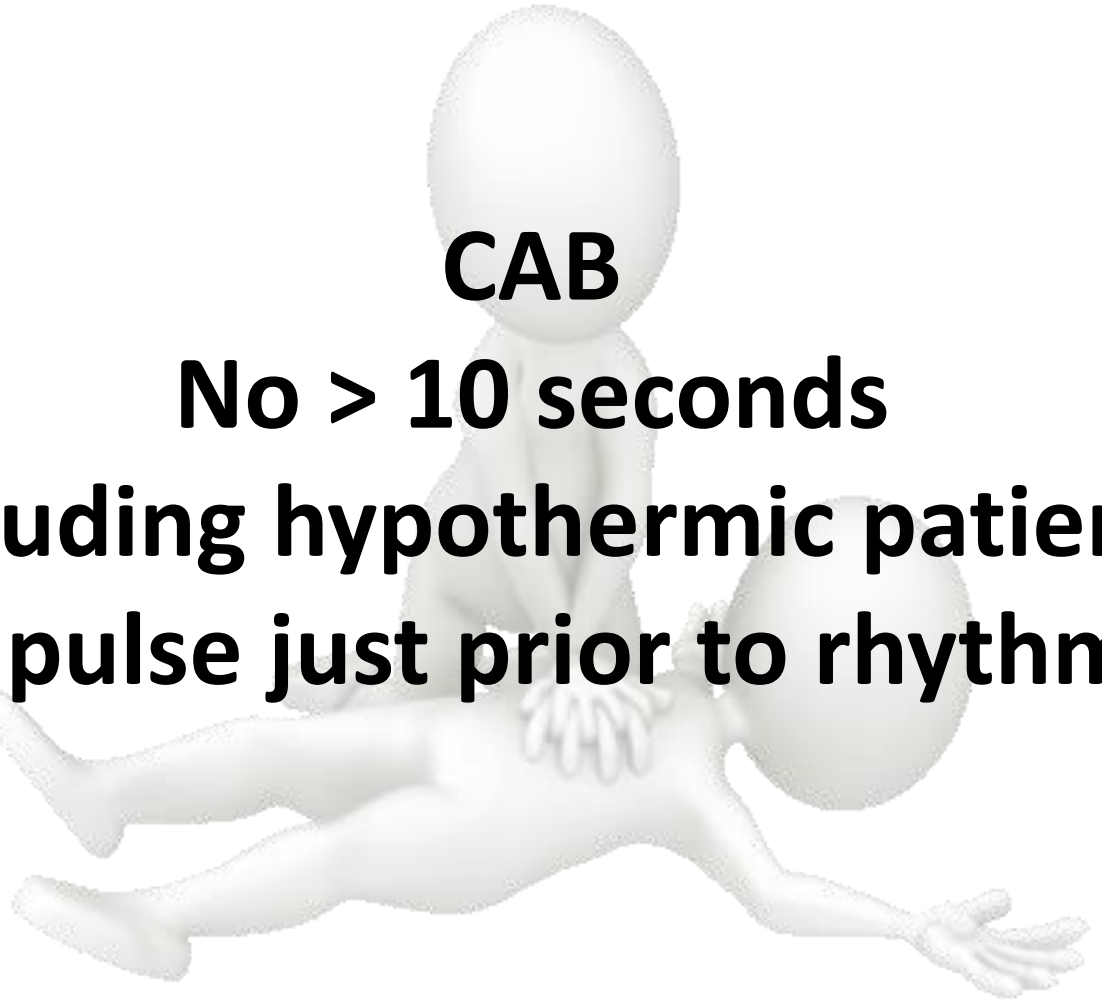
High Quality Resuscitation & The 2015 AHA Guidelines

Ontario Base Hospital Group

Introduction

- This module will identify best practices for resuscitation for PCPs and ACPs in Ontario according to the 2015 AHA Guidelines.
- The Ontario Basic Life Support Patient Care Standards (BLSPCS) & Advanced Life Support Patient Care Standards (ALSPCS) are both being updated to reflect these guidelines.

