

Supplementary Online Content

Newgard CD, Caughey A, McConnell KJ, et al. Comparison of injured older adults included in vs excluded from trauma registries with 1-year follow-up. *JAMA Surg*. Published online July 10, 2019. doi:10.1001/jamasurg.2019.2279

eFigure. Cohort development schematic

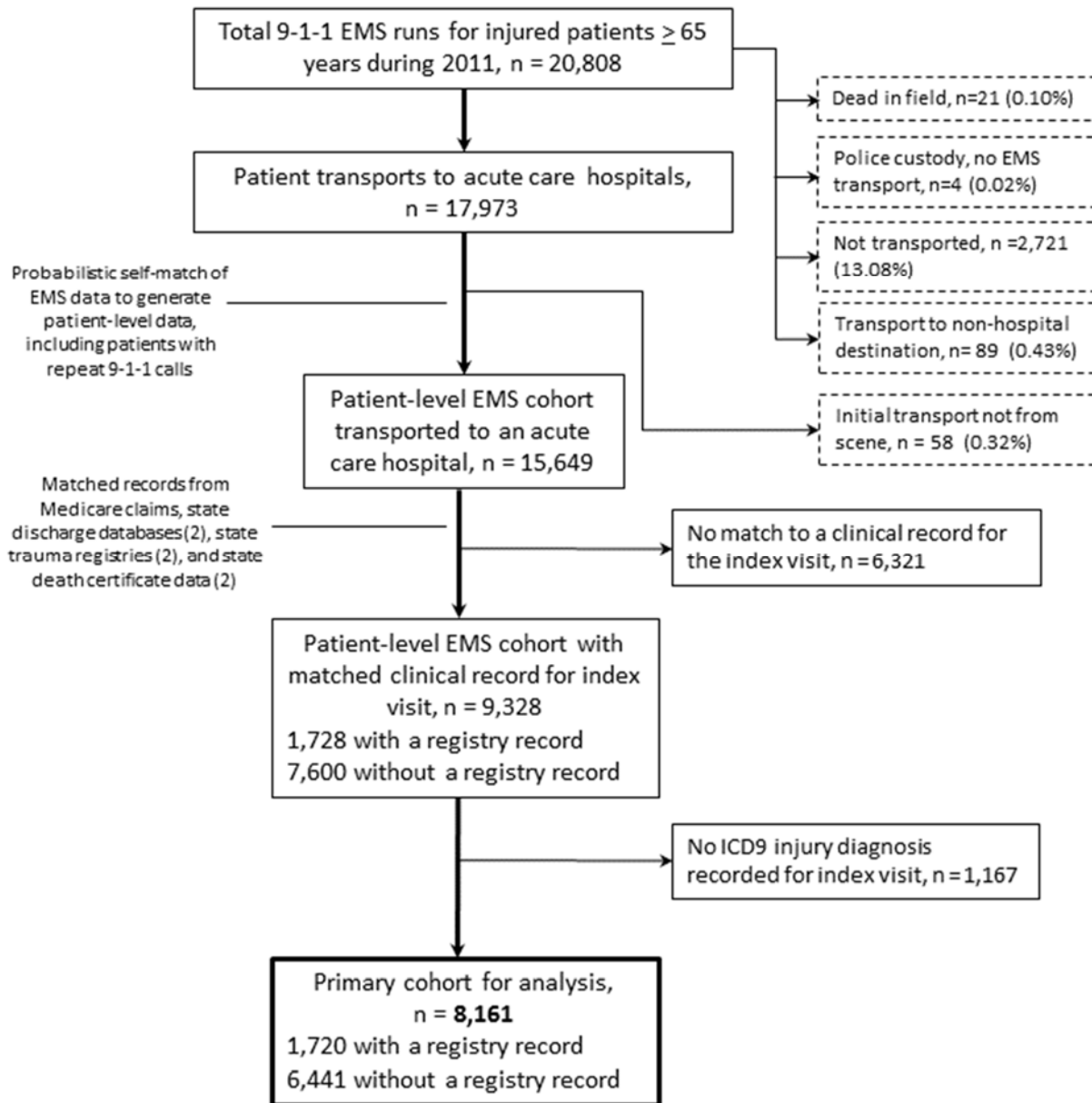
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This supplementary material has been provided by the authors to give readers additional information about their work.

eFigure 1. Cohort development schematic



eTable 1. Comparison of patients included vs excluded from the primary analytic cohort

