCAL PNEUMONIA, EMPHYSEMA, LUNG ABSCESS	753	175	0.00
HCC119	PROLIFERATIVE DIABETIC RETINOPATHY AND VITREOUS HEMORRHAGE	-221	247	0.37
HCC130	DIALYSIS STATUS	1,698	199	0.00
HCC131	RENAL FAILURE	672	73	0.00
HCC132	NEPHRITIS	110	424	0.80
HCC148	DECUBITUS ULCER OF SKIN	2,184	118	0.00
HCC149	CHRONIC ULCER OF SKIN, EXCEPT DECUBITUS	1,428	114	0.00
HCC150	EXTENSIVE THIRD-DEGREE BURNS	-3,027	3,058	0.32
HCC154	SEVERE HEAD INJURY	1,418	1,524	0.35
HCC155	MAJOR HEAD INJURY	1,084	255	0.00
HCC157	VERTEBRAL FRACTURES WITHOUT SPINAL CORD INJURY	2,121	136	0.00
HCC158	HIP FRACTURE/DISLOCATION	2,240	154	0.00
HCC161	TRAUMATIC AMPUTATION	2,100	495	0.00
HCC164	MAJOR COMPLICATIONS OF MEDICAL CARE AND TRAUMA	859	107	0.00
HCC174	MAJOR ORGAN TRANSPLANT STATUS	2,136	267	0.00
HCC176	ARTIFICIAL OPENINGS FOR FEEDING OR ELIMINATION	-72	135	0.59
HCC177	AMPUTATION STATUS, LOWER LIMB/AMPUTATION COMPLICATIONS	1,602	272	0.00
Age_Lt_35		-1,480	188	0.00
Age_Lt_45		-1,359	133	0.00
Age_Lt_55		-1,109	86	0.00
Age_Lt_60		-598	92	0.00
Age_Lt_65		-112	85	0.19
Age_Lt_75		508	61	0.00
Age_Lt_80		1,074	62	0.00
Age_Lt_85		1,764	63	0.00
Age_Lt_90		2,634	68	0.00
Age_Lt_95		3,242	85	0.00
Age_Gt_94		3,361	132	0.00
ORIGDS		422	51	0.00
ESRD		3,786	118	0.00
D_HCC5	DISABLED, OPPORTUNISTISTIC INFECTIONS	1,177	474	0.01
D_HCC44	DISABLED, SEVERE HEMATOLOGICAL DISORDERS	-207	371	0.58

Coef Name	Label	Coef Value	Std Error	P Value
D_HCC51	DISABLED, DRUG/ALCOHOL PSYCHOSIS	-961	435	0.03
D_HCC52	DISABLED, DRUG/ALCOHOL DEPENDENCE	-286	320	0.37
D_HCC107	DISABLED, CYSTIC FIBROSIS	1,748	1,430	0.22
DM_CVD	DIABETES MELLITUS * CEREBROVASCULAR DISEASE	252	154	0.10
CHF_COPD	CONGESTIVE HEART FAILURE*CHRONIC OBSRUCTIVE PULMONARY DISEASE	623	81	0.00
COPD_CVD_CAD	CHRONIC OBSRUCTIVE PULMONARY DISEASE *CEBROVASCULAR DISEASE*CORONARY	-560	284	0.05
RF_CHF_DM	DIABETES MELLITUS * CONGESTIVE HEART* RENAL FAILURE	716	127	0.00
DM_CHF	DIABETES MELLITUS * CONGESTIVE HEART FAILURE	153	94	0.10
RF_CHF	RENAL FAILURE* CONGESTIVE HEART FAILURE	194	130	0.14
DRG_CD=001	HEART TRANSPLANT OR IMPLANT OF HEART ASSIST SYSTEM W MCC	167,441	12,606	0.00
DRG_CD=003	ECMO OR TRACH W MV 96+ HRS OR PDX EXC FACE, MOUTH & NECK W MAJ O.R.	147,849	516	0.00
DRG_CD=004	TRACH W MV 96+ HRS OR PDX EXC FACE, MOUTH & NECK W/O MAJ O.R.	98,280	302	0.00
DRG_CD=005	LIVER TRANSPLANT W MCC OR INTESTINAL TRANSPLANT	103,408	8,918	0.00
DRG_CD=007	LUNG TRANSPLANT	59,399	839	0.00
DRG_CD=011	TRACHEOSTOMY FOR FACE,MOUTH & NECK DIAGNOSES W MCC	26,035	2,689	0.00
DRG_CD=012	TRACHEOSTOMY FOR FACE,MOUTH & NECK DIAGNOSES W CC	5,910	3,639	0.10
DRG_CD=013	TRACHEOSTOMY FOR FACE,MOUTH & NECK DIAGNOSES W/O CC/MCC	-10,989	4,457	0.01
DRG_CD=163	MAJOR CHEST PROCEDURES W MCC	16,328	208	0.00
DRG_CD=164	MAJOR CHEST PROCEDURES W CC	-5,256	176	0.00
DRG_CD=165	MAJOR CHEST PROCEDURES W/O CC/MCC	-12,384	204	0.00
DRG_CD=166	OTHER RESP SYSTEM O.R. PROCEDURES W MCC	8,799	187	0.00
DRG_CD=167	OTHER RESP SYSTEM O.R. PROCEDURES W CC	-5,862	191	0.00
DRG_CD=168	OTHER RESP SYSTEM O.R. PROCEDURES W/O CC/MCC	-13,894	323	0.00
DRG_CD=175	PULMONARY EMBOLISM W MCC	-9,390	188	0.00
DRG_CD=176	PULMONARY EMBOLISM W/O MCC	-16,005	142	0.00

Coef Name	Label	Coef Value	Std Error	P Value
DRG_CD=177	RESPIRATORY INFECTIONS & INFLAMMATIONS W MCC	-4,446	133	0.00
DRG_CD=178	RESPIRATORY INFECTIONS & INFLAMMATIONS W CC	-10,910	133	0.00
DRG_CD=179	RESPIRATORY INFECTIONS & INFLAMMATIONS W/O CC/MCC	-15,532	191	0.00
DRG_CD=180	RESPIRATORY NEOPLASMS W MCC	-4,298	213	0.00
DRG_CD=181	RESPIRATORY NEOPLASMS W CC	-9,046	191	0.00
DRG_CD=182	RESPIRATORY NEOPLASMS W/O CC/MCC	-12,380	430	0.00
DRG_CD=183	MAJOR CHEST TRAUMA W MCC	-6,147	371	0.00
DRG_CD=184	MAJOR CHEST TRAUMA W CC	-11,531	282	0.00
DRG_CD=185	MAJOR CHEST TRAUMA W/O CC/MCC	-15,738	424	0.00
DRG_CD=186	PLEURAL EFFUSION W MCC	-8,745	245	0.00
DRG_CD=187	PLEURAL EFFUSION W CC	-12,639	244	0.00
DRG_CD=188	PLEURAL EFFUSION W/O CC/MCC	-16,795	401	0.00
DRG_CD=189	PULMONARY EDEMA & RESPIRATORY FAILURE	-11,735	122	0.00
DRG_CD=190	CHRONIC OBSTRUCTIVE PULMONARY DISEASE W MCC	-14,252	112	0.00
DRG_CD=191	CHRONIC OBSTRUCTIVE PULMONARY DISEASE W CC	-16,165	112	0.00
DRG_CD=192	CHRONIC OBSTRUCTIVE PULMONARY DISEASE W/O CC/MCC	-19,224	114	0.00
DRG_CD=193	SIMPLE PNEUMONIA & PLEURISY W MCC	-10,903	115	0.00
DRG_CD=194	SIMPLE PNEUMONIA & PLEURISY W CC	-15,881	110	0.00
DRG_CD=195	SIMPLE PNEUMONIA & PLEURISY W/O CC/MCC	-19,358	120	0.00
DRG_CD=196	INTERSTITIAL LUNG DISEASE W MCC	-10,218	283	0.00
DRG_CD=197	INTERSTITIAL LUNG DISEASE W CC	-15,215	287	0.00
DRG_CD=198	INTERSTITIAL LUNG DISEASE W/O CC/MCC	-17,739	387	0.00
DRG_CD=199	PNEUMOTHORAX W MCC	-5,917	352	0.00
DRG_CD=200	PNEUMOTHORAX W CC	-13,587	234	0.00
DRG_CD=201	PNEUMOTHORAX W/O CC/MCC	-17,695	357	0.00
DRG_CD=202	BRONCHITIS & ASTHMA W CC/MCC	-17,729	141	0.00
DRG_CD=203	BRONCHITIS & ASTHMA W/O CC/MCC	-20,750	154	0.00
DRG_CD=204	RESPIRATORY SIGNS & SYMPTOMS	-19,228	166	0.00
DRG_CD=205	OTHER RESPIRATORY SYSTEM DIAGNOSES W MCC	-11,225	262	0.00
DRG_CD=206	OTHER RESPIRATORY SYSTEM DIAGNOSES W/O MCC	-17,279	174	0.00
DRG_CD=207	RESPIRATORY SYSTEM DIAGNOSIS W VENTILATOR SUPPORT 96+ HOURS	27,086	190	0.00

Coef Name	Label	Coef Value	Std Error	P Value
DRG_CD=208	RESPIRATORY SYSTEM DIAGNOSIS W VENTILATOR SUPPORT <96 HOURS	0	0	.
LTI_Indicator		4,078	68	0.00

Table 25: Circulatory System

Coef Name	Label	Coef Value	Std Error	P Value
Intercept		7,232	207	0.00
HCC1	HIV/AIDS	509	234	0.03
HCC2	SEPTICEMIA/SHOCK	2,069	98	0.00
HCC5	OPPORTUNISTIC INFECTIONS	844	275	0.00
HCC7	METASTATIC CANCER AND ACUTE LEUKEMIA	2,398	117	0.00
HCC8	LUNG, UPPER DIGESTIVE TRACT, AND OTHER SEVERE CANCERS	998	119	0.00
HCC9	LYMPHATIC, HEAD AND NECK, BRAIN, AND OTHER MAJOR CANCERS	1,004	102	0.00
HCC10	BREAST, PROSTATE, COLORECTAL AND OTHER CANCERS AND TUMORS	-29	58	0.62
HCC15	DIABETES WITH RENAL OR PERIPHERAL CIRCULATORY MANIFESTATION	1,306	61	0.00
HCC16	DIABETES WITH NEUROLOGIC OR OTHER SPECIFIED MANIFESTATION	1,136	66	0.00
HCC17	DIABETES WITH ACUTE COMPLICATIONS	942	335	0.00
HCC18	DIABETES WITH OPHTHALMOLOGIC OR UNSPECIFIED MANIFESTATION	689	103	0.00
HCC19	DIABETES WITHOUT COMPLICATION	465	38	0.00
HCC21	PROTEIN-CALORIE MALNUTRITION	2,279	102	0.00
HCC25	END-STAGE LIVER DISEASE	2,061	229	0.00
HCC26	CIRRHOSIS OF LIVER	829	184	0.00
HCC27	CHRONIC HEPATITIS	445	239	0.06
HCC31	INTESTINAL OBSTRUCTION/PERFORATION	1,259	118	0.00
HCC32	PANCREATIC DISEASE	638	126	0.00
HCC33	INFLAMMATORY BOWEL DISEASE	333	171	0.05
HCC37	BONE/JOINT/MUSCLE INFECTIONS/NECROSIS	1,043	119	0.00
HCC38	RHEUMATOID ARTHRITIS AND INFLAMMATORY CONNECTIVE TISSUE DISEASE	491	66	0.00
HCC44	SEVERE HEMATOLOGICAL DISORDERS	1,560	121	0.00
HCC45	DISORDERS OF IMMUNITY	1,520	160	0.00
HCC51	DRUG/ALCOHOL PSYCHOSIS	914	256	0.00

Coef Name	Label	Coef Value	Std Error	P Value
HCC52	DRUG/ALCOHOL DEPENDENCE	883	233	0.00
HCC54	SCHIZOPHRENIA	2,297	138	0.00
HCC55	MAJOR DEPRESSIVE, BIPOLAR, AND PARANOID DISORDERS	1,517	67	0.00
HCC67	QUADRIPLEGIA, OTHER EXTENSIVE PARALYSIS	910	378	0.02
HCC68	PARAPLEGIA	1,826	343	0.00
HCC69	SPINAL CORD DISORDERS/INJURIES	1,696	214	0.00
HCC70	MUSCULAR DYSTROPHY	2,544	710	0.00
HCC71	POLYNEUROPATHY	635	58	0.00
HCC72	MULTIPLE SCLEROSIS	1,308	265	0.00
HCC73	PARKINSONS AND HUNTINGTONS DISEASES	2,031	107	0.00
HCC74	SEIZURE DISORDERS AND CONVULSIONS	872	86	0.00
HCC75	COMA, BRAIN COMPRESSION/ANOXIC DAMAGE	2,462	299	0.00
HCC77	RESPIRATOR DEPENDENCE/TRACHEOSTOMY STATUS	4,043	245	0.00
HCC78	RESPIRATORY ARREST	2,114	472	0.00
HCC79	CARDIO-RESPIRATORY FAILURE AND SHOCK	1,093	58	0.00
HCC80	CONGESTIVE HEART FAILURE	669	46	0.00
HCC81	ACUTE MYOCARDIAL INFARCTION	11	85	0.89
HCC82	UNSTABLE ANGINA AND OTHER ACUTE ISCHEMIC HEART DISEASE	-250	67	0.00
HCC83	ANGINA PECTORIS/OLD MYOCARDIAL INFARCTION	-411	47	0.00
HCC92	SPECIFIED HEART ARRHYTHMIAS	201	31	0.00
HCC95	CEREBRAL HEMORRHAGE	1,682	222	0.00
HCC96	ISCHEMIC OR UNSPECIFIED STROKE	1,149	82	0.00
HCC100	HEMIPLEGIA/HEMIPARESIS	1,900	121	0.00
HCC101	CEREBRAL PALSY AND OTHER PARALYTIC SYNDROMES	962	348	0.01
HCC104	VASCULAR DISEASE WITH COMPLICATIONS	1,567	66	0.00
HCC105	VASCULAR DISEASE	401	34	0.00
HCC107	CYSTIC FIBROSIS	3,939	1,610	0.01
HCC108	CHRONIC OBSTRUCTIVE PULMONARY DISEASE	588	47	0.00
HCC111	ASPIRATION AND SPECIFIED BACTERIAL PNEUMONIAS	1,364	141	0.00
HCC112	PNEUMOCOCCAL PNEUMONIA, EMPHYSEMA, LUNG ABSCESS	2	209	0.99

Coef Name	Label	Coef Value	Std Error	P Value
HCC119	PROLIFERATIVE DIABETIC RETINOPATHY AND VITREOUS HEMORRHAGE	167	129	0.20
HCC130	DIALYSIS STATUS	242	104	0.02
HCC131	RENAL FAILURE	364	53	0.00
HCC132	NEPHRITIS	-673	305	0.03
HCC148	DECUBITUS ULCER OF SKIN	2,420	99	0.00
HCC149	CHRONIC ULCER OF SKIN, EXCEPT DECUBITUS	1,976	75	0.00
HCC150	EXTENSIVE THIRD-DEGREE BURNS	4,830	2,789	0.08
HCC154	SEVERE HEAD INJURY	5,826	1,506	0.00
HCC155	MAJOR HEAD INJURY	266	218	0.22
HCC157	VERTEBRAL FRACTURES WITHOUT SPINAL CORD INJURY	1,479	131	0.00
HCC158	HIP FRACTURE/DISLOCATION	1,728	130	0.00
HCC161	TRAUMATIC AMPUTATION	1,697	257	0.00
HCC164	MAJOR COMPLICATIONS OF MEDICAL CARE AND TRAUMA	656	63	0.00
HCC174	MAJOR ORGAN TRANSPLANT STATUS	2,185	230	0.00
HCC176	ARTIFICIAL OPENINGS FOR FEEDING OR ELIMINATION	1,214	164	0.00
HCC177	AMPUTATION STATUS, LOWER LIMB/AMPUTATION COMPLICATIONS	1,366	143	0.00
Age_Lt_35		-65	183	0.72
Age_Lt_45		-519	113	0.00
Age_Lt_55		-328	72	0.00
Age_Lt_60		-29	76	0.70
Age_Lt_65		398	69	0.00
Age_Lt_75		419	46	0.00
Age_Lt_80		914	46	0.00
Age_Lt_85		1,532	47	0.00
Age_Lt_90		2,281	50	0.00
Age_Lt_95		2,646	63	0.00
Age_Gt_94		2,814	103	0.00
ORIGDS		561	41	0.00
ESRD		3,841	73	0.00
D_HCC5	DISABLED, OPPORTUNISTISTIC INFECTIONS	843	641	0.19
D_HCC44	DISABLED, SEVERE HEMATOLOGICAL DISORDERS	1,321	337	0.00
D_HCC51	DISABLED, DRUG/ALCOHOL PSYCHOSIS	57	423	0.89
D_HCC52	DISABLED, DRUG/ALCOHOL DEPENDENCE	149	314	0.63
D_HCC107	DISABLED, CYSTIC FIBROSIS	1,026	2,567	0.69

Coef Name	Label	Coef Value	Std Error	P Value
DM_CVD	DIABETES MELLITUS * CEREBROVASCULAR DISEASE	182	113	0.11
CHF_COPD	CONGESTIVE HEART FAILURE*CHRONIC OBSRUCTIVE PULMONARY DISEASE	237	68	0.00
COPD_CVD_CAD	CHRONIC OBSRUCTIVE PULMONARY DISEASE *CEBROVASCULAR DISEASE*CORONARY	454	207	0.03
RF_CHF_DM	DIABETES MELLITUS * CONGESTIVE HEART* RENAL FAILURE	1,003	84	0.00
DM_CHF	DIABETES MELLITUS * CONGESTIVE HEART FAILURE	181	66	0.01
RF_CHF	RENAL FAILURE* CONGESTIVE HEART FAILURE	415	86	0.00
DRG_CD=001	HEART TRANSPLANT OR IMPLANT OF HEART ASSIST SYSTEM W MCC	189,042	704	0.00
DRG_CD=002	HEART TRANSPLANT OR IMPLANT OF HEART ASSIST SYSTEM W/O MCC	111,380	1,247	0.00
DRG_CD=003	ECMO OR TRACH W MV 96+ HRS OR PDX EXC FACE, MOUTH & NECK W MAJ O.R.	181,842	438	0.00
DRG_CD=004	TRACH W MV 96+ HRS OR PDX EXC FACE, MOUTH & NECK W/O MAJ O.R.	135,640	759	0.00
DRG_CD=007	LUNG TRANSPLANT	71,301	5,580	0.00
DRG_CD=009	BONE MARROW TRANSPLANT	37,637	5,582	0.00
DRG_CD=014	ALLOGENEIC BONE MARROW TRANSPLANT	74,347	12,475	0.00
DRG_CD=215	OTHER HEART ASSIST SYSTEM IMPLANT	88,506	2,214	0.00
DRG_CD=216	CARDIAC VALVE & OTH MAJ CARDIOTHORACIC PROC W CARD CATH W MCC	70,874	295	0.00
DRG_CD=217	CARDIAC VALVE & OTH MAJ CARDIOTHORACIC PROC W CARD CATH W CC	43,007	323	0.00
DRG_CD=218	CARDIAC VALVE & OTH MAJ CARDIOTHORACIC PROC W CARD CATH W/O CC/MCC	32,288	586	0.00
DRG_CD=219	CARDIAC VALVE & OTH MAJ CARDIOTHORACIC PROC W/O CARD CATH W MCC	58,308	262	0.00
DRG_CD=220	CARDIAC VALVE & OTH MAJ CARDIOTHORACIC PROC W/O CARD CATH W CC	34,103	247	0.00
DRG_CD=221	CARDIAC VALVE & OTH MAJ CARDIOTHORACIC PROC W/O CARD	27,415	336	0.00

Coef Name	Label	Coef Value	Std Error	P Value
	CATH W/O CC/MCC			
DRG_CD=222	CARDIAC DEFIB IMPLANT W CARDIAC CATH W AMI/HF/SHOCK W MCC	58,285	472	0.00
DRG_CD=223	CARDIAC DEFIB IMPLANT W CARDIAC CATH W AMI/HF/SHOCK W/O MCC	34,093	420	0.00
DRG_CD=224	CARDIAC DEFIB IMPLANT W CARDIAC CATH W/O AMI/HF/SHOCK W MCC	50,969	445	0.00
DRG_CD=225	CARDIAC DEFIB IMPLANT W CARDIAC CATH W/O AMI/HF/SHOCK W/O MCC	32,249	382	0.00
DRG_CD=226	CARDIAC DEFIBRILLATOR IMPLANT W/O CARDIAC CATH W MCC	39,908	325	0.00
DRG_CD=227	CARDIAC DEFIBRILLATOR IMPLANT W/O CARDIAC CATH W/O MCC	24,687	238	0.00
DRG_CD=228	OTHER CARDIOTHORACIC PROCEDURES W MCC	56,792	489	0.00
DRG_CD=229	OTHER CARDIOTHORACIC PROCEDURES W CC	29,759	441	0.00
DRG_CD=230	OTHER CARDIOTHORACIC PROCEDURES W/O CC/MCC	20,445	760	0.00
DRG_CD=231	CORONARY BYPASS W PTCA W MCC	59,375	600	0.00
DRG_CD=232	CORONARY BYPASS W PTCA W/O MCC	36,938	649	0.00
DRG_CD=233	CORONARY BYPASS W CARDIAC CATH W MCC	51,146	262	0.00
DRG_CD=234	CORONARY BYPASS W CARDIAC CATH W/O MCC	29,682	240	0.00
DRG_CD=235	CORONARY BYPASS W/O CARDIAC CATH W MCC	40,088	306	0.00
DRG_CD=236	CORONARY BYPASS W/O CARDIAC CATH W/O MCC	21,661	245	0.00
DRG_CD=237	MAJOR CARDIOVASC PROCEDURES W MCC OR THORACIC AORTIC ANEURYSM REPAIR	40,026	253	0.00
DRG_CD=238	MAJOR CARDIOVASC PROCEDURES W/O MCC	15,535	226	0.00
DRG_CD=239	AMPUTATION FOR CIRC SYS DISORDERS EXC UPPER LIMB & TOE W MCC	41,945	298	0.00
DRG_CD=240	AMPUTATION FOR CIRC SYS DISORDERS EXC UPPER LIMB & TOE W CC	23,886	300	0.00
DRG_CD=241	AMPUTATION FOR CIRC SYS DISORDERS EXC UPPER LIMB & TOE W/O CC/MCC	16,697	579	0.00
DRG_CD=242	PERMANENT CARDIAC PACEMAKER IMPLANT W MCC	22,139	244	0.00
DRG_CD=243	PERMANENT CARDIAC PACEMAKER	12,509	228	0.00

Coef Name	Label	Coef Value	Std Error	P Value
	IMPLANT W CC			
	PERMANENT CARDIAC PACEMAKER			
DRG_CD=244	IMPLANT W/O CC/MCC	6,561	225	0.00
DRG_CD=245	AICD GENERATOR PROCEDURES	19,803	380	0.00
	PERC CARDIOVASC PROC W DRUG-ELUTING STENT W MCC OR 4+			
DRG_CD=246	VESSELS/STENTS	18,318	233	0.00
	PERC CARDIOVASC PROC W DRUG-			
DRG_CD=247	ELUTING STENT W/O MCC	6,921	212	0.00
	PERC CARDIOVASC PROC W NON-DRUG-ELUTING STENT W MCC OR 4+			
DRG_CD=248	VES/STENTS	19,188	270	0.00
	PERC CARDIOVASC PROC W NON-			
DRG_CD=249	DRUG-ELUTING STENT W/O MCC	6,605	229	0.00
	PERC CARDIOVASC PROC W/O			
DRG_CD=250	CORONARY ARTERY STENT W MCC	17,998	307	0.00
	PERC CARDIOVASC PROC W/O			
DRG_CD=251	CORONARY ARTERY STENT W/O MCC	6,268	230	0.00
	OTHER VASCULAR PROCEDURES W			
DRG_CD=252	MCC	22,686	230	0.00
DRG_CD=253	OTHER VASCULAR PROCEDURES W CC	14,883	226	0.00
	OTHER VASCULAR PROCEDURES W/O			
DRG_CD=254	CC/MCC	5,409	226	0.00
	UPPER LIMB & TOE AMPUTATION FOR			
DRG_CD=255	CIRC SYSTEM DISORDERS W MCC	21,525	442	0.00
	UPPER LIMB & TOE AMPUTATION FOR			
DRG_CD=256	CIRC SYSTEM DISORDERS W CC	11,934	427	0.00
	UPPER LIMB & TOE AMPUTATION FOR			
DRG_CD=257	CIRC SYSTEM DISORDERS W/O CC/MCC	5,331	1,036	0.00
	CARDIAC PACEMAKER DEVICE			
DRG_CD=258	REPLACEMENT W MCC	17,669	681	0.00
	CARDIAC PACEMAKER DEVICE			
DRG_CD=259	REPLACEMENT W/O MCC	5,064	357	0.00
	CARDIAC PACEMAKER REVISION			
DRG_CD=260	EXCEPT DEVICE REPLACEMENT W MCC	26,475	569	0.00
	CARDIAC PACEMAKER REVISION			
DRG_CD=261	EXCEPT DEVICE REPLACEMENT W CC	6,286	393	0.00
	CARDIAC PACEMAKER REVISION			
	EXCEPT DEVICE REPLACEMENT W/O			
DRG_CD=262	CC/MCC	1,711	471	0.00
DRG_CD=263	VEIN LIGATION & STRIPPING	8,315	894	0.00
	OTHER CIRCULATORY SYSTEM O.R.			
DRG_CD=264	PROCEDURES	17,610	248	0.00
DRG_CD=265	AICD LEAD PROCEDURES	9,002	541	0.00
	ACUTE MYOCARDIAL INFARCTION,			
DRG_CD=280	DISCHARGED ALIVE W MCC	13,523	220	0.00

Coef Name	Label	Coef Value	Std Error	P Value
DRG_CD=281	ACUTE MYOCARDIAL INFARCTION, DISCHARGED ALIVE W CC	6,139	228	0.00
DRG_CD=282	ACUTE MYOCARDIAL INFARCTION, DISCHARGED ALIVE W/O CC/MCC	2,286	242	0.00
DRG_CD=286	CIRCULATORY DISORDERS EXCEPT AMI, W CARD CATH W MCC	13,431	238	0.00
DRG_CD=287	CIRCULATORY DISORDERS EXCEPT AMI, W CARD CATH W/O MCC	3,452	212	0.00
DRG_CD=288	ACUTE & SUBACUTE ENDOCARDITIS W MCC	31,282	535	0.00
DRG_CD=289	ACUTE & SUBACUTE ENDOCARDITIS W CC	18,603	660	0.00
DRG_CD=290	ACUTE & SUBACUTE ENDOCARDITIS W/O CC/MCC	9,843	1,375	0.00
DRG_CD=291	HEART FAILURE & SHOCK W MCC	8,797	210	0.00
DRG_CD=292	HEART FAILURE & SHOCK W CC	3,861	209	0.00
DRG_CD=293	HEART FAILURE & SHOCK W/O CC/MCC	187	213	0.38
DRG_CD=294	DEEP VEIN THROMBOPHLEBITIS W CC/MCC	3,871	609	0.00
DRG_CD=295	DEEP VEIN THROMBOPHLEBITIS W/O CC/MCC	-1,488	798	0.06
DRG_CD=296	CARDIAC ARREST, UNEXPLAINED W MCC	20,684	1,709	0.00
DRG_CD=297	CARDIAC ARREST, UNEXPLAINED W CC	10,387	3,338	0.00
DRG_CD=298	CARDIAC ARREST, UNEXPLAINED W/O CC/MCC	3,089	5,579	0.58
DRG_CD=299	PERIPHERAL VASCULAR DISORDERS W MCC	8,907	244	0.00
DRG_CD=300	PERIPHERAL VASCULAR DISORDERS W CC	4,343	225	0.00
DRG_CD=301	PERIPHERAL VASCULAR DISORDERS W/O CC/MCC	-62.32264193	233.3367644	0.79
DRG_CD=302	ATHEROSCLEROSIS W MCC	4254.214096	312.8383182	0.00
DRG_CD=303	ATHEROSCLEROSIS W/O MCC	-794.6603217	227.3189594	0.00
DRG_CD=304	HYPERTENSION W MCC	4516.704115	359.4977427	0.00
DRG_CD=305	HYPERTENSION W/O MCC	-1117.437431	226.3455061	0.00
DRG_CD=306	CARDIAC CONGENITAL & VALVULAR DISORDERS W MCC	10489.58191	453.5860595	0.00
DRG_CD=307	CARDIAC CONGENITAL & VALVULAR DISORDERS W/O MCC	5215.302854	348.241145	0.00
DRG_CD=308	CARDIAC ARRHYTHMIA & CONDUCTION DISORDERS W MCC	6517.824387	217.409231	0.00
DRG_CD=309	CARDIAC ARRHYTHMIA & CONDUCTION DISORDERS W CC	2249.183641	213.001002	0.00

Coef Name	Label	Coef Value	Std Error	P Value
DRG_CD=310	CARDIAC ARRHYTHMIA & CONDUCTION DISORDERS W/O CC/MCC	-1583.757593	210.7337293	0.00
DRG_CD=311	ANGINA PECTORIS	-1191.18206	276.346083	0.00
DRG_CD=312	SYNCOPE & COLLAPSE	863.5896581	209.0187439	0.00
DRG_CD=313	CHEST PAIN	-1790.618251	209.5517069	0.00
DRG_CD=314	OTHER CIRCULATORY SYSTEM DIAGNOSES W MCC	12300.83657	225.4767387	0.00
DRG_CD=315	OTHER CIRCULATORY SYSTEM DIAGNOSES W CC	4161.506659	243.624188	0.00
DRG_CD=316	OTHER CIRCULATORY SYSTEM DIAGNOSES W/O CC/MCC	0	0	.
LTI_Indicator		3431.41953	72.26666923	0.00

Table 26: Digestive System

Coef Name	Label	Coef Value	Std Error	P Value
Intercept		5,741	176	0.00
HCC1	HIV/AIDS	292	369	0.43
HCC2	SEPTICEMIA/SHOCK	1,542	161	0.00
HCC5	OPPORTUNISTIC INFECTIONS	813	387	0.04
HCC7	METASTATIC CANCER AND ACUTE LEUKEMIA	3,572	135	0.00
HCC8	LUNG, UPPER DIGESTIVE TRACT, AND OTHER SEVERE CANCERS	2,072	150	0.00
HCC9	LYMPHATIC, HEAD AND NECK, BRAIN, AND OTHER MAJOR CANCERS	1,388	159	0.00
HCC10	BREAST, PROSTATE, COLORECTAL AND OTHER CANCERS AND TUMORS	52	83	0.53
HCC15	DIABETES WITH RENAL OR PERIPHERAL CIRCULATORY MANIFESTATION	820	130	0.00
HCC16	DIABETES WITH NEUROLOGIC OR OTHER SPECIFIED MANIFESTATION	880	130	0.00
HCC17	DIABETES WITH ACUTE COMPLICATIONS	645	616	0.29
HCC18	DIABETES WITH OPHTHALMOLOGIC OR UNSPECIFIED MANIFESTATION	500	214	0.02
HCC19	DIABETES WITHOUT COMPLICATION	464	66	0.00
HCC21	PROTEIN-CALORIE MALNUTRITION	2,437	141	0.00
HCC25	END-STAGE LIVER DISEASE	806	259	0.00
HCC26	CIRRHOSIS OF LIVER	423	253	0.09
HCC27	CHRONIC HEPATITIS	906	366	0.01
HCC31	INTESTINAL	381	103	0.00

Coef Name	Label	Coef Value	Std Error	P Value
	OBSTRUCTION/PERFORATION			
HCC32	PANCREATIC DISEASE	735	148	0.00
HCC33	INFLAMMATORY BOWEL DISEASE	1,263	157	0.00
HCC37	BONE/JOINT/MUSCLE INFECTIONS/NECROSIS	1,010	246	0.00
HCC38	RHEUMATOID ARTHRITIS AND INFLAMMATORY CONNECTIVE TISSUE DISEASE	680	107	0.00
HCC44	SEVERE HEMATOLOGICAL DISORDERS	1,671	201	0.00
HCC45	DISORDERS OF IMMUNITY	1,870	216	0.00
HCC51	DRUG/ALCOHOL PSYCHOSIS	1,649	401	0.00
HCC52	DRUG/ALCOHOL DEPENDENCE	990	359	0.01
HCC54	SCHIZOPHRENIA	2,130	203	0.00
HCC55	MAJOR DEPRESSIVE, BIPOLAR, AND PARANOID DISORDERS	1,265	104	0.00
HCC67	QUADRIPLEGIA, OTHER EXTENSIVE PARALYSIS	642	396	0.10
HCC68	PARAPLEGIA	1,045	435	0.02
HCC69	SPINAL CORD DISORDERS/INJURIES	2,015	338	0.00
HCC70	MUSCULAR DYSTROPHY	2,660	966	0.01
HCC71	POLYNEUROPATHY	785	111	0.00
HCC72	MULTIPLE SCLEROSIS	1,641	340	0.00
HCC73	PARKINSONS AND HUNTINGTONS DISEASES	2,729	178	0.00
HCC74	SEIZURE DISORDERS AND CONVULSIONS	564	136	0.00
HCC75	COMA, BRAIN COMPRESSION/ANOXIC DAMAGE	3,116	492	0.00
HCC77	RESPIRATOR DEPENDENCE/TRACHEOSTOMY STATUS	4,471	367	0.00
HCC78	RESPIRATORY ARREST	889	1,023	0.38
HCC79	CARDIO-RESPIRATORY FAILURE AND SHOCK	1,183	124	0.00
HCC80	CONGESTIVE HEART FAILURE	818	103	0.00
HCC81	ACUTE MYOCARDIAL INFARCTION	785	234	0.00
HCC82	UNSTABLE ANGINA AND OTHER ACUTE ISCHEMIC HEART DISEASE	340	178	0.06
HCC83	ANGINA PECTORIS/OLD MYOCARDIAL INFARCTION	-101	114	0.37
HCC92	SPECIFIED HEART ARRHYTHMIAS	524	66	0.00
HCC95	CEREBRAL HEMORRHAGE	2,619	410	0.00
HCC96	ISCHEMIC OR UNSPECIFIED STROKE	1,381	151	0.00
HCC100	HEMIPLEGIA/HEMIPARESIS	1,936	213	0.00

Coef Name	Label	Coef Value	Std Error	P Value
HCC101	CEREBRAL PALSY AND OTHER PARALYTIC SYNDROMES	943	408	0.02
HCC104	VASCULAR DISEASE WITH COMPLICATIONS	1,303	144	0.00
HCC105	VASCULAR DISEASE	876	67	0.00
HCC107	CYSTIC FIBROSIS	3,586	2,874	0.21
HCC108	CHRONIC OBSTRUCTIVE PULMONARY DISEASE	594	75	0.00
HCC111	ASPIRATION AND SPECIFIED BACTERIAL PNEUMONIAS	1,529	218	0.00
HCC112	PNEUMOCOCCAL PNEUMONIA, EMPHYSEMA, LUNG ABSCESS	214	398	0.59
HCC119	PROLIFERATIVE DIABETIC RETINOPATHY AND VITREOUS HEMORRHAGE	-130	311	0.68
HCC130	DIALYSIS STATUS	1,425	252	0.00
HCC131	RENAL FAILURE	625	90	0.00
HCC132	NEPHRITIS	-463	579	0.42
HCC148	DECUBITUS ULCER OF SKIN	1,920	174	0.00
HCC149	CHRONIC ULCER OF SKIN, EXCEPT DECUBITUS	1,245	160	0.00
HCC150	EXTENSIVE THIRD-DEGREE BURNS	10,176	5,949	0.09
HCC154	SEVERE HEAD INJURY	3,480	2,595	0.18
HCC155	MAJOR HEAD INJURY	892	385	0.02
HCC157	VERTEBRAL FRACTURES WITHOUT SPINAL CORD INJURY	2,053	206	0.00
HCC158	HIP FRACTURE/DISLOCATION	2,579	219	0.00
HCC161	TRAUMATIC AMPUTATION	2,125	617	0.00
HCC164	MAJOR COMPLICATIONS OF MEDICAL CARE AND TRAUMA	1,061	125	0.00
HCC174	MAJOR ORGAN TRANSPLANT STATUS	436	346	0.21
HCC176	ARTIFICIAL OPENINGS FOR FEEDING OR ELIMINATION	271	130	0.04
HCC177	AMPUTATION STATUS, LOWER LIMB/AMPUTATION COMPLICATIONS	1,279	346	0.00
Age_Lt_35		-63	213	0.77
Age_Lt_45		-104	160	0.52
Age_Lt_55		-119	118	0.31
Age_Lt_60		547	134	0.00
Age_Lt_65		589	125	0.00
Age_Lt_75		455	81	0.00
Age_Lt_80		1,015	81	0.00
Age_Lt_85		1,769	83	0.00
Age_Lt_90		2,739	90	0.00

Coef Name	Label	Coef Value	Std Error	P Value
Age_Lt_95		3,178	115	0.00
Age_Gt_94		3,220	193	0.00
ORIGDS		765	77	0.00
ESRD		3,392	152	0.00
D_HCC5	DISABLED, OPPORTUNISTISTIC INFECTIONS	1,514	746	0.04
D_HCC44	DISABLED, SEVERE HEMATOLOGICAL DISORDERS	752	463	0.10
D_HCC51	DISABLED, DRUG/ALCOHOL PSYCHOSIS	-932	574	0.10
D_HCC52	DISABLED, DRUG/ALCOHOL DEPENDENCE	-396	448	0.38
D_HCC107	DISABLED, CYSTIC FIBROSIS	-2,574	3,271	0.43
DM_CVD	DIABETES MELLITUS * CEREBROVASCULAR DISEASE	-105	218	0.63
CHF_COPD	CONGESTIVE HEART FAILURE*CHRONIC OBSRUCTIVE PULMONARY DISEASE	117	143	0.41
COPD_CVD_CAD	CHRONIC OBSRUCTIVE PULMONARY DISEASE *CEBROVASCULAR DISEASE*CORONARY	446	517	0.39
RF_CHF_DM	DIABETES MELLITUS * CONGESTIVE HEART* RENAL FAILURE	703	189	0.00
DM_CHF	DIABETES MELLITUS * CONGESTIVE HEART FAILURE	138	156	0.38
RF_CHF	RENAL FAILURE* CONGESTIVE HEART FAILURE	-120	192	0.53
DRG_CD=001	HEART TRANSPLANT OR IMPLANT OF HEART ASSIST SYSTEM W MCC	163,475	15,740	0.00
DRG_CD=003	ECMO OR TRACH W MV 96+ HRS OR PDX EXC FACE, MOUTH & NECK W MAJ O.R.	176,240	624	0.00
DRG_CD=004	TRACH W MV 96+ HRS OR PDX EXC FACE, MOUTH & NECK W/O MAJ O.R.	120,147	1,396	0.00
DRG_CD=005	LIVER TRANSPLANT W MCC OR INTESTINAL TRANSPLANT	148,158	5,570	0.00
DRG_CD=009	BONE MARROW TRANSPLANT	139,190	15,744	0.00
DRG_CD=011	TRACHEOSTOMY FOR FACE,MOUTH & NECK DIAGNOSES W MCC	98,776	7,869	0.00
DRG_CD=012	TRACHEOSTOMY FOR FACE,MOUTH & NECK DIAGNOSES W CC	50,383	9,086	0.00
DRG_CD=013	TRACHEOSTOMY FOR FACE,MOUTH & NECK DIAGNOSES W/O CC/MCC	19,506	11,129	0.08
DRG_CD=326	STOMACH, ESOPHAGEAL & DUODENAL PROC W MCC	45,043	301	0.00
DRG_CD=327	STOMACH, ESOPHAGEAL & DUODENAL PROC W CC	17,282	286	0.00

