

SuperLearner versus Clinicians to Prioritise Trauma Patients (working title)

Test version 0.0.0.9000

Results

During the study period, we approached a total of 1500 patients for enrollment. 54 patients did not provide informed consent. Out of the 1446 patients who provided informed consent, 99 had missing data on priority level assigned by clinicians, leaving 1401 patients. An additional 539 were excluded because of missing outcome data. Thus, the final study sample included 862 patients.

The median age among included patients was 30 (IQR 24-42) years (Table 1). A majority, 680 (79%) patients, were males. The most common mechanism of injury was transport accidents, accounting for 358 (42%) patients. A total of 518 (60%) patients were transported to participating centres in some sort of private vehicle, such as a car, taxi, or rickshaw. A majority of patients had normal vital signs on arrival to participating centres. Out of all patients, 61 (7%) died within 30 days of arrival.

Table 1: Sample characteristics

Characteristic	Level	Training	Test	Overall
n (%)		562 (65.20)	300 (34.80)	862 (100.00)
Age in years (median [IQR])		30.00 [24.00, 45.00]	30.00 [23.00, 40.00]	30.00 [24.00, 42.00]
Sex (%)	Female	117 (20.82)	65 (21.67)	182 (21.11)
	Male	445 (79.18)	235 (78.33)	680 (78.89)
Mechanism of injury (%)	Assault	77 (13.70)	49 (16.33)	126 (14.62)
	Burn	2 (0.36)	1 (0.33)	3 (0.35)
	Event of undetermined intent	1 (0.18)	0 (0.00)	1 (0.12)
	Fall	150 (26.69)	81 (27.00)	231 (26.80)
	Intentional self harm	2 (0.36)	1 (0.33)	3 (0.35)
	Other external cause of accidental injury	67 (11.92)	73 (24.33)	140 (16.24)
	Transport accident	263 (46.80)	95 (31.67)	358 (41.53)
Type of injury (%)	Blunt	550 (97.86)	300 (100.00)	850 (98.61)
	Blunt and penetrating	2 (0.36)	0 (0.00)	2 (0.23)
	Penetrating	10 (1.78)	0 (0.00)	10 (1.16)
Mode of transport (%)	Ambulance	238 (42.35)	41 (13.67)	279 (32.37)
	Arrived walking	14 (2.49)	19 (6.33)	33 (3.83)
	Police	24 (4.27)	8 (2.67)	32 (3.71)
	Private vehicle	286 (50.89)	232 (77.33)	518 (60.09)
Transferred (%)	No	315 (56.05)	253 (84.33)	568 (65.89)
	Yes	247 (43.95)	47 (15.67)	294 (34.11)
SBP (median [IQR])		120.00 [111.00, 130.00]	122.00 [114.00, 134.00]	121.00 [112.00, 132.00]
DBP (median [IQR])		80.00 [70.00, 86.75]	82.00 [73.00, 90.00]	80.00 [72.00, 88.00]
SpO ² (median [IQR])		98.00 [97.00, 98.00]	98.00 [98.00, 98.00]	98.00 [97.00, 98.00]
HR (median [IQR])		88.00 [78.00, 96.75]	87.00 [78.00, 100.00]	88.00 [78.00, 98.00]
RR (median [IQR])		20.00 [18.00, 22.00]	24.00 [20.00, 26.00]	22.00 [18.00, 24.00]
EGCS (%)	1	33 (5.87)	11 (3.67)	44 (5.10)
	2	8 (1.42)	1 (0.33)	9 (1.04)
	3	17 (3.02)	1 (0.33)	18 (2.09)
	4	503 (89.50)	286 (95.33)	789 (91.53)
	Non testable	1 (0.18)	1 (0.33)	2 (0.23)
VGCS (%)	1	35 (6.23)	10 (3.33)	45 (5.22)
	2	11 (1.96)	4 (1.33)	15 (1.74)
	3	7 (1.25)	0 (0.00)	7 (0.81)
	4	22 (3.91)	0 (0.00)	22 (2.55)
	5	487 (86.65)	285 (95.00)	772 (89.56)
	Non testable	0 (0.00)	1 (0.33)	1 (0.12)
MGCS (%)	1	15 (2.67)	4 (1.33)	19 (2.20)
	2	7 (1.25)	2 (0.67)	9 (1.04)
	3	9 (1.60)	4 (1.33)	13 (1.51)
	4	6 (1.07)	1 (0.33)	7 (0.81)
	5	23 (4.09)	3 (1.00)	26 (3.02)
	6	500 (88.97)	286 (95.33)	786 (91.18)
	Non testable	2 (0.36)	0 (0.00)	2 (0.23)
AVPU (%)	Alert	499 (88.79)	286 (95.33)	785 (91.07)
	Pain responsive	28 (4.98)	9 (3.00)	37 (4.29)
	Unresponsive	17 (3.02)	4 (1.33)	21 (2.44)
	Voice responsive	18 (3.20)	1 (0.33)	19 (2.20)
Delay (median [IQR])		170.00 [50.00, 893.50]	66.00 [35.00, 288.00]	120.00 [43.25, 693.75]
All cause 30-day mortality (%)	No	512 (91.10)	289 (96.33)	801 (92.92)
	Yes	50 (8.90)	11 (3.67)	61 (7.08)

Abbreviations and explanations: AVPU, Alert, voice, pain, unresponsive scale; DBP, Diastolic blood pressure in mmHg; Delay, Time between injury and arrival to participating centre in minutes; EGCS, Eye component of the Glasgow Coma Scale; HR, Heart rate; MGCS, Motor component of the Glasgow Coma Scale; RR, Respiratory rate in breaths per minute; SBP, Systolic blood pressure in mmHg; SpO², Peripheral capillary oxygen saturation; Transferred, Transferred from another health facility; VGCS, Verbal component of the Glasgow Coma Scale