PULSE CHECKS



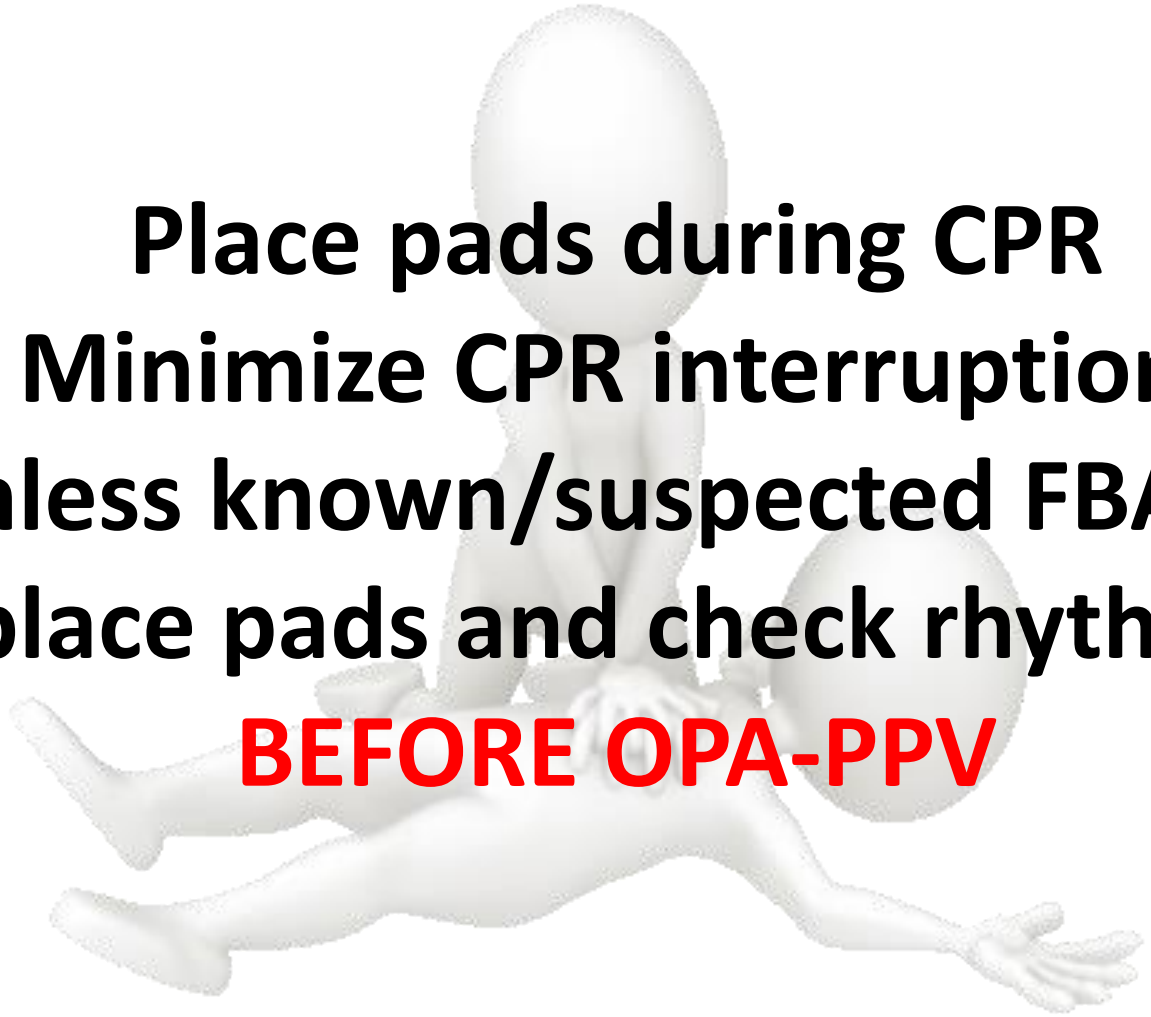
CAB

No > 10 seconds

Including hypothermic patients

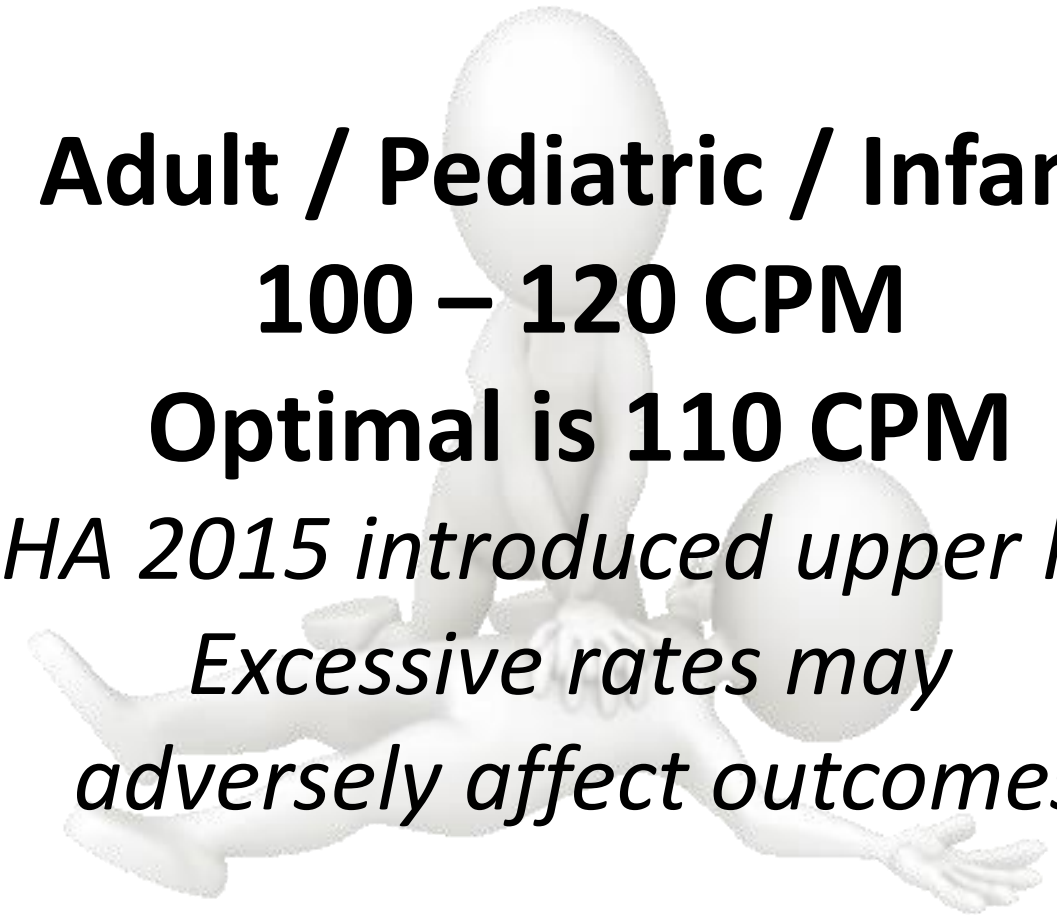
Palpate pulse just prior to rhythm check

EARLY DEFIB



Place pads during CPR
Minimize CPR interruption
Unless known/suspected FBAO…
place pads and check rhythm
BEFORE OPA-PPV

