



Key statistics from the National Cardiac Arrest Audit *2017/18*

Data collection scope (NCAA Version 1.3)

NCAA data are collected for all individuals (excluding neonates) receiving chest compression(s) and/or defibrillation and attended by the hospital-based resuscitation team (or equivalent) in response to a 2222 call.

Available data

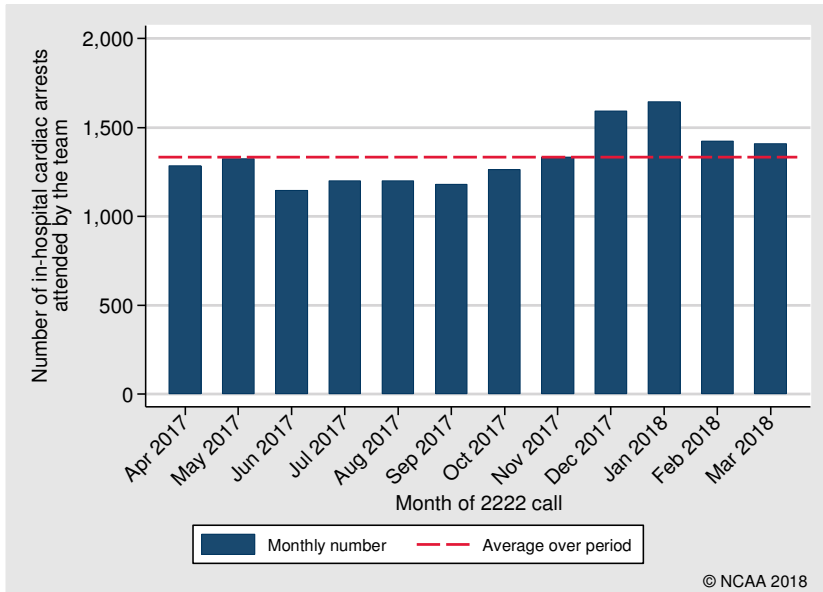
This report is based on data for in-hospital cardiac arrests in NHS acute hospitals. The following team visits were therefore excluded:

- Team visits taking place in specialist or non-acute hospitals
- Team visits taking place in paediatric hospitals
- Team visits (meeting the scope of NCAA) in response to pre-hospital cardiac arrests

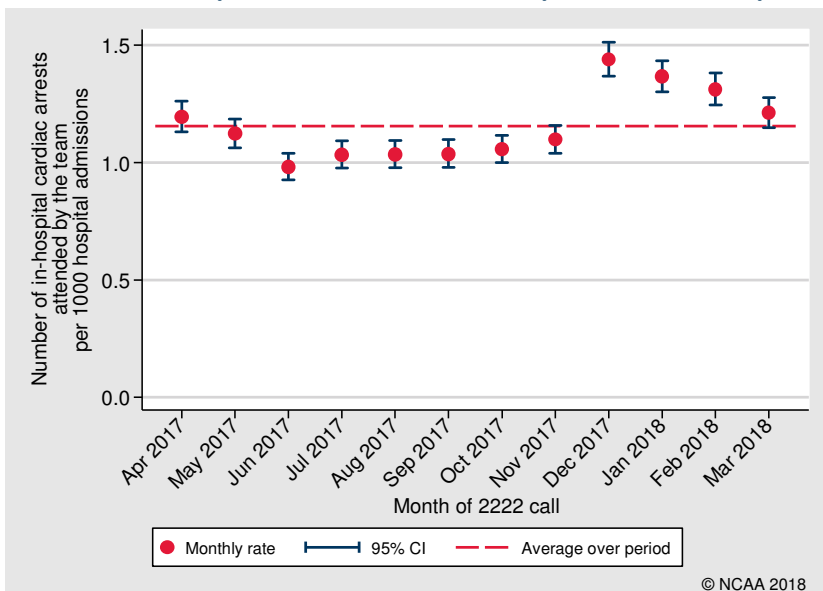
Year	Number of hospitals participating in NCAA	Total number of admissions to hospital	Total number of reported in-hospital cardiac arrests	Total number of individuals
April 2017 – March 2018	185	13,851,292	16,000	15,432
April 2016 – March 2017	182	13,491,110	16,586	16,035
April 2015 – March 2016	188	12,765,380	16,947	16,323
April 2014 – March 2015	172	11,281,047	16,094	15,512
April 2013 – March 2014	161	9,636,511	13,978	13,491

