

APPENDIX N: ASSESSING FLUID RESPONSIVENESS



Greater New York Hospital Association/United Hospital Fund Quality Initiatives

STOP SEPSIS COLLABORATIVE

ASSESSING FLUID RESPONSIVENESS

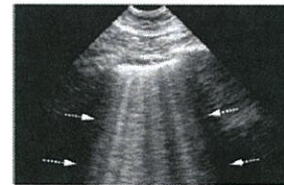
CVP (IF CENTRAL LINE ALREADY IN PLACE)

CVP can serve as a starting point for adequate fluid loading. However, reaching these CVP thresholds does not guarantee adequate fluid loading. While a very low CVP usually indicates an under-resuscitated patient, the opposite is not true.

- In non-intubated patients, fluid load until CVP > 10
- In intubated patients, fluid load until CVP > 14

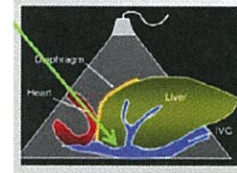
IF YOU HAVE ULTRASOUND, USE B-LINES ON LUNG ULTRASOUND

- 3 or more B-Lines in one Intercostal Space



IF NOT TUBED—USE DYNAMIC IVC

- If IVC collapses with inspiration (>30%), give fluid bolus
- Measure just caudal to hepatic veins



IF NOT TUBED AND PATIENT IS HYPERPNEIC—CAN USE DYNAMIC CVP

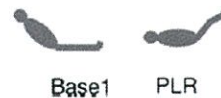
- If CVP decreases 2 mmHg with deep inspiration, administer fluid

IF TUBED, REGULAR HEART RHYTHM, ALINE, NOT SPONT BREATHING—USE SYSTOLIC OR PULSE PRESSURE VARIATION

- Increase Vt to 10 ml/kg
- If there is a visible decrease in systolic or pulse pressure with mechanical breaths, give fluid
- After observation, change Vt back to lung protective settings
- Limited evidence would indicate the pulse ox pleth wave may be used the same way

IF ALINE IN PLACE—USE PASSIVE LEG RAISE

- Place patient in semi-fowlers (45)
- Observe arterial MAP and Pulse Pressure (PP)
- Place patient in modified Trendelenberg
- If arterial MAP or PP rises during the next 60 seconds, patient will benefit from fluid
- Return patient to original position



To know if your passive leg raise is accurate, you need to see the CVP increase by at least 2 mm or use a SV monitor

IF YOU ARE SKILLED AT ECHO—USE LEFT VENTRICULAR ASSESSMENT (LVEDD)

- Transthoracic echo M-mode PLAX
- Hypovolemia < 2.3 cm
- Measured at the tip of the mitral leaflets at the q-wave