RATE



Adult / Pediatric / Infant

100 – 120 CPM

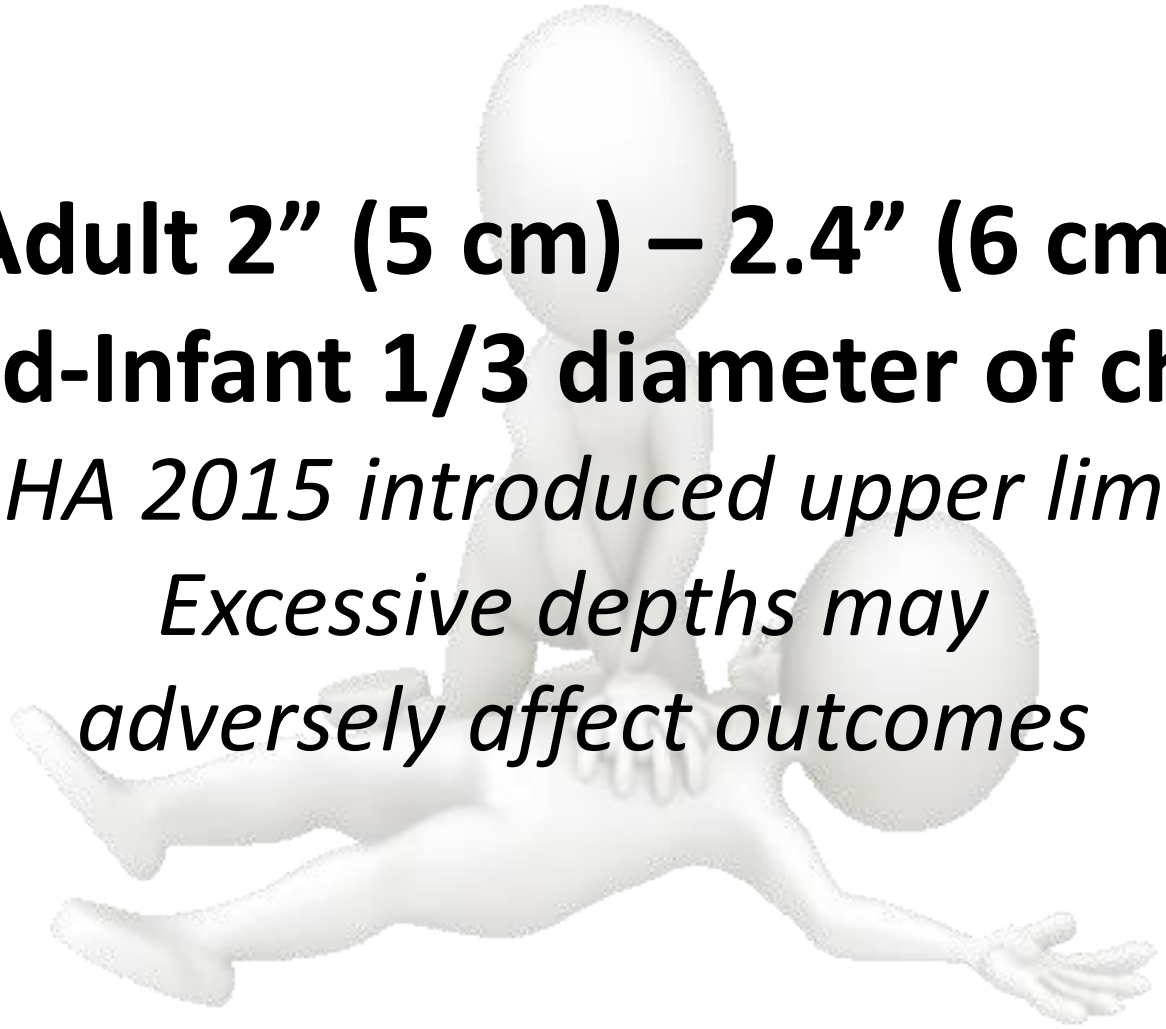
Optimal is 110 CPM

AHA 2015 introduced upper limit

Excessive rates may

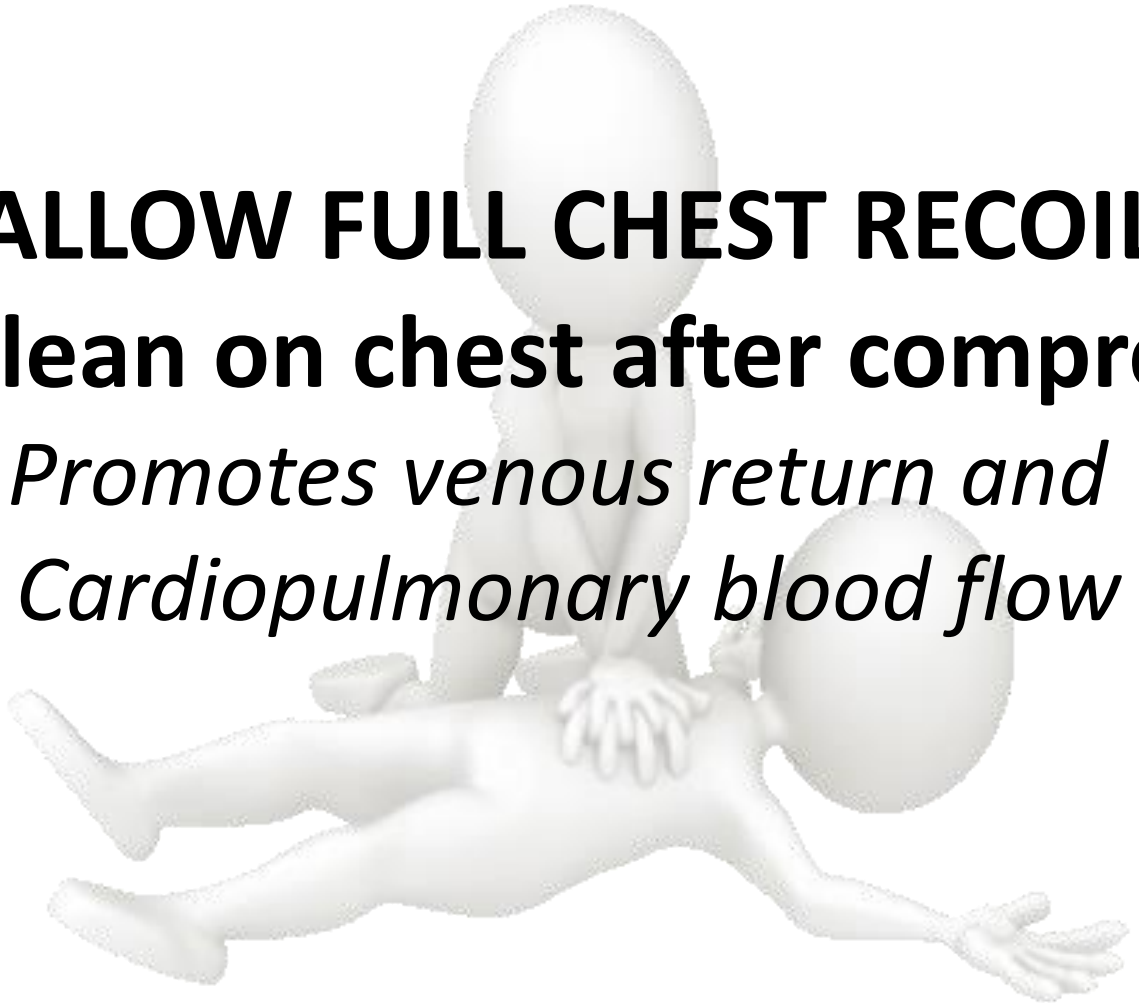
adversely affect outcomes

DEPTH



Adult 2” (5 cm) – 2.4” (6 cm)
Child-Infant 1/3 diameter of chest
AHA 2015 introduced upper limit
Excessive depths may
adversely affect outcomes

RECOIL



ALLOW FULL CHEST RECOIL

Don’t lean on chest after compression

Promotes venous return and

Cardiopulmonary blood flow

CPR:PPV RATIO

WITHOUT advanced airway

Adult 30:2

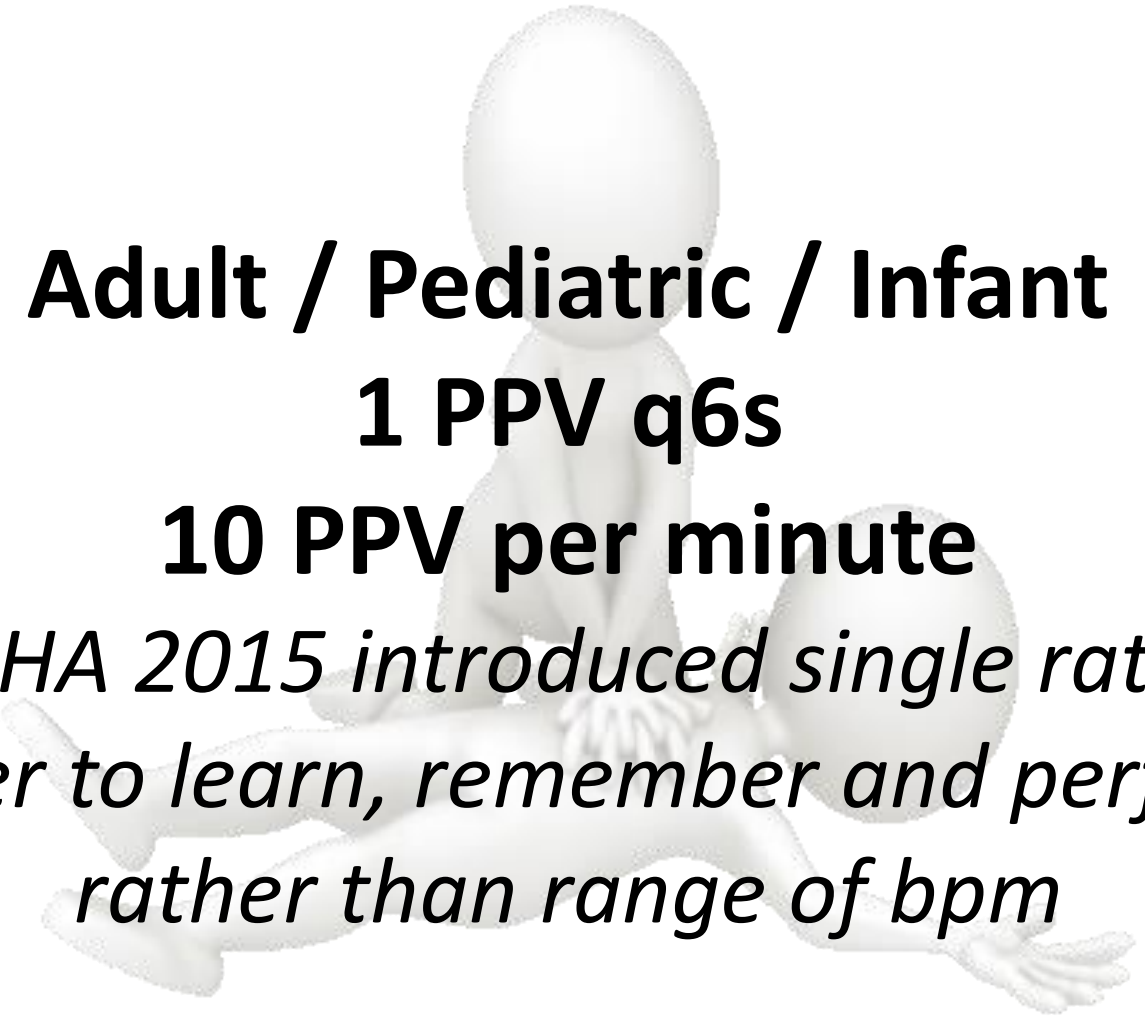
Child-Infant 30:2 / 15:2

WITH advanced airway

continuous compressions

AVOID EXCESSIVE VENTILATIONS

PPV RATE w/SGA-ETI?