Incidence of in-hospital cardiac arrests attended by the team

Number of in-hospital cardiac arrests attended by the team

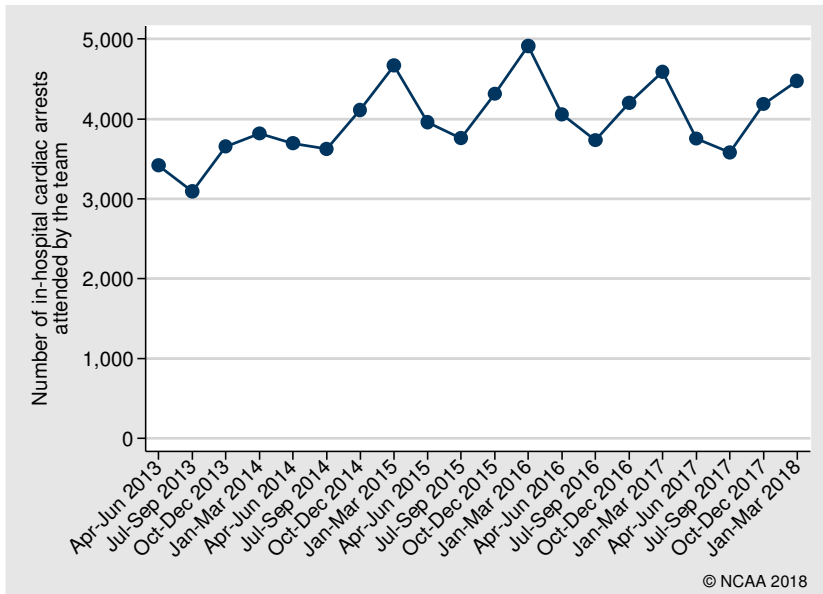


Rate of in-hospital cardiac arrests per 1000 hospital admissions



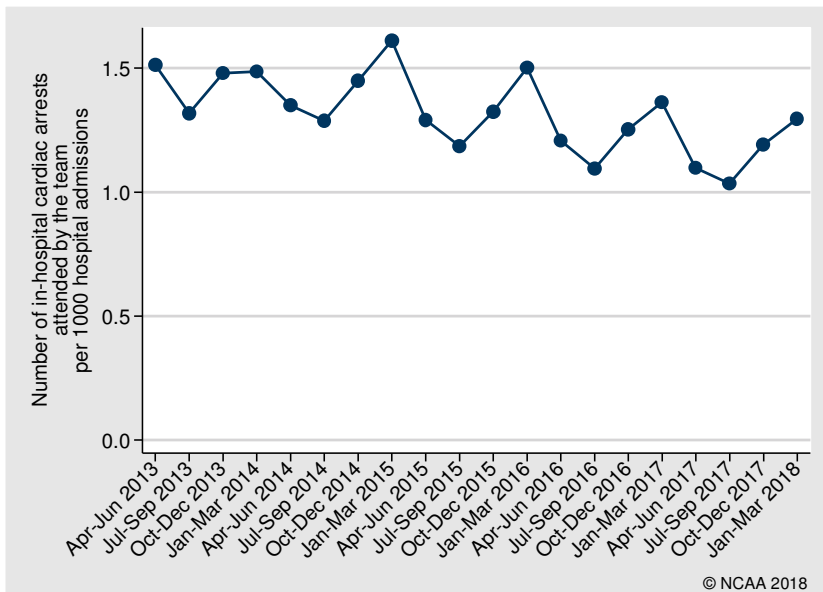
Trends in incidence of in-hospital cardiac arrests attended by the team

Number of in-hospital cardiac arrests attended by the team



Note: number of hospitals participating in NCAA has increased over time

Rate of in-hospital cardiac arrests per 1000 hospital admissions



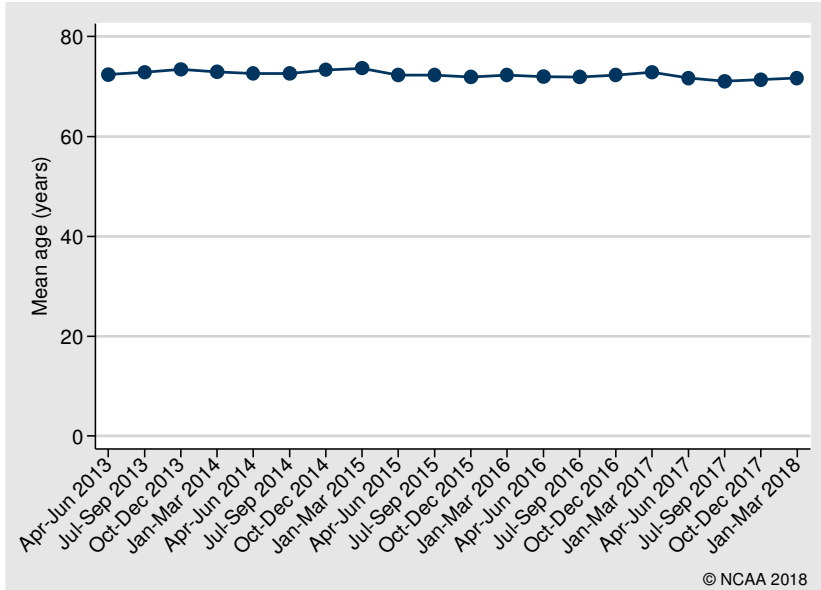
Patient characteristics

Age (years), n (%)	
0-15	195 (1.2)
16-64	3,971 (24.8)
65-74	3,731 (23.3)
75-84	4,909 (30.7)
85+	3,194 (20.0)
Mean (SD)	71.5 (16.2)
Median (IQR)	75 (64, 83)
Sex, n (%)	
Female	6,392 (40.0)
Male	9,607 (60.0)
Missing	1 (0.0)
Reason for admission to/attendance at/visit to your hospital, n (%)	
Patient - trauma	480 (3.0)
Patient - medical	13,442 (84.0)
Patient - elective/scheduled surgery	766 (4.8)
Patient - emergency/urgent surgery	970 (6.1)
Patient - obstetric	35 (0.2)
Outpatient	249 (1.6)
Staff	10 (0.1)
Visitor	48 (0.3)
Missing	0 (0.0)

