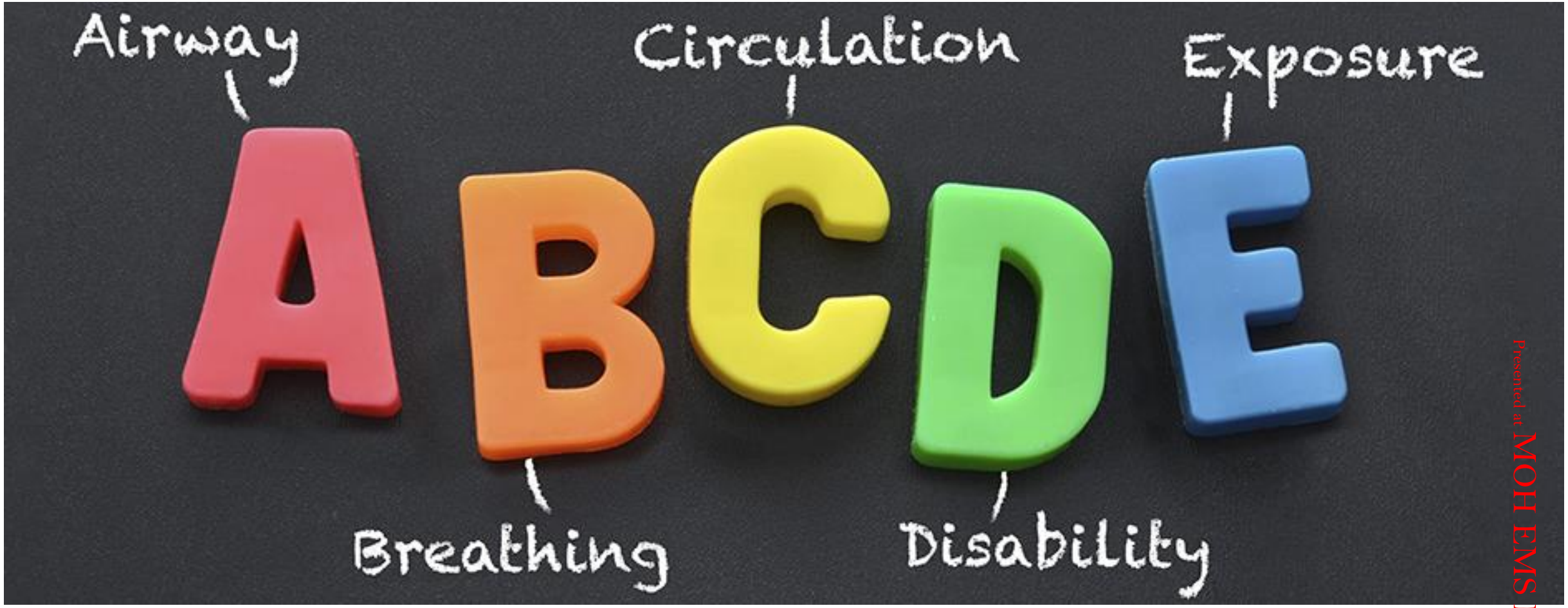
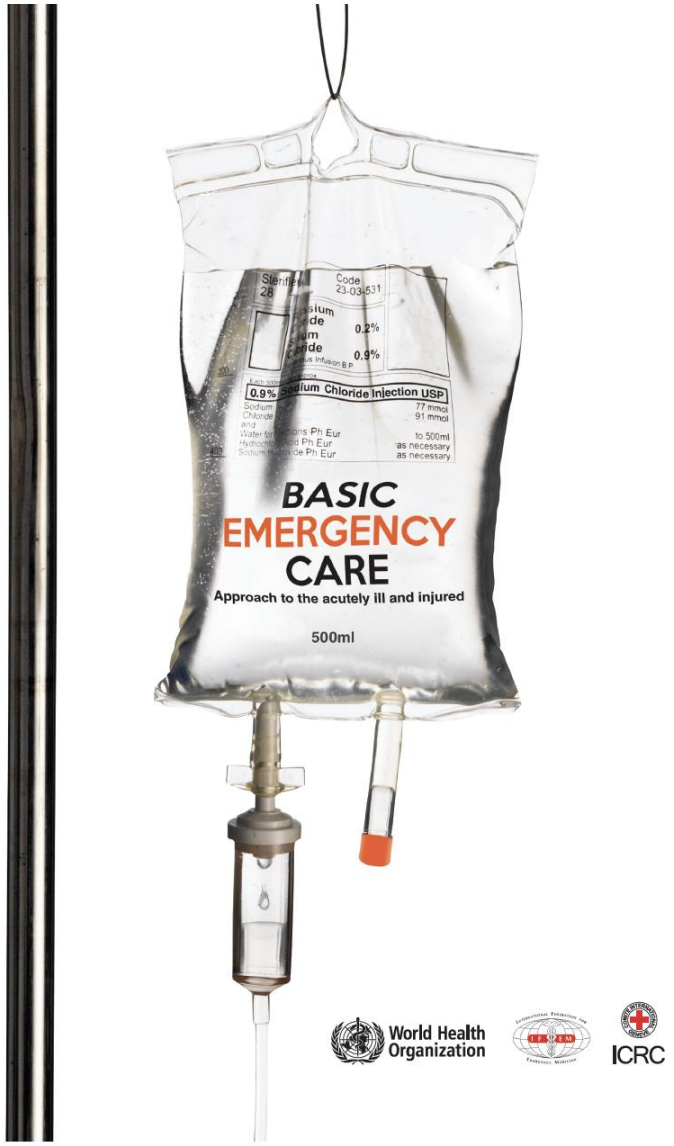
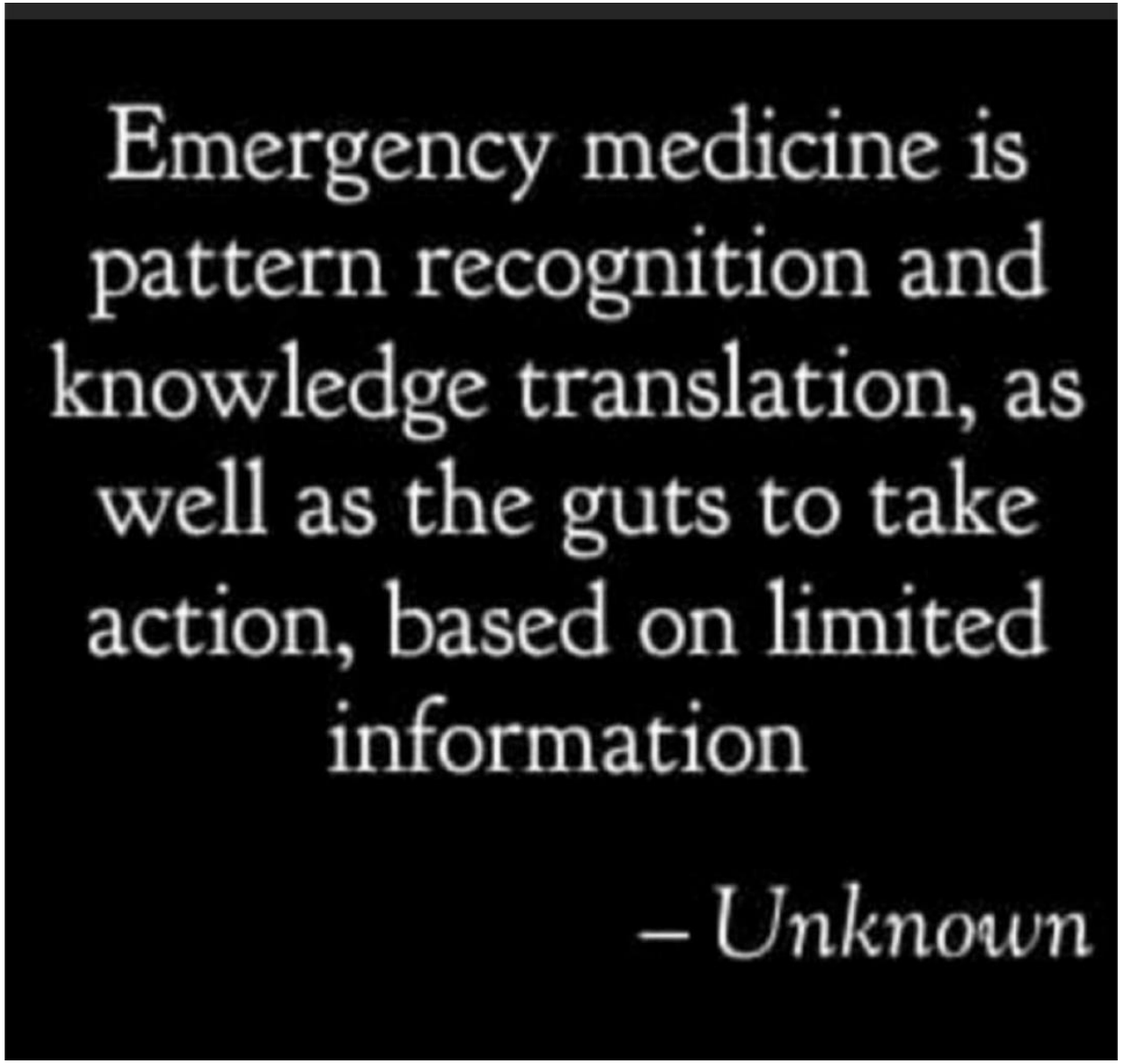