Coef Name	Label	Coef Value	Std Error	P Value
DRG_CD=328	STOMACH, ESOPHAGEAL & DUODENAL PROC W/O CC/MCC	5,152	281	0.00
DRG_CD=329	MAJOR SMALL & LARGE BOWEL PROCEDURES W MCC	41,532	205	0.00
DRG_CD=330	MAJOR SMALL & LARGE BOWEL PROCEDURES W CC	16,025	193	0.00
DRG_CD=331	MAJOR SMALL & LARGE BOWEL PROCEDURES W/O CC/MCC	7,029	219	0.00
DRG_CD=332	RECTAL RESECTION W MCC	36,226	620	0.00
DRG_CD=333	RECTAL RESECTION W CC	15,589	358	0.00
DRG_CD=334	RECTAL RESECTION W/O CC/MCC	7,110	423	0.00
DRG_CD=335	PERITONEAL ADHESIOLYSIS W MCC	31,578	325	0.00
DRG_CD=336	PERITONEAL ADHESIOLYSIS W CC	13,331	266	0.00
DRG_CD=337	PERITONEAL ADHESIOLYSIS W/O CC/MCC	5,825	305	0.00
DRG_CD=338	APPENDECTOMY W COMPLICATED PRINCIPAL DIAG W MCC	23,940	599	0.00
DRG_CD=339	APPENDECTOMY W COMPLICATED PRINCIPAL DIAG W CC	8,917	425	0.00
DRG_CD=340	APPENDECTOMY W COMPLICATED PRINCIPAL DIAG W/O CC/MCC	3,426	421	0.00
DRG_CD=341	APPENDECTOMY W/O COMPLICATED PRINCIPAL DIAG W MCC	15,444	743	0.00
DRG_CD=342	APPENDECTOMY W/O COMPLICATED PRINCIPAL DIAG W CC	4,704	454	0.00
DRG_CD=343	APPENDECTOMY W/O COMPLICATED PRINCIPAL DIAG W/O CC/MCC	1,329	324	0.00
DRG_CD=344	MINOR SMALL & LARGE BOWEL PROCEDURES W MCC	24,304	780	0.00
DRG_CD=345	MINOR SMALL & LARGE BOWEL PROCEDURES W CC	7,984	445	0.00
DRG_CD=346	MINOR SMALL & LARGE BOWEL PROCEDURES W/O CC/MCC	2,457	462	0.00
DRG_CD=347	ANAL & STOMAL PROCEDURES W MCC	17,387	607	0.00
DRG_CD=348	ANAL & STOMAL PROCEDURES W CC	6,773	396	0.00
DRG_CD=349	ANAL & STOMAL PROCEDURES W/O CC/MCC	1,106	401	0.01
DRG_CD=350	INGUINAL & FEMORAL HERNIA PROCEDURES W MCC	16,557	568	0.00
DRG_CD=351	INGUINAL & FEMORAL HERNIA PROCEDURES W CC	5,958	378	0.00
DRG_CD=352	INGUINAL & FEMORAL HERNIA PROCEDURES W/O CC/MCC	692	332	0.04
DRG_CD=353	HERNIA PROCEDURES EXCEPT INGUINAL & FEMORAL W MCC	19,289	414	0.00
DRG_CD=354	HERNIA PROCEDURES EXCEPT	6,724	282	0.00

Coef Name	Label	Coef Value	Std Error	P Value
DRG_CD=355	INGUINAL & FEMORAL W CC HERNIA PROCEDURES EXCEPT INGUINAL & FEMORAL W/O CC/MCC	2,029	257	0.00
DRG_CD=356	OTHER DIGESTIVE SYSTEM O.R. PROCEDURES W MCC	31,462	362	0.00
DRG_CD=357	OTHER DIGESTIVE SYSTEM O.R. PROCEDURES W CC	13,053	352	0.00
DRG_CD=358	OTHER DIGESTIVE SYSTEM O.R. PROCEDURES W/O CC/MCC	5,403	559	0.00
DRG_CD=368	MAJOR ESOPHAGEAL DISORDERS W MCC	11,587	459	0.00
DRG_CD=369	MAJOR ESOPHAGEAL DISORDERS W CC	4,431	382	0.00
DRG_CD=370	MAJOR ESOPHAGEAL DISORDERS W/O CC/MCC	1,088	635	0.09
DRG_CD=371	MAJOR GASTROINTESTINAL DISORDERS & PERITONEAL INFECTIONS W MCC	14,801	243	0.00
DRG_CD=372	MAJOR GASTROINTESTINAL DISORDERS & PERITONEAL INFECTIONS W CC	7,510	225	0.00
DRG_CD=373	MAJOR GASTROINTESTINAL DISORDERS & PERITONEAL INFECTIONS W/O CC/MCC	2,776	290	0.00
DRG_CD=374	DIGESTIVE MALIGNANCY W MCC	18,423	387	0.00
DRG_CD=375	DIGESTIVE MALIGNANCY W CC	13,654	282	0.00
DRG_CD=376	DIGESTIVE MALIGNANCY W/O CC/MCC	9,567	531	0.00
DRG_CD=377	G.I. HEMORRHAGE W MCC	10,651	198	0.00
DRG_CD=378	G.I. HEMORRHAGE W CC	3,270	179	0.00
DRG_CD=379	G.I. HEMORRHAGE W/O CC/MCC	58	199	0.77
DRG_CD=380	COMPLICATED PEPTIC ULCER W MCC	12,569	477	0.00
DRG_CD=381	COMPLICATED PEPTIC ULCER W CC	4,925	374	0.00
DRG_CD=382	COMPLICATED PEPTIC ULCER W/O CC/MCC	1,782	511	0.00
DRG_CD=383	UNCOMPLICATED PEPTIC ULCER W MCC	7,933	643	0.00
DRG_CD=384	UNCOMPLICATED PEPTIC ULCER W/O MCC	1,913	318	0.00
DRG_CD=385	INFLAMMATORY BOWEL DISEASE W MCC	12,456	509	0.00
DRG_CD=386	INFLAMMATORY BOWEL DISEASE W CC	4,716	321	0.00
DRG_CD=387	INFLAMMATORY BOWEL DISEASE W/O CC/MCC	1,898	407	0.00
DRG_CD=388	G.I. OBSTRUCTION W MCC	10,058	239	0.00
DRG_CD=389	G.I. OBSTRUCTION W CC	3,492	198	0.00
DRG_CD=390	G.I. OBSTRUCTION W/O CC/MCC	-516	201	0.01

Coef Name	Label	Coef Value	Std Error	P Value
DRG_CD=391	ESOPHAGITIS, GASTROENT & MISC DIGEST DISORDERS W MCC	6,190	196	0.00
DRG_CD=392	ESOPHAGITIS, GASTROENT & MISC DIGEST DISORDERS W/O MCC	1,064	172	0.00
DRG_CD=393	OTHER DIGESTIVE SYSTEM DIAGNOSES W MCC	10,777	238	0.00
DRG_CD=394	OTHER DIGESTIVE SYSTEM DIAGNOSES W CC	3,762	203	0.00
DRG_CD=395	OTHER DIGESTIVE SYSTEM DIAGNOSES W/O CC/MCC	0	0	.
LTI_Indicator		3,814	111	0.00

Table 27: Hepatobiliary System and Pancreas

Coef Name	Label	Coef Value	Std Error	P Value
Intercept		8,856	197	0.00
HCC1	HIV/AIDS	1,475	447	0.00
HCC2	SEPTICEMIA/SHOCK	889	266	0.00
HCC5	OPPORTUNISTIC INFECTIONS	914	807	0.26
HCC7	METASTATIC CANCER AND ACUTE LEUKEMIA	586	229	0.01
HCC8	LUNG, UPPER DIGESTIVE TRACT, AND OTHER SEVERE CANCERS	873	190	0.00
HCC9	LYMPHATIC, HEAD AND NECK, BRAIN, AND OTHER MAJOR CANCERS	678	318	0.03
HCC10	BREAST, PROSTATE, COLORECTAL AND OTHER CANCERS AND TUMORS	249	179	0.16
HCC15	DIABETES WITH RENAL OR PERIPHERAL CIRCULATORY MANIFESTATION	1,132	206	0.00
HCC16	DIABETES WITH NEUROLOGIC OR OTHER SPECIFIED MANIFESTATION	727	199	0.00
HCC17	DIABETES WITH ACUTE COMPLICATIONS	2,444	844	0.00
HCC18	DIABETES WITH OPHTHALMOLOGIC OR UNSPECIFIED MANIFESTATION	454	315	0.15
HCC19	DIABETES WITHOUT COMPLICATION	465	99	0.00
HCC21	PROTEIN-CALORIE MALNUTRITION	2,289	236	0.00
HCC25	END-STAGE LIVER DISEASE	784	189	0.00
HCC26	CIRRHOSIS OF LIVER	-462	204	0.02
HCC27	CHRONIC HEPATITIS	-445	390	0.25
HCC31	INTESTINAL OBSTRUCTION/PERFORATION	1,068	218	0.00
HCC32	PANCREATIC DISEASE	734	133	0.00
HCC33	INFLAMMATORY BOWEL DISEASE	-16	374	0.97

Coef Name	Label	Coef Value	Std Error	P Value
HCC37	BONE/JOINT/MUSCLE INFECTIONS/NECROSIS	685	438	0.12
HCC38	RHEUMATOID ARTHRITIS AND INFLAMMATORY CONNECTIVE TISSUE DISEASE	682	193	0.00
HCC44	SEVERE HEMATOLOGICAL DISORDERS	566	286	0.05
HCC45	DISORDERS OF IMMUNITY	792	370	0.03
HCC51	DRUG/ALCOHOL PSYCHOSIS	618	649	0.34
HCC52	DRUG/ALCOHOL DEPENDENCE	1,202	392	0.00
HCC54	SCHIZOPHRENIA	1,116	310	0.00
HCC55	MAJOR DEPRESSIVE, BIPOLAR, AND PARANOID DISORDERS	1,152	168	0.00
HCC67	QUADRIPLEGIA, OTHER EXTENSIVE PARALYSIS	1,504	909	0.10
HCC68	PARAPLEGIA	1,553	859	0.07
HCC69	SPINAL CORD DISORDERS/INJURIES	3,119	591	0.00
HCC70	MUSCULAR DYSTROPHY	-838	1,820	0.65
HCC71	POLYNEUROPATHY	576	185	0.00
HCC72	MULTIPLE SCLEROSIS	1,786	648	0.01
HCC73	PARKINSONS AND HUNTINGTONS DISEASES	2,284	362	0.00
HCC74	SEIZURE DISORDERS AND CONVULSIONS	1,414	226	0.00
HCC75	COMA, BRAIN COMPRESSION/ANOXIC DAMAGE	-992	844	0.24
HCC77	RESPIRATOR DEPENDENCE/TRACHEOSTOMY STATUS	2,675	754	0.00
HCC78	RESPIRATORY ARREST	2,093	1,771	0.24
HCC79	CARDIO-RESPIRATORY FAILURE AND SHOCK	1,421	214	0.00
HCC80	CONGESTIVE HEART FAILURE	990	185	0.00
HCC81	ACUTE MYOCARDIAL INFARCTION	505	444	0.26
HCC82	UNSTABLE ANGINA AND OTHER ACUTE ISCHEMIC HEART DISEASE	314	307	0.31
HCC83	ANGINA PECTORIS/OLD MYOCARDIAL INFARCTION	168	196	0.39
HCC92	SPECIFIED HEART ARRHYTHMIAS	489	120	0.00
HCC95	CEREBRAL HEMORRHAGE	981	695	0.16
HCC96	ISCHEMIC OR UNSPECIFIED STROKE	1,983	297	0.00
HCC100	HEMIPLEGIA/HEMIPARESIS	1,626	421	0.00
HCC101	CEREBRAL PALSY AND OTHER PARALYTIC SYNDROMES	1,674	786	0.03
HCC104	VASCULAR DISEASE WITH COMPLICATIONS	1,368	276	0.00

Coef Name	Label	Coef Value	Std Error	P Value
HCC105	VASCULAR DISEASE	664	119	0.00
HCC107	CYSTIC FIBROSIS	-97	3,940	0.98
HCC108	CHRONIC OBSTRUCTIVE PULMONARY DISEASE	428	130	0.00
HCC111	ASPIRATION AND SPECIFIED BACTERIAL PNEUMONIAS	842	443	0.06
HCC112	PNEUMOCOCCAL PNEUMONIA, EMPHYSEMA, LUNG ABSCESS	1,289	715	0.07
HCC119	PROLIFERATIVE DIABETIC RETINOPATHY AND VITREOUS HEMORRHAGE	182	478	0.70
HCC130	DIALYSIS STATUS	1,452	422	0.00
HCC131	RENAL FAILURE	612	145	0.00
HCC132	NEPHRITIS	-1,250	934	0.18
HCC148	DECUBITUS ULCER OF SKIN	3,592	381	0.00
HCC149	CHRONIC ULCER OF SKIN, EXCEPT DECUBITUS	1,347	284	0.00
HCC150	EXTENSIVE THIRD-DEGREE BURNS	0	0	.
HCC154	SEVERE HEAD INJURY	2,415	3,365	0.47
HCC155	MAJOR HEAD INJURY	824	612	0.18
HCC157	VERTEBRAL FRACTURES WITHOUT SPINAL CORD INJURY	2,103	391	0.00
HCC158	HIP FRACTURE/DISLOCATION	2,822	409	0.00
HCC161	TRAUMATIC AMPUTATION	2,207	1,189	0.06
HCC164	MAJOR COMPLICATIONS OF MEDICAL CARE AND TRAUMA	346	222	0.12
HCC174	MAJOR ORGAN TRANSPLANT STATUS	2,925	383	0.00
HCC176	ARTIFICIAL OPENINGS FOR FEEDING OR ELIMINATION	817	347	0.02
HCC177	AMPUTATION STATUS, LOWER LIMB/AMPUTATION COMPLICATIONS	1,361	597	0.02
Age_Lt_35		233	302	0.44
Age_Lt_45		-760	219	0.00
Age_Lt_55		-767	162	0.00
Age_Lt_60		-432	182	0.02
Age_Lt_65		105	185	0.57
Age_Lt_75		188	127	0.14
Age_Lt_80		703	132	0.00
Age_Lt_85		1,516	138	0.00
Age_Lt_90		2,270	157	0.00
Age_Lt_95		3,107	218	0.00
Age_Gt_94		3,072	390	0.00
ORIGDS		535	133	0.00
ESRD		3,581	241	0.00

Coef Name	Label	Coef Value	Std Error	P Value
D_HCC5	DISABLED, OPPORTUNISTISTIC INFECTIONS	1,413	1,232	0.25
D_HCC44	DISABLED, SEVERE HEMATOLOGICAL DISORDERS	1,062	432	0.01
D_HCC51	DISABLED, DRUG/ALCOHOL PSYCHOSIS	-239	759	0.75
D_HCC52	DISABLED, DRUG/ALCOHOL DEPENDENCE	-925	461	0.04
D_HCC107	DISABLED, CYSTIC FIBROSIS	-194	4,318	0.96
DM_CVD	DIABETES MELLITUS * CEREBROVASCULAR DISEASE	-405	405	0.32
CHF_COPD	CONGESTIVE HEART FAILURE*CHRONIC OBSRUCTIVE PULMONARY DISEASE	64	257	0.80
COPD_CVD_CAD	CHRONIC OBSRUCTIVE PULMONARY DISEASE *CEBROVASCULAR DISEASE*CORONARY	169	1,006	0.87
RF_CHF_DM	DIABETES MELLITUS * CONGESTIVE HEART* RENAL FAILURE	381	314	0.23
DM_CHF	DIABETES MELLITUS * CONGESTIVE HEART FAILURE	-77	265	0.77
RF_CHF	RENAL FAILURE* CONGESTIVE HEART FAILURE	347	347	0.32
DRG_CD=003	ECMO OR TRACH W MV 96+ HRS OR PDX EXC FACE, MOUTH & NECK W MAJ O.R.	202,270	1,265	0.00
DRG_CD=004	TRACH W MV 96+ HRS OR PDX EXC FACE, MOUTH & NECK W/O MAJ O.R.	150,444	1,604	0.00
DRG_CD=005	LIVER TRANSPLANT W MCC OR INTESTINAL TRANSPLANT	79,127	802	0.00
DRG_CD=006	LIVER TRANSPLANT W/O MCC	38,886	1,143	0.00
DRG_CD=008	SIMULTANEOUS PANCREAS/KIDNEY TRANSPLANT	100,247	12,464	0.00
DRG_CD=009	BONE MARROW TRANSPLANT	364,621	12,488	0.00
DRG_CD=010	PANCREAS TRANSPLANT	42,766	3,766	0.00
DRG_CD=405	PANCREAS, LIVER & SHUNT PROCEDURES W MCC	40,145	379	0.00
DRG_CD=406	PANCREAS, LIVER & SHUNT PROCEDURES W CC	15,083	332	0.00
DRG_CD=407	PANCREAS, LIVER & SHUNT PROCEDURES W/O CC/MCC	6,835	445	0.00
DRG_CD=408	BILIARY TRACT PROC EXCEPT ONLY CHOLECYST W OR W/O C.D.E. W MCC	29,186	576	0.00
DRG_CD=409	BILIARY TRACT PROC EXCEPT ONLY CHOLECYST W OR W/O C.D.E. W CC	12,314	563	0.00
DRG_CD=410	BILIARY TRACT PROC EXCEPT ONLY CHOLECYST W OR W/O C.D.E. W/O	6,223	911	0.00

Coef Name	Label	Coef Value	Std Error	P Value
	CC/MCC			
DRG_CD=411	CHOLECYSTECTOMY W C.D.E. W MCC	25,728	728	0.00
DRG_CD=412	CHOLECYSTECTOMY W C.D.E. W CC	13,267	725	0.00
DRG_CD=413	CHOLECYSTECTOMY W C.D.E. W/O CC/MCC	5,186	814	0.00
DRG_CD=414	CHOLECYSTECTOMY EXCEPT BY LAPAROSCOPE W/O C.D.E. W MCC	23,014	332	0.00
DRG_CD=415	CHOLECYSTECTOMY EXCEPT BY LAPAROSCOPE W/O C.D.E. W CC	8,436	311	0.00
DRG_CD=416	CHOLECYSTECTOMY EXCEPT BY LAPAROSCOPE W/O C.D.E. W/O CC/MCC	1,672	338	0.00
DRG_CD=417	LAPAROSCOPIC CHOLECYSTECTOMY W/O C.D.E. W MCC	13,334	218	0.00
DRG_CD=418	LAPAROSCOPIC CHOLECYSTECTOMY W/O C.D.E. W CC	5,312	206	0.00
DRG_CD=419	LAPAROSCOPIC CHOLECYSTECTOMY W/O C.D.E. W/O CC/MCC	239	204	0.24
DRG_CD=420	HEPATOBILIARY DIAGNOSTIC PROCEDURES W MCC	28,841	940	0.00
DRG_CD=421	HEPATOBILIARY DIAGNOSTIC PROCEDURES W CC	9,461	752	0.00
DRG_CD=422	HEPATOBILIARY DIAGNOSTIC PROCEDURES W/O CC/MCC	3,590	1,423	0.01
DRG_CD=423	OTHER HEPATOBILIARY OR PANCREAS O.R. PROCEDURES W MCC	33,520	696	0.00
DRG_CD=424	OTHER HEPATOBILIARY OR PANCREAS O.R. PROCEDURES W CC	15,299	936	0.00
DRG_CD=425	OTHER HEPATOBILIARY OR PANCREAS O.R. PROCEDURES W/O CC/MCC	6,277	1,977	0.00
DRG_CD=432	CIRRHOSIS & ALCOHOLIC HEPATITIS W MCC	9,501	287	0.00
DRG_CD=433	CIRRHOSIS & ALCOHOLIC HEPATITIS W CC	2,755	315	0.00
DRG_CD=434	CIRRHOSIS & ALCOHOLIC HEPATITIS W/O CC/MCC	1,258	1,096	0.25
DRG_CD=435	MALIGNANCY OF HEPATOBILIARY SYSTEM OR PANCREAS W MCC	14,058	304	0.00
DRG_CD=436	MALIGNANCY OF HEPATOBILIARY SYSTEM OR PANCREAS W CC	8,040	309	0.00
DRG_CD=437	MALIGNANCY OF HEPATOBILIARY SYSTEM OR PANCREAS W/O CC/MCC	5,288	533	0.00
DRG_CD=438	DISORDERS OF PANCREAS EXCEPT MALIGNANCY W MCC	9,598	236	0.00
DRG_CD=439	DISORDERS OF PANCREAS EXCEPT MALIGNANCY W CC	1,246	213	0.00

Coef Name	Label	Coef Value	Std Error	P Value
DRG_CD=440	DISORDERS OF PANCREAS EXCEPT MALIGNANCY W/O CC/MCC	-2,198	218	0.00
DRG_CD=441	DISORDERS OF LIVER EXCEPT MALIG,CIRR,ALC HEPA W MCC	12,118	268	0.00
DRG_CD=442	DISORDERS OF LIVER EXCEPT MALIG,CIRR,ALC HEPA W CC	3,735	258	0.00
DRG_CD=443	DISORDERS OF LIVER EXCEPT MALIG,CIRR,ALC HEPA W/O CC/MCC	-303	346	0.38
DRG_CD=444	DISORDERS OF THE BILIARY TRACT W MCC	8,213	246	0.00
DRG_CD=445	DISORDERS OF THE BILIARY TRACT W CC	3,018	228	0.00
DRG_CD=446	DISORDERS OF THE BILIARY TRACT W/O CC/MCC	0	0	.
LTI_Indicator		5,531	229	0.00

Table 28: Musculoskeletal System and Connective Tissue

Coef Name	Label	Coef Value	Std Error	P Value
Intercept		7,096	467	0.00
HCC1	HIV/AIDS	1,566	316	0.00
HCC2	SEPTICEMIA/SHOCK	1,412	165	0.00
HCC5	OPPORTUNISTIC INFECTIONS	853	409	0.04
HCC7	METASTATIC CANCER AND ACUTE LEUKEMIA	2,333	143	0.00
HCC8	LUNG, UPPER DIGESTIVE TRACT, AND OTHER SEVERE CANCERS	964	173	0.00
HCC9	LYMPHATIC, HEAD AND NECK, BRAIN, AND OTHER MAJOR CANCERS	426	124	0.00
HCC10	BREAST, PROSTATE, COLORECTAL AND OTHER CANCERS AND TUMORS	-170	68	0.01
HCC15	DIABETES WITH RENAL OR PERIPHERAL CIRCULATORY MANIFESTATION	2,432	95	0.00
HCC16	DIABETES WITH NEUROLOGIC OR OTHER SPECIFIED MANIFESTATION	2,251	90	0.00
HCC17	DIABETES WITH ACUTE COMPLICATIONS	2,875	529	0.00
HCC18	DIABETES WITH OPHTHALMOLOGIC OR UNSPECIFIED MANIFESTATION	1,514	152	0.00
HCC19	DIABETES WITHOUT COMPLICATION	1,003	43	0.00
HCC21	PROTEIN-CALORIE MALNUTRITION	1,378	158	0.00
HCC25	END-STAGE LIVER DISEASE	1,920	340	0.00
HCC26	CIRRHOSIS OF LIVER	1,319	253	0.00
HCC27	CHRONIC HEPATITIS	905	294	0.00

Coef Name	Label	Coef Value	Std Error	P Value
HCC31	INTESTINAL OBSTRUCTION/PERFORATION	701	178	0.00
HCC32	PANCREATIC DISEASE	711	180	0.00
HCC33	INFLAMMATORY BOWEL DISEASE	-218	204	0.29
HCC37	BONE/JOINT/MUSCLE INFECTIONS/NECROSIS	340	92	0.00
HCC38	RHEUMATOID ARTHRITIS AND INFLAMMATORY CONNECTIVE TISSUE DISEASE	768	62	0.00
HCC44	SEVERE HEMATOLOGICAL DISORDERS	1,435	183	0.00
HCC45	DISORDERS OF IMMUNITY	1,172	215	0.00
HCC51	DRUG/ALCOHOL PSYCHOSIS	1,241	317	0.00
HCC52	DRUG/ALCOHOL DEPENDENCE	1,297	268	0.00
HCC54	SCHIZOPHRENIA	3,512	174	0.00
HCC55	MAJOR DEPRESSIVE, BIPOLAR, AND PARANOID DISORDERS	1,965	74	0.00
HCC67	QUADRIPLEGIA, OTHER EXTENSIVE PARALYSIS	2,837	366	0.00
HCC68	PARAPLEGIA	3,981	318	0.00
HCC69	SPINAL CORD DISORDERS/INJURIES	1,936	166	0.00
HCC70	MUSCULAR DYSTROPHY	1,431	879	0.10
HCC71	POLYNEUROPATHY	968	71	0.00
HCC72	MULTIPLE SCLEROSIS	3,100	244	0.00
HCC73	PARKINSONS AND HUNTINGTONS DISEASES	4,035	117	0.00
HCC74	SEIZURE DISORDERS AND CONVULSIONS	1,362	112	0.00
HCC75	COMA, BRAIN COMPRESSION/ANOXIC DAMAGE	582	508	0.25
HCC77	RESPIRATOR DEPENDENCE/TRACHEOSTOMY STATUS	4,577	498	0.00
HCC78	RESPIRATORY ARREST	2,661	960	0.01
HCC79	CARDIO-RESPIRATORY FAILURE AND SHOCK	1,016	111	0.00
HCC80	CONGESTIVE HEART FAILURE	985	75	0.00
HCC81	ACUTE MYOCARDIAL INFARCTION	327	254	0.20
HCC82	UNSTABLE ANGINA AND OTHER ACUTE ISCHEMIC HEART DISEASE	-76	150	0.61
HCC83	ANGINA PECTORIS/OLD MYOCARDIAL INFARCTION	-225	82	0.01
HCC92	SPECIFIED HEART ARRHYTHMIAS	448	47	0.00
HCC95	CEREBRAL HEMORRHAGE	973	313	0.00
HCC96	ISCHEMIC OR UNSPECIFIED STROKE	1,756	119	0.00

Coef Name	Label	Coef Value	Std Error	P Value
HCC100	HEMIPLEGIA/HEMIPARESIS	2,553	189	0.00
HCC101	CEREBRAL PALSY AND OTHER PARALYTIC SYNDROMES	3,560	359	0.00
HCC104	VASCULAR DISEASE WITH COMPLICATIONS	1,501	115	0.00
HCC105	VASCULAR DISEASE	831	48	0.00
HCC107	CYSTIC FIBROSIS	-801	2,090	0.70
HCC108	CHRONIC OBSTRUCTIVE PULMONARY DISEASE	811	53	0.00
HCC111	ASPIRATION AND SPECIFIED BACTERIAL PNEUMONIAS	-199	252	0.43
HCC112	PNEUMOCOCCAL PNEUMONIA, EMPHYSEMA, LUNG ABSCESS	-793	380	0.04
HCC119	PROLIFERATIVE DIABETIC RETINOPATHY AND VITREOUS HEMORRHAGE	1,054	242	0.00
HCC130	DIALYSIS STATUS	2,012	250	0.00
HCC131	RENAL FAILURE	738	69	0.00
HCC132	NEPHRITIS	469	414	0.26
HCC148	DECUBITUS ULCER OF SKIN	1,663	141	0.00
HCC149	CHRONIC ULCER OF SKIN, EXCEPT DECUBITUS	1,538	103	0.00
HCC150	EXTENSIVE THIRD-DEGREE BURNS	-1,179	5,287	0.82
HCC154	SEVERE HEAD INJURY	1,775	1,683	0.29
HCC155	MAJOR HEAD INJURY	563	261	0.03
HCC157	VERTEBRAL FRACTURES WITHOUT SPINAL CORD INJURY	771	99	0.00
HCC158	HIP FRACTURE/DISLOCATION	682	95	0.00
HCC161	TRAUMATIC AMPUTATION	-828	324	0.01
HCC164	MAJOR COMPLICATIONS OF MEDICAL CARE AND TRAUMA	91	79	0.25
HCC174	MAJOR ORGAN TRANSPLANT STATUS	-633	359	0.08
HCC176	ARTIFICIAL OPENINGS FOR FEEDING OR ELIMINATION	-66	248	0.79
HCC177	AMPUTATION STATUS, LOWER LIMB/AMPUTATION COMPLICATIONS	-1,031	219	0.00
Age_Lt_35		-1,555	211	0.00
Age_Lt_45		-1,615	133	0.00
Age_Lt_55		-495	85	0.00
Age_Lt_60		480	92	0.00
Age_Lt_65		1,246	84	0.00
Age_Lt_75		1,269	49	0.00
Age_Lt_80		3,012	50	0.00
Age_Lt_85		5,439	53	0.00

Coef Name	Label	Coef Value	Std Error	P Value
Age_Lt_90		7,616	60	0.00
Age_Lt_95		8,428	78	0.00
Age_Gt_94		8,056	125	0.00
ORIGDS		1,861	54	0.00
ESRD		4,336	147	0.00
D_HCC5	DISABLED, OPPORTUNISTISTIC INFECTIONS	132	933	0.89
D_HCC44	DISABLED, SEVERE HEMATOLOGICAL DISORDERS	5,891	461	0.00
D_HCC51	DISABLED, DRUG/ALCOHOL PSYCHOSIS	-239	514	0.64
D_HCC52	DISABLED, DRUG/ALCOHOL DEPENDENCE	-1,104	353	0.00
D_HCC107	DISABLED, CYSTIC FIBROSIS	1,453	3,321	0.66
DM_CVD	DIABETES MELLITUS * CEREBROVASCULAR DISEASE	-257	185	0.16
CHF_COPD	CONGESTIVE HEART FAILURE*CHRONIC OBSRUCTIVE PULMONARY DISEASE	199	118	0.09
COPD_CVD_CAD	CHRONIC OBSRUCTIVE PULMONARY DISEASE *CEBROVASCULAR DISEASE*CORONARY	-1,089	516	0.03
RF_CHF_DM	DIABETES MELLITUS * CONGESTIVE HEART* RENAL FAILURE	61	165	0.71
DM_CHF	DIABETES MELLITUS * CONGESTIVE HEART FAILURE	-35	120	0.77
RF_CHF	RENAL FAILURE* CONGESTIVE HEART FAILURE	-315	169	0.06
DRG_CD=001	HEART TRANSPLANT OR IMPLANT OF HEART ASSIST SYSTEM W MCC	246,241	11,827	0.00
DRG_CD=002	HEART TRANSPLANT OR IMPLANT OF HEART ASSIST SYSTEM W/O MCC	171,996	8,369	0.00
DRG_CD=003	ECMO OR TRACH W MV 96+ HRS OR PDX EXC FACE, MOUTH & NECK W MAJ O.R.	147,147	770	0.00
DRG_CD=004	TRACH W MV 96+ HRS OR PDX EXC FACE, MOUTH & NECK W/O MAJ O.R.	118,741	1,595	0.00
DRG_CD=007	LUNG TRANSPLANT	131,001	8,372	0.00
DRG_CD=009	BONE MARROW TRANSPLANT	34,544	3,595	0.00
DRG_CD=011	TRACHEOSTOMY FOR FACE,MOUTH & NECK DIAGNOSES W MCC	59,781	2,509	0.00
DRG_CD=012	TRACHEOSTOMY FOR FACE,MOUTH & NECK DIAGNOSES W CC	43,495	2,564	0.00
DRG_CD=013	TRACHEOSTOMY FOR FACE,MOUTH & NECK DIAGNOSES W/O CC/MCC	20,043	3,444	0.00
DRG_CD=014	ALLOGENEIC BONE MARROW TRANSPLANT	64,566	11,826	0.00

Coef Name	Label	Coef Value	Std Error	P Value
DRG_CD=015	AUTOLOGOUS BONE MARROW TRANSPLANT	26,187	4,492	0.00
DRG_CD=453	COMBINED ANTERIOR/POSTERIOR SPINAL FUSION W MCC	86,605	682	0.00
DRG_CD=454	COMBINED ANTERIOR/POSTERIOR SPINAL FUSION W CC	56,711	546	0.00
DRG_CD=455	COMBINED ANTERIOR/POSTERIOR SPINAL FUSION W/O CC/MCC	37,114	550	0.00
DRG_CD=456	SPINAL FUS EXC CERV W SPINAL CURV/MALIG/INFEC OR 9+ FUS W MCC	80,619	700	0.00
DRG_CD=457	SPINAL FUS EXC CERV W SPINAL CURV/MALIG/INFEC OR 9+ FUS W CC	51,160	549	0.00
DRG_CD=458	SPINAL FUS EXC CERV W SPINAL CURV/MALIG/INFEC OR 9+ FUS W/O CC/MCC	34,484	618	0.00
DRG_CD=459	SPINAL FUSION EXCEPT CERVICAL W MCC	47,741	527	0.00
DRG_CD=460	SPINAL FUSION EXCEPT CERVICAL W/O MCC	24,517	470	0.00
DRG_CD=461	BILATERAL OR MULTIPLE MAJOR JOINT PROCS OF LOWER EXTREMITY W MCC	39,811	789	0.00
DRG_CD=462	BILATERAL OR MULTIPLE MAJOR JOINT PROCS OF LOWER EXTREMITY W/O MCC	25,598	492	0.00
DRG_CD=463	WND DEBRID & SKN GRFT EXC HAND, FOR MUSCULO-CONN TISS DIS W MCC	40,743	543	0.00
DRG_CD=464	WND DEBRID & SKN GRFT EXC HAND, FOR MUSCULO-CONN TISS DIS W CC	23,233	509	0.00
DRG_CD=465	WND DEBRID & SKN GRFT EXC HAND, FOR MUSCULO-CONN TISS DIS W/O CC/MCC	13,513	588	0.00
DRG_CD=466	REVISION OF HIP OR KNEE REPLACEMENT W MCC	34,886	544	0.00
DRG_CD=467	REVISION OF HIP OR KNEE REPLACEMENT W CC	20,976	483	0.00
DRG_CD=468	REVISION OF HIP OR KNEE REPLACEMENT W/O CC/MCC	14,427	486	0.00
DRG_CD=469	MAJOR JOINT REPLACEMENT OR REATTACHMENT OF LOWER EXTREMITY W MCC	26,390	476	0.00
DRG_CD=470	MAJOR JOINT REPLACEMENT OR REATTACHMENT OF LOWER EXTREMITY W/O MCC	12,515	466	0.00
DRG_CD=471	CERVICAL SPINAL FUSION W MCC	41,976	574	0.00
DRG_CD=472	CERVICAL SPINAL FUSION W CC	19,046	498	0.00
DRG_CD=473	CERVICAL SPINAL FUSION W/O	10,344	477	0.00

Coef Name	Label	Coef Value	Std Error	P Value
	CC/MCC			
DRG_CD=474	AMPUTATION FOR MUSCULOSKELETAL SYS & CONN TISSUE DIS W MCC	28,613	606	0.00
DRG_CD=475	AMPUTATION FOR MUSCULOSKELETAL SYS & CONN TISSUE DIS W CC	14,518	570	0.00
DRG_CD=476	AMPUTATION FOR MUSCULOSKELETAL SYS & CONN TISSUE DIS W/O CC/MCC	5,152	695	0.00
DRG_CD=477	BIOPSIES OF MUSCULOSKELETAL SYSTEM & CONNECTIVE TISSUE W MCC	26,384	582	0.00
DRG_CD=478	BIOPSIES OF MUSCULOSKELETAL SYSTEM & CONNECTIVE TISSUE W CC	16,152	510	0.00
DRG_CD=479	BIOPSIES OF MUSCULOSKELETAL SYSTEM & CONNECTIVE TISSUE W/O CC/MCC	6,347	539	0.00
DRG_CD=480	HIP & FEMUR PROCEDURES EXCEPT MAJOR JOINT W MCC	29,332	478	0.00
DRG_CD=481	HIP & FEMUR PROCEDURES EXCEPT MAJOR JOINT W CC	20,456	470	0.00
DRG_CD=482	HIP & FEMUR PROCEDURES EXCEPT MAJOR JOINT W/O CC/MCC	16,137	475	0.00
DRG_CD=483	MAJOR JOINT & LIMB REATTACHMENT PROC OF UPPER EXTREMITY W CC/MCC	12,600	489	0.00
DRG_CD=484	MAJOR JOINT & LIMB REATTACHMENT PROC OF UPPER EXTREMITY W/O CC/MCC	6,340	479	0.00
DRG_CD=485	KNEE PROCEDURES W PDX OF INFECTION W MCC	31,927	708	0.00
DRG_CD=486	KNEE PROCEDURES W PDX OF INFECTION W CC	18,283	616	0.00
DRG_CD=487	KNEE PROCEDURES W PDX OF INFECTION W/O CC/MCC	11,420	727	0.00
DRG_CD=488	KNEE PROCEDURES W/O PDX OF INFECTION W CC/MCC	10,664	553	0.00
DRG_CD=489	KNEE PROCEDURES W/O PDX OF INFECTION W/O CC/MCC	4,185	529	0.00
DRG_CD=490	BACK & NECK PROC EXC SPINAL FUSION W CC/MCC OR DISC DEVICE/NEUROSTIM	9,796	480	0.00
DRG_CD=491	BACK & NECK PROC EXC SPINAL FUSION W/O CC/MCC	272	472	0.57
DRG_CD=492	LOWER EXTREM & HUMER PROC EXCEPT HIP,FOOT,FEMUR W MCC	27,626	519	0.00
DRG_CD=493	LOWER EXTREM & HUMER PROC EXCEPT HIP,FOOT,FEMUR W CC	15,626	482	0.00
DRG_CD=494	LOWER EXTREM & HUMER PROC	8,236	479	0.00

