

# Online Resource 1

## *Emergency Department crowding increases 10-day mortality for non-critical patients: a retrospective observational study*

Internal and Emergency Medicine

Anna Eidstø<sup>1</sup>, Jari Ylä-Mattila, Jalmari Tuominen, Heini Huhtala, Ari Palomäki, Teemu Koivistoinen

<sup>1</sup>Emergency Department, Tampere University Hospital, P.O. Box 2000, FI-33521 Tampere, Finland

Email address: anna.eidsto@fimnet.fi

**Table 1. 10-day mortality risk for maximum EDOR, adjusted**

|                     | OR   | 95% CI    | p-value |
|---------------------|------|-----------|---------|
| EDOR <sub>MAX</sub> |      |           |         |
| Q1 (< 0.56)         | 1    |           |         |
| Q2 (0.56-0.75)      | 1.14 | 0.93-1.38 | 0.202   |
| Q3 (0.76-0.92)      | 1.05 | 0.86-1.29 | 0.631   |
| Q4 (> 0.92)         | 1.27 | 1.04-1.56 | 0.020   |
| Age (per year)      | 1.06 | 1.05-1.07 | <0.001  |
| Male sex            | 1.65 | 1.45-1.87 | <0.001  |
| Shift               |      |           |         |
| Day                 | 1    |           |         |
| Evening             | 0.86 | 0.74-0.99 | 0.031   |
| Night               | 0.96 | 0.78-1.18 | 0.684   |
| Triage acuity       |      |           |         |
| ESI 4-5             | 1    |           |         |
| ESI 3               | 1.56 | 0.88-2.77 | 0.131   |
| ESI 1-2             | 3.45 | 1.90-6.27 | <0.001  |
| EMS transport       | 3.77 | 3.11-4.56 | <0.001  |

EDOR, Emergency Department Occupancy Ratio

EMS, Emergency Medical Services

ESI, Emergency Severity Index

**Table 2. Mortality among admitted and discharged patients, crowding defined as EDOR maximum**

|                                                                                                       | EDOR <sub>MAX</sub> | OR   | 95% CI    | p-value |
|-------------------------------------------------------------------------------------------------------|---------------------|------|-----------|---------|
| <b>Admitted</b>                                                                                       |                     |      |           |         |
|                                                                                                       | Q1 (< 0.56)         | 1    |           |         |
|                                                                                                       | Q2 (0.56–0.75)      | 1.04 | 0.85-1.28 | 0.705   |
|                                                                                                       | Q3 (0.76–0.92)      | 0.94 | 0.76-1.17 | 0.593   |
|                                                                                                       | Q4 (> 0.92)         | 1.12 | 0.91-1.39 | 0.287   |
| <b>Discharged</b>                                                                                     |                     |      |           |         |
|                                                                                                       | Q1 (< 0.56)         | 1    |           |         |
|                                                                                                       | Q2 (0.56–0.75)      | 1.47 | 0.79-2.76 | 0.228   |
|                                                                                                       | Q3 (0.76–0.92)      | 1.31 | 0.67-2.57 | 0.429   |
|                                                                                                       | Q4 (> 0.92)         | 1.60 | 0.83-3.10 | 0.160   |
| * All analyses adjusted with age, sex, shift, ESI and transport mode<br>For abbreviations see Table 1 |                     |      |           |         |