ABCDE

Dr. Céline Jacobs
Emergency Medicine Physician
Seed Global Health



Presented at MOH EMS ECHO



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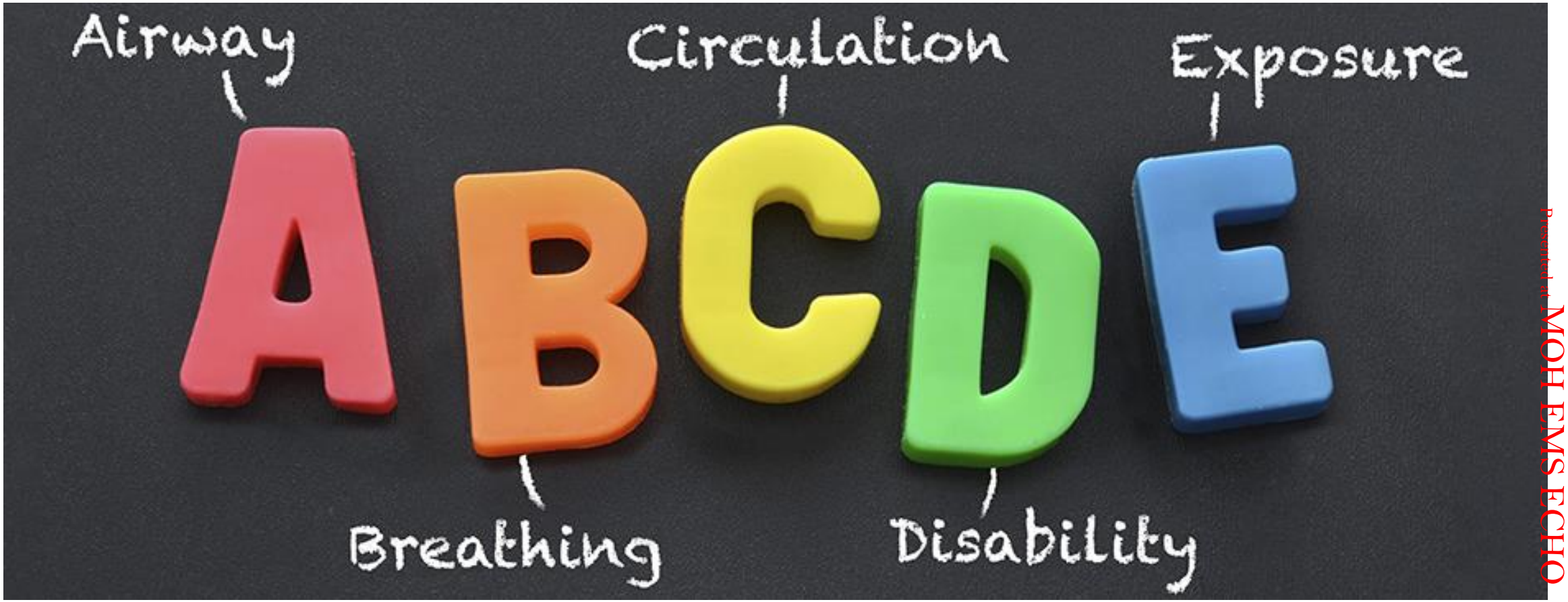
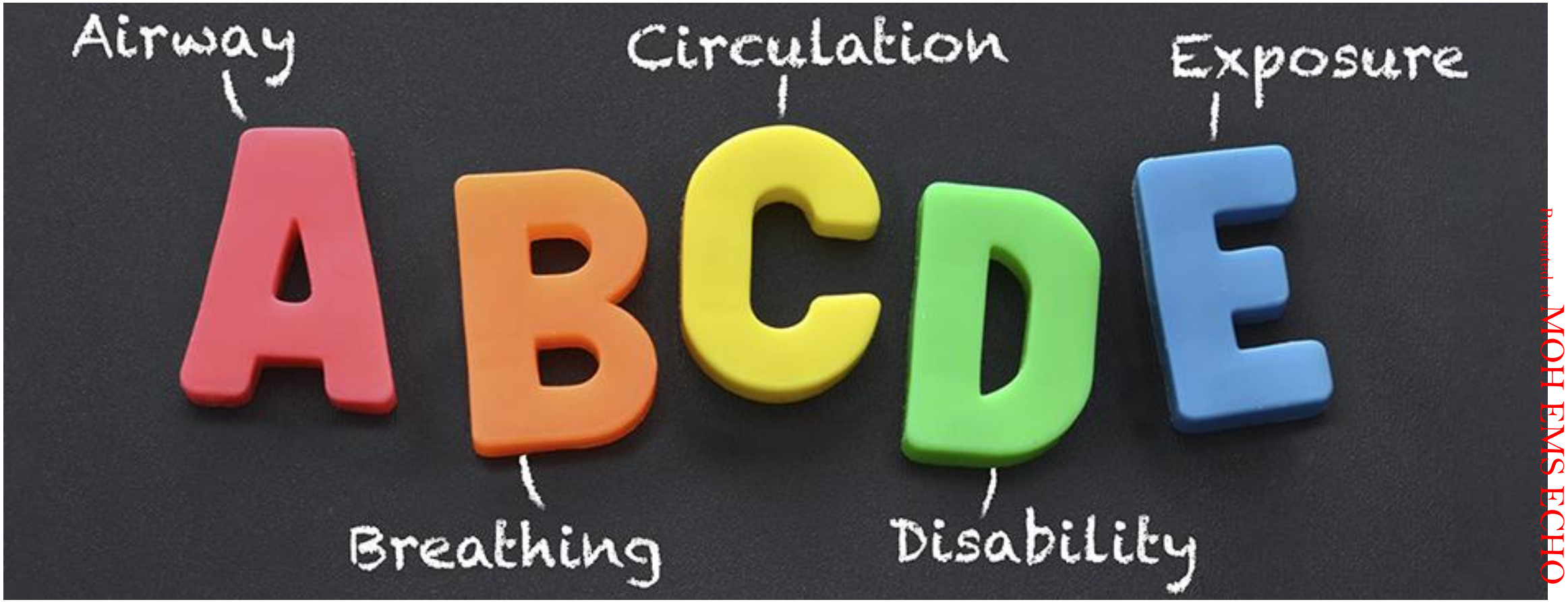


Why the ABCDE approach?

- Simple
- Systematic
- Recognize life-threatening conditions early
- Do the most critical interventions first - fix problems before moving on

