UPDATE PEDIATRIC ADVANCED LIFE SUPPORT

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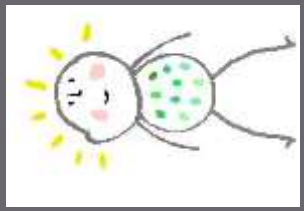
PENDAHULUAN

- Kejadian henti jantung pada anak berbeda dengan kejadian henti jantung pada dewasa. Penyebab tersering pada anak *adalah sudden infant death syndrome* (SIDS) , penyakit pernapasan, sumbatan saluran napas (termasuk aspirasi benda asing), tenggelam, sepsis, penyakit neurologis, terbakar .

- Pada kejadian henti jantung, angka harapan hidup di RS meningkat 19% (2000) dan 38% (2018) dibandingkan dengan kejadian diluar RS yaitu 6.7-10,2% (2007-2012) (Topjian,A.A, et all, Jornal of the AAP, 2021)

- Serangan henti jantung di rumah sakit sekitar 5,5% terjadi pada anak,penyebab paling sering adalah asfiksia, dimana 6,7% dari anak yang dapat bertahan, namun banyak yang mengalami gangguan neurologis (Atkins. DL et al.2015)



PENDAHULUAN

- *Pediatric basic life support* (PBLS) dan *pediatric advance life support* (PALS) merupakan suatu upaya resusitasi (Crit Care Nurs Clin N Am, 2011)

- *American Heart Association* (AHA) dan *European Resuscitation Council* (ERC) mengeluarkan panduan tentang PBLS dan PALS yang selalu diperbaharui berdasarkan bukti ilmiah (*American Heart Association* mengeluarkan panduan tersebut pada tahun 1995, 2000, 2005, 2010, 2015 dan 2020 sedangkan ERC pada tahun 1994, 1998, 2000, 2005, 2010, 2015 dan 2021)

- Untuk mencapai keberhasilan resusitasi diperlukan keterampilan dan kerjasama yang baik dalam satu tim.

RESUSITASI

RESUSITASI

- Upaya terhadap penderita atau korban yang dalam keadaan gawat atau kritis untuk mencegah kematian

RESUSITASI

- Mengembalikan fungsi pernafasan dan sirkulasi yang adekuat..

RESUSITASI

- Resusitasi jantung paru sangat berhubungan dengan keberhasilan kembalinya sirkulasi spontan atau Return of Spontaneous Circulation (ROSC)

TUJUAN

RESUSITASI

- Memberikan ventilasi yang adekuat
- Pemberian oksigen dan curah jantung yang cukup untuk menyalurkan oksigen ke otak, jantung dan organ vital lainnya

Phibbs RH. Delivery room management. Dalam: Avery GB, Fletcher MA, MacDonald MG, Lippincott Williams and Wilkins; 1999.

THE PEDIATRIC CHAIN OF SURVIVAL (AHA, 2020)

Figure 10. AHA Chains of Survival for pediatric IHCA and OHCA.

Reaffirmed

BASIC LIFE SUPPORT

Danger

Response

Shout For Help

Circulation

Airway

Breathing

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PAEDIATRIC*LIFE SUPPORT 2021

5 TOP MESSAGES

*0-18y, except newborns 'at birth'

EUROPEAN RESUSCITATION COUNCIL

1. Use ABCDE as common language - Work as a team – Be competent.

2. Titrate oxygen therapy to SpO_2 94-98% - only if impossible to measure, start high flow O_2 based on signs of circulatory/respiratory failure.

3. In 'shock', give 1 or more fluid bolus(es) of 10ml/kg of (preferably balanced) crystalloids (or blood products). Reassess after each bolus. Start vasoactive drugs early.

4. For basic life support, use the specific PBLS algorithm (ABC - 15:2) if you are trained to do so. Both improving the quality of CPR and limiting the hands-off time are considered crucial. Consider provider safety.

5. For advanced life support, use the specific PALS algorithm. Actively search for and treat reversible causes. Use 2-person BMV as the first line ventilatory support. Only if intubated, provide asynchronous ventilation at an age-dependent rate (10-25/').

OBJECTIVES

Understanding paediatric basic life support:

