

Data Interpretation

I. Sample Report:

Summary of glucose results for the current External Quality Assurance (EQA) samples:

| December / 2006 | Sample No. | No. of Valid Returns | Mean | SD | Target Range |
|-------------------------|------------|----------------------|-------|------|--------------|
| All Analysers | 1 | 173 | 12.25 | 2.27 | 9.8 - 16.1 |
| | 2 | 173 | 3.79 | 0.90 | 2.8 - 5.3 |
| Accu-chek Advantage II | 1 | 56 | 10.43 | 0.41 | 9.3 - 11.3 |
| | 2 | 56 | 3.05 | 0.16 | 2.8 - 3.4 |
| Accu-chek Advantage III | 1 | 48 | 10.55 | 0.39 | 9.8 - 11.4 |
| | 2 | 48 | 3.13 | 0.23 | 2.8 - 3.8 |
| i-STAT 1 | 1 | 2 | 15.5 | 0.40 | 15.1 - 15.9 |
| | 2 | 2 | 4.5 | 0.10 | 4.4 - 4.6 |
| Optium | 1 | 12 | 13.57 | 0.45 | 12.7 - 14.3 |
| | 2 | 12 | 4.38 | 0.20 | 4.0 - 4.8 |
| Precision PCx | 1 | 40 | 15.01 | 0.70 | 13.4 - 16.1 |
| | 2 | 40 | 4.91 | 0.22 | 4.4 - 5.3 |
| Precision QID | 1 | 15 | 15.65 | 0.62 | 14.9 - 17.1 |
| | 2 | 15 | 5.04 | 0.26 | 4.5 - 5.4 |

II. Interpretation:

A power-point presentation can be downloaded to assist your interpretation of external quality control results. You are strongly advised to visit this website.

Internet:

<http://www.cpy.cuhk.edu.hk/wardmanual/NurseP/POCT%20&%20Issues%20on%20QA.pdf>

Intranet:

<http://ntec.home> → System → POCT-EQAPS

1. Result for each sample is analysed statistically by group and by analyser type.
2. The group / analyser mean, SD, and Target Range (95% confidence interval) are calculated and listed in the table.
3. Compare your reported value against the appropriate analyser type and sample number.
4. If your analyser type is not listed above, then compare your result to the 'ALL' analyser group.
5. If your QC results are within the Target Range, then your analyser performance is acceptable.
6. The SD of each group reflects the scattering of the results. A smaller SD is desirable as it reflects better analyser and user performance as well as lot-to-lot glucose strip variability.
7. The mean value of each group reflects the trueness of the actual value. Usually the 'ALL' mean value is closer to the true value of the sample because no single method used for POCT can reflect the true value of the EQA samples.
8. The most common error is sample or result swapping. This may happen during measurement or transcribing the results onto the report form. Please exclude it by repeating the analysis. If that is the case, there is no need for trouble-shooting.
9. If your QC result(s) is(are) outside the Target Range by more than 0.2, there is a 5% probability that your instrument is having either random error or systematic error. Random error cannot be prevented. Repeat external QC testing with fresh QC samples supplied by Department of Chemical Pathology.
10. If repeated QC result(s) still fall(s) outside the Target Range by more than 0.2:

Discontinue the use of the problematic stuff (BGA, control solution & blood glucose strips)

For tender BGA - change the defective BGA via NTEC Supplies Department

For non-tendered BGA - change the defective BGA via manufacturers

III. List of Late / No Return (23 Dec 2006):

| Hospital | Department | Location |
|-----------------|-------------------|-----------------|
| AHNH | O&T | F2 |
| TPH | M&G | 4AR |
| TPH | Psy | 1A |