Coef Name	Label	Coef Value	Std Error	P Value
	EXCEPT HIP,FOOT,FEMUR W/O CC/MCC			
DRG_CD=495	LOCAL EXCISION & REMOVAL INT FIX DEVICES EXC HIP & FEMUR W MCC	24,698	634	0.00
DRG_CD=496	LOCAL EXCISION & REMOVAL INT FIX DEVICES EXC HIP & FEMUR W CC	10,619	529	0.00
DRG_CD=497	LOCAL EXCISION & REMOVAL INT FIX DEVICES EXC HIP & FEMUR W/O CC/MCC	2,378	529	0.00
DRG_CD=498	LOCAL EXCISION & REMOVAL INT FIX DEVICES OF HIP & FEMUR W CC/MCC	16,636	672	0.00
DRG_CD=499	LOCAL EXCISION & REMOVAL INT FIX DEVICES OF HIP & FEMUR W/O CC/MCC	2,337	767	0.00
DRG_CD=500	SOFT TISSUE PROCEDURES W MCC	25,626	615	0.00
DRG_CD=501	SOFT TISSUE PROCEDURES W CC	9,184	527	0.00
DRG_CD=502	SOFT TISSUE PROCEDURES W/O CC/MCC	2,801	519	0.00
DRG_CD=503	FOOT PROCEDURES W MCC	17,525	728	0.00
DRG_CD=504	FOOT PROCEDURES W CC	9,314	572	0.00
DRG_CD=505	FOOT PROCEDURES W/O CC/MCC	3,086	590	0.00
DRG_CD=506	MAJOR THUMB OR JOINT PROCEDURES	2,408	800	0.00
DRG_CD=507	MAJOR SHOULDER OR ELBOW JOINT PROCEDURES W CC/MCC	11,048	842	0.00
DRG_CD=508	MAJOR SHOULDER OR ELBOW JOINT PROCEDURES W/O CC/MCC	3,227	749	0.00
DRG_CD=509	ARTHROSCOPY	5,484	1,119	0.00
DRG_CD=510	SHOULDER,ELBOW OR FOREARM PROC,EXC MAJOR JOINT PROC W MCC	17,117	676	0.00
DRG_CD=511	SHOULDER,ELBOW OR FOREARM PROC,EXC MAJOR JOINT PROC W CC	9,370	534	0.00
DRG_CD=512	SHOULDER,ELBOW OR FOREARM PROC,EXC MAJOR JOINT PROC W/O CC/MCC	1,504	506	0.00
DRG_CD=513	HAND OR WRIST PROC, EXCEPT MAJOR THUMB OR JOINT PROC W CC/MCC	4,690	661	0.00
DRG_CD=514	HAND OR WRIST PROC, EXCEPT MAJOR THUMB OR JOINT PROC W/O CC/MCC	-1,190	740	0.11
DRG_CD=515	OTHER MUSCULOSKELET SYS & CONN TISS O.R. PROC W MCC	23,201	549	0.00
DRG_CD=516	OTHER MUSCULOSKELET SYS & CONN TISS O.R. PROC W CC	11,687	497	0.00
DRG_CD=517	OTHER MUSCULOSKELET SYS & CONN TISS O.R. PROC W/O CC/MCC	5,011	501	0.00
DRG_CD=533	FRACTURES OF FEMUR W MCC	14757.47088	802.1869997	0.00

Coef Name	Label	Coef Value	Std Error	P Value
DRG_CD=534	FRACTURES OF FEMUR W/O MCC	8633.316449	569.2283871	0.00
DRG_CD=535	FRACTURES OF HIP & PELVIS W MCC	13327.36563	510.2385048	0.00
DRG_CD=536	FRACTURES OF HIP & PELVIS W/O MCC	7788.858298	475.9888608	0.00
DRG_CD=537	SPRAINS, STRAINS, & DISLOCATIONS OF HIP, PELVIS & THIGH W CC/MCC	3755.407309	759.4378681	0.00
DRG_CD=538	SPRAINS, STRAINS, & DISLOCATIONS OF HIP, PELVIS & THIGH W/O CC/MCC	1441.147844	856.7586666	0.09
DRG_CD=539	OSTEOMYELITIS W MCC	19182.6928	585.0651191	0.00
DRG_CD=540	OSTEOMYELITIS W CC	10136.45728	554.4590722	0.00
DRG_CD=541	OSTEOMYELITIS W/O CC/MCC	4367.484569	716.8184395	0.00
DRG_CD=542	PATHOLOGICAL FRACTURES & MUSCULOSKELET & CONN TISS MALIG W MCC	14137.20465	546.8653368	0.00
DRG_CD=543	PATHOLOGICAL FRACTURES & MUSCULOSKELET & CONN TISS MALIG W CC	7968.886082	493.0058034	0.00
DRG_CD=544	PATHOLOGICAL FRACTURES & MUSCULOSKELET & CONN TISS MALIG W/O CC/MCC	3915.954669	522.1203938	0.00
DRG_CD=545	CONNECTIVE TISSUE DISORDERS W MCC	16110.2298	563.1131162	0.00
DRG_CD=546	CONNECTIVE TISSUE DISORDERS W CC	4100.0829	527.1072293	0.00
DRG_CD=547	CONNECTIVE TISSUE DISORDERS W/O CC/MCC	-486.5333419	559.1027043	0.38
DRG_CD=548	SEPTIC ARTHRITIS W MCC	16317.12368	950.0557261	0.00
DRG_CD=549	SEPTIC ARTHRITIS W CC	7430.996023	720.8966085	0.00
DRG_CD=550	SEPTIC ARTHRITIS W/O CC/MCC	61.44208355	956.5441064	0.95
DRG_CD=551	MEDICAL BACK PROBLEMS W MCC	12378.37038	492.1410252	0.00
DRG_CD=552	MEDICAL BACK PROBLEMS W/O MCC	3882.082683	470.1119064	0.00
DRG_CD=553	BONE DISEASES & ARTHROPATHIES W MCC	6807.465873	548.8848471	0.00
DRG_CD=554	BONE DISEASES & ARTHROPATHIES W/O MCC	605.5844174	484.4828865	0.21
DRG_CD=555	SIGNS & SYMPTOMS OF MUSCULOSKELETAL SYSTEM & CONN TISSUE W MCC	5584.361674	568.8978192	0.00
DRG_CD=556	SIGNS & SYMPTOMS OF MUSCULOSKELETAL SYSTEM & CONN TISSUE W/O MCC	-135.0191887	484.2125311	0.78
DRG_CD=557	TENDONITIS, MYOSITIS & BURSITIS W MCC	11443.54574	515.1732016	0.00
DRG_CD=558	TENDONITIS, MYOSITIS & BURSITIS W/O MCC	3670.652309	484.4946674	0.00
DRG_CD=559	AFTERCARE, MUSCULOSKELETAL SYSTEM & CONNECTIVE TISSUE W MCC	16078.15491	674.7646014	0.00

Coef Name	Label	Coef Value	Std Error	P Value
DRG_CD=560	AFTERCARE, MUSCULOSKELETAL SYSTEM & CONNECTIVE TISSUE W CC	8333.962319	554.7244791	0.00
DRG_CD=561	AFTERCARE, MUSCULOSKELETAL SYSTEM & CONNECTIVE TISSUE W/O CC/MCC	2510.935807	541.6357637	0.00
DRG_CD=562	FX, SPRN, STRN & DISL EXCEPT FEMUR, HIP, PELVIS & THIGH W MCC	13672.49085	513.4871794	0.00
DRG_CD=563	FX, SPRN, STRN & DISL EXCEPT FEMUR, HIP, PELVIS & THIGH W/O MCC	6633.049281	475.8022772	0.00
DRG_CD=564	OTHER MUSCULOSKELETAL SYS & CONNECTIVE TISSUE DIAGNOSES W MCC	12024.32475	637.6099178	0.00
DRG_CD=565	OTHER MUSCULOSKELETAL SYS & CONNECTIVE TISSUE DIAGNOSES W CC	4503.242779	551.4113033	0.00
DRG_CD=566	OTHER MUSCULOSKELETAL SYS & CONNECTIVE TISSUE DIAGNOSES W/O CC/MCC	0	0	.
LTI_Indicator		-141.4882007	101.4101182	0.16

Table 29: Skin, Subcutaneous Tissue and Breast

Coef Name	Label	Coef Value	Std Error	P Value
Intercept		7,706	238	0.00
HCC1	HIV/AIDS	-1,107	428	0.01
HCC2	SEPTICEMIA/SHOCK	882	217	0.00
HCC5	OPPORTUNISTIC INFECTIONS	-606	751	0.42
HCC7	METASTATIC CANCER AND ACUTE LEUKEMIA	987	212	0.00
HCC8	LUNG, UPPER DIGESTIVE TRACT, AND OTHER SEVERE CANCERS	591	330	0.07
HCC9	LYMPHATIC, HEAD AND NECK, BRAIN, AND OTHER MAJOR CANCERS	617	217	0.00
HCC10	BREAST, PROSTATE, COLORECTAL AND OTHER CANCERS AND TUMORS	-1,099	126	0.00
HCC15	DIABETES WITH RENAL OR PERIPHERAL CIRCULATORY MANIFESTATION	1,011	152	0.00
HCC16	DIABETES WITH NEUROLOGIC OR OTHER SPECIFIED MANIFESTATION	782	146	0.00
HCC17	DIABETES WITH ACUTE COMPLICATIONS	-1,468	818	0.07
HCC18	DIABETES WITH OPHTHALMOLOGIC OR UNSPECIFIED MANIFESTATION	127	276	0.64
HCC19	DIABETES WITHOUT COMPLICATION	314	90	0.00
HCC21	PROTEIN-CALORIE MALNUTRITION	3,107	223	0.00

Coef Name	Label	Coef Value	Std Error	P Value
HCC25	END-STAGE LIVER DISEASE	1,297	421	0.00
HCC26	CIRRHOSIS OF LIVER	1,187	361	0.00
HCC27	CHRONIC HEPATITIS	1,236	470	0.01
HCC31	INTESTINAL OBSTRUCTION/PERFORATION	1,159	288	0.00
HCC32	PANCREATIC DISEASE	1,141	325	0.00
HCC33	INFLAMMATORY BOWEL DISEASE	-399	388	0.30
HCC37	BONE/JOINT/MUSCLE INFECTIONS/NECROSIS	716	202	0.00
HCC38	RHEUMATOID ARTHRITIS AND INFLAMMATORY CONNECTIVE TISSUE DISEASE	313	144	0.03
HCC44	SEVERE HEMATOLOGICAL DISORDERS	1,050	294	0.00
HCC45	DISORDERS OF IMMUNITY	1,109	292	0.00
HCC51	DRUG/ALCOHOL PSYCHOSIS	663	654	0.31
HCC52	DRUG/ALCOHOL DEPENDENCE	998	547	0.07
HCC54	SCHIZOPHRENIA	2,242	230	0.00
HCC55	MAJOR DEPRESSIVE, BIPOLAR, AND PARANOID DISORDERS	1,286	138	0.00
HCC67	QUADRIPLEGIA, OTHER EXTENSIVE PARALYSIS	1,387	408	0.00
HCC68	PARAPLEGIA	3,360	307	0.00
HCC69	SPINAL CORD DISORDERS/INJURIES	963	412	0.02
HCC70	MUSCULAR DYSTROPHY	1,153	1,267	0.36
HCC71	POLYNEUROPATHY	456	133	0.00
HCC72	MULTIPLE SCLEROSIS	2,104	358	0.00
HCC73	PARKINSONS AND HUNTINGTONS DISEASES	2,057	238	0.00
HCC74	SEIZURE DISORDERS AND CONVULSIONS	462	188	0.01
HCC75	COMA, BRAIN COMPRESSION/ANOXIC DAMAGE	2,661	749	0.00
HCC77	RESPIRATOR DEPENDENCE/TRACHEOSTOMY STATUS	2,041	610	0.00
HCC78	RESPIRATORY ARREST	0	1,672	1.00
HCC79	CARDIO-RESPIRATORY FAILURE AND SHOCK	980	175	0.00
HCC80	CONGESTIVE HEART FAILURE	570	141	0.00
HCC81	ACUTE MYOCARDIAL INFARCTION	1,050	404	0.01
HCC82	UNSTABLE ANGINA AND OTHER ACUTE ISCHEMIC HEART DISEASE	26	294	0.93
HCC83	ANGINA PECTORIS/OLD MYOCARDIAL INFARCTION	-372	177	0.04

Coef Name	Label	Coef Value	Std Error	P Value
HCC92	SPECIFIED HEART ARRHYTHMIAS	187	93	0.04
HCC95	CEREBRAL HEMORRHAGE	1,674	589	0.00
HCC96	ISCHEMIC OR UNSPECIFIED STROKE	993	231	0.00
HCC100	HEMIPLEGIA/HEMIPARESIS	2,110	302	0.00
HCC101	CEREBRAL PALSY AND OTHER PARALYTIC SYNDROMES	2,013	519	0.00
HCC104	VASCULAR DISEASE WITH COMPLICATIONS	1,547	171	0.00
HCC105	VASCULAR DISEASE	741	89	0.00
HCC107	CYSTIC FIBROSIS	5,968	4,125	0.15
HCC108	CHRONIC OBSTRUCTIVE PULMONARY DISEASE	404	113	0.00
HCC111	ASPIRATION AND SPECIFIED BACTERIAL PNEUMONIAS	704	359	0.05
HCC112	PNEUMOCOCCAL PNEUMONIA, EMPHYSEMA, LUNG ABSCESS	954	580	0.10
HCC119	PROLIFERATIVE DIABETIC RETINOPATHY AND VITREOUS HEMORRHAGE	-359	367	0.33
HCC130	DIALYSIS STATUS	1,112	354	0.00
HCC131	RENAL FAILURE	441	130	0.00
HCC132	NEPHRITIS	-944	711	0.18
HCC148	DECUBITUS ULCER OF SKIN	3,557	152	0.00
HCC149	CHRONIC ULCER OF SKIN, EXCEPT DECUBITUS	1,469	118	0.00
HCC150	EXTENSIVE THIRD-DEGREE BURNS	3,193	3,690	0.39
HCC154	SEVERE HEAD INJURY	6,229	3,532	0.08
HCC155	MAJOR HEAD INJURY	448	496	0.37
HCC157	VERTEBRAL FRACTURES WITHOUT SPINAL CORD INJURY	864	312	0.01
HCC158	HIP FRACTURE/DISLOCATION	1,801	285	0.00
HCC161	TRAUMATIC AMPUTATION	1,967	613	0.00
HCC164	MAJOR COMPLICATIONS OF MEDICAL CARE AND TRAUMA	861	177	0.00
HCC174	MAJOR ORGAN TRANSPLANT STATUS	-540	551	0.33
HCC176	ARTIFICIAL OPENINGS FOR FEEDING OR ELIMINATION	262	298	0.38
HCC177	AMPUTATION STATUS, LOWER LIMB/AMPUTATION COMPLICATIONS	1,527	317	0.00
Age_Lt_35		-1,301	251	0.00
Age_Lt_45		-1,566	189	0.00
Age_Lt_55		-915	148	0.00
Age_Lt_60		-237	169	0.16
Age_Lt_65		578	165	0.00

Coef Name	Label	Coef Value	Std Error	P Value
Age_Lt_75		528	123	0.00
Age_Lt_80		1,283	125	0.00
Age_Lt_85		2,073	125	0.00
Age_Lt_90		2,997	132	0.00
Age_Lt_95		3,494	162	0.00
Age_Gt_94		3,466	241	0.00
ORIGDS		663	107	0.00
ESRD		3,122	212	0.00
D_HCC5	DISABLED, OPPORTUNISTISTIC INFECTIONS	2,587	1,303	0.05
D_HCC44	DISABLED, SEVERE HEMATOLOGICAL DISORDERS	-22	590	0.97
D_HCC51	DISABLED, DRUG/ALCOHOL PSYCHOSIS	-314	843	0.71
D_HCC52	DISABLED, DRUG/ALCOHOL DEPENDENCE	-761	634	0.23
D_HCC107	DISABLED, CYSTIC FIBROSIS	-9,329	5,246	0.08
DM_CVD	DIABETES MELLITUS * CEREBROVASCULAR DISEASE	-23	307	0.94
CHF_COPD	CONGESTIVE HEART FAILURE*CHRONIC OBSRUCTIVE PULMONARY DISEASE	63	193	0.74
COPD_CVD_CAD	CHRONIC OBSRUCTIVE PULMONARY DISEASE *CEBROVASCULAR DISEASE*CORONARY	866	842	0.30
RF_CHF_DM	DIABETES MELLITUS * CONGESTIVE HEART* RENAL FAILURE	906	245	0.00
DM_CHF	DIABETES MELLITUS * CONGESTIVE HEART FAILURE	822	197	0.00
RF_CHF	RENAL FAILURE* CONGESTIVE HEART FAILURE	700	272	0.01
DRG_CD=003	ECMO OR TRACH W MV 96+ HRS OR PDX EXC FACE, MOUTH & NECK W MAJ O.R.	138,463	1,753	0.00
DRG_CD=004	TRACH W MV 96+ HRS OR PDX EXC FACE, MOUTH & NECK W/O MAJ O.R.	105,300	2,297	0.00
DRG_CD=005	LIVER TRANSPLANT W MCC OR INTESTINAL TRANSPLANT	93,314	11,667	0.00
DRG_CD=011	TRACHEOSTOMY FOR FACE,MOUTH & NECK DIAGNOSES W MCC	23,780	8,245	0.00
DRG_CD=012	TRACHEOSTOMY FOR FACE,MOUTH & NECK DIAGNOSES W CC	15,039	8,246	0.07
DRG_CD=013	TRACHEOSTOMY FOR FACE,MOUTH & NECK DIAGNOSES W/O CC/MCC	2,613	11,660	0.82
DRG_CD=573	SKIN GRAFT &/OR DEBRID FOR SKN ULCER OR CELLULITIS W MCC	26,782	360	0.00

Coef Name	Label	Coef Value	Std Error	P Value
DRG_CD=574	SKIN GRAFT &/OR DEBRID FOR SKN ULCER OR CELLULITIS W CC	13,644	294	0.00
DRG_CD=575	SKIN GRAFT &/OR DEBRID FOR SKN ULCER OR CELLULITIS W/O CC/MCC	4,781	366	0.00
DRG_CD=576	SKIN GRAFT &/OR DEBRID EXC FOR SKIN ULCER OR CELLULITIS W MCC	31,536	713	0.00
DRG_CD=577	SKIN GRAFT &/OR DEBRID EXC FOR SKIN ULCER OR CELLULITIS W CC	10,910	412	0.00
DRG_CD=578	SKIN GRAFT &/OR DEBRID EXC FOR SKIN ULCER OR CELLULITIS W/O CC/MCC	3,295	411	0.00
DRG_CD=579	OTHER SKIN, SUBCUT TISS & BREAST PROC W MCC	25,007	345	0.00
DRG_CD=580	OTHER SKIN, SUBCUT TISS & BREAST PROC W CC	8,908	273	0.00
DRG_CD=581	OTHER SKIN, SUBCUT TISS & BREAST PROC W/O CC/MCC	2,418	279	0.00
DRG_CD=582	MASTECTOMY FOR MALIGNANCY W CC/MCC	4,277	338	0.00
DRG_CD=583	MASTECTOMY FOR MALIGNANCY W/O CC/MCC	1,296	310	0.00
DRG_CD=584	BREAST BIOPSY, LOCAL EXCISION & OTHER BREAST PROCEDURES W CC/MCC	8,761	648	0.00
DRG_CD=585	BREAST BIOPSY, LOCAL EXCISION & OTHER BREAST PROCEDURES W/O CC/MCC	1,915	501	0.00
DRG_CD=592	SKIN ULCERS W MCC	16,795	378	0.00
DRG_CD=593	SKIN ULCERS W CC	7,521	289	0.00
DRG_CD=594	SKIN ULCERS W/O CC/MCC	4,988	517	0.00
DRG_CD=595	MAJOR SKIN DISORDERS W MCC	12,001	546	0.00
DRG_CD=596	MAJOR SKIN DISORDERS W/O MCC	1,852	337	0.00
DRG_CD=597	MALIGNANT BREAST DISORDERS W MCC	15,797	1,022	0.00
DRG_CD=598	MALIGNANT BREAST DISORDERS W CC	8,788	621	0.00
DRG_CD=599	MALIGNANT BREAST DISORDERS W/O CC/MCC	4,094	1,356	0.00
DRG_CD=600	NON-MALIGNANT BREAST DISORDERS W CC/MCC	3,394	552	0.00
DRG_CD=601	NON-MALIGNANT BREAST DISORDERS W/O CC/MCC	-1,236	600	0.04
DRG_CD=602	CELLULITIS W MCC	8,957	241	0.00
DRG_CD=603	CELLULITIS W/O MCC	1,367	223	0.00
DRG_CD=604	TRAUMA TO THE SKIN, SUBCUT TISS & BREAST W MCC	10,425	387	0.00
DRG_CD=605	TRAUMA TO THE SKIN, SUBCUT TISS &	3,654	253	0.00

Coef Name	Label	Coef Value	Std Error	P Value
	BREAST W/O MCC			
DRG_CD=606	MINOR SKIN DISORDERS W MCC	8,277	483	0.00
DRG_CD=607	MINOR SKIN DISORDERS W/O MCC	0	0	.
LTI_Indicator		3,441	143	0.00

Table 30: Endocrine, Nutritional and Metabolic System

Coef Name	Label	Coef Value	Std Error	P Value
Intercept		7,951	226	0.00
HCC1	HIV/AIDS	757	396	0.06
HCC2	SEPTICEMIA/SHOCK	1,731	181	0.00
HCC5	OPPORTUNISTIC INFECTIONS	1,375	510	0.01
HCC7	METASTATIC CANCER AND ACUTE LEUKEMIA	3,043	167	0.00
HCC8	LUNG, UPPER DIGESTIVE TRACT, AND OTHER SEVERE CANCERS	2,481	219	0.00
HCC9	LYMPHATIC, HEAD AND NECK, BRAIN, AND OTHER MAJOR CANCERS	1,911	195	0.00
HCC10	BREAST, PROSTATE, COLORECTAL AND OTHER CANCERS AND TUMORS	320	123	0.01
HCC15	DIABETES WITH RENAL OR PERIPHERAL CIRCULATORY MANIFESTATION	912	119	0.00
HCC16	DIABETES WITH NEUROLOGIC OR OTHER SPECIFIED MANIFESTATION	369	115	0.00
HCC17	DIABETES WITH ACUTE COMPLICATIONS	559	355	0.12
HCC18	DIABETES WITH OPHTHALMOLOGIC OR UNSPECIFIED MANIFESTATION	-95	197	0.63
HCC19	DIABETES WITHOUT COMPLICATION	-132	77	0.09
HCC21	PROTEIN-CALORIE MALNUTRITION	2,446	165	0.00
HCC25	END-STAGE LIVER DISEASE	1,786	343	0.00
HCC26	CIRRHOSIS OF LIVER	90	310	0.77
HCC27	CHRONIC HEPATITIS	225	384	0.56
HCC31	INTESTINAL OBSTRUCTION/PERFORATION	703	204	0.00
HCC32	PANCREATIC DISEASE	715	193	0.00
HCC33	INFLAMMATORY BOWEL DISEASE	604	312	0.05
HCC37	BONE/JOINT/MUSCLE INFECTIONS/NECROSIS	818	182	0.00
HCC38	RHEUMATOID ARTHRITIS AND INFLAMMATORY CONNECTIVE TISSUE DISEASE	407	136	0.00
HCC44	SEVERE HEMATOLOGICAL DISORDERS	1,620	261	0.00
HCC45	DISORDERS OF IMMUNITY	1,090	267	0.00

Coef Name	Label	Coef Value	Std Error	P Value
HCC51	DRUG/ALCOHOL PSYCHOSIS	826	439	0.06
HCC52	DRUG/ALCOHOL DEPENDENCE	614	386	0.11
HCC54	SCHIZOPHRENIA	2,307	182	0.00
HCC55	MAJOR DEPRESSIVE, BIPOLAR, AND PARANOID DISORDERS	1,428	112	0.00
HCC67	QUADRIPLEGIA, OTHER EXTENSIVE PARALYSIS	1,280	566	0.02
HCC68	PARAPLEGIA	2,164	540	0.00
HCC69	SPINAL CORD DISORDERS/INJURIES	1,511	390	0.00
HCC70	MUSCULAR DYSTROPHY	2,130	1,275	0.09
HCC71	POLYNEUROPATHY	294	106	0.01
HCC72	MULTIPLE SCLEROSIS	1,100	432	0.01
HCC73	PARKINSONS AND HUNTINGTONS DISEASES	3,117	202	0.00
HCC74	SEIZURE DISORDERS AND CONVULSIONS	557	141	0.00
HCC75	COMA, BRAIN COMPRESSION/ANOXIC DAMAGE	1,972	486	0.00
HCC77	RESPIRATOR DEPENDENCE/TRACHEOSTOMY STATUS	4,001	479	0.00
HCC78	RESPIRATORY ARREST	59	1,087	0.96
HCC79	CARDIO-RESPIRATORY FAILURE AND SHOCK	932	139	0.00
HCC80	CONGESTIVE HEART FAILURE	429	135	0.00
HCC81	ACUTE MYOCARDIAL INFARCTION	343	264	0.19
HCC82	UNSTABLE ANGINA AND OTHER ACUTE ISCHEMIC HEART DISEASE	320	213	0.13
HCC83	ANGINA PECTORIS/OLD MYOCARDIAL INFARCTION	-180	138	0.19
HCC92	SPECIFIED HEART ARRHYTHMIAS	447	84	0.00
HCC95	CEREBRAL HEMORRHAGE	2,345	439	0.00
HCC96	ISCHEMIC OR UNSPECIFIED STROKE	1,238	186	0.00
HCC100	HEMIPLEGIA/HEMIPARESIS	2,037	240	0.00
HCC101	CEREBRAL PALSY AND OTHER PARALYTIC SYNDROMES	2,070	555	0.00
HCC104	VASCULAR DISEASE WITH COMPLICATIONS	2,407	158	0.00
HCC105	VASCULAR DISEASE	568	81	0.00
HCC107	CYSTIC FIBROSIS	-2,705	3,454	0.43
HCC108	CHRONIC OBSTRUCTIVE PULMONARY DISEASE	475	98	0.00
HCC111	ASPIRATION AND SPECIFIED BACTERIAL PNEUMONIAS	1,173	269	0.00

Coef Name	Label	Coef Value	Std Error	P Value
HCC112	PNEUMOCOCCAL PNEUMONIA, EMPHYSEMA, LUNG ABSCESS	-213	484	0.66
HCC119	PROLIFERATIVE DIABETIC RETINOPATHY AND VITREOUS HEMORRHAGE	573	216	0.01
HCC130	DIALYSIS STATUS	588	206	0.00
HCC131	RENAL FAILURE	-106	96	0.27
HCC132	NEPHRITIS	334	529	0.53
HCC148	DECUBITUS ULCER OF SKIN	2,851	168	0.00
HCC149	CHRONIC ULCER OF SKIN, EXCEPT DECUBITUS	1,744	135	0.00
HCC150	EXTENSIVE THIRD-DEGREE BURNS	-2,431	5,729	0.67
HCC154	SEVERE HEAD INJURY	12,548	3,328	0.00
HCC155	MAJOR HEAD INJURY	229	401	0.57
HCC157	VERTEBRAL FRACTURES WITHOUT SPINAL CORD INJURY	1,976	245	0.00
HCC158	HIP FRACTURE/DISLOCATION	1,672	245	0.00
HCC161	TRAUMATIC AMPUTATION	625	466	0.18
HCC164	MAJOR COMPLICATIONS OF MEDICAL CARE AND TRAUMA	1,241	148	0.00
HCC174	MAJOR ORGAN TRANSPLANT STATUS	-232	409	0.57
HCC176	ARTIFICIAL OPENINGS FOR FEEDING OR ELIMINATION	505	241	0.04
HCC177	AMPUTATION STATUS, LOWER LIMB/AMPUTATION COMPLICATIONS	927	242	0.00
Age_Lt_35		-751	199	0.00
Age_Lt_45		-930	161	0.00
Age_Lt_55		-951	128	0.00
Age_Lt_60		-344	145	0.02
Age_Lt_65		233	141	0.10
Age_Lt_75		601	108	0.00
Age_Lt_80		1,351	109	0.00
Age_Lt_85		2,054	110	0.00
Age_Lt_90		3,065	117	0.00
Age_Lt_95		3,543	144	0.00
Age_Gt_94		4,009	223	0.00
ORIGDS		637	93	0.00
ESRD		3,548	135	0.00
D_HCC5	DISABLED, OPPORTUNISTISTIC INFECTIONS	-2,505	919	0.01
D_HCC44	DISABLED, SEVERE HEMATOLOGICAL DISORDERS	-115	551	0.84
D_HCC51	DISABLED, DRUG/ALCOHOL PSYCHOSIS	423	642	0.51
D_HCC52	DISABLED, DRUG/ALCOHOL	-20	482	0.97

Coef Name	Label	Coef Value	Std Error	P Value
	DEPENDENCE			
D_HCC107	DISABLED, CYSTIC FIBROSIS	10,381	3,777	0.01
DM_CVD	DIABETES MELLITUS * CEREBROVASCULAR DISEASE	339	232	0.14
CHF_COPD	CONGESTIVE HEART FAILURE*CHRONIC OBSRUCTIVE PULMONARY DISEASE	-12	166	0.94
COPD_CVD_CAD	CHRONIC OBSRUCTIVE PULMONARY DISEASE *CEBROVASCULAR DISEASE*CORONARY	-451	577	0.43
RF_CHF_DM	DIABETES MELLITUS * CONGESTIVE HEART* RENAL FAILURE	1,261	194	0.00
DM_CHF	DIABETES MELLITUS * CONGESTIVE HEART FAILURE	358	173	0.04
RF_CHF	RENAL FAILURE* CONGESTIVE HEART FAILURE	316	234	0.18
DRG_CD=001	HEART TRANSPLANT OR IMPLANT OF HEART ASSIST SYSTEM W MCC	176,476	8,116	0.00
DRG_CD=003	ECMO OR TRACH W MV 96+ HRS OR PDX EXC FACE, MOUTH & NECK W MAJ O.R.	153,617	1,532	0.00
DRG_CD=004	TRACH W MV 96+ HRS OR PDX EXC FACE, MOUTH & NECK W/O MAJ O.R.	125,317	1,470	0.00
DRG_CD=005	LIVER TRANSPLANT W MCC OR INTESTINAL TRANSPLANT	109,049	5,735	0.00
DRG_CD=007	LUNG TRANSPLANT	62,334	4,850	0.00
DRG_CD=008	SIMULTANEOUS PANCREAS/KIDNEY TRANSPLANT	35,975	6,618	0.00
DRG_CD=010	PANCREAS TRANSPLANT	26,307	2,968	0.00
DRG_CD=011	TRACHEOSTOMY FOR FACE,MOUTH & NECK DIAGNOSES W MCC	40,161	2,570	0.00
DRG_CD=012	TRACHEOSTOMY FOR FACE,MOUTH & NECK DIAGNOSES W CC	30,516	2,787	0.00
DRG_CD=013	TRACHEOSTOMY FOR FACE,MOUTH & NECK DIAGNOSES W/O CC/MCC	13,916	3,460	0.00
DRG_CD=614	ADRENAL & PITUITARY PROCEDURES W CC/MCC	13,918	470	0.00
DRG_CD=615	ADRENAL & PITUITARY PROCEDURES W/O CC/MCC	3,600	481	0.00
DRG_CD=616	AMPUTAT OF LOWER LIMB FOR ENDOCRINE,NUTRIT,& METABOL DIS W MCC	36,392	495	0.00
DRG_CD=617	AMPUTAT OF LOWER LIMB FOR ENDOCRINE,NUTRIT,& METABOL DIS W CC	14,126	301	0.00
DRG_CD=618	AMPUTAT OF LOWER LIMB FOR	4,798	1,428	0.00

Coef Name	Label	Coef Value	Std Error	P Value
	ENDOCRINE,NUTRIT,& METABOL DIS W/O CC/MCC			
DRG_CD=619	O.R. PROCEDURES FOR OBESITY W MCC	24,102	601	0.00
DRG_CD=620	O.R. PROCEDURES FOR OBESITY W CC	7,400	367	0.00
DRG_CD=621	O.R. PROCEDURES FOR OBESITY W/O CC/MCC	3,566	266	0.00
DRG_CD=622	SKIN GRAFTS & WOUND DEBRID FOR ENDOC, NUTRIT & METAB DIS W MCC	32,592	596	0.00
DRG_CD=623	SKIN GRAFTS & WOUND DEBRID FOR ENDOC, NUTRIT & METAB DIS W CC	14,694	403	0.00
DRG_CD=624	SKIN GRAFTS & WOUND DEBRID FOR ENDOC, NUTRIT & METAB DIS W/O CC/MCC	2,780	1,196	0.02
DRG_CD=625	THYROID, PARATHYROID & THYROGLOSSAL PROCEDURES W MCC	13,126	500	0.00
DRG_CD=626	THYROID, PARATHYROID & THYROGLOSSAL PROCEDURES W CC	1,348	369	0.00
DRG_CD=627	THYROID, PARATHYROID & THYROGLOSSAL PROCEDURES W/O CC/MCC	-2,052	260	0.00
DRG_CD=628	OTHER ENDOCRINE, NUTRIT & METAB O.R. PROC W MCC	27,038	361	0.00
DRG_CD=629	OTHER ENDOCRINE, NUTRIT & METAB O.R. PROC W CC	16,958	327	0.00
DRG_CD=630	OTHER ENDOCRINE, NUTRIT & METAB O.R. PROC W/O CC/MCC	7,920	858	0.00
DRG_CD=637	DIABETES W MCC	7,689	244	0.00
DRG_CD=638	DIABETES W CC	2,384	228	0.00
DRG_CD=639	DIABETES W/O CC/MCC	-1,592	242	0.00
DRG_CD=640	NUTRITIONAL & MISC METABOLIC DISORDERS W MCC	5,645	225	0.00
DRG_CD=641	NUTRITIONAL & MISC METABOLIC DISORDERS W/O MCC	975	215	0.00
DRG_CD=642	INBORN ERRORS OF METABOLISM	4,595	541	0.00
DRG_CD=643	ENDOCRINE DISORDERS W MCC	11,012	297	0.00
DRG_CD=644	ENDOCRINE DISORDERS W CC	4,834	263	0.00
DRG_CD=645	ENDOCRINE DISORDERS W/O CC/MCC	0	0	.
LTI_Indicator		3,046	130	0.00

Table 31: Kidney and Urinary Tract

Coef Name	Label	Coef Value	Std Error	P Value
Intercept		7,922	225	0.00
HCC1	HIV/AIDS	757	338	0.03
HCC2	SEPTICEMIA/SHOCK	656	115	0.00
HCC5	OPPORTUNISTIC INFECTIONS	629	390	0.11
HCC7	METASTATIC CANCER AND ACUTE LEUKEMIA	2,314	145	0.00
HCC8	LUNG, UPPER DIGESTIVE TRACT, AND OTHER SEVERE CANCERS	984	202	0.00
HCC9	LYMPHATIC, HEAD AND NECK, BRAIN, AND OTHER MAJOR CANCERS	1,564	160	0.00
HCC10	BREAST, PROSTATE, COLORECTAL AND OTHER CANCERS AND TUMORS	114	79	0.15
HCC15	DIABETES WITH RENAL OR PERIPHERAL CIRCULATORY MANIFESTATION	720	94	0.00
HCC16	DIABETES WITH NEUROLOGIC OR OTHER SPECIFIED MANIFESTATION	657	106	0.00
HCC17	DIABETES WITH ACUTE COMPLICATIONS	290	489	0.55
HCC18	DIABETES WITH OPHTHALMOLOGIC OR UNSPECIFIED MANIFESTATION	319	174	0.07
HCC19	DIABETES WITHOUT COMPLICATION	234	60	0.00
HCC21	PROTEIN-CALORIE MALNUTRITION	2,487	127	0.00
HCC25	END-STAGE LIVER DISEASE	1,318	306	0.00
HCC26	CIRRHOSIS OF LIVER	292	284	0.30
HCC27	CHRONIC HEPATITIS	502	335	0.13
HCC31	INTESTINAL OBSTRUCTION/PERFORATION	1,224	142	0.00
HCC32	PANCREATIC DISEASE	458	178	0.01
HCC33	INFLAMMATORY BOWEL DISEASE	476	239	0.05
HCC37	BONE/JOINT/MUSCLE INFECTIONS/NECROSIS	1,406	194	0.00
HCC38	RHEUMATOID ARTHRITIS AND INFLAMMATORY CONNECTIVE TISSUE DISEASE	587	108	0.00
HCC44	SEVERE HEMATOLOGICAL DISORDERS	884	187	0.00
HCC45	DISORDERS OF IMMUNITY	1,525	216	0.00
HCC51	DRUG/ALCOHOL PSYCHOSIS	1,089	350	0.00
HCC52	DRUG/ALCOHOL DEPENDENCE	509	355	0.15
HCC54	SCHIZOPHRENIA	2,568	176	0.00
HCC55	MAJOR DEPRESSIVE, BIPOLAR, AND PARANOID DISORDERS	1,799	93	0.00
HCC67	QUADRIPLEGIA, OTHER EXTENSIVE PARALYSIS	266	234	0.26

Coef Name	Label	Coef Value	Std Error	P Value
HCC68	PARAPLEGIA	1,263	223	0.00
HCC69	SPINAL CORD DISORDERS/INJURIES	1,067	242	0.00
HCC70	MUSCULAR DYSTROPHY	930	924	0.31
HCC71	POLYNEUROPATHY	790	94	0.00
HCC72	MULTIPLE SCLEROSIS	1,345	201	0.00
HCC73	PARKINSONS AND HUNTINGTONS DISEASES	2,415	128	0.00
HCC74	SEIZURE DISORDERS AND CONVULSIONS	724	111	0.00
HCC75	COMA, BRAIN COMPRESSION/ANOXIC DAMAGE	2,474	361	0.00
HCC77	RESPIRATOR DEPENDENCE/TRACHEOSTOMY STATUS	4,173	328	0.00
HCC78	RESPIRATORY ARREST	345	799	0.67
HCC79	CARDIO-RESPIRATORY FAILURE AND SHOCK	1,108	106	0.00
HCC80	CONGESTIVE HEART FAILURE	479	97	0.00
HCC81	ACUTE MYOCARDIAL INFARCTION	417	198	0.03
HCC82	UNSTABLE ANGINA AND OTHER ACUTE ISCHEMIC HEART DISEASE	117	169	0.49
HCC83	ANGINA PECTORIS/OLD MYOCARDIAL INFARCTION	-143	107	0.18
HCC92	SPECIFIED HEART ARRHYTHMIAS	291	61	0.00
HCC95	CEREBRAL HEMORRHAGE	2,227	299	0.00
HCC96	ISCHEMIC OR UNSPECIFIED STROKE	1,212	119	0.00
HCC100	HEMIPLEGIA/HEMIPARESIS	1,863	153	0.00
HCC101	CEREBRAL PALSY AND OTHER PARALYTIC SYNDROMES	749	348	0.03
HCC104	VASCULAR DISEASE WITH COMPLICATIONS	1,486	131	0.00
HCC105	VASCULAR DISEASE	663	58	0.00
HCC107	CYSTIC FIBROSIS	-2,521	2,837	0.37
HCC108	CHRONIC OBSTRUCTIVE PULMONARY DISEASE	356	78	0.00
HCC111	ASPIRATION AND SPECIFIED BACTERIAL PNEUMONIAS	1,104	184	0.00
HCC112	PNEUMOCOCCAL PNEUMONIA, EMPHYSEMA, LUNG ABSCESS	55	370	0.88
HCC119	PROLIFERATIVE DIABETIC RETINOPATHY AND VITREOUS HEMORRHAGE	-115	210	0.59
HCC130	DIALYSIS STATUS	143	166	0.39
HCC131	RENAL FAILURE	69	66	0.29
HCC132	NEPHRITIS	-439	422	0.30