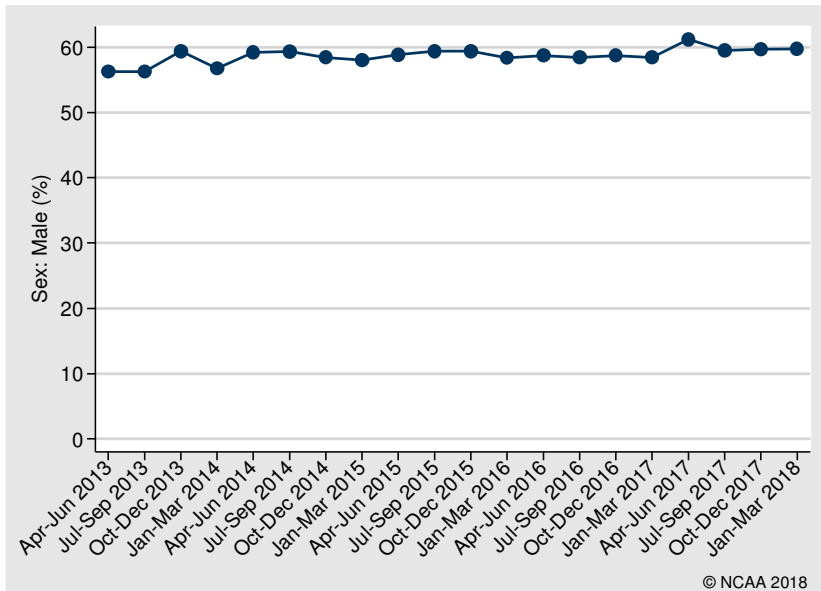
IQR, interquartile range; SD, standard deviation.

