a new perspective on best transfusion practices

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Khoa PTGMHS

introduction

Clinical trials

support

Restriction of RBC transfusion

Overall use of RBC

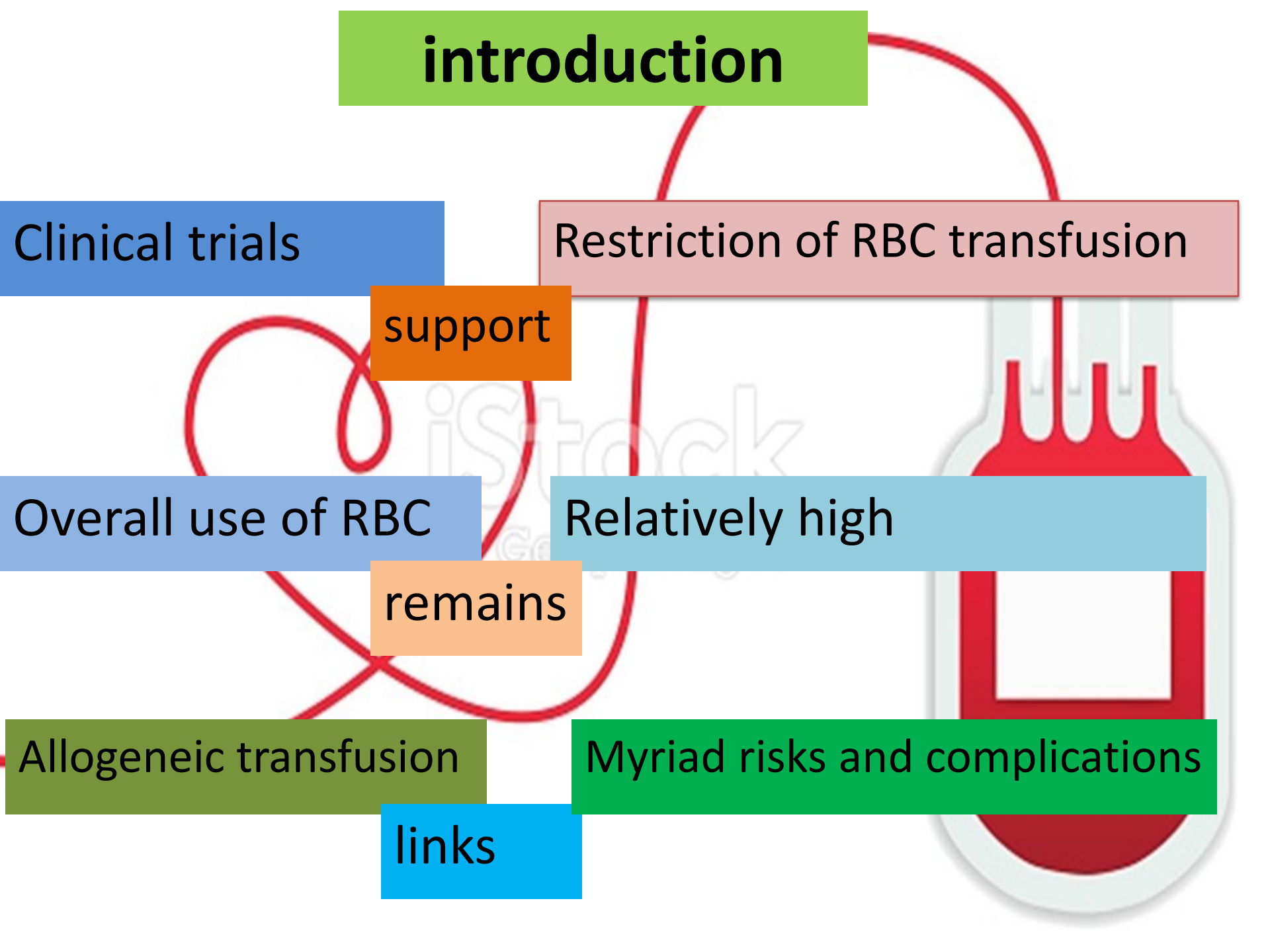
remains

Relatively high

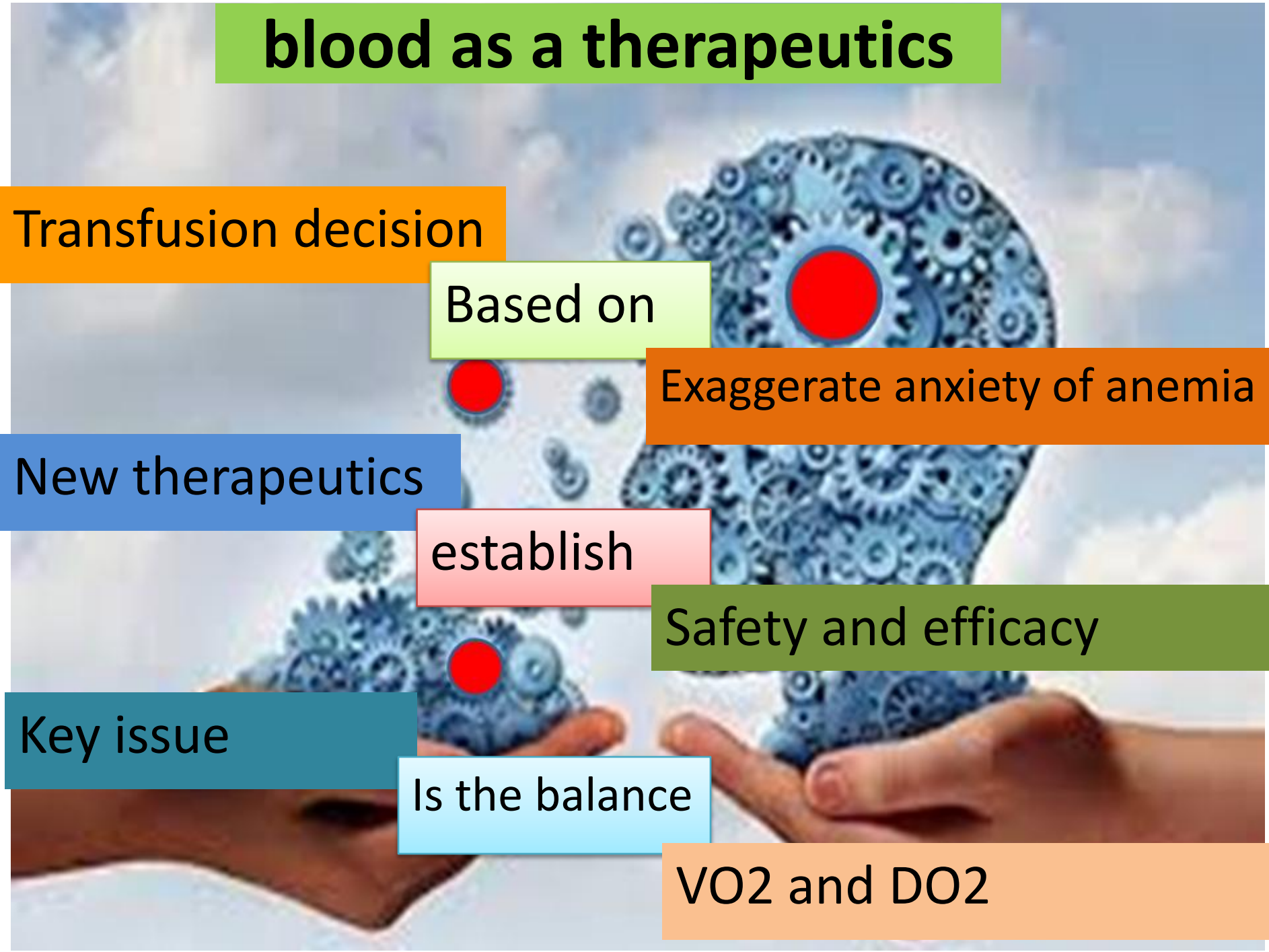
Allogeneic transfusion

links

Myriad risks and complications



blood as a therapeutics



Transfusion decision

Based on

Exaggerate anxiety of anemia

New therapeutics

