



July 2015

Dear Healthcare Provider,

The information contained in the packet may be very important to your practice. Below is a quick summary of the items that are included in this mailing. Please take a moment to read this and review the enclosed material for detailed information.

### **REFERENCE RANGE UPDATES EFFECTIVE JULY 17, 2015**

PCL Alverno continually monitors reference ranges to ensure clinical relevancy and accuracy and makes adjustments when necessary. On page 2, you will find the updated ranges and the effective dates. Thyroid testing, sodium levels and anion gap ranges are affected by this July 17, 2015, change.

For details on the anion gap reference range, please see page 3.

### **REFERENCE LABORATORY COMMUNICATION CORRECTION**

We apologize for the error in the phone number listed on the letter from our President included in the June bulletin. If you have any questions, please call us at 800.937.5521.

### **SIGN UP FOR OUR BLOG!**

We encourage you and your staff to visit [www.PCLAlverno.com](http://www.PCLAlverno.com) to sign up for our blog so you will continue to receive our updates!



## REFERENCE RANGE UPDATE EFFECTIVE JULY 17, 2015

PCL Alverno continually monitors reference ranges to ensure clinical relevancy and accuracy and makes adjustments when necessary. Please see the summary below of changes that have occurred in 2015 and those which will occur on July 17, 2015.

TEST	OLD REFERENCE RANGE	NEW REFERENCE RANGE	EFFECTIVE DATE
<b>THYROIDS</b>			
Adult TSH	0.34-5.60 uIU/mL	0.27-4.20 uIU/mL	4/1/2015
Total T4	6.09-12.23 ug/dL	5.0-12.3 ug/dL	4/1/2015
Free T4	0.61-1.12 ng/dL	0.55-1.60 ng/dL	4/1/2015
Total T3	87-178 ng/dL	80-178 ng/dL	7/17/2015
Free T3	2.5-3.9 pg/mL	1.8-3.9 pg/mL	7/17/2015
<b>CHEMISTRIES</b>			
Sodium	136-145 mEq/L	133-144 mEq/L	6/1/2015
Anion Gap*	8-16	3.6-11	7/17/2015

**\*As a result of further evaluation, the reference range for anion gap has been adjusted as shown above. Please see separate bulletin for details on anion gap reference range evaluation.**



Test Summary  
Utilization Guidelines

**ANION GAP REFERENCE RANGE**  
**3.6-11.0 mEq/L**  
**EFFECTIVE JULY 17, 2015**

**TEST UPDATE**

Historically, the normal range for the anion gap has been 12 +/- 4 mEq/L. Studies have shown that, as new technology has been introduced, the normal range of the anion gap has been decreasing over the past several decades. With our switch to new chemistry analyzers and a study of a large number of wellness profiles, it was necessary to reevaluate the anion gap reference range, which will become effective July 17, 2015.

**Verification of Reference Interval**

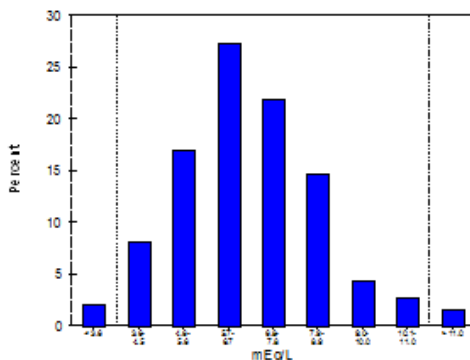
Analyst KCalvert  
Specimen Criteria Wellness Samples Na-(CL+CO2)

Date 18 Jun 2015

Reference Interval	
Proposed	3.6 to 11 mEq/L
Results (Total/Excl)	480 / 0
Max/Obs outside	10.0% / 3.8%
Passes	Yes

Statistical Analysis	
Mean	6.70 mEq/L
SD	1.76
Median	6.60
Range	2.0 to 12.3
Central 95% Interval	3.6 to 10.9
Central 95% Index	12.0 / 469.0

Reference Interval Histogram



Results Distribution

Interval	Percent	Count
< 3.6	2.1	10
3.6-4.5	8.1	39
4.6-5.6	17.1	82
5.7-6.7	27.3	131
6.8-7.8	21.9	105
7.9-8.9	14.8	71
9.0-10.0	4.4	21
10.1-11.0	2.7	13
> 11.0	1.7	8