**4.3.4a. Additional Validity Testing Results**

**Table 1. Person- and Facility-level Distributions of Nonresponse Model Variables (n=14,510)**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Non-Response Model Variable Distributions | | | | | | | |
|  | Person-Level (n=14,510) | | |  | Facility-Level (n=146) | | |
|  | Mean | SD | Range |  | Mean | SD | Range |
| *Patient age* | 76.4 | 10.7 | 21-107 |  | 77.0 | 3.3 | 51.5-83.3 |
| *Patient race/ethnicity* |  |  |  |  |  |  |  |
| Non-Hispanic White | 0.68 | 0.47 | 0-1 |  | 0.72 | 0.2 | 0.06-1 |
| Non-Hispanic Black | 0.18 | 0.39 | 0-1 |  | 0.17 | 0.18 | 0-0.75 |
| Hispanic | 0.07 | 0.25 | 0-1 |  | 0.04 | 0.09 | 0-0.90 |
| Non-Hispanic American Indian/Alaska Native | 0.007 | 0.08 | 0-1 |  | 0.007 | 0.01 | 0-0.08 |
| Non-Hispanic Asian or Pacific Islander | 0.01 | 0.10 | 0-1 |  | 0.01 | 0.03 | 0-0.39 |
| Did not disclose/unknown | 0.05 | 0.23 | 0-1 |  | 0.05 | 0.03 | 0-0.13 |
| *Listed next of kin relationship* |  |  |  |  |  |  |  |
| Spouse/Partner | 0.36 | 0.48 | 0-1 |  | 0.35 | 0.08 | 0-0.52 |
| Child | 0.32 | 0.47 | 0-1 |  | 0.32 | 0.06 | 0-0.48 |
| Sibling | 0.13 | 0.34 | 0-1 |  | 0.14 | 0.06 | 0.04-0.5 |
| Other family | 0.08 | 0.28 | 0-1 |  | 0.08 | 0.04 | 0-0.3 |
| Other non-family | 0.10 | 0.30 | 0-1 |  | 0.11 | 0.06 | 0-0.5 |
| Mode of Survey Administration |  |  |  |  |  |  |  |
| Mail | 0.26 | 0.44 | 0-1 |  | 0.30 | 0.09 | 0-0.62 |
| Phone | 0.12 | 0.32 | 0-1 |  | 0.10 | 0.04 | 0-0.33 |
| Online | 0.03 | 0.16 | 0-1 |  | 0.03 | 0.02 | 0-0.13 |
| *Most Common Primary Diagnosis on Last Admission* |  |  |  |  |  |  |  |
| Infectious and parasitic diseases (1) | 0.26 | 0.44 | 0-1 |  | 0.18 | 0.13 | 0-0.49 |
| Neoplasms (2) | 0.19 | 0.39 | 0-1 |  | 0.21 | 0.10 | 0-0.52 |
| Diseases of the circulatory system (7) | 0.12 | 0.33 | 0-1 |  | 0.12 | 0.05 | 0-0.30 |
| Diseases of the respiratory system (8) | 0.10 | 0.30 | 0-1 |  | 0.11 | 0.05 | 0-0.24 |
| Mental illness (5) | 0.06 | 0.24 | 0-1 |  | 0.09 | 0.11 | 0-0.67 |
| Residual codes, unclassified, all E/V codes (18) | 0.04 | 0.20 | 0-1 |  | 0.05 | 0.08 | 0-0.53 |
|  |  |  |  |  |  |  |  |
| *Elixhauser Comorbidity Index* | 8.0 | 3.3 | 0-22 |  | 8.1 | 0.68 | 6.1-9.9 |
| *Top 5 Elixhauser Diagnoses* |  |  |  |  |  |  |  |
| Anemias due to other nutritional deficiencies | 0.62 | 0.49 | 0-1 |  | 0.62 | 0.09 | 0.38-0.81 |
| Hypertension, complicated | 0.57 | 0.49 | 0-1 |  | 0.56 | 0.09 | 0-0.77 |
| Heart failure | 0.46 | 0.50 | 0-1 |  | 0.45 | 0.09 | 0-0.66 |
| Chronic pulmonary disease | 0.45 | 0.50 | 0-1 |  | 0.46 | 0.09 | 0-0.67 |
| Weight loss | 0.43 | 0.50 | 0-1 |  | 0.43 | 0.12 | 0-0.81 |
| *Receipt of Palliative Care consult* | 0.75 | 0.44 | 0-1 |  | 0.77 | 0.17 | 0-1 |
| *Receipt of Chaplain Contact* | 0.86 | 0.35 | 0-1 |  | 0.84 | 0.15 | 0-1 |
| *Bereavement contact one month post-death* | 0.63 | 0.48 | 0-1 |  | 0.62 | 0.28 | 0-1 |
| *Death in Community Living Center or Hospice* | 0.43 | 0.49 | 0-1 |  | 0.50 | 0.31 | 0-1 |