Trends in patient characteristics

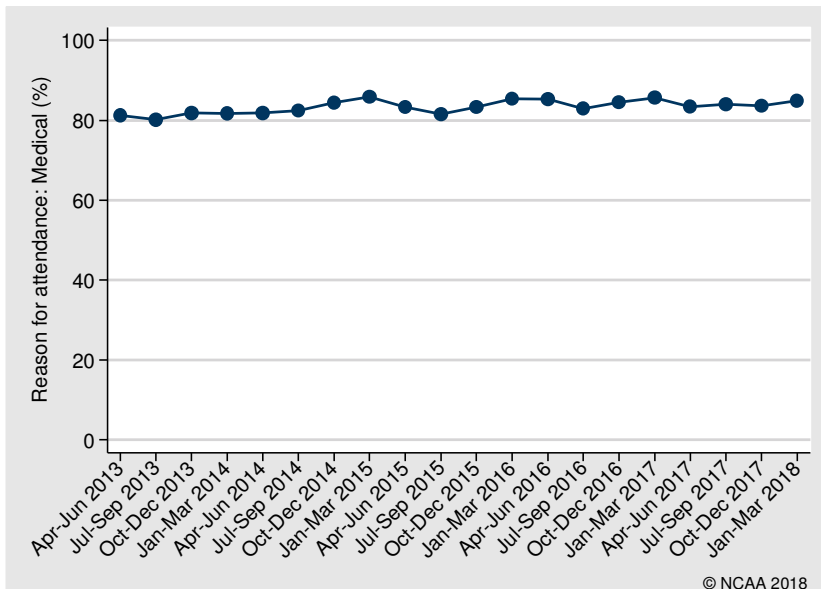
Mean age



Sex: Male



Reason for attendance: Medical



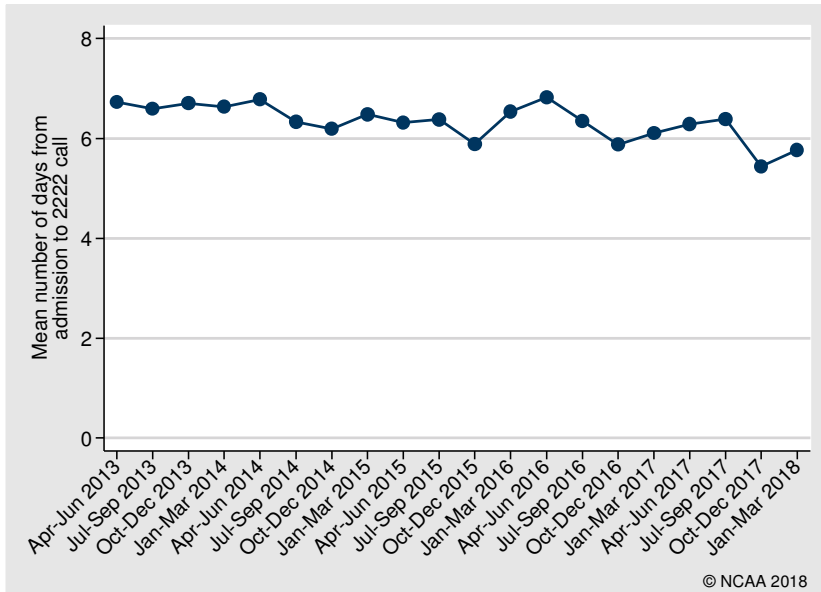
Team visit characteristics

Number of days from admission to 2222 call, n (%)	
0	4,570 (28.6)
1	2,756 (17.2)
2-7	5,150 (32.2)
8-30	2,984 (18.6)
>30	537 (3.4)
Missing	3 (0.0)
Mean (SD)	5.9 (15.3)
Median (IQR)	2 (0, 6)
Location of arrest, n (%)	
Emergency department	1,666 (10.4)
Emergency admissions unit	1,163 (7.3)
Theatre & recovery	264 (1.6)
Imaging department	284 (1.8)
Cardiac catheter laboratory	566 (3.5)
Specialist treatment area	247 (1.5)
ICU or ICU/HDU	879 (5.5)
HDU	179 (1.1)
PICU	39 (0.2)
PHDU	14 (0.1)
Coronary care unit	1,580 (9.9)
Other intermediate care area	18 (0.1)
Obstetrics area	19 (0.1)
Ward	8,870 (55.4)
Other internal location	19 (0.1)
Clinic	98 (0.6)
Non-clinical area	94 (0.6)
Missing	1 (0.0)
Status at team arrival, n (%)	
Dead - resuscitation stopped	132 (0.8)
