

**Additional Detail Regarding MA & PDP CAHPS Weighting of Measures  
within MA Contracts  
and Sampling of MA-PD and MA-Only cases**

*How weights are constructed*

For each stratum defined by contract and coverage type (MA-PD or MA-Only), the weights of individual responses are defined as the ratio of the number of survey-eligible beneficiaries in the stratum to the number of respondents in the stratum. Thus, when there are both MA-PD and MA-Only beneficiaries in the same contract, the ratios for these two strata are calculated separately, regardless of whether the strata were sampled at different rates. A contract can best approximate these weights using its own counts of survey-eligible beneficiaries and respondents. The weighted unadjusted estimates of contract means are defined in the usual way as

$$\bar{y}_h = \sum_k w_{hk} y_{hk} / \sum_k w_{hk}$$

where  $w_{hk}$  is the weight for respondent  $k$  in contract  $h$  and  $y_{hk}$  is the observed value of variable  $y$  for that respondent.

*Sampling Design: Sampling of MA-PD and MA-Only cases within Contracts<sup>1</sup>*

If the fraction of a contract's enrollment<sup>2</sup> that is MA-Only is very small ( $< 1\%$ ), we drop the MA-Only sample requirement for the contract and draw the entire sample from the MA-PD portion. Similarly, in contracts in which MA-PD beneficiaries make up a very small portion ( $< 1\%$ ) of the enrollment, the entire sample is drawn from the MA-Only enrollees.

Otherwise, if the proportion of beneficiaries in MA-PD is less than 40% or greater than 80%, we allocate the sample between MA-PD and MA-Only proportionally using the following formula:

$$\begin{aligned} \text{MA-PD sample} &= \min(NR, \text{MA-PD enrollment}) \\ \text{MA-Only sample} &= \min(N - \text{MA-PD sample}, \text{MA-Only enrollment}) \end{aligned}$$

where  $R$  is the proportion of MA-PD enrollment in the contract,

$$R = (\text{MA-PD enrollment}) / (\text{total enrollment}).$$

and  $N$  is the required sample size (including any sample expansion requested by the contract, and limited by total enrollment in the contract).

In contracts where the proportion of beneficiaries in MA-PD is between 40% and 80%, we sample MA-PD beneficiaries at a higher rate than MA-Only beneficiaries in order to improve the accuracy of the Part D measures for the contract, while limiting the variance increase for the Part

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<sup>1</sup> This section describes how sampling proportions of MA-PD and MA-Only beneficiaries are determined within some MA contracts, but it is not necessary to calculate this proportion to calculate weights or contract scores.

<sup>2</sup> A contract's enrollment is defined as the count of January enrollees with six months of continuous enrollment, excluding those who reside outside of the United States or are enrolled in an Institutional Special Needs Plan (I-SNP).

C measures due to disproportionate sampling from the MA-PD and MA-Only strata. The fraction of sample allocated to MA-PD is calculated by the following formulas:

$$p = \min \left[ .80, \frac{\left( \sqrt{b^2 - 4CR^2} + b \right)}{(2C)} \right] \quad \text{where } b = C + 2R - 1, \quad R = \text{PD enrollment rate in}$$

contract, and  $C$  = maximum allowed variance inflation, which for MA is set to 1.2. Then the MA-PD sample is  $\min(Np, \text{MA-PD enrollment})$ .