**Supplemental Table 1.** American College of Emergency Physician (ACEP) Criteria for Head Imaging in the Setting of Blunt Head Trauma.

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| --- | --- |
| **A non-contrast head CT…** | **Characteristics** |
| …is indicated in head trauma patients **with** loss of consciousness (LOC) or post-traumatic amnesia (PTA) ONLY if one or more of the following is present: | Headache, vomiting, **age greater than 60 years**, drug or alcohol intoxication, deficits in short-term memory, physical evidence of trauma above the clavicle, post-traumatic seizure, Glasgow Coma Scale (GCS) score less than 15, focal neurologic deficits, or coagulopathy |
| …should be considered in head trauma patients **with no** LOC or PTA if there is a: | Focal neurological deficits, vomiting, severe headaches, **age 65 years or greater**, physical signs of a basilar skull fracture, GCS score less than 15, coagulopathy, or a dangerous mechanism of injury |

**Supplemental Table 2.** Baseline Demographic Comparison of Older vs. Younger Individuals Diagnosed Clinically with TBI (a subset of those with blunt head trauma).

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| --- | --- | --- | --- | --- | --- |
| **Characteristic\*** | | **Younger:**  **Age <65**  **(n=302)** | **Older:**  **Age >65**  **(n=63)** | **Statistic^** | **P Value** |
| Age, median in years (IQR) | | 37 (25-51) | 72 (68-81) | 155.951 | <0.001 |
| Sex | | | | 12.0149 | 0.001 |
|  | Male | 204 (67.5) | 28 (44.4) |
| Female | 98 (32.5) | 35 (55.6) |
| Race | | | | 17.9804 | <0.001 |
|  | Black | 145 (48.0) | 14 (22.2) |
| White | 132 (43.7) | 46 (73.0) |
| Other | 25 (8.3) | 3 (4.8) |
| Highest Level of Education | | | | 0.4996 | 0.747 |
|  | Less than High School | 54 (17.9) | 13 (20.6) |
| High School Graduate | 182 (60.3) | 35 (55.6) |
| College Graduate | 66 (21.8) | 15 (23.8) |
| Married | | 77 (25.5) | 30 (47.6) | 12.3112 | 0.001 |
| Employed | | 180 (59.6) | 11 (17.5) | 37.1103 | <0.001 |
| Prior Concussion | | 99 (32.8) | 13 (20.6) | 3.6158 | 0.071 |
| Mood Disorder | | 90 (29.8) | 26 (41.3) | 3.3175 | 0.256 |
| Non-mood Psychiatric Disorder | | 64 (21.2) | 15 (23.8) | 0.4085 | 0.782 |
| \*No. (%) unless listed otherwise; ^Fisher’s exact for proportions and Kruskal-Wallis for continuous variables | | | | | |

**Supplemental Table 3.** Injury Descriptor Comparison of Older vs. Younger Individuals Diagnosed Clinically with TBI (a subset of those with blunt head trauma).

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Characteristic\*** | | **Younger:**  **Age <65**  **(n=302)** | **Older:**  **Age >65**  **(n=63)** | **Statistic^** | **P Value** |
| Mechanism of Injury | | | | 47.5561 | <0.001 |
|  | Pedestrian Struck | 33 (10.9) | 4 (6.3) |
| Motor Vehicle-Traffic | 82 (27.2) | 11 (17.5) |
| Fall | 76 (25.2) | 43 (68.3) |
| Assault | 65 (21.5) | 1 (1.5) |
| Struck by / against | 17 (5.6) | 2 (3.2) |
| Pedal Cycle | 29 (9.6) | 2 (3.2) |
| Intoxicated on Drugs / Alcohol | | 84 (27.8) | 9 (14.3) | 5.0247 | 0.026 |
| Abnormal CT Findings | | 58 (19.2) | 19 (30.2) | 3.7571 | 0.062 |
| **Symptoms at Time of Presentation** | | | | | |
| GCS1 <15 at Presentation | | 61 (20.2) | 12 (19.0) | 0.0432 | 1.000 |
| Post-traumatic Amnesia | | 221 (73.2) | 52 (82.5) | 2.5240 | 0.297 |
| Deficits in Short-term Memory | | 54 (17.9) | 14 (22.2) | 2.2306 | 0.212 |
| Focal Neurological Deficits | | 33 (10.9) | 5 (7.9) | 0.7208 | 0.711 |
| Headache | | 263 (87.1) | 45 (71.4) | 10.2121 | 0.009 |
| Vomiting since Injury | | 36 (11.9) | 6 (9.5) | 0.2941 | 0.671 |
| GOAT2 Total Score, median (IQR) | | 98 (90-100) | 95 (89-100) | 0.991 | 0.3196 |
| Head AIS3 Score | | | | 10.9169 | 0.016 |
|  | Minor | 231 (76.5) | 41 (65.1) |
| Moderate | 11 (3.6) | 0 (0) |
| Serious | 20 (6.6) | 4 (6.4) |
| Severe, Critical, or Maximal | 40 (13.3) | 18 (28.6) |
| \*No. (%) unless listed otherwise; ^Fisher’s exact for proportions and Kruskal-Wallis for continuous variables; 1. GCS: Glasgow Coma Scale; 2. GOAT: Galveston Orientation and Amnesia Test; 3. AIS: Abbreviated Injury Scale. | | | | | |