

**Date:** July 23, 2015

**To:** All Physicians and Laboratory Staff at Crowsnest Pass, Pincher Creek, Cardston and Taber, Dr. Clayne Steed, Dr. Jim Wesenberg, Dr. Michael O'Connor, Dr. Vanessa Maclean, Helen Monteith, Dorothy Ward, Karen Williams, Jim Moore, Mike Peta

**From:** Dr. Michael Greeff

**Re:** Capillary Blood Gas Testing for Neonates

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**Key Messages:**

Building on the work already done by Dr. Clayne Steed (Associate Zone Medical Director, South Zone Rural West), Dr. Barbara Popma (previous Zone Clinical Department Head (Co-Lead) for Laboratory, South Zone West), Mr. Mike Peta (Manager, Cardio-Respiratory Services, Chinook Regional Hospital) and Mr. Jim Moore (Technologist III, South Zone West), the above laboratory test will be fully implemented later this week. Following a routine Laboratory Leaders meeting on July 9, 2015, this project has also been approved by Dr. Jim Wesenberg (Provincial Medical/Scientific Director).

This test is specifically for compromised newly born neonates. The results of this test will be used for immediate medical care as well as for triage if the patient requires transfer to Calgary. STARS medical air evacuation also require these results to help decide whether to air lift or not.

The testing will be done on an I-Stat instrument by a laboratory technologist and values for pH, bicarbonate (HCO<sub>3</sub><sup>-</sup>) and PCO<sub>2</sub> will be determined. The specimen must be a closed sample without exposure to gases in the atmosphere. Obtaining the sample and sample integrity is the sole responsibility of attending physicians and laboratory staff will not be part of this process. The testing will be performed as a stat procedure and the results will be provided to the requesting physician immediately. Normal and critical values are available on site in the appropriate laboratory manual. The laboratory will be responsible for providing the capillary tubes.

Mr. Mike Peta has kindly provided a copy from the policy and procedure manual on how to obtain a capillary blood sample. This information will be forwarded to all parties as a formal attachment to this bulletin. If any physicians require further training, it will be possible to arrange an inservice as a teleconference.

PO<sub>2</sub> levels are not part of this testing process and need to be determined using oximetry. The process outlined above has been done as an urgent measure to help clinicians practicing obstetrics in rural sites. A formal laboratory procedure as well as specific LIS reporting will follow. A memo confirming the above has also been sent to all involved physicians by Dr. C. Steed.

**Why this is important:**

Improved blood gas testing including pH, HCO<sub>3</sub><sup>-</sup> and PCO<sub>2</sub>. This is a stat procedure to help with resuscitation of compromised neonates after delivery.

**Action Required:**

Implementation by July 24, 2015

**Inquiries and feedback may be directed to:**

Dr. Michael Greeff

**This bulletin has been reviewed and approved by:**

Dr. Michael Greeff, AHS Zone Clinical Department Head (Co-Lead) Laboratory Medicine, South Zone  
Dorothy Ward, South Zone Laboratory Director