Supplemental Table: Multilevel Logistic Regression models of Readmission using Elixhauser Index using Hospital Level random intercept (age 18 and older)

<table>
<thead>
<tr>
<th>Model Info</th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
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<td>N</td>
<td>1,682,629</td>
<td>1,679,169</td>
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<td>LL</td>
<td>-1,709,883.6</td>
<td>-1,701,310.5</td>
<td>-1,695,230.0</td>
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<td>df</td>
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<td>AIC</td>
<td>3,419,773.3</td>
<td>3,402,665.0</td>
<td>3,390,542.0</td>
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<td>BIC</td>
<td>3,419,810.3</td>
<td>3,402,936.3</td>
<td>3,391,047.8</td>
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<thead>
<tr>
<th>Predictors</th>
<th>OR (95% CI)</th>
<th>P</th>
<th>OR (95% CI)</th>
<th>P</th>
<th>OR (95% CI)</th>
<th>P</th>
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<tbody>
<tr>
<td>Elixhauser Index (per 3)</td>
<td>1.06 (1.06, 1.06)</td>
<td>&lt;.001</td>
<td>1.05 (1.05, 1.06)</td>
<td>&lt;.001</td>
<td>1.05 (1.05, 1.05)</td>
<td>&lt;.001</td>
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<td>Year (ref=2010)</td>
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<tr>
<td>2011</td>
<td>0.99 (0.97, 1.01)</td>
<td>0.469</td>
<td>0.99 (0.97, 1.01)</td>
<td>0.432</td>
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<tr>
<td>2012</td>
<td>0.95 (0.93, 0.97)</td>
<td>&lt;.001</td>
<td>0.95 (0.93, 0.97)</td>
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<tr>
<td>2013</td>
<td>0.91 (0.89, 0.93)</td>
<td>&lt;.001</td>
<td>0.91 (0.89, 0.93)</td>
<td>&lt;.001</td>
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<td>2014</td>
<td>0.89 (0.87, 0.91)</td>
<td>&lt;.001</td>
<td>0.89 (0.87, 0.90)</td>
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<td>2015</td>
<td>0.86 (0.84, 0.88)</td>
<td>&lt;.001</td>
<td>0.86 (0.84, 0.88)</td>
<td>&lt;.001</td>
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<tr>
<td>2016</td>
<td>0.86 (0.84, 0.88)</td>
<td>&lt;.001</td>
<td>0.85 (0.83, 0.87)</td>
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<td>Quarter (ref=1st)</td>
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<tr>
<td>2nd Quarter</td>
<td>0.96 (0.95, 0.98)</td>
<td>&lt;.001</td>
<td>0.97 (0.95, 0.98)</td>
<td>&lt;.001</td>
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<tr>
<td>3rd Quarter</td>
<td>1.00 (0.98, 1.01)</td>
<td>0.618</td>
<td>1.00 (0.99, 1.01)</td>
<td>0.912</td>
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<tr>
<td>4th Quarter</td>
<td>0.98 (0.97, 1.00)</td>
<td>0.008</td>
<td>0.99 (0.97, 1.00)</td>
<td>0.044</td>
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<td>Sex (ref=Male)</td>
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<tr>
<td>Female</td>
<td>0.93 (0.93, 0.94)</td>
<td>&lt;.001</td>
<td>0.92 (0.91, 0.92)</td>
<td>&lt;.001</td>
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<tr>
<td>Age (per 10 year)</td>
<td>1.01 (1.00, 1.01)</td>
<td>&lt;.001</td>
<td>0.99 (0.98, 0.99)</td>
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<tr>
<td>Income Quartile (ref=1st)</td>
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<tr>
<td>2nd Quartile</td>
<td>0.98 (0.97, 1.00)</td>
<td>0.033</td>
<td>0.98 (0.97, 1.00)</td>
<td>0.008</td>
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<td>3rd Quartile</td>
<td>0.98 (0.97, 1.00)</td>
<td>0.012</td>
<td>0.97 (0.95, 0.98)</td>
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<td>4th Quartile</td>
<td>0.97 (0.95, 0.99)</td>
<td>&lt;.001</td>
<td>0.95 (0.93, 0.97)</td>
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<td>Missing</td>
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<td>0.164</td>
<td>0.97 (0.93, 1.01)</td>
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<td>Payer (ref=Medicare)</td>
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<tr>
<td>Medicaid</td>
<td>1.06 (1.05, 1.08)</td>
<td>&lt;.001</td>
<td>1.07 (1.05, 1.09)</td>
<td>&lt;.001</td>
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<tr>
<td>Private</td>
<td>0.70 (0.68, 0.71)</td>
<td>&lt;.001</td>
<td>0.71 (0.70, 0.72)</td>
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<td>Self-Pay</td>
<td>0.61 (0.59, 0.63)</td>
<td>&lt;.001</td>
<td>0.63 (0.61, 0.65)</td>
<td>&lt;.001</td>
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<tr>
<td>Other/No Charge</td>
<td>0.78 (0.76, 0.81)</td>
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<td>0.80 (0.77, 0.82)</td>
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<td>Disposition (ref=Routine to home)</td>
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<td>Post-acute care</td>
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<td>Other</td>
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<td>Home Health</td>
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<td>Length of Stay (per day)</td>
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<td>Care intensity (ref=No)</td>
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<td>Non-invasive ventilation</td>
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<td>Tracheostomy</td>
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<td>Cardiac arrest</td>
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<td>Private, non-profit</td>
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<td>Private, for-profit</td>
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<td>Small metro area</td>
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<td>Area</td>
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<td>Micropolitan area</td>
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<td>Rural</td>
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<td><strong>Hospital Bed Size (ref=Small)</strong></td>
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<td><strong>Annual Discharge (per 10k)</strong></td>
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<td>1.01 (1.00, 1.03)</td>
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<td><strong>Proportion of Medicaid per 10%</strong></td>
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<td>1.00 (0.99, 1.01)</td>
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