Supplemental Table 5: Subgroup analysis: proportions and incidence rates of CVAD failure per device across ICU specialty

|  |  |  |
| --- | --- | --- |
|  | Proportion of failure | Incidence rates of failure per 1000 catheter days |
| CVAD type | Studies | CVADs | Outcomes | Pooled % | 95% CI | Studies | Catheter days | Outcomes | Pooled IR | 95% CI |
| NTCVAD |  |  |  |  |  |  |  |  |  |  |
|  All ICU types | 41 | 22,635 | 885 | 4 d,e,h | 3-6 | 35 | 210,114 | 813 | 5.18 d,e,g | 4.13-6.24 |
|  Medical | 6 | 2,014 | 172 | 7 d,e | 2-16 | 5 | 18,354 | 120 | 5.66 d,e | 1.72-9.59 |
|  Surgical | 5 | 698 | 30 | 4 b,e | 3-6 | 5 | 7,390 | 30 | 3.55 b,e | 2.02-5.08 |
|  Medical/ Surgical | 13 | 3,693 | 253 | 3 d,e | 1-5 | 12 | 41,257 | 251 | 5.16 d,e | 2.98-7.35 |
|  Neuro | 3 | 771 | 14 | 2 a,e | 0-4 | 2 | 4,730 | 11 | 2.33 b,e | 0.78-3.88 |
|  Trauma | 0 | - | - | - | - | 0 | - | - | - | - |
|  Mixed | 1 | 156 | 7 | 4 a,e | 2-9 | 1 | 1,148 | 7 | 6.10 a,e | 1.04-11.2 |
|  Not reported | 13 | 15,303 | 409 | 5 d,e | 3-7 | 10 | 137,235 | 394 | 7.03 d,e | 4.64-9.41 |
| PICC |  |  |  |  |  |  |  |  |  |  |
|  All ICU types | 9 | 1,654 | 100 | 6 d,e,g | 2-12 | 6 | 13,078 | 58 | 3.98 d,e,g | 0.57-7.40 |
|  Surgical | 1 | 37 | 1 | 3 a,f | 0-14 | 1 | 455 | 1 | 2.20 a,f | 0.00-8.29 |
|  Medical/Surgical | 1 | 50 | 15 | 30 a,e  | 19-44 | 1 | 847 | 15 | 17.7 a,e | 8.06-27.4 |
|  Neuro | 4 | 965 | 78 | 10 d,e | 3-18 | 2 | 6,748 | 36 | 4.62 c,e | 0.67-8.57 |
|  Trauma | 1 | 65 | 0 | 0 a,f | 0-6 | 0 |  |  |  |  |
|  Not reported | 2 | 537 | 6 | 1 a,e | 0-2 | 2 | 5,028 | 6 | 1.10 a,e | 0.04-2.17 |
| HD |  |  |  |  |  |  |  |  |  |  |
|  All ICU types | 4 | 1,481 | 130 | 7 d,e,g | 3-12 | 3 | 8,809 | 124 | 11.2 d,f,g | 0.00-22.9 |
|  Medical/ Surgical | 2 | 674 | 41 | 6 a,e | 4-7 | 2 | 4,635 | 41 | 6.90 d,f | 0.00-18.2 |
|  Not reported | 2 | 807 | 89 | 11 a,e | 9-13 | 1 | 4,174 | 83 | 19.9 a,e | 15.5-24.3 |

CVAD: Central Vascular Access Devices CI: confidence intervals IR: incidence rate NTCVAD: Non-tunnelled central venous access device PICC: Peripherally inserted central catheter HD: Haemodialysis catheter

Heterogeneity of studies a cannot be calculated, blow (<25%), c moderate (25%-75%), or d high (>75%).

Effect-size test e significant or f nonsignificant.

Test for heterogeneity between subgroups g significant or h nonsignificant.