Data Interpretation

I. Sample Report:

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

March / 2006	Sample No.	No. of Valid Returns	Mean	SD	95% Confidence Interval (CI)
All Analysers	1	160	13.24	3.77	9.1 - 20.1
	2	160	2.52	1.18	1.3 - 4.8
Accu-chek Advantage II	1	95	10.18	0.53	8.9 - 11.8
	2	95	1.56	0.18	1.2 - 2.1
i-STAT 1	1	2	16.45	0.35	16.1 - 16.8
	2	2	3.75	0.05	3.7 - 3.8
Optium	1	8	19.21	0.55	18.4 - 20.4
	2	8	3.79	0.16	3.6 - 4.1
Precision PCx	1	40	17.51	0.75	15.6 - 19.0
	2	40	3.92	0.23	3.5 - 4.5
Precision QID	1	15	17.57	1.16	15.7 - 19.6
	2	15	4.00	0.45	3.4 - 4.9

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://pwh.home → Department & Units → Clinical Services →Department of Chemical Pathology → Information for Clinical Users → NTEC POCT Glucometer External Quality Assurance Programme

1. Result for each sample is analysed statistically by group and by analyser type.
2. The group / analyser mean, SD, and 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 95% confidence interval (CI), 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 95% CI, there is a 5% probability that your instrument is having either random error or systematic error. Random error cannot be prevented. A Precision Check therefore is recommended to ensure the quality performance of the analyser by excluding any chance of systematic error.
10. You can obtain the Precision Check Form (Excel) in the Nursing Protocol for POCT from above addresses.
11. If the Precision Check result is acceptable (< 5% CV at high QC level & < 7% CV at low QC level), the concerned analyser can be retained for clinical use.

III. List of Late / No Return (20 Mar 2006):

Hospital	Department	Location
NDH	RAD	RAD
NDH	SURG	3B
PWH	FM	FMTC
PWH	SUR	10A
PWH	SUR	3D
TPH	PSY	2C