

Section: Division of Nursing
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*** PROCEDURE ***

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MATERNAL SERVICES
(Scope)

TITLE: SET UP TELEMTRY MODE OF ELECTRONIC FETAL MONITORING, PROCEDURE

PURPOSE: To define the procedure for the safe, accurate and efficient set up and activation of the Corometrics telemetry system of electronic fetal monitoring, whether it is needed in the internal or external monitoring mode.

- SUPPORTIVE DATA:**
1. This system supports providing increased opportunities for the utilization of adjunct non-pharmacological labor management therapies and tools when continuous, accurate maternal-fetal electronic monitoring is absolutely indicated.
 2. There are non-pharmacological interventions that are and have been known to increase the laboring mother's comfort level as well as increase labor progress by allowing her to assume those position changes that physiologically enhance labor activity. This increases the laboring mother's satisfaction with her labor outcome and also improves statistical outcomes.
 3. Activate electronic fetal monitor Protocol
 4. See procedure for use of whirlpool in labor management.
 5. Telemetry system may be activated either after conventional electronic maternal fetal monitoring has been in progress or initiated instead of conventional EFM.

EQUIPMENT

For the Corometrics 120 series Electronic maternal-fetal monitor

1. One monitor with ultrasound transducer and tocotransducer, 2 abdominal belts, ultrasound gel, telemetry system receiver, telemetry system transmitter, telemetry system connecting cables, 4 AA batteries.
2. All the above listed items plus
 - a. One interconnect cable that is connected permanently to the back of the Corometrics 120 series monitor (each of the units' two 120 series monitors have their own cable installed to simplify activation of the telemetry system)
 - b. If FECG mode is to be used, one FECG interface cable

PROCEDURE:

- A. Explain procedure and rationale of telemetry monitoring to the laboring mother and to her labor support person(s). Include advantages i.e., the ways in which it will benefit the patient.
- B. If the patient is presently being monitored in the conventional mode, check the transducers to see if they are correct for the purpose of the telemetry monitoring to be done. Change as indicated. If patient is considering showering or hydrotherapy, then apply Nautilus transducers.
- C. If the laboring mother is not currently being monitored by the conventional mode, apply the ultrasound transducer and the tocotransducer per EFM procedure.
- D. To set up the telemetry receiver:
 - a. Place the receiver on or close to the fetal monitor.
 - b. Connect it to an electrical power source – use the electrical power strip which is located at the back of the cart that contains the fetal monitor and the computer system – (this provides power to the fetal monitor and the computer archiving system).
 - c. Connect the appropriate interconnect cables to the back of the receiver and to the front of the fetal monitor. See diagram/illustrations A&B

- Each cable has identical male type connectors at each end
 - Each cable is differentiated by its monitoring function
 - Each cable end connector is color coded for its function – FECG, ultrasound or toco. These colors are identical to the colors on the cable end connectors that fit into the monitor when using it in conventional monitor mode.
 - each receptor port on the receiver and on the monitor front is color coded by function, also.
 - Connect like color to like color
 - On the front of the receiver, place the UA mode selector switch in the TOCO position. See diagram/illustration D
 - Press the power pushbutton if the power is off on either the monitor or the receiver – ensure that the power is on for both units. See diagram/illustration E
- F. In order for data to be received by the 120 series fetal monitor, the interconnect cable that has been connected to the back of the 120 monitor must have its' free end connected to the back of the telemetry receiver. See diagram/illustration I.
- Make the connection very carefully as the connecting **pins** in this cable end can be broken off easily if the connection is misaligned when force is used to **make it fit**.
 - Secure the connection in place on the receiver by using the turn screws located at each side of the connector. Use gentle pressure only.
- G. To use the FECG mode of monitoring, an interconnect adapter must be used to connect the FECG cable that is connected to the laboring mother to the transmitter. The 120 series FECG cable is not interchangeable with the FECG cables previously supplied by Corometrics with earlier monitor modes it has a lime green rectangular end connector – this must be connected to the adapter and then the adapter connected to the transmitter.

To set up the telemetry transmitter

- a. Turn the power switch on the transmitter to **off**.
 - b. Open the battery compartment on the bottom of the transmitter, remove the 4 AA batteries there, replace with fresh AA batteries and close compartment securely. See diagram/illustration F. This may be done before bringing the telemetry system to the laboring mother's bedside.
 - c. Connect the ultrasound or FECG and tocotransducer cables that are on the laboring mother to the front of the telemetry transmitter. As per above information each cable end and its matching receptor on the transmitter is color-coded by its function. See illustrations G1-G3
 - d. Turn on power switch located on the back of the transmitter. See illustration H
 - e. Observe the fetal monitor screen to check for recording of maternal uterine activity and fetal heart rate.
 - f. Adjust volume of fetal heart rate on the fetal monitor per conventional fetal monitor procedure. Adjust the position of the ultrasound transducer if necessary to obtain the most accurate signal for the fetal heart rate.
 - g. Adjust the maternal contraction tracing as needed per usual monitoring procedure, i.e., by using the UA reference push button located on the fetal monitor front.
 - h. It may take up to 2 minutes for the maternal fetal signals to be recorded on the QS screen, but the fetal monitor screen will show reception of data almost immediately.
 - i. The transmitter may be worn by the laboring mother using the shoulder strap connected to it or if an IV pole is being used for the mother, it may be hung from this using the shoulder strap.
- ** Be aware that the whirlpool in use may interfere with tracing.
- H. To discontinue the Telemetry Unit:
1. Turn off power by the power switches on both the receiver and the transmitter units.
 2. On the transmitter unit, open the battery compartment and remove the batteries for either reuse or disposal, depending on battery life left.
 3. Remove power cord from electrical power source.

4. Remove connecting cables from the front of the fetal monitor.
 5. If using on the 120 series fetal monitor, remove the connecting cable from the receiver unit only. **DO NOT** remove the connecting cable from the back of the fetal monitor itself.
- I. Store entire telemetry unit, including all cables except the 120 series connecting cable which remains on the 120 EFM units, in the storage bucket in a central location near the main desk area. This will allow efficient location of the unit when needed.

Documentation:

1. Note on the QS archiving system the switch to telemetry mode when it occurs.
2. Documentation on the laboring mother's record is the same as it is for all labor record documentation

References: Corometrics Medical System, Inc. Model 340 Maternal/Fetal Telemetry System Operator's Manual P/N13918AA-001 revised 2/97

RECEIVER UNIT – BACK

A-1

A-2

FRONT OF FETAL MONITOR

B

RECIEVER UNIT – FRONT

C

D

E

TRANSMITTER UNIT

F

TRANSMITTER UNIT – FRONT

G1

H.BACK OF TRANSMITTER UNIT

RECEIVER UNIT – BACK

I



**Connector site
For 120 cable**