Laboratory Utilization

In June of last year, the Chief of (the Medical) Staff at a university hospital asked us for “tips on cost-effective ordering of laboratory tests” to share with new house staff. Seeing this as an opportunity too good to pass up, we hastily put together a list of tips.

The Chief of Staff used these gems as planned, but we had, and have, no real idea of what sorts of “tips” (if any) might actually affect test ordering. Indeed, the workload at the hospital showed no obvious signs of change after this effort to control test utilization. Nonetheless, the tips have taken on a life of their own, with copies turning up in unexpected places. They are even posted, on a revolving basis, on the university medical center’s Medical Information System. This activity, without a shred of evidence of any value in the effort, underscores the desperate need for tools to affect test utilization.

My purpose here is to encourage careful studies to develop, describe, and document novel efforts to improve test utilization. How can we most efficiently and effectively educate and remind clinicians that use of the bleeding time as a preoperative screen is a poor predictor of significant post-surgical bleeding? That the hypomagnesemia associated with disease and trauma goes away with or without intravenous magnesium therapy or daily monitoring of serum magnesium? That daily monitoring of white cell differentials and “of all constituents we analyze in body fluids in our clinical chemistry laboratories. Of course we cannot generalize to all mankind what we find in one man, but we can make a unique beginning.

What we find from Glenn’s pre-flight body chemistry and other physiological values are already studied and reported for the aged. Or are they? If your lab’s repertoire is, let us assume, 125 different quantitative (not qualitative) assays, encompassing immunology, endocrinology and TDM, how many of them provide sound reference for the 77-year-old male? How many established reference intervals are there for life’s critical periods, e.g.: newborn, puberty, pregnancy, menopause and extreme old age?

We clinical chemists have played around with reference intervals long enough. The time is ripe, now, for us to devote some of our research and financial resources to study reference intervals with special emphasis on the changes possible at various periods of life for both males and females, and the expected differences between dissimilar analytical methods. Are we currently using “tongue-in-cheek” R.I.? Are we being hypocritical? Are we hiding our ignorance? Are we so involved with the trappings of our profession that we have no stomach for solving one of our most urgent problems? Heaven forbid that penny-pitching takes precedence.

We are at the stage now with reference intervals that we once were with standards, reagents, and method validation, perhaps 30 years ago or more. We have, with our colleague at the NIST and the CDC, made notable progress. What the AACC did was to appoint and support a Standards Committee. Now we must simply set up an AACC
Committee on Reference Intervals and appoint representative members from all walks of the clinical chemistry profession. Let them begin! Let us take heart from John Glenn, and move on!

**AACC Meetings**

*DNA Technology in the Clinical Laboratory*, the 8th Annual Seminar on Molecular Pathology, William Beaumont Hospital, Royal Oak, Michigan, March 25–27, 1999, cosponsored by the AACC Molecular Pathology Division. This 3-day symposium will include pre-meeting workshops, on March 25, on Molecular Hematology and on Interfaces Between Flow Cytometry and Molecular Detection, and a Review Course for the Medical Technologists’ National Certification Agency Examination in Clinical Molecular Biology. The sessions on March 26 are on “New Technology in Molecular Pathology”, with the keynote address on “DNA Technology and the Human Genome Project” by Dr. Francis Collins, and “Molecular Cardiology”. The March 27 sessions are on “Molecular Microbiology” and “Molecular Oncology-Hematology”. CME credits are available. Information: Domnita Crisan, MD, PhD, phone 248-551-7261, fax 248-551-3694, e-mail dcrisan@beaumont.edu; or Sharon Simler, phone 248-551-8023, fax 248-551-3694, e-mail ssimler@beaumont.edu; or visit the Web Site at http://www.beaumont.edu/html/Conf/8annual.htm.

**Other Meetings**

43rd Annual Scientific Congress, Canadian Society of Clinical Chemists, Winnipeg Convention Centre/Crowne Plaza Hotel, Winnipeg, Manitoba, Canada, May 8–13, 1999. Information: CSCC 43rd Annual Conference, Canadian Society of Clinical Chemists, PO Box 1570, Kingston ON K7L 5C8, Canada. Phone 613-531-8899; fax 613-531-0626; e-mail cscc@kingston.net/www.cscc.ca.