

## Transesophageal Echocardiography (TEE) Indications, Privileges and Procedure

1. Cardiac arrest using CASA (Cardiac Arrest Sonographic Assessment)
2. Intubated patients if TTE views inadequate
3. Visit [www.kaweahem.com/ultrasound](http://www.kaweahem.com/ultrasound) to review: [www.5minsono.com/TEE](http://www.5minsono.com/TEE)  
[www.pie.med.utoronto.ca/TEE/](http://www.pie.med.utoronto.ca/TEE/) [www.openanesthesia.org/course-in-basic-tee/](http://www.openanesthesia.org/course-in-basic-tee/)

### Kaweah Delta Medical Center TEE privilege requirements:

1. Credentialed in TTE emergency ultrasound
2. Complete 2 hours of TEE specific CME or didactics/web-based info and 1 hour of Sim
3. Do 10 TEE exams (max of 5 can be Sim). Submit these 10 cases to medical staff.
4. Once given TEE privileges (ED/MEC/BOT), get proctored on 5 more (can be images/live).

### TEE Procedure (TEE should be in Room 20 cabinet, if not check the top of the Pyxis cabinet)

1. Cases: Text Dr. Hipkind at 559-287-1212 6am-9pm; he will reply if available
2. Technique:
  - a. Pre-insertion: No contra-indications, intubate, paralyze, probe gel & green bite block
  - b. Components (do not lock with the level and no need to use the little wheel)
    - i. Big wheel: ante-flex and retro-flex
    - ii. Omni-plane buttons rotate beam clockwise and counter-clockwise
    - iii. Manually advance or retract and rotate probe towards right and left
3. 11\* views comprise the basic TEE series (optional, do **bolded** ones while performing CASA)
4. **Mid-esophageal (ME) 4 chamber (used for CASA pulse checks)**
  - a. Advance probe to about 30 to 40 cm until it is behind the LA
  - b. Omni 0° to 20° so it is parallel to diaphragm, +/- slight retroflexion
5. \*ME 2 chamber view (omni 90°): LA and LV
6. **ME long axis (LAX) (used for CASA chest compression assessment)**
  - a. Keep probe at same depth and increase multiplane to 120° - 140°
  - b. Keep MV in center of screen and AV to right of screen
7. \*ME Ascending Aorta LAX: omni 90° - 110°, withdraw probe from ME LAX (dissection)
8. \*ME Asc Aor short axis view (SAX): omni 0° - 30° (dissection/PE)
9. \*ME Aortic Valve (AV) SAX: omni to 30° - 40°, advance probe from ME Asc SAX; AV
10. \*ME Right Ventricle Outflow: omni to 60°; TV, PV, ROT and RV inferior free wall
11. \*ME Bi-caval (IVC on left and SVC on right of screen)
  - a. Advance probe, rotate probe right, omni 90 - 120°
  - b. Volume status, atrial septal defect
12. **Trans-gastric short axis (similar to TTE PSAX)**
  - a. Rotate probe left, omni to 0° and advance probe 40 to 50 cm, +/- ante-flex
  - b. Use for regional wall motion abnormalities and septal flattening
13. \*Desc Aor SAX: omni to 0°; rotate probe left; descending aortic dissection
14. \*Desc Aor LAX: omni to 90°
15. Place probe in tray, put red cover over tray, and call x2675 for pick-up and cleaning