establish

Safety and efficacy

Key issue

Is the balance

VO2 and DO2

recommendations RBC transfusion

Clinicians

Try to formulate

An indication - Hb/Hct – 10/30

This rule

Not based on

Direct clinical evidence

College of American Pathologists

Hb < 6 g/dl	always
Hb > 10 g/dl	rarely
Hb 6 – 10 g/dl	depend on

- Extend of blood loss
- Underlying diseases
- Clinical status

first by correcting hypovolumia through infusion of crystalloids and colloids

American Society of Anesthesiologists

Hb < 6 g/dl	usually
Hb > 10 g/dl	rarely
Hb 6 – 10 g/dl	Evidence of

- ischemia
- bleeding
- intravascular volume
- cardiopulmonary reserve

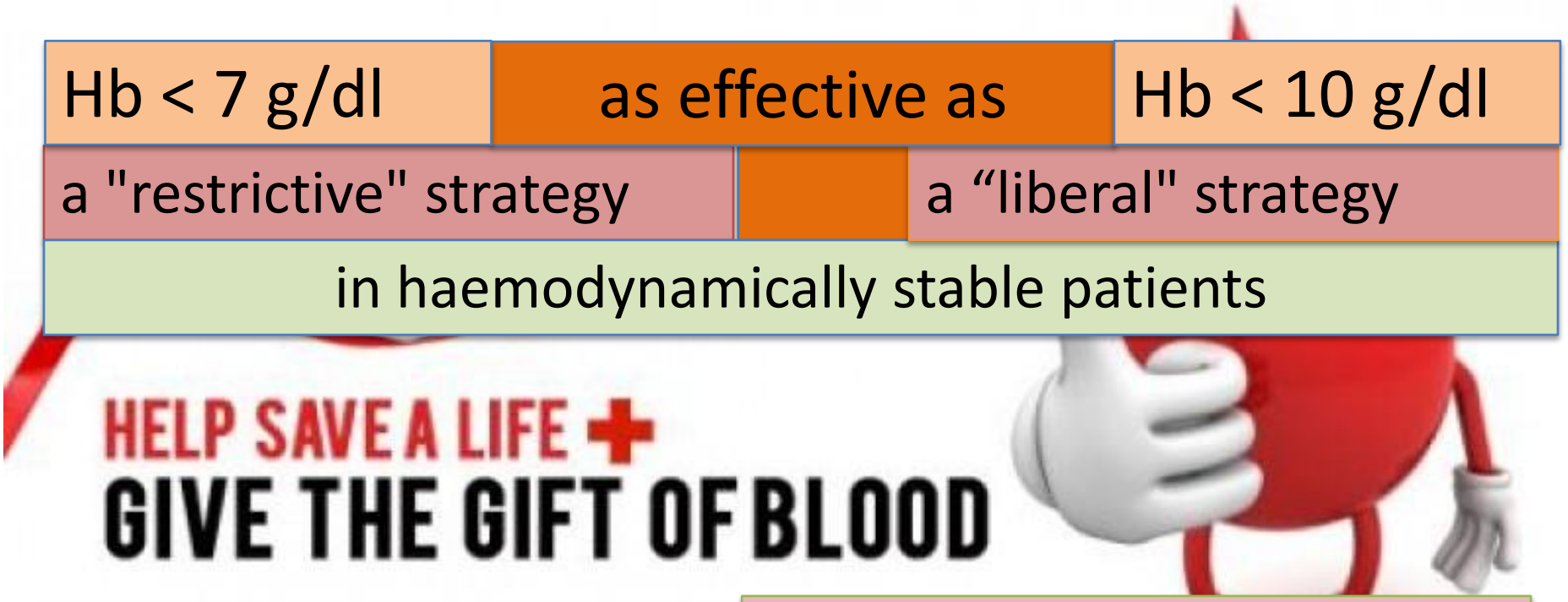
Thoracic Surgeons and Cardiovascular Anesthesiologists

Hb < 7 g/dl	reasonable
Hb >10 g/dL	not recommended
Hb ≤10 g/dL	unreasonable in certain patients

Society of Critical Care Medicine

Hb < 7 g/dl	as effective as	Hb < 10 g/dl
a "restrictive" strategy		a “liberal" strategy

