

overall average hospital-specific relative charge value across all cases for all LTCHs. Using these recalculated LTC-DRG relative weights, each LTCH's average relative weight for all of its cases (case-mix) is calculated by dividing the sum of all the LTCH's LTC-DRG relative weights by its total number of cases. The LTCHs' hospital-specific relative charge values above are multiplied by these hospital specific case-mix indexes. These hospital-specific case-mix adjusted relative charge values are then used to calculate a new set of LTC-DRG relative weights across all LTCHs. In this final rule, this iterative process is continued until there is convergence between the weights produced at adjacent steps, for example, when the maximum difference is less than 0.0001.

*Step 5—Adjust the FY 2004 LTC-DRG Relative Weights to Account for Nonmonotonically Increasing Relative Weights*

As explained in section II.B. of this preamble, the FY 2004 CMS DRGs, upon which the FY 2004 LTC-DRGs are based, contain "pairs" that are differentiated based on the presence or absence of CCs. The LTC-DRGs with CCs are defined by certain secondary diagnoses not related to or inherently a part of the disease process identified by the principal diagnosis, but the presence of additional diagnoses does not automatically generate a CC. As we discussed in the May 19, 2003 proposed rule (68 FR 27180), the value of monotonically increasing relative weights rises as the resource use increases (for example, from uncomplicated to more complicated). The presence of CCs in a LTC-DRG means that cases classified into a "without CC" LTC-DRG are expected to have lower resource use (and lower costs). In other words, resource use (and costs) are expected to decrease across "with CC"/"without CC" pairs of LTC-DRGs.

For a case to be assigned to a LTC-DRG with CCs, more coded information is called for (that is, at least one relevant secondary diagnosis), than for a case to be assigned to a LTC-DRG "without CCs" (which is based on only one principal diagnosis and no relevant secondary diagnoses). Currently, the LTCH claims data include both accurately coded cases without complications and cases that have complications (and cost more) but were not coded completely. Both types of cases are grouped to a LTC-DRG "without CCs" since only one principal diagnosis was coded. Since LTCHs were previously paid under cost-based

reimbursement, which is not based on patient diagnoses, coding by LTCHs for these cases may not have been as detailed as possible.

Thus, in developing the FY 2003 LTC-DRG relative weights for the LTCH PPS based on FY 2001 claims data, as we discussed in the August 30, 2002 LTCH PPS final rule (67 FR 55990), we found on occasion that the data suggested that cases classified to the LTC-DRG "with CCs" of a "with CC"/"without CC" pair had a lower average charge than the corresponding LTC-DRG "without CCs." Similarly, based on FY 2002 claims data, we also found on occasion that the data suggested that cases classified to the LTC-DRG "with CCs" of a "with CC"/"without CC" pair have a lower average charge than the corresponding LTC-DRG "without CCs" for FY 2004.

We believe this anomaly may be due to coding that may not have fully reflected all comorbidities that were present. Specifically, LTCHs may have failed to code relevant secondary diagnoses, which resulted in cases that actually had CCs being classified into a "without CC" LTC-DRG. It would not be appropriate to pay a lower amount for the "with CC" LTC-DRG. Therefore, as we discussed in the May 19, 2003 proposed rule (68 FR 27180), we grouped both the cases "with CCs" and "without CCs" together for the purpose of calculating the FY 2004 LTC-DRG relative weights in this final rule. We continue to employ this methodology to account for nonmonotonically increasing relative weights until we have adequate data to calculate appropriate separate weights for these anomalous LTC-DRG pairs. We expect that, as was the case when we first implemented the IPPS, this problem will be self-correcting, as LTCHs submit more completely coded data in the future.

There are three types of "with CC" and "without CC" pairs that could be nonmonotonic, that is, where the "without CC" LTC-DRG would have a higher average charge than the "with CC" LTC-DRG. For this final rule, using the LTCH cases in the December 2002 update of the FY 2002 MedPAR file, we identified three of the types of nonmonotonic LTC-DRG pairs.

The first category of nonmonotonically increasing relative weights for FY 2004 LTC-DRG pairs "with and without CCs" contains 1 pair of LTC-DRGs in which both the LTC-DRG "with CCs" and the LTC-DRG "without CCs" had 25 or more LTCH cases and, therefore, did not fall into one of the 5 low volume quintiles. For that type of nonmonotonic LTC-DRG

pair, as discussed in the May 19, 2003 proposed rule (68 FR 27180), we combine the LTC cases and compute a new relative weight based on the case-weighted average of the combined LTC cases of the LTC-DRGs. The case-weighted average charge is determined by dividing the total charges for all LTC cases by the total number of LTC cases for the combined LTC-DRG. This new relative weight is then assigned to both of the LTC-DRGs in the pair. In this final rule, for FY 2004, LTC-DRGs 180 and 181 are in this category.

The second category of nonmonotonically increasing relative weights for LTC-DRG pairs with and without CCs consists of 7 pairs of LTC-DRGs that has fewer than 25 cases, and each LTC-DRG is grouped to different low volume quintiles in which the "without CC" LTC-DRG is in a higher-weighted low volume quintile than the "with CC" LTC-DRG. For those pairs, as we discussed in the May 19, 2003 proposed rule (68 FR 27181), we combine the LTC cases and determine the case-weighted average charge for all LTC cases. The case-weighted average charge is determined by dividing the total charges for all LTC cases by the total number of LTC cases for the combined LTC-DRG. Based on the case-weighted average LTC charge, we determine which low volume quintile the "combined LTC-DRG" is grouped. Both LTC-DRGs in the pair are then grouped into the same low volume quintile, and thus would have the same relative weight. For FY 2004, in this final rule, the following LTC-DRGs are in this category: LTC-DRGs 31 and 32 (low volume quintile 3); LTC-DRGs 193 and 194 (low volume quintile 2); LTC-DRGs 226 and 227 (low volume quintile 4); LTC-DRGs 449 and 450 (low volume quintile 3); LTC-DRGs 493 and 494 (low volume quintile 4); LTC-DRGs 497 and 498 (low volume quintile 3); and LTC-DRGs 506 and 507 (low volume quintile 2).

The third category of nonmonotonically increasing relative weights for LTC-DRG pairs with and without CCs consists of 6 pairs of LTC-DRGs where one of the LTC-DRGs has fewer than 25 LTCH cases and is grouped to a low volume quintile and the other LTC-DRG has 25 or more LTCH cases and has its own LTC-DRG relative weight, and the LTC-DRG "without CCs" has the higher relative weight. As we discussed in the May 19, 2003 proposed rule (68 FR 27181), we remove the low volume LTC-DRG from the low volume quintile and combine it with the other LTC-DRG for the computation of a new relative weight for