## **5101:3-2-07.7 Medical education.**

Ohio hospitals that have an approved medical education program as defined in 42 CFR 413.86 qualify for an allowance for medical education. This rule describes the method used to determined the medical education allowance that will be added to the DRG base price for teaching hospitals. Source documents used are those described in paragraph (D) of rule 5101:3-2-07.4 of the Administrative Code.

- (A) Direct medical education allowance.
  - (1) Identify the hospital's intern and resident cost as reported on the HCFA 2552-962552-85, worksheet B, part I, line 95, columns 22 and 23column 21 and divide that cost by the number of full-time equivalent (FTE) residents and interns reported by the hospital on HCFA 2552, worksheet S-3, column 9, line 12lines 8, 9, and 10.
  - (2) Determine the value of one standard deviation above the statewide mean cost per intern/resident. The statewide mean cost per intern/resident is determined by dividing the statewide total cost for interns and residents by the total number of FTE interns and residents in the state. The numbers used in this computation are identified in paragraph (A)(1) of this rule.
  - (3) Compare the hospital-specific average cost per intern/resident as described in paragraph (A)(1) of this rule with the amount derived from paragraph (A)(2) of this rule. The allowable cost per intern/resident for hospitals which have a hospital-specific average cost per intern/resident below the amount derived from paragraph (A)(2) of this rule is the amount derived as described in paragraph (A)(1) of this rule. The allowable cost per intern/resident for hospitals which have a hospital-specific average cost per intern/resident above the amount derived from paragraph (A)(2) of this rule is the amount as described in paragraph (A)(2) of this rule.
  - (4) Multiply the hospital's allowable cost per intern/resident, as described in paragraph (A)(3) of this rule, by the hospital's number of FTE interns and residents.
  - (5) Add to the total allowed cost for interns and residents computed in paragraph (A)(4) of this rule, the hospital's costs for nursing and paramedical education from HCFA 2552-962552-85, worksheet B, line 95, columns 20, 2122, 23, and 24.
  - (6) Multiply the total allowed direct medical education cost derived in paragraph (A)(5) of this rule by the per cent derived in paragraph (D)(6)(b)(iii) of rule 5101:3-2-07.4 of the Administrative Code. Divide this product by the number

of discharges used to calculate the average cost per discharge as described in rule 5101:3-2-07.4 of the Administrative Code.

- (B) Indirect medical education allowance.
  - (1) The hospital's indirect medical education percentage will be determined by applying the following logarithmic formula:

$$2* \left[ \left( \frac{1 + \text{Residents}}{\text{Beds}} \right)^{0.405} - 1 \right]$$

The number of interns and residents will be the number described in paragraph (A)(1) of this rule. The number of beds will be the number reported on HCFA 2552, worksheet S-3, lines 12 and 148, 9, and 10, column 1.

- (2) Determine the total indirect medical education cost for a hospital by subtracting the amount derived in paragraph (D)(9)(b) of rule 5101:3-2-07.4 of the Administrative Code from the amount derived in paragraph (D)(8)(c) of rule 5101:3-2-07.4 of the Administrative Code.
- (3) Determine a hospital-specific unit cost of indirect medical education by dividing the amount derived from paragraph (B)(2) of this rule by the product of one hundred times, the percentage calculated in paragraph (B)(1) of this rule. This amount is then divided by the number of discharges used to calculate the average cost per discharge as described in rule 5101:3-2-07.4 of the Administrative Code.
- (4) A statewide mean unit cost for indirect medical education is determined by summing all hospitals' unit cost as described in paragraph (B)(3) of this rule, eliminating the two values that represent the highest and the lowest values, and dividing this sum by the number of values used in this calculation. The values of one standard deviation above this statewide mean cost is then determined.
- (5) Compare the hospital-specific unit cost of indirect medical education as described in paragraph (B)(3) of this rule to the statewide mean unit cost plus one standard deviation as described in paragraph (B)(4) of this rule. The allowable indirect medical education unit cost for hospitals which have a

hospital-specific unit cost below the statewide mean plus one standard deviation is the amount derived in paragraph (B)(3) of this rule. The allowable unit cost for hospitals with a unit cost above the statewide mean plus one standard deviation is the amount derived in paragraph (B)(4) of this rule.

- (6) The allowable unit cost for indirect medical education is multiplied by one hundred, times the indirect medical education percentage described in paragraph (B)(1) of this rule to determine the indirect medical education allowance.
- (C) The total medical education allowance is the sum of the indirect medical education allowance derived in paragraph (B)(6) of this rule and the direct medical education amount derived in paragraph (A)(6) of this rule, adjusted for inflation as described in paragraphs (D)(12) and (G) of rule 5101:3-2-07.4 of the Administrative Code.
- (D) The total medical education allowance as described in paragraph (C) of this rule is adjusted to remove the effects of the hospital's case mix. The data used to compute the hospital's case mix index are the hospital's claim records for discharges occurring during the hospital's fiscal period, on or after April 1, 1990 through December 31, 1991, and paid by December 31, 1992. For purposes of this paragraph, case mix is determined using the DRG categories and relative weights described in rule 5101:3-2-07.3 of the Administrative Code and includes outlier cases as described in rule 5101:3-2-07.9 of the Administrative Code.
  - (1) For each hospital the number of cases in each DRG is multiplied by the relative weight for each DRG. Round the result to five decimal places. The relative weights are those described in rule 5101:3-2-07.3 of the Administrative Code.
  - (2) Sum the result of each computation in paragraph (D)(1) of this rule.
  - (3) Divide the product from paragraph (D)(2) of this rule by the number of cases in the hospital's sample as described in paragraph (D) of this rule. Round the result to five decimal places. This produces a hospital-specific case mix index.
  - (4) Divide the total medical education allowance as described in paragraph (C) of this rule by the hospital-specific case mix index computed in paragraph (D)(3) of this rule to determine the adjusted total medical education allowance. Round the result to the nearest whole penny.
- (E) The adjusted total medical education allowance as described in paragraph (D) of this

rule is multiplied by the relative weight appropriate to the DRG as described in rule 5101:3-2-07.3 of the Administrative Code, rounding the result to the nearest whole penny, to determine the hospital specific medical education allowance amount for the DRG.

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