Adult / Pediatric / Infant

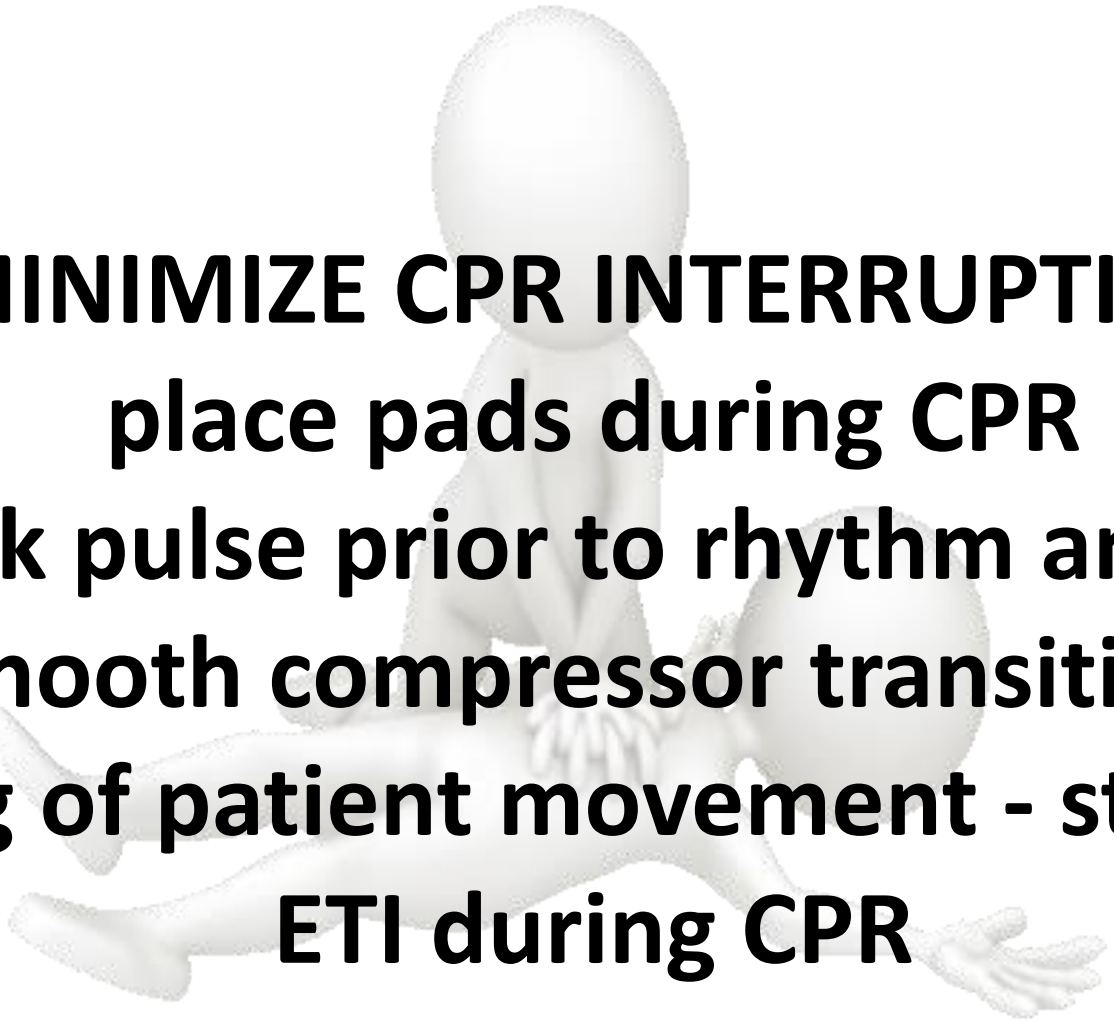
1 PPV q6s

10 PPV per minute

AHA 2015 introduced single rate

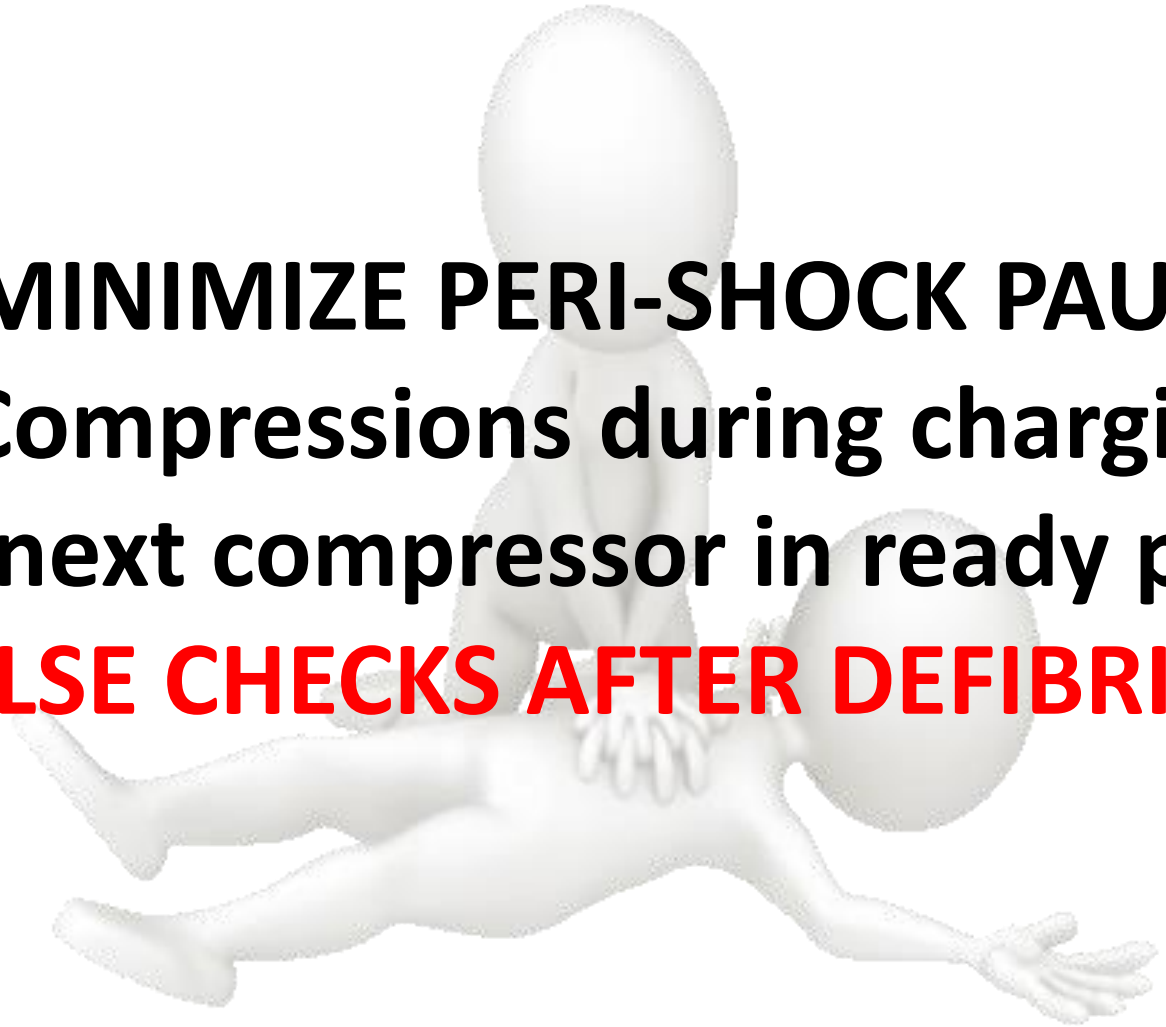
Easier to learn, remember and perform rather than range of bpm

TIME ON THE CHEST



MINIMIZE CPR INTERRUPTION
place pads during CPR
check pulse prior to rhythm analysis
smooth compressor transitions
timing of patient movement - stretcher
ETI during CPR

