COLLEGE of AMERICAN PATHOLOGISTS

CAP Quality Cross Check

Explanation of Reports

The CAP thanks you for purchasing the CAP Quality Cross Check (QCC) program and trusts that you are receiving the benefits of monitoring the performance of multiple instruments within your laboratory. This is the first informational write-up for participants enrolled in the QCC Programs. This program was designed to complement CAP PT by offering opportunities to monitor and proactively identify instrument problems before they impact patient test results, and help improve your quality processes by assessing the comparability of your instruments' results. The QCC program was designed to be fully compliant with the recent Centers for Medicare and Medicaid Services (CMS) notification to all PT Providers that during a PT event, a laboratory is not to test the PT specimens on more than one instrument/method, unless that is how they test patient specimens.

CAP has recently completed the QCC 2015 A Mailing reports. The intent of this first educational/informational report is to provide an explanation of the data analysis and report format. These explanations apply to all 11 QCC programs.

For the QCC reports, each reported analyte will have one summarization report page. There are two overall evaluations that are performed:

1. **Peer Group Comparisons**: this is the large table in the middle of the report and presents a statistical analysis of each reported result compared to a peer group target. Unlike PT, the QCC offering allows participants to report up to three instruments for all analytes offered.

2. **Instrument Comparisons**: this analysis is new – the absolute and percent difference is calculated for each pairwise grouping amongst the 3 reported instruments. One important note is that the instrumentation for any pairwise comparison must be similar in order for CAP to provide the comparison statistics.

Overall Report:

1 Your institution and kit mailing information is contained in the header of the page.

2 This is your Instrument Information table which lists the reported instrumentation and/or methodology for each of the reported instruments. If any instrumentation/methods are not reported for any particular instrument, with or without a reported result, then this is indicated. This table also denotes any exception codes that are reported for that particular instrument. Lastly, if there are varying units of measure across the reported instruments, then the units specific to each instrument is also listed in this table. If the units are the same across all the reported instruments, then the units are provided in the report title following the analyte name.

COLLEGE of AMERICAN PATHOLOGISTS

CAP Number: 1
Institution:
Attention:
City/State:

Kit #:

Kit ID:
Kit Mailed: 02/23/2015
Original Evaluation Date: 04/01/2015
Next Mailing Date: 08/31/2015

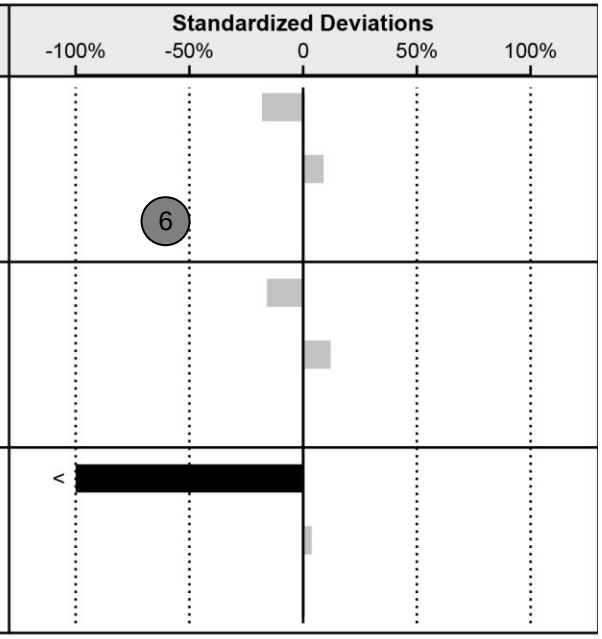
Instrument Information

2
#1 RADIOMETER ABL 800 SER
#2 RADIOMETER ABL 800 SER
#3 OTHER

SOQ-A 2015: Blood Oximetry Quality Cross Check
Est Hematocrit %

Peer Group Comparisons: 4 5 3 **Evaluation Limit: +/- 6%**

Specimen	Instrument	Your Peer Group	Your Result	Peer Group n	Peer Group Mean	Peer Group SD	Peer Group Limits	Your Evaluation
SOQ-01	#1	RADIOMETER ABL 800 SER	24.30	24	24.567	0.331	23.09-26.05	within limit
	#2	RADIOMETER ABL 800 SER	24.70	24	24.567	0.331	23.09-26.05	within limit
	#3	NO PEER GROUP	21.90	<9				
SOQ-02	#1	RADIOMETER ABL 800 SER	41.20	24	41.596	0.756	39.10-44.10	within limit
	#2	RADIOMETER ABL 800 SER	41.90	24	41.596	0.756	39.10-44.10	within limit
	#3	NO PEER GROUP	38.70	<9				
SOQ-03	#1	RADIOMETER ABL 800 SER	13.50	16	14.467	0.344	13.59-15.34	**outside limit**
	#2	RADIOMETER ABL 800 SER	14.50	16	14.467	0.344	13.59-15.34	within limit
	#3	NO PEER GROUP	14.10	<9				



Note: Quality Cross Check is not proficiency testing. These results will not be sent to any regulatory agency.