**Table 2. Non-response model coefficients with model fit statistics**

**Logistic regression**

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Complete=1 | Log odds | | St.Err. | t-value | | p-value | [95% Conf | | Interval] | | Sig |
| bereave03 | .14 | | .037 | 3.79 | | 0 | .068 | | .213 | | \*\*\* |
| chap03 | .099 | | .052 | 1.89 | | .058 | -.003 | | .202 | | \* |
| palt01 | .218 | | .047 | 4.68 | | 0 | .127 | | .309 | | \*\*\* |
| hclcdeath | .298 | | .041 | 7.24 | | 0 | .218 | | .379 | | \*\*\* |
| nok : base 0 | 0 | | . | . | | . | . | | . | |  |
| 1 | -.902 | | .044 | -20.50 | | 0 | -.988 | | -.816 | | \*\*\* |
| 2 | -.507 | | .058 | -8.78 | | 0 | -.62 | | -.393 | | \*\*\* |
| 3 | -.678 | | .07 | -9.74 | | 0 | -.815 | | -.542 | | \*\*\* |
| 4 | -.803 | | .065 | -12.45 | | 0 | -.929 | | -.677 | | \*\*\* |
| nonhiswhtvall : ba~0 | 0 | | . | . | | . | . | | . | |  |
| 1 | .193 | | .04 | 4.86 | | 0 | .115 | | .271 | | \*\*\* |
| age | .024 | | .002 | 11.50 | | 0 | .02 | | .029 | | \*\*\* |
| chgen : base 0 | 0 | | . | . | | . | . | | . | |  |
| 1 | -.168 | | .105 | -1.59 | | .111 | -.374 | | .039 | |  |
| elix | .063 | | .046 | 1.37 | | .17 | -.027 | | .152 | |  |
| anemdef | -.009 | | .061 | -0.15 | | .882 | -.128 | | .11 | |  |
| cancer\_solid | -.005 | | .066 | -0.07 | | .945 | -.133 | | .124 | |  |
| dementia | -.113 | | .062 | -1.81 | | .071 | -.235 | | .01 | | \* |
| diab\_cx | -.056 | | .066 | -0.85 | | .396 | -.184 | | .073 | |  |
| diab\_uncx | -.06 | | .089 | -0.67 | | .5 | -.235 | | .115 | |  |
| htn\_cx | -.102 | | .081 | -1.26 | | .207 | -.261 | | .057 | |  |
| htn\_uncx | -.102 | | .076 | -1.34 | | .18 | -.252 | | .047 | |  |
| liver\_mld | -.077 | | .071 | -1.09 | | .277 | -.216 | | .062 | |  |
| thyroid\_hypo | -.027 | | .065 | -0.42 | | .678 | -.154 | | .1 | |  |
| wghtloss | -.165 | | .056 | -2.96 | | .003 | -.274 | | -.056 | | \*\*\* |
| depress | -.069 | | .061 | -1.12 | | .263 | -.189 | | .052 | |  |
| renlfl\_mod | -.117 | | .068 | -1.71 | | .088 | -.251 | | .017 | | \* |
| coag | -.083 | | .063 | -1.31 | | .191 | -.206 | | .041 | |  |
| hf | -.048 | | .067 | -0.71 | | .478 | -.18 | | .084 | |  |
| lung\_chronic | -.08 | | .059 | -1.34 | | .18 | -.196 | | .037 | |  |