TIME ON THE CHEST



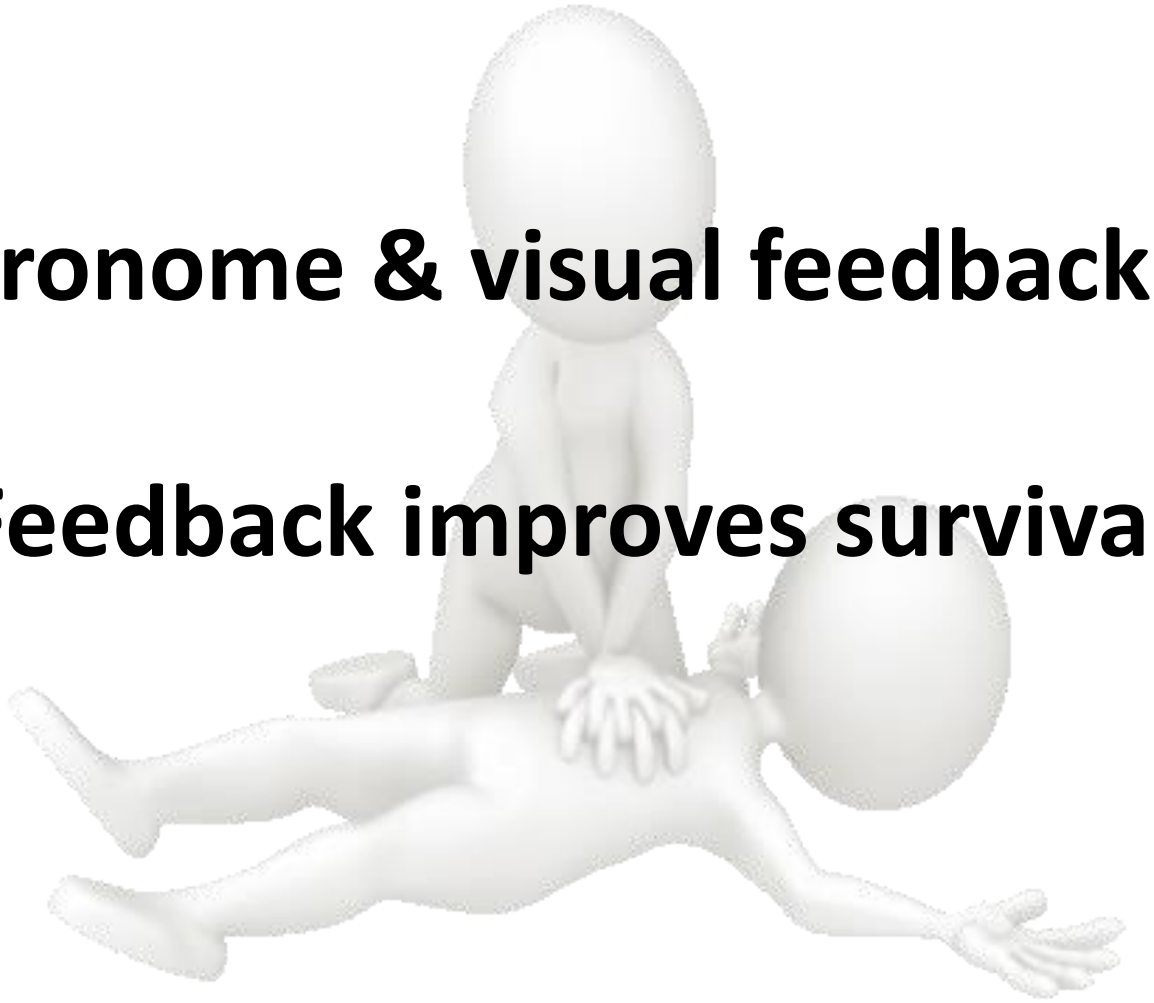
MINIMIZE PERI-SHOCK PAUSE

Compressions during charging

Have next compressor in ready position

NO PULSE CHECKS AFTER DEFIBRILLATION

Realtime CPR Feedback

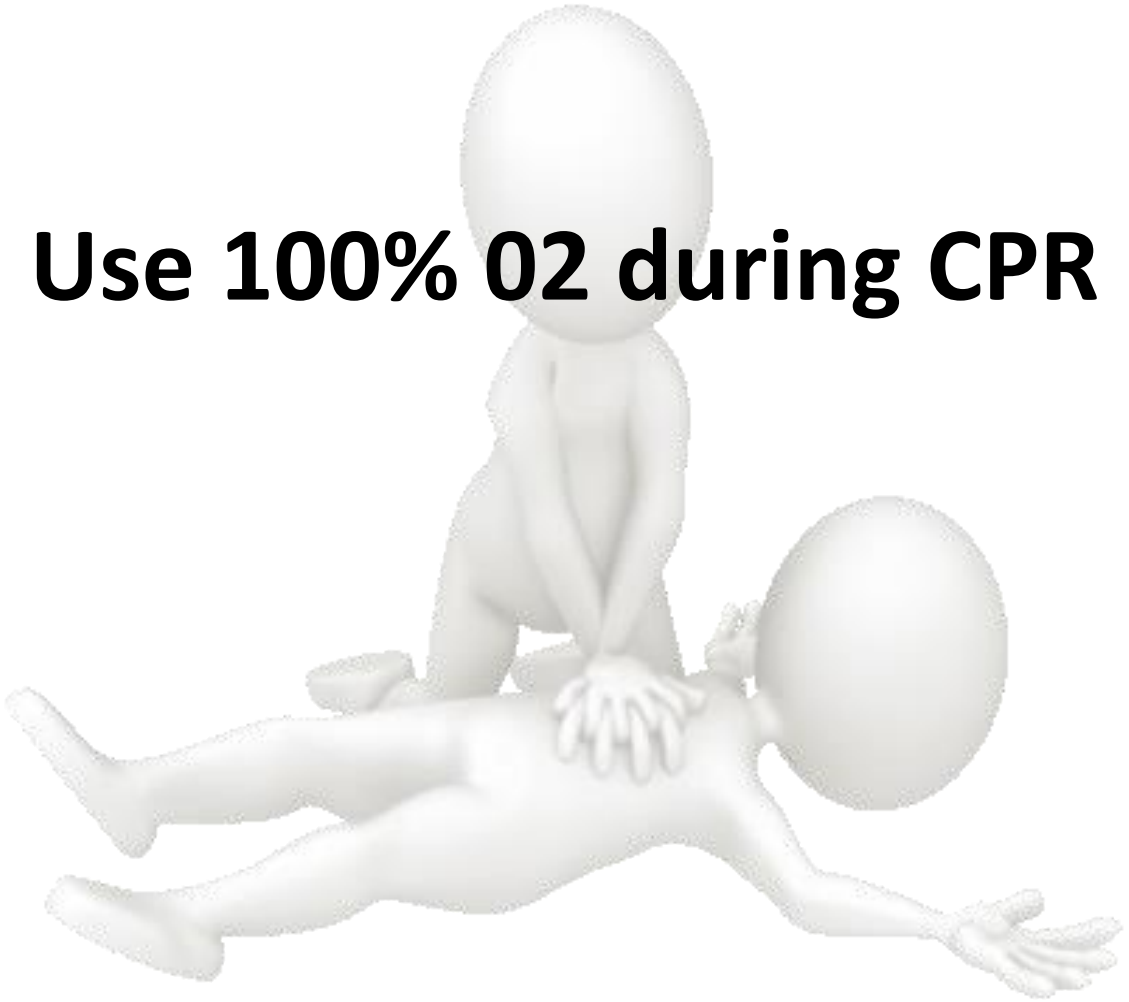


Use metronome & visual feedback devices

Feedback improves survival

Oxygenation

Use 100% 02 during CPR



EtCO2

Guide for chest compression quality

AIM for EtCO2 > 20

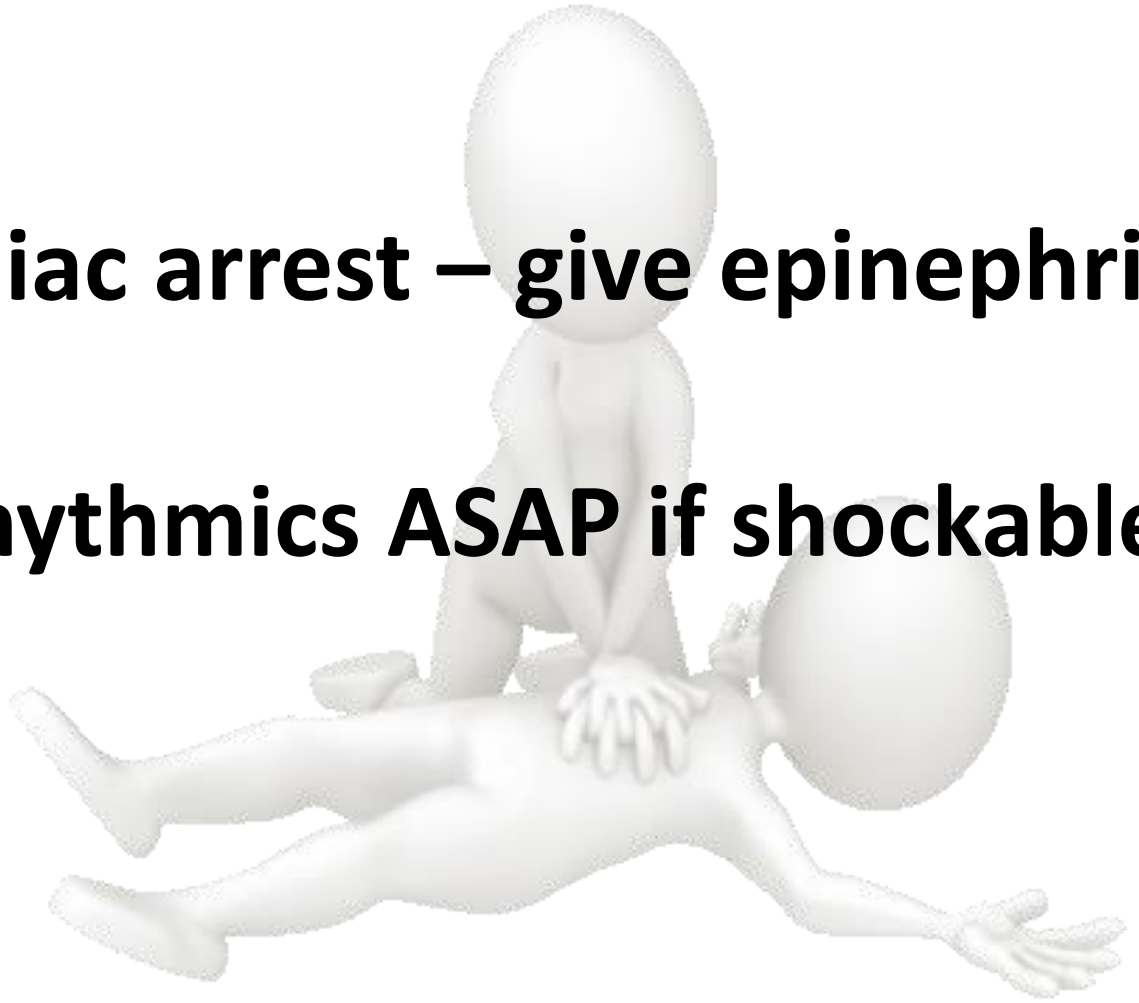
Identify ROSC

Abrupt increase – Don't stop CPR

Determine futility – TOR

EtCO2 < 10 after 20 min CPR not good

