SBAR for implementation of Radiometer for Blood Gas and Co-oximetry Testing April 2020

WFBH – Davie

**Radiometer ABL 90 FLEX Plus for measuring arterial and venous blood gas samples**

SITUATION: DMC has validated a new testing method for Blood gas analysis, co-oximetry and other critical tests. This method will replace the current Abbott Istat method.

BACKGROUND: As a network, Pathology labs chose the Radiometer instrumentation to replace the Istat method. This new methodology will perform the following tests: **Blood Gas (pH, pCO2, pO2, sO2); chemistry analytes (Na, K, Glucose, Lactate, ionized Calcium (iCa)); total hemoglobin (Hb); and Co-oximetry (O2Hb, COHb, and MetHb).** The radiometer methodology is an improvement in the quality of testing compared to the current method using the Abbott.

ASSESSMENT: DMC will go live with the instrumentation on April 22, 2020 at 8am.

RECOMMENDATION:

1. Acceptable specimen type will be:
* Arterial Blood – collected in balanced lithium heparin syringe. Minimum volume 1.0 mL
* Venous blood – collected in balanced lithium heparin syringe Minimum volume 1.0 mL
* Li Heparin evacuated tubes may be used for Na, K, Glu, and Lactate testing ONLY. Tube must be filled at least ¾ full.
1. Critical values will remain the same for all applicable analytes. No changes.
2. Reference ranges (Normal Ranges) have adjusted slightly but are of minimal clinical significance except for Na. The Radiometer consistently, precisely measures above usual values by +5 mmol/L. Therefore:

The Normal Range for Sodium (Na) when measured by blood gas Radiometer instrument is increased to: 141-150; compared to the Istat which was: 136-145.

Arterial blood gas and some alternative source normal ranges are provided. Alternative blood source measurements should be interpreted based on the specimen blood source.

1. New workflow to be used:
* Provider will place DMCP2 RT TO COLLECT BLOOD FOR Radiometer to document the order for respiratory therapists to collect.
	+ **NOTE: the BMP and Creatinine orders are not available with this test method.**
* Respiratory therapy or nursing staff will complete the Davie Radiometer testing charge order slip and mark the appropriate orders.
* Respiratory or nursing staff will collect the appropriate specimen and either use the tube system or walk the specimen to the lab with the charge order slip.
* Lab staff will run the testing and print the report from the instrument. This report will be sent to the patient location by the tube system.