	Primary study sample (n = 8,161)				Excluded	
	Captured in a trauma registry		Not in a trauma registry		-	
	n = 1,720		n = 6,441		n = 7,488†	
Demographics:						
Mean – age (years)	80.5		82.6		81.8	
Women	1,032	(60.0%)	4,547	(70.6%)	4,961	(67.2%)
Out-of-hospital characteristics:						
Met field triage criteria, per EMS	1,240	(72.1%)	158	(2.5%)	146	(2.0%)
SBP ≤ 100 mmHg	99	(5.8%)	269	(4.2%)	256	(3.7%)
Respiratory rate ≤ 10 or ≥ 24	186	(10.8%)	354	(5.5%)	357	(5.4%)
GCS ≤ 8	50	(2.9%)	8	(0.1%)	14	(0.3%)
Assisted ventilation	40	(2.3%)	22	(0.3%)	28	(0.4%)
Mechanism of Injury						
Fall	1,412	(82.1%)	5,803	(90.1%)	3,764	(80.8%)
Motor vehicle crash	195	(11.4%)	183	(2.9%)	319	(6.8%)
Motor vehicle vs. pedestrian	38	(2.2%)	28	(0.4%)	26	(0.6%)
Penetrating injury	10	(0.6%)	50	(0.8%)	36	(0.8%)
Other	65	(3.8%)	377	(5.9%)	3,343	(11.0%)
Initial hospital:						
Level I	501	(29.1%)	408	(6.3%)	472	(6.4%)
Level II	214	(12.4%)	401	(6.2%)	492	(6.6%)
Level III	608	(35.4%)	904	(14.0%)	1,257	(17.0%)
Level IV/V	263	(15.3%)	970	(15.1%)	1,057	(14.3%)
Non-trauma hospital	134	(7.8%)	3,758	(58.3%)	4,140	(55.9%)
Mortality:						
30-day mortality	152	(8.8%)	392	(6.1%)	251	(3.4%)
90-day mortality	229	(13.3%)	725	(11.3%)	509	(6.8%)
365-day mortality	356	(20.7%)	1,531	(23.8%)	1,288	(17.2%)

*EMS = emergency medical services; SBP = systolic blood pressure; GCS = Glasgow Coma Scale score; ISS = Injury Severity Score; AIS = Abbreviated Injury Scale score.

†Based on observed values for each variable. Missingness about excluded patients ranged from 0% (mortality, age, assisted ventilation) to 37.8% (mechanism of injury).

eTable 2. Specific injury diagnoses among 2241 older adults with extremity Abbreviated Injury Scale (AIS) scores ≥ 3 by trauma registry status and whether the injury was isolated

	Isolated Extremity AIS ≥ 3 (all other body regions AIS ≤ 1) (n = 1,982)		All patients with extremity AIS ≥ 3 (n = 2,241)	
	In Trauma Registry (n = 339)	Not in Trauma Registry (n = 1,643)	In Trauma Registry (n = 449)	Not in Trauma Registry (n = 1,792)
Fracture of neck of femur (hip)	240 (70.8%)	1,491 (90.7%)	304 (67.7%)	1,628 (90.8%)
Fracture of pelvis	11 (3.2%)	16 (1%)	33 (7.3%)	19 (1.1%)
Fracture of humerus	3 (0.9%)	5 (0.3%)	6 (1.3%)	7 (0.4%)
Fracture of radius & ulna	16 (4.7%)	13 (0.8%)	23 (5.1%)	14 (0.8%)
Fracture of other & unspecified parts of femur	90 (26.5%)	192 (11.7%)	116 (25.8%)	219 (12.2%)
Fracture of tibia & fibula	7 (2.1%)	2 (0.1%)	11 (2.4%)	2 (0.1%)
Fracture of ankle	12 (3.5%)	12 (0.7%)	14 (3.1%)	12 (0.7%)
Dislocations	3 (0.9%)	2 (0.1%)	6 (1.3%)	2 (0.1%)
Traumatic amputation of leg or foot	2 (0.3%)	0	2 (0.2%)	0
Injury to blood vessels of upper extremity	0	0	1 (0.2%)	0
Injury to blood vessels of lower extremity	2 (0.6%)	1 (0.1%)	5 (1.1%)	1 (0.1%)
Crushing injury of upper limb	0	1 (0.1%)	0	1 (0.1%)
Crushing injury of lower limb	3 (0.9%)	1 (0.1%)	3 (0.7%)	1 (0.1%)
Crushing injury of multiple or unspecified sites	0	1 (0.1%)	0	1 (0.1%)

*Patients could have more than one type of extremity injury with AIS ≥ 3 , so row proportions may add to greater than 100%.

eTable 3. Absolute numbers of high-risk patients not captured by trauma registries by final hospital destination

High-risk definition	Non-trauma hospital	Level IV-V	Level III	Level II	Level I	Total
ISS \geq 16	113	9	19	17	20	178
Head AIS \geq 3	101	12	31	15	20	179
Chest AIS \geq 3	26	7	4	6	3	46
Abdominal-pelvic AIS \geq 3	3	0	3	1	0	7
Major non-orthopedic surgery	47	6	9	2	4	68
Extremity AIS \geq 3	1147	254	206	115	70	1792
Orthopedic surgery	1158	245	214	114	78	1809