**Table 3:** Predictors of readmission with primary heart failure and secondary heart failure

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Variable | Primary heart failure | | Secondary heart failure\* | |
| Odds ratio (95% CI) | p-value | Odds ratio (95% CI) | p-value |
| Age (per year) | 0.99 (0.99-0.99) | <0.001 | 0.99 (0.99-0.99) | <0.001 |
| Female | NS | 0.063 | NS | 0.28 |
| Weekend admission | 1.02 (1.01-1.04) | <0.001 | 1.02 (1.01-1.03) | <0.001 |
| Year vs 2010  2011  2012  2013  2014 | NS  0.95 (0.93-0.97)  0.92 (0.91-0.94)  0.89 (0.88-0.91) | 0.22  <0.001  <0.001  <0.001 | NS  0.97 (0.96-0.98)  0.93 (0.92-0.94)  0.92 (0.91-0.93) | 0.74  <0.001  <0.001  <0.001 |
| Primary expected payer vs Medicare  Medicaid  Private  Uninsured  No charge  Other | 1.11 (1.09-1.14)  0.75 (0.74-0.77)  0.65 (0.63-0.68)  0.64 (0.58-0.71)  0.82 (0.79-0.85) | <0.001  <0.001  <0.001  <0.001  <0.001 | 1.05 (1.04-1.06)  0.77 (0.76-0.78)  0.70 (0.68-0.72)  0.77 (0.72-0.82)  0.79 (0.77-0.81) | <0.001  <0.001  <0.001  <0.001  <0.001 |
| Median household income (percentile) vs 0-25th  26-50th  51-75th  76-100th | 0.96 (0.94-0.97)  0.94 (0.93-0.96)  0.93 (0.92-0.95) | <0.001  <0.001  <0.001 | NS  0.99 (0.98-0.99)  0.99 (0.98-1.00) | 0.32  0.001  0.003 |
| Hypertension | NS | 0.066 | 0.97 (0.96-0.98) | <0.001 |
| Dyslipidemia | 0.93 (0.92-0.94) | <0.001 | 0.93 (0.93-0.94) | <0.001 |
| Obesity | 0.83 (0.82-0.84) | <0.001 | 0.88 (0.87-0.89) | <0.001 |
| Diabetes mellitus | 1.11 (1.09-1.12) | <0.001 | 1.10 (1.10-1.11) | <0.001 |
| Smoker | 0.96 (0.95-0.98) | <0.001 | 0.99 (0.99-1.00) | 0.048 |
| Alcohol misuse | 0.95 (0.92-0.98) | 0.002 | NS | 0.87 |
| Coronary artery disease | 1.10 (1.08-1.11) | <0.001 | 1.08 (1.07-1.08) | <0.001 |
| Previous myocardial infarction | NS | 0.12 | 1.01 (1.00-1.02) | 0.048 |
| Previous PCI | 1.03 (1.01-1.05) | 0.003 | 1.03 (1.01-1.04) | <0.001 |
| Previous CABG | NS | 0.38 | NS | 0.52 |
| Previous heart failure | 0.72 (0.69-0.76) | <0.001 | NS | 0.27 |
| Atrial fibrillation | 1.08 (1.07-1.09) | <0.001 | 1.08 (1.08-1.09) | <0.001 |
| Valvular heart disease | NS | 0.50 | 1.01 (1.00-1.02) | <0.001 |
| Previous stroke or TIA | 1.05 (1.03-1.07) | <0.001 | 1.03 (1.02-1.04) | <0.001 |
| Peripheral vascular disease | 1.07 (1.06-1.09) | <0.001 | 1.07 (1.06-1.08) | <0.001 |
| Pulmonary circulatory disorder | NS | 0.72 | NS | 0.29 |
| Chronic lung disease | 1.16 (1.15-1.17) | <0.001 | 1.14 (1.13-1.14) | <0.001 |
| Hypothyroidism | 1.04 (1.03-1.06) | <0.001 | NS | 0.14 |
| Renal failure | 1.27 (1.25-1.28) | <0.001 | 1.24 (1.23-1.25) | <0.001 |
| Liver disease | 1.21 (1.18-1.25) | <0.001 | 1.20 (1.18-1.22) | <0.001 |
| Fluid and electrolyte disorders | 1.08 (1.07-1.09) | <0.001 | 1.04 (1.03-1.05) | <0.001 |
| Peptic ulcer disease | 1.46 (1.11-1.92) | 0.007 | NS | 0.89 |
| Anaemia | 1.13 (1.12-1.14) | <0.001 | 1.15 (1.15-1.16) | <0.001 |
| Bleeding | NS | 0.25 | 0.97 (0.96-0.99) | 0.12 |
| Cancer | 1.26 (1.22-1.29) | <0.001 | 1.22 (1.20-1.24) | <0.001 |
| Depression | 1.08 (1.07-1.11) | <0.001 | 1.04 (1.03-1.05) | <0.001 |
| Dementia | NS | 0.15 | 0.97 (0.96-0.98) | <0.001 |
| Bed size vs small  Medium  Large | NS  1.02 (1.00-1.03) | 0.067  0.049 | 1.01 (1.00-1.02)  NS | 0.035  0.81 |
| Teaching hospital | 0.96 (0.95-0.97) | <0.001 | 0.98 (0.98-0.99) | <0.001 |
| Urban hospital | 1.03 (1.01-1.05) | 0.001 | 1.09 (1.08-1.10) | <0.001 |
| Cardiogenic shock | NS | 0.071 | 0.88 (0.85-0.91) | <0.001 |
| Cardiac arrest | 0.83 (0.73-0.94) | 0.004 | 0.84 (0.81-0.87) | <0.001 |
| Ventilation | 0.74 (0.70-0.78) | <0.001 | 0.72 (0.71-0.73) | <0.001 |
| Circulatory support | 2.81 (1.64-4.81) | <0.001 | NS | 0.46 |
| Intra-aortic balloon pump | 0.30 (0.18-0.52) | <0.001 | NS | 0.73 |
| Vasopressor | NS | 0.86 | 0.94 (0.90-0.98) | 0.003 |
| Coronary angiogram | 0.74 (0.72-0.75) | <0.001 | 0.84 (0.83-0.86) | <0.001 |
| Current admission PCI | 1.26 (1.19-1.33) | <0.001 | 1.08 (1.05-1.10) | <0.001 |
| Current CABG | NS | 0.55 | 0.74 (0.72-0.76) | <0.001 |
| Pacemaker or ICD implantation | 0.84 (0.80-0.88) | <0.001 | 0.82 (0.80-0.84) | <0.001 |
| Cardiac resynchronization therapy | 0.77 (0.73-0.82) | <0.001 | 0.82 (0.68-0.76) | <0.001 |
| Left ventricular assist device | 0.18 (0.12-0.25) | <0.001 | 0.60 (0.49-0.74) | <0.001 |
| Heart transplant | 0.34 (0.24-0.48) | <0.001 | 0.32 (0.22-0.47) | <0.001 |
| Discharge location vs home  Transfer to other hospital  Care home  Discharge against medical advice  Court/law enforcement | 1.23 (1.21-1.25)  1.21 (1.19-1.22)  2.29 (2.20-2.39)  NS | <0.001  <0.001  <0.001  - | 1.19 (1.18-1.20)  1.20 (1.19-1.21)  2.06 (2.01-2.12)  NS | <0.001  <0.001  <0.001  0.51 |

\*Also adjusted for causes of admission but shown in detail in Supplementary Table 2

NS=not significant where p>0.05.