Coef Name	Label	Coef Value	Std Error	P Value
HCC148	DECUBITUS ULCER OF SKIN	1,611	112	0.00
HCC149	CHRONIC ULCER OF SKIN, EXCEPT DECUBITUS	1,544	125	0.00
HCC150	EXTENSIVE THIRD-DEGREE BURNS	14,354	4,255	0.00
HCC154	SEVERE HEAD INJURY	1,844	1,936	0.34
HCC155	MAJOR HEAD INJURY	1,414	293	0.00
HCC157	VERTEBRAL FRACTURES WITHOUT SPINAL CORD INJURY	1,979	193	0.00
HCC158	HIP FRACTURE/DISLOCATION	2,226	173	0.00
HCC161	TRAUMATIC AMPUTATION	484	473	0.31
HCC164	MAJOR COMPLICATIONS OF MEDICAL CARE AND TRAUMA	509	97	0.00
HCC174	MAJOR ORGAN TRANSPLANT STATUS	-513	287	0.07
HCC176	ARTIFICIAL OPENINGS FOR FEEDING OR ELIMINATION	115	131	0.38
HCC177	AMPUTATION STATUS, LOWER LIMB/AMPUTATION COMPLICATIONS	948	251	0.00
Age_Lt_35		-1,002	178	0.00
Age_Lt_45		-1,442	152	0.00
Age_Lt_55		-1,377	118	0.00
Age_Lt_60		-570	131	0.00
Age_Lt_65		-37	122	0.76
Age_Lt_75		622	86	0.00
Age_Lt_80		1,525	85	0.00
Age_Lt_85		2,280	84	0.00
Age_Lt_90		3,037	88	0.00
Age_Lt_95		3,384	103	0.00
Age_Gt_94		3,384	149	0.00
ORIGDS		585	69	0.00
ESRD		2,539	98	0.00
D_HCC5	DISABLED, OPPORTUNISTISTIC INFECTIONS	2,127	825	0.01
D_HCC44	DISABLED, SEVERE HEMATOLOGICAL DISORDERS	1,287	451	0.00
D_HCC51	DISABLED, DRUG/ALCOHOL PSYCHOSIS	-98	635	0.88
D_HCC52	DISABLED, DRUG/ALCOHOL DEPENDENCE	-178	501	0.72
D_HCC107	DISABLED, CYSTIC FIBROSIS	1,541	3,692	0.68
DM_CVD	DIABETES MELLITUS * CEREBROVASCULAR DISEASE	13	159	0.93
CHF_COPD	CONGESTIVE HEART FAILURE*CHRONIC OBSRUCTIVE PULMONARY DISEASE	51	127	0.69
COPD_CVD_CAD	CHRONIC OBSRUCTIVE PULMONARY	295	415	0.48

Coef Name	Label	Coef Value	Std Error	P Value
	DISEASE *CEBROVASCULAR DISEASE*CORONARY			
RF_CHF_DM	DIABETES MELLITUS * CONGESTIVE HEART* RENAL FAILURE	887	143	0.00
DM_CHF	DIABETES MELLITUS * CONGESTIVE HEART FAILURE	406	138	0.00
RF_CHF	RENAL FAILURE* CONGESTIVE HEART FAILURE	444	147	0.00
DRG_CD=003	ECMO OR TRACH W MV 96+ HRS OR PDX EXC FACE, MOUTH & NECK W MAJ O.R.	196,086	1,308	0.00
DRG_CD=004	TRACH W MV 96+ HRS OR PDX EXC FACE, MOUTH & NECK W/O MAJ O.R.	134,234	1,183	0.00
DRG_CD=005	LIVER TRANSPLANT W MCC OR INTESTINAL TRANSPLANT	86,221	4,263	0.00
DRG_CD=006	LIVER TRANSPLANT W/O MCC	64,057	12,050	0.00
DRG_CD=008	SIMULTANEOUS PANCREAS/KIDNEY TRANSPLANT	44,111	907	0.00
DRG_CD=010	PANCREAS TRANSPLANT	29,411	5,387	0.00
DRG_CD=652	KIDNEY TRANSPLANT	23,491	285	0.00
DRG_CD=653	MAJOR BLADDER PROCEDURES W MCC	42,701	481	0.00
DRG_CD=654	MAJOR BLADDER PROCEDURES W CC	18,793	364	0.00
DRG_CD=655	MAJOR BLADDER PROCEDURES W/O CC/MCC	9,789	523	0.00
DRG_CD=656	KIDNEY & URETER PROCEDURES FOR NEOPLASM W MCC	23,325	349	0.00
DRG_CD=657	KIDNEY & URETER PROCEDURES FOR NEOPLASM W CC	8,257	293	0.00
DRG_CD=658	KIDNEY & URETER PROCEDURES FOR NEOPLASM W/O CC/MCC	2,624	301	0.00
DRG_CD=659	KIDNEY & URETER PROCEDURES FOR NON-NEOPLASM W MCC	24,683	350	0.00
DRG_CD=660	KIDNEY & URETER PROCEDURES FOR NON-NEOPLASM W CC	9,230	300	0.00
DRG_CD=661	KIDNEY & URETER PROCEDURES FOR NON-NEOPLASM W/O CC/MCC	2,629	348	0.00
DRG_CD=662	MINOR BLADDER PROCEDURES W MCC	20,366	666	0.00
DRG_CD=663	MINOR BLADDER PROCEDURES W CC	5,317	477	0.00
DRG_CD=664	MINOR BLADDER PROCEDURES W/O CC/MCC	-358	389	0.36
DRG_CD=665	PROSTATECTOMY W MCC	20,717	763	0.00
DRG_CD=666	PROSTATECTOMY W CC	6,819	478	0.00
DRG_CD=667	PROSTATECTOMY W/O CC/MCC	-2,135	427	0.00
DRG_CD=668	TRANSURETHRAL PROCEDURES W MCC	14,757	342	0.00
DRG_CD=669	TRANSURETHRAL PROCEDURES W CC	3,868	262	0.00

Coef Name	Label	Coef Value	Std Error	P Value
DRG_CD=670	TRANSURETHRAL PROCEDURES W/O CC/MCC	-1,273	290	0.00
DRG_CD=671	URETHRAL PROCEDURES W CC/MCC	6,803	670	0.00
DRG_CD=672	URETHRAL PROCEDURES W/O CC/MCC	-1,608	692	0.02
DRG_CD=673	OTHER KIDNEY & URINARY TRACT PROCEDURES W MCC	22,948	285	0.00
DRG_CD=674	OTHER KIDNEY & URINARY TRACT PROCEDURES W CC	13,691	300	0.00
DRG_CD=675	OTHER KIDNEY & URINARY TRACT PROCEDURES W/O CC/MCC	2,183	443	0.00
DRG_CD=682	RENAL FAILURE W MCC	11,849	224	0.00
DRG_CD=683	RENAL FAILURE W CC	4,946	220	0.00
DRG_CD=684	RENAL FAILURE W/O CC/MCC	-76	239	0.75
DRG_CD=685	ADMIT FOR RENAL DIALYSIS	4,942	428	0.00
DRG_CD=686	KIDNEY & URINARY TRACT NEOPLASMS W MCC	13,798	638	0.00
DRG_CD=687	KIDNEY & URINARY TRACT NEOPLASMS W CC	7,010	458	0.00
DRG_CD=688	KIDNEY & URINARY TRACT NEOPLASMS W/O CC/MCC	1,604	806	0.05
DRG_CD=689	KIDNEY & URINARY TRACT INFECTIONS W MCC	6,835	223	0.00
DRG_CD=690	KIDNEY & URINARY TRACT INFECTIONS W/O MCC	2,006	217	0.00
DRG_CD=691	URINARY STONES W ESW LITHOTRIPSY W CC/MCC	5,655	617	0.00
DRG_CD=692	URINARY STONES W ESW LITHOTRIPSY W/O CC/MCC	1,637	966	0.09
DRG_CD=693	URINARY STONES W/O ESW LITHOTRIPSY W MCC	4,796	355	0.00
DRG_CD=694	URINARY STONES W/O ESW LITHOTRIPSY W/O MCC	-173	253	0.49
DRG_CD=695	KIDNEY & URINARY TRACT SIGNS & SYMPTOMS W MCC	8,320	558	0.00
DRG_CD=696	KIDNEY & URINARY TRACT SIGNS & SYMPTOMS W/O MCC	-665	280	0.02
DRG_CD=697	URETHRAL STRICTURE	186	767	0.81
DRG_CD=698	OTHER KIDNEY & URINARY TRACT DIAGNOSES W MCC	8,938	241	0.00
DRG_CD=699	OTHER KIDNEY & URINARY TRACT DIAGNOSES W CC	3,618	244	0.00
DRG_CD=700	OTHER KIDNEY & URINARY TRACT DIAGNOSES W/O CC/MCC	0	0	.
LTI_Indicator		2,800	75	0.00

Table 32: Male Reproductive System

Coef Name	Label	Coef Value	Std Error	P Value
Intercept		7,005	673	0.00
HCC1	HIV/AIDS	-496	718	0.49
HCC2	SEPTICEMIA/SHOCK	1,963	323	0.00
HCC5	OPPORTUNISTIC INFECTIONS	-86	1,293	0.95
HCC7	METASTATIC CANCER AND ACUTE LEUKEMIA	1,646	306	0.00
HCC8	LUNG, UPPER DIGESTIVE TRACT, AND OTHER SEVERE CANCERS	1,390	457	0.00
HCC9	LYMPHATIC, HEAD AND NECK, BRAIN, AND OTHER MAJOR CANCERS	417	348	0.23
HCC10	BREAST, PROSTATE, COLORECTAL AND OTHER CANCERS AND TUMORS	187	127	0.14
HCC15	DIABETES WITH RENAL OR PERIPHERAL CIRCULATORY MANIFESTATION	1,343	276	0.00
HCC16	DIABETES WITH NEUROLOGIC OR OTHER SPECIFIED MANIFESTATION	944	273	0.00
HCC17	DIABETES WITH ACUTE COMPLICATIONS	358	1,534	0.82
HCC18	DIABETES WITH OPHTHALMOLOGIC OR UNSPECIFIED MANIFESTATION	891	434	0.04
HCC19	DIABETES WITHOUT COMPLICATION	235	119	0.05
HCC21	PROTEIN-CALORIE MALNUTRITION	2,043	431	0.00
HCC25	END-STAGE LIVER DISEASE	270	877	0.76
HCC26	CIRRHOSIS OF LIVER	388	723	0.59
HCC27	CHRONIC HEPATITIS	1,919	941	0.04
HCC31	INTESTINAL OBSTRUCTION/PERFORATION	1,131	367	0.00
HCC32	PANCREATIC DISEASE	11	439	0.98
HCC33	INFLAMMATORY BOWEL DISEASE	587	552	0.29
HCC37	BONE/JOINT/MUSCLE INFECTIONS/NECROSIS	1,669	583	0.00
HCC38	RHEUMATOID ARTHRITIS AND INFLAMMATORY CONNECTIVE TISSUE DISEASE	609	315	0.05
HCC44	SEVERE HEMATOLOGICAL DISORDERS	1,671	493	0.00
HCC45	DISORDERS OF IMMUNITY	2,918	571	0.00
HCC51	DRUG/ALCOHOL PSYCHOSIS	822	967	0.40
HCC52	DRUG/ALCOHOL DEPENDENCE	843	836	0.31
HCC54	SCHIZOPHRENIA	1,515	445	0.00
HCC55	MAJOR DEPRESSIVE, BIPOLAR, AND PARANOID DISORDERS	805	271	0.00
HCC67	QUADRIPLEGIA, OTHER EXTENSIVE PARALYSIS	-1,862	916	0.04

Coef Name	Label	Coef Value	Std Error	P Value
HCC68	PARAPLEGIA	-61	790	0.94
HCC69	SPINAL CORD DISORDERS/INJURIES	364	611	0.55
HCC70	MUSCULAR DYSTROPHY	1,963	2,096	0.35
HCC71	POLYNEUROPATHY	422	247	0.09
HCC72	MULTIPLE SCLEROSIS	4,499	865	0.00
HCC73	PARKINSONS AND HUNTINGTONS DISEASES	2,515	336	0.00
HCC74	SEIZURE DISORDERS AND CONVULSIONS	785	325	0.02
HCC75	COMA, BRAIN COMPRESSION/ANOXIC DAMAGE	-1,435	1,293	0.27
HCC77	RESPIRATOR DEPENDENCE/TRACHEOSTOMY STATUS	3,640	1,050	0.00
HCC78	RESPIRATORY ARREST	2,839	3,084	0.36
HCC79	CARDIO-RESPIRATORY FAILURE AND SHOCK	977	304	0.00
HCC80	CONGESTIVE HEART FAILURE	220	220	0.32
HCC81	ACUTE MYOCARDIAL INFARCTION	1,266	578	0.03
HCC82	UNSTABLE ANGINA AND OTHER ACUTE ISCHEMIC HEART DISEASE	789	373	0.03
HCC83	ANGINA PECTORIS/OLD MYOCARDIAL INFARCTION	-29	199	0.88
HCC92	SPECIFIED HEART ARRHYTHMIAS	413	130	0.00
HCC95	CEREBRAL HEMORRHAGE	-786	842	0.35
HCC96	ISCHEMIC OR UNSPECIFIED STROKE	833	322	0.01
HCC100	HEMIPLEGIA/HEMIPARESIS	2,607	467	0.00
HCC101	CEREBRAL PALSY AND OTHER PARALYTIC SYNDROMES	884	1,037	0.39
HCC104	VASCULAR DISEASE WITH COMPLICATIONS	1,740	377	0.00
HCC105	VASCULAR DISEASE	405	140	0.00
HCC107	CYSTIC FIBROSIS	-1,281	7,528	0.86
HCC108	CHRONIC OBSTRUCTIVE PULMONARY DISEASE	150	151	0.32
HCC111	ASPIRATION AND SPECIFIED BACTERIAL PNEUMONIAS	1,115	629	0.08
HCC112	PNEUMOCOCCAL PNEUMONIA, EMPHYSEMA, LUNG ABSCESS	-341	953	0.72
HCC119	PROLIFERATIVE DIABETIC RETINOPATHY AND VITREOUS HEMORRHAGE	-746	696	0.28
HCC130	DIALYSIS STATUS	4,121	733	0.00
HCC131	RENAL FAILURE	-2	166	0.99
HCC132	NEPHRITIS	-86	1,044	0.93

Coef Name	Label	Coef Value	Std Error	P Value
HCC148	DECUBITUS ULCER OF SKIN	4,222	433	0.00
HCC149	CHRONIC ULCER OF SKIN, EXCEPT DECUBITUS	824	372	0.03
HCC150	EXTENSIVE THIRD-DEGREE BURNS	0	0	.
HCC154	SEVERE HEAD INJURY	-3,043	5,299	0.57
HCC155	MAJOR HEAD INJURY	112	856	0.90
HCC157	VERTEBRAL FRACTURES WITHOUT SPINAL CORD INJURY	1,388	550	0.01
HCC158	HIP FRACTURE/DISLOCATION	2,845	586	0.00
HCC161	TRAUMATIC AMPUTATION	-1,715	1,227	0.16
HCC164	MAJOR COMPLICATIONS OF MEDICAL CARE AND TRAUMA	-181	196	0.36
HCC174	MAJOR ORGAN TRANSPLANT STATUS	311	965	0.75
HCC176	ARTIFICIAL OPENINGS FOR FEEDING OR ELIMINATION	896	413	0.03
HCC177	AMPUTATION STATUS, LOWER LIMB/AMPUTATION COMPLICATIONS	4,081	738	0.00
Age_Lt_35		-711	639	0.27
Age_Lt_45		-320	495	0.52
Age_Lt_55		-145	295	0.62
Age_Lt_60		692	287	0.02
Age_Lt_65		201	238	0.40
Age_Lt_75		378	118	0.00
Age_Lt_80		641	138	0.00
Age_Lt_85		1,329	153	0.00
Age_Lt_90		2,223	182	0.00
Age_Lt_95		3,918	271	0.00
Age_Gt_94		3,296	594	0.00
ORIGDS		592	150	0.00
ESRD		4,234	400	0.00
D_HCC5	DISABLED, OPPORTUNISTISTIC INFECTIONS	-5,337	3,164	0.09
D_HCC44	DISABLED, SEVERE HEMATOLOGICAL DISORDERS	3,002	1,524	0.05
D_HCC51	DISABLED, DRUG/ALCOHOL PSYCHOSIS	-184	1,822	0.92
D_HCC52	DISABLED, DRUG/ALCOHOL DEPENDENCE	146	1,216	0.90
D_HCC107	DISABLED, CYSTIC FIBROSIS	-1,013	10,633	0.92
DM_CVD	DIABETES MELLITUS * CEREBROVASCULAR DISEASE	2,032	477	0.00
CHF_COPD	CONGESTIVE HEART FAILURE*CHRONIC OBSRUCTIVE PULMONARY DISEASE	470	329	0.15
COPD_CVD_CAD	CHRONIC OBSRUCTIVE PULMONARY	-3,429	1,175	0.00

Coef Name	Label	Coef Value	Std Error	P Value
	DISEASE *CEBROVASCULAR DISEASE*CORONARY			
RF_CHF_DM	DIABETES MELLITUS * CONGESTIVE HEART* RENAL FAILURE	1,463	425	0.00
DM_CHF	DIABETES MELLITUS * CONGESTIVE HEART FAILURE	1,152	347	0.00
RF_CHF	RENAL FAILURE* CONGESTIVE HEART FAILURE	554	407	0.17
DRG_CD=003	ECMO OR TRACH W MV 96+ HRS OR PDX EXC FACE, MOUTH & NECK W MAJ O.R.	180,442	3,410	0.00
DRG_CD=004	TRACH W MV 96+ HRS OR PDX EXC FACE, MOUTH & NECK W/O MAJ O.R.	102,542	4,371	0.00
DRG_CD=707	MAJOR MALE PELVIC PROCEDURES W CC/MCC	7,692	688	0.00
DRG_CD=708	MAJOR MALE PELVIC PROCEDURES W/O CC/MCC	3,024	679	0.00
DRG_CD=709	PENIS PROCEDURES W CC/MCC	11,677	776	0.00
DRG_CD=710	PENIS PROCEDURES W/O CC/MCC	2,464	725	0.00
DRG_CD=711	TESTES PROCEDURES W CC/MCC	9,814	802	0.00
DRG_CD=712	TESTES PROCEDURES W/O CC/MCC	176	868	0.84
DRG_CD=713	TRANSURETHRAL PROSTATECTOMY W CC/MCC	3,298	676	0.00
DRG_CD=714	TRANSURETHRAL PROSTATECTOMY W/O CC/MCC	-2,190	670	0.00
DRG_CD=715	OTHER MALE REPRODUCTIVE SYSTEM O.R. PROC FOR MALIGNANCY W CC/MCC	11,956	867	0.00
DRG_CD=716	OTHER MALE REPRODUCTIVE SYSTEM O.R. PROC FOR MALIGNANCY W/O CC/MCC	4,342	823	0.00
DRG_CD=717	OTHER MALE REPRODUCTIVE SYSTEM O.R. PROC EXC MALIGNANCY W CC/MCC	10,190	774	0.00
DRG_CD=718	OTHER MALE REPRODUCTIVE SYSTEM O.R. PROC EXC MALIGNANCY W/O CC/MCC	-325	836	0.70
DRG_CD=722	MALIGNANCY, MALE REPRODUCTIVE SYSTEM W MCC	11,261	844	0.00
DRG_CD=723	MALIGNANCY, MALE REPRODUCTIVE SYSTEM W CC	6,619	751	0.00
DRG_CD=724	MALIGNANCY, MALE REPRODUCTIVE SYSTEM W/O CC/MCC	2,936	1,024	0.00
DRG_CD=725	BENIGN PROSTATIC HYPERTROPHY W MCC	7,160	741	0.00
DRG_CD=726	BENIGN PROSTATIC HYPERTROPHY	2,309	693	0.00

Coef Name	Label	Coef Value	Std Error	P Value
DRG_CD=727	INFLAMMATION OF THE MALE REPRODUCTIVE SYSTEM W MCC	8,466	715	0.00
DRG_CD=728	INFLAMMATION OF THE MALE REPRODUCTIVE SYSTEM W/O MCC	910	680	0.18
DRG_CD=729	OTHER MALE REPRODUCTIVE SYSTEM DIAGNOSES W CC/MCC	5,410	798	0.00
DRG_CD=730	OTHER MALE REPRODUCTIVE SYSTEM DIAGNOSES W/O CC/MCC	0	0	.
LTI_Indicator		5,061	320	0.00

Table 33: Female Reproductive System

Coef Name	Label	Coef Value	Std Error	P Value
Intercept		7,264	362	0.00
HCC1	HIV/AIDS	91	728	0.90
HCC2	SEPTICEMIA/SHOCK	438	441	0.32
HCC5	OPPORTUNISTIC INFECTIONS	-695	1,176	0.55
HCC7	METASTATIC CANCER AND ACUTE LEUKEMIA	199	241	0.41
HCC8	LUNG, UPPER DIGESTIVE TRACT, AND OTHER SEVERE CANCERS	704	419	0.09
HCC9	LYMPHATIC, HEAD AND NECK, BRAIN, AND OTHER MAJOR CANCERS	751	203	0.00
HCC10	BREAST, PROSTATE, COLORECTAL AND OTHER CANCERS AND TUMORS	-295	133	0.03
HCC15	DIABETES WITH RENAL OR PERIPHERAL CIRCULATORY MANIFESTATION	751	286	0.01
HCC16	DIABETES WITH NEUROLOGIC OR OTHER SPECIFIED MANIFESTATION	941	273	0.00
HCC17	DIABETES WITH ACUTE COMPLICATIONS	2,204	1,186	0.06
HCC18	DIABETES WITH OPHTHALMOLOGIC OR UNSPECIFIED MANIFESTATION	-193	384	0.61
HCC19	DIABETES WITHOUT COMPLICATION	376	107	0.00
HCC21	PROTEIN-CALORIE MALNUTRITION	2,798	454	0.00
HCC25	END-STAGE LIVER DISEASE	2,427	1,010	0.02
HCC26	CIRRHOSIS OF LIVER	3	670	1.00
HCC27	CHRONIC HEPATITIS	-1,191	691	0.08
HCC31	INTESTINAL OBSTRUCTION/PERFORATION	742	338	0.03
HCC32	PANCREATIC DISEASE	437	368	0.23
HCC33	INFLAMMATORY BOWEL DISEASE	-698	488	0.15
HCC37	BONE/JOINT/MUSCLE	907	602	0.13

Coef Name	Label	Coef Value	Std Error	P Value
	INFECTIONS/NECROSIS			
HCC38	RHEUMATOID ARTHRITIS AND INFLAMMATORY CONNECTIVE TISSUE DISEASE	458	187	0.01
HCC44	SEVERE HEMATOLOGICAL DISORDERS	465	555	0.40
HCC45	DISORDERS OF IMMUNITY	-442	385	0.25
HCC51	DRUG/ALCOHOL PSYCHOSIS	-1,142	1,248	0.36
HCC52	DRUG/ALCOHOL DEPENDENCE	1,255	1,260	0.32
HCC54	SCHIZOPHRENIA	2,038	341	0.00
HCC55	MAJOR DEPRESSIVE, BIPOLAR, AND PARANOID DISORDERS	459	164	0.01
HCC67	QUADRIPLEGIA, OTHER EXTENSIVE PARALYSIS	676	1,224	0.58
HCC68	PARAPLEGIA	3,983	923	0.00
HCC69	SPINAL CORD DISORDERS/INJURIES	711	710	0.32
HCC70	MUSCULAR DYSTROPHY	-1,615	2,178	0.46
HCC71	POLYNEUROPATHY	543	229	0.02
HCC72	MULTIPLE SCLEROSIS	1,424	469	0.00
HCC73	PARKINSONS AND HUNTINGTONS DISEASES	2,369	466	0.00
HCC74	SEIZURE DISORDERS AND CONVULSIONS	218	273	0.43
HCC75	COMA, BRAIN COMPRESSION/ANOXIC DAMAGE	1,213	1,211	0.32
HCC77	RESPIRATOR DEPENDENCE/TRACHEOSTOMY STATUS	7,443	1,397	0.00
HCC78	RESPIRATORY ARREST	-3,049	3,220	0.34
HCC79	CARDIO-RESPIRATORY FAILURE AND SHOCK	1,340	319	0.00
HCC80	CONGESTIVE HEART FAILURE	0	224	1.00
HCC81	ACUTE MYOCARDIAL INFARCTION	3,869	801	0.00
HCC82	UNSTABLE ANGINA AND OTHER ACUTE ISCHEMIC HEART DISEASE	49	433	0.91
HCC83	ANGINA PECTORIS/OLD MYOCARDIAL INFARCTION	190	239	0.43
HCC92	SPECIFIED HEART ARRHYTHMIAS	287	148	0.05
HCC95	CEREBRAL HEMORRHAGE	2,751	1,141	0.02
HCC96	ISCHEMIC OR UNSPECIFIED STROKE	-114	363	0.75
HCC100	HEMIPLEGIA/HEMIPARESIS	1,542	564	0.01
HCC101	CEREBRAL PALSY AND OTHER PARALYTIC SYNDROMES	1,432	847	0.09
HCC104	VASCULAR DISEASE WITH COMPLICATIONS	1,492	348	0.00

Coef Name	Label	Coef Value	Std Error	P Value
HCC105	VASCULAR DISEASE	606	144	0.00
HCC107	CYSTIC FIBROSIS	-72	7,843	0.99
HCC108	CHRONIC OBSTRUCTIVE PULMONARY DISEASE	383	146	0.01
HCC111	ASPIRATION AND SPECIFIED BACTERIAL PNEUMONIAS	674	730	0.36
HCC112	PNEUMOCOCCAL PNEUMONIA, EMPHYSEMA, LUNG ABSCESS	2,765	1,177	0.02
HCC119	PROLIFERATIVE DIABETIC RETINOPATHY AND VITREOUS HEMORRHAGE	-473	622	0.45
HCC130	DIALYSIS STATUS	2,975	710	0.00
HCC131	RENAL FAILURE	1,213	204	0.00
HCC132	NEPHRITIS	-1,047	1,011	0.30
HCC148	DECUBITUS ULCER OF SKIN	1,342	473	0.00
HCC149	CHRONIC ULCER OF SKIN, EXCEPT DECUBITUS	1,160	382	0.00
HCC150	EXTENSIVE THIRD-DEGREE BURNS	0	0	.
HCC154	SEVERE HEAD INJURY	0	0	.
HCC155	MAJOR HEAD INJURY	798	972	0.41
HCC157	VERTEBRAL FRACTURES WITHOUT SPINAL CORD INJURY	385	508	0.45
HCC158	HIP FRACTURE/DISLOCATION	1,226	576	0.03
HCC161	TRAUMATIC AMPUTATION	1,172	1,482	0.43
HCC164	MAJOR COMPLICATIONS OF MEDICAL CARE AND TRAUMA	481	312	0.12
HCC174	MAJOR ORGAN TRANSPLANT STATUS	86	901	0.92
HCC176	ARTIFICIAL OPENINGS FOR FEEDING OR ELIMINATION	1,014	481	0.04
HCC177	AMPUTATION STATUS, LOWER LIMB/AMPUTATION COMPLICATIONS	2,913	936	0.00
Age_Lt_35		-827	259	0.00
Age_Lt_45		-867	173	0.00
Age_Lt_55		-297	161	0.06
Age_Lt_60		-2	228	0.99
Age_Lt_65		638	217	0.00
Age_Lt_75		299	109	0.01
Age_Lt_80		635	120	0.00
Age_Lt_85		1,301	141	0.00
Age_Lt_90		2,137	187	0.00
Age_Lt_95		2,728	322	0.00
Age_Gt_94		3,172	648	0.00
ORIGDS		710	161	0.00
ESRD		2,876	391	0.00

Coef Name	Label	Coef Value	Std Error	P Value
D_HCC5	DISABLED, OPPORTUNISTISTIC INFECTIONS	-2,086	2,479	0.40
D_HCC44	DISABLED, SEVERE HEMATOLOGICAL DISORDERS	308	1,094	0.78
D_HCC51	DISABLED, DRUG/ALCOHOL PSYCHOSIS	1,423	1,724	0.41
D_HCC52	DISABLED, DRUG/ALCOHOL DEPENDENCE	78	1,366	0.95
D_HCC107	DISABLED, CYSTIC FIBROSIS	8,057	8,777	0.36
DM_CVD	DIABETES MELLITUS * CEREBROVASCULAR DISEASE	583	540	0.28
CHF_COPD	CONGESTIVE HEART FAILURE*CHRONIC OBSRUCTIVE PULMONARY DISEASE	502	363	0.17
COPD_CVD_CAD	CHRONIC OBSRUCTIVE PULMONARY DISEASE *CEBROVASCULAR DISEASE*CORONARY	-4,831	1,586	0.00
RF_CHF_DM	DIABETES MELLITUS * CONGESTIVE HEART* RENAL FAILURE	1,093	500	0.03
DM_CHF	DIABETES MELLITUS * CONGESTIVE HEART FAILURE	691	350	0.05
RF_CHF	RENAL FAILURE* CONGESTIVE HEART FAILURE	68	559	0.90
DRG_CD=003	ECMO OR TRACH W MV 96+ HRS OR PDX EXC FACE, MOUTH & NECK W MAJ O.R.	177,553	1,676	0.00
DRG_CD=004	TRACH W MV 96+ HRS OR PDX EXC FACE, MOUTH & NECK W/O MAJ O.R.	125,285	7,849	0.00
DRG_CD=734	PELVIC EVISCERATION, RAD HYSTERECTOMY & RAD VULVECTOMY W CC/MCC	17,763	459	0.00
DRG_CD=735	PELVIC EVISCERATION, RAD HYSTERECTOMY & RAD VULVECTOMY W/O CC/MCC	3,425	487	0.00
DRG_CD=736	UTERINE & ADNEXA PROC FOR OVARIAN OR ADNEXAL MALIGNANCY W MCC	37,134	551	0.00
DRG_CD=737	UTERINE & ADNEXA PROC FOR OVARIAN OR ADNEXAL MALIGNANCY W CC	13,430	416	0.00
DRG_CD=738	UTERINE & ADNEXA PROC FOR OVARIAN OR ADNEXAL MALIGNANCY W/O CC/MCC	4,535	548	0.00
DRG_CD=739	UTERINE,ADNEXA PROC FOR NON-OVARIAN/ADNEXAL MALIG W MCC	24,228	513	0.00
DRG_CD=740	UTERINE,ADNEXA PROC FOR NON-OVARIAN/ADNEXAL MALIG W CC	8,001	402	0.00

Coef Name	Label	Coef Value	Std Error	P Value
DRG_CD=741	UTERINE,ADNEXA PROC FOR NON-OVARIAN/ADNEXAL MALIG W/O CC/MCC	2,491	396	0.00
DRG_CD=742	UTERINE & ADNEXA PROC FOR NON-MALIGNANCY W CC/MCC	5,113	368	0.00
DRG_CD=743	UTERINE & ADNEXA PROC FOR NON-MALIGNANCY W/O CC/MCC	124	359	0.73
DRG_CD=744	D&C, CONIZATION, LAPAROSCOPY & TUBAL INTERRUPTION W CC/MCC	9,549	463	0.00
DRG_CD=745	D&C, CONIZATION, LAPAROSCOPY & TUBAL INTERRUPTION W/O CC/MCC	1,388	498	0.01
DRG_CD=746	VAGINA, CERVIX & VULVA PROCEDURES W CC/MCC	5,588	418	0.00
DRG_CD=747	VAGINA, CERVIX & VULVA PROCEDURES W/O CC/MCC	-317	378	0.40
DRG_CD=748	FEMALE REPRODUCTIVE SYSTEM RECONSTRUCTIVE PROCEDURES	-376	364	0.30
DRG_CD=749	OTHER FEMALE REPRODUCTIVE SYSTEM O.R. PROCEDURES W CC/MCC	18,254	539	0.00
DRG_CD=750	OTHER FEMALE REPRODUCTIVE SYSTEM O.R. PROCEDURES W/O CC/MCC	1,847	761	0.02
DRG_CD=754	MALIGNANCY, FEMALE REPRODUCTIVE SYSTEM W MCC	18,572	592	0.00
DRG_CD=755	MALIGNANCY, FEMALE REPRODUCTIVE SYSTEM W CC	11,151	445	0.00
DRG_CD=756	MALIGNANCY, FEMALE REPRODUCTIVE SYSTEM W/O CC/MCC	5,986	863	0.00
DRG_CD=757	INFECTIONS, FEMALE REPRODUCTIVE SYSTEM W MCC	13,052	501	0.00
DRG_CD=758	INFECTIONS, FEMALE REPRODUCTIVE SYSTEM W CC	6,964	456	0.00
DRG_CD=759	INFECTIONS, FEMALE REPRODUCTIVE SYSTEM W/O CC/MCC	2,541	528	0.00
DRG_CD=760	MENSTRUAL & OTHER FEMALE REPRODUCTIVE SYSTEM DISORDERS W CC/MCC	3,770	436	0.00
DRG_CD=761	MENSTRUAL & OTHER FEMALE REPRODUCTIVE SYSTEM DISORDERS W/O CC/MCC	0	0	.
LTI_Indicator		3,410	325	0.00

Table 34: Pregnancy, Childbirth and Puerperium

Coef Name	Label	Coef Value	Std Error	P Value
Intercept		6,275	4,761	0.19
HCC1	HIV/AIDS	1,283	515	0.01
HCC2	SEPTICEMIA/SHOCK	2,409	1,177	0.04
HCC5	OPPORTUNISTIC INFECTIONS	-3,300	3,560	0.35
HCC7	METASTATIC CANCER AND ACUTE LEUKEMIA	5,780	1,481	0.00
HCC8	LUNG, UPPER DIGESTIVE TRACT, AND OTHER SEVERE CANCERS	-414	4,739	0.93
HCC9	LYMPHATIC, HEAD AND NECK, BRAIN, AND OTHER MAJOR CANCERS	1,199	1,016	0.24
HCC10	BREAST, PROSTATE, COLORECTAL AND OTHER CANCERS AND TUMORS	118	795	0.88
HCC15	DIABETES WITH RENAL OR PERIPHERAL CIRCULATORY MANIFESTATION	5,390	843	0.00
HCC16	DIABETES WITH NEUROLOGIC OR OTHER SPECIFIED MANIFESTATION	1,296	497	0.01
HCC17	DIABETES WITH ACUTE COMPLICATIONS	1,641	1,066	0.12
HCC18	DIABETES WITH OPHTHALMOLOGIC OR UNSPECIFIED MANIFESTATION	-1,303	731	0.07
HCC19	DIABETES WITHOUT COMPLICATION	-5	217	0.98
HCC21	PROTEIN-CALORIE MALNUTRITION	5,624	1,028	0.00
HCC25	END-STAGE LIVER DISEASE	1,516	4,727	0.75
HCC26	CIRRHOSIS OF LIVER	-943	1,880	0.62
HCC27	CHRONIC HEPATITIS	-144	769	0.85
HCC31	INTESTINAL OBSTRUCTION/PERFORATION	-193	1,247	0.88
HCC32	PANCREATIC DISEASE	187	641	0.77
HCC33	INFLAMMATORY BOWEL DISEASE	1,458	578	0.01
HCC37	BONE/JOINT/MUSCLE INFECTIONS/NECROSIS	426	797	0.59
HCC38	RHEUMATOID ARTHRITIS AND INFLAMMATORY CONNECTIVE TISSUE DISEASE	173	310	0.58
HCC44	SEVERE HEMATOLOGICAL DISORDERS	1,978	335	0.00
HCC45	DISORDERS OF IMMUNITY	2,054	1,062	0.05
HCC51	DRUG/ALCOHOL PSYCHOSIS	-1,373	710	0.05
HCC52	DRUG/ALCOHOL DEPENDENCE	596	275	0.03
HCC54	SCHIZOPHRENIA	2,021	266	0.00
HCC55	MAJOR DEPRESSIVE, BIPOLAR, AND PARANOID DISORDERS	410	146	0.00
HCC67	QUADRIPLEGIA, OTHER EXTENSIVE PARALYSIS	511	1,591	0.75

Coef Name	Label	Coef Value	Std Error	P Value
HCC68	PARAPLEGIA	1,119	976	0.25
HCC69	SPINAL CORD DISORDERS/INJURIES	1,821	692	0.01
HCC70	MUSCULAR DYSTROPHY	13,532	1,334	0.00
HCC71	POLYNEUROPATHY	1,403	505	0.01
HCC72	MULTIPLE SCLEROSIS	271	548	0.62
HCC73	PARKINSONS AND HUNTINGTONS DISEASES	-1,624	4,803	0.74
HCC74	SEIZURE DISORDERS AND CONVULSIONS	150	234	0.52
HCC75	COMA, BRAIN COMPRESSION/ANOXIC DAMAGE	1,335	1,627	0.41
HCC77	RESPIRATOR DEPENDENCE/TRACHEOSTOMY STATUS	14,518	3,468	0.00
HCC78	RESPIRATORY ARREST	-1,019	4,758	0.83
HCC79	CARDIO-RESPIRATORY FAILURE AND SHOCK	3,778	715	0.00
HCC80	CONGESTIVE HEART FAILURE	118	558	0.83
HCC81	ACUTE MYOCARDIAL INFARCTION	-45,404	5,225	0.00
HCC82	UNSTABLE ANGINA AND OTHER ACUTE ISCHEMIC HEART DISEASE	-1,686	1,589	0.29
HCC83	ANGINA PECTORIS/OLD MYOCARDIAL INFARCTION	1,257	1,106	0.26
HCC92	SPECIFIED HEART ARRHYTHMIAS	-533	673	0.43
HCC95	CEREBRAL HEMORRHAGE	-2,942	2,223	0.19
HCC96	ISCHEMIC OR UNSPECIFIED STROKE	-1,909	1,070	0.07
HCC100	HEMIPLEGIA/HEMIPARESIS	3,575	1,053	0.00
HCC101	CEREBRAL PALSY AND OTHER PARALYTIC SYNDROMES	70	728	0.92
HCC104	VASCULAR DISEASE WITH COMPLICATIONS	-180	833	0.83
HCC105	VASCULAR DISEASE	1,269	588	0.03
HCC107	CYSTIC FIBROSIS	7,884	1,191	0.00
HCC108	CHRONIC OBSTRUCTIVE PULMONARY DISEASE	-263	531	0.62
HCC111	ASPIRATION AND SPECIFIED BACTERIAL PNEUMONIAS	-2,743	1,649	0.10
HCC112	PNEUMOCOCCAL PNEUMONIA, EMPHYSEMA, LUNG ABSCESS	18,996	2,377	0.00
HCC119	PROLIFERATIVE DIABETIC RETINOPATHY AND VITREOUS HEMORRHAGE	-2,871	1,219	0.02
HCC130	DIALYSIS STATUS	4,555	1,253	0.00
HCC131	RENAL FAILURE	1,979	588	0.00
HCC132	NEPHRITIS	397	1,055	0.71

Coef Name	Label	Coef Value	Std Error	P Value
HCC148	DECUBITUS ULCER OF SKIN	-1,994	1,545	0.20
HCC149	CHRONIC ULCER OF SKIN, EXCEPT DECUBITUS	449	1,041	0.67
HCC150	EXTENSIVE THIRD-DEGREE BURNS	0	0	.
HCC154	SEVERE HEAD INJURY	0	0	.
HCC155	MAJOR HEAD INJURY	1,076	1,722	0.53
HCC157	VERTEBRAL FRACTURES WITHOUT SPINAL CORD INJURY	-1,040	2,816	0.71
HCC158	HIP FRACTURE/DISLOCATION	-2,080	2,474	0.40
HCC161	TRAUMATIC AMPUTATION	-316	2,037	0.88
HCC164	MAJOR COMPLICATIONS OF MEDICAL CARE AND TRAUMA	4,906	683	0.00
HCC174	MAJOR ORGAN TRANSPLANT STATUS	-3,334	1,960	0.09
HCC176	ARTIFICIAL OPENINGS FOR FEEDING OR ELIMINATION	-2,243	1,295	0.08
HCC177	AMPUTATION STATUS, LOWER LIMB/AMPUTATION COMPLICATIONS	-2,215	1,413	0.12
Age_Lt_35		819	4,733	0.86
Age_Lt_45		1,024	4,734	0.83
Age_Lt_55		-2,316	4,814	0.63
Age_Lt_60		0	0	.
Age_Lt_65		0	0	.
Age_Lt_75		0	0	.
Age_Lt_80		0	0	.
Age_Lt_85		0	0	.
Age_Lt_90		0	0	.
Age_Lt_95		0	0	.
Age_Gt_94		0	0	.
ORIGDS		-1,080	1,470	0.46
ESRD		3,545	682	0.00
D_HCC5	DISABLED, OPPORTUNISTISTIC INFECTIONS	0	0	.
D_HCC44	DISABLED, SEVERE HEMATOLOGICAL DISORDERS	0	0	.
D_HCC51	DISABLED, DRUG/ALCOHOL PSYCHOSIS	0	0	.
D_HCC52	DISABLED, DRUG/ALCOHOL DEPENDENCE	0	0	.
D_HCC107	DISABLED, CYSTIC FIBROSIS	0	0	.
DM_CVD	DIABETES MELLITUS * CEREBROVASCULAR DISEASE	441	1,602	0.78
CHF_COPD	CONGESTIVE HEART FAILURE*CHRONIC OBSRUCTIVE PULMONARY DISEASE	42,359	2,132	0.00
COPD_CVD_CAD	CHRONIC OBSRUCTIVE PULMONARY	28,723	7,087	0.00

Coef Name	Label	Coef Value	Std Error	P Value
RF_CHF_DM	DISEASE *CEBROVASCULAR DISEASE*CORONARY DIABETES MELLITUS * CONGESTIVE HEART* RENAL FAILURE	-11,396	2,578	0.00
DM_CHF	DIABETES MELLITUS * CONGESTIVE HEART FAILURE	9,130	1,150	0.00
RF_CHF	RENAL FAILURE* CONGESTIVE HEART FAILURE	-963	1,543	0.53
DRG_CD=765	CESAREAN SECTION W CC/MCC	2,027	528	0.00
DRG_CD=766	CESAREAN SECTION W/O CC/MCC	-500	529	0.34
DRG_CD=767	VAGINAL DELIVERY W STERILIZATION &/OR D&C	-197	612	0.75
DRG_CD=768	VAGINAL DELIVERY W O.R. PROC EXCEPT STERIL &/OR D&C	4,872	2,456	0.05
DRG_CD=769	POSTPARTUM & POST ABORTION DIAGNOSES W O.R. PROCEDURE	7,276	1,298	0.00
DRG_CD=770	ABORTION W D&C, ASPIRATION CURETTAGE OR HYSTEROTOMY	-1,647	729	0.02
DRG_CD=774	VAGINAL DELIVERY W COMPLICATING DIAGNOSES	-1,037	540	0.05
DRG_CD=775	VAGINAL DELIVERY W/O COMPLICATING DIAGNOSES	-2,365	522	0.00
DRG_CD=776	POSTPARTUM & POST ABORTION DIAGNOSES W/O O.R. PROCEDURE	-1,949	665	0.00
DRG_CD=777	ECTOPIC PREGNANCY	-686	746	0.36
DRG_CD=778	THREATENED ABORTION	286	623	0.65
DRG_CD=779	ABORTION W/O D&C	-3,170	873	0.00
DRG_CD=780	FALSE LABOR	223	1,228	0.86
DRG_CD=781	OTHER ANTEPARTUM DIAGNOSES W MEDICAL COMPLICATIONS	1,074	534	0.04
DRG_CD=782	OTHER ANTEPARTUM DIAGNOSES W/O MEDICAL COMPLICATIONS	0	0	.
LTI_Indicator		0	0	.

