

**Attachment for 5.4.4a for all Derived Measure Forms****Case-Mix Adjustment Model**

$$y' = y + a1(h1 - m1) + a2(h2 - m2) + a3(h3 - m3) + \dots + a26(h26 - m26) + a27*h27 + a28*h28 + a29*h29$$

where

$y'$  is the facility's adjusted top box score for a ratings measure or the individual ICH CAHPS question included in the multi-item measure.

$y$  is the facility's "raw score," or mean on the respective unadjusted top-box ICH CAHPS ratings measure or question included in the multi-item measure.

$a1$  to  $a26$  are the national-level patient characteristic adjustments, for the global ratings measures and individual questions that comprise the multi-item measures.

$a27$  to  $a29$  are the national-level survey mode adjustments for the global ratings measures and the individual questions that comprise the multi-item measures.

$h1$  to  $h26$  are the facility's mean proportions of patients with each of the patient characteristics in the same row.

$h27$  to  $h29$  are the facility's proportion for a given mode. This value will always be 0 or 1 because within a given facility all surveys are completed by either phone, mail, or mixed mode.

$m1$  to  $m26$  are the national mean proportions of patients with each of the patient characteristics.

**Case-Mix Variables Tested**

<b>Survey mode</b>	<b>Mail</b>
	<b>Phone</b>
	<b>Mail_Phone</b>
	<b>Web_Mail</b>
<b>Duration at this dialysis center</b>	<b>2 = At least 3 months but less than 1 year</b>
	<b>3 = At least 1 year but less than 5 years</b>
	<b>4 = 5 years or more</b>
<b>Overall health</b>	<b>1 = Excellent</b>
	<b>2 = Very good</b>
	<b>3 = Good</b>
	<b>4 = Fair</b>
	<b>5 = Poor</b>
<b>Overall mental health</b>	<b>1 = Excellent</b>
	<b>2 = Very good</b>
	<b>3 = Good</b>
	<b>4 = Fair</b>
	<b>5 = Poor</b>
<b>Age</b>	<b>1 = 18 to 44</b>
	<b>2 = 45 to 54</b>
	<b>3 = 55 to 64</b>
	<b>4 = 65 to 74</b>
	<b>5 = 75 or older</b>
<b>Sex</b>	<b>1 = Male</b>
	<b>2 = Female</b>
<b>Education</b>	<b>1 = 8th grade or less</b>
	<b>2 = Some high school, but did not graduate</b>
	<b>3 = High school graduate or GED</b>
	<b>4 = Some college or 2-year degree</b>
	<b>5 = 4-year college graduate</b>
	<b>6 = More than 4-year college graduate</b>
<b>Did someone help you complete this survey</b>	<b>1 = Yes</b>
	<b>2 and missing= No</b>
<b>Total years on dialysis (EQRS)</b>	<b>1 = 1 year</b>
	<b>2 = 2 years</b>
	<b>3 = 3-4 years</b>
	<b>4 = 5-7 years</b>
	<b>5 = 8+ years</b>
<b>Was diabetes the primary cause of ESRD (EQRS)</b>	<b>1 = Yes</b>
	<b>2 = No</b>

<b>LIS or Dual anytime (CME)</b>	<b>0 = No</b>
	<b>1 = Yes</b>
	<b>2 = Missing</b>
<b>Survey Language</b>	<b>1 = English</b>
	<b>2 = Spanish</b>

**Final Case-Mix Adjusters for the Final Model**

<b>Independent Variable</b>	<b>Response category</b>	<b>Global rating of dialysis center staff</b>	<b>Global rating of dialysis center</b>	<b>Quality of Dialysis Center Care and Operations</b>	<b>Providing Information to Patients</b>
<b>Survey mode</b>	<b>Mail</b>	-0.001	0.000	0.017	0.023
	<b>Phone</b>	-0.006	-0.034	-0.034	0.001
	<b>Mail_Phone</b>	-0.017	-0.028	-0.006	0.007
	<b>Web_Mail</b>	0.000	0.000	0.000	0.000
<b>Duration at this dialysis center</b>	<b>At least 3 months but less than 1 year</b>	-0.038	-0.039	-0.006	0.004
	<b>At least 1 year but less than 5 years</b>	-0.022	-0.036	-0.005	0.008
	<b>5 years or more</b>	0.000	0.000	0.000	0.000
<b>Overall health</b>	<b>Excellent</b>	-0.190	-0.175	-0.118	-0.069
	<b>Very good</b>	-0.117	-0.128	-0.098	-0.039
	<b>Good</b>	-0.029	-0.035	-0.032	-0.015
	<b>Fair</b>	-0.033	-0.032	-0.004	-0.015
	<b>Poor</b>	0.000	0.000	0.000	0.000
<b>Overall mental health</b>	<b>Excellent</b>	-0.120	-0.122	-0.130	-0.072
	<b>Very good</b>	-0.104	-0.097	-0.084	-0.050
	<b>Good</b>	-0.067	-0.077	-0.049	-0.034
	<b>Fair/Poor</b>	0.000	0.000	0.000	0.000
<b>Age</b>	<b>18 to 44</b>	0.109	0.158	0.032	-0.063
	<b>45 to 54</b>	0.093	0.104	0.013	-0.061
	<b>55 to 64</b>	0.065	0.091	0.016	-0.033
	<b>65 to 74</b>	0.028	0.042	0.011	-0.031
	<b>75 or older</b>	0.000	0.000	0.000	0.000
<b>Sex</b>	<b>Male</b>	0.034	0.019	0.020	0.011
	<b>Female</b>	0.000	0.000	0.000	0.000
<b>Education</b>	<b>8th grade or less</b>	-0.017	-0.055	-0.026	0.018
	<b>Some high school, but did not graduate</b>	-0.030	-0.049	-0.039	0.004
	<b>High school graduate or GED</b>	-0.034	-0.058	-0.014	-0.007
	<b>Some college or 2-year degree</b>	0.001	0.006	0.013	-0.001
	<b>4-year college graduate</b>	0.040	0.008	0.040	-0.002
	<b>More than 4-year college graduate</b>	0.000	0.000	0.000	0.000

<b>Independent Variable</b>	<b>Response category</b>	<b>Global rating of dialysis center staff</b>	<b>Global rating of dialysis center</b>	<b>Quality of Dialysis Center Care and Operations</b>	<b>Providing Information to Patients</b>
<b>Did someone help you complete this survey</b>	<b>Yes</b>	-0.023	-0.032	-0.020	-0.031
	<b>No and missing</b>	0.000	0.000	0.000	0.000
<b>Total years on dialysis (EQRS)</b>	<b>1 year</b>	-0.063	-0.073	-0.075	0.023
	<b>2 years</b>	-0.067	-0.072	-0.084	0.007
	<b>3-4 years</b>	-0.065	-0.093	-0.071	-0.003
	<b>5-7 years</b>	-0.044	-0.056	-0.033	0.004
	<b>8+ years</b>	0.000	0.000	0.000	0.000
<b>Was diabetes the primary cause of ESRD (EQRS)</b>	<b>Yes</b>	-0.010	-0.018	-0.005	-0.009
	<b>No</b>	0.000	0.000	0.000	0.000
<b>Survey Language</b>	<b>English</b>	0.069	0.122	0.009	0.003
	<b>Spanish</b>	0.000	0.000	0.000	0.000