Resuscitation ongoing	13,294 (83.1)
ROSC achieved before team arrival	1,542 (9.6)
Deteriorating (not yet arrested)	1,025 (6.4)
Missing	7 (0.0)
Presenting/first documented rhythm, n (%)	
Shockable - VF	1,706 (10.7)
Shockable - VT	758 (4.7)
Shockable - unknown rhythm	105 (0.7)
Non-shockable - asystole	3,196 (20.0)
Non-shockable - PEA	8,553 (53.5)
Non-shockable - bradycardia	62 (0.4)
Non-shockable - unknown rhythm	286 (1.8)
Never determined	804 (5.0)
Unknown	530 (3.3)

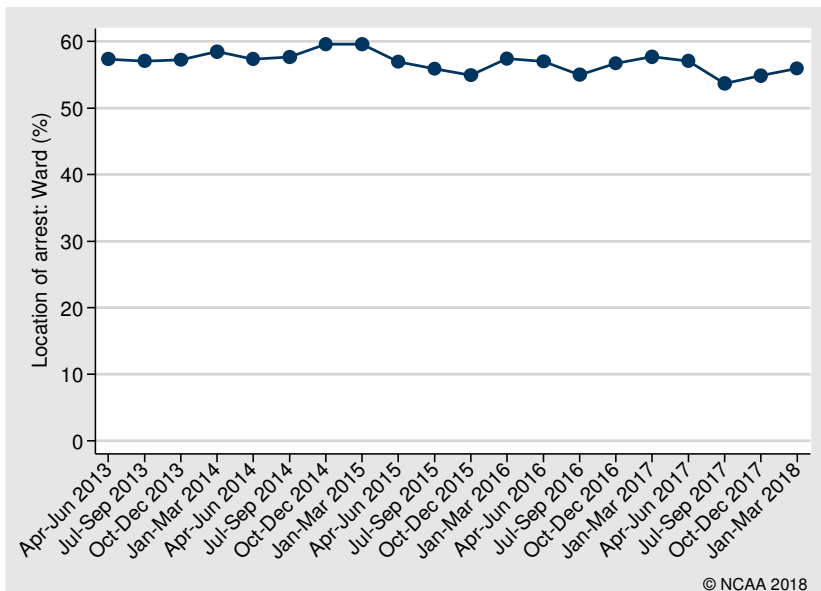
HDU, high dependency unit; ICU, intensive care unit; IQR, interquartile range; PEA, pulseless electrical activity; PHDU, paediatric high dependency unit; PICU, paediatric intensive care unit; ROSC, return of spontaneous circulation; SD, standard deviation; VF, ventricular fibrillation; VT, ventricular tachycardia.

Trends in team visit characteristics

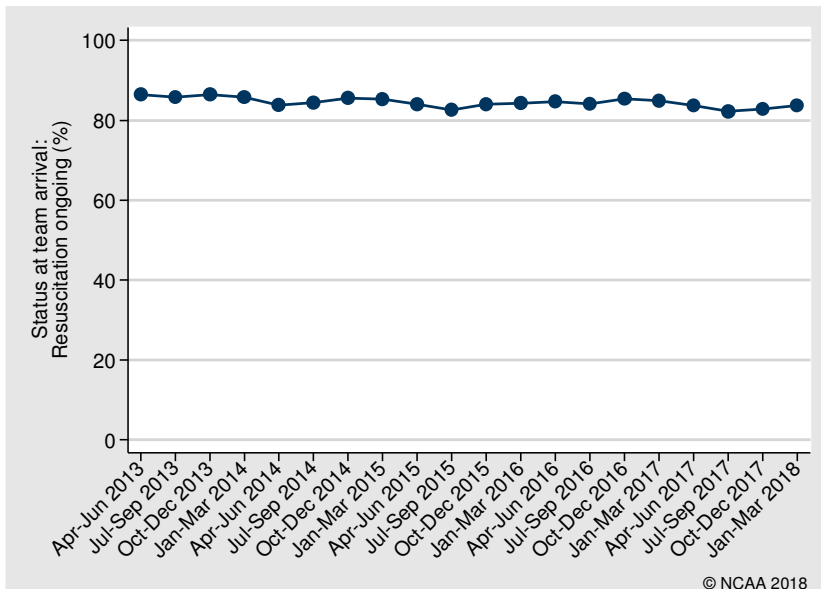
Mean number of days from admission to 2222 call