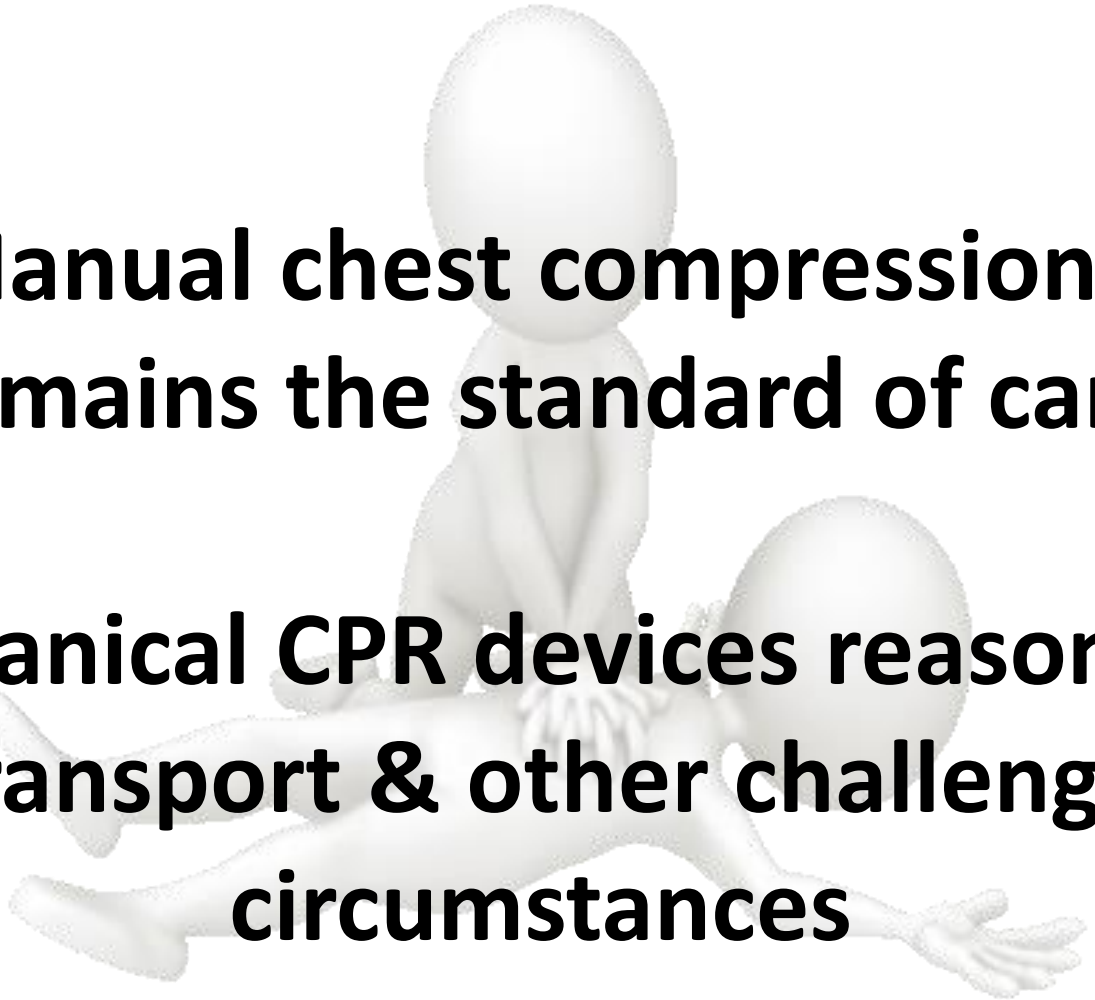
ACLS



If in cardiac arrest – give epinephrine ASAP

Anti-arrhythmics ASAP if shockable rhythm

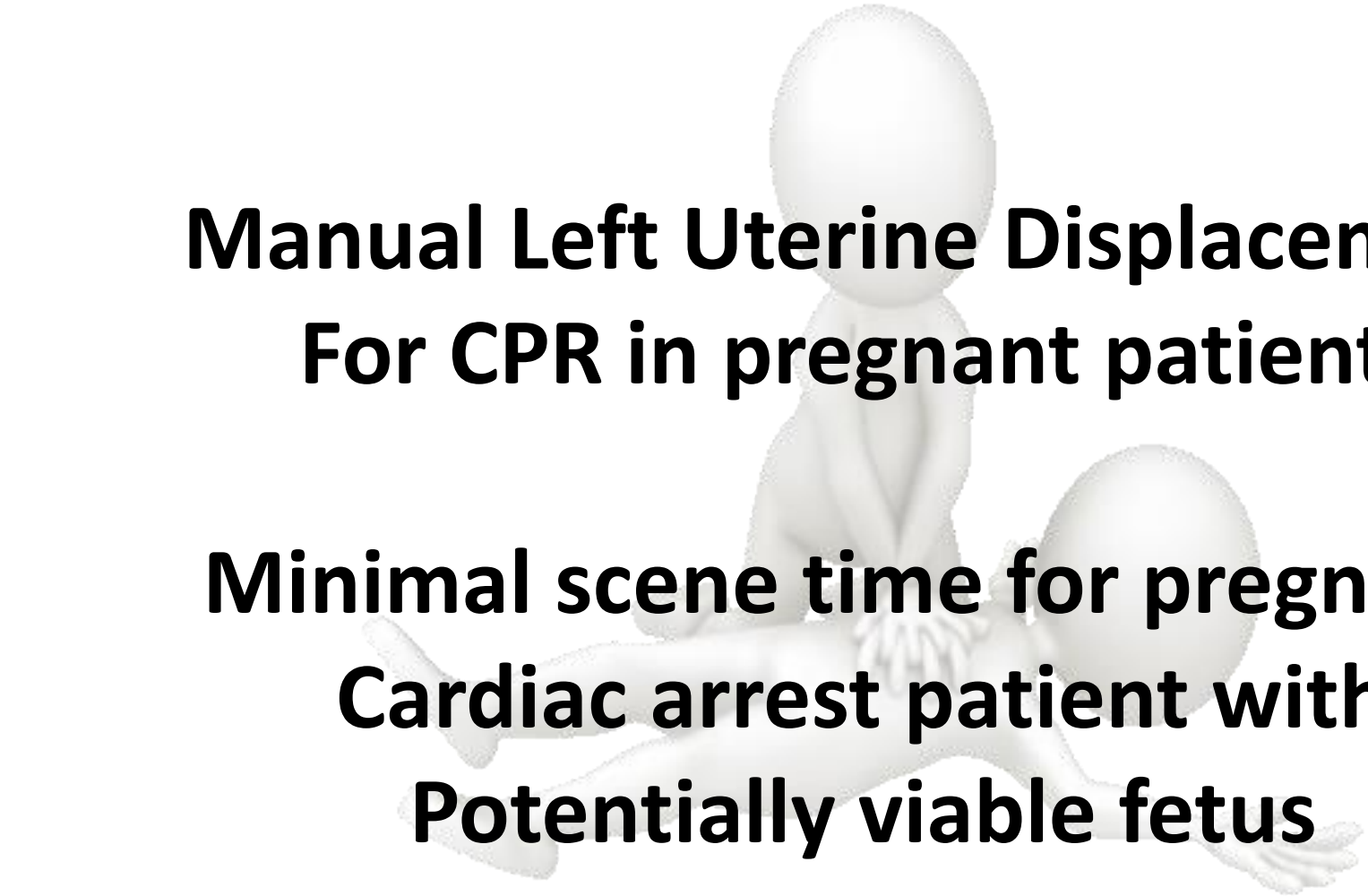
Mechanical CPR



Manual chest compressions Remains the standard of care

Mechanical CPR devices reasonable in transport & other challenging circumstances

Special Considerations



Manual Left Uterine Displacement
For CPR in pregnant patients

Minimal scene time for pregnant
Cardiac arrest patient with
Potentially viable fetus

ARREST SUMMARY

Pulse checks no > 10 seconds

Rate 100-120 (optimal 110)

