Data-sheet	VARIABLES	Utstein (C=core, O=optional)	Fieldname	Fieldtype	Fieldcoding/ content	Remarks	Utstein definition
	Country of cardiac arrest	C	ReaLand	Text			
	Region of cardiac arrest	C	ReaRegion	Text			
	Population served by EMS	C	ReaPop	numeric		number as exact as possible	
A1	Cardiac arrest confirmed	C	ReaConf	numeric	00 not recorded 01 yes 02 no 99 unknown	Confirmation by EMS on arrival; "unknown" may be chosen, e.g. in case of bystander-CPR with ROSC prior to EMS-arrival	Cardiac arrest is the cessation of cardiac mechanical activity as confirmed by the absence of signs of circulation. If an EMS provider or physician did not witness the cardiac arrest, he/she may be uncertain as to whether a cardiac arrest actually occurred
A2	CPR attempted	C	CPRdone	numeric	00 not recorded 01 yes 02 no 99 unknown	any CPR attempted by EMS or bystander, irrespective of countinued or not	Cardiopulmonary resuscitation is an attempt to restore spontaneous circulation by performing chest compressions with or without ventilations, for the EuReCa ONE study it also includes the use of an AED without compressions.
A3	CPR not attempted by EMS	C	NoCPR	numeric	00 not recorded 01 died earlier 02 DNAR 03 wish family 04 wish doctor 05 succesful ICD shock 06 signs of life 99 unknown	Reason for no attempt as decided by EMS; this field has to be left blank if CPR is attempted by EMS	EMS personnel may not attempt resuscitation when a do- not-attempt-resuscitation (DNAR) order exists, a resuscitation attempt is considered futile, or resuscitation is not required (e.g., the patient has signs of circulation).

	PatID	C	PatID	String	Unique number for each submitting region		May be a combination of digits and characters. Used so that the contry of origin can trace the patient if there are any questions.
B1	Patient age	C	PatAge	numeric			Age in years at moment of cardiac arrest
B2	Patient gender/sex	C	PaGender	numeric	00 not recorded 01 male 02 female 99 unknown		Sex (male or female) may be an important risk factor for cardiac arrest and resuscitation interventions.
B3	Year of cardiac arrest	C	ReaYr	numeric	YYYY	Year of receipt of dispatch call	
B3	Month of cardiac arrest	C	ReaMo	numeric	MM	Month of receipt of dispatch call	
B3	Day of cardiac arrest	C	ReaDay	numeric	DD	Day of receipt of dispatch call	
B4	time of call received at medical dispatch	C	TimeCallReceived	Time	hh:mm:ss	Time of receipt of call at medical dispatch	
B5	Time on scene	C	timeSceneYr	numeric	YYYY	Year of time on scene	
B5	Time on scene	C	time SceneMo	numeric	MM	Month of time on scene	
B5	Time on scene	C	time SceneDay	numeric	DD	Day of time on scene	
B5	Time on scene		timeScene	Time	hh:mm:ss	Time of stopping the car on scene	The time and date of stopping the ambulance car or the helicopter etc.

C1	aetiology of cardiac arrest	C	ReaCause	numeric	00 not recorded 01 cardiac 02 trauma 03 submersion 04 respiratory 11 other non-cardiac 99 unknown (presumed cardiac)		An arrest is presumed to be of cardiac aetiology unless it is known or likely to have been caused by trauma, submersion, drug overdose, asphyxia, exsanguination, or any other non-cardiac cause as best determined by rescuers
C2	aetiology of cardiac arrest (Utstein 2014)	O	ReaC2014	numeric	00 not recorded 01 medical 02 traumatic 03 drowning 05 drug overdose 13 electrocution 14 asphyxial (external cause) 99 unknown		Medical: This includes cases where the cause of the cardiac arrest is presumed to be cardiac, other medical (e.g. anaphylaxis, asthma, GI bleed) and where there is no obvious cause of the cardiac arrest; Traumatic: Cardiac arrest directly caused by blunt, penetrating or burn injury; Drug overdose: Evidence that the cardiac arrest was caused by deliberate or accidental overdose of prescribed medications, recreational drugs, and ethanol; Drowning: Victim is found submersed in water without an alternative causation; Asphyxial: External causes of asphyxia such as foreign body airway obstruction, hanging, strangulation

