Troubleshooting epidurals:

Initial assessment:
1. Identify LOR and Depth catheter is documented to be and assess for migration of catheter.
2. Assess how much local anesthetic has already been given; if epidural not run during case it may need to be bolused to build up the pocket of fluid in the epidural space.
3. Test level with ICE or SHARP object.
   - Test epidural level bilaterally
   - If one modality does not definitively show level use the other
   - If patient has chest tubes test posteriorly to chest tube site (incisions from chest tubes can cause paresthesia unrelated to epidural)

Results: 1) Thin level bilaterally
2) Unilateral Block
3) No level Bilaterally

Next steps:
1. Thin Level
   - Check blood pressures and assure MAPs above 60
     - If MAPs <60 or soft BP call staff to discuss or split to PCA
   - Bolus with Bupi 0.1% at 5ml to increase epidural space (Hand bolus preferred)
   - Increase epidural infusion by 2ml/hr
2. Unilateral Block
   - Assess LOR and skin depth of catheter to ensure catheter remains in epidural space
   - Sterile procedure: Remove dressing, Pull back catheter 1-2cm if allowed, redress in sterile fashion using mastisol
   - Bolus epidural (hand bolus preferred) 5ml off pump if BP allow and MAPs >60.
   - Re-check level in 20-30 minutes
3. No discernible level bilaterally:
   - Assess blood pressures
   - Prior to bolus have pressors immediately available.
   - Have blood pressure cuff on and set to cycle every 5 minutes
   - Discuss with patient that lidocaine analgesia is superior to that of bupivacaine and not to expect as good of pain control with bupivacaine infusion.
   - Bolus with lidocaine
     - Use lowest effective dose.
     - Usually no more than 5ml of 1% lidocaine.
   - Test epidural level bilaterally with ice or sharp object
     - Onset parethesia ~10-15 minutes following injection
   - Do not re-bolus with Lidocaine if level present.
     - This will give patient false since of analgesia and set patient up for unrealistic expectations of pain control.
   - Consider increasing epidural infusion if level present.

No discernible level when bolused with lidocaine:
- Stop epidural infusion
- Start Dilaudid PCA with settings 0.2/8/0 and nurse bolus of 0.4mg every 30 minutes
- Discuss replacing epidural with patient and call staff