Blood Products
7/9/17

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 safe 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