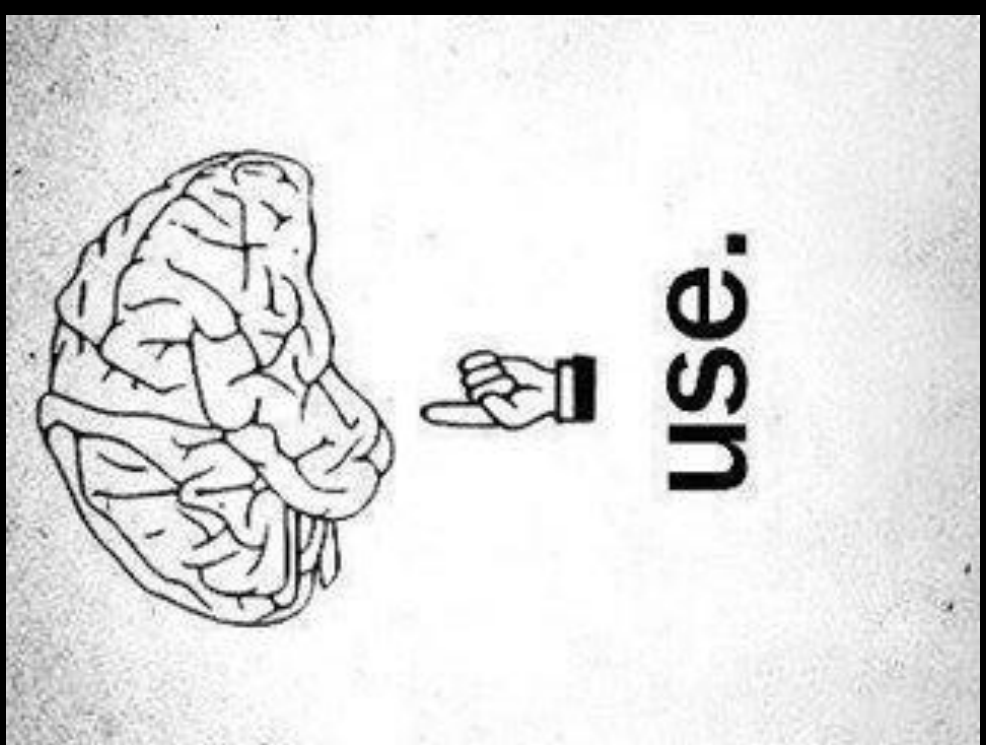
NO signs of life: Start CPR

Presented at MOH EMS ECHO

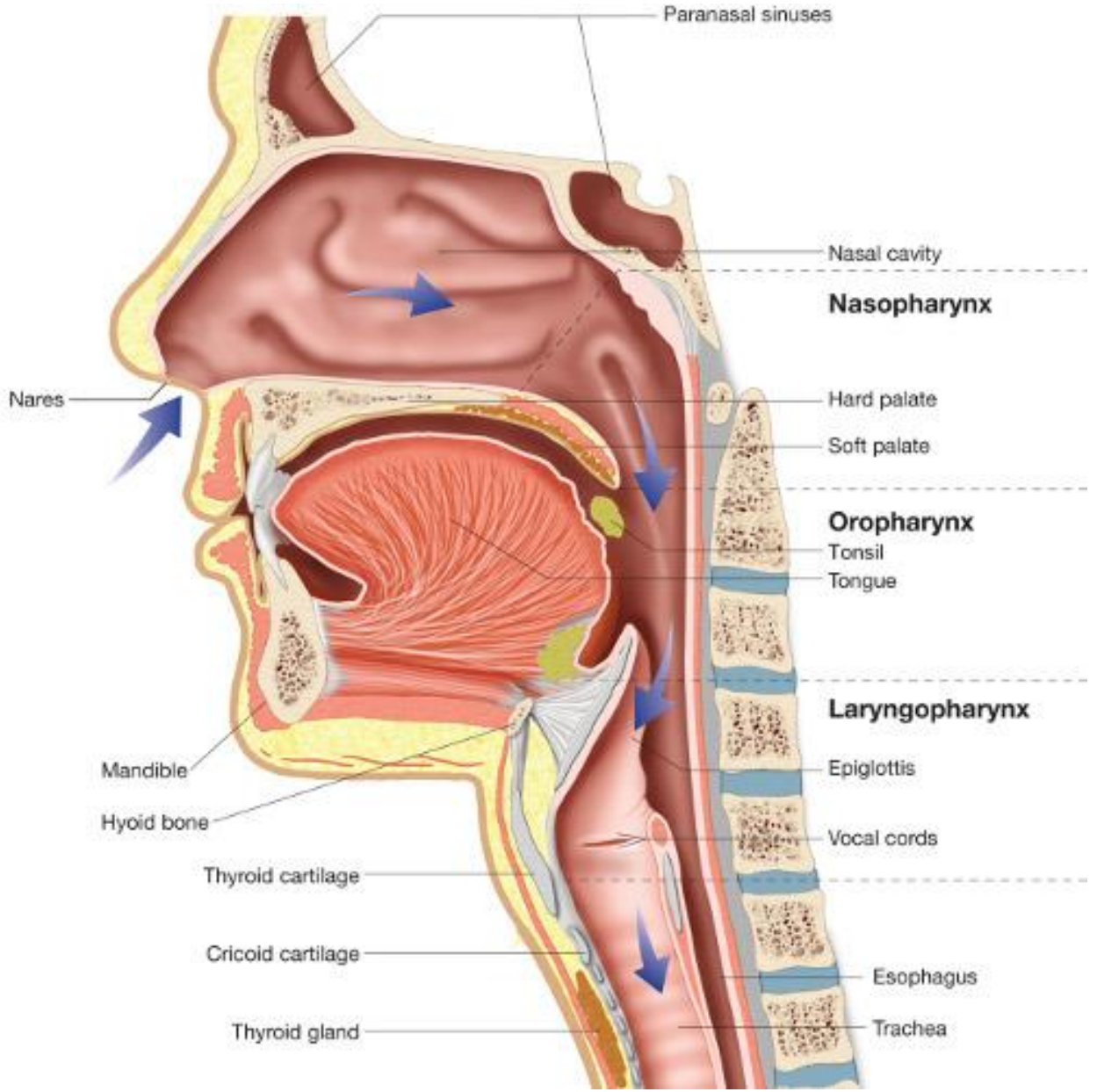


ABCDE

Any problem identified must be addressed immediately before moving on to the next step.

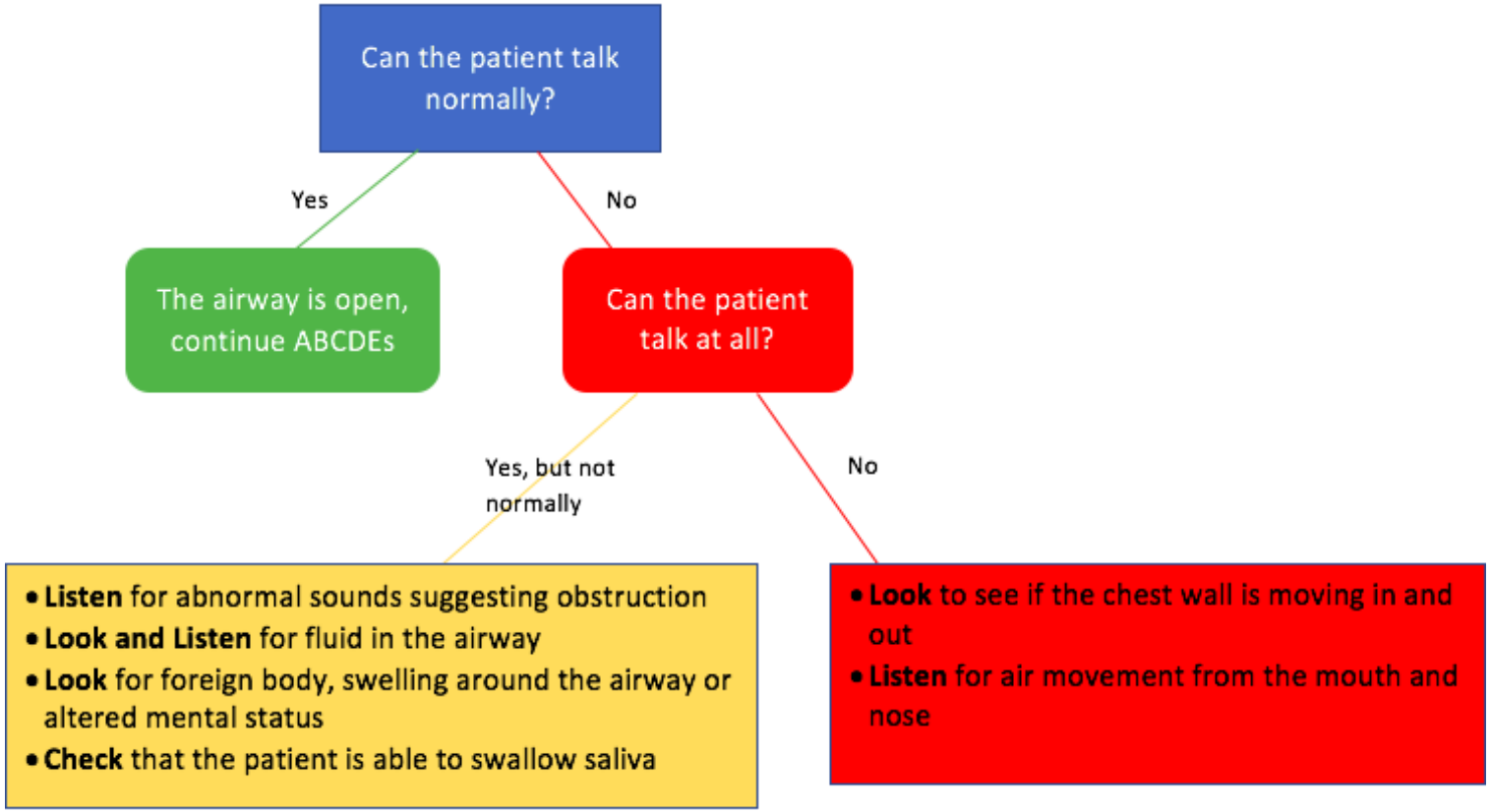

use.

A is for Airway



Step 1: Recognize a threatened airway!

Airway Assessment



If you identify an issue: stop and address it!

