

**HACKETTSTOWN REGIONAL MEDICAL CENTER
CARDIO PULMONARY POLICY MANUAL
TRANSESOPHAGEAL ECHOCARDIOGRAM**

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Effective Date: March 2010
Cross Referenced:
Reviewed Date: 02/16
Revised Date: 04/12

Policy No: 6.007
Origin: Cardio Pulmonary
Authority: Cardio/Pulmonary Manager
Page: 1 of 3

Purpose: To provide the cardiologist to view the internal structures of the heart and the hearts' valves.

Definition: A transesophageal echocardiogram (TEE) is a test that doctors use to obtain images of the heart from inside the esophagus (swallowing tube). The esophagus lies immediately behind the heart and with this technology, very clear images of the heart can be obtained. This test is used by doctors to visualize structures of the heart not seen by a standard echocardiogram (from the outside chest wall) as well as clarify structures which may be otherwise poorly seen.

Procedure: Transesophageal echocardiogram (TEE) are performed and interpreted by a Cardiologist along with an Echo technologist during the hours of operation in Minors or ICCU. The test is performed by inserting a long flexible probe with an ultrasound transducer at its tip, through the mouth and into the esophagus just behind the heart. The transducer sends high frequency sound waves into the heart, which return as echos. These echoes are converted into a real time image of the beating heart and blood flow through the chambers and valves. The images are displayed on a video monitor while the cardiologist determines which pictures the technician should acquire. When the test is finished the technician will end the exam and all the pictures will be saved and sent to the Heart Lab system. The Cardiologist performing the TEE will read the study in Heart Lab and generate a report and signature. For in-house patients the Cardiologist will place the order in Cerner into the patient's chart and will schedule the procedure with Minors. When the test is finished the technician will open the patient's chart and finalize the TEE task which will charge the order. For out patients the technician will enter a charge for the Tee order.

1. The TEE is performed by a cardiologist credentialed in the TEE procedure and conscious sedation. Anesthesia is also used, if needed by the Anesthesiologist.
2. A physician's order is required.
3. The TEE can be done in Minor Procedure, ITU, or ICCU. Scheduling should be done through those departments following their procedures. Cardiopulmonary should be notified of the request for the procedure in order to arrange appropriate staffing and availability of equipment.
4. A cardiologist, ECHO tech, and a nurse (qualified in conscious sedation) need to be present when the TEE is performed. A crash cart must be immediately available.
5. The equipment for the TEE is stored in Minor Procedures.
6. The patient should be NPO for 6 hours before the exam.
7. The physician obtains a brief history from the patient.
8. The procedure is explained by the physician and a signed consent form obtained. The RN may witness the signature of the patient/guardian.
9. Vital signs are obtained as stated in the Conscious Sedation policy.
10. Monitoring is provided according to the Conscious Sedation policy.
11. The oropharynx is anesthetized by the physician.
12. The patient is placed in the left lateral position.
13. A bite block is placed in the patient's mouth by the physician.
14. After the probe is removed, the technician will wipe the probe with enzyme cleaner and send to central supply for further cleaning.
15. The TEE can last from 15-30 minutes.

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Specific Roles/Duties:

Cardiologist:

1. Inform patient about the procedure and risks and benefits. Write an order in the patient's chart and a task will be placed for the patient in Cerner.
2. Provide a brief history and profile for patients in the outpatient setting. (The medical record will be with the inpatient and should contain the complete H&P).
3. Perform the procedure.
4. The cardiologist performing the TEE will read the study in Heartlab and generate a report and signature.

Echo Tech:

1. Greet the patient.
2. Bring and prepare all necessary equipment.
3. Turn on the machine.
4. Plug in the probe with the adapter for the probe.
5. Press "preset" and highlight TEE Preset.
6. Enter patient's name, MR#, date of birth, and all of the available information.
7. Assist cardiologist as directed. Acquire all images with 3 to 5 beats.
8. End the exam and all images will be saved and sent to the Heart Lab system.
9. Open the patient's chart and finalize the TEE task which will charge the order. For outpatients, enter the charge for TEE.
10. After procedure, wipe down probe with enzyme cleaner and send to central supply for cleaning.

Nurse:

1. Review consent form for completeness; may witness patient/guardian's signature.
2. Review physician's order for procedure.
3. Assess NPO status.
4. Initiate IV, or assess current IV site, and administer conscious sedation medications as prescribed.
5. Follow IV Conscious Sedation Policy regarding monitoring and documentation before, during, and after procedure.
6. Provide emotional support to patient.

Supplies Needed:

- Lidocaine Spray
- 10cc syringe and needle
- 4x4 gauze and Lubricating Jelly
- Alcohol swabs
- Xylocaine viscous
- Surgilube
- Gloves
- Tongue Depressor
- Emesis Basin
- Bite Block
- Oxygen via nasal cannula/suction
- Probe
- Automatic Blood Pressure and oxygen sat monitor
- Consent Forms

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Following the Procedure:

1. The patient will not be allowed to eat for 1-2 hours (or as ordered by the physician) due to the numbing of the throat.
2. For outpatients, the patient must meet established discharge criteria as delineated in the Conscious Sedation Policy.
3. For outpatients, discharge instructions will be provided by the RN as ordered by the physician.

Performance Improvement:

1. The patient meets criteria for the procedure.
2. The NPO status is documented.
3. There is a signed consent form on the chart.
4. The patient is monitored according to conscious sedation policy.
5. Complications or unanticipated outcomes are monitored and reported.