



VITAL SIGNS/TELEMETRY

UAP Marathon Study Guide



Respirations

- Respiration is process of inhaling and exhaling
- One respiration = breathing in once (inspiration) and out once (expiration)
- Normal adult rate is 12 to 20 times a minute
 - *Count for 30 seconds then multiply by 2*
 - *If abnormal count for 1 minute*

*Must Report Anything outside
Normal Range to R.N. and
Document!!!*

Respirations

- Describe as:
 - *Rapid or Very Slow*
 - *Shallow or Very Deep*
 - *Regular (both rate and depth)*

Pulse

Strong Pulse Locations

- Radial artery

Wrist at base of thumb

\

Pulse

- Determined by how many times your heart beats
- Normal Value is 60 bpm-100bpm
 - Count for 30 seconds then multiply by 2
 - If abnormal count for 1 minute
- Must accurately report the following:
 - Rate: Number of pulse beats per minute
 - Rhythm: Regularity of pulse beats (whether or not length of time between beats is steady and regular)

Must Report Anything outside Normal Range
to R.N. and Document!!!

Pulse Description of Rhythem

- Strong and regular
 - Even beats with good force
- Weak and regular
 - Even beats with poor force
- Irregular
 - Both strong and weak beat in a minute
- Thready
 - Generally means weak force and irregular