C3	place of cardiac arrest OHCA	C	ReaLocat	numeric	00 not recorded 01 residence 02 long-term care 03 work/office 05 street 06 public building 11 sports facility 98 other 99 unknown		Location of arrest is the specific location where the event occurred or the patient was found. Knowledge of where cardiac arrests occur may help a community to determine how it can optimize its resources to reduce response intervals. A basic list of predefined locations will facilitate comparisons. Local factors may make creation of subcategories useful. For example: Place of residence: e.g., home, apartment, back yard of a home.
C4	EMS-witnessed cardiac arrest in helicopter	O	LocatHeli	numeric	00 not recorded 01 yes 02 no 99 unknown		
C5	cardiac arrest in school building	O	LocatSchool	numeric	00 not recorded 01 yes 02 no 99 unknown		
	b. **PROCESS VARIABLES**						
D1	dispatch: telephone CPR	C	TeleCPR	numeric	00 not recorded 01 yes 02 no 99 unknown	Info from dispatch centre: is CPR offered? NOT if actually done	
D2	collapse witnessed	C	ReaWitnes	numeric	00 not recorded 01 yes, bystander 02 no 03 EMS 99 unknown		A witnessed cardiac arrest is one that is seen or heard by another person or an arrest that is monitored

D3	bystander CPR	C	BystanCPR	numeric	00 not recorded 01 no CPR 02 any bystander w/o additinional information 03 full CPR 04 CCO CPR 99 unknown	For the EuReCa ONE study "any bystander-CPR" has been added compared to Utstein definition. Participants should preferably specify between "full CPR" and "CCO CPR"	Bystander CPR is cardiopulmonary resuscitation performed by a person who is not responding as part of an organized emergency response system to a cardiac arrest. Physicians, nurses, and paramedics may be described as performing bystander CPR if they are not part of the emergency response system involved in the victim's resuscitation
D4	Who started CPR	O	PersCPRstart	numeric	00 not recorded 01 person there by chance (true bystander) 02 person sent to help 03 EMS 99 unknown	Who started the resuscitation. Was it a person there by chance or was it a person sent to help by the dispatch center for example via App or as a community response	
D5	Gender of bystander	O	Gbystnader	numeric	00 not recorded 01 male 02 female 99 unknown	Gender of the person on scene by chance who started CPR	
D6	Age of bystander	O	AgeBystander	numeric	XXX years	Estimated age of the person on scene by chance who started CPR	

E1	First recorded rhythm	C	IniRythm	numeric	00 not recorded 01 shockable 02 not shockable 99 unknown	From EMS defib. If AED first: from memory or "shockable" if AED shock given.	The first monitored rhythm is the first cardiac rhythm present when the monitor or defibrillator is attached to the patient after a cardiac arrest. If the AED does not have a rhythm display, it may be possible to determine the first monitored rhythm from a data storage card, hard drive, or other device used by the AED to record data. If the AED has no data recording device, the first monitored rhythm should be classified simply as shockable or nonshockable. This data point can be updated at a later time if the AED has data download capability.
E2	AED connected before EMS arrival with or without shocks	C	AEDConn	numeric	00 not recorded 01 yes 02 no 99 unknown		
E3	AED shocks before arrival EMS	C	AEDShock	numeric	00 not recorded 01 yes 02 no 99 unknown	Can be from AED memory or verbal report and EMS info	When a bystander attempts defibrillation, e.g public access or lay rescuer defibrillation, it is recorded as a defibrillation attempt before EMS arrival. AEDs are increasingly being made available for access by the general public. In patients with an ICD, a shockable rhythm is likely to have triggered at least one shock by the device before the arrival of EMS personne This can be confirmed by analyzing the ICD memory. After extensive discussion, the task force agreed that defibrillation attempts by ICDs are important but difficult for EMS to track. Thus, ICD documentation is optional.

