

## DISPOSABLE PRESSURE TRANSDUCER TROUBLESHOOTING GUIDE

| Problem                    | Cause   | Prevention   | Intervention   |
|----------------------------|---|--|--|
| 1 – No waveform on monitor | Transducer not open to catheter   | Check stopcocks for proper check and correct stopcock  | Check and correct stopcock position  |
|                            | Setting on bedside monitor incorrect on-cal, zero, or off                             | Use correct setting on bedside monitor   | Check scale setting and monitor setup  |
|                            | Catheter clotted.   | Maintain continuous flush.   | Aspirate blood clot.<br>Do not irrigate.   |
|                            | Faulty transducer.  |  | Check function of transducer with mercury, water manometer or transducer tester / simulator. Change transducer, if necessary.      |
| 2- Damped waveform         | Improper scale selection.   |  | Change to proper scale   |
|                            | Air bubbles in tubing.  | Flush system to gravity. Remove<br>air bubbles during pressure<br>monitoring setup                     | Flush air bubbles from system.   |
|                            | Blood clot partially occluding catheter tip.  | Maintain continuous flush with heparinized solution.   | Aspirate clot with syringe and flush with heparinized solution.  |
|                            | Forward migration of catheter.<br>Catheter tip occluded by balloon<br>or vessel wall. |  | Reposition patient. Have patient cough and deep breathe. Reposition catheter by rotating or pulling back while observing waveform. |
|                            | Leak in setup.  | Tighten all connections and stopcocks before use.  | Tighten any loose connections. Change faulty transducer, etc.  |
|                            | Pressure infusion cuff. Not inflated to 300 mmHg.                                     | Inflate pressure infusion cuff to 300 mmHg.  | Reinflate pressure infusion cuff. Replace cuff if faulty.  |
| 3-False low measurement    | Transducer level too high.  | Check level periodically. Level air-fluid port of stopcock closest to transducer to phlebostatic axis. | Re-level transducer air-fluid interface to phlebostatic axis.  |
|                            | Improper zeroing.   | Check monitor settings. Observe waveforms closely. Do square wave test once a shift.                   | Re-zero monitor.   |
| 4-False high measurement   | Transducer level too low.   | Check level periodically. Level air-fluid port of stopcock closest to transducer to phlebostatic axis. | Re-level transducer air-fluid interface to phlebostatic axis.  |
|                            | Improper zeroing.   | Check monitor settings. Observe waveforms closely. Do square wave test once a shift.                   | Re-zero monitor.   |
|                            | Ringing   | Excess tubing length.  | Use shortest tubing length possible (1–1.2 m,3–4 ft).  |



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| 5-Change in configuration of waveform (noisy or erratic tracings) | Incorrect catheter position.                            |  | Reposition patient. Obtain chest x-ray. Reposition catheter, if necessary. |
|   | Loose connections in catheter and/or transducer system. |  | Tighten loose connections.   |
|   | Electrical interference.                                |  | Check transducer and monitor connections.                                  |
| 6-Catheter fling/whip in waveform                                 | Excessive movement of catheter.                         | Correct catheter placement in pulmonary artery.  | Catheter may require repositioning.  |
|   | Excessive stopcock usage.                               | Limit number of stopcocks.   | Eliminate excess stopcocks.  |
| 7-Bleedback into tubing or<br>transducer                          | Loose connections.                                      | Return stopcocks to proper position after use.   | Replace transducer if contaminated with blood. Tighten connectors.         |
|   | Pressure infusion cuff below 300 mmHg.                  | Keep pressure infisuon cuff inflated to 300 mmHg.  | Replace transducer if contaminated with blood. Tighten connectors.         |
| 8-Sepsis  | Organisms introduced into bloodstream.                  |  | Remove catheter as ordered.<br>Antibiotics as ordered.                     |
|   | Poor sterile technique setup and maintenance.           | Use aseptic technique when inserting catheter. Use aseptic technique when drawing blood samples. Maintain closed system. | Remove catheter as ordered.<br>Antibiotics as ordered.                     |
|   | Prolonged catheter use.                                 | Remove catheter after 72 hours.  | Remove catheter as ordered.<br>Antibiotics as ordered.                     |
|   | Bacterial growth in IV fluid                            | Change IV fluid according to unit policy.  | Remove catheter as ordered.<br>Antibiotics as ordered.                     |
|   |   | Use sterile non-vented caps on all stopcock parts.   | Remove catheter as ordered.<br>Antibiotics as ordered.                     |

The information in this instruction has been carefully checked and it is believed to be accurate. Please consult your hospital's specialist for further information.