Supplemental Digital Content 5: Comparison of process and outcome measures in Parallel Controls defined as AlertWatch use 0% versus AlertWatch used ≥ 75% of case

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|  | AlertWatch used ≥ 75% of the case  N=7,954 | Parallel Controls AlertWatch used 0% of the case  N=8,321 | Adjusted  Odds Ratio  or Beta Coefficient  for AlertWatch Use in Multivariable Analysis (95% CI) \*\*\* | P-value |
| Minutes of mean arterial pressure < 55mmHg  Median [25th to 75th %ile] | 1 [0-5] | 1 [0-5] | Beta -0.21 (-0.22 to -0.19) | < 0.001 |
| Crystalloid cc/kg/hr Median [25th to 75th %ile]\* | 5.88  [4.18-8.18] | 6.20  [4.32-8.84] | Beta -0.02 (-0.04 to -0.01) | 0.002 |
| Median tidal volume > 10 ml/kg \*\* | 233 / 843 (28%) | 302 / 802 (38%) | 0.64 (0.52-0.80) | < 0.001 |
| Postop Myocardial Injury | 119 / 7954 (1.5%) | 177 / 8321 (2.1%) | 0.85 (0.66-1.09) | 0.20 |
| Stage 1 Acute Kidney Injury | 1048 / 6733 (15.6%) | 1195 / 7121 (16.8%) | 1.04 (0.95-1.15) | 0.38 |
| Stage 2 Acute Kidney Injury | 175 / 6733 (2.6%) | 199 / 7121 (2.8%) | 0.98 (0.74-1.12) | 0.83 |
| Mortality 30 day | 185 / 7954 (2.3%) | 246 / 8321 (3.0%) | 0.91 (0.81-1.21) | 0.35 |
| Median Hospital Length of Stay in days [25th to 75th percentile] | 5 [3-11] | 6 [3-12] | Beta -0.02 (-0.03 to -0.003) | 0.01 |
| Encounter Charges [25th to 75th percentile] | $65,770 [41,237-123,869] | $68,621 [41,381 to 134,568] | Beta -0.02 (-0.02 to -0.02) | <0.001 |

CI = Confidence Interval

\* Patients < 500 estimated blood loss and no packed red blood cells given

\*\* Patients with ideal body weight ≤ 50kgs

\*\*\* Adjusted for patient demographics, anthropometrics, clinical diagnoses, procedural risk, and in-room provider characteristics. For dichotomous outcomes, a logistic regression model was used. For continuous outcomes, generalized linear model with Poisson distribution was used. Measure of effect size of binary outcomes are reported as adjusted odds ratios and 95% confidence intervals. Measure of effect size for continuous outcomes are reported as beta coefficients and 95% confidence intervals. The beta coefficient indicates in what direction the use of AlertWatch demonstrated impact: a lower (negative beta coefficient) or a higher (positive beta coefficient) expected value.