**Supplement**

**Association between intravenous fluid bolus and biomarker trajectory during prehospital care**

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**eFigure 1. Median value of biomarkers at prehospital and ED measurements**

(A) Y-axis shows median values of biomarkers measured at two time points, i.) time of IV catheter placement by EMS and ii.) ED arrival, among patients who received a prehospital IV-fluid bolus, illustrated on the log scale. X-axis corresponds to the measured biomarkers, IL-6, IL-10 and TNF. Solid bars are biomarkers drawn at prehospital time point and hashed bars represent biomarkers drawn in the ED. Error bars correspond to the interquartile range. (B) Similar plot of biomarkers drawn from patients who did not receive a prehospital IV fluid bolus.

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| **eFigure 2**. **Relative change in biomarkers from prehospital to ED measurement**  |
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Y-axis represents relative change in biomarkers between two time points, i.) prehospital IV catheter placement and ii.) ED arrival. Relative change is defined as $\frac{(biomarkerED-biomarkerEMS)}{biomarkerEMS}$. Error bars represent interquartile range. X-axis illustrates each measured biomarker with black shading representing patients who received a prehospital IV fluid bolus and gray shading representing patients who did not.

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| **eTable 1. Sensitivity analyses of primary model for relative change in IL-6, IL-10 and TNF**  |
| **Model**  | **Cohort** |  | **Regression coefficient,****𝛽 (95% CI)** | **p-value**  |
| **No. in model** |
| Relative change in IL-6 | Primary model | 345 | -0.7 (-19.1, -0.3) | 0.04 |
|  | Prehospital risk score ≥ 1 | 265 | -12.2 (-23.2, -1.4) | 0.03 |
|  | FMC to ED > 30 mins | 195 | -13.3 (-25.4, -1.1) | 0.03 |
|   | Including Elixhauser Index | 345 | -9.56 (-19, -0.1) | 0.05 |
|  | Including prehospital temp | 345 | -9.69 (-19.1, -0.3) | 0.04 |
|  | Including Prehospital time:fluid volume interaction | 345 | -19.8 (-87.1, 47.5) | 0.56 |
| Relative change in IL-10 | Primary model | 345 | 4.6 (-5.1, 14.3) | 0.34 |
|  | Prehospital risk score ≥ 1 | 265 | 4.0 (-7.0, 15.1) | 0.47 |
|  | FMC to ED > 30 mins | 195 | -0.1 (-14.5, 14.3) | 0.99 |
|  | Including Elixhauser Index  | 345 | 4.8 (-4.9, 14.4) | 0.33 |
|   | Including prehospital temp  | 345 | -2.2 (-8.4, 4.0) | 0.49 |
|  | Including Prehospital time:fluid volume interaction  | 345 | -39.5 (-103.5, 24.5) | 0.23 |
| Relative change in TNF  | Primary model | 345 | -2.1 (-8.3, 4.1) | 0.53 |
|  | Prehospital risk score ≥ 1 | 265 | -12.2 (-23.2, -1.4) | 0.03 |
|  | FMC to ED > 30 mins | 195 | -4.7 (-12.3,3.0) | 0.23 |
|  | Including Elixhauser Index | 345 | -2.2 (-8.4,4.0) | 0.48 |
|   | Including prehospital temp  | 345 | 4.2 (-5.5, 13.9) | 0.39 |
|  | Including Prehospital time:fluid volume interaction  | 345  | -3.4 (-46.7, 40.0) | 0.88 |
| *Abbreviations*: No, number; CI, confidence interval; FMC, first medical contact; ED, Emergency Department; hrs, hours; min, minutes; temp, temperature; vol, volume |