

ANZCOR Guideline 12.3 – Flowchart for the Sequential Management of Life-Threatening Dysrhythmias in Infants and Children

Summary

Who does this guideline apply to?

This guideline applies to infants and children.

Who is the audience for this guideline?

This guideline is for health professionals and those who provide healthcare in environments where equipment and drugs are available.

Recommendations

The Australian and New Zealand Resuscitation Committee on Resuscitation (ANZCOR) make the following recommendations:

1. The attached flow chart be used to guide the sequence of actions during infant and child cardiac arrest management.
2. Manual defibrillators are preferred at all ages for infant and child cardiac arrest.
3. In the absence of a manual defibrillator, an automated external defibrillator may be used used in infants and children (preferably a model with the capability to deliver a reduced energy shock).

Guideline

1 Introduction

In this flowchart, sequential actions are indicated by arrows, assuming that the preceding recommended action has been unsuccessful.

The recognition of a new arrhythmia requires transfer to the appropriate side of the flow chart at the beginning of that sequence.

The evidence for the efficacy of most drug therapy in infant/child cardiac arrest is weak or suggestive of dubious benefit. Drug therapy is secondary to good quality CPR and other interventions.

2 Drug Doses

The doses of drugs [Class A; Expert Consensus Opinion] and volume of fluid therapy are based on body weight, which in non-obese victims may be estimated according to age or height (length)¹. In obese victims, initial doses, except selected drugs eg succinylcholine, should be based on ideal weight estimated from height ¹. In obese victims, doses based on weight may cause drug toxicity. In all victims, subsequent doses should be based on clinical effects and toxicity.

2.1 Approximate weights according to age are:

Newborn:	3.5kg
1 year:	10kg
9 years and less:	(age x 2) plus 8kg, [2 (age +4)]
10 years and over:	age x 3.3kg

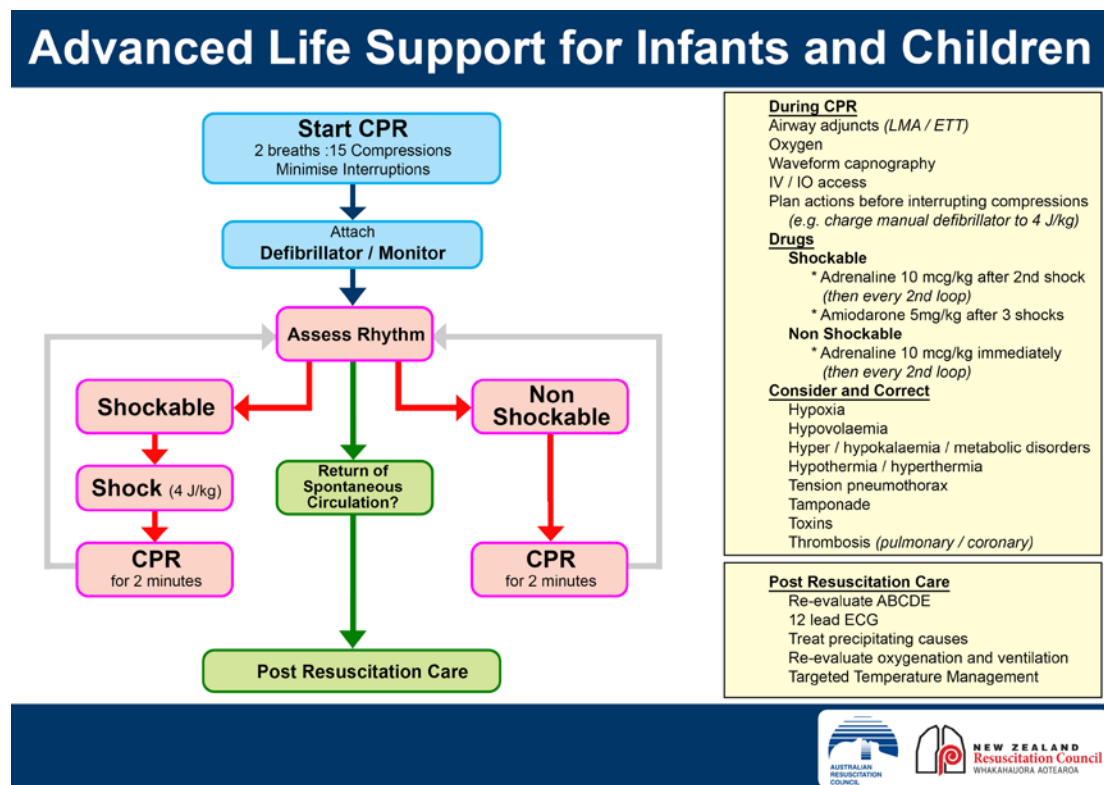
Alternatively, doses of drugs, energy of DC shock and volume of fluid therapy may be prescribed on the basis of height. Drug doses according to the average of 50th percentiles of weight and height according to age for boys and girls ² may be read from the resuscitation table (Refer Guideline 12.4).

3 Automated External Defibrillation

Manual defibrillators are preferred in infants and children. If no manual defibrillator is available it is appropriate to use a standard Automated External Defibrillator (AED) for children over 8 yrs. For infants and children under 8 years, the order of preference is:

1. Manual defibrillator
2. AED with paediatric attenuation
3. Standard AED.

4 Flow Chart



References

1. de Caen AR, Kleinman ME, Chameides L, Atkins DL, Berg RA, Berg MD, Bhanji F, Biarent D, Bingham R, Coovadia AH, Hazinski MF, Hickey RW, Nadkarni VM, Reis AG, Rodriguez-Nunez A, Tibballs J, Zaritsky AL, Zideman D, On behalf of the Paediatric Basic and Advanced Life Support Chapter Collaborators. Part 10: Paediatric basic and advanced life support: 2010 International Consensus on Cardiopulmonary Resuscitation and Emergency Cardiovascular Care Science with Treatment Recommendations. *Resuscitation* 2010;81:e213–e259.
2. Lubitz SL, Seidel JS, Chameides L. et al. A rapid method for estimating weight and resuscitation drug dosages from length in the paediatric age group. *Ann Emerg Med* 1988; 17:576-581
3. Atkins DL, Jorgenson D. Attenuated pediatric electrode pads for automated external defibrillator use in children. *Resuscitation* 2005; 66: 31-37.
4. Maconochie IK, de Caen AR, Aickin R, Atkins DL, Biarent D, Guerguerian AM, Kleinman ME, Kloeck DA, Meaney PA, Nadkarni VM, Ng KC, Nuthall G, Reis AG, Shimizu N, Tibballs J, Pintos RV. Part 6: Pediatric basic life support and pediatric advanced life support 2015 International Consensus on cardiopulmonary Resuscitation and emergency Cardiovascular Care Science with Treatment Recommendations. *Resuscitation* 2015: 95: e147-e168.