

Appendix

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APPENDICES

Appendix I: Utstein definitions for the uniform collection and reporting of data on cardiac arrest (Jacobs et al. Cardiac arrest and cardiopulmonary resuscitation outcome reports: Update and simplification of the Utstein templates for resuscitation registries. A statement for healthcare professionals from a task force of the international liaison committee on resuscitation. *Resuscitation*. 2004;63(3):233-49)

Core Data Element	Definition
Cardiac arrest	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.
CPR	An attempt to restore spontaneous circulation by performing chest compressions with or without ventilations.
Cause of arrest/aetiology	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.
Emergency medical services	EMS personnel respond to a medical emergency in an official capacity as part of an organised medical response team. By this definition, physicians, nurses or paramedics who witness a cardiac arrest and initiate CPR but are not part of the organised rescue team are characterized as bystanders and not part of the EMS team.
Witnessed	One that is seen or heard by another person or an arrest that is monitored
Bystander CPR	Cardiopulmonary resuscitation performed by a person who is not responding as part of an organised 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.
First monitored rhythm	The first cardiac rhythm present when the monitor or defibrillator is attached to the patient after a cardiac arrest.
Shockable/non-shockable	Shockable cardiac arrest rhythms are further divided into ventricular fibrillation and pulseless ventricular tachycardia. Nonshockable cardiac arrest rhythms can be categorized as either asystole or

	PEA. Although a very specific definition of asystole is desirable, no consensus agreement was reached on either a specific duration (e.g. 30 seconds) or heart rate (e.g. <5 beats per minute) to define asystole versus bradycardia/PEA.
Return of spontaneous circulation (ROSC)	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. 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.
Sustained ROSC	Sustained ROSC is deemed to have occurred when chest compressions are not required for 20 consecutive minutes and signs of circulation persist (or sustained ROC if extracorporeal circulatory support is applied).
Neurological outcome at discharge from hospital	Documentation of the patient's neurological status at many specific points is desirable (e.g. on discharge from the hospital, at 1 year). Survival without higher neurological function is suboptimal; therefore, it is important to attempt to assess neurological outcome at discharge. A simple validated neurological score such as the cerebral performance category (CPC) should be recorded if available.

Appendix II: The Paediatric Cerebral Performance Category (PCPC) scale

(Fiser D, Long N, Roberson P, Hefley G, Zolten K, Brodie-Fowler M. Relationship of Pediatric Overall Performance Category and Pediatric Cerebral Performance Category scores at pediatric intensive care unit discharge with outcome measures collected at hospital discharge and 1- and 6-month follow-up assessments. Crit Care Med. 2000;28(7):2616-20)

Scale	Category	Description
1	Normal	Normal: at age-appropriate level; school-age child attending regular school classroom
2	Mild disability	Conscious, alert, and able to interact at age-appropriate level; school-age child attending regular school classroom but grade perhaps not appropriate for age; possibility of mild neurologic deficit (e.g. seizure disorder).
3	Moderate disability	Conscious. Below age-appropriate functioning; neurologic disease that is not controlled and severely limits activities. Sufficient cerebral function for age-appropriate independent activities of daily life; school age child attending special education classroom and//or learning deficit present.
4	Severe disability	Conscious; dependent on others for daily support because of impaired brain function. School-age child may be so impaired as to be unable to attend school.
5	Coma or vegetative state	Any degree of coma without the presence of all brain death criteria unawareness, even if awake in appearance, without interaction with environment; cerebral unresponsiveness and no evidence of cortex function (not roused by verbal stimuli); possibility of some reflexive response, spontaneous eye-opening, and sleep-wake cycles.
6	Brain death	Apnoea, areflexia, and/or electroencephalographic silence.

Appendix III. Baseline variables of paediatric out-of-hospital cardiac arrest presentations to Royal Children's Hospital Emergency Department

Variable	Total (n = 121)
Age, months, <i>median (IQR)</i>	6 (2,20)
Male sex, <i>n (%)</i>	77 (64)
Aetiology, <i>n (%)</i>	
Asphyxia	3 (3)
Cardiac	7 (6)
Neurological	6 (5)
Other	17 (14)
Respiratory	8 (7)
SIDS	50 (41)
Submersion	4 (3)
Trauma	4 (3)
Unknown	22 (18)