Supplemental Tables – RMS of ambulance and H-N kinematics

Table 1. Effects of driving task and speed on RMS of ambulance acceleration (m/s2). M [95%CI] shown.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| RMS | all speeds | 5 | 15 | 25 | 35 | 45 |
| all tasks | 2.0 [1.9, 2.0] | -- | 1.0 [1.0, 1.1] | 1.6 [1.6, 1.7] | 2.5 [2.4, 2.6] | 3.1 [2.9, 3.3] |
| speed bump | -- | 2.7 [2.4, 3.1] | -- |
| turn | 2.6 [2.5, 2.7] | -- | 1.1 [1.1, 1.2] | 2.0 [1.9, 2.1] | 3.0 [2.8, 3.2] | 4.1 [3.8, 4.4] |
| abrupt stop | -- | 4.3 [3.8, 4.8] | -- |
| slalom turns | 2.2 [2.1, 2.3] | -- | 1.3 [1.2, 1.4] | 2.1 [1.9, 2.2] | 3.3 [3.1, 3.5] | -- |
| decelerating | 1.8 [1.7, 1.9] | -- | 0.9 [0.8, 1.0] | 1.4 [1.3, 1.5] | 2.0 [1.8, 2.3] | 3.0 [2.6, 3.3] |
| abrupt start | -- | 2.0 [1.8, 2.3] | -- |
| accelerating | 1.5 [1.4, 1.5] | -- | 0.9 [0.8, 1.0] | 1.1 [1.0, 1.2] | 1.6 [1.5, 1.7] | 2.2 [2.1, 2.3] |

Table 2. Main effects of driving task and speed on RMS of H-N linear acceleration (resultant, m/s2) in participants receiving SI and SMR spinal precautions. M [95%CI] shown. Superscripts (a-e) indicate differences between tasks and speeds, independent of immobilization condition (p<.01).

|  |  |  |
| --- | --- | --- |
|  |  | effect of spinal precautions |
| **task** | **SI and SMR** | **SI** | **SMR** | **p-value** | **difference (SI-SMR)** |
| speed bump | 2.3 [1.7, 2.9]a | 1.9 [1.2, 2.7] | 2.6 [1.7, 3.5] | .12 | -0.7 [-1.9, 0.5] |
| abrupt stop | 1.9 [1.4, 2.3]a | 2.0 [1.3, 2.8] | 1.7 [1.2, 2.2] | .21 | +0.3 [-0.5, 1.2] |
| turn | 1.1 [1.1, 1.2]b | 1.0 [0.9, 1.0] | 1.3 [1.2, 1.4] | <.001 | -0.4 [-0.5, -0.2] |
| slalom turn | 1.1 [1.0, 1.1]b | 0.9 [0.8, 1.0] | 1.2 [1.1, 1.4] | <.001 | -0.3 [-0.5, -0.2] |
| abrupt start | 0.8 [0.7, 1.0]d | 1.0 [0.7, 1.2] | 0.7 [0.6, 0.8] | .06 | +0.2 [0.0, 0.6] |
| decelerating | 0.8 [0.7, 0.9]d | 0.8 [0.7, 0.9] | 0.8 [0.7, 0.8] | .76 | 0.0 [-0.1, 0.1] |
| accelerating | 0.5 [0.4, 0.5]e | 0.4 [0.4, 0.5] | 0.5 [0.5, 0.6] | <.05 | -0.1 [-0.2, 0.0] |
|  |  |  |  |  |  |
| **speed** |  |  |  |  |  |
| 15 | 0.5 [0.5, 0.6]a | 0.5 [0.4, 0.5] | 0.6 [0.6, 0.7] | <.001 | -0.2 [-0.3, -0.1] |
| 25 | 0.7 [0.7, 0.8]b | 0.6 [0.6, 0.7] | 0.8 [0.8, 0.9] | <.001 | -0.2 [-0.3, -0.1] |
| 35 | 1.0 [1.0, 1.1]c | 0.9 [0.9, 1.0] | 1.1 [1.0, 1.2] | <.01 | -0.2 [-0.3, -0.1] |
| 45 | 1.2 [1.1, 1.3]d | 1.1 [1.0, 1.3] | 1.3 [1.1, 1.4] | .07 | -0.1 [-0.3, 0.0] |