

Supplementary Table 1. Summary of reviewed articles reporting evaluation of trauma score (n=98)

Country	Year	Study population	Study design	Sample size	Trauma score	Predictor of mortality (AUROC)	Feasibility	Quality improvement	Author
Brazil	2013	Admitted patients with penetrating cardiac trauma	Prospective registry	93	ISS RTS	✓+ ✓+			Pereira et al. [35]
Brazil	2017	Admitted trauma patients	Retrospective record review	2,416	TRISS	✓ (0.85)	✓		de Alencar Domingues et al. [93]
Cambodia; Iraq	2003	Trauma patients attended by trauma rescue system	Prospective questionnaire	1,285	ISS RTS	✓+ ✓+ (>0.90)		✓	Husum et al. [24]
Cameroon	2010	All thoracic trauma patients (>16 years)	Retrospective record review	354	AIS ISS	✓+ ✓+			Mefire et al. [21]
Cameroon	2011	All trauma patients (>15 years)	Retrospective record review	1,713	ISS		× (8% of cases)		Mefire et al. [103]
Cameroon	2014	All trauma patients	Prospective registry	2,855	ISS	✓+	✓ (underestimation)		Juillard et al. [32]
Cameroon	2014	All trauma patients	Prospective questionnaire	2,855	ISS KTS RTS TRISS	✓ (0.72) ✓ (0.77) ✓ (0.73) ✓ (0.71)			Weeks et al. [14]
China	2010	All trauma patients	Prospective cohort study	150	ISS	✓			Wang et al. [62]
Colombia	2014	Trauma patients 12h or less after injury	Prospective registry	108	ISS	✓+			Kesinger et al. [36]
Ethiopia	2012	Severely injured trauma patients (>15 years)	Retrospective record review	328	ISS RTS TRISS	✓+ ✓+ ✓+			Mengitsu & Azaj [26]
Ghana	1993	All trauma patients	Retrospective record review	539	ISS	✓+			Mock et al. [37]

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Ghana	1993	Pediatric patients (<19 years)	Retrospective record review	181	ISS	✓+		✓	Mock et al. [38]
Ghana	1997	Households in Kumasi Region and 4 contiguous districts	Community-based survey	21,105	AIS		×		Mock et al. [115]
Ghana	1997	Pediatric trauma patients	Hospital-based surveillance	677	ISS	✓+			Abantanga & Mock [39]
Ghana	2001	All trauma patients	Prospective registry	2,022	ISS	✓+			London et al. [40]
Ghana	2017	Trauma patients presenting to ED	Nested diagnostic accuracy study	1,053	KTS-AIS	✓+ (0.93)	✓	✓	Gardner et al. [13]
					RTS	✓ (0.84)		×	
India	2001	Abdominal trauma	Prospective observational study	144	RTS	✓			Lone et al. [80]
India	2004	Trauma patients presenting to ED	Prospective registry	180	AIS	✓+	✓ (underestimation, potential age effects)		Goel et al. [75]
					ISS		✓ (underestimation)		
					TRISS	×	✓ (87% of cases)	✓	
India	2004	Severe trauma	Prospective questionnaire	1,074	TRISS	×			Murlidhar & Roy [41]
India	2012	All trauma patients	Prospective registry	300	ISS	✓+			Deshmukh et al. [25]
					RTS	✓+			
					TRISS	×			

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India	2015	Severely injured patients	Retrospective record review	1,117	ISS	✓ (0.69)	✓  ✓ (35% of cases)		Laytin et al. [12]
					KTS	✓+ (0.86)			
					RTS	✓+ (0.85)			
India	2016	Admitted trauma patients	Prospective cohort study	9,244	ISS	✓+			Roy et al. [41]
India	2017	Patients with life- and/or limb-threatening injuries	Prospective observational study	1,811	ISS	✓+			Dharap et al. [42]
Indonesia	2001	All trauma patients	Prospective registry	105	ISS	✓+	✓ (underestimation)		Joosse et al. [7]
					RTS	✓+			
					TRISS	×			
Indonesia	2009	Traumatic brain injury (TBI)	Prospective registry	49	ISS	✓+	✓ (98% of cases)		Joosse et al. [28]
					RTS	✓+			
					TRISS	✓+			
Iran	2000	Admitted trauma patients	Retrospective record review	2,662	ISS	✓+	✓		Moini et al. [34]
					RTS	✓+			
					TRISS	✓			
Iran	2001	Trauma patients presenting to ED	Prospective registry	58,013	TRISS		✓	✓	Zargar et al. [106]
Iran	2003	Road traffic injury, pediatric	Prospective questionnaire	921	ISS	✓+			Zargar et al. [43]
Iran	2003	Admitted trauma patients (>65 years)	Prospective questionnaire	963	ISS	✓			Ghodsi et al. [64]
Iran	2004	Assault-related injuries	Retrospective record review	479	ISS	✓+			Zargar et al. [20]