Table 35: Newborn and Other Neonates (Perinatal Period)

Coef Name	Label	Coef Value	Std Error	P Value
Intercept		18,306	.	.
HCC1	HIV/AIDS	0	.	.
HCC2	SEPTICEMIA/SHOCK	0	.	.
HCC5	OPPORTUNISTIC INFECTIONS	0	.	.
HCC7	METASTATIC CANCER AND ACUTE LEUKEMIA	0	.	.
HCC8	LUNG, UPPER DIGESTIVE TRACT, AND	0	.	.

Coef Name	Label	Coef Value	Std Error	P Value
	OTHER SEVERE CANCERS			
HCC9	LYMPHATIC, HEAD AND NECK, BRAIN, AND OTHER MAJOR CANCERS	0	.	.
HCC10	BREAST, PROSTATE, COLORECTAL AND OTHER CANCERS AND TUMORS	0	.	.
HCC15	DIABETES WITH RENAL OR PERIPHERAL CIRCULATORY MANIFESTATION	0	.	.
HCC16	DIABETES WITH NEUROLOGIC OR OTHER SPECIFIED MANIFESTATION	0	.	.
HCC17	DIABETES WITH ACUTE COMPLICATIONS	0	.	.
HCC18	DIABETES WITH OPHTHALMOLOGIC OR UNSPECIFIED MANIFESTATION	0	.	.
HCC19	DIABETES WITHOUT COMPLICATION	0	.	.
HCC21	PROTEIN-CALORIE MALNUTRITION	0	.	.
HCC25	END-STAGE LIVER DISEASE	0	.	.
HCC26	CIRRHOSIS OF LIVER	0	.	.
HCC27	CHRONIC HEPATITIS	0	.	.
HCC31	INTESTINAL OBSTRUCTION/PERFORATION	0	.	.
HCC32	PANCREATIC DISEASE	0	.	.
HCC33	INFLAMMATORY BOWEL DISEASE	0	.	.
HCC37	BONE/JOINT/MUSCLE INFECTIONS/NECROSIS	0	.	.
HCC38	RHEUMATOID ARTHRITIS AND INFLAMMATORY CONNECTIVE TISSUE DISEASE	0	.	.
HCC44	SEVERE HEMATOLOGICAL DISORDERS	0	.	.
HCC45	DISORDERS OF IMMUNITY	0	.	.
HCC51	DRUG/ALCOHOL PSYCHOSIS	0	.	.
HCC52	DRUG/ALCOHOL DEPENDENCE	0	.	.
HCC54	SCHIZOPHRENIA	0	.	.
HCC55	MAJOR DEPRESSIVE, BIPOLAR, AND PARANOID DISORDERS	0	.	.
HCC67	QUADRIPLEGIA, OTHER EXTENSIVE PARALYSIS	0	.	.
HCC68	PARAPLEGIA	0	.	.
HCC69	SPINAL CORD DISORDERS/INJURIES	0	.	.
HCC70	MUSCULAR DYSTROPHY	0	.	.
HCC71	POLYNEUROPATHY	0	.	.
HCC72	MULTIPLE SCLEROSIS	0	.	.
HCC73	PARKINSONS AND HUNTINGTONS DISEASES	0	.	.
HCC74	SEIZURE DISORDERS AND	0	.	.

Coef Name	Label	Coef Value	Std Error	P Value
	CONVULSIONS			
HCC75	COMA, BRAIN COMPRESSION/ANOXIC DAMAGE	0	.	.
HCC77	RESPIRATOR DEPENDENCE/TRACHEOSTOMY STATUS	0	.	.
HCC78	RESPIRATORY ARREST	0	.	.
HCC79	CARDIO-RESPIRATORY FAILURE AND SHOCK	0	.	.
HCC80	CONGESTIVE HEART FAILURE	0	.	.
HCC81	ACUTE MYOCARDIAL INFARCTION	0	.	.
HCC82	UNSTABLE ANGINA AND OTHER ACUTE ISCHEMIC HEART DISEASE	0	.	.
HCC83	ANGINA PECTORIS/OLD MYOCARDIAL INFARCTION	0	.	.
HCC92	SPECIFIED HEART ARRHYTHMIAS	0	.	.
HCC95	CEREBRAL HEMORRHAGE	0	.	.
HCC96	ISCHEMIC OR UNSPECIFIED STROKE	0	.	.
HCC100	HEMIPLEGIA/HEMIPARESIS	0	.	.
HCC101	CEREBRAL PALSY AND OTHER PARALYTIC SYNDROMES	0	.	.
HCC104	VASCULAR DISEASE WITH COMPLICATIONS	0	.	.
HCC105	VASCULAR DISEASE	0	.	.
HCC107	CYSTIC FIBROSIS	0	.	.
HCC108	CHRONIC OBSTRUCTIVE PULMONARY DISEASE	0	.	.
HCC111	ASPIRATION AND SPECIFIED BACTERIAL PNEUMONIAS	0	.	.
HCC112	PNEUMOCOCCAL PNEUMONIA, EMPHYSEMA, LUNG ABSCESS	0	.	.
HCC119	PROLIFERATIVE DIABETIC RETINOPATHY AND VITREOUS HEMORRHAGE	0	.	.
HCC130	DIALYSIS STATUS	0	.	.
HCC131	RENAL FAILURE	0	.	.
HCC132	NEPHRITIS	0	.	.
HCC148	DECUBITUS ULCER OF SKIN	0	.	.
HCC149	CHRONIC ULCER OF SKIN, EXCEPT DECUBITUS	0	.	.
HCC150	EXTENSIVE THIRD-DEGREE BURNS	0	.	.
HCC154	SEVERE HEAD INJURY	0	.	.
HCC155	MAJOR HEAD INJURY	0	.	.
HCC157	VERTEBRAL FRACTURES WITHOUT SPINAL CORD INJURY	0	.	.

Coef Name	Label	Coef Value	Std Error	P Value
HCC158	HIP FRACTURE/DISLOCATION	0	.	.
HCC161	TRAUMATIC AMPUTATION	0	.	.
HCC164	MAJOR COMPLICATIONS OF MEDICAL CARE AND TRAUMA	0	.	.
HCC174	MAJOR ORGAN TRANSPLANT STATUS	0	.	.
HCC176	ARTIFICIAL OPENINGS FOR FEEDING OR ELIMINATION	0	.	.
HCC177	AMPUTATION STATUS, LOWER LIMB/AMPUTATION COMPLICATIONS	0	.	.
Age_Lt_35		0	.	.
Age_Lt_45		0	.	.
Age_Lt_55		0	.	.
Age_Lt_60		0	.	.
Age_Lt_65		0	.	.
Age_Lt_75		0	.	.
Age_Lt_80		0	.	.
Age_Lt_85		0	.	.
Age_Lt_90		0	.	.
Age_Lt_95		0	.	.
Age_Gt_94		0	.	.
ORIGDS		0	.	.
ESRD		0	.	.
D_HCC5	DISABLED, OPPORTUNISTISTIC INFECTIONS	0	.	.
D_HCC44	DISABLED, SEVERE HEMATOLOGICAL DISORDERS	0	.	.
D_HCC51	DISABLED, DRUG/ALCOHOL PSYCHOSIS	0	.	.
D_HCC52	DISABLED, DRUG/ALCOHOL DEPENDENCE	0	.	.
D_HCC107	DISABLED, CYSTIC FIBROSIS	0	.	.
DM_CVD	DIABETES MELLITUS * CEREBROVASCULAR DISEASE	0	.	.
CHF_COPD	CONGESTIVE HEART FAILURE*CHRONIC OBSRUCTIVE PULMONARY DISEASE	0	.	.
COPD_CVD_CAD	CHRONIC OBSRUCTIVE PULMONARY DISEASE *CEBROVASCULAR DISEASE*CORONARY	0	.	.
RF_CHF_DM	DIABETES MELLITUS * CONGESTIVE HEART* RENAL FAILURE	0	.	.
DM_CHF	DIABETES MELLITUS * CONGESTIVE HEART FAILURE	0	.	.
RF_CHF	RENAL FAILURE* CONGESTIVE HEART FAILURE	0	.	.

Coef Name	Label	Coef Value	Std Error	P Value
DRG_CD=794	NEONATE W OTHER SIGNIFICANT PROBLEMS	0	.	.
LTI_Indicator		0	.	.

Table 36: Blood and Blood Forming Organs and Immunological Disorders

Coef Name	Label	Coef Value	Std Error	P Value
Intercept		8,946	593	0.00
HCC1	HIV/AIDS	2,452	818	0.00
HCC2	SEPTICEMIA/SHOCK	1,923	294	0.00
HCC5	OPPORTUNISTIC INFECTIONS	1,978	694	0.00
HCC7	METASTATIC CANCER AND ACUTE LEUKEMIA	3,085	212	0.00
HCC8	LUNG, UPPER DIGESTIVE TRACT, AND OTHER SEVERE CANCERS	1,764	277	0.00
HCC9	LYMPHATIC, HEAD AND NECK, BRAIN, AND OTHER MAJOR CANCERS	2,591	228	0.00
HCC10	BREAST, PROSTATE, COLORECTAL AND OTHER CANCERS AND TUMORS	809	221	0.00
HCC15	DIABETES WITH RENAL OR PERIPHERAL CIRCULATORY MANIFESTATION	959	273	0.00
HCC16	DIABETES WITH NEUROLOGIC OR OTHER SPECIFIED MANIFESTATION	665	290	0.02
HCC17	DIABETES WITH ACUTE COMPLICATIONS	2,740	1,277	0.03
HCC18	DIABETES WITH OPHTHALMOLOGIC OR UNSPECIFIED MANIFESTATION	113	464	0.81
HCC19	DIABETES WITHOUT COMPLICATION	225	155	0.15
HCC21	PROTEIN-CALORIE MALNUTRITION	2,784	284	0.00
HCC25	END-STAGE LIVER DISEASE	-665	460	0.15
HCC26	CIRRHOSIS OF LIVER	-779	479	0.10
HCC27	CHRONIC HEPATITIS	2,644	656	0.00
HCC31	INTESTINAL OBSTRUCTION/PERFORATION	1,369	363	0.00
HCC32	PANCREATIC DISEASE	431	377	0.25
HCC33	INFLAMMATORY BOWEL DISEASE	740	530	0.16
HCC37	BONE/JOINT/MUSCLE INFECTIONS/NECROSIS	669	345	0.05
HCC38	RHEUMATOID ARTHRITIS AND INFLAMMATORY CONNECTIVE TISSUE DISEASE	542	242	0.03
HCC44	SEVERE HEMATOLOGICAL DISORDERS	1,968	181	0.00
HCC45	DISORDERS OF IMMUNITY	1,565	227	0.00

Coef Name	Label	Coef Value	Std Error	P Value
HCC51	DRUG/ALCOHOL PSYCHOSIS	287	920	0.76
HCC52	DRUG/ALCOHOL DEPENDENCE	519	815	0.52
HCC54	SCHIZOPHRENIA	2,145	485	0.00
HCC55	MAJOR DEPRESSIVE, BIPOLAR, AND PARANOID DISORDERS	1,378	258	0.00
HCC67	QUADRIPLEGIA, OTHER EXTENSIVE PARALYSIS	3,165	1,190	0.01
HCC68	PARAPLEGIA	3,453	936	0.00
HCC69	SPINAL CORD DISORDERS/INJURIES	1,307	490	0.01
HCC70	MUSCULAR DYSTROPHY	104	2,566	0.97
HCC71	POLYNEUROPATHY	937	245	0.00
HCC72	MULTIPLE SCLEROSIS	2,032	848	0.02
HCC73	PARKINSONS AND HUNTINGTONS DISEASES	1,714	457	0.00
HCC74	SEIZURE DISORDERS AND CONVULSIONS	724	299	0.02
HCC75	COMA, BRAIN COMPRESSION/ANOXIC DAMAGE	3,132	1,019	0.00
HCC77	RESPIRATOR DEPENDENCE/TRACHEOSTOMY STATUS	4,221	740	0.00
HCC78	RESPIRATORY ARREST	397	1,860	0.83
HCC79	CARDIO-RESPIRATORY FAILURE AND SHOCK	615	229	0.01
HCC80	CONGESTIVE HEART FAILURE	698	205	0.00
HCC81	ACUTE MYOCARDIAL INFARCTION	1,039	434	0.02
HCC82	UNSTABLE ANGINA AND OTHER ACUTE ISCHEMIC HEART DISEASE	917	378	0.02
HCC83	ANGINA PECTORIS/OLD MYOCARDIAL INFARCTION	325	250	0.19
HCC92	SPECIFIED HEART ARRHYTHMIAS	289	144	0.04
HCC95	CEREBRAL HEMORRHAGE	126	838	0.88
HCC96	ISCHEMIC OR UNSPECIFIED STROKE	1,243	330	0.00
HCC100	HEMIPLEGIA/HEMIPARESIS	1,366	458	0.00
HCC101	CEREBRAL PALSY AND OTHER PARALYTIC SYNDROMES	-165	1,137	0.88
HCC104	VASCULAR DISEASE WITH COMPLICATIONS	1,384	287	0.00
HCC105	VASCULAR DISEASE	727	145	0.00
HCC107	CYSTIC FIBROSIS	5,658	9,587	0.56
HCC108	CHRONIC OBSTRUCTIVE PULMONARY DISEASE	-173	175	0.32
HCC111	ASPIRATION AND SPECIFIED BACTERIAL PNEUMONIAS	835	459	0.07

Coef Name	Label	Coef Value	Std Error	P Value
HCC112	PNEUMOCOCCAL PNEUMONIA, EMPHYSEMA, LUNG ABSCESS	-131	688	0.85
HCC119	PROLIFERATIVE DIABETIC RETINOPATHY AND VITREOUS HEMORRHAGE	-108	632	0.86
HCC130	DIALYSIS STATUS	1,136	508	0.03
HCC131	RENAL FAILURE	292	177	0.10
HCC132	NEPHRITIS	-131	1,238	0.92
HCC148	DECUBITUS ULCER OF SKIN	2,981	332	0.00
HCC149	CHRONIC ULCER OF SKIN, EXCEPT DECUBITUS	1,071	313	0.00
HCC150	EXTENSIVE THIRD-DEGREE BURNS	39,102	7,830	0.00
HCC154	SEVERE HEAD INJURY	1,698	5,565	0.76
HCC155	MAJOR HEAD INJURY	2,394	815	0.00
HCC157	VERTEBRAL FRACTURES WITHOUT SPINAL CORD INJURY	1,322	445	0.00
HCC158	HIP FRACTURE/DISLOCATION	2,930	452	0.00
HCC161	TRAUMATIC AMPUTATION	2,425	1,218	0.05
HCC164	MAJOR COMPLICATIONS OF MEDICAL CARE AND TRAUMA	1,909	256	0.00
HCC174	MAJOR ORGAN TRANSPLANT STATUS	4,687	535	0.00
HCC176	ARTIFICIAL OPENINGS FOR FEEDING OR ELIMINATION	216	423	0.61
HCC177	AMPUTATION STATUS, LOWER LIMB/AMPUTATION COMPLICATIONS	4,968	701	0.00
Age_Lt_35		-1,079	341	0.00
Age_Lt_45		-2,032	347	0.00
Age_Lt_55		-1,545	296	0.00
Age_Lt_60		-897	344	0.01
Age_Lt_65		-531	313	0.09
Age_Lt_75		81	201	0.69
Age_Lt_80		178	201	0.38
Age_Lt_85		456	202	0.02
Age_Lt_90		765	216	0.00
Age_Lt_95		1,137	259	0.00
Age_Gt_94		787	383	0.04
ORIGDS		245	179	0.17
ESRD		3,805	314	0.00
D_HCC5	DISABLED, OPPORTUNISTISTIC INFECTIONS	9,620	1,517	0.00
D_HCC44	DISABLED, SEVERE HEMATOLOGICAL DISORDERS	-1,202	317	0.00
D_HCC51	DISABLED, DRUG/ALCOHOL PSYCHOSIS	178	1,413	0.90
D_HCC52	DISABLED, DRUG/ALCOHOL	945	982	0.34

Coef Name	Label	Coef Value	Std Error	P Value
	DEPENDENCE			
D_HCC107	DISABLED, CYSTIC FIBROSIS	-9,776	12,384	0.43
DM_CVD	DIABETES MELLITUS * CEREBROVASCULAR DISEASE	575	466	0.22
CHF_COPD	CONGESTIVE HEART FAILURE*CHRONIC OBSRUCTIVE PULMONARY DISEASE	756	286	0.01
COPD_CVD_CAD	CHRONIC OBSRUCTIVE PULMONARY DISEASE *CEBROVASCULAR DISEASE*CORONARY	-786	1,024	0.44
RF_CHF_DM	DIABETES MELLITUS * CONGESTIVE HEART* RENAL FAILURE	373	356	0.29
DM_CHF	DIABETES MELLITUS * CONGESTIVE HEART FAILURE	-663	319	0.04
RF_CHF	RENAL FAILURE* CONGESTIVE HEART FAILURE	-402	341	0.24
DRG_CD=003	ECMO OR TRACH W MV 96+ HRS OR PDX EXC FACE, MOUTH & NECK W MAJ O.R.	138,466	2,949	0.00
DRG_CD=004	TRACH W MV 96+ HRS OR PDX EXC FACE, MOUTH & NECK W/O MAJ O.R.	134,150	3,165	0.00
DRG_CD=006	LIVER TRANSPLANT W/O MCC	31,668	13,577	0.02
DRG_CD=009	BONE MARROW TRANSPLANT	62,749	3,347	0.00
DRG_CD=014	ALLOGENEIC BONE MARROW TRANSPLANT	58,734	6,830	0.00
DRG_CD=015	AUTOLOGOUS BONE MARROW TRANSPLANT	32,621	6,810	0.00
DRG_CD=799	SPLENECTOMY W MCC	42,281	1,188	0.00
DRG_CD=800	SPLENECTOMY W CC	13,960	1,055	0.00
DRG_CD=801	SPLENECTOMY W/O CC/MCC	4,295	1,137	0.00
DRG_CD=802	OTHER O.R. PROC OF THE BLOOD & BLOOD FORMING ORGANS W MCC	28,033	975	0.00
DRG_CD=803	OTHER O.R. PROC OF THE BLOOD & BLOOD FORMING ORGANS W CC	9,103	875	0.00
DRG_CD=804	OTHER O.R. PROC OF THE BLOOD & BLOOD FORMING ORGANS W/O CC/MCC	933	970	0.34
DRG_CD=808	MAJOR HEMATOL/IMMUN DIAG EXC SICKLE CELL CRISIS & COAGUL W MCC	12,606	636	0.00
DRG_CD=809	MAJOR HEMATOL/IMMUN DIAG EXC SICKLE CELL CRISIS & COAGUL W CC	5,065	616	0.00
DRG_CD=810	MAJOR HEMATOL/IMMUN DIAG EXC SICKLE CELL CRISIS & COAGUL W/O CC/MCC	2,704	740	0.00
DRG_CD=811	RED BLOOD CELL DISORDERS W MCC	6,005	587	0.00
DRG_CD=812	RED BLOOD CELL DISORDERS W/O	653	578	0.26

Coef Name	Label	Coef Value	Std Error	P Value
	MCC			
DRG_CD=813	COAGULATION DISORDERS	10,573	617	0.00
DRG_CD=814	RETICULOENDOTHELIAL & IMMUNITY DISORDERS W MCC	10,684	804	0.00
DRG_CD=815	RETICULOENDOTHELIAL & IMMUNITY DISORDERS W CC	3,679	691	0.00
DRG_CD=816	RETICULOENDOTHELIAL & IMMUNITY DISORDERS W/O CC/MCC	0	0	.
LTI_Indicator		2,225	228	0.00

Table 37: Myeloproliferative DDs (Poorly Differentiated Neoplasms)

Coef Name	Label	Coef Value	Std Error	P Value
Intercept		23,042	1,556	0.00
HCC1	HIV/AIDS	-1,860	1,836	0.31
HCC2	SEPTICEMIA/SHOCK	2,933	828	0.00
HCC5	OPPORTUNISTIC INFECTIONS	1,787	1,755	0.31
HCC7	METASTATIC CANCER AND ACUTE LEUKEMIA	-3,353	467	0.00
HCC8	LUNG, UPPER DIGESTIVE TRACT, AND OTHER SEVERE CANCERS	-2,934	650	0.00
HCC9	LYMPHATIC, HEAD AND NECK, BRAIN, AND OTHER MAJOR CANCERS	-1,386	445	0.00
HCC10	BREAST, PROSTATE, COLORECTAL AND OTHER CANCERS AND TUMORS	-2,615	677	0.00
HCC15	DIABETES WITH RENAL OR PERIPHERAL CIRCULATORY MANIFESTATION	883	1,054	0.40
HCC16	DIABETES WITH NEUROLOGIC OR OTHER SPECIFIED MANIFESTATION	148	910	0.87
HCC17	DIABETES WITH ACUTE COMPLICATIONS	-2,638	4,499	0.56
HCC18	DIABETES WITH OPHTHALMOLOGIC OR UNSPECIFIED MANIFESTATION	-386	1,424	0.79
HCC19	DIABETES WITHOUT COMPLICATION	719	426	0.09
HCC21	PROTEIN-CALORIE MALNUTRITION	322	770	0.68
HCC25	END-STAGE LIVER DISEASE	-2,821	1,516	0.06
HCC26	CIRRHOSIS OF LIVER	-3,873	1,290	0.00
HCC27	CHRONIC HEPATITIS	-630	1,830	0.73
HCC31	INTESTINAL OBSTRUCTION/PERFORATION	3,566	870	0.00
HCC32	PANCREATIC DISEASE	-446	979	0.65
HCC33	INFLAMMATORY BOWEL DISEASE	-181	1,668	0.91
HCC37	BONE/JOINT/MUSCLE INFECTIONS/NECROSIS	961	1,753	0.58

Coef Name	Label	Coef Value	Std Error	P Value
HCC38	RHEUMATOID ARTHRITIS AND INFLAMMATORY CONNECTIVE TISSUE DISEASE	1,576	789	0.05
HCC44	SEVERE HEMATOLOGICAL DISORDERS	320	520	0.54
HCC45	DISORDERS OF IMMUNITY	1,230	456	0.01
HCC51	DRUG/ALCOHOL PSYCHOSIS	-861	2,461	0.73
HCC52	DRUG/ALCOHOL DEPENDENCE	147	2,676	0.96
HCC54	SCHIZOPHRENIA	-412	1,591	0.80
HCC55	MAJOR DEPRESSIVE, BIPOLAR, AND PARANOID DISORDERS	257	848	0.76
HCC67	QUADRIPLEGIA, OTHER EXTENSIVE PARALYSIS	2,899	4,225	0.49
HCC68	PARAPLEGIA	8,409	2,849	0.00
HCC69	SPINAL CORD DISORDERS/INJURIES	940	1,377	0.49
HCC70	MUSCULAR DYSTROPHY	-2,057	7,588	0.79
HCC71	POLYNEUROPATHY	1,630	642	0.01
HCC72	MULTIPLE SCLEROSIS	2,019	2,326	0.39
HCC73	PARKINSONS AND HUNTINGTONS DISEASES	996	1,728	0.56
HCC74	SEIZURE DISORDERS AND CONVULSIONS	919	968	0.34
HCC75	COMA, BRAIN COMPRESSION/ANOXIC DAMAGE	4,652	1,528	0.00
HCC77	RESPIRATOR DEPENDENCE/TRACHEOSTOMY STATUS	2,621	2,335	0.26
HCC78	RESPIRATORY ARREST	5,295	10,190	0.60
HCC79	CARDIO-RESPIRATORY FAILURE AND SHOCK	-627	754	0.41
HCC80	CONGESTIVE HEART FAILURE	-611	699	0.38
HCC81	ACUTE MYOCARDIAL INFARCTION	-817	1,949	0.67
HCC82	UNSTABLE ANGINA AND OTHER ACUTE ISCHEMIC HEART DISEASE	3,373	1,288	0.01
HCC83	ANGINA PECTORIS/OLD MYOCARDIAL INFARCTION	432	720	0.55
HCC92	SPECIFIED HEART ARRHYTHMIAS	-38	468	0.94
HCC95	CEREBRAL HEMORRHAGE	1,754	2,213	0.43
HCC96	ISCHEMIC OR UNSPECIFIED STROKE	131	1,136	0.91
HCC100	HEMIPLEGIA/HEMIPARESIS	-256	1,543	0.87
HCC101	CEREBRAL PALSY AND OTHER PARALYTIC SYNDROMES	8,359	3,280	0.01
HCC104	VASCULAR DISEASE WITH COMPLICATIONS	344	896	0.70
HCC105	VASCULAR DISEASE	391	448	0.38

Coef Name	Label	Coef Value	Std Error	P Value
HCC107	CYSTIC FIBROSIS	-6,360	13,199	0.63
HCC108	CHRONIC OBSTRUCTIVE PULMONARY DISEASE	208	490	0.67
HCC111	ASPIRATION AND SPECIFIED BACTERIAL PNEUMONIAS	-1,501	1,480	0.31
HCC112	PNEUMOCOCCAL PNEUMONIA, EMPHYSEMA, LUNG ABSCESS	12,200	1,800	0.00
HCC119	PROLIFERATIVE DIABETIC RETINOPATHY AND VITREOUS HEMORRHAGE	2,763	2,449	0.26
HCC130	DIALYSIS STATUS	242	2,423	0.92
HCC131	RENAL FAILURE	-703	520	0.18
HCC132	NEPHRITIS	1,109	3,305	0.74
HCC148	DECUBITUS ULCER OF SKIN	3,301	1,448	0.02
HCC149	CHRONIC ULCER OF SKIN, EXCEPT DECUBITUS	1,951	1,173	0.10
HCC150	EXTENSIVE THIRD-DEGREE BURNS	-10,206	22,674	0.65
HCC154	SEVERE HEAD INJURY	-54	13,238	1.00
HCC155	MAJOR HEAD INJURY	698	2,502	0.78
HCC157	VERTEBRAL FRACTURES WITHOUT SPINAL CORD INJURY	3,620	976	0.00
HCC158	HIP FRACTURE/DISLOCATION	1,517	1,528	0.32
HCC161	TRAUMATIC AMPUTATION	3,609	5,371	0.50
HCC164	MAJOR COMPLICATIONS OF MEDICAL CARE AND TRAUMA	2,547	686	0.00
HCC174	MAJOR ORGAN TRANSPLANT STATUS	4,642	945	0.00
HCC176	ARTIFICIAL OPENINGS FOR FEEDING OR ELIMINATION	241	1,015	0.81
HCC177	AMPUTATION STATUS, LOWER LIMB/AMPUTATION COMPLICATIONS	1,351	2,595	0.60
Age_Lt_35		-2,207	1,526	0.15
Age_Lt_45		-1,833	1,247	0.14
Age_Lt_55		-1,195	816	0.14
Age_Lt_60		-1,456	870	0.09
Age_Lt_65		-678	764	0.37
Age_Lt_75		-1,113	436	0.01
Age_Lt_80		-1,479	478	0.00
Age_Lt_85		-2,998	530	0.00
Age_Lt_90		-3,060	645	0.00
Age_Lt_95		-4,586	1,023	0.00
Age_Gt_94		-6,275	2,238	0.01
ORIGDS		-1,300	550	0.02
ESRD		2,972	1,237	0.02
D_HCC5	DISABLED, OPPORTUNISTISTIC	-4,115	3,670	0.26

Coef Name	Label	Coef Value	Std Error	P Value
	INFECTIONS			
D_HCC44	DISABLED, SEVERE HEMATOLOGICAL DISORDERS	5,413	1,141	0.00
D_HCC51	DISABLED, DRUG/ALCOHOL PSYCHOSIS	-1,350	4,625	0.77
D_HCC52	DISABLED, DRUG/ALCOHOL DEPENDENCE	1,339	3,537	0.70
D_HCC107	DISABLED, CYSTIC FIBROSIS	-4,728	26,233	0.86
DM_CVD	DIABETES MELLITUS * CEREBROVASCULAR DISEASE	-695	1,688	0.68
CHF_COPD	CONGESTIVE HEART FAILURE*CHRONIC OBSRUCTIVE PULMONARY DISEASE	174	1,036	0.87
COPD_CVD_CAD	CHRONIC OBSRUCTIVE PULMONARY DISEASE *CEBROVASCULAR DISEASE*CORONARY	3,546	4,250	0.40
RF_CHF_DM	DIABETES MELLITUS * CONGESTIVE HEART* RENAL FAILURE	2,005	1,405	0.15
DM_CHF	DIABETES MELLITUS * CONGESTIVE HEART FAILURE	338	1,099	0.76
RF_CHF	RENAL FAILURE* CONGESTIVE HEART FAILURE	1,006	1,318	0.45
DRG_CD=003	ECMO OR TRACH W MV 96+ HRS OR PDX EXC FACE, MOUTH & NECK W MAJ O.R.	113,495	4,535	0.00
DRG_CD=004	TRACH W MV 96+ HRS OR PDX EXC FACE, MOUTH & NECK W/O MAJ O.R.	77,267	4,686	0.00
DRG_CD=009	BONE MARROW TRANSPLANT	29,949	1,832	0.00
DRG_CD=011	TRACHEOSTOMY FOR FACE,MOUTH & NECK DIAGNOSES W MCC	27,871	8,145	0.00
DRG_CD=012	TRACHEOSTOMY FOR FACE,MOUTH & NECK DIAGNOSES W CC	16,491	11,431	0.15
DRG_CD=013	TRACHEOSTOMY FOR FACE,MOUTH & NECK DIAGNOSES W/O CC/MCC	16,818	8,692	0.05
DRG_CD=014	ALLOGENEIC BONE MARROW TRANSPLANT	61,546	3,090	0.00
DRG_CD=015	AUTOLOGOUS BONE MARROW TRANSPLANT	18,437	2,006	0.00
DRG_CD=820	LYMPHOMA & LEUKEMIA W MAJOR O.R. PROCEDURE W MCC	35,261	1,905	0.00
DRG_CD=821	LYMPHOMA & LEUKEMIA W MAJOR O.R. PROCEDURE W CC	6,935	1,679	0.00
DRG_CD=822	LYMPHOMA & LEUKEMIA W MAJOR O.R. PROCEDURE W/O CC/MCC	-5,480	1,698	0.00
DRG_CD=823	LYMPHOMA & NON-ACUTE LEUKEMIA W OTHER O.R. PROC W MCC	29,102	1,760	0.00
DRG_CD=824	LYMPHOMA & NON-ACUTE LEUKEMIA	9,780	1,652	0.00

Coef Name	Label	Coef Value	Std Error	P Value
	W OTHER O.R. PROC W CC LYMPHOMA & NON-ACUTE LEUKEMIA			
DRG_CD=825	W OTHER O.R. PROC W/O CC/MCC	-936	1,764	0.60
DRG_CD=826	MYELOPROLIF DISORD OR POORLY DIFF NEOPL W MAJ O.R. PROC W MCC	27,652	2,112	0.00
DRG_CD=827	MYELOPROLIF DISORD OR POORLY DIFF NEOPL W MAJ O.R. PROC W CC	2,491	1,741	0.15
DRG_CD=828	MYELOPROLIF DISORD OR POORLY DIFF NEOPL W MAJ O.R. PROC W/O CC/MCC	-6,258	1,843	0.00
DRG_CD=829	MYELOPROLIF DISORD OR POORLY DIFF NEOPL W OTHER O.R. PROC W CC/MCC	12,007	1,797	0.00
DRG_CD=830	MYELOPROLIF DISORD OR POORLY DIFF NEOPL W OTHER O.R. PROC W/O CC/MCC	-5,952	2,204	0.01
DRG_CD=834	ACUTE LEUKEMIA W/O MAJOR O.R. PROCEDURE W MCC	40,987	1,812	0.00
DRG_CD=835	ACUTE LEUKEMIA W/O MAJOR O.R. PROCEDURE W CC	18,273	1,784	0.00
DRG_CD=836	ACUTE LEUKEMIA W/O MAJOR O.R. PROCEDURE W/O CC/MCC	11,640	2,139	0.00
DRG_CD=837	CHEMO W ACUTE LEUKEMIA AS SDX OR W HIGH DOSE CHEMO AGENT W MCC	44,088	1,882	0.00
DRG_CD=838	CHEMO W ACUTE LEUKEMIA AS SDX W CC OR HIGH DOSE CHEMO AGENT	18,305	1,857	0.00
DRG_CD=839	CHEMO W ACUTE LEUKEMIA AS SDX W/O CC/MCC	7,414	1,904	0.00
DRG_CD=840	LYMPHOMA & NON-ACUTE LEUKEMIA W MCC	15,297	1,578	0.00
DRG_CD=841	LYMPHOMA & NON-ACUTE LEUKEMIA W CC	4,623	1,555	0.00
DRG_CD=842	LYMPHOMA & NON-ACUTE LEUKEMIA W/O CC/MCC	-1,152	1,630	0.48
DRG_CD=843	OTHER MYELOPROLIF DIS OR POORLY DIFF NEOPL DIAG W MCC	4,387	1,973	0.03
DRG_CD=844	OTHER MYELOPROLIF DIS OR POORLY DIFF NEOPL DIAG W CC	-344	1,709	0.84
DRG_CD=845	OTHER MYELOPROLIF DIS OR POORLY DIFF NEOPL DIAG W/O CC/MCC	-3,345	2,084	0.11
DRG_CD=846	CHEMOTHERAPY W/O ACUTE LEUKEMIA AS SECONDARY DIAGNOSIS W MCC	9,351	1,706	0.00
DRG_CD=847	CHEMOTHERAPY W/O ACUTE LEUKEMIA AS SECONDARY DIAGNOSIS	-3,324	1,509	0.03

Coef Name	Label	Coef Value	Std Error	P Value
DRG_CD=848	W CC CHEMOTHERAPY W/O ACUTE LEUKEMIA AS SECONDARY DIAGNOSIS W/O CC/MCC	-7,645	1,970	0.00
DRG_CD=849	RADIOTHERAPY	0	0	.
LTI_Indicator		36	1,410	0.98