| perivasc | -.108 | | .06 | -1.79 | | .073 | -.227 | | .01 | | \* |
| cancer\_mets | -.015 | | .065 | -0.23 | | .817 | -.143 | | .113 | |  |
| neuro\_oth | -.015 | | .06 | -0.25 | | .802 | -.134 | | .103 | |  |
| valve | -.004 | | .065 | -0.05 | | .957 | -.13 | | .123 | |  |
| autoimmune | .013 | | .094 | 0.13 | | .894 | -.172 | | .197 | |  |
| liver\_sev | -.035 | | .085 | -0.42 | | .676 | -.202 | | .131 | |  |
| alcohol | .018 | | .071 | 0.25 | | .803 | -.121 | | .156 | |  |
| neuro\_seiz | -.094 | | .08 | -1.19 | | .235 | -.25 | | .061 | |  |
| psychoses | -.099 | | .072 | -1.37 | | .17 | -.241 | | .042 | |  |
| ulcer\_peptic | -.363 | | .093 | -3.89 | | 0 | -.547 | | -.18 | | \*\*\* |
| neuro\_movt | -.011 | | .078 | -0.15 | | .882 | -.164 | | .141 | |  |
| cancer\_lymph | .012 | | .096 | 0.13 | | .898 | -.176 | | .201 | |  |
| renlfl\_sev | -.071 | | .076 | -0.94 | | .346 | -.22 | | .077 | |  |
| paralysis | -.002 | | .073 | -0.03 | | .975 | -.146 | | .141 | |  |
| pulmcirc | -.026 | | .072 | -0.36 | | .717 | -.168 | | .116 | |  |
| thyroid\_oth | .057 | | .101 | 0.56 | | .573 | -.142 | | .256 | |  |
| drug\_abuse | -.319 | | .087 | -3.65 | | 0 | -.489 | | -.148 | | \*\*\* |
| bldloss | -.121 | | .087 | -1.39 | | .166 | -.293 | | .05 | |  |
| cancer\_nsitu | -.135 | | .157 | -0.86 | | .389 | -.443 | | .172 | |  |
| cancer\_leuk | .1 | | .108 | 0.92 | | .357 | -.112 | | .312 | |  |
| cbvd | -.038 | | .065 | -0.59 | | .553 | -.165 | | .088 | |  |
| aids | -.291 | | .223 | -1.30 | | .192 | -.729 | | .146 | |  |
| o | 0 | | . | . | | . | . | | . | |  |
| loslast | 0 | | 0 | 0.91 | | .36 | 0 | | 0 | |  |
| Constant | -2.225 | | .197 | -11.30 | | 0 | -2.611 | | -1.839 | | \*\*\* |
|  | | | | | | | | | | | |
| Mean dependent var | | 0.401 | | | SD dependent var | | | 0.490 | |
| Pseudo r-squared | | 0.049 | | | Number of obs | | | 14510 | |
| Chi-square | | 955.903 | | | Prob > chi2 | | | 0.000 | |
| Akaike crit. (AIC) | | 18683.365 | | | Bayesian crit. (BIC) | | | 19070.077 | |
| *Note: Model constructed using FY22 data. Obesity excluded due to collinearity; \*\*\* p<.01, \*\* p<.05, \* p<.1 ;* | | | | | | | | | | | |
|  | | | | | | | | | | | |

**Figure 1. cvAUC and k-fold ROC curves for Nonresponse Model**



