

CBE 2979: Standardized Transfusion Ratio for Dialysis Facilities

5.4.6. Interpretation of Risk/Case-mix Factor Findings

5.4.6. [If risk factors/case-mix are addressed by any method (5.4.1)] Interpretation of Risk/Case-mix Factor Findings*

Provide your interpretation of the results, in terms of demonstrating adequacy of controlling for differences in patient characteristics (i.e., case mix). Clearly describe the rationale for why each risk factor tested WAS or WAS NOT included in the final model. Describe what the results mean, including what is normally expected in relation to the test conducted.

Risk Adjustment Factors Included in Final Model

- Age groups
- Cause of ESRD
- Duration of ESRD
- Nursing Home Status (none; <90 d; ≥90 d)
- BMI (at incidence; categorical)
- Incident Comorbidities (from Medicare Form 2728)
- Prevalent Comorbidity Groups (Previous Exclusion Categories for malignancies, hereditary anemias, coagulation disorders)
- h/o GI/GU Bleeding from Medicare Claims and Medicare Advantage Encounter Data
- active MA insurance variable
- Interaction tests
 - Duration of ESRD with Diabetes as ESRD cause
 - Age groups with DM as ESRD cause
 - MA with Coagulation disorders
 - MA with lymphoma

These covariates were included in the model based on strength of association with the dependent variable (transfusion events). In addition, the variable definitions are objectively defined using data from national data sets managed by federal agencies and contributed to by all U.S. dialysis facilities and organizations (e.g. EQRS). In addition, prevalent comorbidity groups defining h/o malignancy, h/o hereditary anemia, and coagulation disorders utilize Medicare claims and Medicare Advantage encounter data for definition.

Risk Adjustment Factors Excluded from the Final Model

- Sex
- Race
 - White
 - Black
 - Asian/PI
 - Native Amer
- Hispanic Ethnicity
- Employment Status (Incident) (Employed; Unemployed)
- Medicare coverage
 - Primary Traditional alone

Risk Adjustment Factors Excluded from the Final Model (continued)

- Dual eligible
- Medicare Advantage
Non-Medicare/Missing
- Area Deprivation Index

En bloc, the sociodemographic variables tested demonstrated significant, albeit relatively small associations with the patient-level model outcome. In addition, two variables (race and employment status) were of particular concern based on accuracy of data. Employment Status raised concerns based on lack of current information since the Medical Evidence Form (Form 2728) is used to populate the variable and status at time of dialysis initiation is very unlikely to still be accurate after 1 or more year on dialysis. For race, the concern about whether Black race is a meaningful biological construct, given the multiple distinct groups of people that have contributed to that population's makeup and definition in the United States. Finally, the direction of some covariate estimates was not consistent with their anticipated effect if they represented outcome disparities (e.g. Black, Hispanic ethnicity, Medicare dual-eligible with lower transfusion rate HR). In order to present the most parsimonious, accurate and implementable model, we elected to exclude these covariates with very little effect on facility-level flagging.

	2023 STrR with SES		
2023 STrR	Better than Expected	As Expected	Worse than Expected
Better than Expected	18 (0.3%)	15 (0.2%)	0 (0.0%)
As Expected	4 (0.1%)	6,719 (92.5%)	33 (0.5%)
Worse than Expected	0 (0.0%)	44 (0.6%)	435 (6.0%)
total	22	6778	468
%	0.3	93.3	6.4

*The facilities with patient years at risk ≥ 10 applied in the both methods are reported in the table.