Table 38: Infectious and Parasitic DDs

Coef Name	Label	Coef Value	Std Error	P Value
Intercept		12,548	192	0.00
HCC1	HIV/AIDS	1,610	1,056	0.13
HCC2	SEPTICEMIA/SHOCK	32	205	0.87
HCC5	OPPORTUNISTIC INFECTIONS	3,341	688	0.00
HCC7	METASTATIC CANCER AND ACUTE LEUKEMIA	2,910	298	0.00
HCC8	LUNG, UPPER DIGESTIVE TRACT, AND OTHER SEVERE CANCERS	832	373	0.03
HCC9	LYMPHATIC, HEAD AND NECK, BRAIN, AND OTHER MAJOR CANCERS	1,634	312	0.00
HCC10	BREAST, PROSTATE, COLORECTAL AND OTHER CANCERS AND TUMORS	-69	221	0.76
HCC15	DIABETES WITH RENAL OR PERIPHERAL CIRCULATORY MANIFESTATION	1,721	234	0.00
HCC16	DIABETES WITH NEUROLOGIC OR OTHER SPECIFIED MANIFESTATION	1,017	246	0.00
HCC17	DIABETES WITH ACUTE COMPLICATIONS	1,135	1,074	0.29
HCC18	DIABETES WITH OPHTHALMOLOGIC OR UNSPECIFIED MANIFESTATION	728	425	0.09
HCC19	DIABETES WITHOUT COMPLICATION	616	145	0.00
HCC21	PROTEIN-CALORIE MALNUTRITION	3,496	236	0.00
HCC25	END-STAGE LIVER DISEASE	3,046	582	0.00
HCC26	CIRRHOSIS OF LIVER	1,133	580	0.05
HCC27	CHRONIC HEPATITIS	1,030	795	0.20
HCC31	INTESTINAL OBSTRUCTION/PERFORATION	1,871	288	0.00
HCC32	PANCREATIC DISEASE	358	390	0.36
HCC33	INFLAMMATORY BOWEL DISEASE	1,254	510	0.01
HCC37	BONE/JOINT/MUSCLE INFECTIONS/NECROSIS	1,343	315	0.00
HCC38	RHEUMATOID ARTHRITIS AND INFLAMMATORY CONNECTIVE TISSUE DISEASE	876	232	0.00

Coef Name	Label	Coef Value	Std Error	P Value
HCC44	SEVERE HEMATOLOGICAL DISORDERS	2,098	380	0.00
HCC45	DISORDERS OF IMMUNITY	1,410	386	0.00
HCC51	DRUG/ALCOHOL PSYCHOSIS	1,591	784	0.04
HCC52	DRUG/ALCOHOL DEPENDENCE	159	832	0.85
HCC54	SCHIZOPHRENIA	2,373	363	0.00
HCC55	MAJOR DEPRESSIVE, BIPOLAR, AND PARANOID DISORDERS	1,514	213	0.00
HCC67	QUADRIPLEGIA, OTHER EXTENSIVE PARALYSIS	358	464	0.44
HCC68	PARAPLEGIA	2,278	488	0.00
HCC69	SPINAL CORD DISORDERS/INJURIES	3,219	566	0.00
HCC70	MUSCULAR DYSTROPHY	-2,335	1,796	0.19
HCC71	POLYNEUROPATHY	1,148	212	0.00
HCC72	MULTIPLE SCLEROSIS	-57	439	0.90
HCC73	PARKINSONS AND HUNTINGTONS DISEASES	1,899	295	0.00
HCC74	SEIZURE DISORDERS AND CONVULSIONS	655	231	0.00
HCC75	COMA, BRAIN COMPRESSION/ANOXIC DAMAGE	870	593	0.14
HCC77	RESPIRATOR DEPENDENCE/TRACHEOSTOMY STATUS	3,302	448	0.00
HCC78	RESPIRATORY ARREST	-902	1,407	0.52
HCC79	CARDIO-RESPIRATORY FAILURE AND SHOCK	883	207	0.00
HCC80	CONGESTIVE HEART FAILURE	989	226	0.00
HCC81	ACUTE MYOCARDIAL INFARCTION	304	426	0.48
HCC82	UNSTABLE ANGINA AND OTHER ACUTE ISCHEMIC HEART DISEASE	-526	399	0.19
HCC83	ANGINA PECTORIS/OLD MYOCARDIAL INFARCTION	-535	270	0.05
HCC92	SPECIFIED HEART ARRHYTHMIAS	834	143	0.00
HCC95	CEREBRAL HEMORRHAGE	2,499	611	0.00
HCC96	ISCHEMIC OR UNSPECIFIED STROKE	2,123	273	0.00
HCC100	HEMIPLEGIA/HEMIPARESIS	1,062	338	0.00
HCC101	CEREBRAL PALSY AND OTHER PARALYTIC SYNDROMES	1,349	705	0.06
HCC104	VASCULAR DISEASE WITH COMPLICATIONS	2,266	259	0.00
HCC105	VASCULAR DISEASE	1,143	138	0.00
HCC107	CYSTIC FIBROSIS	-4,813	5,625	0.39
HCC108	CHRONIC OBSTRUCTIVE PULMONARY DISEASE	-120	163	0.46

Coef Name	Label	Coef Value	Std Error	P Value
HCC111	ASPIRATION AND SPECIFIED BACTERIAL PNEUMONIAS	2,232	294	0.00
HCC112	PNEUMOCOCCAL PNEUMONIA, EMPHYSEMA, LUNG ABSCESS	-458	637	0.47
HCC119	PROLIFERATIVE DIABETIC RETINOPATHY AND VITREOUS HEMORRHAGE	-311	565	0.58
HCC130	DIALYSIS STATUS	2,373	416	0.00
HCC131	RENAL FAILURE	1,053	178	0.00
HCC132	NEPHRITIS	1,886	1,157	0.10
HCC148	DECUBITUS ULCER OF SKIN	2,411	215	0.00
HCC149	CHRONIC ULCER OF SKIN, EXCEPT DECUBITUS	1,646	258	0.00
HCC150	EXTENSIVE THIRD-DEGREE BURNS	-3,975	10,890	0.72
HCC154	SEVERE HEAD INJURY	1,244	2,970	0.68
HCC155	MAJOR HEAD INJURY	578	618	0.35
HCC157	VERTEBRAL FRACTURES WITHOUT SPINAL CORD INJURY	2,356	446	0.00
HCC158	HIP FRACTURE/DISLOCATION	2,976	363	0.00
HCC161	TRAUMATIC AMPUTATION	1,198	836	0.15
HCC164	MAJOR COMPLICATIONS OF MEDICAL CARE AND TRAUMA	976	213	0.00
HCC174	MAJOR ORGAN TRANSPLANT STATUS	119	641	0.85
HCC176	ARTIFICIAL OPENINGS FOR FEEDING OR ELIMINATION	-308	270	0.25
HCC177	AMPUTATION STATUS, LOWER LIMB/AMPUTATION COMPLICATIONS	-337	481	0.48
Age_Lt_35		-2,002	477	0.00
Age_Lt_45		-1,699	358	0.00
Age_Lt_55		-963	262	0.00
Age_Lt_60		-23	284	0.94
Age_Lt_65		992	268	0.00
Age_Lt_75		70	195	0.72
Age_Lt_80		706	196	0.00
Age_Lt_85		1,344	197	0.00
Age_Lt_90		1,946	209	0.00
Age_Lt_95		2,118	256	0.00
Age_Gt_94		2,080	393	0.00
ORIGDS		449	162	0.01
ESRD		4,168	256	0.00
D_HCC5	DISABLED, OPPORTUNISTISTIC INFECTIONS	-840	1,324	0.53
D_HCC44	DISABLED, SEVERE HEMATOLOGICAL DISORDERS	-606	851	0.48

Coef Name	Label	Coef Value	Std Error	P Value
D_HCC51	DISABLED, DRUG/ALCOHOL PSYCHOSIS	-1,513	1,280	0.24
D_HCC52	DISABLED, DRUG/ALCOHOL DEPENDENCE	-570	1,098	0.60
D_HCC107	DISABLED, CYSTIC FIBROSIS	3,700	6,562	0.57
DM_CVD	DIABETES MELLITUS * CEREBROVASCULAR DISEASE	-10	357	0.98
CHF_COPD	CONGESTIVE HEART FAILURE*CHRONIC OBSRUCTIVE PULMONARY DISEASE	1,189	277	0.00
COPD_CVD_CAD	CHRONIC OBSRUCTIVE PULMONARY DISEASE *CEBROVASCULAR DISEASE*CORONARY	1,625	831	0.05
RF_CHF_DM	DIABETES MELLITUS * CONGESTIVE HEART* RENAL FAILURE	1,697	349	0.00
DM_CHF	DIABETES MELLITUS * CONGESTIVE HEART FAILURE	148	312	0.63
RF_CHF	RENAL FAILURE* CONGESTIVE HEART FAILURE	-53	374	0.89
DRG_CD=001	HEART TRANSPLANT OR IMPLANT OF HEART ASSIST SYSTEM W MCC	159,703	15,398	0.00
DRG_CD=002	HEART TRANSPLANT OR IMPLANT OF HEART ASSIST SYSTEM W/O MCC	192,598	15,405	0.00
DRG_CD=003	ECMO OR TRACH W MV 96+ HRS OR PDX EXC FACE, MOUTH & NECK W MAJ O.R.	170,788	1,048	0.00
DRG_CD=004	TRACH W MV 96+ HRS OR PDX EXC FACE, MOUTH & NECK W/O MAJ O.R.	123,943	666	0.00
DRG_CD=005	LIVER TRANSPLANT W MCC OR INTESTINAL TRANSPLANT	167,167	21,775	0.00
DRG_CD=853	INFECTIOUS & PARASITIC DISEASES W O.R. PROCEDURE W MCC	39,659	221	0.00
DRG_CD=854	INFECTIOUS & PARASITIC DISEASES W O.R. PROCEDURE W CC	14,279	407	0.00
DRG_CD=855	INFECTIOUS & PARASITIC DISEASES W O.R. PROCEDURE W/O CC/MCC	3,438	1,720	0.05
DRG_CD=856	POSTOPERATIVE OR POST-TRAUMATIC INFECTIONS W O.R. PROC W MCC	31,875	568	0.00
DRG_CD=857	POSTOPERATIVE OR POST-TRAUMATIC INFECTIONS W O.R. PROC W CC	8,486	434	0.00
DRG_CD=858	POSTOPERATIVE OR POST-TRAUMATIC INFECTIONS W O.R. PROC W/O CC/MCC	1,218	873	0.16
DRG_CD=862	POSTOPERATIVE & POST-TRAUMATIC INFECTIONS W MCC	6,999	450	0.00
DRG_CD=863	POSTOPERATIVE & POST-TRAUMATIC INFECTIONS W/O MCC	-2,284	315	0.00

Coef Name	Label	Coef Value	Std Error	P Value
DRG_CD=864	FEVER	-3,568	269	0.00
DRG_CD=865	VIRAL ILLNESS W MCC	2,155	702	0.00
DRG_CD=866	VIRAL ILLNESS W/O MCC	-5,445	409	0.00
DRG_CD=867	OTHER INFECTIOUS & PARASITIC DISEASES DIAGNOSES W MCC	10,653	543	0.00
DRG_CD=868	OTHER INFECTIOUS & PARASITIC DISEASES DIAGNOSES W CC	-2,357	694	0.00
DRG_CD=869	OTHER INFECTIOUS & PARASITIC DISEASES DIAGNOSES W/O CC/MCC	-6,143	1,210	0.00
DRG_CD=870	SEPTICEMIA OR SEVERE SEPSIS W MV 96+ HOURS	47,911	343	0.00
DRG_CD=871	SEPTICEMIA OR SEVERE SEPSIS W/O MV 96+ HOURS W MCC	8,404	131	0.00
DRG_CD=872	SEPTICEMIA OR SEVERE SEPSIS W/O MV 96+ HOURS W/O MCC	0	0	.
LTI_Indicator		2,165	153	0.00

Table 39: Mental Diseases and Disorders

Coef Name	Label	Coef Value	Std Error	P Value
Intercept		9,664	680	0.00
HCC1	HIV/AIDS	2,485	385	0.00
HCC2	SEPTICEMIA/SHOCK	2,375	469	0.00
HCC5	OPPORTUNISTIC INFECTIONS	-1,943	1,626	0.23
HCC7	METASTATIC CANCER AND ACUTE LEUKEMIA	2,615	610	0.00
HCC8	LUNG, UPPER DIGESTIVE TRACT, AND OTHER SEVERE CANCERS	-783	616	0.20
HCC9	LYMPHATIC, HEAD AND NECK, BRAIN, AND OTHER MAJOR CANCERS	538	481	0.26
HCC10	BREAST, PROSTATE, COLORECTAL AND OTHER CANCERS AND TUMORS	674	281	0.02
HCC15	DIABETES WITH RENAL OR PERIPHERAL CIRCULATORY MANIFESTATION	1,330	322	0.00
HCC16	DIABETES WITH NEUROLOGIC OR OTHER SPECIFIED MANIFESTATION	1,172	259	0.00
HCC17	DIABETES WITH ACUTE COMPLICATIONS	2,366	940	0.01
HCC18	DIABETES WITH OPHTHALMOLOGIC OR UNSPECIFIED MANIFESTATION	968	451	0.03
HCC19	DIABETES WITHOUT COMPLICATION	548	121	0.00
HCC21	PROTEIN-CALORIE MALNUTRITION	1,264	340	0.00
HCC25	END-STAGE LIVER DISEASE	2,498	634	0.00
HCC26	CIRRHOSIS OF LIVER	1,252	502	0.01

Coef Name	Label	Coef Value	Std Error	P Value
HCC27	CHRONIC HEPATITIS	448	379	0.24
HCC31	INTESTINAL OBSTRUCTION/PERFORATION	846	443	0.06
HCC32	PANCREATIC DISEASE	1,010	418	0.02
HCC33	INFLAMMATORY BOWEL DISEASE	746	551	0.18
HCC37	BONE/JOINT/MUSCLE INFECTIONS/NECROSIS	-184	606	0.76
HCC38	RHEUMATOID ARTHRITIS AND INFLAMMATORY CONNECTIVE TISSUE DISEASE	-100	266	0.71
HCC44	SEVERE HEMATOLOGICAL DISORDERS	1,037	765	0.18
HCC45	DISORDERS OF IMMUNITY	981	624	0.12
HCC51	DRUG/ALCOHOL PSYCHOSIS	1,390	639	0.03
HCC52	DRUG/ALCOHOL DEPENDENCE	-766	602	0.20
HCC54	SCHIZOPHRENIA	1,517	116	0.00
HCC55	MAJOR DEPRESSIVE, BIPOLAR, AND PARANOID DISORDERS	607	115	0.00
HCC67	QUADRIPLEGIA, OTHER EXTENSIVE PARALYSIS	3,922	1,272	0.00
HCC68	PARAPLEGIA	824	1,001	0.41
HCC69	SPINAL CORD DISORDERS/INJURIES	1,806	604	0.00
HCC70	MUSCULAR DYSTROPHY	-1,275	1,986	0.52
HCC71	POLYNEUROPATHY	605	229	0.01
HCC72	MULTIPLE SCLEROSIS	1,814	613	0.00
HCC73	PARKINSONS AND HUNTINGTONS DISEASES	1,905	313	0.00
HCC74	SEIZURE DISORDERS AND CONVULSIONS	655	149	0.00
HCC75	COMA, BRAIN COMPRESSION/ANOXIC DAMAGE	1,294	821	0.11
HCC77	RESPIRATOR DEPENDENCE/TRACHEOSTOMY STATUS	7,898	1,066	0.00
HCC78	RESPIRATORY ARREST	1,220	2,100	0.56
HCC79	CARDIO-RESPIRATORY FAILURE AND SHOCK	551	298	0.06
HCC80	CONGESTIVE HEART FAILURE	1,076	262	0.00
HCC81	ACUTE MYOCARDIAL INFARCTION	1,219	662	0.07
HCC82	UNSTABLE ANGINA AND OTHER ACUTE ISCHEMIC HEART DISEASE	-52	396	0.90
HCC83	ANGINA PECTORIS/OLD MYOCARDIAL INFARCTION	250	266	0.35
HCC92	SPECIFIED HEART ARRHYTHMIAS	535	186	0.00
HCC95	CEREBRAL HEMORRHAGE	1,207	683	0.08

Coef Name	Label	Coef Value	Std Error	P Value
HCC96	ISCHEMIC OR UNSPECIFIED STROKE	1,195	290	0.00
HCC100	HEMIPLEGIA/HEMIPARESIS	1,818	422	0.00
HCC101	CEREBRAL PALSY AND OTHER PARALYTIC SYNDROMES	1,393	727	0.06
HCC104	VASCULAR DISEASE WITH COMPLICATIONS	1,153	428	0.01
HCC105	VASCULAR DISEASE	203	163	0.21
HCC107	CYSTIC FIBROSIS	4,548	6,619	0.49
HCC108	CHRONIC OBSTRUCTIVE PULMONARY DISEASE	988	132	0.00
HCC111	ASPIRATION AND SPECIFIED BACTERIAL PNEUMONIAS	-111	581	0.85
HCC112	PNEUMOCOCCAL PNEUMONIA, EMPHYSEMA, LUNG ABSCESS	-1,569	1,026	0.13
HCC119	PROLIFERATIVE DIABETIC RETINOPATHY AND VITREOUS HEMORRHAGE	414	807	0.61
HCC130	DIALYSIS STATUS	2,780	798	0.00
HCC131	RENAL FAILURE	1,388	221	0.00
HCC132	NEPHRITIS	93	1,182	0.94
HCC148	DECUBITUS ULCER OF SKIN	2,716	477	0.00
HCC149	CHRONIC ULCER OF SKIN, EXCEPT DECUBITUS	971	360	0.01
HCC150	EXTENSIVE THIRD-DEGREE BURNS	3,913	9,300	0.67
HCC154	SEVERE HEAD INJURY	2,551	2,825	0.37
HCC155	MAJOR HEAD INJURY	769	447	0.09
HCC157	VERTEBRAL FRACTURES WITHOUT SPINAL CORD INJURY	1,186	491	0.02
HCC158	HIP FRACTURE/DISLOCATION	895	537	0.10
HCC161	TRAUMATIC AMPUTATION	-356	1,485	0.81
HCC164	MAJOR COMPLICATIONS OF MEDICAL CARE AND TRAUMA	865	367	0.02
HCC174	MAJOR ORGAN TRANSPLANT STATUS	-1,148	1,107	0.30
HCC176	ARTIFICIAL OPENINGS FOR FEEDING OR ELIMINATION	3,423	637	0.00
HCC177	AMPUTATION STATUS, LOWER LIMB/AMPUTATION COMPLICATIONS	-238	753	0.75
Age_Lt_35		-2,768	225	0.00
Age_Lt_45		-2,991	220	0.00
Age_Lt_55		-2,637	212	0.00
Age_Lt_60		-2,058	239	0.00
Age_Lt_65		-904	260	0.00
Age_Lt_75		940	239	0.00
Age_Lt_80		2,079	244	0.00

Coef Name	Label	Coef Value	Std Error	P Value
Age_Lt_85		2,950	246	0.00
Age_Lt_90		3,111	257	0.00
Age_Lt_95		3,491	312	0.00
Age_Gt_94		3,434	483	0.00
ORIGDS		261	192	0.17
ESRD		5,612	463	0.00
D_HCC5	DISABLED, OPPORTUNISTISTIC INFECTIONS	2,290	2,253	0.31
D_HCC44	DISABLED, SEVERE HEMATOLOGICAL DISORDERS	1,086	1,046	0.30
D_HCC51	DISABLED, DRUG/ALCOHOL PSYCHOSIS	194	691	0.78
D_HCC52	DISABLED, DRUG/ALCOHOL DEPENDENCE	1,332	623	0.03
D_HCC107	DISABLED, CYSTIC FIBROSIS	-6,725	7,309	0.36
DM_CVD	DIABETES MELLITUS * CEREBROVASCULAR DISEASE	182	423	0.67
CHF_COPD	CONGESTIVE HEART FAILURE*CHRONIC OBSRUCTIVE PULMONARY DISEASE	-464	339	0.17
COPD_CVD_CAD	CHRONIC OBSRUCTIVE PULMONARY DISEASE *CEBROVASCULAR DISEASE*CORONARY	604	977	0.54
RF_CHF_DM	DIABETES MELLITUS * CONGESTIVE HEART* RENAL FAILURE	-1,561	510	0.00
DM_CHF	DIABETES MELLITUS * CONGESTIVE HEART FAILURE	-180	370	0.63
RF_CHF	RENAL FAILURE* CONGESTIVE HEART FAILURE	-624	566	0.27
DRG_CD=004	TRACH W MV 96+ HRS OR PDX EXC FACE, MOUTH & NECK W/O MAJ O.R.	83,359	6,651	0.00
DRG_CD=876	O.R. PROCEDURE W PRINCIPAL DIAGNOSES OF MENTAL ILLNESS	21,051	873	0.00
DRG_CD=880	ACUTE ADJUSTMENT REACTION & PSYCHOSOCIAL DYSFUNCTION	-1,535	675	0.02
DRG_CD=881	DEPRESSIVE NEUROSES	-935	690	0.18
DRG_CD=882	NEUROSES EXCEPT DEPRESSIVE	-235	751	0.75
DRG_CD=883	DISORDERS OF PERSONALITY & IMPULSE CONTROL	4,871	823	0.00
DRG_CD=884	ORGANIC DISTURBANCES & MENTAL RETARDATION	4,935	666	0.00
DRG_CD=885	PSYCHOSES	2,067	660	0.00
DRG_CD=886	BEHAVIORAL & DEVELOPMENTAL DISORDERS	2,496	887	0.00
DRG_CD=887	OTHER MENTAL DISORDER DIAGNOSES	0	0	.
LTI_Indicator		2,123	188	0.00

Table 40: Alcohol/Drug Use or Induced Mental Disorders

Coef Name	Label	Coef Value	Std Error	P Value
Intercept		8,937	191	0.00
HCC1	HIV/AIDS	80	370	0.83
HCC2	SEPTICEMIA/SHOCK	22	588	0.97
HCC5	OPPORTUNISTIC INFECTIONS	-2,542	1,947	0.19
HCC7	METASTATIC CANCER AND ACUTE LEUKEMIA	2,178	714	0.00
HCC8	LUNG, UPPER DIGESTIVE TRACT, AND OTHER SEVERE CANCERS	740	650	0.25
HCC9	LYMPHATIC, HEAD AND NECK, BRAIN, AND OTHER MAJOR CANCERS	219	575	0.70
HCC10	BREAST, PROSTATE, COLORECTAL AND OTHER CANCERS AND TUMORS	24	389	0.95
HCC15	DIABETES WITH RENAL OR PERIPHERAL CIRCULATORY MANIFESTATION	1,355	534	0.01
HCC16	DIABETES WITH NEUROLOGIC OR OTHER SPECIFIED MANIFESTATION	189	380	0.62
HCC17	DIABETES WITH ACUTE COMPLICATIONS	1,631	1,240	0.19
HCC18	DIABETES WITH OPHTHALMOLOGIC OR UNSPECIFIED MANIFESTATION	842	727	0.25
HCC19	DIABETES WITHOUT COMPLICATION	712	188	0.00
HCC21	PROTEIN-CALORIE MALNUTRITION	711	390	0.07
HCC25	END-STAGE LIVER DISEASE	1,362	455	0.00
HCC26	CIRRHOSIS OF LIVER	142	303	0.64
HCC27	CHRONIC HEPATITIS	342	316	0.28
HCC31	INTESTINAL OBSTRUCTION/PERFORATION	1,478	590	0.01
HCC32	PANCREATIC DISEASE	850	315	0.01
HCC33	INFLAMMATORY BOWEL DISEASE	2,178	671	0.00
HCC37	BONE/JOINT/MUSCLE INFECTIONS/NECROSIS	936	587	0.11
HCC38	RHEUMATOID ARTHRITIS AND INFLAMMATORY CONNECTIVE TISSUE DISEASE	414	325	0.20
HCC44	SEVERE HEMATOLOGICAL DISORDERS	2,110	811	0.01
HCC45	DISORDERS OF IMMUNITY	1,112	758	0.14
HCC51	DRUG/ALCOHOL PSYCHOSIS	-75	314	0.81
HCC52	DRUG/ALCOHOL DEPENDENCE	-160	316	0.61
HCC54	SCHIZOPHRENIA	1,897	214	0.00
HCC55	MAJOR DEPRESSIVE, BIPOLAR, AND PARANOID DISORDERS	1,009	139	0.00
HCC67	QUADRIPLEGIA, OTHER EXTENSIVE PARALYSIS	2,880	1,340	0.03

Coef Name	Label	Coef Value	Std Error	P Value
HCC68	PARAPLEGIA	2,798	1,019	0.01
HCC69	SPINAL CORD DISORDERS/INJURIES	-58	721	0.94
HCC70	MUSCULAR DYSTROPHY	717	2,735	0.79
HCC71	POLYNEUROPATHY	625	264	0.02
HCC72	MULTIPLE SCLEROSIS	575	800	0.47
HCC73	PARKINSONS AND HUNTINGTONS DISEASES	3,828	525	0.00
HCC74	SEIZURE DISORDERS AND CONVULSIONS	878	194	0.00
HCC75	COMA, BRAIN COMPRESSION/ANOXIC DAMAGE	451	1,077	0.68
HCC77	RESPIRATOR DEPENDENCE/TRACHEOSTOMY STATUS	2,193	1,470	0.14
HCC78	RESPIRATORY ARREST	-2,784	2,173	0.20
HCC79	CARDIO-RESPIRATORY FAILURE AND SHOCK	767	348	0.03
HCC80	CONGESTIVE HEART FAILURE	1,014	354	0.00
HCC81	ACUTE MYOCARDIAL INFARCTION	-647	819	0.43
HCC82	UNSTABLE ANGINA AND OTHER ACUTE ISCHEMIC HEART DISEASE	-281	510	0.58
HCC83	ANGINA PECTORIS/OLD MYOCARDIAL INFARCTION	590	328	0.07
HCC92	SPECIFIED HEART ARRHYTHMIAS	720	249	0.00
HCC95	CEREBRAL HEMORRHAGE	-334	877	0.70
HCC96	ISCHEMIC OR UNSPECIFIED STROKE	1,161	466	0.01
HCC100	HEMIPLEGIA/HEMIPARESIS	1,798	687	0.01
HCC101	CEREBRAL PALSY AND OTHER PARALYTIC SYNDROMES	-495	1,353	0.71
HCC104	VASCULAR DISEASE WITH COMPLICATIONS	1,991	529	0.00
HCC105	VASCULAR DISEASE	1,045	237	0.00
HCC107	CYSTIC FIBROSIS	1,497	4,334	0.73
HCC108	CHRONIC OBSTRUCTIVE PULMONARY DISEASE	532	168	0.00
HCC111	ASPIRATION AND SPECIFIED BACTERIAL PNEUMONIAS	-659	620	0.29
HCC112	PNEUMOCOCCAL PNEUMONIA, EMPHYSEMA, LUNG ABSCESS	-10	1,205	0.99
HCC119	PROLIFERATIVE DIABETIC RETINOPATHY AND VITREOUS HEMORRHAGE	-908	1,281	0.48
HCC130	DIALYSIS STATUS	6,390	1,119	0.00
HCC131	RENAL FAILURE	436	309	0.16
HCC132	NEPHRITIS	3,361	2,041	0.10

Coef Name	Label	Coef Value	Std Error	P Value
HCC148	DECUBITUS ULCER OF SKIN	1,113	627	0.08
HCC149	CHRONIC ULCER OF SKIN, EXCEPT DECUBITUS	1,027	492	0.04
HCC150	EXTENSIVE THIRD-DEGREE BURNS	-1,582	6,124	0.80
HCC154	SEVERE HEAD INJURY	-1,106	3,126	0.72
HCC155	MAJOR HEAD INJURY	504	493	0.31
HCC157	VERTEBRAL FRACTURES WITHOUT SPINAL CORD INJURY	2,072	477	0.00
HCC158	HIP FRACTURE/DISLOCATION	372	621	0.55
HCC161	TRAUMATIC AMPUTATION	-947	1,471	0.52
HCC164	MAJOR COMPLICATIONS OF MEDICAL CARE AND TRAUMA	-31	428	0.94
HCC174	MAJOR ORGAN TRANSPLANT STATUS	948	1,243	0.45
HCC176	ARTIFICIAL OPENINGS FOR FEEDING OR ELIMINATION	3	778	1.00
HCC177	AMPUTATION STATUS, LOWER LIMB/AMPUTATION COMPLICATIONS	792	770	0.30
Age_Lt_35		-2,322	283	0.00
Age_Lt_45		-2,093	245	0.00
Age_Lt_55		-1,913	222	0.00
Age_Lt_60		-1,415	251	0.00
Age_Lt_65		-828	278	0.00
Age_Lt_75		1,061	252	0.00
Age_Lt_80		1,847	293	0.00
Age_Lt_85		2,123	343	0.00
Age_Lt_90		3,371	413	0.00
Age_Lt_95		4,378	608	0.00
Age_Gt_94		1,632	1,160	0.16
ORIGDS		170	252	0.50
ESRD		1,550	647	0.02
D_HCC5	DISABLED, OPPORTUNISTISTIC INFECTIONS	3,062	2,329	0.19
D_HCC44	DISABLED, SEVERE HEMATOLOGICAL DISORDERS	-525	971	0.59
D_HCC51	DISABLED, DRUG/ALCOHOL PSYCHOSIS	867	348	0.01
D_HCC52	DISABLED, DRUG/ALCOHOL DEPENDENCE	498	357	0.16
D_HCC107	DISABLED, CYSTIC FIBROSIS	0	0	.
DM_CVD	DIABETES MELLITUS * CEREBROVASCULAR DISEASE	-700	731	0.34
CHF_COPD	CONGESTIVE HEART FAILURE*CHRONIC OBSRUCTIVE PULMONARY DISEASE	333	457	0.47
COPD_CVD_CAD	CHRONIC OBSRUCTIVE PULMONARY	2,216	1,623	0.17

Coef Name	Label	Coef Value	Std Error	P Value
RF_CHF_DM	DISEASE *CEBROVASCULAR DISEASE*CORONARY DIABETES MELLITUS * CONGESTIVE HEART* RENAL FAILURE	760	767	0.32
DM_CHF	DIABETES MELLITUS * CONGESTIVE HEART FAILURE	-271	547	0.62
RF_CHF	RENAL FAILURE* CONGESTIVE HEART FAILURE	216	719	0.76
DRG_CD=004	TRACH W MV 96+ HRS OR PDX EXC FACE, MOUTH & NECK W/O MAJ O.R.	127,360	2,725	0.00
DRG_CD=894	ALCOHOL/DRUG ABUSE OR DEPENDENCE, LEFT AMA	-1,968	209	0.00
DRG_CD=895	ALCOHOL/DRUG ABUSE OR DEPENDENCE W REHABILITATION THERAPY	1,234	158	0.00
DRG_CD=896	ALCOHOL/DRUG ABUSE OR DEPENDENCE W/O REHABILITATION THERAPY W MCC	8,105	171	0.00
DRG_CD=897	ALCOHOL/DRUG ABUSE OR DEPENDENCE W/O REHABILITATION THERAPY W/O MCC	0	0	.
LTI_Indicator		2,878	561	0.00

Table 41: Injuries, Poison and Toxic Effect of Drugs

Coef Name	Label	Coef Value	Std Error	P Value
Intercept		8,010	370	0.00
HCC1	HIV/AIDS	619	597	0.30
HCC2	SEPTICEMIA/SHOCK	1,511	361	0.00
HCC5	OPPORTUNISTIC INFECTIONS	2,593	1,269	0.04
HCC7	METASTATIC CANCER AND ACUTE LEUKEMIA	2,394	407	0.00
HCC8	LUNG, UPPER DIGESTIVE TRACT, AND OTHER SEVERE CANCERS	967	425	0.02
HCC9	LYMPHATIC, HEAD AND NECK, BRAIN, AND OTHER MAJOR CANCERS	396	407	0.33
HCC10	BREAST, PROSTATE, COLORECTAL AND OTHER CANCERS AND TUMORS	-264	249	0.29
HCC15	DIABETES WITH RENAL OR PERIPHERAL CIRCULATORY MANIFESTATION	860	300	0.00
HCC16	DIABETES WITH NEUROLOGIC OR OTHER SPECIFIED MANIFESTATION	573	284	0.04
HCC17	DIABETES WITH ACUTE COMPLICATIONS	-887	1,256	0.48
HCC18	DIABETES WITH OPHTHALMOLOGIC OR	390	513	0.45

Coef Name	Label	Coef Value	Std Error	P Value
	UNSPECIFIED MANIFESTATION			
HCC19	DIABETES WITHOUT COMPLICATION	168	164	0.30
HCC21	PROTEIN-CALORIE MALNUTRITION	3,035	354	0.00
HCC25	END-STAGE LIVER DISEASE	1,196	647	0.06
HCC26	CIRRHOSIS OF LIVER	-1,016	568	0.07
HCC27	CHRONIC HEPATITIS	541	526	0.30
HCC31	INTESTINAL OBSTRUCTION/PERFORATION	2,693	326	0.00
HCC32	PANCREATIC DISEASE	1,284	366	0.00
HCC33	INFLAMMATORY BOWEL DISEASE	690	561	0.22
HCC37	BONE/JOINT/MUSCLE INFECTIONS/NECROSIS	2,489	390	0.00
HCC38	RHEUMATOID ARTHRITIS AND INFLAMMATORY CONNECTIVE TISSUE DISEASE	850	252	0.00
HCC44	SEVERE HEMATOLOGICAL DISORDERS	1,111	583	0.06
HCC45	DISORDERS OF IMMUNITY	309	584	0.60
HCC51	DRUG/ALCOHOL PSYCHOSIS	1,048	777	0.18
HCC52	DRUG/ALCOHOL DEPENDENCE	306	629	0.63
HCC54	SCHIZOPHRENIA	3,510	281	0.00
HCC55	MAJOR DEPRESSIVE, BIPOLAR, AND PARANOID DISORDERS	1,893	178	0.00
HCC67	QUADRIPLEGIA, OTHER EXTENSIVE PARALYSIS	-275	968	0.78
HCC68	PARAPLEGIA	1,497	810	0.06
HCC69	SPINAL CORD DISORDERS/INJURIES	2,657	726	0.00
HCC70	MUSCULAR DYSTROPHY	4,181	2,448	0.09
HCC71	POLYNEUROPATHY	566	238	0.02
HCC72	MULTIPLE SCLEROSIS	2,228	633	0.00
HCC73	PARKINSONS AND HUNTINGTONS DISEASES	1,870	468	0.00
HCC74	SEIZURE DISORDERS AND CONVULSIONS	156	244	0.52
HCC75	COMA, BRAIN COMPRESSION/ANOXIC DAMAGE	1,267	969	0.19
HCC77	RESPIRATOR DEPENDENCE/TRACHEOSTOMY STATUS	2,306	770	0.00
HCC78	RESPIRATORY ARREST	-1,061	1,744	0.54
HCC79	CARDIO-RESPIRATORY FAILURE AND SHOCK	955	272	0.00
HCC80	CONGESTIVE HEART FAILURE	910	277	0.00
HCC81	ACUTE MYOCARDIAL INFARCTION	2,078	543	0.00
HCC82	UNSTABLE ANGINA AND OTHER ACUTE	-375	414	0.37

Coef Name	Label	Coef Value	Std Error	P Value
	ISCHEMIC HEART DISEASE			
HCC83	ANGINA PECTORIS/OLD MYOCARDIAL INFARCTION	-376	277	0.17
HCC92	SPECIFIED HEART ARRHYTHMIAS	321	179	0.07
HCC95	CEREBRAL HEMORRHAGE	1,611	883	0.07
HCC96	ISCHEMIC OR UNSPECIFIED STROKE	1,590	384	0.00
HCC100	HEMIPLEGIA/HEMIPARESIS	2,761	542	0.00
HCC101	CEREBRAL PALSY AND OTHER PARALYTIC SYNDROMES	312	1,031	0.76
HCC104	VASCULAR DISEASE WITH COMPLICATIONS	1,948	311	0.00
HCC105	VASCULAR DISEASE	790	180	0.00
HCC107	CYSTIC FIBROSIS	-7,936	5,374	0.14
HCC108	CHRONIC OBSTRUCTIVE PULMONARY DISEASE	373	178	0.04
HCC111	ASPIRATION AND SPECIFIED BACTERIAL PNEUMONIAS	-7	537	0.99
HCC112	PNEUMOCOCCAL PNEUMONIA, EMPHYSEMA, LUNG ABSCESS	-1,399	906	0.12
HCC119	PROLIFERATIVE DIABETIC RETINOPATHY AND VITREOUS HEMORRHAGE	-405	652	0.53
HCC130	DIALYSIS STATUS	-341	467	0.47
HCC131	RENAL FAILURE	824	229	0.00
HCC132	NEPHRITIS	-1,169	1,230	0.34
HCC148	DECUBITUS ULCER OF SKIN	3,370	400	0.00
HCC149	CHRONIC ULCER OF SKIN, EXCEPT DECUBITUS	825	327	0.01
HCC150	EXTENSIVE THIRD-DEGREE BURNS	8,888	7,601	0.24
HCC154	SEVERE HEAD INJURY	-6,372	5,012	0.20
HCC155	MAJOR HEAD INJURY	557	667	0.40
HCC157	VERTEBRAL FRACTURES WITHOUT SPINAL CORD INJURY	1,832	509	0.00
HCC158	HIP FRACTURE/DISLOCATION	2,062	494	0.00
HCC161	TRAUMATIC AMPUTATION	-197	967	0.84
HCC164	MAJOR COMPLICATIONS OF MEDICAL CARE AND TRAUMA	1,060	228	0.00
HCC174	MAJOR ORGAN TRANSPLANT STATUS	-1,954	813	0.02
HCC176	ARTIFICIAL OPENINGS FOR FEEDING OR ELIMINATION	317	432	0.46
HCC177	AMPUTATION STATUS, LOWER LIMB/AMPUTATION COMPLICATIONS	2,135	581	0.00
Age_Lt_35		-658	318	0.04
Age_Lt_45		-1,236	269	0.00

Coef Name	Label	Coef Value	Std Error	P Value
Age_Lt_55		-833	230	0.00
Age_Lt_60		-363	266	0.17
Age_Lt_65		212	274	0.44
Age_Lt_75		349	216	0.11
Age_Lt_80		1,011	228	0.00
Age_Lt_85		1,608	240	0.00
Age_Lt_90		2,719	274	0.00
Age_Lt_95		2,923	382	0.00
Age_Gt_94		3,629	668	0.00
ORIGDS		812	201	0.00
ESRD		2,323	325	0.00
D_HCC5	DISABLED, OPPORTUNISTISTIC INFECTIONS	144	1,911	0.94
D_HCC44	DISABLED, SEVERE HEMATOLOGICAL DISORDERS	2,797	1,058	0.01
D_HCC51	DISABLED, DRUG/ALCOHOL PSYCHOSIS	358	893	0.69
D_HCC52	DISABLED, DRUG/ALCOHOL DEPENDENCE	123	693	0.86
D_HCC107	DISABLED, CYSTIC FIBROSIS	10,049	6,588	0.13
DM_CVD	DIABETES MELLITUS * CEREBROVASCULAR DISEASE	-438	540	0.42
CHF_COPD	CONGESTIVE HEART FAILURE*CHRONIC OBSRUCTIVE PULMONARY DISEASE	219	346	0.53
COPD_CVD_CAD	CHRONIC OBSRUCTIVE PULMONARY DISEASE *CEBROVASCULAR DISEASE*CORONARY	300	1,137	0.79
RF_CHF_DM	DIABETES MELLITUS * CONGESTIVE HEART* RENAL FAILURE	477	459	0.30
DM_CHF	DIABETES MELLITUS * CONGESTIVE HEART FAILURE	110	386	0.78
RF_CHF	RENAL FAILURE* CONGESTIVE HEART FAILURE	-747	486	0.12
DRG_CD=001	HEART TRANSPLANT OR IMPLANT OF HEART ASSIST SYSTEM W MCC	133,052	13,170	0.00
DRG_CD=003	ECMO OR TRACH W MV 96+ HRS OR PDX EXC FACE, MOUTH & NECK W MAJ O.R.	133,259	1,608	0.00
DRG_CD=004	TRACH W MV 96+ HRS OR PDX EXC FACE, MOUTH & NECK W/O MAJ O.R.	86,529	1,184	0.00
DRG_CD=005	LIVER TRANSPLANT W MCC OR INTESTINAL TRANSPLANT	61,520	13,183	0.00
DRG_CD=012	TRACHEOSTOMY FOR FACE,MOUTH & NECK DIAGNOSES W CC	24,814	13,157	0.06
DRG_CD=901	WOUND DEBRIDEMENTS FOR INJURIES	33,489	906	0.00