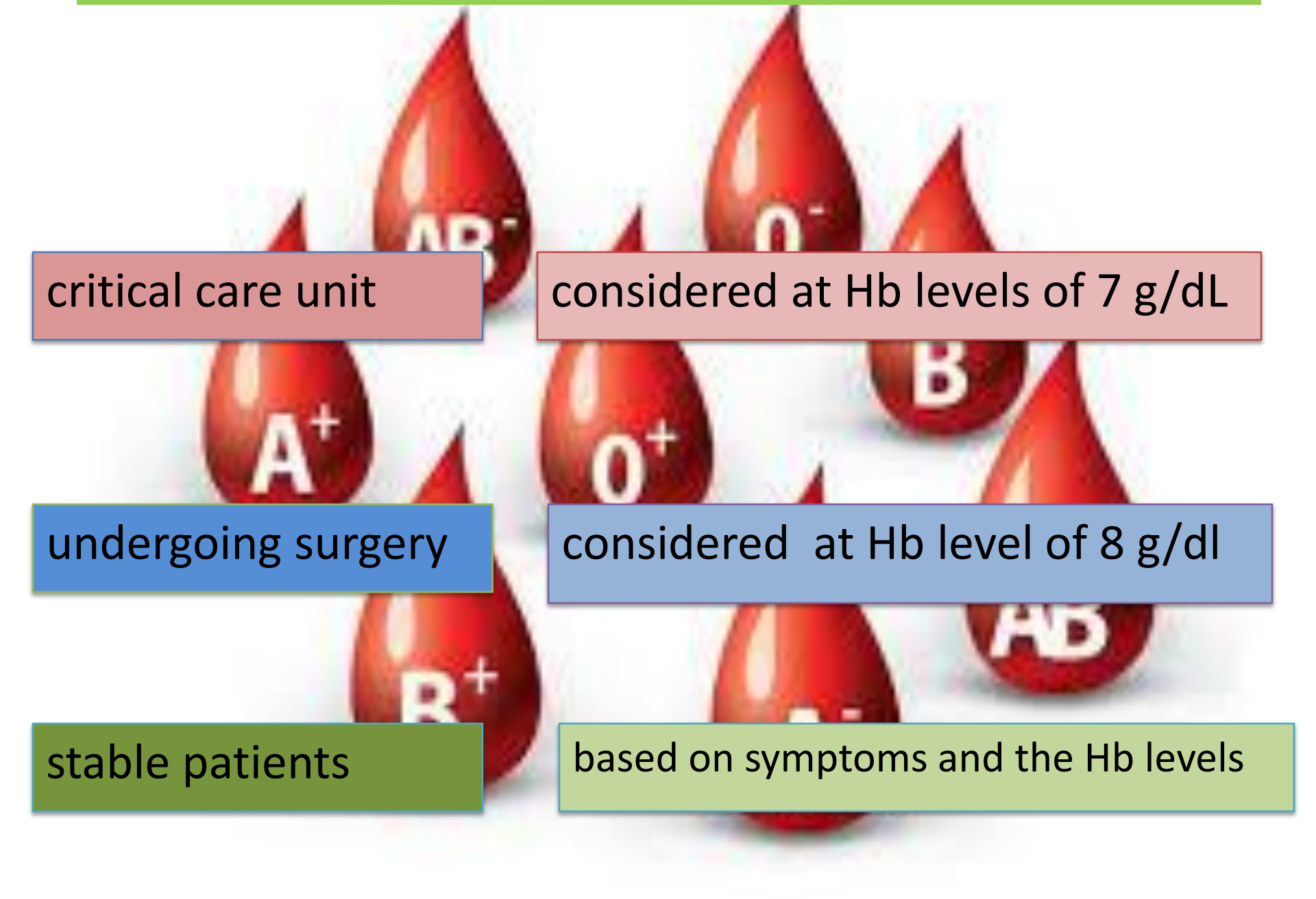
in haemodynamically stable patients



acute coronary syndrome	beneficial with Hb <= 8 g/dl

no benefit with Hb > 10 g/dl

American Association of Blood Banks



critical care unit

considered at Hb levels of 7 g/dL

undergoing surgery

considered at Hb level of 8 g/dl

stable patients

based on symptoms and the Hb levels

Implementing better transfusion practices

1. **Acute Anaemia**
   (Before considering transfusion, all efforts should be made to control active bleeding)

   - Acute blood loss and symptomatic
     (Loss of >30% of estimated blood volume with Hb <7 mg/dL; tachycardia or hypotension not corrected by fluids alone, or mixed venous O_2 saturation <55%)

   - Evidence of ACTIVE ischaemia
     (New ECG changes AND symptomatic)

2. **Chronic Anaemia**
   (Treatable cause of anaemia should be ruled out first: iron/folate/B_{12} deficiencies; consider using erythropoiesis-stimulating agents)

   - Patient symptomatic
     (Tachycardia or hypotension not corrected by fluids alone, or mixed venous O_2 saturation <55%)

   - Patient is undergoing active treatment anticipated to cause significant anaemia

Conclusion

transfusion as a gift of life

limited efficacy and substantial risks

the challenge

risk of severe anemia

transfusing them

better transfusion

are giving benefit

not doing harm

Thanks for listening