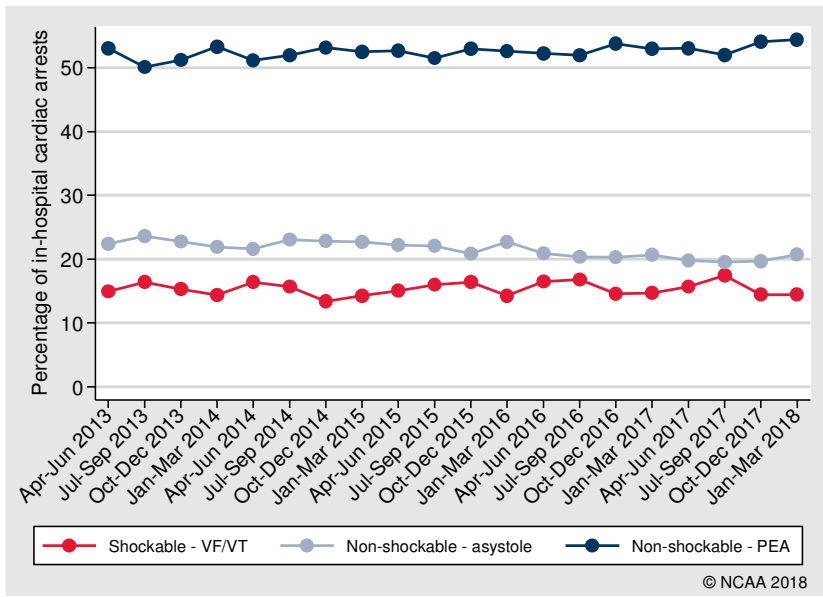
Location of arrest: Ward



Status at team arrival: Resuscitation ongoing



Presenting/first documented rhythm



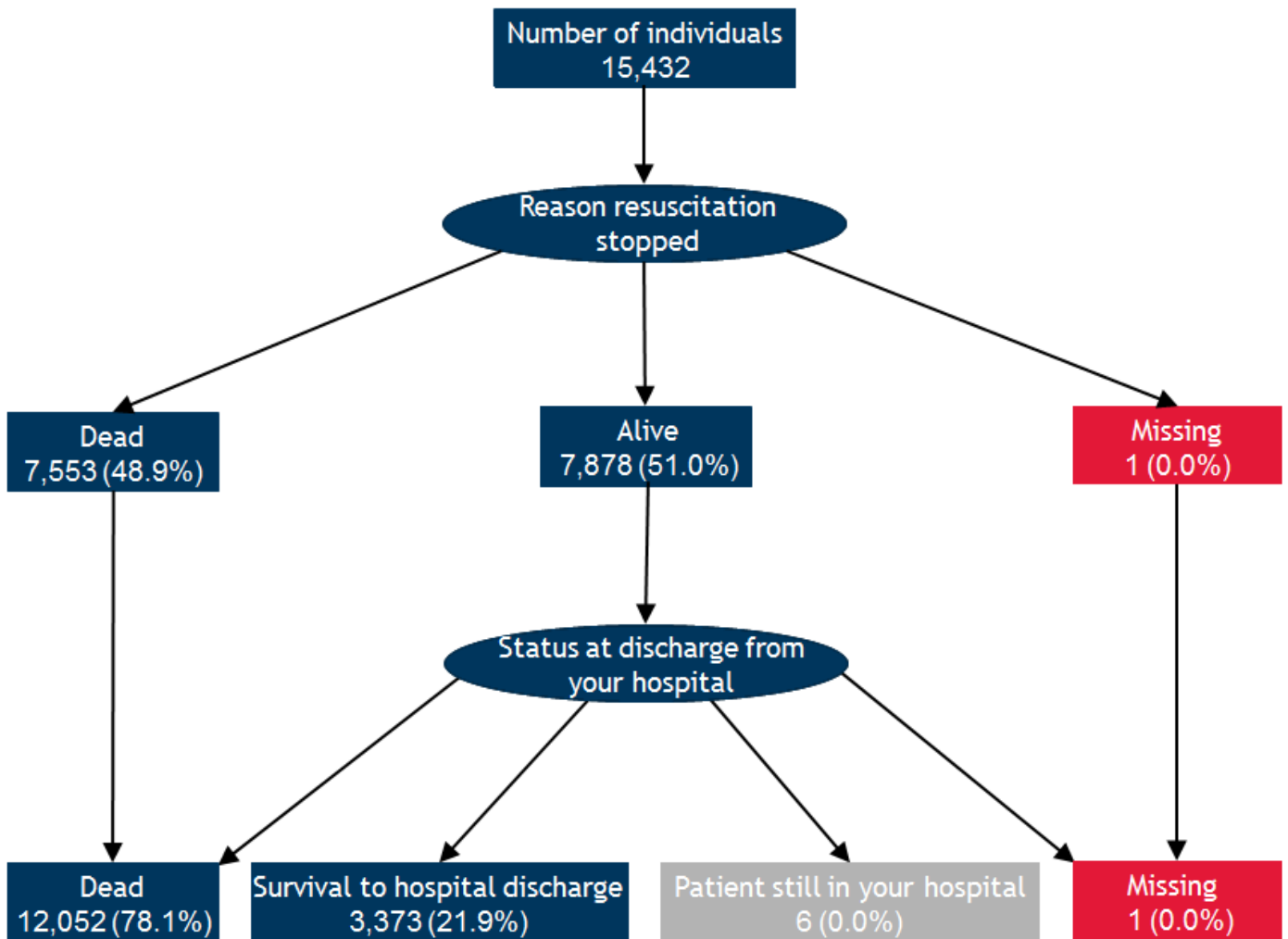
Outcomes

Reason resuscitation stopped at end of team visit, n (%)	
Alive - ROSC > 20 minutes	8,298 (51.9)
Dead - ROSC < 20 minutes	969 (6.1)
Dead - no ROSC	5,643 (35.3)
Dead - DNACPR	371 (2.3)
Dead - futility	718 (4.5)
Missing	1 (0.0)
Post-arrest location, n (% of ROSC > 20 minutes)	
Emergency admissions unit	285 (3.4)
ICU or ICU/HDU	2,949 (35.5)
HDU	132 (1.6)
PICU	61 (0.7)
PHDU	4 (0.0)
CCU	1,547 (18.6)
Other intermediate care area	22 (0.3)
Obstetrics area	3 (0.0)
Ward	1,825 (22.0)
Other internal location	7 (0.1)
Mortuary	1,119 (13.5)
Other hospital	327 (3.9)
Not in hospital	17 (0.2)
Missing	0 (0.0)
CPC at hospital discharge, n (% of adult survivors)	
1	2,784 (84.4)
2	265 (8.0)
3	88 (2.7)
4	13 (0.4)
Missing	148 (4.5)

CPC, cerebral performance category; DNACPR, do not attempt cardiopulmonary resuscitation; HDU, high dependency unit; ICU, intensive care unit; PHDU, paediatric high dependency unit; PICU, paediatric intensive care unit; ROSC, return of spontaneous circulation.

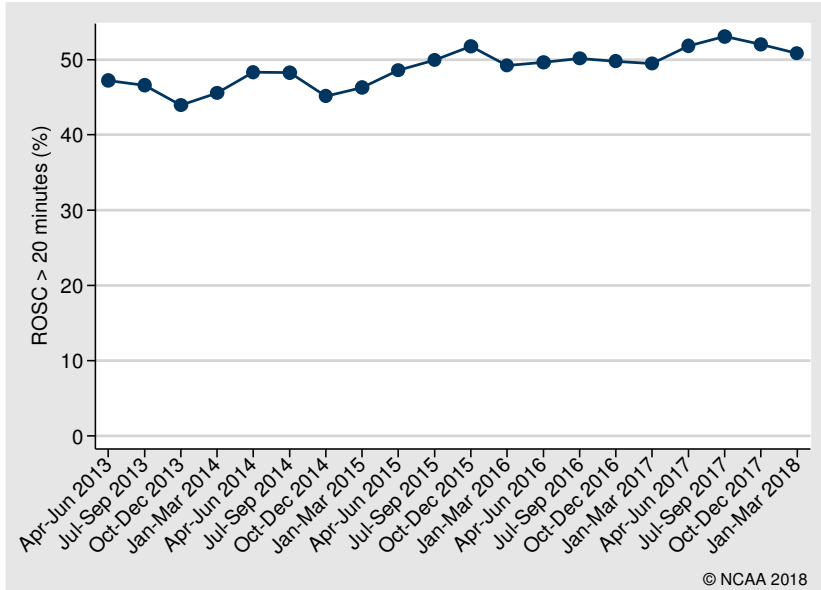
Outcome flow

All percentages are reported as the percentage of all individuals (N=15,432).