Instrument Comparisons:

Comparison	SOQ-01 Difference (%)	SOQ-02 Difference (%)	SOQ-03 Difference (%)
7 #1 to #2	8 Diff = 0.40 (1.6%)	Diff = 0.70 (1.7%)	Diff = 1.00 (7.1%)
#1 to #3	9 No comparison due to varying methodologies	No comparison due to varying methodologies	No comparison due to varying methodologies
#2 to #3	No comparison due to varying methodologies	No comparison due to varying methodologies	No comparison due to varying methodologies

Note: Consult your laboratory director/designee to evaluate the acceptability of instrument comparisons.

Details of Peer Group Comparisons Analyses

The purpose of these analyses is to compare reported results for up to three instruments and specimens with its appropriate peer group targets, using the same Surveys evaluation limit. It is very important at the outset to draw attention to the note at the bottom of the table; this exercise is not Proficiency Testing and will not be reported to any regulatory agency. This is a Quality Improvement Program with the purpose to monitor the performance of multiple instruments within a laboratory/institution.

Specific report detail:

3 The CLIA or CAP Surveys evaluation limit is stated. This is the same evaluation limit as in the corresponding PT Survey.

4 For each result, a peer group is assigned, if it exists, based upon the corresponding PT Survey target assignment criteria.

5 The statistics for the assigned peer group are presented in the table for each result: n, mean, SD, and the calculated peer group evaluation limit. “Your evaluation” column shows whether the reported result was within or outside of the limit.

6 The “Standardized Deviations” bar graph portraying where the reporting results lies relative to the evaluation limit. “0%” is defined as the reported result equaling the peer group mean; “-100%” means the reported result is at the peer group’s lower evaluation limit; and “100%” means the reported result is at the peer group’s upper evaluation limit. If the reported result is outside of the limit, either above or below, then the bar is bold and a “<” or “>” symbol is shown at the appropriate end of the graphed bar.

Listed are some more detailed discussion points on the peer group comparison table and analysis:

a. The peer groups are defined from the aggregate reported results for each specimen. It is possible that a lab with the same three instruments could contribute three observations to that peer group’s statistics.
b. For any instrumentation that is the same, the peer group and statistics will be identical for a given specimen, and if the instrumentation is different, then the assigned peer group and statistics may differ.
c. Waterfall grading is used to combine results at a higher level (all method or all instrument) when a specific peer group does not have the minimum required number of results, usually either 9 or 10.
d. If for any analyte, an all method or all instrument waterfall level is not allowed, then for peer groups with less than the minimum number, there will be “no peer group” assigned and the peer group n will be “<” with that minimum number.
e. When there are no results reported any specific instrument, then “----------“ will appear under the peer group and “result not reported” will appear under “Your Result”.
f. The QCC Program allows reporting of SI units. Your report will be in the SI units, if you indicate as such, and the summarized data and evaluations will be done using SI transformed peer group data.

Details of Instrument Comparisons Analyses

This bottom section of the individual analyte report provides a comparability analysis between the three potential pairs of instruments. Due to the fact that we are using manufactured material, formal comparisons can only be made across similar instrumentation and methods.

7 The specific pairwise comparison being evaluated

8 For each cell of the instrument comparison table, if results are reported and instrumentations are similar, then the absolute difference between the results of those two instruments and that difference expressed as a percentage is provided.

% difference = |absolute difference between two results| / mean(two results) *100

9 If pairwise comparison data could not be reported for any cell in this table, the reason is indicated. Potential reasons for non-comparison are: varying methodologies, varying units of measure, at least one instrument's information is not provided, or at least one specimen's result is not provided.

Per the CAP Accreditation Checklist, the evaluation of acceptability for the comparability of two instruments within a laboratory is defined by Laboratory Director or designee; this is indicated in the note under the table. As a result, the QCC program provides the difference data that can be used by the Laboratory Director to evaluate the acceptability of the two instruments.

Listed are some more detailed discussion points on the instrument comparison table and analysis:

a. If the mean of the two instrument results is less than 1.0, then the percent difference is shown as "(*)" with a corresponding footnote indicating that the percent difference is not presented due to a low average concentration in the denominator of the percentage calculation.
b. If comparisons are not made for any cell due to varying methodologies, the participants can take the reported results from the peer group analysis table above and evaluate based upon Laboratory Director/Designee established acceptance criteria.

CAP will continue to enhance the QCC Programs to meet your laboratory needs. Your feedback is very important to CAP. If you have any suggestions, feedback, comments, or questions regarding your QCC program or reports, then please contact at QCC@cap.org.

Thank you again for your participation in the Quality Cross Check program.