**Supplementary Digital Content 2**

Baseline characteristics, total and daily ICU costs with a PDT of 100%fT>4×MIC

**Table 1.** Baseline characteristics and clinical outcomes

|  |  |  |  |
| --- | --- | --- | --- |
|   | **Target attainment** | **Target non-attainment** |  |
|  | **(N=31)** | **(N=48)** | p |
| **Age** | 63.0 [54.0-68.0] | 60.0 [51.8-66.0] | 0.327b |
| **Male** | 20 (64.5%) | 32 (66.7%) | 1c |
| **BMI (kg/m²)** | 25.7 [22.2-28.1] | 25.4 [22.7-28.2] | 0.864b |
| **Target antibiotic** |   |   | **<0.01c** |
| Cefotaxim | 5 (16.1%) | 23 (47.9%) |  |
| Ceftazidim | 2 (6.5%) | 2 (4.2%) |  |
| Ceftriaxon | 13 (41.9%) | 3 (6.2%) |  |
| Cefuroxim | 0 (0%) | 2 (4.2%) |  |
| Augmentin | 2 (6.5%) | 6 (12.5%) |  |
| Meropenem | 9 (29.0%) | 12 (25.0%) |  |
| **Sepsis at admission** | 8 (25.8%) | 4 (8.3%) | **0.048c** |
| **APACHE score** | 23.0 [17.5-26.0] | 21.5 [17.0-25.0] | 0.732a |
| **SOFA score** | 10.0 [7.00-11.5] | 7.00 [5.00-9.00] | **0.003a** |
| **Albumin (g/L)** | 22.0 [20.0-28.5] | 28.0 [23.8-34.3] | **0.008b** |
| **Serum createnin (umol/L)** | 130 [91.0-159] | 78.5 [56.0-123] | **0.003b** |
| **Leukocyte count (×109/L)** | 13.8 [7.20-18.9] | 14.5 [9.75-17.7] | 0.564b |
| **CRP (mg/L)** | 91.0 [51.0-245] | 66.5 [27.5-147] | 0.103b |
| **30 day mortality** | 7 (22.6%) | 9 (18.8%) | 0.777c |
| **Transfusion received** | 24 (77.4%) | 31 (64.6%) |  0.31c |
| **RRT** | 8 (25.8%) | 4 (8.3%) | 0.053c |
| **ICU LOS** | 14.0 [8.00-31.5] | 11.5 [5.00-20.3] | 0.334b |

a t-test; b Mann-Whitney U test; c Fisher’s Exact test; Bold p-values are significant (lower than 0.05); data shown as median [interquartal range] or count (percentage)

BMI, body mass index; APACHE, Acute Physiology And Chronic Health Evaluation version 2; SOFA, Sequential Organ Failure Assessment; CRP, C-reactive protein; RRT, renal replacement therapy; ICU, intensive care unit; LOS, length of stay.

**Table 2.** Total ICU costs split by cost categories.

|  |  |  |  |
| --- | --- | --- | --- |
| **Categories** | **Target attainment** | **Target non-attainment** | p-value |
|  | **(N=31)** | **(N=48)** | Mann-Whitney U test | Bootstrapped t-test |
| **Total** | 37600 [22900-75200] | 33000 [17000-54100] | 0.24 | 0.21 |
| **Variable** | 20100 [9130-29500] | 12600 [7200-19500] | 0.07 | 0.08 |
| **Fixed admission** | 27300 [13800-58200] | 21500 [9260-41500] | 0.51 | 0.30 |
| **Consultation** | 1160 [508-3720] | 1790 [735-2830] | 0.63 | 0.41 |
| **RRT** | 0 [0-1190] | 0 [0-0] | **0.01** | **<0.01** |
| **Bedside procedures** | 699 [427-1190] | 797 [191-1130] | 0.61 | 0.44 |
| **Laboratory diagnostics** | 2790 [1670-4530] | 2140 [1000-3920] | 0.27 | 0.26 |
| **Radiology** | 797 [385-1990] | 1170 [527-2580] | 0.50 | 0.38 |
| **Transfusion** | 1070 [233-6910] | 478 [0-1700] | 0.06 | **0.04** |
| **Microbiology** | 2620 [1370-5980] | 1600 [582-3530] | **0.02** | **0.01** |
| **Pathology** | 0 [0-0] | 0 [0-0] | 0.72 | 0.28 |
| **Surgery** | 452 [0-4190] | 396 [0-1300] | 0.34 | 0.31 |

ICU, intensive care unit; RRT, renal replacement therapy. Data shown as median [interquartal range]

**Table 3.** Daily ICU costs split by cost category

|  |  |  |  |
| --- | --- | --- | --- |
| **Categories** | **Target attainment** | **Target non-attainment** | p-Value |
| **(N=31)** | **(N=48)** | **Mann-Whitney U test** | **Bootstrapped t-test** |
| **Total** | €2790 [2470-3370] | €2610 [2400-3310] | 0.48 | 0.51 |
| **Variable** | €1230 [828-1790] | €963 [774-1390] | 0.16 | 0.32 |
| **Fixed admission** | €1790 [1650-1840] | €1810 [1750-1890] | 0.22 | 1.00 |
| **Consultation** | €88.2 [54.4-147] | €110 [67.6-220] | 0.19 | 0.04 |
| **RRT** | €0 [0-59.5] | €0 [0-0] | **0.01** | **<0.01** |
| **Bed side procedures** | €54.7 [24.0-94.9] | €47.7 [17.1-85.4] | 0.49 | 0.98 |
| **Laboratory diagnostics** | €185 [151-231] | €169 [135-217] | 0.28 | 0.70 |
| **Radiology** | €89.9 [34.0-149] | €99.3 [36.8-267] | 0.21 | 0.51 |
| **Transfusion** | €91.7 [8.00-361] | €33.0 [0-143] | 0.07 | 0.08 |
| **Microbiology** | €166 [97.3-260] | €112 [72.8-160] | **0.02** | 0.05 |
| **Pathology** | €0 [0-0] | €0 [0-0] | 0.75 | 0.27 |
| **Surgery** | €24.9 [0-132] | €40.0 [0-128] | 0.54 | 0.27 |

ICU, intensive care unit; RRT, renal replacement therapy. Data shown as median [interquartal range]