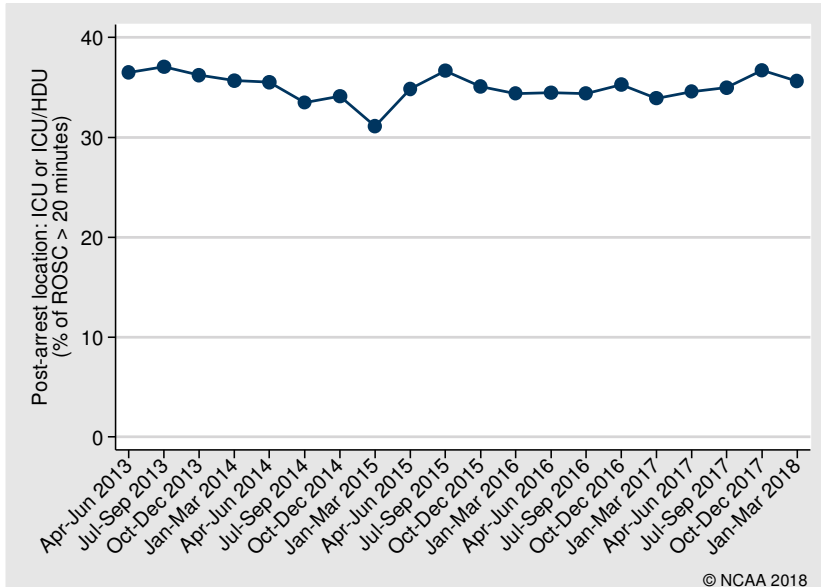


Trends in outcomes

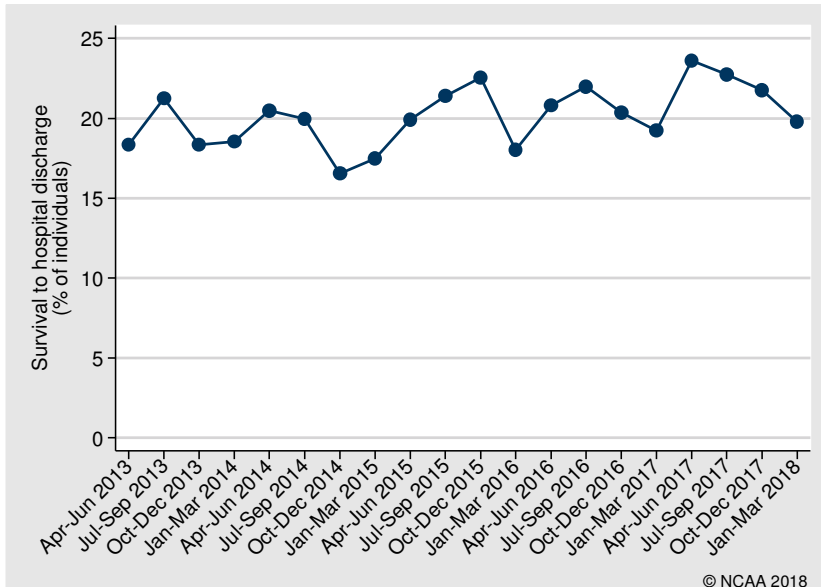
Reason resuscitation stopped: ROSC > 20 minutes



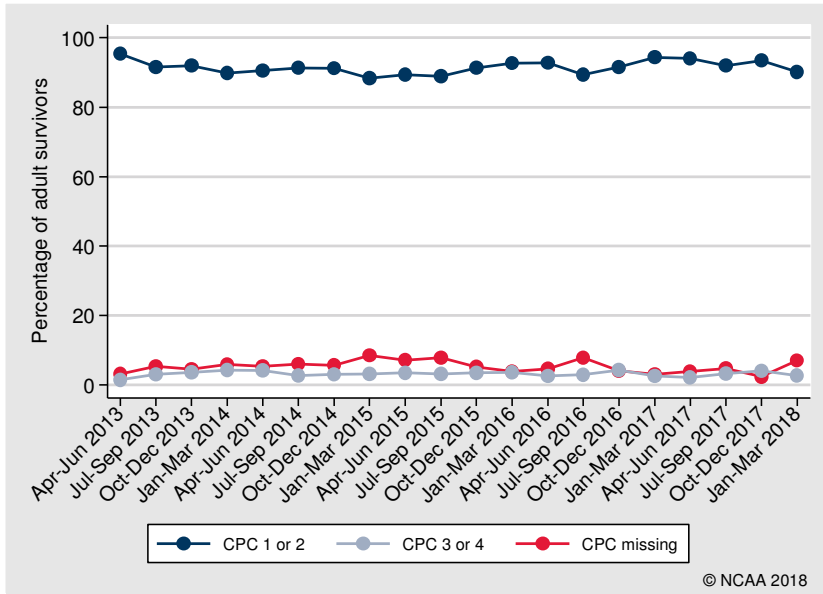
Post-arrest location: ICU or ICU/HDU



Survival to hospital discharge



CPC at hospital discharge (adult survivors)



Outcomes by patient subgroups

ROSC > 20 minutes

Subgroup	Number of in-hospital cardiac arrests*	Number with ROSC > 20 min	Percentage (95% confidence interval)
Overall	15,999	8,298	51.9 (51.1, 52.6)
By presenting rhythm:			
Shockable - VF/VT	2,464	1,946	79.0 (77.3, 80.5)
Non-shockable - asystole	3,195	1,008	31.5 (30.0, 33.2)
Non-shockable - PEA	8,553	4,151	48.5 (47.5, 49.6)
By age group (years):			
0-15	195	134	68.7 (61.9, 74.8)
16-64	3,971	2,378	59.9 (58.4, 61.4)
65-74	3,730	1,977	53.0 (51.4, 54.6)
75-84	4,909	2,459	50.1 (48.7, 51.5)
85+	3,194	1,350	42.3 (40.6, 44.0)

PEA, pulseless electrical activity; ROSC, return of spontaneous circulation; VF, ventricular fibrillation; VT, ventricular tachycardia.

* Excluding arrests missing reason resuscitation stopped (N=1).

