Type and Screen? Type and Rh? Type and Cross? Emergency Release? I never received a talk in medical school about how to give blood to patients. So when I started residency, I was surprised and confused by how many options I could select when placing orders for blood! This episode covers the basic terminology you need to know so that you can sound smart on your clerkship.

The 4 orders you need to know:

1. Type and Rh
   a. Blood type: A, B, AB, or O
   b. Rh factor: pos (+) or neg (-)
   c. Order for: pregnant patients with vaginal bleeding
   d. Useful for: knowing whether to give RhoGam in Rh (-) women exposed to Rh (+) fetal blood

2. Type and Screen
   a. Blood type: A, B, AB, or O
   b. Rh factor: pos (+) or neg (-)
   c. Antibodies: pos (+) or neg (-) Looks for Ab’s to ALL possible RBC antigens
   d. Order for: pt who might need a blood transfusion (ex. GI bleed)
   e. Useful for: facilitating blood order from lab (order early, 30 min test)

3. Type and Crossmatch
   a. Blood type: A, B, AB, or O
   b. Rh factor: positive (+) or negative (-)
   c. Antibody screen: pos (+) or neg (-) Looks for Ab’s to ALL possible RBC antigens
   d. Crossmatch: pre-mixes specified units of requested blood with patient’s blood
      i. Final safety check before a blood transfusion

4. Emergency release blood
   a. Universal donor blood: O (-)
   b. No time to wait for type and screen (when you have < 30 min to save the pt’s life)
   c. Order for: pt who is dying in front of you

The basics:
- RBC antigens determine blood type
- We screen for RBC antigens by looking for their corresponding antibodies
- A, B, and Rh are the most common RBC antigens (screened for by “Type and Rh”)
- But HUNDREDS of other RBC antigens exist, as well (screened for by “Type and Screen”)
- Rh (-) women are born without Ab’s to Rh antigen. Mother can have Rh (+) babies, but Hemolytic disease of the newborn may arise in future pregnancies if mother’s blood mixes with fetal blood (birth trauma, etc), leading to Rh antigen exposure and maternal IgG antibody formation