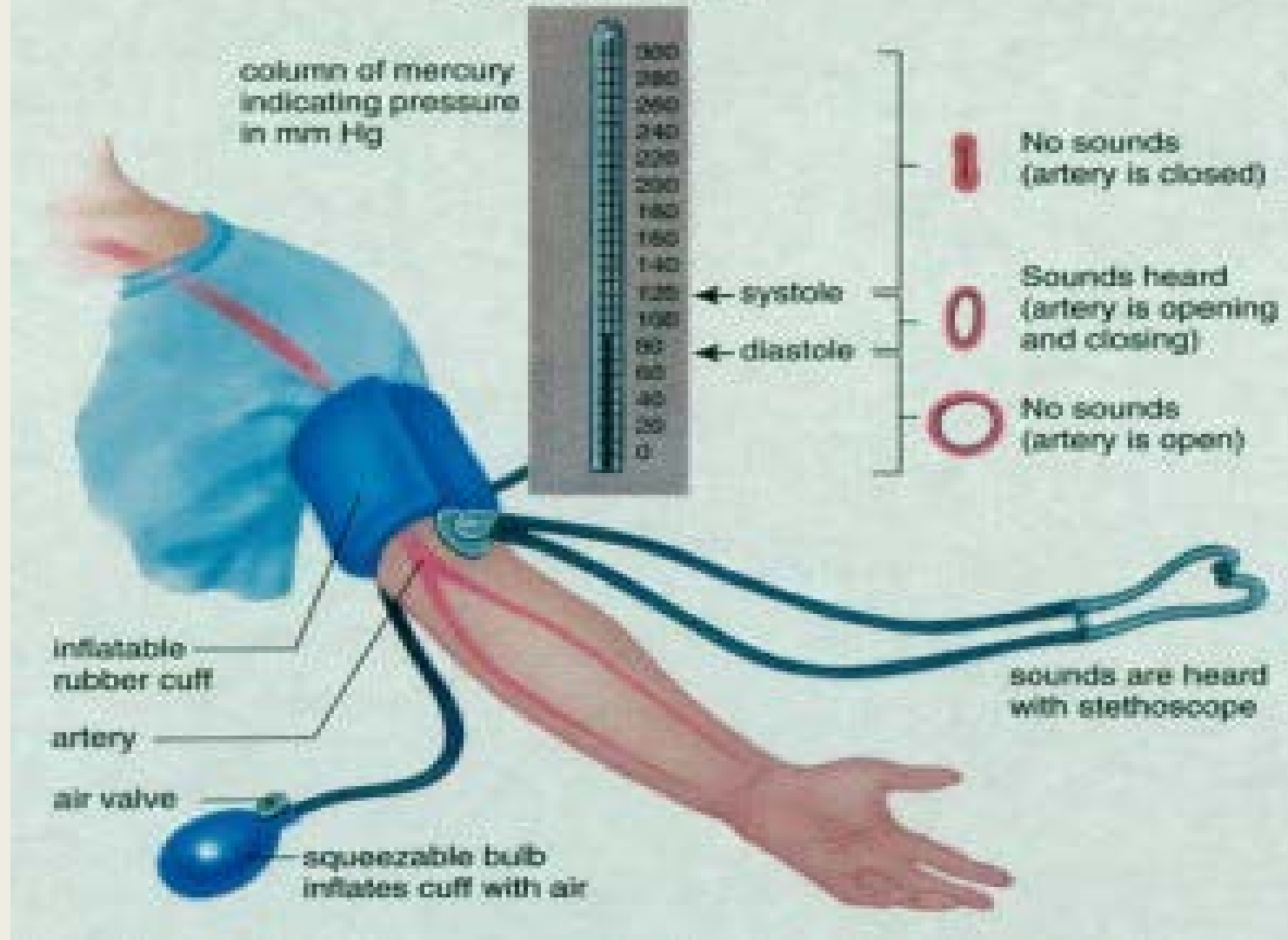
Pulse Checks

- When taking pulse, focus on rate of beats (number per minute), force of pulse beat (strong or weak and regular or irregular), and rhythm of beats (normal rhythm has same interval between beats)
- Do not take pulse immediately if you have repositioned patient's arm - exertion increases pulse
- Place your finger tips flatly and lightly on radial artery
- If you press too hard, you will close off the artery and feel no pulse
- Do not use your thumb to take pulse or feel own pulse

Measuring Blood Pressure

- Use instrument called sphygmomanometer (blood pressure cuff)
- Measure on upper arm, mid-arm
- Do not obtain BP on forearm if cuff does not fit upper arm.
Find Correct Cuff
 - Smaller-sized cuff must be used for children or small framed adults
 - Larger size cuff for large frame or obese patients
- Don't use arm if:
 - *AV Fistula (dialysis patient)* *Paralyzed*
 - *Fracture* *Mastectomy*
 - *Burns* *Surgical procedures*
 - *Running I.V. Fluids*

Sphygmomanometer



Measuring Blood Pressure

- Results written as:

100-120 = SYSTOLIC

60- 80 = DYSTOLIC

} AHA guidelines

*Must Report Anything outside
Normal Range to R.N. and
Document!!!*

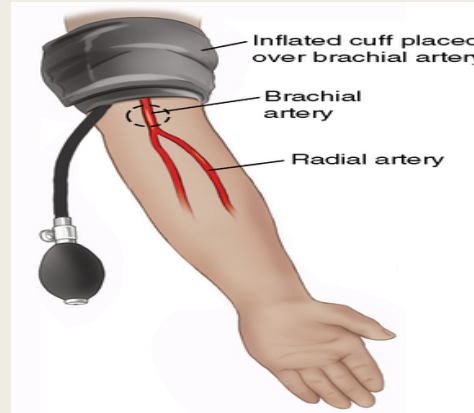
Measuring Blood Pressure

- Prior to arm selection you **MUST** ask patient: “Are there any medical conditions that would prevent be from taking your blood pressure on either arm?”
- Prior to applying cuff look at the patients arm to be sure there are no wounds, an I.V., or injuries.
- Apply Blood Pressure cuff securely (should not slide) to patients upper arm mid way between shoulder and elbow.
- Be sure Dial is facing forward and arrow on blood pressure cuff (typically says Artery) is pointing at the antecubital space.



Measuring Blood Pressure

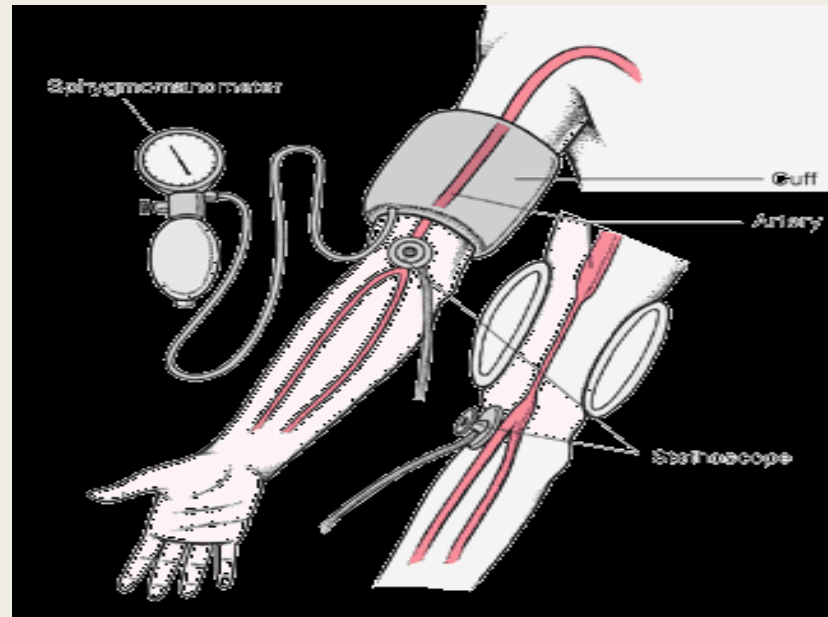
- Check the Brachial Pulse so you know where to place your stethoscope.