Immobilize C-Spine

Airway Management

1) Open the Airway

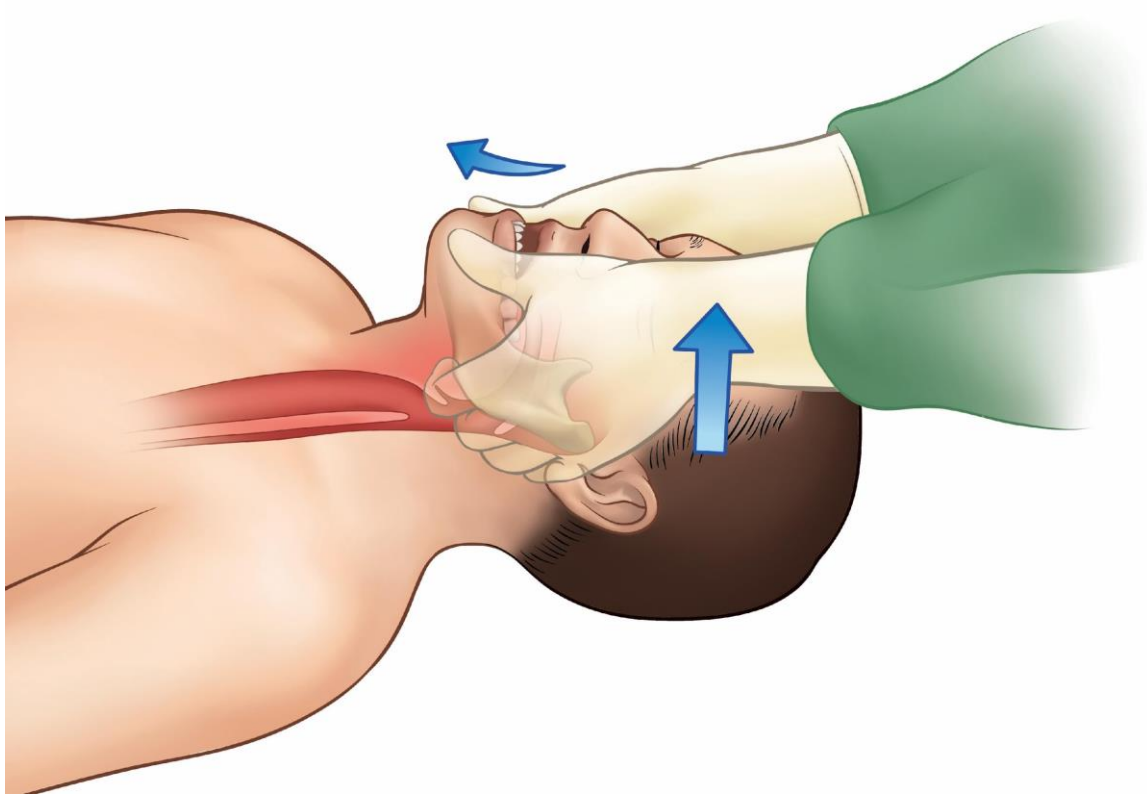
2) Clear the Airway

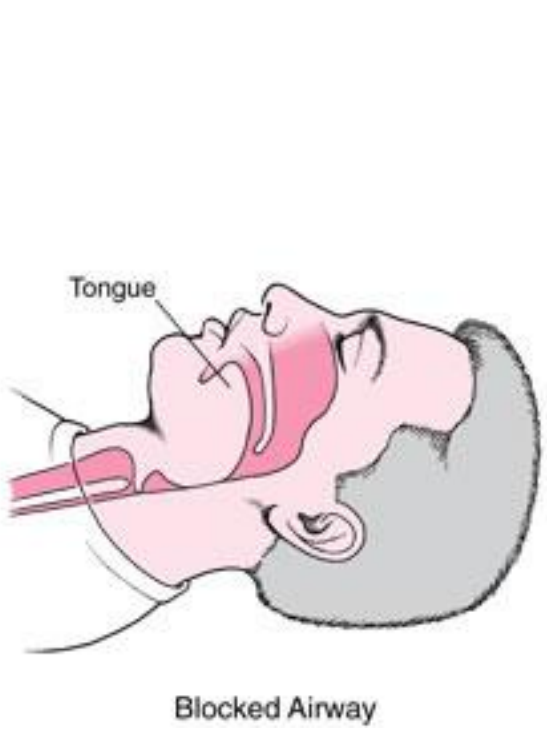
3) Maintain the Airway

4) Protect the Airway

Presented at MOH EMS ECHO

Open the Airway






Jaw Thrust

Clear the Airway

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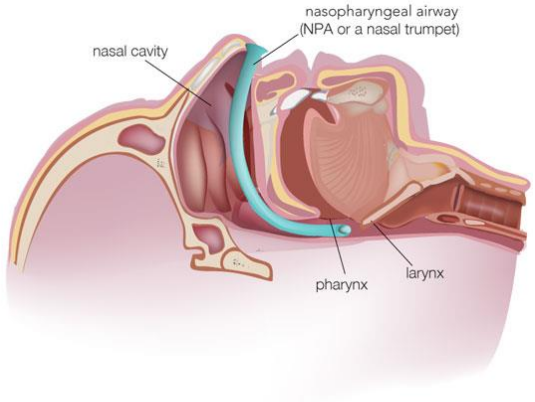
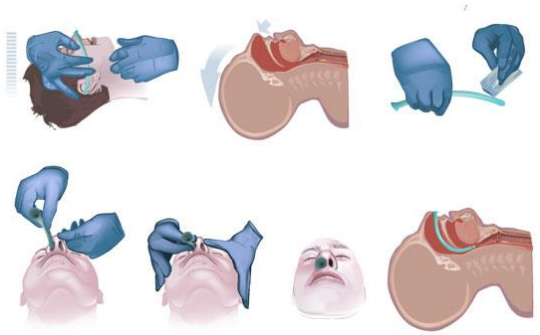
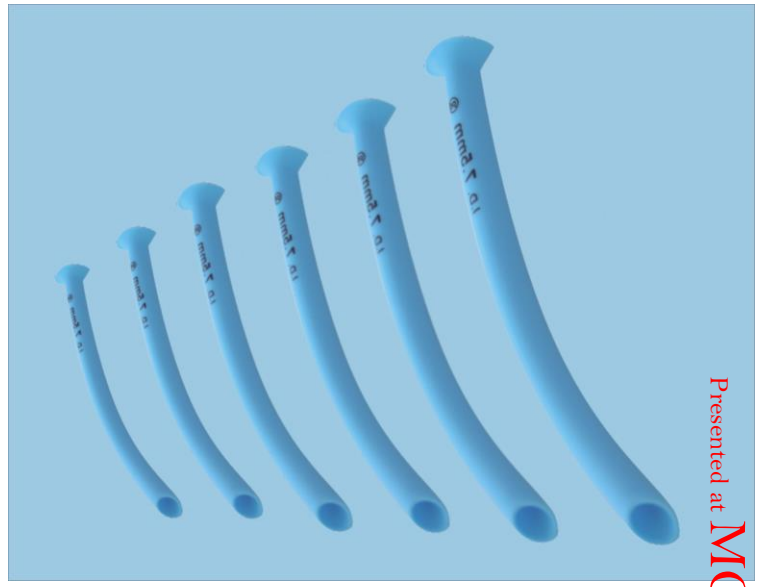
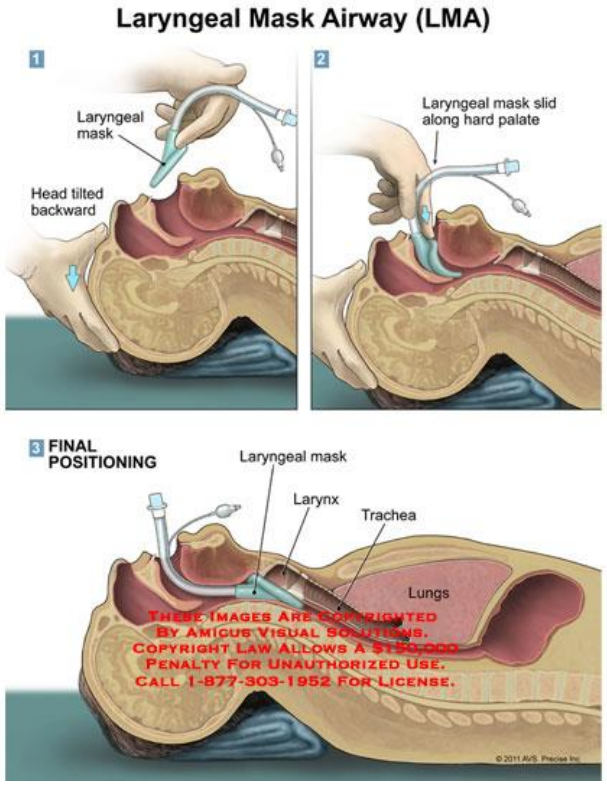




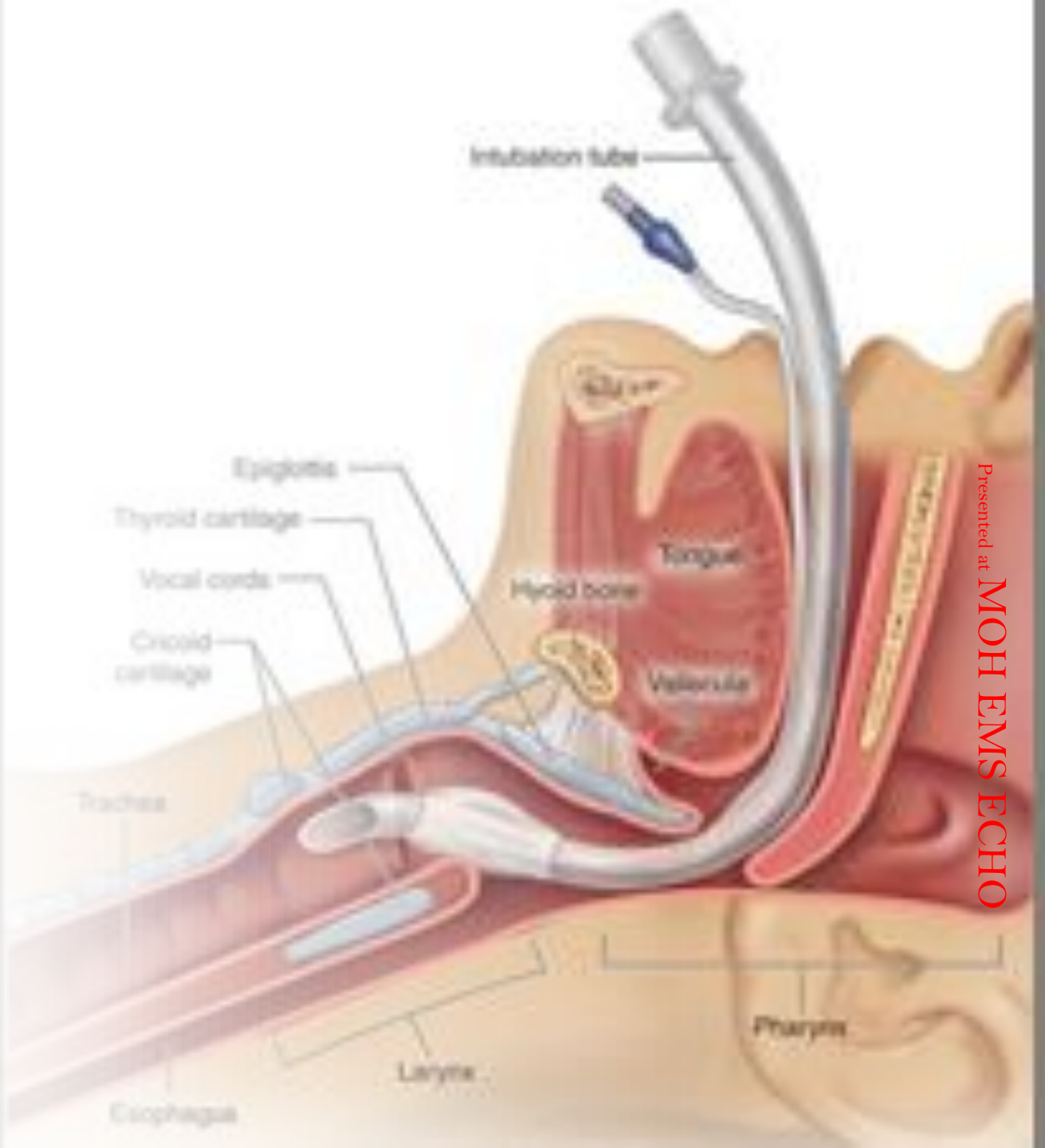


Maintain the Airway



LMA: LARYNGEAL MASK AIRWAY

Protect the Airway: Advanced Skill



B is for Breathing

Presented at MOH EMS ECHO

Breathing: Assessment

Look, listen and feel	Look, listen and feel to see if the patient is breathing.
Assess	Assess if the breathing is very fast, very slow or very shallow.
Look	Look for increased work of breathing.
Listen	Listen for abnormal breath sounds.

Count the respiratory rate!

Presented at MOH EMS ECHO

If you identify an issue: stop and address it!

Presented by MOH EMS ECHO

Most Important Tools in Managing Airway and Breathing?

Presented at MOH EMS ECHO

Most Important Tools in Managing Airway and Breathing?