Coef Name	Label	Coef Value	Std Error	P Value
	W MCC			
DRG_CD=902	WOUND DEBRIDEMENTS FOR INJURIES W CC	11,384	673	0.00
DRG_CD=903	WOUND DEBRIDEMENTS FOR INJURIES W/O CC/MCC	3,732	837	0.00
DRG_CD=904	SKIN GRAFTS FOR INJURIES W CC/MCC	21,153	598	0.00
DRG_CD=905	SKIN GRAFTS FOR INJURIES W/O CC/MCC	2,104	766	0.01
DRG_CD=906	HAND PROCEDURES FOR INJURIES	3,245	784	0.00
DRG_CD=907	OTHER O.R. PROCEDURES FOR INJURIES W MCC	28,510	425	0.00
DRG_CD=908	OTHER O.R. PROCEDURES FOR INJURIES W CC	10,715	408	0.00
DRG_CD=909	OTHER O.R. PROCEDURES FOR INJURIES W/O CC/MCC	2,812	456	0.00
DRG_CD=913	TRAUMATIC INJURY W MCC	10,509	674	0.00
DRG_CD=914	TRAUMATIC INJURY W/O MCC	2,562	422	0.00
DRG_CD=915	ALLERGIC REACTIONS W MCC	6,108	569	0.00
DRG_CD=916	ALLERGIC REACTIONS W/O MCC	-3,702	415	0.00
DRG_CD=917	POISONING & TOXIC EFFECTS OF DRUGS W MCC	7,622	361	0.00
DRG_CD=918	POISONING & TOXIC EFFECTS OF DRUGS W/O MCC	-3	351	0.99
DRG_CD=919	COMPLICATIONS OF TREATMENT W MCC	10,507	416	0.00
DRG_CD=920	COMPLICATIONS OF TREATMENT W CC	2,717	388	0.00
DRG_CD=921	COMPLICATIONS OF TREATMENT W/O CC/MCC	-1,090	438	0.01
DRG_CD=922	OTHER INJURY, POISONING & TOXIC EFFECT DIAG W MCC	7,556	588	0.00
DRG_CD=923	OTHER INJURY, POISONING & TOXIC EFFECT DIAG W/O MCC	0	0	.
LTI_Indicator		2,607	365	0.00

Table 42: Burns

Coef Name	Label	Coef Value	Std Error	P Value
Intercept		16,577	2,135	0.00
HCC1	HIV/AIDS	1,133	7,193	0.87
HCC2	SEPTICEMIA/SHOCK	3,529	8,925	0.69
HCC5	OPPORTUNISTIC INFECTIONS	-8,633	27,522	0.75
HCC7	METASTATIC CANCER AND ACUTE LEUKEMIA	1,845	5,410	0.73
HCC8	LUNG, UPPER DIGESTIVE TRACT, AND	-2,169	7,417	0.77

Coef Name	Label	Coef Value	Std Error	P Value
	OTHER SEVERE CANCERS			
HCC9	LYMPHATIC, HEAD AND NECK, BRAIN, AND OTHER MAJOR CANCERS	-4,001	5,885	0.50
HCC10	BREAST, PROSTATE, COLORECTAL AND OTHER CANCERS AND TUMORS	-2,791	3,926	0.48
HCC15	DIABETES WITH RENAL OR PERIPHERAL CIRCULATORY MANIFESTATION	3,120	4,138	0.45
HCC16	DIABETES WITH NEUROLOGIC OR OTHER SPECIFIED MANIFESTATION	-4,162	3,803	0.27
HCC17	DIABETES WITH ACUTE COMPLICATIONS	0	0	.
HCC18	DIABETES WITH OPHTHALMOLOGIC OR UNSPECIFIED MANIFESTATION	-5,280	6,142	0.39
HCC19	DIABETES WITHOUT COMPLICATION	3,697	2,097	0.08
HCC21	PROTEIN-CALORIE MALNUTRITION	6,092	5,476	0.27
HCC25	END-STAGE LIVER DISEASE	6,909	17,475	0.69
HCC26	CIRRHOSIS OF LIVER	3,438	7,693	0.66
HCC27	CHRONIC HEPATITIS	-3,633	8,378	0.66
HCC31	INTESTINAL OBSTRUCTION/PERFORATION	6,205	7,157	0.39
HCC32	PANCREATIC DISEASE	-4,003	8,582	0.64
HCC33	INFLAMMATORY BOWEL DISEASE	-2,829	10,162	0.78
HCC37	BONE/JOINT/MUSCLE INFECTIONS/NECROSIS	7,633	6,096	0.21
HCC38	RHEUMATOID ARTHRITIS AND INFLAMMATORY CONNECTIVE TISSUE DISEASE	-3,124	4,271	0.46
HCC44	SEVERE HEMATOLOGICAL DISORDERS	-5,172	11,861	0.66
HCC45	DISORDERS OF IMMUNITY	-4,082	8,166	0.62
HCC51	DRUG/ALCOHOL PSYCHOSIS	-5,445	10,012	0.59
HCC52	DRUG/ALCOHOL DEPENDENCE	4,144	8,183	0.61
HCC54	SCHIZOPHRENIA	-905	4,202	0.83
HCC55	MAJOR DEPRESSIVE, BIPOLAR, AND PARANOID DISORDERS	4,011	2,790	0.15
HCC67	QUADRIPLEGIA, OTHER EXTENSIVE PARALYSIS	-11,799	9,619	0.22
HCC68	PARAPLEGIA	-1,069	6,691	0.87
HCC69	SPINAL CORD DISORDERS/INJURIES	13,991	8,350	0.09
HCC70	MUSCULAR DYSTROPHY	46,038	27,353	0.09
HCC71	POLYNEUROPATHY	-4,527	3,285	0.17
HCC72	MULTIPLE SCLEROSIS	-6,646	6,657	0.32
HCC73	PARKINSONS AND HUNTINGTONS DISEASES	124	8,201	0.99
HCC74	SEIZURE DISORDERS AND	1,687	3,340	0.61

Coef Name	Label	Coef Value	Std Error	P Value
	CONVULSIONS			
HCC75	COMA, BRAIN COMPRESSION/ANOXIC DAMAGE	0	0	.
HCC77	RESPIRATOR DEPENDENCE/TRACHEOSTOMY STATUS	-4,225	15,060	0.78
HCC78	RESPIRATORY ARREST	89,173	39,158	0.02
HCC79	CARDIO-RESPIRATORY FAILURE AND SHOCK	5,555	3,983	0.16
HCC80	CONGESTIVE HEART FAILURE	1,952	4,473	0.66
HCC81	ACUTE MYOCARDIAL INFARCTION	-2,953	7,645	0.70
HCC82	UNSTABLE ANGINA AND OTHER ACUTE ISCHEMIC HEART DISEASE	1,180	7,050	0.87
HCC83	ANGINA PECTORIS/OLD MYOCARDIAL INFARCTION	-6,950	4,107	0.09
HCC92	SPECIFIED HEART ARRHYTHMIAS	-723	2,869	0.80
HCC95	CEREBRAL HEMORRHAGE	4,467	15,428	0.77
HCC96	ISCHEMIC OR UNSPECIFIED STROKE	-4,228	6,277	0.50
HCC100	HEMIPLEGIA/HEMIPARESIS	8,949	6,989	0.20
HCC101	CEREBRAL PALSY AND OTHER PARALYTIC SYNDROMES	17,316	9,570	0.07
HCC104	VASCULAR DISEASE WITH COMPLICATIONS	92	4,735	0.98
HCC105	VASCULAR DISEASE	-1,697	2,532	0.50
HCC107	CYSTIC FIBROSIS	0	0	.
HCC108	CHRONIC OBSTRUCTIVE PULMONARY DISEASE	-264	2,238	0.91
HCC111	ASPIRATION AND SPECIFIED BACTERIAL PNEUMONIAS	13,340	11,694	0.25
HCC112	PNEUMOCOCCAL PNEUMONIA, EMPHYSEMA, LUNG ABSCESS	2,920	18,210	0.87
HCC119	PROLIFERATIVE DIABETIC RETINOPATHY AND VITREOUS HEMORRHAGE	-9,907	7,405	0.18
HCC130	DIALYSIS STATUS	-4,376	9,584	0.65
HCC131	RENAL FAILURE	4,601	3,562	0.20
HCC132	NEPHRITIS	-4,813	16,774	0.77
HCC148	DECUBITUS ULCER OF SKIN	24,936	5,045	0.00
HCC149	CHRONIC ULCER OF SKIN, EXCEPT DECUBITUS	1,916	3,921	0.63
HCC150	EXTENSIVE THIRD-DEGREE BURNS	-2,331	5,758	0.69
HCC154	SEVERE HEAD INJURY	0	0	.
HCC155	MAJOR HEAD INJURY	965	10,508	0.93
HCC157	VERTEBRAL FRACTURES WITHOUT SPINAL CORD INJURY	-956	8,716	0.91

Coef Name	Label	Coef Value	Std Error	P Value
HCC158	HIP FRACTURE/DISLOCATION	731	8,867	0.93
HCC161	TRAUMATIC AMPUTATION	-21,986	16,454	0.18
HCC164	MAJOR COMPLICATIONS OF MEDICAL CARE AND TRAUMA	-4,940	4,150	0.23
HCC174	MAJOR ORGAN TRANSPLANT STATUS	-4,157	27,206	0.88
HCC176	ARTIFICIAL OPENINGS FOR FEEDING OR ELIMINATION	-6,557	9,787	0.50
HCC177	AMPUTATION STATUS, LOWER LIMB/AMPUTATION COMPLICATIONS	3,173	6,623	0.63
Age_Lt_35		-7,285	4,283	0.09
Age_Lt_45		-4,238	3,092	0.17
Age_Lt_55		-4,152	2,724	0.13
Age_Lt_60		-2,928	3,163	0.35
Age_Lt_65		-2,012	3,243	0.54
Age_Lt_75		1,917	2,592	0.46
Age_Lt_80		698	2,796	0.80
Age_Lt_85		4,605	3,023	0.13
Age_Lt_90		4,130	3,570	0.25
Age_Lt_95		8,592	4,810	0.07
Age_Gt_94		-3,930	7,700	0.61
ORIGDS		-2,831	2,468	0.25
ESRD		13,598	5,454	0.01
D_HCC5	DISABLED, OPPORTUNISTISTIC INFECTIONS	10,430	34,193	0.76
D_HCC44	DISABLED, SEVERE HEMATOLOGICAL DISORDERS	8,633	18,544	0.64
D_HCC51	DISABLED, DRUG/ALCOHOL PSYCHOSIS	6,623	12,173	0.59
D_HCC52	DISABLED, DRUG/ALCOHOL DEPENDENCE	-3,028	9,387	0.75
D_HCC107	DISABLED, CYSTIC FIBROSIS	0	0	.
DM_CVD	DIABETES MELLITUS * CEREBROVASCULAR DISEASE	-8,268	9,060	0.36
CHF_COPD	CONGESTIVE HEART FAILURE*CHRONIC OBSRUCTIVE PULMONARY DISEASE	-5,258	5,038	0.30
COPD_CVD_CAD	CHRONIC OBSRUCTIVE PULMONARY DISEASE *CEBROVASCULAR DISEASE*CORONARY	-1,921	20,930	0.93
RF_CHF_DM	DIABETES MELLITUS * CONGESTIVE HEART* RENAL FAILURE	11,288	6,962	0.11
DM_CHF	DIABETES MELLITUS * CONGESTIVE HEART FAILURE	926	5,473	0.87
RF_CHF	RENAL FAILURE* CONGESTIVE HEART FAILURE	-3,555	10,677	0.74

Coef Name	Label	Coef Value	Std Error	P Value
DRG_CD=003	ECMO OR TRACH W MV 96+ HRS OR PDX EXC FACE, MOUTH & NECK W MAJ O.R.	220,965	5,716	0.00
DRG_CD=004	TRACH W MV 96+ HRS OR PDX EXC FACE, MOUTH & NECK W/O MAJ O.R.	52,899	27,385	0.05
DRG_CD=927	EXTENSIVE BURNS OR FULL THICKNESS BURNS W MV 96+ HRS W SKIN GRAFT	113,516	6,514	0.00
DRG_CD=928	FULL THICKNESS BURN W SKIN GRAFT OR INHAL INJ W CC/MCC	33,866	1,897	0.00
DRG_CD=929	FULL THICKNESS BURN W SKIN GRAFT OR INHAL INJ W/O CC/MCC	4,158	2,494	0.10
DRG_CD=933	EXTENSIVE BURNS OR FULL THICKNESS BURNS W MV 96+ HRS W/O SKIN GRAFT	32,356	21,807	0.14
DRG_CD=934	FULL THICKNESS BURN W/O SKIN GRFT OR INHAL INJ	2,411	2,058	0.24
DRG_CD=935	NON-EXTENSIVE BURNS	0	0	.
LTI_Indicator		-1,968	7,999	0.81

Table 43: Factors Influencing Health Status

Coef Name	Label	Coef Value	Std Error	P Value
Intercept		9,084	674	0.00
HCC1	HIV/AIDS	1,403	980	0.15
HCC2	SEPTICEMIA/SHOCK	1,092	429	0.01
HCC5	OPPORTUNISTIC INFECTIONS	-871	1,228	0.48
HCC7	METASTATIC CANCER AND ACUTE LEUKEMIA	3,541	290	0.00
HCC8	LUNG, UPPER DIGESTIVE TRACT, AND OTHER SEVERE CANCERS	1,684	458	0.00
HCC9	LYMPHATIC, HEAD AND NECK, BRAIN, AND OTHER MAJOR CANCERS	2,040	443	0.00
HCC10	BREAST, PROSTATE, COLORECTAL AND OTHER CANCERS AND TUMORS	154	290	0.59
HCC15	DIABETES WITH RENAL OR PERIPHERAL CIRCULATORY MANIFESTATION	470	343	0.17
HCC16	DIABETES WITH NEUROLOGIC OR OTHER SPECIFIED MANIFESTATION	667	337	0.05
HCC17	DIABETES WITH ACUTE COMPLICATIONS	3,744	1,535	0.01
HCC18	DIABETES WITH OPHTHALMOLOGIC OR UNSPECIFIED MANIFESTATION	266	592	0.65
HCC19	DIABETES WITHOUT COMPLICATION	191	193	0.32
HCC21	PROTEIN-CALORIE MALNUTRITION	1,955	411	0.00

Coef Name	Label	Coef Value	Std Error	P Value
HCC25	END-STAGE LIVER DISEASE	703	604	0.24
HCC26	CIRRHOSIS OF LIVER	-162	619	0.79
HCC27	CHRONIC HEPATITIS	-1,573	1,002	0.12
HCC31	INTESTINAL OBSTRUCTION/PERFORATION	1,060	462	0.02
HCC32	PANCREATIC DISEASE	415	503	0.41
HCC33	INFLAMMATORY BOWEL DISEASE	1,184	765	0.12
HCC37	BONE/JOINT/MUSCLE INFECTIONS/NECROSIS	1,184	584	0.04
HCC38	RHEUMATOID ARTHRITIS AND INFLAMMATORY CONNECTIVE TISSUE DISEASE	1,073	312	0.00
HCC44	SEVERE HEMATOLOGICAL DISORDERS	556	554	0.32
HCC45	DISORDERS OF IMMUNITY	2,075	573	0.00
HCC51	DRUG/ALCOHOL PSYCHOSIS	31	907	0.97
HCC52	DRUG/ALCOHOL DEPENDENCE	749	836	0.37
HCC54	SCHIZOPHRENIA	2,662	393	0.00
HCC55	MAJOR DEPRESSIVE, BIPOLAR, AND PARANOID DISORDERS	1,346	248	0.00
HCC67	QUADRIPLEGIA, OTHER EXTENSIVE PARALYSIS	-689	1,142	0.55
HCC68	PARAPLEGIA	836	1,151	0.47
HCC69	SPINAL CORD DISORDERS/INJURIES	1,171	741	0.11
HCC70	MUSCULAR DYSTROPHY	7,236	2,753	0.01
HCC71	POLYNEUROPATHY	86	279	0.76
HCC72	MULTIPLE SCLEROSIS	353	786	0.65
HCC73	PARKINSONS AND HUNTINGTONS DISEASES	2,999	362	0.00
HCC74	SEIZURE DISORDERS AND CONVULSIONS	905	272	0.00
HCC75	COMA, BRAIN COMPRESSION/ANOXIC DAMAGE	2,488	998	0.01
HCC77	RESPIRATOR DEPENDENCE/TRACHEOSTOMY STATUS	3,434	1,053	0.00
HCC78	RESPIRATORY ARREST	497	2,341	0.83
HCC79	CARDIO-RESPIRATORY FAILURE AND SHOCK	529	322	0.10
HCC80	CONGESTIVE HEART FAILURE	140	277	0.61
HCC81	ACUTE MYOCARDIAL INFARCTION	728	648	0.26
HCC82	UNSTABLE ANGINA AND OTHER ACUTE ISCHEMIC HEART DISEASE	-1,035	509	0.04
HCC83	ANGINA PECTORIS/OLD MYOCARDIAL INFARCTION	-218	317	0.49

Coef Name	Label	Coef Value	Std Error	P Value
HCC92	SPECIFIED HEART ARRHYTHMIAS	-635	179	0.00
HCC95	CEREBRAL HEMORRHAGE	2,718	773	0.00
HCC96	ISCHEMIC OR UNSPECIFIED STROKE	628	339	0.06
HCC100	HEMIPLEGIA/HEMIPARESIS	1,855	442	0.00
HCC101	CEREBRAL PALSY AND OTHER PARALYTIC SYNDROMES	2,613	1,057	0.01
HCC104	VASCULAR DISEASE WITH COMPLICATIONS	664	378	0.08
HCC105	VASCULAR DISEASE	398	184	0.03
HCC107	CYSTIC FIBROSIS	-6,385	6,732	0.34
HCC108	CHRONIC OBSTRUCTIVE PULMONARY DISEASE	187	223	0.40
HCC111	ASPIRATION AND SPECIFIED BACTERIAL PNEUMONIAS	1,017	621	0.10
HCC112	PNEUMOCOCCAL PNEUMONIA, EMPHYSEMA, LUNG ABSCESS	353	1,043	0.74
HCC119	PROLIFERATIVE DIABETIC RETINOPATHY AND VITREOUS HEMORRHAGE	-341	773	0.66
HCC130	DIALYSIS STATUS	467	620	0.45
HCC131	RENAL FAILURE	568	260	0.03
HCC132	NEPHRITIS	-586	1,739	0.74
HCC148	DECUBITUS ULCER OF SKIN	1,229	429	0.00
HCC149	CHRONIC ULCER OF SKIN, EXCEPT DECUBITUS	681	395	0.08
HCC150	EXTENSIVE THIRD-DEGREE BURNS	0	0	.
HCC154	SEVERE HEAD INJURY	11,677	4,775	0.01
HCC155	MAJOR HEAD INJURY	597	713	0.40
HCC157	VERTEBRAL FRACTURES WITHOUT SPINAL CORD INJURY	1,700	444	0.00
HCC158	HIP FRACTURE/DISLOCATION	2,000	503	0.00
HCC161	TRAUMATIC AMPUTATION	215	1,417	0.88
HCC164	MAJOR COMPLICATIONS OF MEDICAL CARE AND TRAUMA	712	344	0.04
HCC174	MAJOR ORGAN TRANSPLANT STATUS	1,699	879	0.05
HCC176	ARTIFICIAL OPENINGS FOR FEEDING OR ELIMINATION	773	581	0.18
HCC177	AMPUTATION STATUS, LOWER LIMB/AMPUTATION COMPLICATIONS	-172	840	0.84
Age_Lt_35		-2,560	672	0.00
Age_Lt_45		-2,823	481	0.00
Age_Lt_55		-2,034	350	0.00
Age_Lt_60		-1,332	376	0.00
Age_Lt_65		-252	362	0.49

Coef Name	Label	Coef Value	Std Error	P Value
Age_Lt_75		259	269	0.34
Age_Lt_80		1,393	268	0.00
Age_Lt_85		2,485	266	0.00
Age_Lt_90		2,936	279	0.00
Age_Lt_95		3,266	330	0.00
Age_Gt_94		3,824	474	0.00
ORIGDS		730	216	0.00
ESRD		4,929	406	0.00
D_HCC5	DISABLED, OPPORTUNISTISTIC INFECTIONS	4,681	2,131	0.03
D_HCC44	DISABLED, SEVERE HEMATOLOGICAL DISORDERS	-1,248	1,145	0.28
D_HCC51	DISABLED, DRUG/ALCOHOL PSYCHOSIS	-1,032	1,347	0.44
D_HCC52	DISABLED, DRUG/ALCOHOL DEPENDENCE	-790	1,067	0.46
D_HCC107	DISABLED, CYSTIC FIBROSIS	0	0	.
DM_CVD	DIABETES MELLITUS * CEREBROVASCULAR DISEASE	716	469	0.13
CHF_COPD	CONGESTIVE HEART FAILURE*CHRONIC OBSRUCTIVE PULMONARY DISEASE	774	379	0.04
COPD_CVD_CAD	CHRONIC OBSRUCTIVE PULMONARY DISEASE *CEBROVASCULAR DISEASE*CORONARY	-705	1,066	0.51
RF_CHF_DM	DIABETES MELLITUS * CONGESTIVE HEART* RENAL FAILURE	589	483	0.22
DM_CHF	DIABETES MELLITUS * CONGESTIVE HEART FAILURE	439	406	0.28
RF_CHF	RENAL FAILURE* CONGESTIVE HEART FAILURE	286	511	0.57
DRG_CD=003	ECMO OR TRACH W MV 96+ HRS OR PDX EXC FACE, MOUTH & NECK W MAJ O.R.	173,148	11,685	0.00
DRG_CD=004	TRACH W MV 96+ HRS OR PDX EXC FACE, MOUTH & NECK W/O MAJ O.R.	108,680	5,238	0.00
DRG_CD=009	BONE MARROW TRANSPLANT	36,124	11,711	0.00
DRG_CD=011	TRACHEOSTOMY FOR FACE,MOUTH & NECK DIAGNOSES W MCC	19,095	11,689	0.10
DRG_CD=939	O.R. PROC W DIAGNOSES OF OTHER CONTACT W HEALTH SERVICES W MCC	24,080	957	0.00
DRG_CD=940	O.R. PROC W DIAGNOSES OF OTHER CONTACT W HEALTH SERVICES W CC	8,698	781	0.00
DRG_CD=941	O.R. PROC W DIAGNOSES OF OTHER CONTACT W HEALTH SERVICES W/O CC/MCC	1,739	806	0.03

Coef Name	Label	Coef Value	Std Error	P Value
DRG_CD=945	REHABILITATION W CC/MCC	9,300	1,136	0.00
DRG_CD=946	REHABILITATION W/O CC/MCC	4,972	1,496	0.00
DRG_CD=947	SIGNS & SYMPTOMS W MCC	6,851	658	0.00
DRG_CD=948	SIGNS & SYMPTOMS W/O MCC	1,784	642	0.01
DRG_CD=949	AFTERCARE W CC/MCC	1,849	1,111	0.10
DRG_CD=950	AFTERCARE W/O CC/MCC	-3,438	1,311	0.01
DRG_CD=951	OTHER FACTORS INFLUENCING HEALTH STATUS	0	0	.
LTI_Indicator		1,339	275	0.00

Table 44: Multiple Significant Trauma

Coef Name	Label	Coef Value	Std Error	P Value
Intercept		20,694	1,339	0.00
HCC1	HIV/AIDS	-740	8,061	0.93
HCC2	SEPTICEMIA/SHOCK	580	3,838	0.88
HCC5	OPPORTUNISTIC INFECTIONS	9,734	7,019	0.17
HCC7	METASTATIC CANCER AND ACUTE LEUKEMIA	-533	3,275	0.87
HCC8	LUNG, UPPER DIGESTIVE TRACT, AND OTHER SEVERE CANCERS	2,483	2,963	0.40
HCC9	LYMPHATIC, HEAD AND NECK, BRAIN, AND OTHER MAJOR CANCERS	468	2,437	0.85
HCC10	BREAST, PROSTATE, COLORECTAL AND OTHER CANCERS AND TUMORS	1,014	1,351	0.45
HCC15	DIABETES WITH RENAL OR PERIPHERAL CIRCULATORY MANIFESTATION	1,311	2,091	0.53
HCC16	DIABETES WITH NEUROLOGIC OR OTHER SPECIFIED MANIFESTATION	5,850	1,808	0.00
HCC17	DIABETES WITH ACUTE COMPLICATIONS	11,219	9,097	0.22
HCC18	DIABETES WITH OPHTHALMOLOGIC OR UNSPECIFIED MANIFESTATION	602	3,274	0.85
HCC19	DIABETES WITHOUT COMPLICATION	108	973	0.91
HCC21	PROTEIN-CALORIE MALNUTRITION	1,126	2,549	0.66
HCC25	END-STAGE LIVER DISEASE	-5,951	5,112	0.24
HCC26	CIRRHOSIS OF LIVER	-1,594	4,064	0.69
HCC27	CHRONIC HEPATITIS	-4,146	4,910	0.40
HCC31	INTESTINAL OBSTRUCTION/PERFORATION	41	3,540	0.99
HCC32	PANCREATIC DISEASE	-5,272	3,422	0.12
HCC33	INFLAMMATORY BOWEL DISEASE	-2,812	4,684	0.55
HCC37	BONE/JOINT/MUSCLE	153	3,564	0.97

Coef Name	Label	Coef Value	Std Error	P Value
	INFECTIONS/NECROSIS			
HCC38	RHEUMATOID ARTHRITIS AND INFLAMMATORY CONNECTIVE TISSUE DISEASE	878	1,597	0.58
HCC44	SEVERE HEMATOLOGICAL DISORDERS	-211	2,963	0.94
HCC45	DISORDERS OF IMMUNITY	-2,456	4,664	0.60
HCC51	DRUG/ALCOHOL PSYCHOSIS	-5,496	5,568	0.32
HCC52	DRUG/ALCOHOL DEPENDENCE	4,098	4,893	0.40
HCC54	SCHIZOPHRENIA	1,005	2,492	0.69
HCC55	MAJOR DEPRESSIVE, BIPOLAR, AND PARANOID DISORDERS	262	1,350	0.85
HCC67	QUADRIPLEGIA, OTHER EXTENSIVE PARALYSIS	-6,916	9,237	0.45
HCC68	PARAPLEGIA	-10,384	8,259	0.21
HCC69	SPINAL CORD DISORDERS/INJURIES	-696	3,970	0.86
HCC70	MUSCULAR DYSTROPHY	0	0	.
HCC71	POLYNEUROPATHY	-239	1,587	0.88
HCC72	MULTIPLE SCLEROSIS	-880	5,047	0.86
HCC73	PARKINSONS AND HUNTINGTONS DISEASES	2,989	1,838	0.10
HCC74	SEIZURE DISORDERS AND CONVULSIONS	-1,457	1,808	0.42
HCC75	COMA, BRAIN COMPRESSION/ANOXIC DAMAGE	-11,342	12,790	0.38
HCC77	RESPIRATOR DEPENDENCE/TRACHEOSTOMY STATUS	-29,625	18,543	0.11
HCC78	RESPIRATORY ARREST	0	0	.
HCC79	CARDIO-RESPIRATORY FAILURE AND SHOCK	1,204	1,989	0.54
HCC80	CONGESTIVE HEART FAILURE	-518	1,349	0.70
HCC81	ACUTE MYOCARDIAL INFARCTION	-1,897	4,591	0.68
HCC82	UNSTABLE ANGINA AND OTHER ACUTE ISCHEMIC HEART DISEASE	-4,594	3,489	0.19
HCC83	ANGINA PECTORIS/OLD MYOCARDIAL INFARCTION	927	1,828	0.61
HCC92	SPECIFIED HEART ARRHYTHMIAS	1,615	846	0.06
HCC95	CEREBRAL HEMORRHAGE	-633	3,155	0.84
HCC96	ISCHEMIC OR UNSPECIFIED STROKE	2,273	1,798	0.21
HCC100	HEMIPLEGIA/HEMIPARESIS	1,947	3,019	0.52
HCC101	CEREBRAL PALSY AND OTHER PARALYTIC SYNDROMES	-3,246	8,265	0.69
HCC104	VASCULAR DISEASE WITH COMPLICATIONS	1,932	2,273	0.40

Coef Name	Label	Coef Value	Std Error	P Value
HCC105	VASCULAR DISEASE	292	908	0.75
HCC107	CYSTIC FIBROSIS	0	0	.
HCC108	CHRONIC OBSTRUCTIVE PULMONARY DISEASE	504	1,042	0.63
HCC111	ASPIRATION AND SPECIFIED BACTERIAL PNEUMONIAS	-2,831	3,642	0.44
HCC112	PNEUMOCOCCAL PNEUMONIA, EMPHYSEMA, LUNG ABSCESS	2,019	6,911	0.77
HCC119	PROLIFERATIVE DIABETIC RETINOPATHY AND VITREOUS HEMORRHAGE	-9,402	4,778	0.05
HCC130	DIALYSIS STATUS	2,502	4,349	0.57
HCC131	RENAL FAILURE	247	1,340	0.85
HCC132	NEPHRITIS	-7,888	13,018	0.54
HCC148	DECUBITUS ULCER OF SKIN	-636	2,582	0.81
HCC149	CHRONIC ULCER OF SKIN, EXCEPT DECUBITUS	2,138	1,962	0.28
HCC150	EXTENSIVE THIRD-DEGREE BURNS	0	0	.
HCC154	SEVERE HEAD INJURY	0	0	.
HCC155	MAJOR HEAD INJURY	-1,546	3,063	0.61
HCC157	VERTEBRAL FRACTURES WITHOUT SPINAL CORD INJURY	-951	1,770	0.59
HCC158	HIP FRACTURE/DISLOCATION	-3,737	1,480	0.01
HCC161	TRAUMATIC AMPUTATION	-774	10,618	0.94
HCC164	MAJOR COMPLICATIONS OF MEDICAL CARE AND TRAUMA	3,215	2,412	0.18
HCC174	MAJOR ORGAN TRANSPLANT STATUS	-2,643	12,798	0.84
HCC176	ARTIFICIAL OPENINGS FOR FEEDING OR ELIMINATION	-1,537	5,075	0.76
HCC177	AMPUTATION STATUS, LOWER LIMB/AMPUTATION COMPLICATIONS	-7,607	8,401	0.37
Age_Lt_35		-7,405	2,266	0.00
Age_Lt_45		-5,633	1,950	0.00
Age_Lt_55		-1,964	1,636	0.23
Age_Lt_60		-2,481	1,968	0.21
Age_Lt_65		4,912	1,981	0.01
Age_Lt_75		-327	1,254	0.79
Age_Lt_80		1,423	1,186	0.23
Age_Lt_85		2,167	1,132	0.06
Age_Lt_90		3,295	1,142	0.00
Age_Lt_95		3,194	1,270	0.01
Age_Gt_94		394	1,750	0.82
ORIGDS		910	1,174	0.44
ESRD		4,396	2,601	0.09

Coef Name	Label	Coef Value	Std Error	P Value
D_HCC5	DISABLED, OPPORTUNISTISTIC INFECTIONS	-18,307	19,897	0.36
D_HCC44	DISABLED, SEVERE HEMATOLOGICAL DISORDERS	-4,961	10,091	0.62
D_HCC51	DISABLED, DRUG/ALCOHOL PSYCHOSIS	10,339	7,279	0.16
D_HCC52	DISABLED, DRUG/ALCOHOL DEPENDENCE	-4,270	5,902	0.47
D_HCC107	DISABLED, CYSTIC FIBROSIS	0	0	.
DM_CVD	DIABETES MELLITUS * CEREBROVASCULAR DISEASE	-3,947	2,998	0.19
CHF_COPD	CONGESTIVE HEART FAILURE*CHRONIC OBSRUCTIVE PULMONARY DISEASE	-2,427	2,199	0.27
COPD_CVD_CAD	CHRONIC OBSRUCTIVE PULMONARY DISEASE *CEBROVASCULAR DISEASE*CORONARY	-1,795	7,353	0.81
RF_CHF_DM	DIABETES MELLITUS * CONGESTIVE HEART* RENAL FAILURE	2,021	3,427	0.56
DM_CHF	DIABETES MELLITUS * CONGESTIVE HEART FAILURE	2,148	2,327	0.36
RF_CHF	RENAL FAILURE* CONGESTIVE HEART FAILURE	-67	2,908	0.98
DRG_CD=955	CRANIOTOMY FOR MULTIPLE SIGNIFICANT TRAUMA	46,801	2,369	0.00
DRG_CD=956	LIMB REATTACHMENT, HIP & FEMUR PROC FOR MULTIPLE SIGNIFICANT TRAUMA	22,171	1,083	0.00
DRG_CD=957	OTHER O.R. PROCEDURES FOR MULTIPLE SIGNIFICANT TRAUMA W MCC	50,890	1,438	0.00
DRG_CD=958	OTHER O.R. PROCEDURES FOR MULTIPLE SIGNIFICANT TRAUMA W CC	25,705	1,414	0.00
DRG_CD=959	OTHER O.R. PROCEDURES FOR MULTIPLE SIGNIFICANT TRAUMA W/O CC/MCC	10,474	2,426	0.00
DRG_CD=963	OTHER MULTIPLE SIGNIFICANT TRAUMA W MCC	18,422	1,339	0.00
DRG_CD=964	OTHER MULTIPLE SIGNIFICANT TRAUMA W CC	4,010	1,155	0.00
DRG_CD=965	OTHER MULTIPLE SIGNIFICANT TRAUMA W/O CC/MCC	0	0	.
LTI_Indicator		-4,751	1,308	0.00

Table 45: Human Immunodeficiency Virus Infection

Coef Name	Label	Coef Value	Std Error	P Value
Intercept		18,705	1,680	0.00
HCC1	HIV/AIDS	-1,611	811	0.05
HCC2	SEPTICEMIA/SHOCK	-1,240	1,344	0.36
HCC5	OPPORTUNISTIC INFECTIONS	8,661	2,676	0.00
HCC7	METASTATIC CANCER AND ACUTE LEUKEMIA	4,613	2,570	0.07
HCC8	LUNG, UPPER DIGESTIVE TRACT, AND OTHER SEVERE CANCERS	-306	2,644	0.91
HCC9	LYMPHATIC, HEAD AND NECK, BRAIN, AND OTHER MAJOR CANCERS	922	1,346	0.49
HCC10	BREAST, PROSTATE, COLORECTAL AND OTHER CANCERS AND TUMORS	-93	1,800	0.96
HCC15	DIABETES WITH RENAL OR PERIPHERAL CIRCULATORY MANIFESTATION	2,196	2,477	0.38
HCC16	DIABETES WITH NEUROLOGIC OR OTHER SPECIFIED MANIFESTATION	2,841	2,176	0.19
HCC17	DIABETES WITH ACUTE COMPLICATIONS	1,286	9,230	0.89
HCC18	DIABETES WITH OPHTHALMOLOGIC OR UNSPECIFIED MANIFESTATION	1,243	3,737	0.74
HCC19	DIABETES WITHOUT COMPLICATION	1,408	1,112	0.21
HCC21	PROTEIN-CALORIE MALNUTRITION	1,794	1,058	0.09
HCC25	END-STAGE LIVER DISEASE	6,589	2,470	0.01
HCC26	CIRRHOSIS OF LIVER	-1,478	2,302	0.52
HCC27	CHRONIC HEPATITIS	1,349	1,143	0.24
HCC31	INTESTINAL OBSTRUCTION/PERFORATION	9,397	1,957	0.00
HCC32	PANCREATIC DISEASE	303	1,657	0.86
HCC33	INFLAMMATORY BOWEL DISEASE	636	3,247	0.84
HCC37	BONE/JOINT/MUSCLE INFECTIONS/NECROSIS	3,519	2,033	0.08
HCC38	RHEUMATOID ARTHRITIS AND INFLAMMATORY CONNECTIVE TISSUE DISEASE	3,252	2,298	0.16
HCC44	SEVERE HEMATOLOGICAL DISORDERS	2,756	3,225	0.39
HCC45	DISORDERS OF IMMUNITY	2,833	1,308	0.03
HCC51	DRUG/ALCOHOL PSYCHOSIS	-3,060	10,364	0.77
HCC52	DRUG/ALCOHOL DEPENDENCE	-2,611	4,702	0.58
HCC54	SCHIZOPHRENIA	4,372	1,542	0.00
HCC55	MAJOR DEPRESSIVE, BIPOLAR, AND PARANOID DISORDERS	3,430	959	0.00
HCC67	QUADRIPLEGIA, OTHER EXTENSIVE PARALYSIS	8,099	5,870	0.17

Coef Name	Label	Coef Value	Std Error	P Value
HCC68	PARAPLEGIA	3,520	4,015	0.38
HCC69	SPINAL CORD DISORDERS/INJURIES	6,183	3,697	0.09
HCC70	MUSCULAR DYSTROPHY	21,145	20,524	0.30
HCC71	POLYNEUROPATHY	-255	1,037	0.81
HCC72	MULTIPLE SCLEROSIS	-7,936	6,513	0.22
HCC73	PARKINSONS AND HUNTINGTONS DISEASES	-3,052	5,414	0.57
HCC74	SEIZURE DISORDERS AND CONVULSIONS	3,407	1,111	0.00
HCC75	COMA, BRAIN COMPRESSION/ANOXIC DAMAGE	2,915	3,535	0.41
HCC77	RESPIRATOR DEPENDENCE/TRACHEOSTOMY STATUS	3,463	3,589	0.33
HCC78	RESPIRATORY ARREST	-5,238	14,769	0.72
HCC79	CARDIO-RESPIRATORY FAILURE AND SHOCK	29	1,328	0.98
HCC80	CONGESTIVE HEART FAILURE	-1,802	1,594	0.26
HCC81	ACUTE MYOCARDIAL INFARCTION	4,168	3,473	0.23
HCC82	UNSTABLE ANGINA AND OTHER ACUTE ISCHEMIC HEART DISEASE	-229	2,579	0.93
HCC83	ANGINA PECTORIS/OLD MYOCARDIAL INFARCTION	-1,810	1,954	0.35
HCC92	SPECIFIED HEART ARRHYTHMIAS	721	1,701	0.67
HCC95	CEREBRAL HEMORRHAGE	10,131	4,471	0.02
HCC96	ISCHEMIC OR UNSPECIFIED STROKE	6,759	2,193	0.00
HCC100	HEMIPLEGIA/HEMIPARESIS	3,454	2,723	0.20
HCC101	CEREBRAL PALSY AND OTHER PARALYTIC SYNDROMES	-266	5,102	0.96
HCC104	VASCULAR DISEASE WITH COMPLICATIONS	-1,120	2,178	0.61
HCC105	VASCULAR DISEASE	-694	1,226	0.57
HCC107	CYSTIC FIBROSIS	-2,900	22,438	0.90
HCC108	CHRONIC OBSTRUCTIVE PULMONARY DISEASE	-267	977	0.78
HCC111	ASPIRATION AND SPECIFIED BACTERIAL PNEUMONIAS	1,271	1,963	0.52
HCC112	PNEUMOCOCCAL PNEUMONIA, EMPHYSEMA, LUNG ABSCESS	74	3,207	0.98
HCC119	PROLIFERATIVE DIABETIC RETINOPATHY AND VITREOUS HEMORRHAGE	-3,474	5,481	0.53
HCC130	DIALYSIS STATUS	3,313	1,984	0.10
HCC131	RENAL FAILURE	404	1,060	0.70
HCC132	NEPHRITIS	-1,934	5,168	0.71