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Iran	2006	Road traffic injury (motorcycle)	Prospective questionnaire	1,332	ISS	✓+			Zargar et al. [44]
Iran	2006	All trauma patients	Retrospective record review	768	TRISS	×			Chardoli & Rahimi-Movaghar [94]
Iran	2006	Blunt and penetrating trauma	Prospective registry	4,096	TRISS	✓+ (>0.93)		✓	Rabbani & Moini
Iran	2008	Admitted trauma patients	Prospective cohort study	110	ISS		✓ (coding errors)		Honarmand & Safavi
Iran	2009	Admitted trauma patients	Prospective registry	779	ISS	✓+			Karbaksh et al. [59]
Iran	2010	Traumatic spine injury	Prospective questionnaire	619	ISS	✓+			Heidari et al. [19]
Iraq	2008	Penetrating trauma	Retrospective record review	919	ISS	✓+			Wisborg et al. [45]
Kenya	2003	Road traffic injury	Prospective registry	240	ISS			✓	Saidi et al. [109]
Kenya	2004	Admitted trauma patients	Prospective registry	202	ISS TRISS		× (time consuming, resource limitations)		Otieno et al. [112]
Kenya	2005	Road traffic injury	Prospective longitudinal survey	233	ISS	✓+			Saidi et al. [29]
Kenya	2013	Road traffic injury (motorcycle)	Prospective questionnaire	205	ISS TRISS	✓+ ×			Saidi et al. [50]
Kenya	2017	All trauma patients presenting to ED	Prospective registry	14,237	ISS	✓+			Botchey et al. [49]

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Kenya	2017	All trauma patients	Retrospective record review	16,548	eISS	✓ (0.76)	✓ (modified use)		Hung et al. [73]
					KTS	✓ (0.87)	✓		
					RTS	✓ (0.79)			
					TRISS	✓ (0.89)	✓		
Lebanon	2007	All trauma patients (>16 years)	Prospective registry	891	ISS	✓ (0.88)			Tamim et al. [63]
Malawi	2010	Admitted trauma patients	Retrospective record review	127	ISS		× (missing data)		Samuel et al. [113]
Malawi	2015	All trauma patients	Prospective cohort study	15,617	KTS	✓ (0.69)	✓ (cautionary)	×	Haac et al. [79]
					RTS	✓ (0.67)	✓ (cautionary)	✓	
Malawi	2016	All trauma patients	Retrospective record review	50,059	RTS		✓ (35% of cases)		Boschini et al. [105]
Malaysia	2002	All trauma patients (>12 years)	Prospective cohort study	484	ISS	✓+			Sethi et al. [51]
Malaysia	2013	TBI (first episode)	Retrospective record review	100	AIS	✓+			Leong et al. [76]
Mexico	1995	Admitted trauma patients (>15 years)	Retrospective record review	545	AIS (head)	✓+	×		Arreola-Risa et al. [77]
					ISS				
Nigeria	1990	All trauma patients	Prospective registry	419	ISS	✓+			Elechi & Etawo [48]
Nigeria	2000	Road traffic injury, pediatric	Retrospective record review	324	ISS	✓			Adesunkanmi et al. [65]
Nigeria	2001	Admitted trauma patients	Prospective observational study	253	TRISS		✓		Onwudike et al. [107]

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Nigeria	2008	Polytrauma patients	Prospective questionnaire	291	ISS	✓+			Obalum et al. [47]
Nigeria	2008	Head injury	Retrospective record review	648	ISS RTS TRISS	× × ×			Odebode [72]
Nigeria	2011	All trauma patients	Retrospective record review	286	RTS		× (35% of cases)	✓	Afuwape et al. [104]
Pakistan	2002	Admitted trauma patients	Prospective registry	279	ISS TRISS	✓ ×	✓	✓	Zafar et al. [10]
Pakistan	2004	Trauma deaths	Registry-based audit	17	ISS	✓+			Jat et al. [46]
Pakistan	2010	Trauma patients (>14 years)	Prospective registry	978	ISS TRISS	✓+ ✓+			Khan et al. [9]
Pakistan	2013	All trauma patients	Retrospective record review	1,227	ISS RTS	✓+ ✓+		✓ ✓	Hashmi et al. [33]
Pakistan	2013	Abdominal trauma	Retrospective record review	30	ISS			×	Memon et al. [110]
Pakistan	2015	Abdominal gunshot wounds	Retrospective record review	70	ISS	✓+ (0.95)			Shah et al. [52]
South Africa	1992	All trauma patients (except orthopedic cases)	Prospective registry	198	ISS RTS TRISS		✓ (age effects) ✓		Eisenberg [90]
South Africa	1997	All trauma patients (except head injuries) (>18 years)	Prospective model validation	300	ISS	✓			Muckart et al. [66]
South Africa	2002	All trauma patients	Prospective registry	428	TRISS	✓+			Buntman & Yeomans [91]