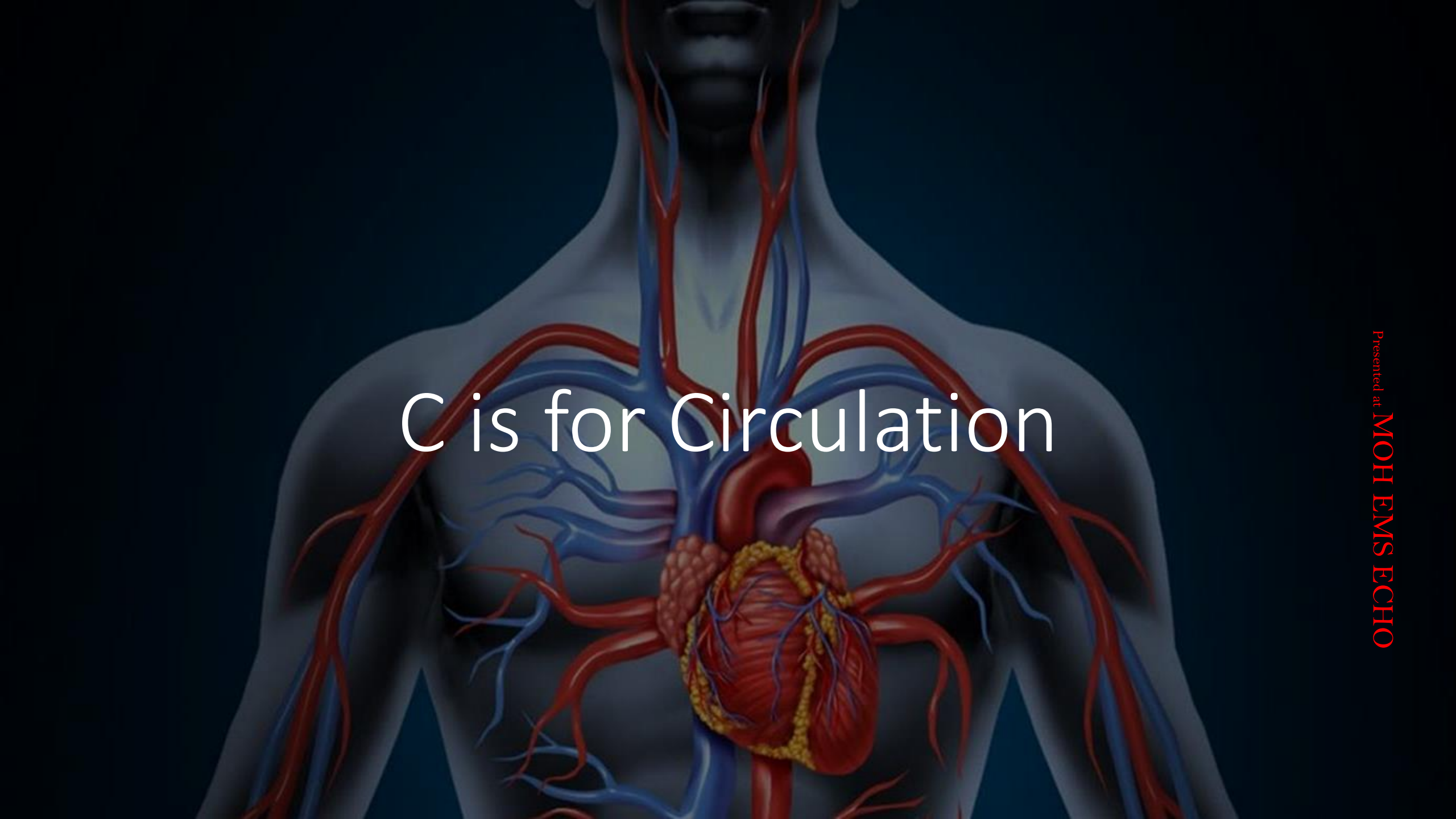
Bag-mask Ventilation

1-hand technique for BVM

2-hand technique for BVM

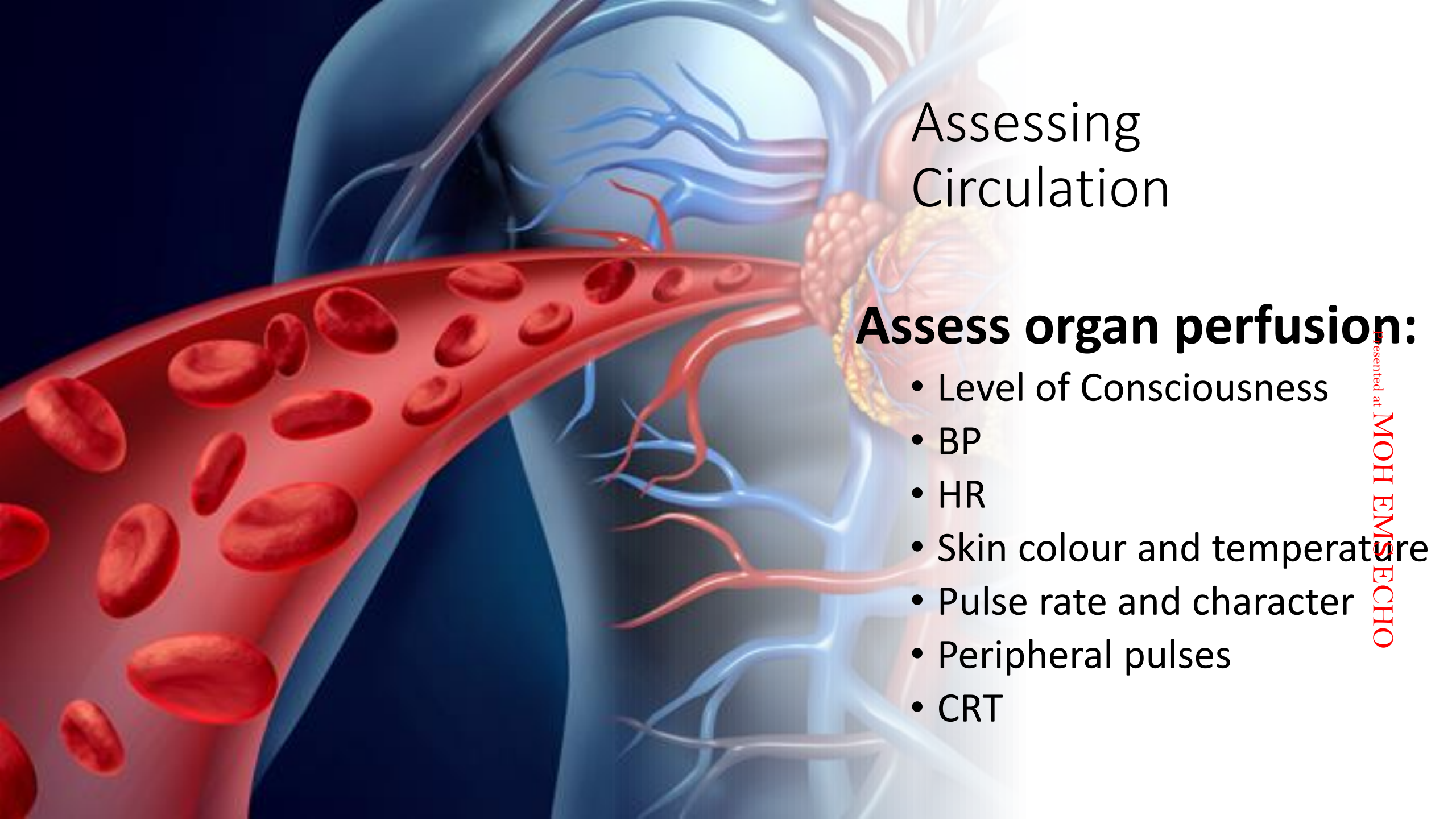
ALS Subcommittee 2010

Hyperventilation does not treat hypoxia



C is for Circulation

Presented at MOH EMS ECHO



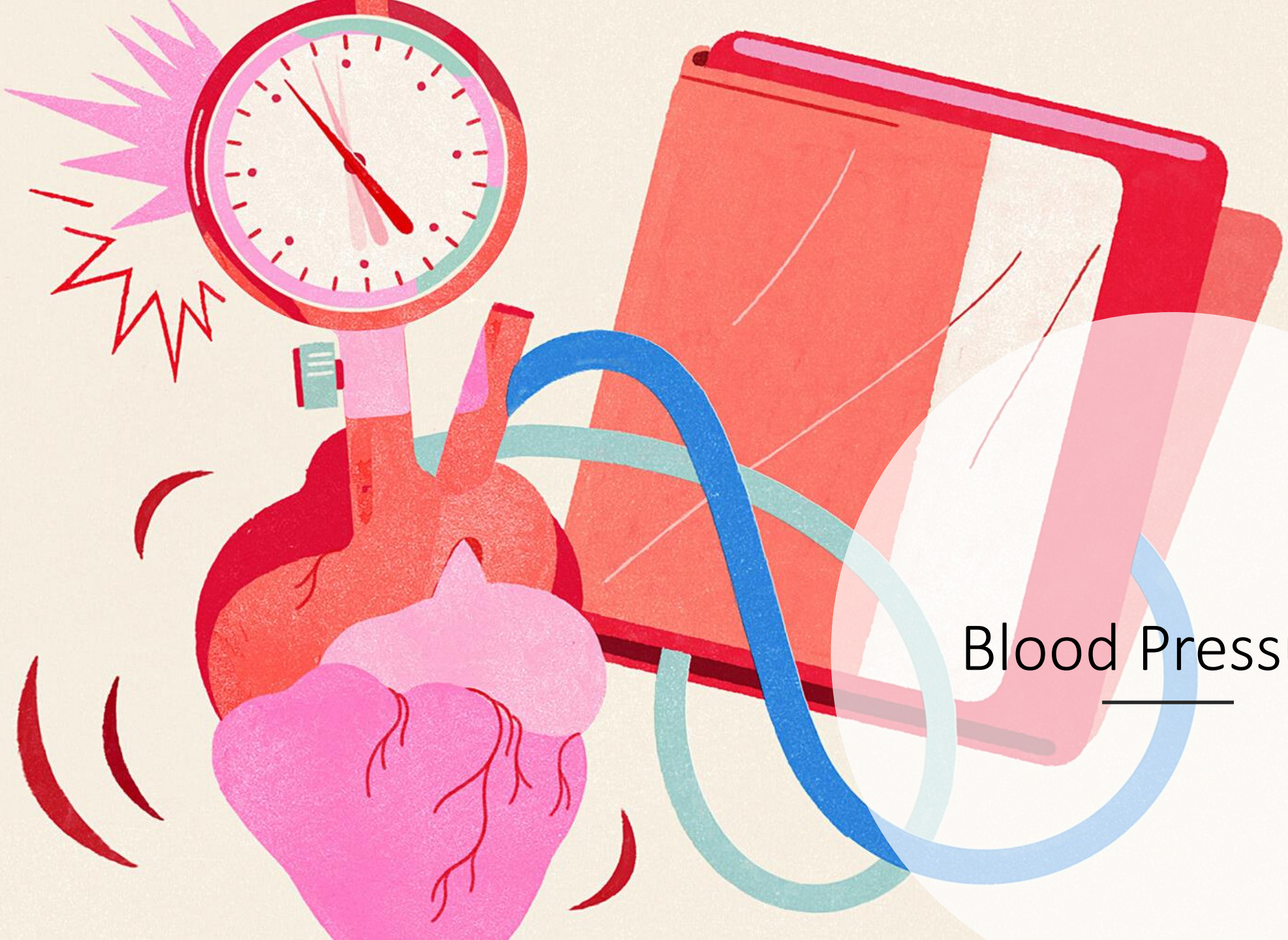
Assessing Circulation

Assess organ perfusion:

- Level of Consciousness
- BP
- HR
- Skin colour and temperature
- Pulse rate and character
- Peripheral pulses
- CRT

Heart Rate

Presented at MOH EMS ECHO



Blood Pressure

Presented at MOH EMS ECHO

Capillary Refill Time

JAMA | Original Investigation | CARING FOR THE CRITICALLY ILL PATIENT

Effect of a Resuscitation Strategy Targeting Peripheral Perfusion Status vs Serum Lactate Levels on 28-Day Mortality Among Patients With Septic Shock

The ANDROMEDA-SHOCK Randomized Clinical Trial

Glenn Hernández, MD, PhD; Gustavo A. Ospina-Tascón, MD, PhD; Lucas Petri Damiani, MSc; Elisa Estenssoro, MD; Arnaldo Dubin, MD, PhD; Javier Hurtado, MD; Gilberto Friedman, MD, PhD; Ricardo Castro, MD, MPH; Leyla Alegría, RN, MSc; Jean-Louis Teboul, MD, PhD; Maurizio Cecconi, MD, FFICM; Giorgio Ferri, MD; Manuel Jibaja, MD; Ronald Pairumani, MD; Paula Fernández, MD; Diego Barahona, MD; Vladimir Granda-Luna, MD, PhD; Alexandre Biasi Cavalcanti, MD, PhD; Jan Bakker, MD, PhD; for the ANDROMEDA-SHOCK Investigators and the Latin America Intensive Care Network (LIVEN)

OBJECTIVE To determine if a peripheral perfusion–targeted resuscitation during early septic shock in adults is more effective than a lactate level–targeted resuscitation for reducing mortality.

DESIGN, SETTING, AND PARTICIPANTS Multicenter, randomized trial conducted at 28 intensive care units in 5 countries. Four-hundred twenty-four patients with septic shock were included between March 2017 and March 2018. The last date of follow-up was June 12, 2018.

