

logarithms, which is approximately equal to 2.718. The proposed payment adjustment factors represent the proportional effect of each variable relative to a reference variable.

1. Proposed Patient-Level Characteristics

Subject to the limitations of the proposed cost variable described above and the availability of patient characteristic information contained in the administrative data, we attempted to use patient characteristics to explain the cost variation amongst IPFs. By adjusting for DRGs, comorbidities, age, and day of the stay, we were able to explain approximately 19 percent of the variation in the per diem cost. This result is comparable to that obtained by THEORI in the analysis they conducted for the APA. The study is described in section II.B. of this proposed rule.

a. DRGs

The principal diagnosis ICD code listed on the claim is used to assign each case to one of the 15 DRGs that we are proposing to recognize in this IPF prospective payment system (see section II.C of this proposed rule). The coefficients of these DRGs from the cost regression analysis were used to determine the magnitude of the payment adjustment for each of the proposed 15 DRGs. The payment adjustments are expressed relative to the most frequently assigned DRG (DRG 430, Psychoses). That is, the proposed adjustment factor for DRG 430 would be 1.00, and the proposed adjustment factors for the other 14 DRGs would vary above and below 1.00. For 8 DRGs, the proposed adjustments would be relatively small (between .96 and 1.04, that is, between 4 percent lower to 4 percent higher). The following 4 DRGs would receive relatively large payment adjustments:

- DRG 424 (Surgical procedure with Principal Diagnosis of Mental Illness) would have the largest payment adjustment of approximately 1.22.

- DRG 023 (Non-traumatic stupor and coma) would receive an adjustment of approximately 1.10.

- DRG 425 (Acute Adjustment Reaction and Psychosocial Dysfunction) would receive an adjustment of approximately 1.08.

- DRG 12 (Degenerative Nervous System Disorders) would receive an adjustment of approximately 1.07.

Both of the following two DRGs would be paid substantially less than DRG 430 with payment adjustments of approximately 0.88:

- DRG 433 (Alcohol/Drug Abuse or Dependence, left against medical advice).

- DRG 523 (Alcohol/Drug Abuse or Dependence, without Complications and/or Comorbidity and without Rehabilitation Therapy).

Cases in our MedPAR data file whose principal diagnosis classified them in DRGs other than one of the 15 DRGs that we are proposing to recognize in this proposed IPF prospective payment system were grouped into a single "other" category.

b. Comorbidities

Our analysis of the data indicates that patients who have certain comorbid conditions in addition to their psychiatric condition generally require more expensive care while they are hospitalized. After a thorough review of the ICD-9-CM codes, some comorbid conditions were identified as being more costly on a per diem basis. Groups of similar diagnosis codes were created to describe these conditions, which tend to be chronic illnesses that require additional medications, supplies, laboratory, or diagnostic testing in addition to the care provided for their psychiatric condition. Conditions in which the patient is acutely ill requiring care in a general hospital, for example, myocardial infarction, were not included in our analysis.

Based upon this analysis, we are proposing payment adjustments for 17 comorbidity categories that we would recognize for payment adjustments under the proposed IPF prospective payment system. Table 3 below

provides a listing of the proposed comorbidity categories, the ICD-9-CM diagnostic codes comprising each category, and the payment adjustment factors. The adjustment factors are also in Addendum A.

As in the case of the DRGs, the cost regression analysis was used to determine the magnitude of the proposed payment adjustments for the comorbidity groups. Of the 17 comorbidity categories, the following 4 groups would have proposed payment adjustment factors ranging from 1.11 to 1.17 more than a case that did not have any of the 17 comorbid conditions: (1) Coagulation factor deficits; (2) renal failure, chronic; (3) chronic cardiac conditions; and (4) atherosclerosis of extremity with gangrene. Seven categories would be paid payment adjustments from 1.08 to 1.14: (1) Tracheotomy; (2) renal failure, acute; (3) malignant neoplasms; (4) severe protein calorie malnutrition; (5) chronic obstructive pulmonary disease; (6) poisoning; and (7) severe musculoskeletal and connective tissue diseases. The remaining 6 comorbidity categories would receive payment adjustments ranging from 1.03 to 1.10: (1) HIV; (2) infectious diseases; (3) uncontrolled type I diabetes mellitus; (4) artificial openings digestive and urinary; (5) drug and/or alcohol induced mental disorders; and (6) eating and conduct disorders.

Other potential conditions were considered as potentially more expensive, but the small number of cases in the MedPAR data file made it impossible to propose an appropriate adjustment for those conditions. We solicit comments suggesting other conditions that may be expected to increase the per diem cost of care in IPFs. In addition, we expect that as facilities become aware of the importance of providing accurate information on the diagnoses of patients, we will have more data to use as a basis for refinements to the list of proposed comorbid conditions affecting the per diem cost of care.

TABLE 3.—DIAGNOSIS CODES FOR PROPOSED COMORBIDITY CATEGORIES

Description of proposed comorbidity	ICD-9-CM code	Proposed adjustment factor
HIV	042	1.06
Coagulation Factor Deficits	2860 through 2864	1.11
Tracheotomy	51900 and V440	1.14
Renal Failure, Acute	5846 through 5849; 7885; 9585; V451; V560, V561; and V562	1.08
Renal Failure, Chronic	40301; 40311; 40391; 40402; 40412; 40492, 585; and 586	1.14
Malignant Neoplasms	1400 through 1720; 1740 through 1840; and 1850 through 2080.	1.10