Alberta Health Services

Laboratory Bulletin

Date: **February 19, 2014**

To: **Central Zone Physicians, Nursing Units, Laboratories**: Camrose, Drayton Valley, Lacombe, Ponoka, Red Deer, Rocky Mountain House, Stettler, Wainwright

From: **AHS Laboratory Services – Chemistry Network**

Re: **Beta-Hydroxybutyrate (BOH) – Changes to On-Site Test Availability and Test Order Priority**

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Key Messages:

- Beta-Hydroxybutyrate (BOH) is the most sensitive marker for ketoacidosis based on the predominance of BOH over the other ketone bodies (acetoacetate and acetone) during periods of excessive fatty acid metabolism, e.g., as occurs in diabetic ketoacidosis. BOH also responds relatively quickly in response to appropriate treatment. Therefore BOH is the most sensitive marker for the diagnosis and monitoring of diabetic ketoacidosis.
- BOH does not measure acetoacetate or acetone.
- Testing for acetone is not appropriate in investigation of diabetic ketoacidosis and is ONLY required if acetone ingestion is suspected.
- **Although testing for BOH was initially required within 30 minutes of specimen collection, recent studies have proven stability of BOH in samples collected in Lithium Heparin (whole blood) and EDTA (whole blood) for up to 48 hours at refrigerator temperature**.
- **This increased stability eliminates the need for all testing to be ordered with "STAT" priority.**

Why this is important:

Effective March 5, 2014

- Test availability of BOH will be extended to the on-site test menu in Camrose and Wainwright.
- Order with priority "Routine" unless otherwise clinically indicated.
- The sample must be received by the testing lab within 48 hours of specimen collection (refrigerator temperature).

Inquiries and feedback may be directed to:

- Dr. Allison Venner, Clinical Biochemist, Central Zone at: 403-406-5633 or email: Allison.venner@albertahealthservices.ca

This bulletin has been reviewed and approved by:
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