INTERVENTIONS Patients were randomized to a step-by-step resuscitation protocol aimed at either normalizing capillary refill time (n = 212) or normalizing or decreasing lactate levels at rates greater than 20% per 2 hours (n = 212), during an 8-hour intervention period.

MAIN OUTCOMES AND MEASURES The primary outcome was all-cause mortality at 28 days. Secondary outcomes were organ dysfunction at 72 hours after randomization, as assessed by Sequential Organ Failure Assessment (SOFA) score (range, 0 [best] to 24 [worst]); death within 90 days; mechanical ventilation–, renal replacement therapy–, and vasopressor–free days within 28 days; intensive care unit and hospital length of stay.

RESULTS Among 424 patients randomized (mean age, 63 years; 226 [53%] women), 416 (98%) completed the trial. By day 28, 74 patients (34.9%) in the peripheral perfusion group and 92 patients (43.4%) in the lactate group had died (hazard ratio, 0.75 [95% CI, 0.55 to 1.02]; $P = .06$; risk difference, −8.5% [95% CI, −18.2% to 1.2%]). Peripheral perfusion–targeted resuscitation was associated with less organ dysfunction at 72 hours (mean SOFA score, 5.6 [SD, 4.3] vs 6.6 [SD, 4.7]; mean difference, −1.00 [95% CI, −1.97 to −0.02]; $P = .045$). There were no significant differences in the other 6 secondary outcomes. No protocol-related serious adverse reactions were confirmed.

CONCLUSIONS AND RELEVANCE Among patients with septic shock, a resuscitation strategy targeting normalization of capillary refill time, compared with a strategy targeting serum lactate levels, did not reduce all-cause 28-day mortality.

Assess Volume Status

Is the patient hypovolemic, normovolemic, or hypervolemic?

Look for Signs of Bleeding

Presented at MOH EMS ECHO

PoCUS

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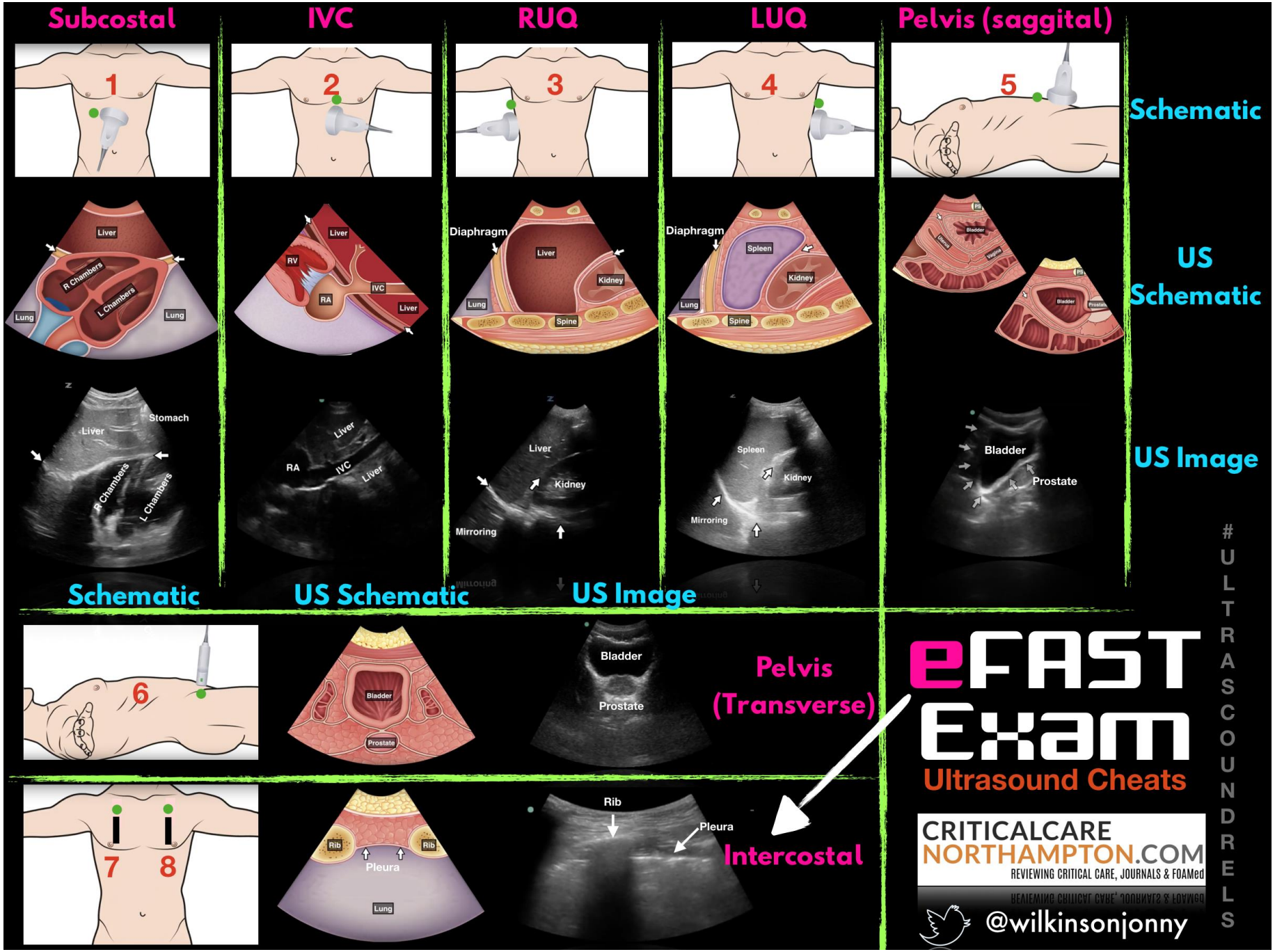

