

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. XX did not provide informed consent. Out of the YY fulfilling the inclusion criteria, 48 had missing data on priority level assigned by clinicians, leaving 1452 patients. An additional 583 were excluded because of missing outcome data. Thus, the final study sample included 869 patients.

The median age among included patients was 30 (IQR 24-42) years. A majority, 686 (79%) patients, were males. The most common mechanism of injury was transport accidents, accounting for 360 (41%) patients. A total of 521 (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.

Table 1: Sample characteristics

Characteristic	Level	Training	Test	Overall
n (%)		568 (65.36)	301 (34.64)	869 (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	118 (20.77)	65 (21.59)	183 (21.06)
	Male	450 (79.23)	236 (78.41)	686 (78.94)
Mechanism of injury (%)	Assault	77 (13.56)	50 (16.61)	127 (14.61)
	Burn	2 (0.35)	1 (0.33)	3 (0.35)
	Event of undetermined intent	1 (0.18)	0 (0.00)	1 (0.12)
	Fall	152 (26.76)	81 (26.91)	233 (26.81)
	Intentional self harm	2 (0.35)	1 (0.33)	3 (0.35)
	Other external cause of accidental injury	69 (12.15)	73 (24.25)	142 (16.34)
	Transport accident	265 (46.65)	95 (31.56)	360 (41.43)
Type of injury (%)	Blunt	556 (97.89)	301 (100.00)	857 (98.62)
	Blunt and penetrating	2 (0.35)	0 (0.00)	2 (0.23)
	Penetrating	10 (1.76)	0 (0.00)	10 (1.15)
Mode of transport (%)	Ambulance	242 (42.61)	41 (13.62)	283 (32.57)
	Arrived walking	14 (2.46)	19 (6.31)	33 (3.80)
	Police	24 (4.23)	8 (2.66)	32 (3.68)
	Private vehicle	288 (50.70)	233 (77.41)	521 (59.95)
Transfer status (%)	No	317 (55.81)	254 (84.39)	571 (65.71)
	Yes	251 (44.19)	47 (15.61)	298 (34.29)
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, 87.00]	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, 97.00]	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	35 (6.16)	11 (3.65)	46 (5.29)
	2	8 (1.41)	1 (0.33)	9 (1.04)
	3	18 (3.17)	1 (0.33)	19 (2.19)
	4	506 (89.08)	287 (95.35)	793 (91.25)
	Non testable	1 (0.18)	1 (0.33)	2 (0.23)
VGCS (%)	1	37 (6.51)	10 (3.32)	47 (5.41)
	2	11 (1.94)	4 (1.33)	15 (1.73)
	3	7 (1.23)	0 (0.00)	7 (0.81)
	4	23 (4.05)	0 (0.00)	23 (2.65)
	5	490 (86.27)	286 (95.02)	776 (89.30)
	Non testable	0 (0.00)	1 (0.33)	1 (0.12)
MGCS (%)	1	17 (2.99)	4 (1.33)	21 (2.42)
	2	7 (1.23)	2 (0.66)	9 (1.04)
	3	9 (1.58)	4 (1.33)	13 (1.50)
	4	6 (1.06)	1 (0.33)	7 (0.81)
	5	23 (4.05)	3 (1.00)	26 (2.99)
	6	504 (88.73)	287 (95.35)	791 (91.02)
	Non testable	2 (0.35)	0 (0.00)	2 (0.23)
AVPU (%)	Alert	502 (88.38)	287 (95.35)	789 (90.79)
	Pain responsive	28 (4.93)	9 (2.99)	37 (4.26)
	Unresponsive	19 (3.35)	4 (1.33)	23 (2.65)
	Voice responsive	19 (3.35)	1 (0.33)	20 (2.30)
Delay (median [IQR])		165.00 [50.00, 903.50]	68.00 [35.00, 285.00]	120.00 [44.00, 700.00]
All cause 30-day mortality (%)	No	515 (90.67)	290 (96.35)	805 (92.64)
	Yes	53 (9.33)	11 (3.65)	64 (7.36)

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; VGCS, Verbal component of the Glasgow Coma Scale