Airway – airways opening

Breathing – artificial ventilation

Circulation – recovery of circulation

CAB VS ABC

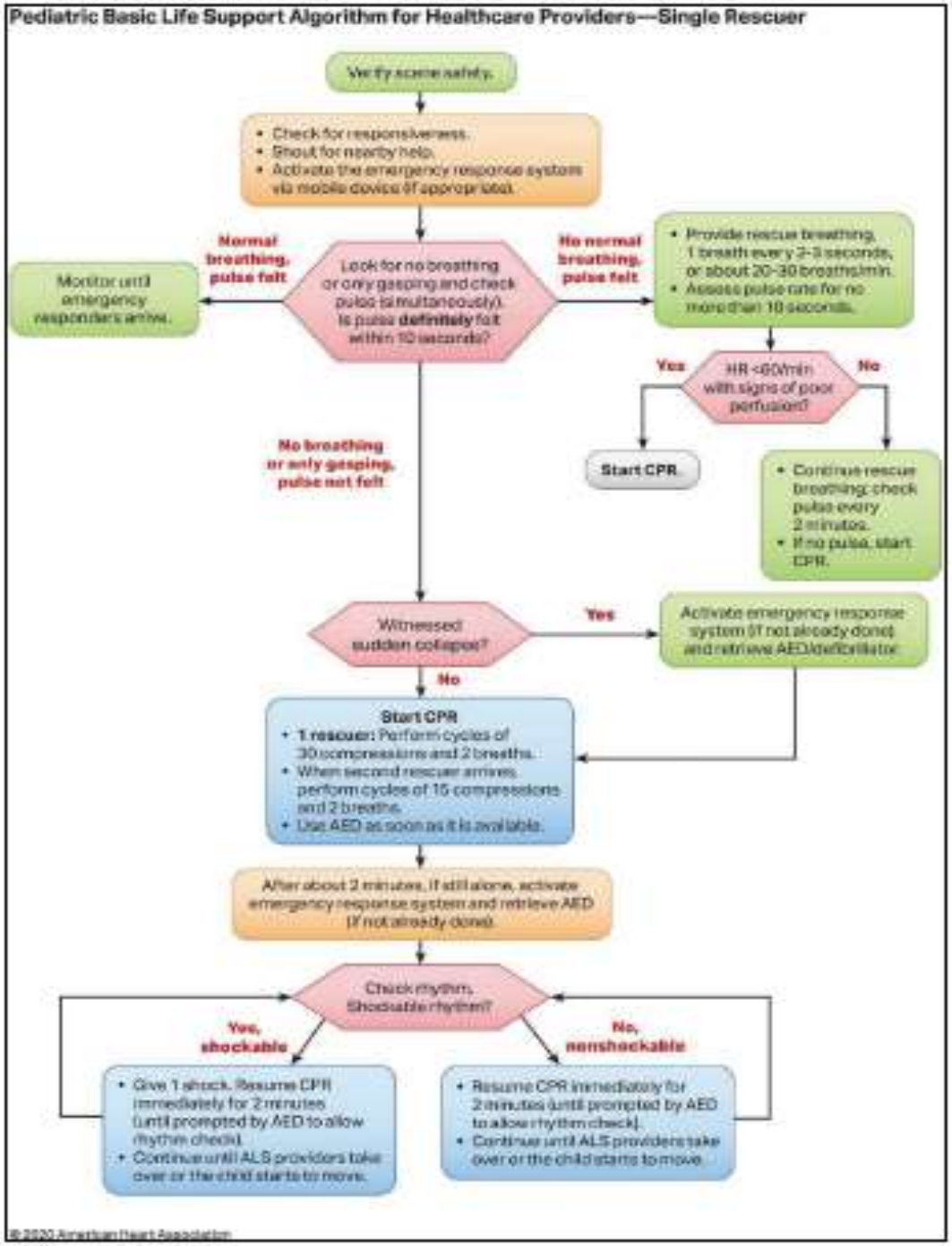
For those with DUTY RESPONDS

- Urutan RJP pada AHA 2020 yaitu C-A-B, namun berbeda dengan 2005, yaitu A-B-C (Airway-Breathing-Compression) dengan alasan untuk menurunkan waktu dimulainya kompresi dada sehinga menurunkan “waktu tanpa aliran darah”.

- Perubahan tersebut berdasarkan pada orang dewasa yang membutuhkan RJP dengan ventrikular fibrilasi (VF) lebih memerlukan kompresi daripada ventilasi.

- Permulaan RJP dengan 30 kompresi daripada ventilasi bertujuan menurunkan keterlambatan aliran darah sehingga penolong dapat memulai kompresi dada secepatnya

Reaffirmed


Pediatric Basic Life Support Algorithm for Healthcare Providers—Single Rescuer
Verify scene safety.
• Check for responsiveness.
• Shout for nearby help.
• Activate the emergency response system via mobile device (if appropriate).
Look for no breathing or only gasping and check pulse (simultaneously). Is pulse definitely felt within 10 seconds?
Normal breathing, pulse felt
Monitor until emergency responders arrive.
No normal breathing, pulse felt
• Provide rescue breathing, 1 breath every 2-3 seconds, or about 20-30 breaths/min.
• Assess pulse rate for no more than 10 seconds.
HR <60/min with signs of poor perfusion?
Yes
Start CPR.
No
• Continue rescue breathing; check pulse every 2 minutes.
• If no pulse, start CPR.
No breathing or only gasping, pulse not felt
Witnessed sudden collapse?
Yes
Activate emergency response system (if not already done) and retrieve AED/defibrillator.
No
Start CPR
• 1 rescuer: Perform cycles of 30 compressions and 2 breaths.
• When second rescuer arrives, perform cycles of 15 compressions and 2 breaths.
• Use AED as soon as it is available.
After about 2 minutes, if still alone, activate emergency response system and retrieve AED (if not already done).
Check rhythm. Shockable rhythm?
Yes, shockable
• Give 1 shock. Resume CPR immediately for 2 minutes (until prompted by AED to allow rhythm check).
• Continue until ALS providers take over or the child starts to move.
No, nonshockable
• Resume CPR immediately for 2 minutes (until prompted by AED to allow rhythm check).
• Continue until ALS providers take over or the child starts to move.
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- Algoritma yang dikeluarkan ERC pada tahun 2021 masih menggunakan urutan RJP nya dengan A-B-C. Mengingat bahwa urutan ABC telah menjadi metode yang dikenal dengan baik untuk penyampaian RJP pada anak di Eropa
- Algoritma PBLS menurut ERC masih menggunakan *look,listen and feel* dalam memastikan bernapas atau tidak dalam 10 detik.