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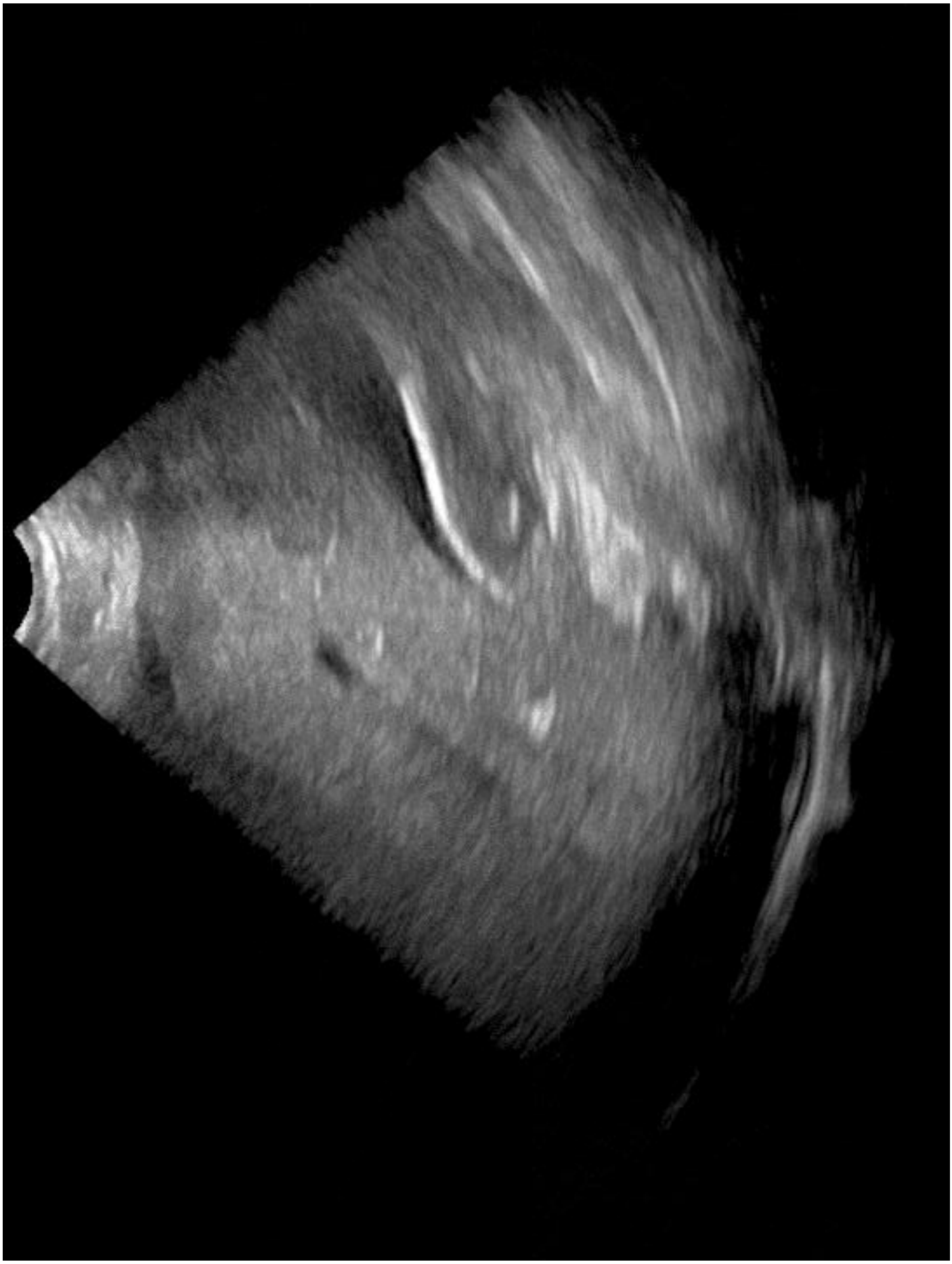
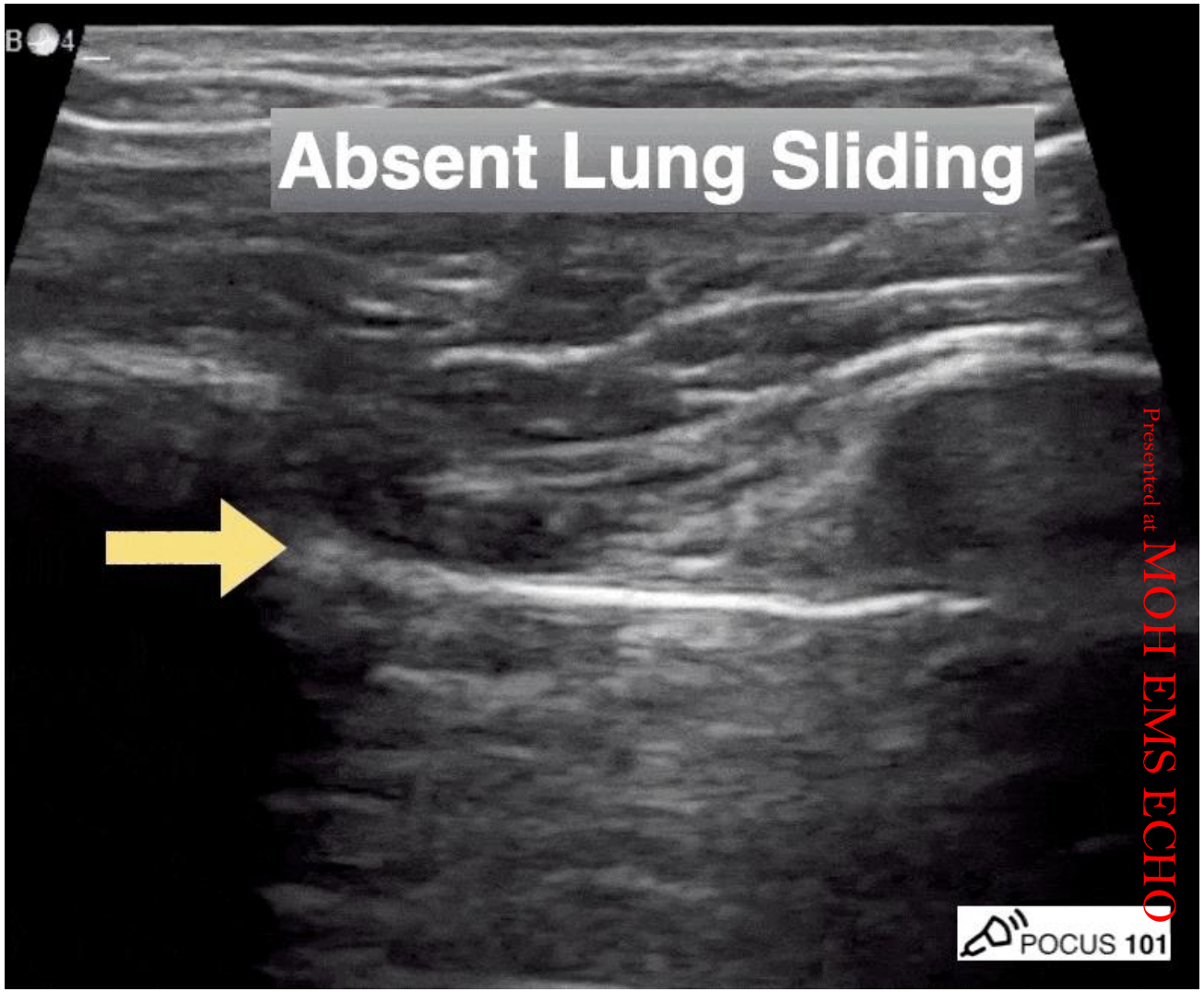



Absent Lung Sliding
Presented at MOH EMS ECHO
POCUS 101

If you identify an issue: stop and address it!

Presented by MOH EMS ECHO

C is for Circulation

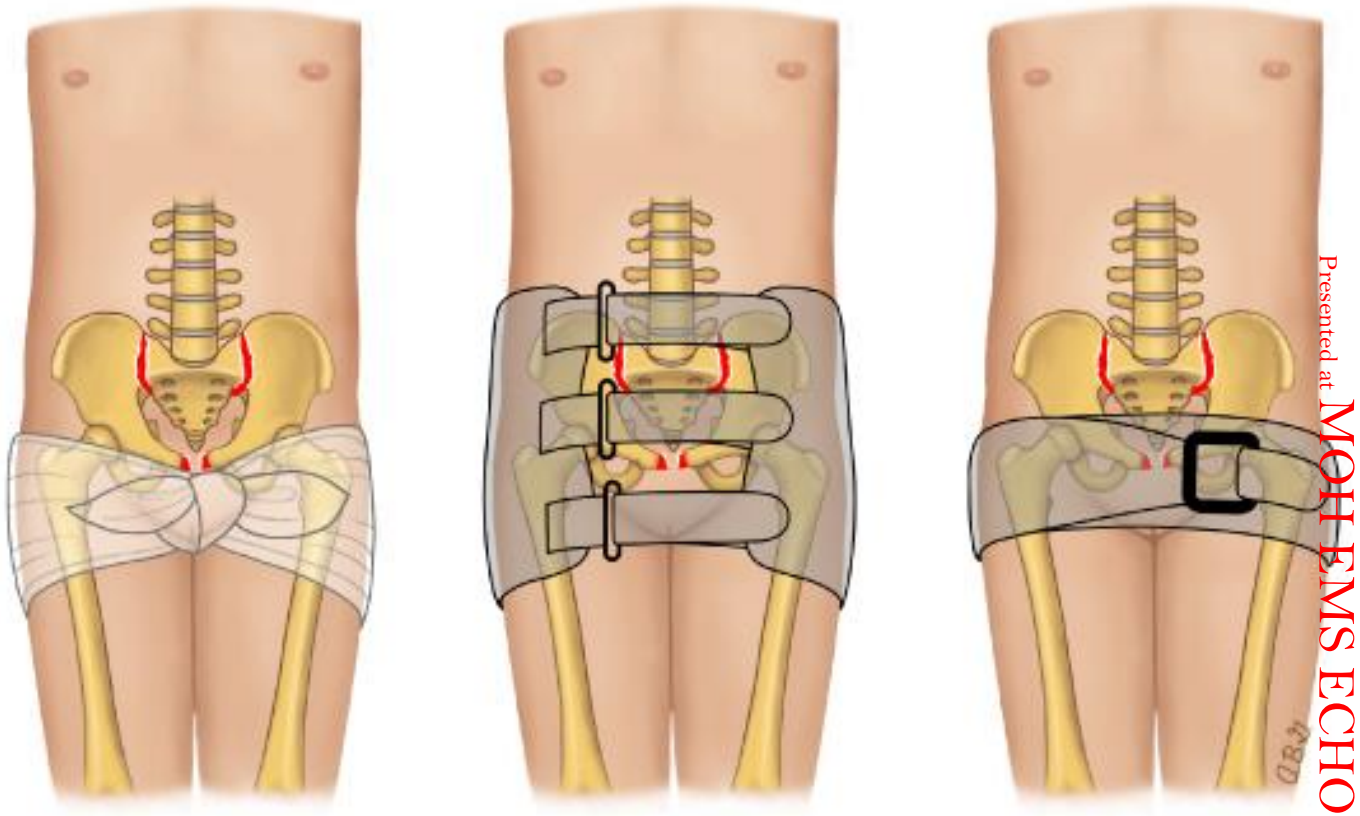
Circulatory resuscitation is an attempt to correct the shock by improving perfusion.