Survival to hospital discharge

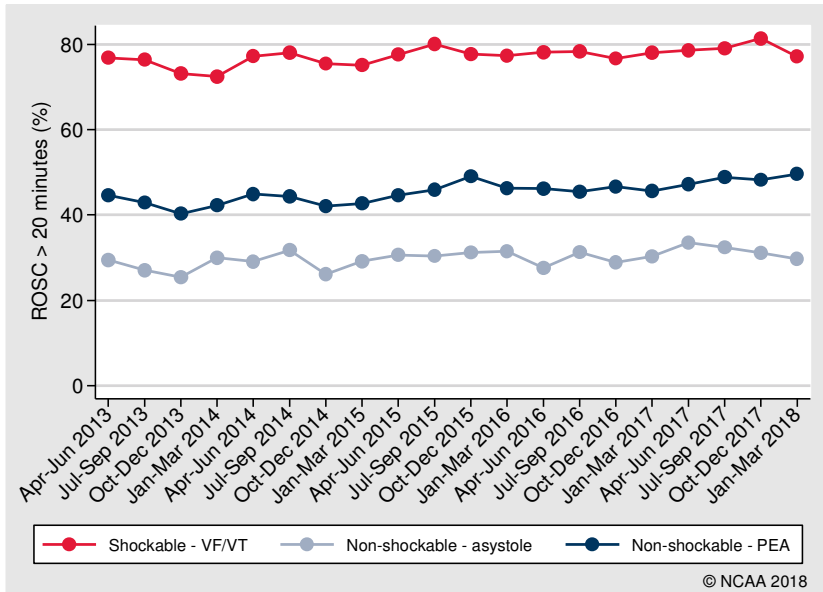
Subgroup	Number of individuals*	Number of hospital survivors	Percentage (95% confidence interval)
Overall	15,425	3,373	21.9 (21.2, 22.5)
By presenting rhythm:			
Shockable - VF/VT	2,265	1,182	52.2 (50.1, 54.2)
Non-shockable - asystole	3,115	313	10.0 (9.0, 11.2)
Non-shockable - PEA	8,298	1,197	14.4 (13.7, 15.2)
By age group (years):			
0-15	180	102	56.7 (49.4, 63.7)
16-64	3,790	1,228	32.4 (30.9, 33.9)
65-74	3,581	779	21.8 (20.4, 23.1)
75-84	4,742	854	18.0 (16.9, 19.1)
85+	3,132	410	13.1 (12.0, 14.3)

PEA, pulseless electrical activity; VF, ventricular fibrillation; VT, ventricular tachycardia.

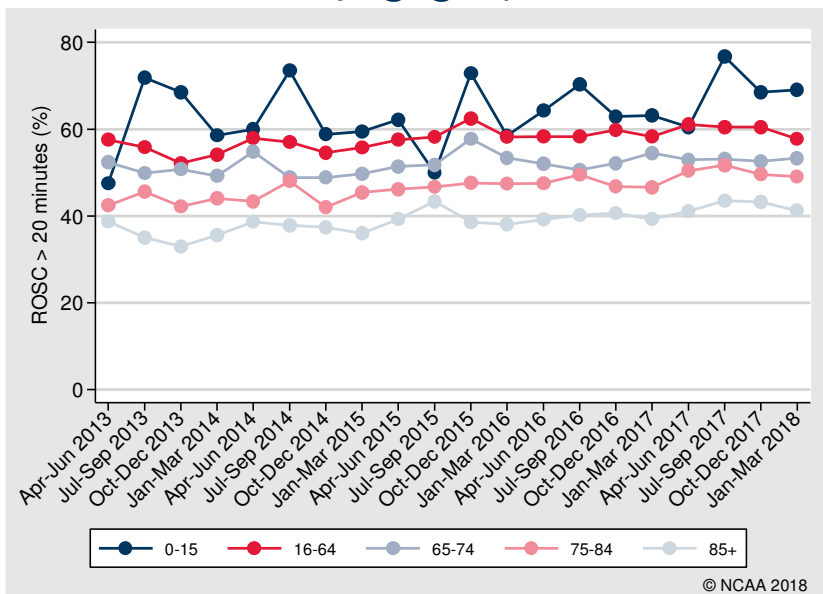
* Excluding individuals still in hospital (N=6) or missing hospital survival (N=1).

Trends in outcomes by patient subgroups

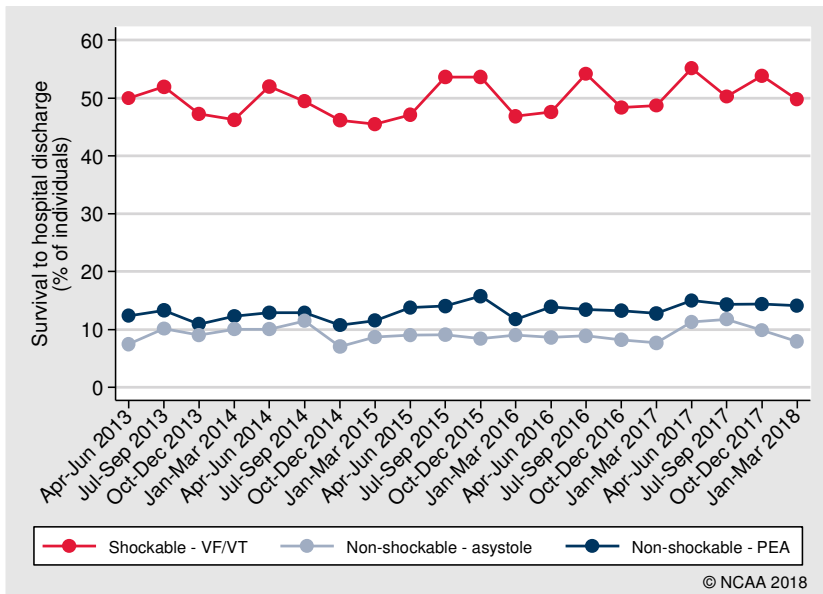
ROSC > 20 minutes by presenting/first documented rhythm



ROSC > 20 minutes by age group



Survival to hospital discharge by presenting/first documented rhythm



Survival to hospital discharge by age group

