CCQM Activities and Impact in Healthcare

Dr. Willie E. May
Director, NIST
President, CIPM Consultative Committee on Metrology in Chemistry and Biology
willie.may@nist.gov

Accuracy and acceptability of chemical and biochemical measurement results in the healthcare sector are critical to the global economy and to the well-being of our citizens. In the U.S., for example, over $2.5 trillion is spent annually on healthcare with 10-20% of this cost associated with measurements. 70% of medical decisions are based upon results from tests performed in a medical laboratory; yet only about 10% of the ~700 most-often-performed laboratory tests have an internationally-recognized measurement infrastructure underpinning these measurements. In Germany, it is estimated that the costs of repeat measurements amounts to more than 1.5 billion US$ per year. There are therefore strong drivers to improve the comparability and quality of measurements and number of measurands covered by an internationally recognized measurement system.

In addition to documenting the comparability of measurements made across the world, comparisons organized under the auspices of the International Committee on Weights and Measures’ Consultative Committee on Metrology in Chemistry and Biology (CCQM) have also facilitated an increase in the provision of high-quality reference materials/measurements.

Since 1998, more than 25 CCQM Comparison Studies have been completed in the healthcare/clinical diagnostics area. They have resulted in significantly increased capacity of National Metrology Institute capabilities, with nine National Metrology Institute services that support healthcare measurements growing from 2 in 2000 to more than 10 now.

This talk will present examples of the results of CCQM comparisons in the healthcare/clinical diagnostics area and provide information concerning their impact.