

HEALTH POLICY COMMISSION

Technical Bulletin

for

958 CMR 7.00: Notices of Material Change and Cost and Market Impact Reviews

This Technical Bulletin is a sub-regulatory document containing methodological explanations and examples to facilitate understanding of and compliance with the provisions contained in 958 CMR 7.00, including measurement of Primary Service Areas, Dispersed Service Areas, Materially Higher Prices, and Materially Higher Health Status Adjusted Total Medical Expenses. Capitalized terms in this Technical Bulletin are defined in 958 CMR 7.02.

- I. Calculation of Primary Service Area
- II. Calculation of Dispersed Service Area
- III. Calculation of Materially Higher Price
- IV. Calculation of Materially Higher Health Status Adjusted Total Medical Expenses

I. Calculation of Primary Service Area

A Primary Service Area should be calculated by service line, based on the best available data, as described in 958 CMR 7.02. In a Cost and Market Impact Review, the Commission may make certain fact-specific determinations regarding a Primary Service Area. The following is an exemplar calculation of the Primary Service Area for inpatient general acute care services. The methodology for calculating Primary Service Areas for specialty acute care services, outpatient/ambulatory services, primary care services, and other service lines may be described by the Commission in a future Technical Bulletin.

A. Exemplar Calculation: General Acute Care Hospital

To calculate the Primary Service Area of a general acute care Hospital:

1. For each zip code in Massachusetts, identify the number of commercial general acute care discharges¹ from the Hospital of interest by patient zip code of residence for the most recent year for which data is available.
2. Listing zip codes in order of drive time to the Hospital of interest, identify the smallest number of contiguous zip codes that account for 75% of the Hospital's total commercial general acute care discharges.

¹ In identifying the number of commercial general acute care discharges, exclude normal newborns (including normal newborns would effectively double-count a single delivery as two discharges) and non-acute discharges (discharges with a length of stay of greater than 180 days and rehabilitation discharges).

3. Then exclude any zip code for which fewer than 1% of the total commercial general acute care discharges from the zip code went to the Hospital of interest that year.
4. If the resulting list of zip codes accounts for less than 75% of the Hospital's total commercial general acute care discharges, identify additional contiguous zip codes sorted, from high to low, by the percentage of each zip code's total commercial general acute care discharges that went to the Hospital of interest that year. Add in each additional contiguous zip code, thus sorted, until at least 75% (but no greater than 75% than is necessary) of the Hospital's commercial general acute care discharges for that year are represented.
5. This resulting list of zip codes is the Primary Service Area of the general acute care Hospital.

II. Calculation of Dispersed Service Area

In a Cost and Market Impact Review, the Commission may make fact-specific determinations regarding a Dispersed Service Area. For example, for a multi-Hospital Provider Organization, a Dispersed Service Area could be the union of the Provider Organization's Hospital Primary Service Areas. As data and analyses mature, the Commission may describe one or more methodologies for calculating a Dispersed Service Area in a Technical Bulletin.

III. Calculation of Materially Higher Price

A Provider's Carrier-specific price, as defined by the Center pursuant to M.G.L. c. 12C and 957 CMR 2.02, is materially higher if it exceeds the Carrier's weighted mean relative price threshold for a Carrier or set of Carriers which constitute at least one-third of such Provider's total commercial revenue.

A. "Carrier or set of Carriers which constitute at least one-third of a Provider's commercial revenue"

1. Whether a price is materially higher will be determined by Carrier, and only for a Carrier or set of Carriers that constitute one-third or greater of a Provider's commercial revenue. Commercial revenue shall encompass health maintenance organization (HMO), preferred provider organization (PPO), and indemnity books of business, as reported by the Center.
2. The Commission will first determine whether a Provider's relative price is above the weighted mean relative price threshold for any Carrier. If so, the Commission will sum the commercial revenue received by that Provider from those Carriers for which the Provider's relative price is above the weighted mean relative price threshold to

determine whether the sum of that revenue equals one-third or more of the Provider's total commercial revenue.

B. Steps to Determine Materially Higher Relative Price

To determine whether a Provider's relative price for a particular Carrier is materially higher:

1. Determine the set of Providers or the Provider type similar to the Provider of interest. At a minimum, the similar Providers or Provider type shall be Providers that offer similar services, e.g., physician groups will be compared to other physician groups, and general acute care Hospitals will be compared to other general acute care Hospitals. Based on the best available data, the Commission may identify further refined sets of similar Providers or Provider types based on geographic proximity, patient flow patterns, and types of services provided. These sets of similar Providers or Provider types will be published from time to time in Cost and Market Impact Review reports.
2. Estimate the Carrier's volume that each similar Provider represents (excluding the Provider of interest) by dividing each such Provider's percentage of network payments by its relative price for a given Carrier.
3. Divide the sum of similar Providers' percentages of network payments by the sum of similar Providers' estimated volume for the Carrier to determine the weighted mean relative price threshold.
4. If the relative price of the Provider of interest is above the weighted mean relative price threshold, it is materially higher for that Carrier.