E4	Year of first defibrillation shock	C	Def1Yr	numeric	YYYY	Year of first defibrillation; has to be left blank if no shock	
E4	Month of first defibrillation shock	C	Def1Mo	numeric	MM	Month of first defibrillation; has to be left blank if no shock	
E4	Day of first defibrillation shock	C	Def1Day	numeric	DD	Day of first defibrillation; has to be left blank if no shock	
E5	Time of first defibrillation shock	C	Def1Time	Time	hh:mm:ss	Time of first defibrillation; must be corrected for clock drift; has to be left blank if no shock	
E6	First shock from AED or EMS	C	DefiOrig	numeric	00 not recorded 01 AED 03 EMS 99 unknown	Device from which the first rhythm was derived; has to be left blank if no shock	

	c. **OUTCOME VARIABLES**						
F1	any ROSC	C	ROSC	numeric	00 not recorded 01 no ROSC 02 ROSC 99 unknown	Any ROSC of a duration >30 seconds with no chest compressions given.	Signs of return of spontaneous circulation include breathing (more than an occasional gasp), coughing, or movement. For healthcare personnel, signs of ROSC may also include evidence of a palpable pulse or a measurable blood pressure. For the purposes of the Utstein registry template, "successful resuscitation," or ROSC, is defined for all rhythms as the restoration of a spontaneous perfusing rhythm that results in more than an occasional gasp, fleeting palpated pulse, or arterial waveform. Assisted circulation (e.g., extracorporeal support such as extracorporeal membrane oxygenation or biventricular assist device) should not be considered ROSC until "patient-generated" (i.e., spontaneous) circulation is established. Previous reports focused on outcomes from ventricular fibrillation have variably defined "successful defibrillation" as the termination of fibrillation to any rhythm (including asystole) and the termination of fibrillation to an organized electrical rhythm at 5 s after defibrillation (including pulseless electrical activity, PEA). Neither of these definitions of "successful defibrillation" would qualify as ROSC unless accompanied by evidence of restoration of circulation. By consensus, the term "any ROSC" is intended to represent a brief

							(approximately >30 s) restoration of spontaneous circulation that provides evidence of more than an occasional gasp, occasional fleeting palpable pulse, or arterial waveform. The time that ROSC is achieved is a core data element.
F2	Died on scene	C	DeadSc	numeric	00 not recorded 01 yes 02 no	Patient dies on scene	Patients who were not transported to hospital and died on scene after CPR had been attempted
F3	Status of arrival @hosp	C	HospArri	numeric	00 not recorded 01 dead 02 transfer with ROSC 03 transfer with ongoing CPR 04 alive, no hospital transport 99 unknown	Admission defined as handover from EMS to emergency department or hospital system with ongoing additional treatment in the next step of care	
F4	date of hospital discharge (Year)	C	DischYr	numeric	YYYY	Year of hospital discharge	The date of discharge or death is the date on which the patient was discharged from the acute hospital or was certified dead.
F4	date of hospital discharge (Month)	C	DischMo	numeric	MM	Month of hospital discharge	
F4	date of hospital discharge (Day)	C	DischDay	numeric	DD	Day of hospital discharge	

F5	survival to discharge	C/O	HospDisc	numeric	00 not recorded 01 yes 02 no 99 unknown	Either survival to discharge or 30 day survival must be included; Note: interhopital transfer to same or higher level should not be considered discharge. If death in hospital: same as date of discharge	hospital discharge is the point at which the patient is discharged from the hospital acute care unit regardless of neurological status, outcome, or destination. Ideally this should indicate survival to discharge from acute hospital care, including a possible rehabilitation period in a local hospital before longterm care, home care, or death.
F6	30 day survival	C/O	surv30d	numeric	00 not recorded 01 yes 02 no 99 unknown	Either survival to discharge or 30 day survival must be included	