Coef Name	Label	Coef Value	Std Error	P Value
HCC148	DECUBITUS ULCER OF SKIN	8,707	2,147	0.00
HCC149	CHRONIC ULCER OF SKIN, EXCEPT DECUBITUS	-568	2,231	0.80
HCC150	EXTENSIVE THIRD-DEGREE BURNS	0	0	.
HCC154	SEVERE HEAD INJURY	0	0	.
HCC155	MAJOR HEAD INJURY	-1,501	3,904	0.70
HCC157	VERTEBRAL FRACTURES WITHOUT SPINAL CORD INJURY	-8,907	4,309	0.04
HCC158	HIP FRACTURE/DISLOCATION	8,652	3,385	0.01
HCC161	TRAUMATIC AMPUTATION	7,421	9,503	0.43
HCC164	MAJOR COMPLICATIONS OF MEDICAL CARE AND TRAUMA	3,531	1,518	0.02
HCC174	MAJOR ORGAN TRANSPLANT STATUS	6,080	5,547	0.27
HCC176	ARTIFICIAL OPENINGS FOR FEEDING OR ELIMINATION	-2,878	2,658	0.28
HCC177	AMPUTATION STATUS, LOWER LIMB/AMPUTATION COMPLICATIONS	11,267	5,638	0.05
Age_Lt_35		-6,902	1,790	0.00
Age_Lt_45		-6,133	1,614	0.00
Age_Lt_55		-5,125	1,560	0.00
Age_Lt_60		-4,987	1,716	0.00
Age_Lt_65		-3,119	1,904	0.10
Age_Lt_75		502	2,146	0.82
Age_Lt_80		-613	3,179	0.85
Age_Lt_85		-5,933	5,387	0.27
Age_Lt_90		-5,810	7,969	0.47
Age_Lt_95		-15,811	20,384	0.44
Age_Gt_94		0	0	.
ORIGDS		-2,528	1,623	0.12
ESRD		1,185	1,366	0.39
D_HCC5	DISABLED, OPPORTUNISTISTIC INFECTIONS	-7,754	2,848	0.01
D_HCC44	DISABLED, SEVERE HEMATOLOGICAL DISORDERS	2,814	3,417	0.41
D_HCC51	DISABLED, DRUG/ALCOHOL PSYCHOSIS	4,585	10,597	0.67
D_HCC52	DISABLED, DRUG/ALCOHOL DEPENDENCE	337	4,904	0.95
D_HCC107	DISABLED, CYSTIC FIBROSIS	0	0	.
DM_CVD	DIABETES MELLITUS * CEREBROVASCULAR DISEASE	-944	3,274	0.77
CHF_COPD	CONGESTIVE HEART FAILURE*CHRONIC OBSRUCTIVE PULMONARY DISEASE	1,517	2,062	0.46
COPD_CVD_CAD	CHRONIC OBSRUCTIVE PULMONARY	9,888	7,458	0.18

Coef Name	Label	Coef Value	Std Error	P Value
RF_CHF_DM	DISEASE *CEBROVASCULAR DISEASE*CORONARY DIABETES MELLITUS * CONGESTIVE HEART* RENAL FAILURE	913	2,980	0.76
DM_CHF	DIABETES MELLITUS * CONGESTIVE HEART FAILURE	2,917	2,678	0.28
RF_CHF	RENAL FAILURE* CONGESTIVE HEART FAILURE	3,428	2,307	0.14
DRG_CD=003	ECMO OR TRACH W MV 96+ HRS OR PDX EXC FACE, MOUTH & NECK W MAJ O.R.	202,625	11,773	0.00
DRG_CD=004	TRACH W MV 96+ HRS OR PDX EXC FACE, MOUTH & NECK W/O MAJ O.R.	126,298	7,328	0.00
DRG_CD=005	LIVER TRANSPLANT W MCC OR INTESTINAL TRANSPLANT	95,052	14,679	0.00
DRG_CD=009	BONE MARROW TRANSPLANT	21,595	14,470	0.14
DRG_CD=969	HIV W EXTENSIVE O.R. PROCEDURE W MCC	44,191	1,710	0.00
DRG_CD=970	HIV W EXTENSIVE O.R. PROCEDURE W/O MCC	15,946	3,677	0.00
DRG_CD=974	HIV W MAJOR RELATED CONDITION W MCC	16,326	801	0.00
DRG_CD=975	HIV W MAJOR RELATED CONDITION W CC	2,571	830	0.00
DRG_CD=976	HIV W MAJOR RELATED CONDITION W/O CC/MCC	-3,337	1,063	0.00
DRG_CD=977	HIV W OR W/O OTHER RELATED CONDITION	0	0	.
LTI_Indicator		9,143	1,641	0.00

Table 46: Ungroupable

Coef Name	Label	Coef Value	Std Error	P Value
Intercept		10,406	615	0.00
HCC1	HIV/AIDS	-2,217	2,083	0.29
HCC2	SEPTICEMIA/SHOCK	535	729	0.46
HCC5	OPPORTUNISTIC INFECTIONS	-2,253	2,081	0.28
HCC7	METASTATIC CANCER AND ACUTE LEUKEMIA	1,685	800	0.04
HCC8	LUNG, UPPER DIGESTIVE TRACT, AND OTHER SEVERE CANCERS	-517	867	0.55
HCC9	LYMPHATIC, HEAD AND NECK, BRAIN, AND OTHER MAJOR CANCERS	92	803	0.91
HCC10	BREAST, PROSTATE, COLORECTAL AND OTHER CANCERS AND TUMORS	-1,258	477	0.01

Coef Name	Label	Coef Value	Std Error	P Value
HCC15	DIABETES WITH RENAL OR PERIPHERAL CIRCULATORY MANIFESTATION	1,127	578	0.05
HCC16	DIABETES WITH NEUROLOGIC OR OTHER SPECIFIED MANIFESTATION	2,381	590	0.00
HCC17	DIABETES WITH ACUTE COMPLICATIONS	2,605	2,919	0.37
HCC18	DIABETES WITH OPHTHALMOLOGIC OR UNSPECIFIED MANIFESTATION	956	1,023	0.35
HCC19	DIABETES WITHOUT COMPLICATION	244	369	0.51
HCC21	PROTEIN-CALORIE MALNUTRITION	4,816	749	0.00
HCC25	END-STAGE LIVER DISEASE	-1,859	1,421	0.19
HCC26	CIRRHOSIS OF LIVER	-1,683	1,509	0.26
HCC27	CHRONIC HEPATITIS	725	2,023	0.72
HCC31	INTESTINAL OBSTRUCTION/PERFORATION	974	811	0.23
HCC32	PANCREATIC DISEASE	-698	935	0.46
HCC33	INFLAMMATORY BOWEL DISEASE	2,160	1,368	0.11
HCC37	BONE/JOINT/MUSCLE INFECTIONS/NECROSIS	1,954	724	0.01
HCC38	RHEUMATOID ARTHRITIS AND INFLAMMATORY CONNECTIVE TISSUE DISEASE	1,090	612	0.08
HCC44	SEVERE HEMATOLOGICAL DISORDERS	2,581	1,081	0.02
HCC45	DISORDERS OF IMMUNITY	-474	1,208	0.69
HCC51	DRUG/ALCOHOL PSYCHOSIS	29	2,182	0.99
HCC52	DRUG/ALCOHOL DEPENDENCE	-85	1,876	0.96
HCC54	SCHIZOPHRENIA	1,212	1,154	0.29
HCC55	MAJOR DEPRESSIVE, BIPOLAR, AND PARANOID DISORDERS	643	593	0.28
HCC67	QUADRIPLEGIA, OTHER EXTENSIVE PARALYSIS	-623	1,682	0.71
HCC68	PARAPLEGIA	5,283	1,348	0.00
HCC69	SPINAL CORD DISORDERS/INJURIES	3,194	1,642	0.05
HCC70	MUSCULAR DYSTROPHY	-844	4,599	0.85
HCC71	POLYNEUROPATHY	951	517	0.07
HCC72	MULTIPLE SCLEROSIS	1,797	1,528	0.24
HCC73	PARKINSONS AND HUNTINGTONS DISEASES	1,584	1,004	0.11
HCC74	SEIZURE DISORDERS AND CONVULSIONS	3,558	723	0.00
HCC75	COMA, BRAIN COMPRESSION/ANOXIC DAMAGE	2,618	2,242	0.24
HCC77	RESPIRATOR DEPENDENCE/TRACHEOSTOMY STATUS	5,616	1,518	0.00

Coef Name	Label	Coef Value	Std Error	P Value
HCC78	RESPIRATORY ARREST	7,023	4,004	0.08
HCC79	CARDIO-RESPIRATORY FAILURE AND SHOCK	916	558	0.10
HCC80	CONGESTIVE HEART FAILURE	103	539	0.85
HCC81	ACUTE MYOCARDIAL INFARCTION	-1,307	1,048	0.21
HCC82	UNSTABLE ANGINA AND OTHER ACUTE ISCHEMIC HEART DISEASE	-264	888	0.77
HCC83	ANGINA PECTORIS/OLD MYOCARDIAL INFARCTION	-1,349	576	0.02
HCC92	SPECIFIED HEART ARRHYTHMIAS	7	341	0.98
HCC95	CEREBRAL HEMORRHAGE	5,865	2,000	0.00
HCC96	ISCHEMIC OR UNSPECIFIED STROKE	949	809	0.24
HCC100	HEMIPLEGIA/HEMIPARESIS	2,123	1,085	0.05
HCC101	CEREBRAL PALSY AND OTHER PARALYTIC SYNDROMES	1,249	2,599	0.63
HCC104	VASCULAR DISEASE WITH COMPLICATIONS	2,521	623	0.00
HCC105	VASCULAR DISEASE	561	356	0.12
HCC107	CYSTIC FIBROSIS	-634	14,518	0.97
HCC108	CHRONIC OBSTRUCTIVE PULMONARY DISEASE	427	410	0.30
HCC111	ASPIRATION AND SPECIFIED BACTERIAL PNEUMONIAS	1,864	1,059	0.08
HCC112	PNEUMOCOCCAL PNEUMONIA, EMPHYSEMA, LUNG ABSCESS	1,325	1,869	0.48
HCC119	PROLIFERATIVE DIABETIC RETINOPATHY AND VITREOUS HEMORRHAGE	-750	1,123	0.50
HCC130	DIALYSIS STATUS	792	940	0.40
HCC131	RENAL FAILURE	-123	464	0.79
HCC132	NEPHRITIS	-2,139	2,526	0.40
HCC148	DECUBITUS ULCER OF SKIN	2,757	652	0.00
HCC149	CHRONIC ULCER OF SKIN, EXCEPT DECUBITUS	2,681	604	0.00
HCC150	EXTENSIVE THIRD-DEGREE BURNS	-3,673	14,534	0.80
HCC154	SEVERE HEAD INJURY	-13,200	10,338	0.20
HCC155	MAJOR HEAD INJURY	-2,860	1,887	0.13
HCC157	VERTEBRAL FRACTURES WITHOUT SPINAL CORD INJURY	-864	856	0.31
HCC158	HIP FRACTURE/DISLOCATION	3,381	1,068	0.00
HCC161	TRAUMATIC AMPUTATION	3,700	1,928	0.05
HCC164	MAJOR COMPLICATIONS OF MEDICAL CARE AND TRAUMA	10	544	0.98
HCC174	MAJOR ORGAN TRANSPLANT STATUS	5,276	1,609	0.00

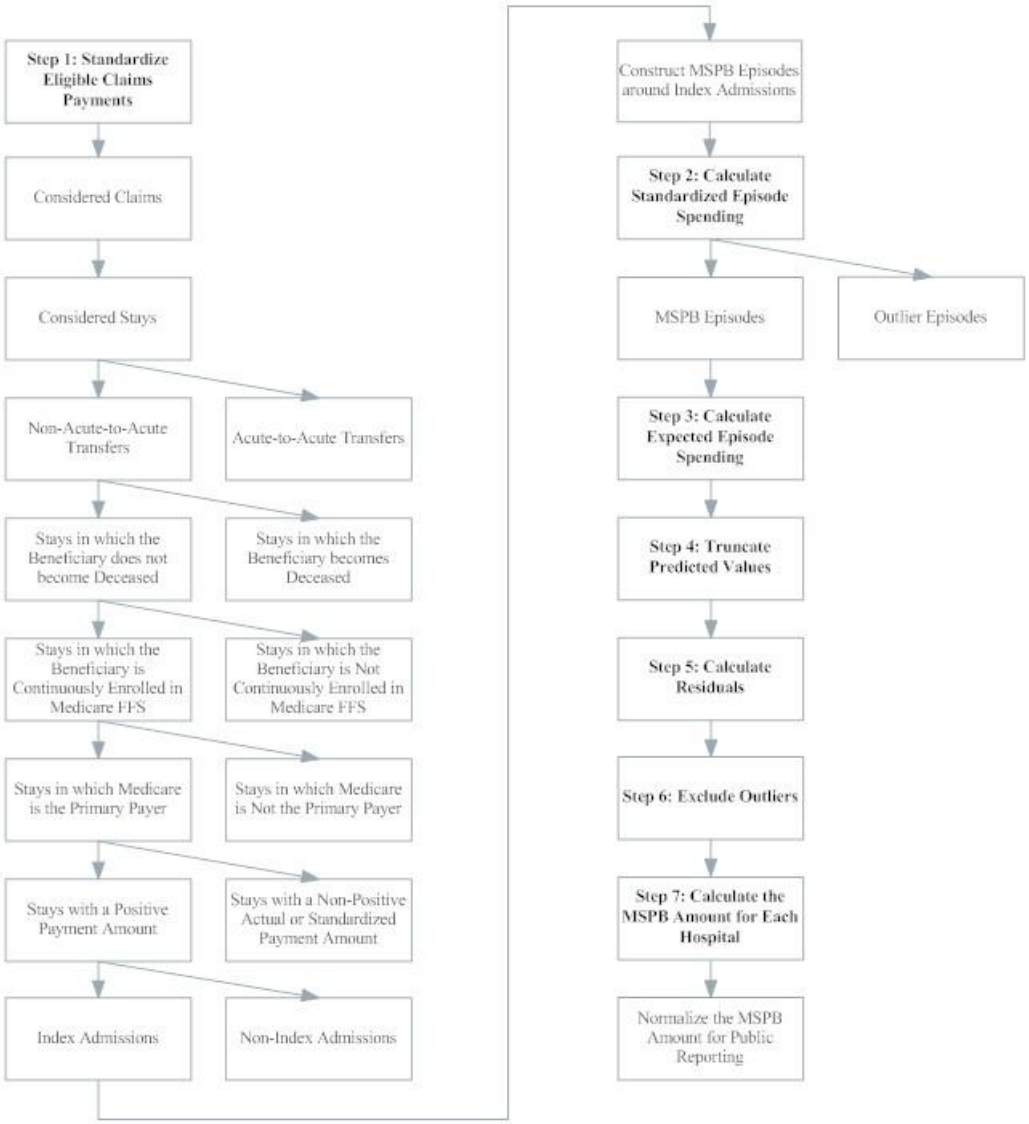
Coef Name	Label	Coef Value	Std Error	P Value
HCC176	ARTIFICIAL OPENINGS FOR FEEDING OR ELIMINATION	-588	908	0.52
HCC177	AMPUTATION STATUS, LOWER LIMB/AMPUTATION COMPLICATIONS	905	1,122	0.42
Age_Lt_35		471	1,146	0.68
Age_Lt_45		-2,004	850	0.02
Age_Lt_55		-2,997	634	0.00
Age_Lt_60		-301	693	0.66
Age_Lt_65		-295	645	0.65
Age_Lt_75		106	459	0.82
Age_Lt_80		1,176	463	0.01
Age_Lt_85		1,564	475	0.00
Age_Lt_90		2,255	524	0.00
Age_Lt_95		2,327	708	0.00
Age_Gt_94		1,665	1,281	0.19
ORIGDS		513	414	0.21
ESRD		2,661	605	0.00
D_HCC5	DISABLED, OPPORTUNISTISTIC INFECTIONS	10,546	3,663	0.00
D_HCC44	DISABLED, SEVERE HEMATOLOGICAL DISORDERS	23,234	2,108	0.00
D_HCC51	DISABLED, DRUG/ALCOHOL PSYCHOSIS	291	3,252	0.93
D_HCC52	DISABLED, DRUG/ALCOHOL DEPENDENCE	-2,185	2,520	0.39
D_HCC107	DISABLED, CYSTIC FIBROSIS	-3,891	15,051	0.80
DM_CVD	DIABETES MELLITUS * CEREBROVASCULAR DISEASE	1,159	1,056	0.27
CHF_COPD	CONGESTIVE HEART FAILURE*CHRONIC OBSRUCTIVE PULMONARY DISEASE	572	677	0.40
COPD_CVD_CAD	CHRONIC OBSRUCTIVE PULMONARY DISEASE *CEBROVASCULAR DISEASE*CORONARY	4,543	2,330	0.05
RF_CHF_DM	DIABETES MELLITUS * CONGESTIVE HEART* RENAL FAILURE	597	846	0.48
DM_CHF	DIABETES MELLITUS * CONGESTIVE HEART FAILURE	151	743	0.84
RF_CHF	RENAL FAILURE* CONGESTIVE HEART FAILURE	798	930	0.39
DRG_CD=981	EXTENSIVE O.R. PROCEDURE UNRELATED TO PRINCIPAL DIAGNOSIS W MCC	36,158	573	0.00
DRG_CD=982	EXTENSIVE O.R. PROCEDURE UNRELATED TO PRINCIPAL DIAGNOSIS W CC	17,296	573	0.00

Coef Name	Label	Coef Value	Std Error	P Value
DRG_CD=983	EXTENSIVE O.R. PROCEDURE UNRELATED TO PRINCIPAL DIAGNOSIS W/O CC/MCC	5,472	674	0.00
DRG_CD=984	PROSTATIC O.R. PROCEDURE UNRELATED TO PRINCIPAL DIAGNOSIS W MCC	22,537	1,558	0.00
DRG_CD=985	PROSTATIC O.R. PROCEDURE UNRELATED TO PRINCIPAL DIAGNOSIS W CC	9,810	1,306	0.00
DRG_CD=986	PROSTATIC O.R. PROCEDURE UNRELATED TO PRINCIPAL DIAGNOSIS W/O CC/MCC	281	1,594	0.86
DRG_CD=987	NON-EXTENSIVE O.R. PROC UNRELATED TO PRINCIPAL DIAGNOSIS W MCC	23,865	651	0.00
DRG_CD=988	NON-EXTENSIVE O.R. PROC UNRELATED TO PRINCIPAL DIAGNOSIS W CC	9,546	613	0.00
DRG_CD=989	NON-EXTENSIVE O.R. PROC UNRELATED TO PRINCIPAL DIAGNOSIS W/O CC/MCC	0	0	.
LTI_Indicator		2,183	624	0.00

S_7_2_Construction_Logic

The diagram below summarizes the identification of MSPB index admissions from the discussed included and excluded populations, the construction of MSPB episodes around the index admissions, and the seven-step measure construction logic discussed in S.7.2. A detailed description of the MSPB Measure methodology titled "MSPB Measure Information Form" is publicly available at the following URL: http://www.qualitynet.org/dcs/ContentServer?c=Page&pagename=QnetPublic%2FPage%2FQnetTier4&cid=1228772057350.

Although measure information form at the link above was developed for the initial implementation of the MSPB measure for Medicare Inpatient Prospective Payment System (IPPS) hospital public reporting and incentive payment programs, one can readily extend this measure to other hospitals and beneficiaries who were not included in initial specifications. For instance, the measure specifications described in the URL above state that railroad retirement board (RRB) beneficiaries and certain hospitals not paid through the IPPS system (e.g., hospitals in Maryland) are excluded from the measure; however, the MSPB Measure can be readily expanded to include RRB beneficiaries as well as hospitals paid under different payment systems, such as Maryland hospitals. RRB beneficiaries can be incorporated with no changes to the methodology, Maryland hospitals and other IPPS-exempt hospitals can be incorporated into the MSPB measure methodology by applying an IPPS-style price standardization approach to discharges from those hospital types. Supporting analyses for inclusion of these beneficiaries and hospital types are included in 1.7.



Return to Measure Evaluation

Hospital-Specific Report

February 2012

Medicare Spending Per Beneficiary Measure

HEARTCARE REGIONAL MEDICAL CENTER
Provider ID: 999999
State

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TABLE OF CONTENTS

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1 BACKGROUND

This report provides information on your hospital's performance on the Medicare Spending Per Beneficiary (MSPB) Measure that CMS intends to make public on the *Hospital Compare* website. CMS expects to include this measure in future years of the Hospital Value-Based Purchasing (VBP) program. The Hospital VBP program is designed to improve the efficiency and quality of care by providing financial incentives to hospitals based on their performance on selected quality measures. As part of the Hospital VBP Program, the MSPB Measure assesses Medicare Part A and Part B payments for services provided to a Medicare beneficiary during a spending per beneficiary episode that spans from three days prior to an inpatient admission to 30 days after discharge. The payments included in this measure are price-standardized and risk-adjusted to remove sources of variation not directly related to hospitals' decisions to utilize care. Detailed measure specifications, including exclusions, the payment standardization methodology, and an MSPB Measure calculation example, can be found at: http://www.qualitynet.org/dcs/ContentServer?c=Page&pagename=QnetPublic%2FPage%2FQnetTier3&cid=1228772053996.

How to Use This Report

You can use this hospital-specific report (HSR) to assess your hospital's performance on the MSPB Measure for the period of May 15, 2010 through February 14, 2011. To determine how your hospital performed, *Section 2: Results* provides an overview of your hospital's performance on the MSPB Measure and a summary of how hospitals in your State and in the Nation performed. Your hospital's MSPB Measure, which is the ratio your hospital's price-standardized, risk-adjusted MSPB amount to the median MSPB amount across all hospitals, will be reported on the *Hospital Compare* website. *Section 2: Results* also presents additional statistics regarding your hospital's performance on the MSPB Measure and a comparison of your performance to other hospitals in your State and across the Nation. This section also includes your hospital's MSPB spending breakdowns by claim type and by Major Diagnostic Category (MDC).

Separate from this report, your hospital will also receive three supplementary hospital-specific data files (an index admission file, a beneficiary risk score file, and an MSPB episode file) related to your MSPB Measure. These files will allow your hospital to validate the calculation of your MSPB Measure. Your hospital will receive these files in CSV (Comma Separated Values) format (sometimes referred to as Comma Delimited format) through *QualityNet*, at the same time your hospital receives this report. This data has been formatted in such a way as to enable you to easily review the hospital-specific data that CMS used to calculate your MSPB Measure.

Additional Resources

- For more information about the MSPB Measure, including measure methodologies and frequently asked questions, visit the Hospital VBP webpage on QualityNet: http://www.qualitynet.org/dcs/ContentServer?c=Page&pagename=QnetPublic%2FPage%2FQnetTier3&cid=1228772053996 or the FY 2012 IPPS/LTCH Final Rule: http://www.gpo.gov/fdsys/pkg/FR-2011-08-18/pdf/2011-19719.pdf

- If you have questions or concerns about your HSR or your MSPB Measure results, please submit them to: cmsmspbmeasure@acumenllc.com

- For more information on the HVBP Program and other CMS hospital quality initiatives, see: http://www.cms.hhs.gov/HospitalQualityInits/

2 RESULTS

This section presents your hospital's performance on the MSPB Measure for the period of May 15, 2010 through February 14, 2011, as well as additional measure statistics. Your hospital's performance on this measure will be reported on *Hospital Compare*. The tables in this report summarize your hospital's MSPB performance and present detailed measure statistics for your hospital, hospitals in your State, and hospitals across the U.S. All the results presented in this hospital-specific report are price-standardized to remove local and regional price differences which are not directly related to hospitals' decisions to utilize care. More information about the standardization approach can be found at: http://www.qualitynet.org/dcs/ContentServer?c=Page&pagename=QnetPublic%2FPage%2FQnetTier4&cid=1228772057350. Your hospital's individual MSPB Measure is not combined with the MSPB Measure from any other hospital; however, if your hospital is located in a State or territory with fewer than 10 hospitals, your State's results in this report are combined with other small or nearby States or territories to protect confidentiality. Specifically, results are combined as follows: (1) the District of Columbia and Delaware are combined; (2) Alaska is combined with Washington; (3) North Dakota is grouped with South Dakota; and (4) Vermont is combined with New Hampshire. Although State results are provided in this report for your information, only your MSPB Measure will be displayed on *Hospital Compare*.

Your Hospital's Results

Table 1 displays your hospital's MSPB Measure performance during the period of May 15, 2010 through February 14, 2011. A hospital's MSPB Measure is calculated as the ratio of the standardized, risk-adjusted MSPB Amount for each hospital to the median MSPB Amount across all hospitals. The MSPB Amount is defined as the average spending level for a hospital divided by the average expected spending level for that hospital, multiplied by the average spending over all episodes across all hospitals. As a result, an MSPB Measure ratio of greater than one indicates that your hospital's MSPB Amount is more expensive than the national median spending amount. An MSPB Measure ratio of less than one indicates that your hospital's MSPB Amount is less expensive than the national median spending amount. Additional information detailing the MSPB Measure calculation can be found in the Measure Information Form for the MSPB Measure at: http://www.qualitynet.org/dcs/ContentServer?c=Page&pagename=QnetPublic%2FPage%2FQnetTier4&cid=1228772057350.

Table 1: MSPB Measure for
HEARTCARE REGIONAL MEDICAL CENTER

Your Hospital's MSPB Measure*
1.08

*This information will be posted on *Hospital Compare* for hospitals with 10 or more eligible admissions.

Table 2 displays your hospital's MSPB Amount during the period from May 15, 2010 through February 14, 2011 and summarizes your hospital's MSPB performance relative to other hospitals in your State and in the entire Nation.

Table 2: Additional Information About Your Hospital's MSPB Performance*
HEARTCARE REGIONAL MEDICAL CENTER

Number of Eligible Admissions at Your Hospital	Your Hospital's MSPB Amount	State Average MSPB Amount	U.S. National Average MSPB Amount
21	19,546.53	18,900.02	17,683.47

*This information will not be posted on *Hospital Compare.*

Detailed Medicare Spending Per Beneficiary Measure Statistics

To supplement the summary information above, this section provides a more detailed breakdown of the MSPB Measure. Table 3 presents the major components used to calculate your hospital's MSPB Measure. The first column lists five statistics. The first two—the number of eligible admissions and average spending per episode—are self-explanatory. The MSPB Amount describes what your hospital's average spending is after controlling for your patients' health status and regional variation in Medicare payments. The Average MSPB Measure, calculated in the fifth row, is the MSPB Amount divided by the U.S. National Median MSPB Amount in the fourth row. The information provided in Table 3 allows your hospital to follow the calculation of its MSPB Measure and compare its values to those calculated at the State and national levels. Columns 2, 3 and 4 display these statistics for your hospital, your State, and the entire U.S., respectively. Table 4 displays national distribution of the MSPB Measure across all hospitals in the Nation and Figure 1 presents this same information in a histogram.

Table 3: Detailed MSPB Statistics*
HEARTCARE REGIONAL MEDICAL CENTER

	Your Hospital	State	U.S.
Number of Eligible Admissions	21	64,000	4,482,704
Average Spending per Episode	16,215.81	15,502.55	18,736.44
MSPB Amount (Avg. Risk-Adjusted Spending)	19,546.53	18,900.02	17,683.47
U.S. National Median MSPB Amount	18,017.19	18,017.19	18,017.19
Average MSPB Measure	1.08	1.05	0.98

*This information will not be posted on *Hospital Compare*.

Figure 1: National Distribution of the MSPB Measure

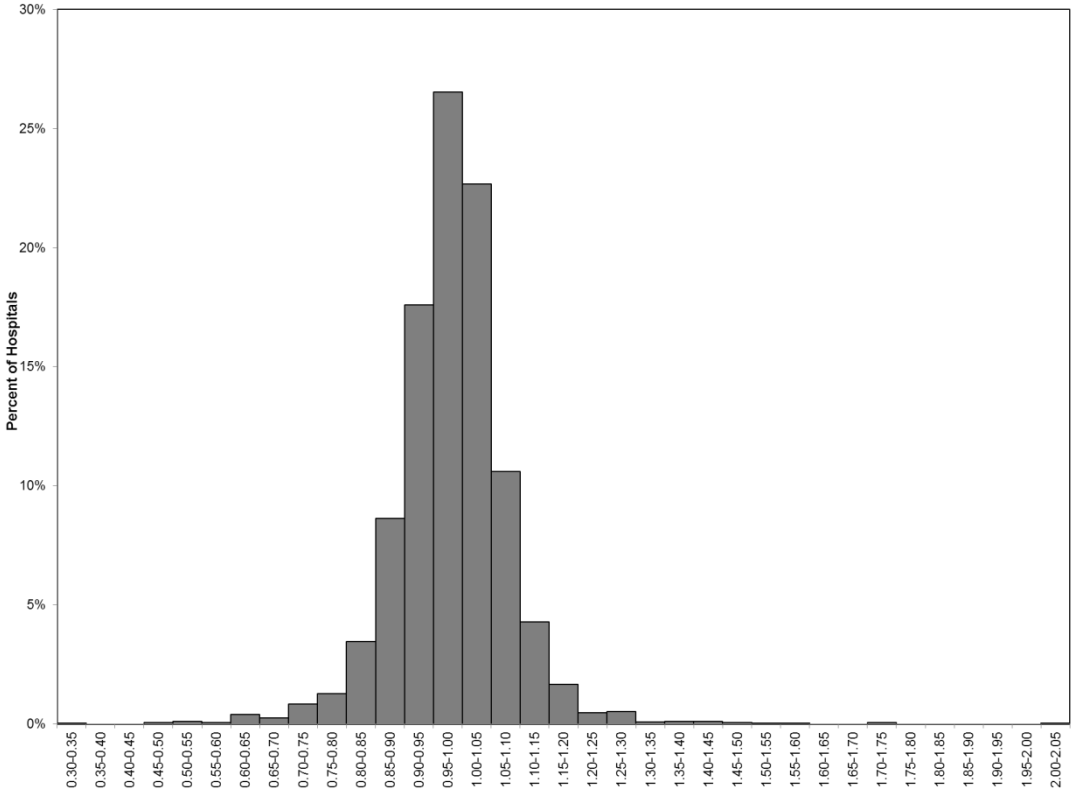

Table 4: National Distribution of the MSPB Measure, Percentiles

Percentile	MSPB Value
5	0.83
10	0.87
25	0.93
50	0.98
75	1.03
90	1.08
95	1.12

The MSPB spending per beneficiary episode is defined as all claims whose discharge date falls between 3 days prior to an inpatient PPS hospital admission (index admission) through 30 days post hospital discharge. Only discharges occurring between May 15, 2010 and January 15, 2011 are included in the measure calculation. Table 5 breaks down your hospital's MSPB spending into three categories: 3 days prior to index admission, during-index admission, and 30 days after hospital discharge. The "3 Days Prior to Index Admission" category includes all claims that begin during the 3 days prior to an index admission. The "During-Index Admission" category includes all claims that fall between the episode's index admission date and discharge

date. The "30 Days After Hospital Discharge" category includes all Medicare Parts A and B claims for services furnished from the index hospitalization discharge, up to and including 30 days post-discharge. Within these three categories, spending levels are broken down by claim type. For comparison, the table also presents State and National values for these categories.

Table 5: Detailed MSPB Spending Breakdowns by Claim Type*, [1]
HEARTCARE REGIONAL MEDICAL CENTER

		Your Hospital		State	Nation
	Claim Type	**Spending per Episode**	**Percent of Spending**	**Percent of Spending**	**Percent of Spending**
3 Days Prior to Index Admission	*Total Pre-Index*	*323*	*1.99%*	*1.0%*	*1.2%*
	Home Health Agency	0	0.00%	0.2%	0.1%
	Hospice	50	0.31%	0.0%	0.0%
	Inpatient	0	0.00%	0.0%	0.0%
	Outpatient	23	0.14%	0.2%	0.2%
	Skilled Nursing Facility	0	0.00%	0.1%	0.0%
	Durable Medical Equipment	0	0.00%	0.0%	0.1%
	Carrier	250	1.54%	0.5%	0.8%
During-Index Admission	*Total During-Index*	*6,687*	*41.23%*	*70.2%*	*67.8%*
	Home Health Agency	47	0.29%	3.1%	0.1%
	Hospice	75	0.46%	4.9%	0.1%
	Inpatient	5,262	32.45%	47%	50.8%
	Outpatient	0	0.00%	0.1%	0.2%
	Skilled Nursing Facility	340	2.10%	10%	6.4%
	Durable Medical Equipment	76	0.47%	0.1%	0.1%
	Carrier	887	5.47%	5.0%	10.0%
30 Days After Hospital Discharge	*Total Post-Index*	*9,206*	*56.77%*	*28.8%*	*31.0%*
	Home Health Agency	1,248	7.70%	3.5%	3.8%
	Hospice	230	1.42%	0.9%	0.5%
	Inpatient	4,000	24.67%	12%	9.0%
	Outpatient	12	0.07%	0.0%	3.0%
	Skilled Nursing Facility	3,255	20.07%	6%	8.9%
	Durable Medical Equipment	61	0.38%	0.5%	0.6%
	Carrier	400	2.47%	5.9%	5.2%

*This information will not be posted on *Hospital Compare*.

[1] Percentages reported in this table may not add up to 100% due to rounding.

When comparing hospitals across the country on a measure of spending, it is important to remove sources of variation which are not directly related to hospitals' decisions to utilize care. For example, the cost of MSPB episodes can vary across hospitals due to differences in patient age or severity of illness. Risk adjustment accounts for such variation across hospitals by adjusting for observable patient factors over which hospitals have no control (i.e., prior to the hospital admission). Table 6 presents average spending and average expected spending (based on beneficiary age and health status) breakdowns by Major Diagnostic Category (MDC). Average Expected Spending per Episode values in Table 6 are calculated as the predicted values from a risk adjustment model that measures the relationship between episode spending and beneficiary age and severity of illness. Episodes in the Pre-MDC category are included in the other MDC categories based on the principal diagnosis on the episode's index stay. More information on the MSPB risk adjustment methodology and the price standardization approach can be found at: http://www.qualitynet.org/dcs/ContentServer?c=Page&pagename=QnetPublic%2FPage%2FQnetTier4&cid=1228772057350.

Columns A and B display your hospital's average spending per episode and average expected spending per episode by MDC. Columns C and D display these values for your State, while columns E and F display these values for the Nation. This chart can help you identify how your case mix compares to your State and the Nation. For instance, if the value in Column B is higher than Column F in any row, your patients have higher expected spending levels (based on their age and observable severity of illness) than the Nation at large for that particular MDC. If Column F is larger than Column B, on the other hand, then your patients have lower expected spending levels than patients in the Nation at large.

Table 6: Detailed MSPB Spending Breakdowns by MDC*
HEARTCARE REGIONAL MEDICAL CENTER

MDC	Description	Your Hospital		State		National	
		(A) Average Spending per Episode	(B) Average Expected Spending per Episode	(C) Average Spending per Episode	(D) Average Expected Spending per Episode	(E) Average Spending per Episode	(F) Average Expected Spending per Episode
1	Nervous System	35,250	20,074	21,342	20,324	19,407	19,860
2	Eye	--	--	11,502	12,234	11,922	12,266
3	Ear, Nose, Mouth, and Throat	--	--	11,234	12,342	12,458	12,892

MDC	Description	Your Hospital		State		National	
		(A) Average Spending per Episode	(B) Average Expected Spending per Episode	(C) Average Spending per Episode	(D) Average Expected Spending per Episode	(E) Average Spending per Episode	(F) Average Expected Spending per Episode
4	Respiratory System	14,585	16,444	16,324	15,565	16,562	17,059
5	Circulatory System	19,053	17,422	16,533	17,200	18,210	18,737
6	Digestive System	6,605	11,700	8,000	9,200	15,923	16,430
7	Hepatobiliary System and Pancreas	--	--	22,000	21,499	17,282	17,836
8	Musculoskeletal System and Connective Tissue	23,685	15,455	22,891	18,900	24,880	25,259
9	Skin, Subcutaneous Tissue, and Breast	--	--	14,234	11,274	14,991	15,420
10	Endocrine, Nutritional, and Metabolic System	6,305	11,650	15,923	16,348	14,725	15,165
11	Kidney and Urinary Tract	8,601	10,917	6,685	7,436	17,013	17,467
12	Male Reproductive System	--	--	10,934	15,678	10,818	11,156
13	Female Reproductive System	--	--	11,112	13,765	11,682	12,055
14	Pregnancy, Childbirth, and Puerperium	--	--	--	--	6,920	7,131
15	Newborn and Other Neonates (Perinatal Period)	--	--	--	--	--	--
16	Blood and Blood Forming Organs and Immunological Disorders	--	--	14,346	15,734	14,959	15,546
17	Myeloproliferative DDs (Poorly Differentiated Neoplasms)	--	--	29,456	26,235	27,969	28,900
18	Infectious and Parasitic DDs	--	--	27,234	25,742	26,490	27,177
19	Mental Diseases and Disorders	--	--	15,672	13,453	12,546	12,905

MDC	Description	Your Hospital		State		National	
		(A) Average Spending per Episode	(B) Average Expected Spending per Episode	(C) Average Spending per Episode	(D) Average Expected Spending per Episode	(E) Average Spending per Episode	(F) Average Expected Spending per Episode
20	Alcohol/Drug Use or Induced Mental Disorders	--	--	11,235	10,800	10,400	10,739
21	Injuries, Poison, and Toxic Effect of Drugs	--	--	17,323	17,000	15,871	16,429
22	Burns	--	--	29,876	30,102	27,348	28,836
23	Factors Influencing Health Status	--	--	15,000	16,234	15,132	15,559
24	Multiple Significant Trauma	--	--	41,200	40,123	40,401	41,081
25	Human Immunodeficiency Virus Infection	--	--	25,565	24,234	22,638	23,533
U	"Ungroupable" episodes that could not be assigned to one of the existing MDCs.	--	--	24,500	21,345	33,387	34,142

*This information will not be posted on *Hospital Compare*.

Return to Measure Evaluation

S_5_2_DataSourceReference

CMS Office of Information Systems (OIS) maintains a detailed Medicare Claims Processing Manual available at the following URL: http://www.cms.gov/Regulations-and-Guidance/Guidance/Manuals/Internet-Only-Manuals-IOMs-Items/CMS018912.html