



U.S. Department of Health  
and Human Services  
National Institutes of Health



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Dear Proficiency Testing (PT)/External Quality Assessment Schemes (EQAS) Providers:

We are writing on behalf of the International Federation of Clinical Chemistry and Laboratory Medicine (IFCC); the National Kidney Disease Education Program (NKDEP), an initiative of the National Institutes of Health (USA); and the European Communities Confederation of Clinical Chemistry (EC4) to introduce you to our Creatinine Standardization Program and highlight its implications for PT/EQAS providers.

The NKDEP, in collaboration with the IFCC and EC4, has launched the Creatinine Standardization Program to reduce inter-laboratory variation in creatinine assay calibration and provide more accurate estimates of glomerular filtration rate (GFR). The effort is part of a larger NKDEP initiative to help health care providers better identify and treat chronic kidney disease in order to prevent or delay kidney failure and improve patient outcomes.

The Creatinine Standardization Program encourages IVD manufacturers to adjust the calibrations of routine serum creatinine methods to be traceable to the internationally accepted reference method— isotope dilution mass spectrometry (IDMS)—and to work with clinical laboratories to coordinate this calibration adjustment with the introduction of a revised GFR estimating equation appropriate for use with IDMS-traceable creatinine methods.

PT/EQAS providers will be crucial partners in the successful implementation of this program that is currently being implemented and is expected to be completed in 2008. We hope we can count on you to take the steps necessary to ensure a smooth transition from traditional calibration to IDMS-traceable calibration.

Specifically, IFCC, NKDEP and EC4 are asking PT/EQAS providers to:

- 1) Advise participant laboratories that you will be collaborating with IVD manufacturers, IFCC, NKDEP and EC4 to ensure appropriate grading of PT/EQAS data during a transition period for implementation of the Creatinine Standardization Program, to ultimately improve the worldwide performance of GFR estimates based on standardized serum creatinine values.
- 2) Make accommodations in participant grading within your respective survey programs during the transition of routine creatinine methods from traditional calibrations to IDMS-traceable calibrations. It is anticipated that bimodal distributions of survey results within a method may be observed. When this occurs, it will most likely be the result of groups of laboratories independently transitioning to new creatinine calibrations for a particular method, and it should not be a cause for a given laboratory to fail a PT/EQAS challenge. Thus, it may be necessary for the PT/EQAS providers to collaborate with IVD manufacturers to create new instrument/method peer groups for their participants that reflect the calibration status of each method that is

undergoing a calibration transition (traditional or IDMS-traceable) for both serum and urine creatinine values.

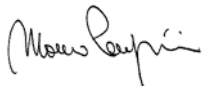
- 3) Clearly inform participant laboratories that they will need to choose the correct instrument/method peer group (sub-classified by calibration type) for the creatinine calibration in use by their laboratory for a given PT/EQAS challenge.
- 4) Communicate with IVD manufacturers to obtain expected dates for introduction of IDMS-traceable calibrations for creatinine for each of their methods, and the anticipated timeframe to achieve completion of the transition for a given method to the new calibration in all routine clinical laboratories using that method around the world.

It is also recommended over the longer term to introduce a regularly recurring EQA program that uses commutable serum materials with target values traceable to the IDMS reference method for creatinine. Such a program will allow individual laboratories and IVD manufacturers, on an on-going basis, to assess the performance of routine clinical laboratory methods and the success of the calibration adjustment process for each of their methods. For additional information about commutable serum reference materials and their application to EQA programs, we refer you to the recent paper: WG Miller, et al, Creatinine Measurement: State of the Art in Accuracy and Interlaboratory Harmonization. *Archives of Pathology and Laboratory Medicine*, Vol. 129, 297-304, March 2005.

As we move forward, we hope to open a dialogue with you about the most effective way for you to effect these changes within your organization. In the meantime, you can find more information about the Creatinine Standardization Program on the NKDEP website at [www.nkdep.nih.gov/labprofessionals](http://www.nkdep.nih.gov/labprofessionals).

Thank you very much for your attention. We look forward to working with you on this important initiative.

Sincerely,



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