C. Formula for Materially Higher Relative Price

Materially higher relative price = Relative price that is > Weighted mean relative price threshold

Weighted mean relative price threshold for a given Carrier =

$$\frac{\text{Sum of similar Providers' percentages of network payments for a given Carrier}}{\text{Sum of similar Providers' estimated volume for the Carrier}}$$

And where a Provider's estimated volume for a Carrier =

Provider's percentage of network payments from a given Carrier
Provider's relative price for that Carrier

D. Exemplar Calculation of Materially Higher Relative Price

Provider A has a relative price of 1.05 for a given Carrier.

Provider B: Receives 10% of network payments; Carrier-specific relative price is 0.8.

Provider C: Receives 20% of network payments; Carrier-specific relative price is 1.2.

Provider D: Receives 5% of network payments; Carrier-specific relative price is 1.4.

To determine whether Provider A has a Materially Higher Price for this Carrier compared to Providers B, C, and D, calculate the following:

Provider B's estimated volume for the Carrier = 10% payments / 0.8 = 0.125

Provider C's estimated volume for the Carrier = 20% payments / 1.2 = 0.166

Provider D's estimated volume for the Carrier = 5% payments / 1.4 = 0.036

Sum of these Providers' estimated volume for the Carrier = 0.327

Sum of the Providers' percentage of network payments = 10% + 20% + 5% = 35% or 0.35

Weighted mean relative price threshold = $0.350 / 0.327 = 1.07$

Provider A, with a relative price of 1.05, does not have a materially higher relative price for this Carrier because it does not exceed the weighted mean relative price threshold of 1.07.

IV. Calculation of Materially Higher Health Status Adjusted Total Medical Expenses

A Provider's Carrier-specific health status adjusted total medical expenses (HSA TME), as defined by the Center pursuant to M.G.L. c. 12C and 957 CMR 2.02, is materially higher if it is above the weighted mean HSA TME threshold, which is based on the Carrier's network-wide weighted mean of all similar Providers' HSA TME for that Carrier, for a Carrier or set of Carriers which constitute at least one-third of such Provider's total commercial revenue.

A. Steps for Calculation of Materially Higher Health Status Adjusted Total Medical Expenses

1. Calculate a weighted mean TME by multiplying each similar Provider's (not counting the Provider of interest) Carrier-specific TME by that Provider's Carrier-specific member months and dividing by the total Carrier-specific member months of the similar Providers.
2. Calculate a weighted mean health status adjustment by multiplying each Provider's Carrier-specific health status adjustment (again not counting the Provider of interest) by that Provider's Carrier-specific member months and dividing by the total Carrier-specific member months of the similar Providers.
3. Calculate the weighted mean HSA TME threshold by dividing the weighted mean TME by the weighted mean health status adjustment.

B. Formula for Materially Higher Health Status Adjusted Total Medical Expenses

Materially higher HSA TME = HSA TME that is > Weighted mean HSA TME threshold

Weighted mean HSA TME threshold =

$$\frac{\text{Weighted mean TME}}{\text{Weighted mean health status adjustment}}$$

Where weighted mean TME =

The sum of the similar Providers' weighted TME for that Carrier

And where a Provider's weighted TME =

$$\frac{\text{Provider's TME} * \text{Provider's Carrier-specific member months}}{\text{Total Carrier-specific member months of the similar Providers}}$$

And weighted mean health status adjustment =

The sum of the similar Providers' weighted health status adjustments for that Carrier

Where a Provider's weighted health status adjustment =

$$\frac{\text{Provider's health status adjustment} * \text{Provider's Carrier-specific member months}}{\text{Total Carrier-specific member months of the similar Providers}}$$

C. Exemplar Calculation of Materially Higher Health Status Adjusted Total Medical Expenses

Provider A has a HSA TME of \$420 per member per month (PMPM) for a given Carrier.

Provider B: TME = \$450 PMPM
Health status adjustment = 1.05
Member months = 1,000,000

Provider C: TME = \$400 PMPM
Health status adjustment = 0.95
Member months = 600,000

Provider D: TME = \$300 PMPM
Health status adjustment = 1.02
Member months = 200,000

To determine whether Provider A has Materially Higher HSA TME for this Carrier compared to Providers B, C, and D, calculate the following:

Provider B's weighted TME = $\$450 * 1,000,000 / 1,800,000 = \250

Provider C's weighted TME = $\$400 * 600,000 / 1,800,000 = \133.33

Provider D's weighted TME = $\$300 * 200,000 / 1,800,000 = \33.33

Sum of these Providers' weighted TME = \$416.66 PMPM

Weighted mean TME = \$416.66 PMPM

Provider B's weighted health status adjustment = $1.05 * 1,000,000 / 1,800,000 = 0.5833$

Provider C's weighted health status adjustment = $0.95 * 600,000 / 1,800,000 = 0.3167$

Provider D's weighted health status adjustment = $1.02 * 200,000 / 1,800,000 = 0.113$

Sum of these Providers' weighted health status adjustment = 1.0133

Weighted mean HSA TME threshold = $\$416.66 / 1.0133 = \411.18

Provider A, with a HSA TME of \$420 PMPM, has Materially Higher HSA TME for this Carrier because \$420 PMPM exceeds the weighted mean HSA TME threshold of \$411.18 PMPM.