- To ensure an accurate reading inflate the cuff 30 to 40 mmHg above the person's normal BP reading. So prior to inflation you **MUST** ask your patient: “What is your normal blood pressure?”
- If this value is unknown you can inflate the cuff to 160 - 180 mmHg.

Measuring Blood Pressure

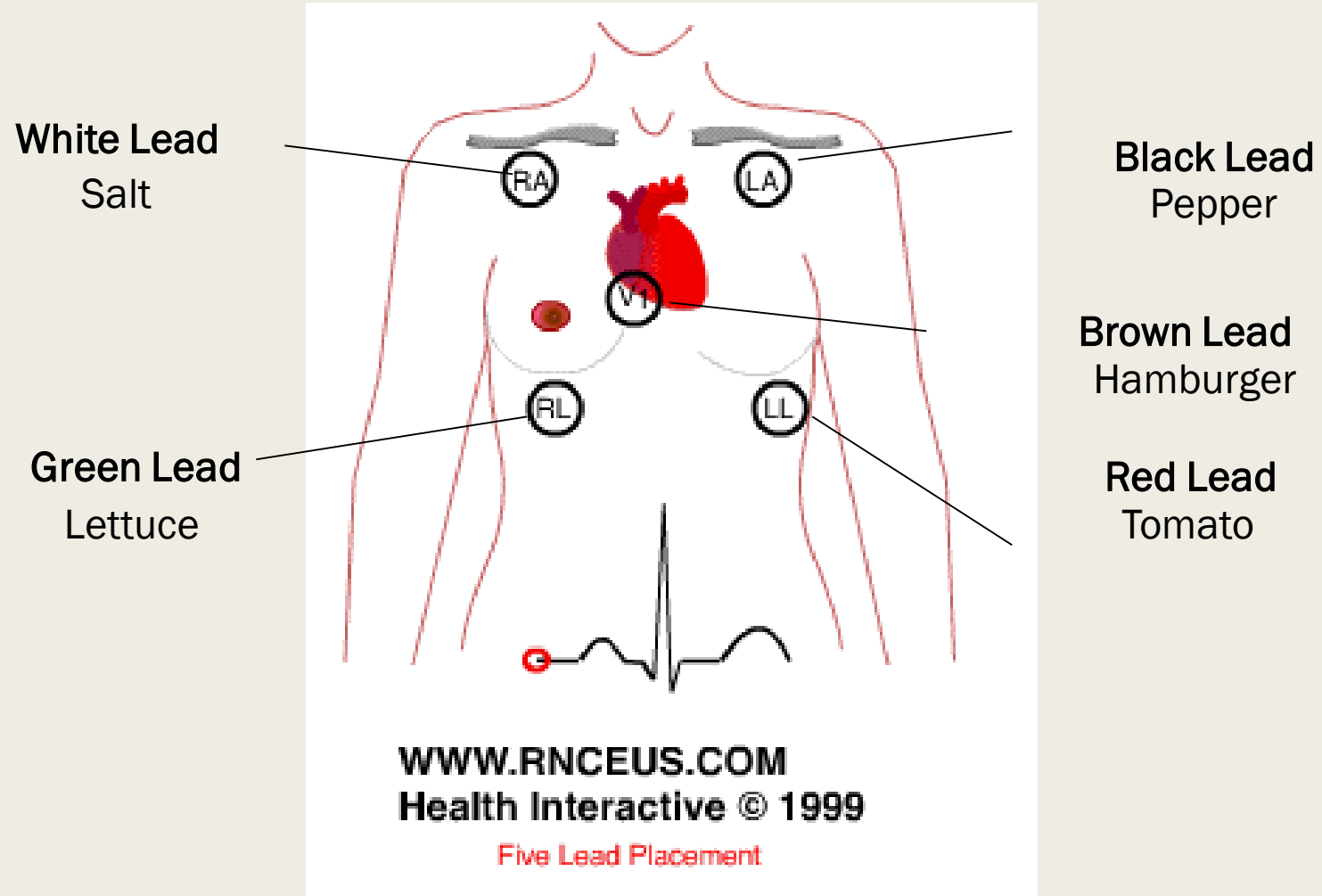
- Place stethoscope over Brachial Artery. The stethoscope should **NEVER** be under the blood pressure cuff and should not touch if possible.