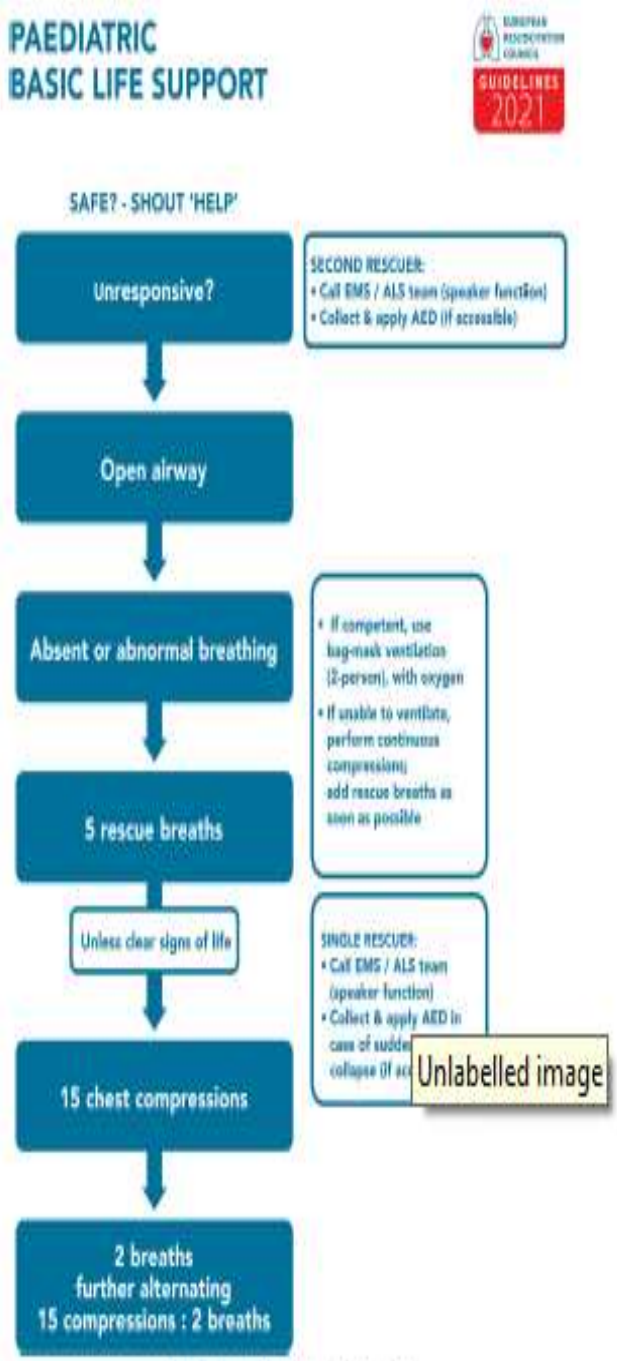

Fig. 2 - Paediatric basic life support.

Recommendations for Components of High-Quality CPR		
COR	LOE	Recommendations
1	B-NR	1. CPR using chest compressions with rescue breaths should be provided to infants and children in cardiac arrest.[26–28]
1	B-NR	2. For infants and children, if bystanders are unwilling or unable to deliver rescue breaths, it is recommended that rescuers should provide chest compressions only.[27,28]
1	C-EO	3. After each compression, rescuers should allow the chest to recoil completely.[1,8,93]
2a	C-LD	4. It is reasonable to use a chest compression rate of ≥100–120/min for infants and children.[91,92]
2a	C-LD	5. For infants and children, it is reasonable for rescuers to provide chest compressions that depress the chest at least one third the anterior-posterior diameter of the chest, which equates to approximately 1.5 inches (4 cm) in infants to 2 inches (5 cm) in children. Once children have reached puberty, it is reasonable to use the adult compression depth of at least 5 cm but no more than 6 cm.[93–96]
2a	C-EO	6. For healthcare providers, it is reasonable to perform a rhythm check, lasting no more than 10 s, approximately every 2 min.
2a	C-EO	7. It is reasonable to ventilate with 100% oxygen during CPR.
2a	C-EO	8. When performing CPR without an advanced airway, it is reasonable for single rescuers to provide a compression-to-ventilation ratio of 30:2 and for 2 rescuers to provide a compression-to-ventilation ratio of 15:2.*
2b	C-LD	9. When performing CPR in infants and children with an advanced airway, it may be reasonable to target a respiratory rate range of 1 breath every 2–3 s (20–30 breaths/min), accounting for age and clinical condition. Rates exceeding these recommendations may compromise hemodynamics.*

Topjian, AA et all. Part 4: Pediatric Basic and Advanced Life Support: 2020 American Heart Association Guidelines for Cardiopulmonary Resuscitation and Emergency Cardiovascular Care, Pediatrics. 2020; DOI: (10.1542/peds.2020-038505D)

REMEMBER!