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South Africa	2005	Vena cava injury	Retrospective record review	48	ISS	✓+			Navsaria et al. [53]
South Africa	2007	Liver trauma	Prospective registry	478	ISS	✓+			Sikhondze et al. [54]
South Africa	2011	All trauma patients	Retrospective record review	407	ISS	✓			Cheddie et al. [67]
South Africa	2012	Abdominal trauma	Prospective questionnaire	488	ISS	✓			Mnguni et al. [68]
South Africa	2013	Trauma patients who underwent haemodialysis	Retrospective record review	64	ISS RTS	× ×			Machemehl et al. [71]
South Africa	2014	Victims of community assault	Retrospective record review	263	AIS ISS	✓+ ✓+	✓ (underestimation) ✓ (underestimation)		Forgus et al. [102]
South Africa	2016	Road traffic injury, pediatric	Retrospective record review	8,815	AIS			✓	Burstein et al. [74]
Tanzania	2011	Maxillofacial injuries	Prospective questionnaire	154	ISS	✓+			Chalya et al. [55]
Tanzania	2011	Chest injury	Hospital-based surveillance	150	ISS RTS	✓+ ✓+		✓ ✓	Lema et al. [23]
Tanzania	2012	Intentional injuries	Prospective questionnaire	1,642	ISS	✓+			Chalya & Gilyoma [56]
Tanzania	2012	Geriatric injury patients (<60 years)	Prospective questionnaire	414	ISS	✓			Chalya et al. [69]
Tanzania	2012	Splenic injury patients	Prospective questionnaire	118	KTS	✓+			Chalya et al. [81]
Tanzania	2012	Road traffic injury	Prospective questionnaire	1,678	KTS	✓+		✓	Chalya et al. [83]
Tanzania	2013	Abdominal trauma	Prospective registry	396	KTS	✓+		✓	Chalya & Mabula [84]
Tanzania	2016	Road traffic injury	Prospective questionnaire	4,675	KTS	✓+			Boniface et al. [85]

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Thailand	2001	All trauma patients	Prospective registry	2,044	ISS	✓+ (0.96)			Jamulitrat et al. [57]
Thailand	2002	All trauma patients	Prospective observational study	146	ISS RTS TRISS	✓+		✓ ✓	Jamulitrat et al. [92]
Thailand	2003	Motor vehicle accidents	Prospective investigation: direct observation, record review, patient and provider interviews	73	ISS	✓+			Kasantikul et al. [22]
Thailand	2004	Road traffic injury	Retrospective record review	8,477	TRISS	×			Podang et al. [96]
Thailand	2005	Admitted trauma patients	Retrospective record review	203	TRISS	✓+	×	✓	Thanapaisal et al. [27]
Thailand	2009	Admitted trauma patients (>15 years)	Prospective registry	1,487	ISS RTS TRISS	✓+ ✓ ✓+ (>0.90)		✓	Siritongtaworn & Opananon [30]
Thailand	2017	Adult trauma patients presenting to ED	Prospective cohort study	80	ISS	✓+			Wuthisuthime thawee [58]
Tunisia	2004	Head injuries admitted to ICU	Retrospective record review	437	ISS	✓			Bahloul et al. [60]
Tunisia	2009	Severe TBI (<15 years)	Retrospective record review	455	ISS	✓ (0.57)			Bahloul et al [61].

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Turkey	1999	Admitted trauma patients	Retrospective record review	347	ISS	✓+	✓ (required sophisticated investigation)		Kaya et al. [31]
					RTS	✓			
Turkey	2002	Penetrating abdominal trauma	Prospective registry	119	ISS			✓	Ozturk et al. [111]
Uganda	1999	Trauma patients presenting to ED	Prospective questionnaire	150	TRISS		×		Kirya et al. [95]
Uganda	2000	Trauma patients presenting to ED	Prospective registry	5,210	KTS	✓+	✓	✓	Kobusingye & Lett
Uganda	2001	Admitted trauma patients	Retrospective record review, prospective audit	1,305	KTS	✓ (0.88)	✓	✓	Owor & Kobusingye [82]
					ISS	✓ (0.81)			
					KTS	✓ (0.84)		✓	
Uganda	2003	All trauma patients	Prospective registry	150	RTS	✓ (0.87)		×	MacLeod et al. [70]
					TRISS	✓ (0.87)			
Uganda	2007	All trauma patients	Prospective registry	2,022	KTS	✓			MacLeod et al. [86]
Uganda	2010	Trauma patients presenting to ED	Prospective questionnaire	173	KTS	✓ (0.87)			Mutooro et al. [87]
Uganda	2010	Trauma patients presenting to ED	Prospective cohort study, secondary analysis	3,481	KTS	✓+			Hsia et al. [88]

Note: ✓+ : Strong or good predictor of mortality based on logistic regression analysis and/or author report; ✓ : Moderate or weak predictor of mortality / Feasible (with challenges) / Associated with QI measures; × : Not associated with mortality / Not feasible / Not used in QI and/or not associated with QI measures; blank indicates that outcome was not evaluated. Area under the ROC curve (AUROC) included above when available.