Measuring Blood Pressure

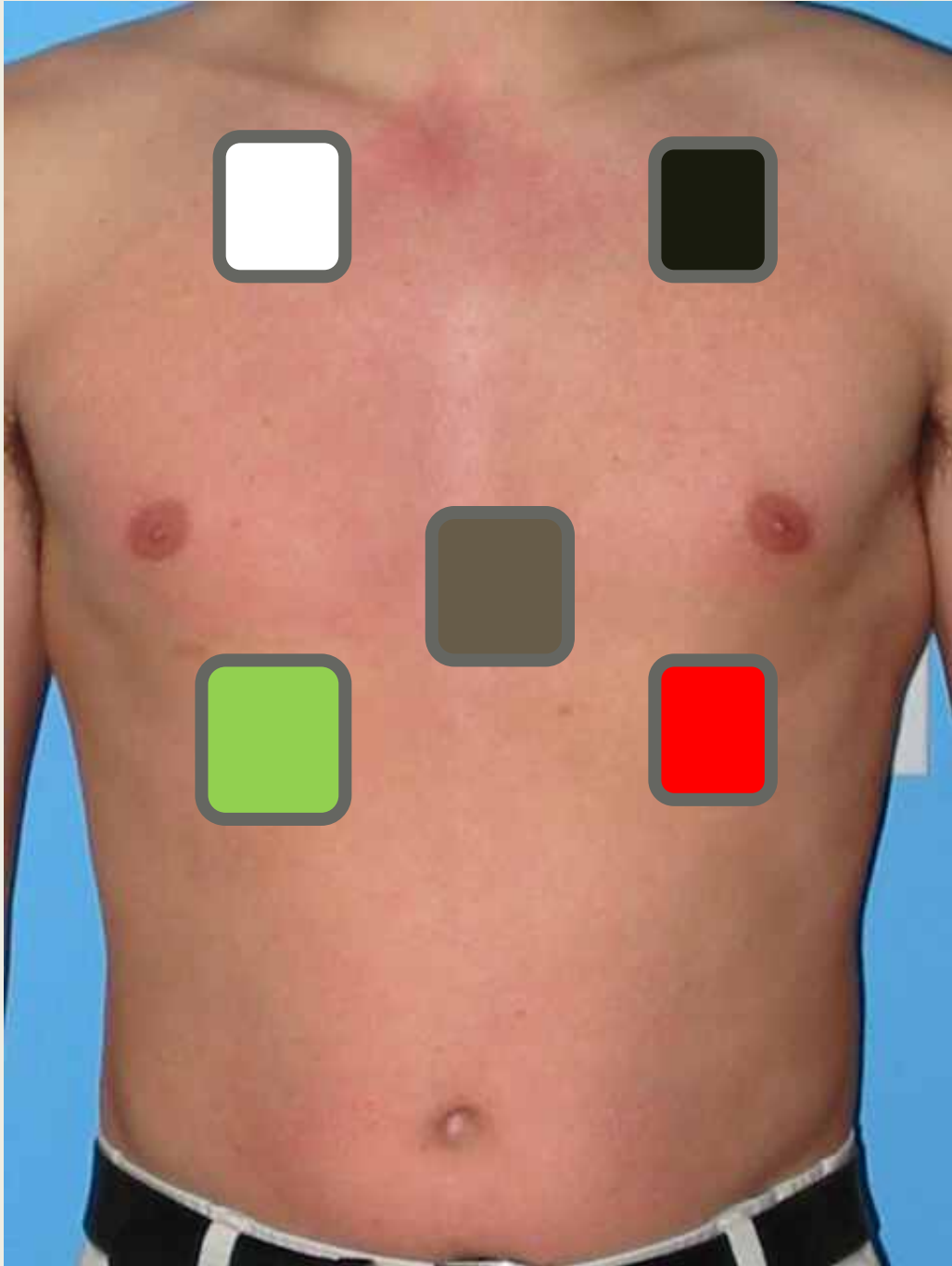
- Begin pumping the cuff bulb. When the BP cuff has inflated to appropriate number.
- The AHA recommends that the pressure should fall at 2 - 3 mmHg per second, anything faster may likely result in an inaccurate measurement.
- The first occurrence of rhythmic sounds heard as blood begins to flow through the artery is the patient's systolic pressure (Top Number).
- Continue to listen as the BP cuff pressure drops and the sounds fade. Note the gauge reading when the rhythmic sounds stop. This will be the diastolic reading (Bottom Number).