HIGH QUALITY CPR

» Push hard and fast

» Complete recoil

» Minimal interruption

» Avoid excessive ventilation

ERC

- Nadi tidak teraba atau tidak ada tanda-tanda kehidupan lakukan kompresi 15 kali kompresi dada
- Bagian bawah sternum harus ditekan setidaknya sepertiga diameter antero-posterior dari rongga dada (4 cm pada bayi dan 5 cm pada anak) tidak lebih dari 6 cm
- Kecepatan 100–120x/menit dan meminimalkan interupsi. Jangan menyela kompresi >10 detik untuk memberikan ventilasi.

CPR Technique

Recommendations for CPR Technique		
COR	LOE	Recommendations
1	C-LD	1. For infants, single rescuers (whether lay rescuers or healthcare providers) should compress the sternum with 2 fingers (Figure 2) or 2 thumbs placed just below the intermammary line.[38–41]
1	C-LD	2. For infants, the 2-thumb–encircling hands technique (Figure 3) is recommended when CPR is provided by 2 rescuers. If the rescuer cannot physically encircle the victim's chest, compress the chest with 2 fingers.[42–46]
2b	C-LD	3. For children, it may be reasonable to use either a 1- or 2-hand technique to perform chest compressions.[47–49]
2b	C-EO	4. For infants, if the rescuer is unable to achieve guideline recommended depths (at least one third the anterior-posterior diameter of the chest), it may be reasonable to use the heel of 1 hand.

Topjian, AA et all. Part 4: Pediatric Basic and Advanced Life Support: 2020 American Heart Association Guidelines for Cardiopulmonary Resuscitation and Emergency Cardiovascular Care, Pediatrics. 2020; DOI: (10.1542/peds.2020-038505D)

Thumb–encircling hands compressions.

Finger compressions

2-hand technique

New

INTRAVENOUS ACCES

- *Intravenous (IV) before intraosseous (IO):* The peripheral IV route has been the traditional approach for giving emergency pharmacotherapy, although the IO route has grown in popularity and is increasingly implemented as a first-line approach for vascular access. New evidence suggests some uncertainty about the efficacy of the IO route compared with the IV route.[65–69] Therefore, it is reasonable for providers to first attempt establishing IV access for drug administration in cardiac arrest (Class 2a, LOE B-NR). IO access may be considered if attempts at IV access are unsuccessful or not feasible (Class 2b, LOE B-NR).

Ashish R. Panchal. Circulation. Part 3: Adult Basic and Advanced Life Support: 2020 American Heart Association Guidelines for Cardiopulmonary Resuscitation and Emergency Cardiovascular Care, Volume: 142, Issue: 16_suppl_2, Pages: S366-S468, DOI: (10.1161/CIR.0000000000000916)

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OPENING THE AIRWAY

Opening the Airway

Recommendations for Opening the Airway		
COR	LOE	Recommendations
1	C-LD	1. Unless a cervical spine injury is suspected, use a head tilt–chin lift maneuver to open the airway.[64]
1	C-EO	2. For the trauma patient with suspected cervical spinal injury, use a jaw thrust without head tilt to open the airway.
1	C-EO	3. For the trauma patient with suspected cervical spinal injury, if the jaw thrust does not open the airway, use a head tilt–chin lift maneuver.

AIRWAY

HEAD TILT CHIN LIFT

JAW THRUST

Topjian, AA et all. Part 4: Pediatric Basic and Advanced Life Support: 2020 American Heart Association Guidelines for Cardiopulmonary Resuscitation and Emergency Cardiovascular Care, Pediatrics. 2020; DOI: (10.1542/peds.2020-038505D)

OPENING THE AIRWAY

cross finger & finger sweeps maneuver

Obstruksi:
Bayi

back blow

Chest thrust

Anak

Heimlich maneuver

Abdominal thrust

ADVANCED AIRWAY INTERVENTIONS DURING CPR

Recommendation for Advanced Airway Interventions During CPR		
COR	LOE	Recommendation
2a	C-LD	1. Bag-mask ventilation is reasonable compared with advanced airway interventions (SGA and ETI) in the management of children during cardiac arrest in the out-of-hospital setting.[1-4]

DOPES

- D : Displacement (TT, mask)
- O : Obstruction (TT, airway sircuit, airway-head position)
- P : Pneumothorax
- E : Equipment (oxygen, tubing, connections, valve)
- S : Stomach (abdominal compartement)

MAJOR NEW AND UPDATE RECOMMENDATIONS

- Ventilation rate during CPR with an advance airway

2020

- it may be reasonable to target a respiratory rate range of 1 breath every 2 to 3 second (20-30/min), accounting for age and clinical condition. (AHA, 2020).

2010

- If the infant or child is intubated, ventilate at a rate of about 1 breath every 6 seconds (10/min) without interrupting chest compressions (AHA, 2020).

MAJOR NEW AND UPDATE RECOMMENDATIONS

- Cuffed ETTs

2020

- It is reasonable to choose cuffed ETTs over uncuffed ETTs for intubating infants and children. Cuff inflation pressure (usually <20-25 cm H2O). (AHA, 2020).

