Table S1: Descriptive overview for cases of non-traumatic aetiology

Characteristic	Cases of non-traumatic aetiology (n=3436)	Missing Data
	(Median (IQR))	*n (%)*
Age in years	68 (55-79)	89 (2.6)
EMS call-response interval*	12 (8-19)	231 (7.1)
	n (%)	
Under 65 years	1387 (40)	89 (2.6)
Male	2277 (66)	4 (0.1)
Presumed Cardiac Aetiology	3199 (93)	0 (0)
Urban Setting	2151 (64)	81 (2.4)
Public Location	687 (20)	28 (0.8)
Initial Shockable Rhythm	839 (25)	78 (2.3)
Bystander witnessed	1867 (57)	132 (3.8)
EMS witnessed	201 (6)	133 (3.8)
Bystander witnessed and Bystander CPR**	1280 (70)	40 (2.1)
Defibrillation attempted	1251 (38)	112 (3.3)
Early defibrillation attempted***	290 (24)	16 (1.3)
EMS CRI eight minutes or less*	897 (30)	231 (7.1)
Outcome		
ROSC at any stage (n (%))	784 (24)	28 (0.8)
ROSC on arrival at hospital (n (%))	554 (17)	211 (6.1)
Survival to Hospital Discharge	214 (6)	28 (0.8)

*Excludes EMS witnessed cases. Non-trauma cases (n=3235)
**Includes only cases where the collapse was bystander-witnessed. Non-trauma cases (n=1867)
***Patients were defined as having received early defibrillation if defibrillation was attempted by a bystander or if the EMS call-response interval was five minutes or less. Includes only cases where defibrillation reported as attempted. Non-trauma cases (n=1251)
Abbreviations: EMS, emergency medical services; CPR, cardiopulmonary resuscitation; CRI, call-response interval; ROSC, return of spontaneous circulation.

Table S2: Regression Analysis for subgroup of cases of non-traumatic aetiology* for the Outcome Survival to Discharge

Variable	Outcome		Model 1[a] (95% CI)	Model 2[b] (95% CI)
	Survived (n=107)	Died (n=402)		
Under 65 years	64	178	1.9 (1.2-2.9)*	1.6 (1.0-2.6)
Male	89	311	1.4 (0.8-2.5)	1.1 (0.6-2.1)
Urban Setting	72	223	1.7 (1.1-2.6)*	1.4 (0.8-2.3)
Public Location	71	134	3.9 (2.5-6.2)*	3.1 (1.2-5.0)*
Bystander CPR	96	315	2.4 (1.2-4.7)*	2.4 (1.2-4.9)*
Early defibrillation attempted	49	113	2.1 (1.4-3.3)*	1.5 (0.9-2.4)
EMS CRI eight minutes or less	48	105	2.3 (1.5-3.6)*	2.3 (1.4-3.7)*

[a]Univariate Analysis
[b]Multivariate Analysis
*Non-traumatic aetiology, aged over 18 years, witnessed arrest, shockable at time of first rhythm analysis.
Abbreviations: CPR, cardiopulmonary resuscitation; EMS, emergency medical services; CRI, call-response interval.

Table S3: Regression Analysis for Utstein Group for the Outcome Survival to Discharge including results of pooled logistic regression analysis following multiple data imputation

In order to assess the impact of missing data on the results of logistic regression, for the whole dataset, data was imputed for the following variables: age; EMS call-response interval; gender; urban/rural location; public/private location; initial shockable rhythm; witness status, bystander CPR; Return of Spontaneous Circulation (ROSC) at any stage; ROSC on arrival at hospital and survival to discharge. Thirty imputations were performed, using predictive mean matching, with a specified maximum of twenty iterations. Following imputation, age and call-response interval were re-categorised into dichotomous variables and the variable 'early defibrillation attempted' was derived again, using imputed data. Using only cases that matched the Utstein criteria, logistic regression analysis for the outcome 'survival to discharge' was performed using imputed data. As can be seen from the table below, while odds ratios changed slightly, variables that were significant in the pooled analysis (Model 3) were identical to those found to be significant in the original logistic regression analysis (Model 2).

| | Outcome | | | | |
Variable	Survived (n=106)	Died (n=396)	Model 1[a] (95% CI)	Model 2[b] (95% CI)	Model 3[e] (95% CI)
Under 65 years	63	175	1.8 (1.2-2.9)*	1.6 (1.0-2.6)	1.5 (1.0-2.3)
Male	88	305	1.5 (0.8-2.6)	1.2 (0.6-2.2)	1.1 (0.7-1.9)
Urban Setting	71	219	1.6 (1.0-2.6)*	1.4 (0.9-2.3)	1.5 (0.9-2.3)
Public Location	70	131	3.9 (2.5-6.2)*	3.1 (1.9-5.0)*	3.3 (2.1-5.1)*
Bystander CPR	95	310	2.4 (1.2-4.7)*	2.4 (1.2-4.9)*	2.3 (1.2-4.5)*
Was shock delivered[c]	106	0	c		
Early defibrillation attempted[d]	48	112	2.1 (1.4-3.3)*	1.4 (0.9-2.3)	1.3 (0.8-2.0)
EMS CRI eight minutes or less	47	104	2.2 (1.4-3.5)*	2.2 (1.3-3.6)*	2.1 (1.3-3.4)*

aUnivariate Analysis
bMultivariate Analysis
cThe variable "Was shock delivered" was omitted from analysis as it is a constant i.e. shock delivered to all cases included in the analysis
dPatients were defined as having received early defibrillation if defibrillation was attempted by a bystander or if EMS defibrillation was attempted and the call-response interval was five minutes or less.
eResults from pooled analysis following multiple data imputation.
*Statistically significant
Abbreviations: CPR, cardiopulmonary resuscitation; EMS, emergency medical services; CRI, call-response interval