Depth 5 – 6 cm

Allow full recoil

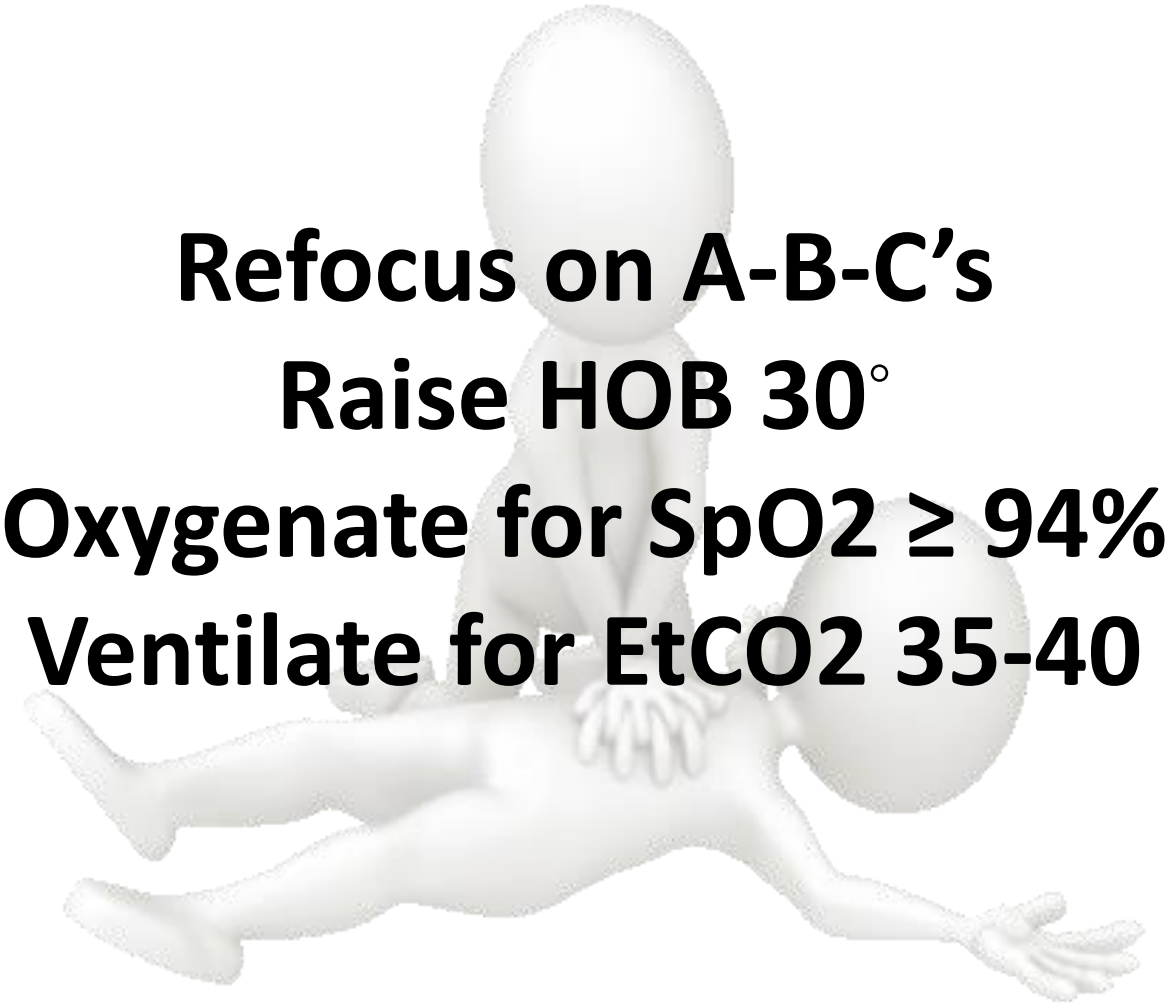
Ratio 30:2 without advanced airway

Maximize time on the chest

Reduce peri-shock pause

Use EtCO2

ROSC CARE



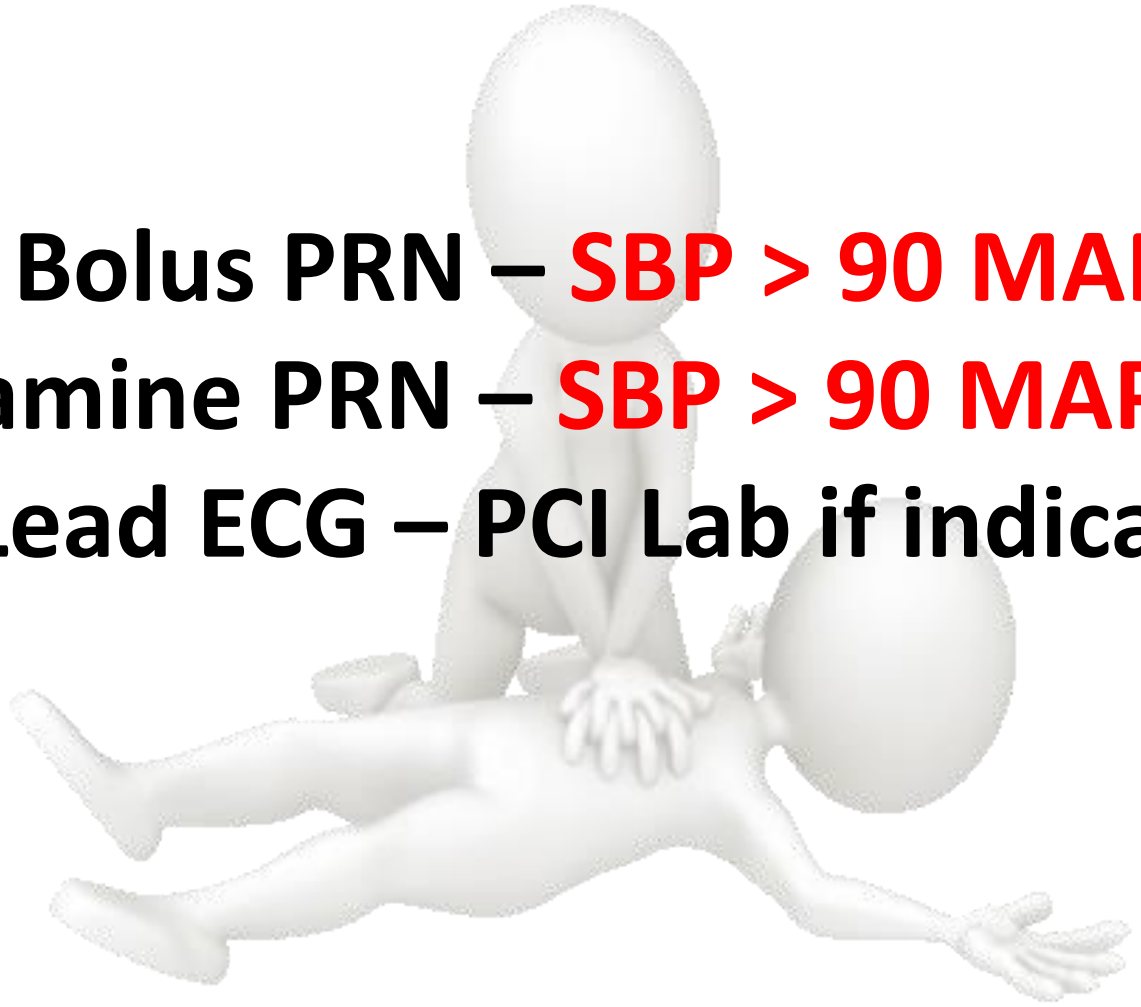
Refocus on A-B-C's

Raise HOB 30°

Oxygenate for $SpO_2 \geq 94\%$

Ventilate for $EtCO_2$ 35-40

ROSC CARE

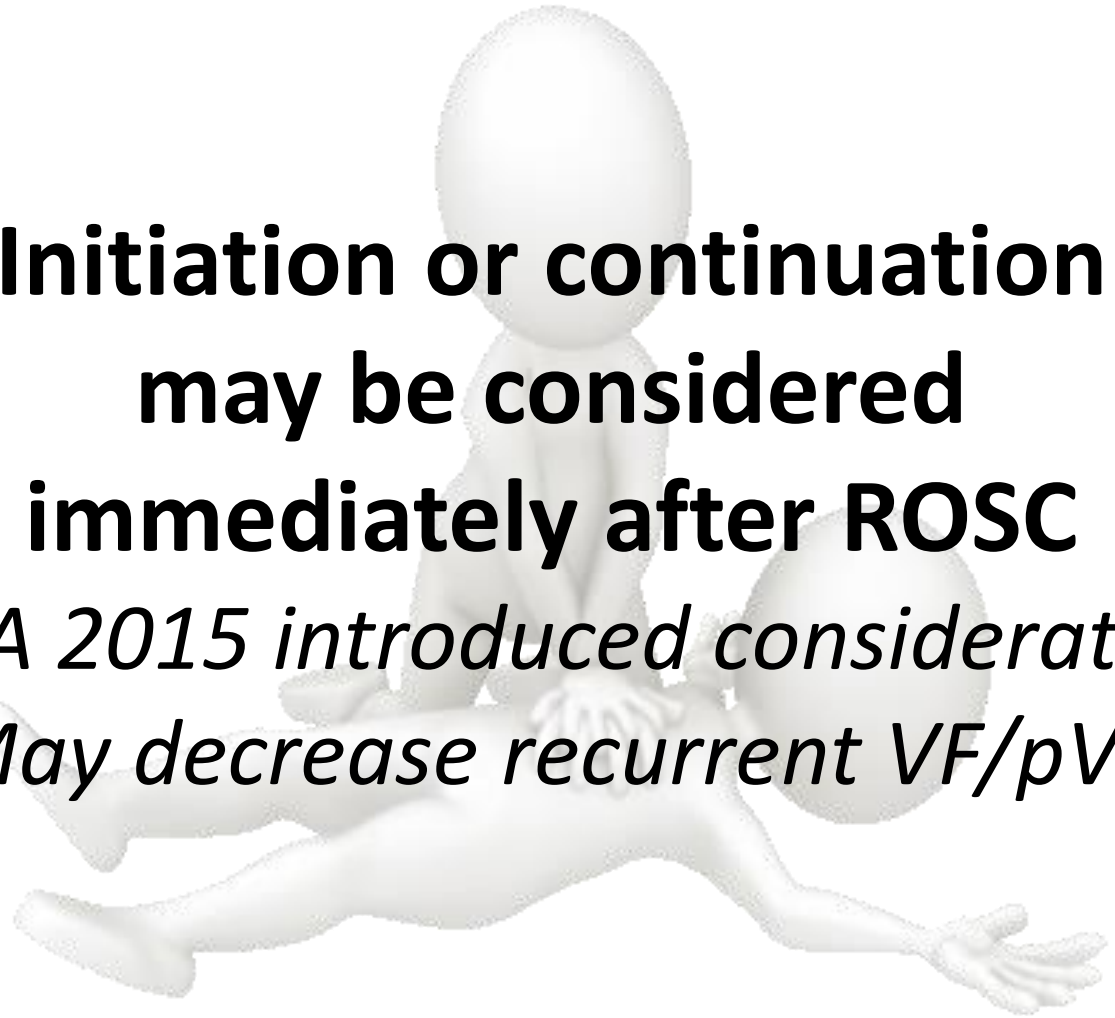


Fluid Bolus PRN – SBP > 90 MAP >65

Dopamine PRN – SBP > 90 MAP >65

12 Lead ECG – PCI Lab if indicated

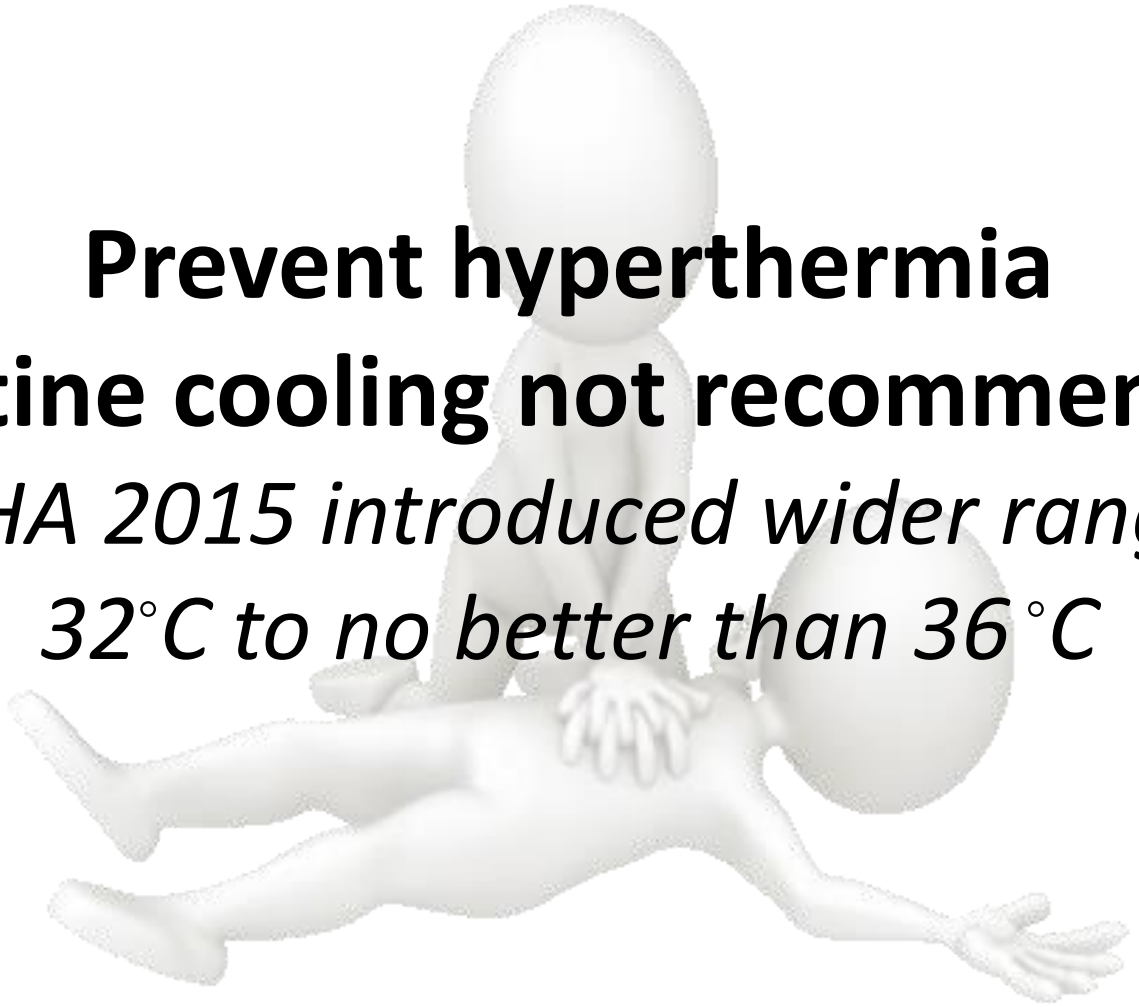
ROSC LIDOCAINE?



Initiation or continuation
may be considered