2010

- Both cuffed and uncuffed ETTs are acceptable for intubating infants and children. In certain circumstances (eg, poor lung compliance, high airway resistance, or a large glottic air leak) a cuffed ETT may be preferable to an uncuffed tube (AHA, 2020).

ENERGY DOSE

Energy Dose

Recommendations for Energy Dose		
COR	LOE	Recommendations
2a	C-LD	1. It is reasonable to use an initial dose of 2–4 J/kg of monophasic or biphasic energy for defibrillation, but, for ease of teaching, an initial dose of 2 J/kg may be considered.[1–7]
2b	C-LD	2. For refractory VF, it may be reasonable to increase the defibrillation dose to 4 J/kg.[1–7]
2b	C-LD	3. For subsequent energy levels, a dose of 4 J/kg may be reasonable, and higher energy levels may be considered, though not to exceed 10 J/kg or the adult maximum dose.[1–7]

Dosis energi yang ideal untuk defibrillation yang aman dan efektif tidak diketahui. Dosis awal pada 2-4 J/Kg , max 10 J/Kg (AH, 2020)

menurut ERC dosis awal disamakan dengan 4 J/kg dan maksimal 8 J/Kg. Untuk kardioversi supraventricular takikardi (SVT), dosis inisial telah diperbaharui menjadi 1 J/kg

Topjian, AA et all. Part 4: Pediatric Basic and Advanced Life Support: 2020 American Heart Association Guidelines for Cardiopulmonary Resuscitation and Emergency Cardiovascular Care, Pediatrics. 2020; DOI: (10.1542/peds.2020-038505D)

DRUG ADMINISTRATION DURING CARDIAC ARREST

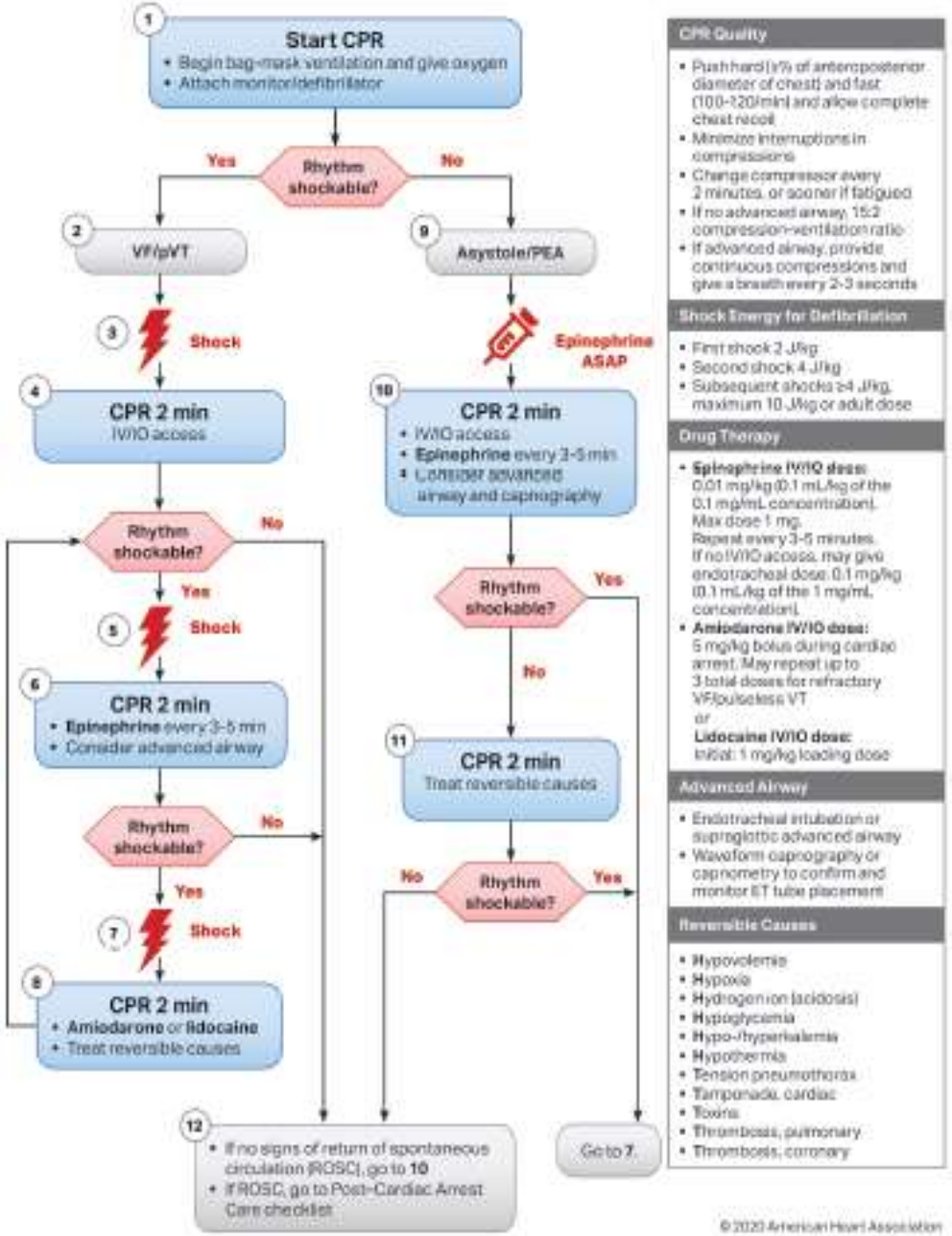
Drug Administration During Cardiac Arrest