5 Lead EKG Placement/Telemetry



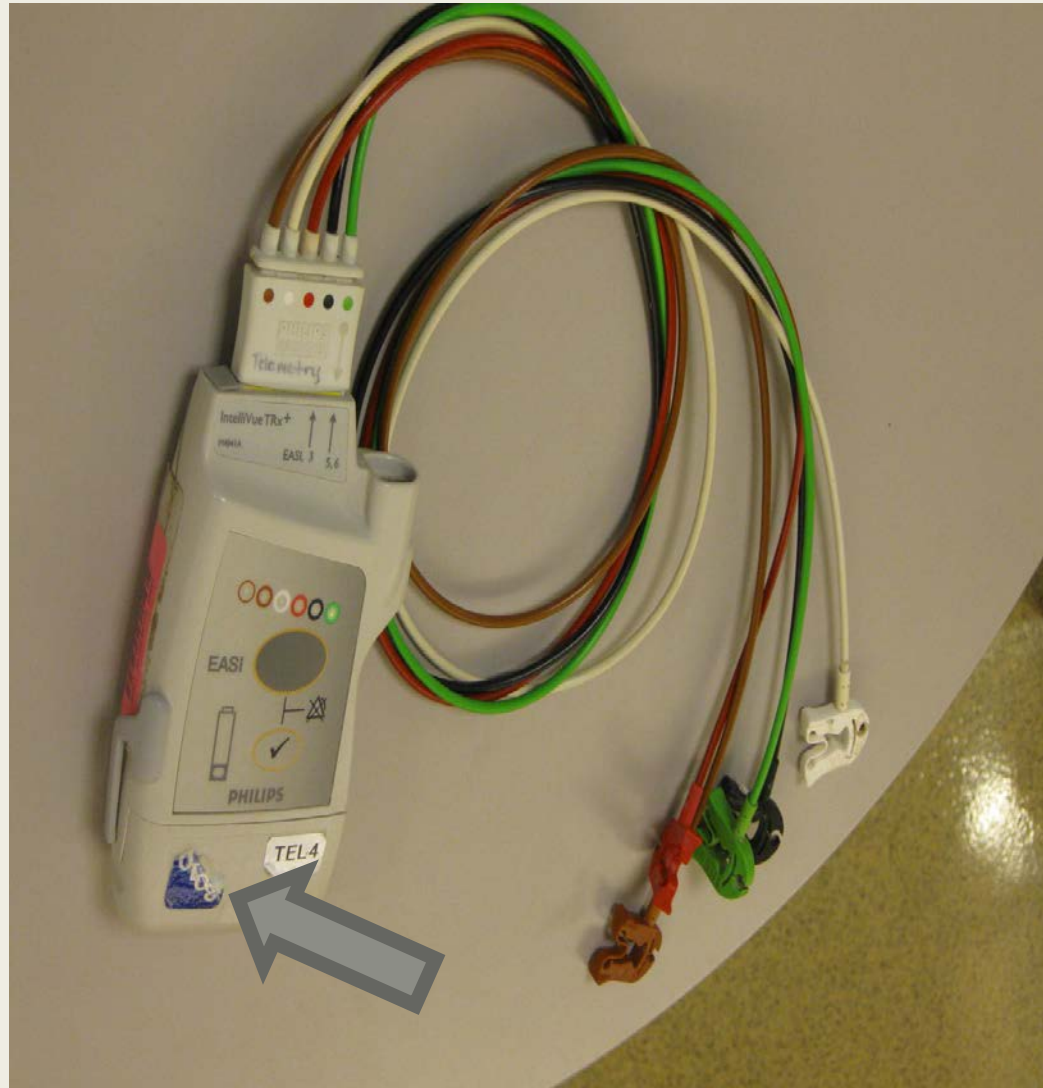
Electrode Placement (standard configuration)

- White (RA) electrode – place directly below the clavicle and near the right shoulder
- Black (LA) electrode – place directly below the clavicle and near the left shoulder
- Red (LL) electrode – place in left lower abdomen
- Green (RL) electrode – place in right lower abdomen
- Brown ground – left lower sternum edge



5 Lead EKG Placement/Telemetry Site Prep

- Prior to applying electrodes check patients chest for cleanliness. If necessary cleanse skin prior to electrode application.
- If patient has a large amount of hair in area where electrodes are to be applied. The area must be shaved.
- Apply electrodes in correct configuration per the examples provided.
- Telemetry leads (The Wires) are now disposable please discard after patient discharges
- Clean and reapply new electrodes every 48 hours.



Obtain Telemetry Unit
from H4

Contact telemetry to verify
transmission via Vocera,
call telemetry office, or
call operator on hospital
phone and ask for
telemetry)

Change batteries every
24 hours (Include in hand
off report when batteries
where changed and
document in Epic)