STOP THE BLEED®

SAVE A LIFE

Presented at MOH EMS ECHO

Pelvic Binder



Procedure Pearls

IV CATHETER SIZES AND FLOW RATES

Fluids

D is for Disability

Presented at MOH EMS ECHO

Disability Assessment

- **Assess** level of consciousness (AVPU or GCS)
- **DEFG:** don’t ever forget glucose.
- **Check** pupil size, equality and reactivity to light
- **Check** movement and sensation in all four limbs

Glasgow Coma Scale

BEHAVIOR	RESPONSE	SCORE
Eye opening response	Spontaneously	4
	To speech	3
	To pain	2
	No response	1
Best verbal response	Oriented to time, place, and person	5
	Confused	4
	Inappropriate words	3
	Incomprehensible sounds	2
	No response	1
Best motor response	Obeys commands	6
	Moves to localized pain	5
	Flexion withdrawal from pain	4
	Abnormal flexion (decorticate)	3
	Abnormal extension (decerebrate)	2
	No response	1
Total score:	*Best response*	15
	Comatose client	8 or less
	Totally unresponsive	3

DEFG: Don’t ever forget glucose

Presented at MOH EMS ECHO

Check Pupils

Rapid Neuro Assessment

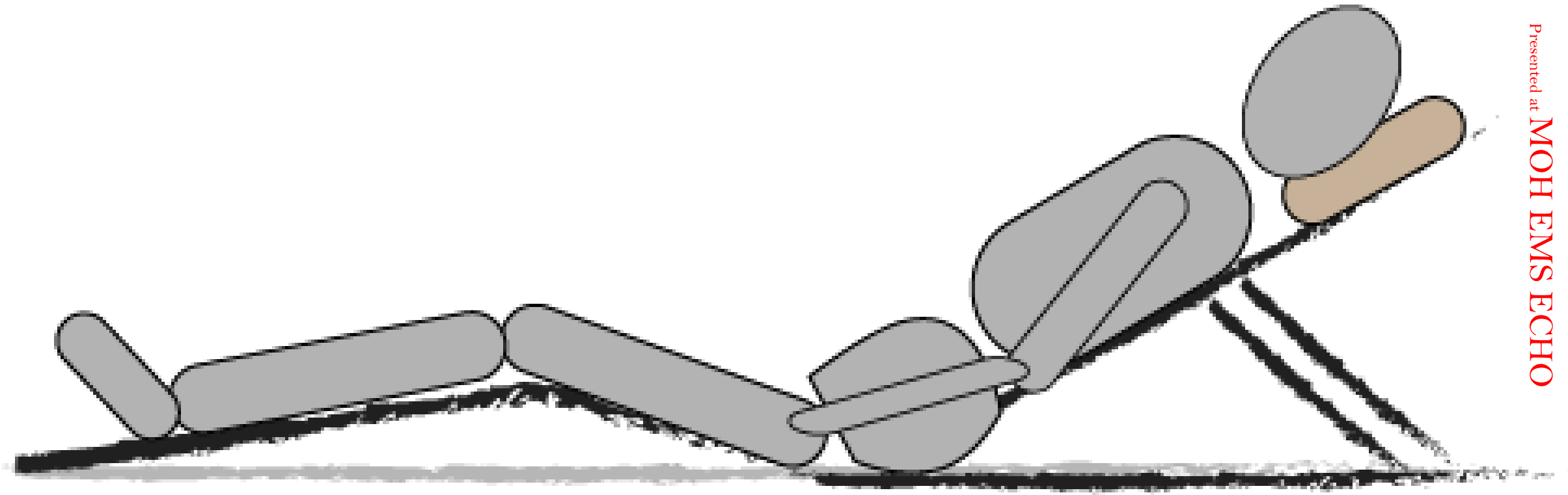
If you identify an issue: stop and address it!

Disability: Management

- If altered mental status, no trauma, ABCDEs otherwise normal
  - place in RECOVERY POSITION
- If altered mental status, low glucose (<3.5mmol/L) or if unable to check glucose
  - Give GLUCOSE
- If actively *seizing*
  - Give BENZODIAZEPINE
- If pregnant and *seizing*
  - Give MAGNESIUM SULPHATE

Recovery position

Elevate head of the bed.



E is for Exposure

Presented at MOH EMS ECHO

Undress the patient fully.

—

Log Roll

Hypothermia Kills

Presented at MOH EMS ECHO

ABCDE Approach: Summary

Airway with cervical spine immobilization

Breathing plus oxygen if needed

Circulation IV fluids and bleeding control

Disability AVPU/GCS, pupils and glucose

Exposure and keep warm

Reassess, Reassess, Reassess, Reassess!

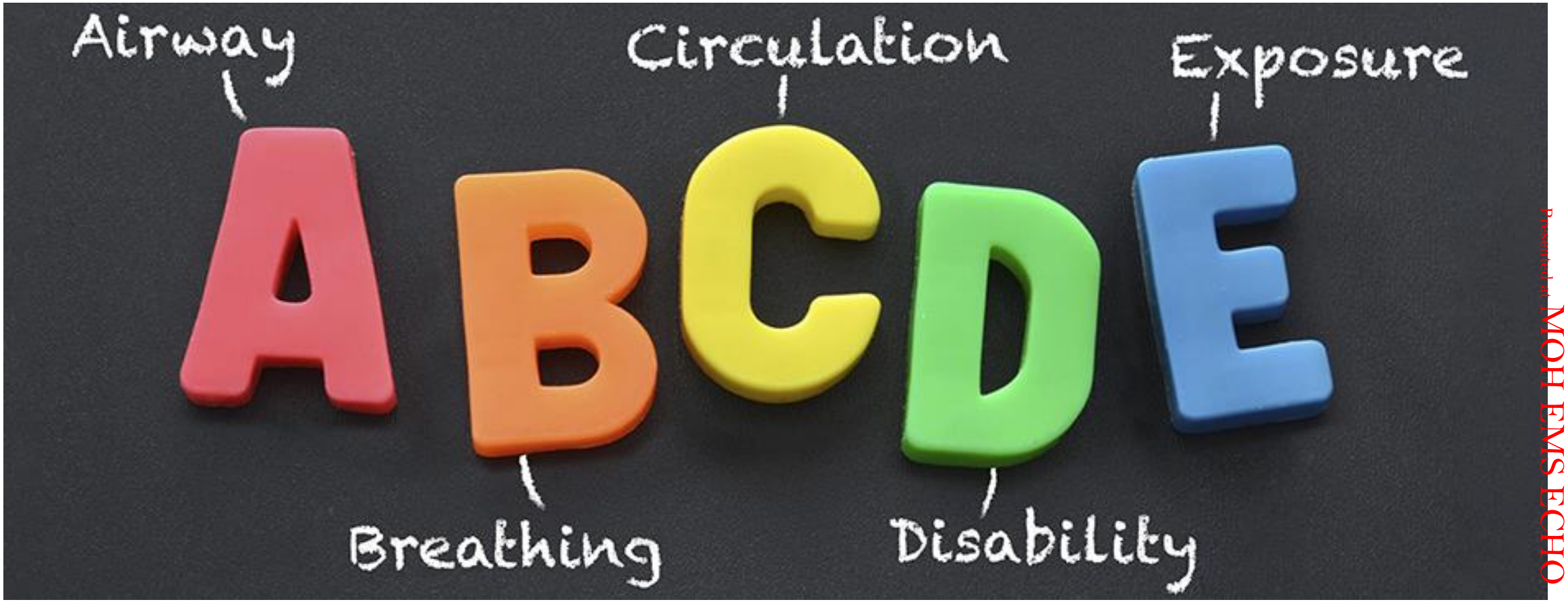
Presented at MOH EMS ECHO

Elements of the SAMPLE history

S	Signs and symptoms	Patient/family's report of signs and symptoms is an essential assessment
A	Allergies	Important to prevent harm; may also suggest anaphylaxis
M	Medications	Obtain a full list and note recent medication or dose changes
P	Past Medical History	May help in understanding current illness and change management choices
L	Last Oral intake	Note whether solid or liquid; vomiting/choking risk for sedation; intubation or surgical procedures
E	Events surrounding the injury/illness	Helpful clues to the cause, progression and severity of current illness

Secondary Survey: Head-to-Toe Exam

Mnemonic	*Secondary survey*
Has	Head/skull
My	Maxillofacial
Critical	Cervical Spine
Care	Chest
Assessed	Abdomen
Patient's	Pelvis
Priorities	Perineum
Or	Orifices (PR/PV)*
Next	Neurological
Management	Musculoskeletal
Decision?	Diagnostic tests/ definitive care



Take Home Messages

- Be systematic: ABCDE
- Identify a problem = stop and manage that problem
- Learn to do the basics well!


thank you


ANY
QUESTIONS
?