Recommendations for Drug Administration During Cardiac Arrest		
COR	LOE	Recommendations
2a	C-LD	1. For pediatric patients in any setting, it is reasonable to administer epinephrine. IV/IO is preferable to endotracheal tube (ETT) administration.[7,9–11]
2a	C-LD	2. For pediatric patients in any setting, it is reasonable to administer the initial dose of epinephrine within 5 min from the start of chest compressions.[12–16]
2a	C-LD	3. For pediatric patients in any setting, it is reasonable to administer epinephrine every 3–5 min until ROSC is achieved.[17,18]
2b	C-LD	4. For shock-refractory VF/pVT, either amiodarone or lidocaine may be used.[19,20]
3: Harm	B-NR	5. Routine administration of sodium bicarbonate is not recommended in pediatric cardiac arrest in the absence of hyperkalemia or sodium channel blocker (eg, tricyclic antidepressant) toxicity.[5–7,21–25]
3: Harm	B-NR	6. Routine calcium administration is not recommended for pediatric cardiac arrest in the absence of documented hypocalcemia, calcium channel blocker overdose, hypermagnesemia, or hyperkalemia.[3,4,23]

Broselow pediatric emergency tape,

Topjian, AA et all. Part 4: Pediatric Basic and Advanced Life Support: 2020 American Heart Association Guidelines for Cardiopulmonary Resuscitation and Emergency Cardiovascular Care, Pediatrics. 2020; DOI: (10.1542/peds.2020-038505D)

Figure 11. Pediatric Cardiac Arrest Algorithm.



CPR Quality

- Push hard (⅓ of anteroposterior diameter of chest) and fast (100-120/min) and allow complete chest recoil
- Minimize interruptions in compressions
- Change compressor every 2 minutes, or sooner if fatigued
- If no advanced airway, 15:2 compression-ventilation ratio
- If advanced airway, provide continuous compressions and give a breath every 2-3 seconds

Shock Energy for Defibrillation

- First shock 2 J/kg
- Second shock 4 J/kg
- Subsequent shocks ≥4 J/kg, maximum 10 J/kg or adult dose

Drug Therapy

- **Epinephrine IV/IO dose:** 0.01 mg/kg (0.1 mL/kg of the 0.1 mg/mL concentration). Max dose 1 mg. Repeat every 3-5 minutes. If no IV/IO access, may give endotracheal dose: 0.1 mg/kg (0.1 mL/kg of the 1 mg/mL concentration).
- **Amiodarone IV/IO dose:** 5 mg/kg bolus during cardiac arrest. May repeat up to 3 total doses for refractory VF/pulseless VT

  or

  Lidocaine IV/IO dose: Initial: 1 mg/kg loading dose

Advanced Airway

- Endotracheal intubation or supraglottic advanced airway
- Waveform capnography or capnometry to confirm and monitor ET tube placement

Reversible Causes

- **H**ypovolemia
- **H**ypoxia
- **H**ydrogen ion (acidosis)
- **H**ypoglycemia
- **H**ypo-/hyperkalemia
- **H**ypothermia
- **T**ension pneumothorax
- **T**amponade, cardiac
- **T**oxins
- **T**hrombosis, pulmonary
- **T**hrombosis, coronary

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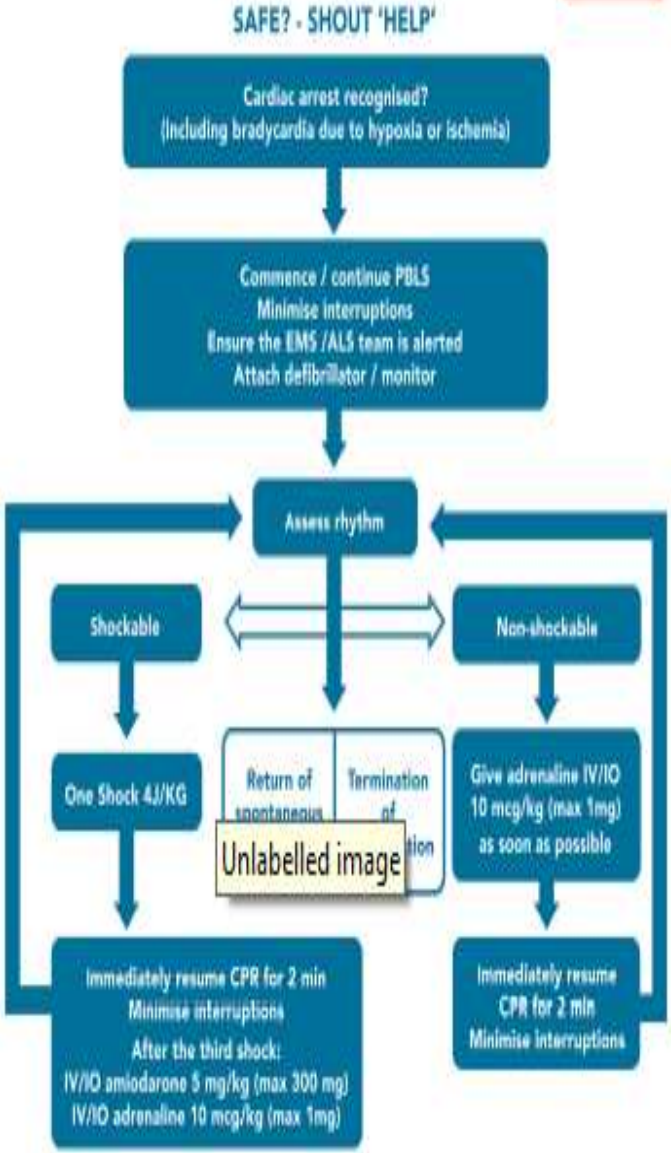
PAEDIATRIC ADVANCED LIFE SUPPORT