immediately after ROSC

AHA 2015 introduced consideration
May decrease recurrent VF/pVT

TTM?



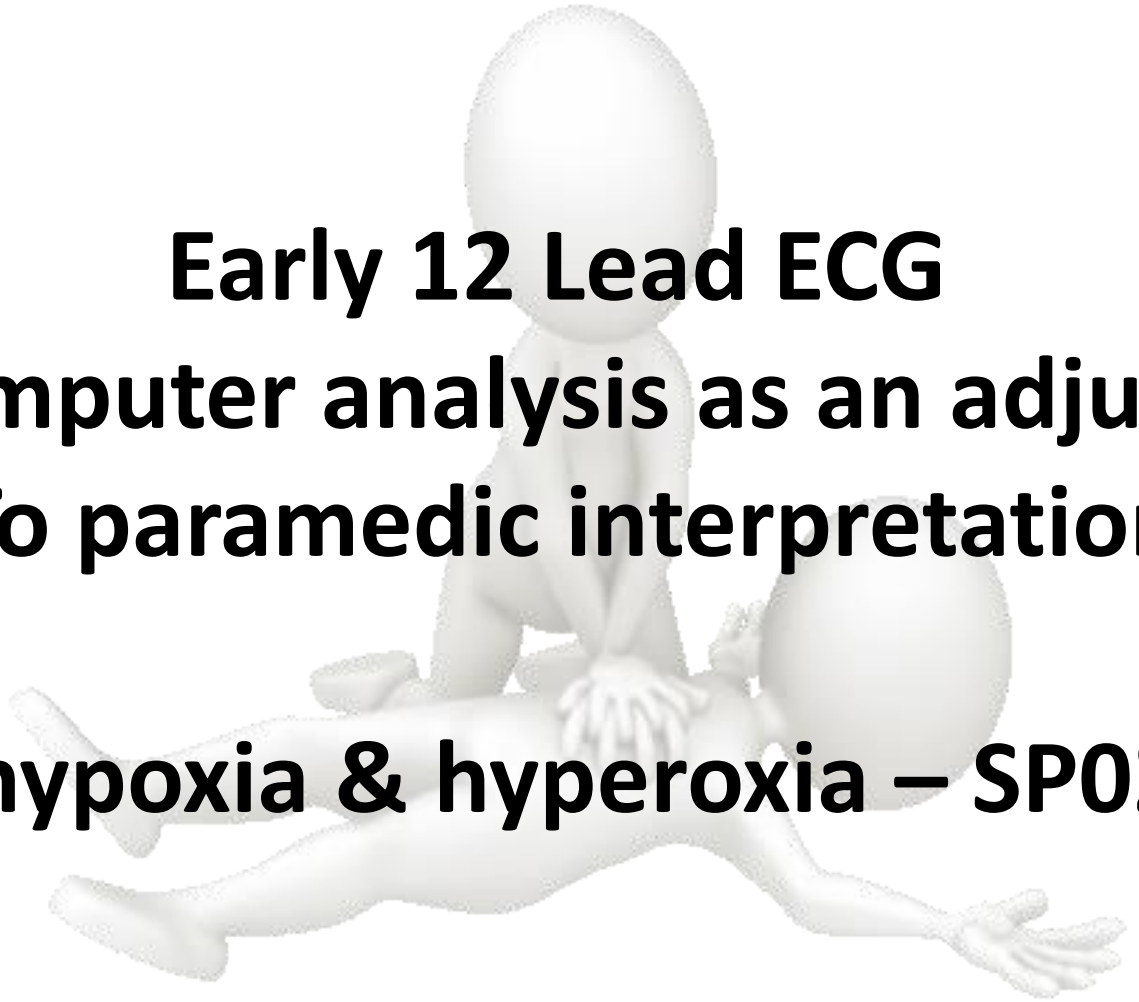
Prevent hyperthermia

Routine cooling not recommended

AHA 2015 introduced wider range

32°C to no better than 36°C

ACS incl STEMI



Early 12 Lead ECG
Computer analysis as an adjunct
To paramedic interpretation

Avoid hypoxia & hyperoxia – SP02 >94%

Naloxone

BLS priorities remain focus

No quality CPR = ineffective drug delivery

Summary

ROSC – ABC's

SP02 94-99%

EtC02 35-40mmHg

No Hypothermia

Early 12 Lead in ACS & ROSC

High quality CPR priority in opiod OD