EUROPEAN RESUSCITATION COUNCIL

GUIDELINES 2021



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DURING CPR

- Ensure high-quality CPR: rate, depth, recoil
- Provide bag-mask ventilation with 100% oxygen (2-person approach)
- Avoid hyperventilation
- Vascular access (intravenous, intraosseous)
- Once started, give adrenaline every 3-5 min
- Flush after each drug
- Repeat amiodarone 5 mg/kg (max 150mg) after the 5th shock
- Consider an advanced airway and capnography (if competent)
- Provide continuous compressions when a tracheal tube is in place. Ventilate at a rate of 25 (infants) – 20 (1-8y) – 15 (8-12y) or 10 (>12y) per minute
- Consider stepwise escalating shock dose (max 8J/kg – max 360J) for refractory VF/pVT (≥6 shocks)

CORRECT REVERSIBLE CAUSES

- Hypoxia
- Hypovolaemia
- Hyper/hypokalaemia, -calcaemia, -magnesemia; Hypoglycaemia
- Hypothermia - hyperthermia
- Toxic agents
- Tension pneumothorax
- Tamponade (cardiac)
- Thrombosis (coronary or pulmonary)

ADJUST ALGORITHM IN SPECIFIC SETTINGS (E.G. TRAUMA, E-CPR)

IMMEDIATE POST ROSC

- ABCDE approach
- Controlled oxygenation (SpO_2 94-98%) & ventilation (normocapnia)
- Avoid hypotension
- Treat precipitating causes

WHEN TO STOP?

- Signs of life: start to wake up/move/ opens eyes/breathe normally
- More healthcare workers arrive and can either assist or take over
- You become exhausted

FAMILY PRESENCE DURING INVASIF PROCEDURES AND CARDIOPULMONARY RESCUCITATION

- Penting sekali kehadiran orangtua saat fase end of life
- Keluarga hadir pada saat dilakukan CPR dan prosedur invasif lainnya.
- Kehadiran keluarga meningkatkan pemahaman keluarga akan situasi dan mampu meningkatkan kontrol mereka.
- Kehadiran orang tua dalam situasi ini dapat memberikan umpan balik yang positif terhadap tenaga kesehatan
- Anak dapat berespon terhadap kehadiran orangtua, Bahkan pada anak yang tidak sadar

Journal List › Rev Paul Pediatr › v 32(1); 2014 Mar › PMC4182989

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Language: English | Spanish

Family presence during cardiopulmonary resuscitation and invasive procedures in children

Cristiana Araújo G. Ferreira,[1] Flávia Simphronio Balbino,[2] Maria Magda F. G. Baleeiro,[2] and Myriam Aparecida Mandetta[2]

Conclusions:

Researches on these issues must be encouraged in order to help healthcare team to modify their practice, implementing the principles of the Patient and Family Centered Care model, especially during critical episodes.

GENERAL PRINCIPLES FOR RESUSCITATION IN SUSPECTED AND CONFIRMED COVID-19 PATIENTS

1. Penolong kurangi paparan terhadap COVID-19
2. Prioritaskan oxygenation dan ventilation strategies dengan lower aerosolization risk
3. Pertimbangkan kelayakan memulai dan melanjutkan resusitasi

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GENERAL PRINCIPLES FOR RESUSCITATION IN PATIENTS WITH SUSPECTED AND CONFIRMED COVID-19

From the Emergency Cardiovascular Care Committee and Get With The Guidelines-Resuscitation Adult and Pediatric Task Forces of the American Heart Association

Reduce provider exposure

- Don PPE before entering the room/scene
- Limit personnel
- Consider using mechanical CPR devices for adults and adolescents who meet height and weight criteria
- Communicate COVID-19 status to any new providers

Prioritize c

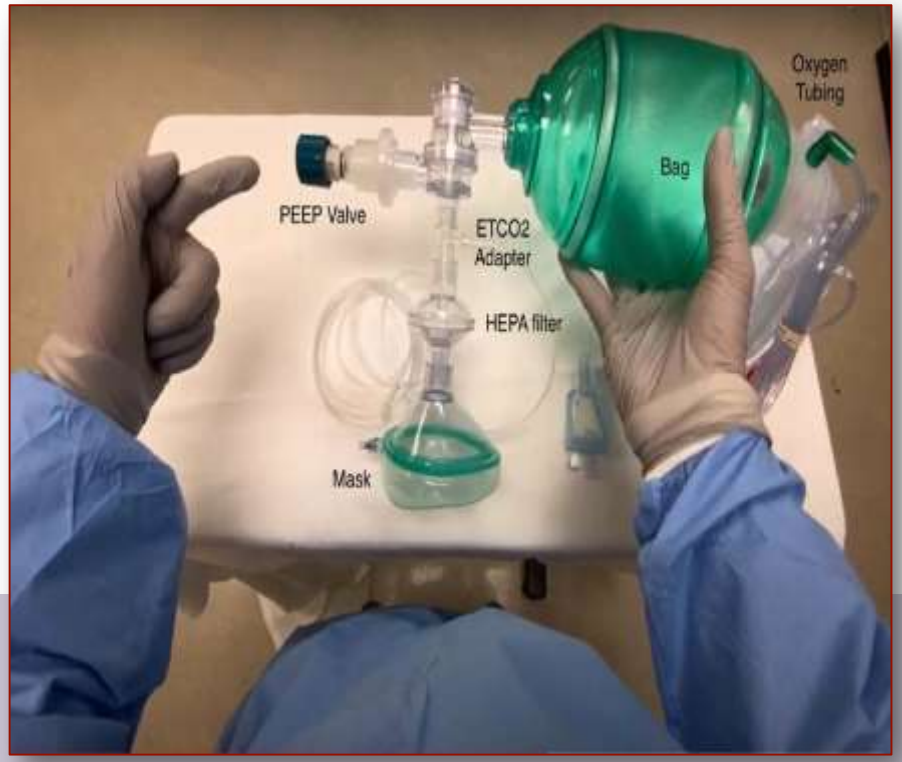
From the Emergency Cardiovascular Care Committee and Get With The Guidelines-Resuscitation Adult and Pediatric Task Forces of the American Heart Association

- Use a HEPA filter, if available, for all ventilation
- Intubate early with a cuffed tube, if possible, and connect to mechanical ventilator, when able
- Engage the intubator with highest chance of first-pass success
- Pause chest compressions to intubate
- Consider use of video laryngoscopy, if available
- Before intubation, use a bag-mask device (or T-piece in neonates) with a HEPA filter and a tight seal
- For adults, consider passive oxygenation with nonrebreathing face mask as alternative to bag-mask device for short duration
- If intubation delayed, consider supraglottic airway
- Minimize closed circuit disconnections

Consider resuscitation appropriateness

- Address goals of care
- Adopt policies to guide determination, taking into account patient risk factors for survival

HEPAFILTER



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PERAWATAN PASCA RESUSITASI

- Hemodinamik
- Ventilasi
- Oksigenasi
- Manajemen suhu
- Kontrol kadar gula

HEMODINAMIK

- Pemantauan hemodinamik secara invasive untuk mengukur tekanan darah digunakan agar dapat mencapai target tekanan darah (MAP <5 5 th percentile for age)
- Pengukuran cardiac output
- Penggunaan cairan kristaloid isotonic restriktif dapat meningkatkan angka harapan hidup, pada anak yang mengalami syok , cairan awal dapat diberikan 10 cc/kg
- Penggunaan obat vasoaktif

VENTILASI DAN OKSIGENASI

- Normal PaCO2
- Hindari hipokarbia/hiperkarbia
- Penggunaan etco2
- Target SpO2 94-98%
- Titrasi FiO2

TERAPI HYPOTERMI

- Terapi hiponatremia adalah upaya menurunan suhu inti tubuh dengan tujuan melindungi otak dari kerusakan neurologi paska henti jantung.
- Pedoman CPR dan perawatan emergensi AHA 2020 merekomendasikan terapi hipotermia pada pasien yang tidak sadar namun telah timbul sirkulasi spontan paska VF atau henti jantung.

TARGETED TEMPERATURE MANAGEMENT (TTM)

Cooling Techniques

- Used cool air blanket
- Initiated almost 2 hours after (ROSC)
- Target temperature attained 8 hours later

Lower target :34 C

Higher target : 36 C

HACA study group, *NEJM,* 2002

KONTROL KADAR GULA

- Monitor hasil elektrolit,
- Monitor gula darah,
- Monitor faktor koagulasi.
- Hindari hipoglikemia
- Hindari hiperglikemia

SIMPULAN

Resusitasi merupakan rangkaian tindakan yang dilakukan untuk membantu anak dapat bernafas spontan

Kunci dari keberhasilan resusitasi adalah high quality CPR

Semua tindakan yang kita lakukan bertujuan untuk keselamatan anak dan tidak membahayakan bagi pasien

Perawatan pasca henti jantung yang baik menjadi kunci penurunan angka morbiditas dan mortalitas anak


obrigado
Dank U
Merci
mahalo
Köszi
спасибо
Grazie
Thank you
mauruuru
Takk
Gracias
Dziękuję
Děkuju
danke
Kiitos