Epilogue

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Advances in technology for performing public health and clinical laboratory tests, increased knowledge of biologic mechanisms and pathology, changes in reimbursement leading to changes in where and how testing is performed, the accessibility of relatively inexpensive and easy-to-use computer and electronic data analyses and information systems, new clients of laboratory testing services, and nationwide regulation of all clinical laboratory testing are rapidly changing the paradigm for laboratory medicine. With these developments in the foreground, the 1995 Institute on Critical Issues in Health Laboratory Practice: Frontiers in Laboratory Practice Research presented a chance for us to develop a vision for the future of laboratory medicine by reflecting on where we have been, assessing where we are currently, and developing strategies for moving forward.

The changes enumerated above are driving a rethinking of, for example, what quality control systems are needed for testing devices that have built-in fail-safe mechanisms or error detection systems, how personnel competency can be assured and evaluated, and how to develop a proficiency testing system that truly reflects routine performance and provides timely feedback. Key to responding to these laboratory practice issues is a need to more clearly define the analytical and medical performance goals. Establishing these goals is possible and but requires timely and effective collaboration among laboratorians, clinicians, and manufacturers which has not often occurred.

The objectives of the 1995 Institute were to review research strategies for addressing traditional and newly emerging issues in public health and clinical laboratory practice. To accomplish the objectives, participants at the Institute focused on 8 topics dealing with issues surrounding proficiency testing, personnel, quality assurance, establishing analytical and medical goals, laboratory-focused health systems research, measuring the impact of change on the laboratory, and measuring patient outcomes. Sharing of information among the 225 attending participants occurred through plenary session presentations, 49 scientific posters, workshops on the 8 topic areas, and collegial discussions. Participants included representatives from industry, government agencies, academia, private hospitals, physician office laboratories, and public health laboratories.

It is clear that the recent major shifts in health care delivery toward managed care and increased competition have profoundly affected how laboratorians see their role and the services they offer. The pre-analytic, analytic, and post-analytic model for evaluating quality is now seen in the broader context of health care delivery, test utility,

and cost benefit. This was a common theme in formal presentations and the workshop discussions. Again, to fully contribute to the health system, laboratorians must get beyond their walls and focus on working to improve test quality attributes other than analytic accuracy and reliability. They must work to improve availability of services, turnaround times, and reliability of testing, and assist with test selection and results interpretation. Moreover, the usual quality attributes of testing--accuracy and precision--must be examined in the context of outcomes, i.e., what difference does it make?

The **Frontiers in Laboratory Practice Research Institute** is the fifth institute sponsored by the Centers for Disease Control and Prevention (CDC) over the past 10 years which has focused on laboratory practice. The 1984 and 1985 Institutes addressed laboratory cost containment and safety management, respectively. The 1986 and 1989 Institutes brought together leaders in laboratory medicine to paint a picture of what laboratory practice would look like in the future and what the important quality issues may be. As discussed by Dr. Carlyn Collins in her opening presentation, participants in the 1986 and 1989 Institutes proved to be accurate in their vision. We hope that years from now, providers, users, and payers of laboratory services will not only be able to say that the participants in the **1995 Institute** were good prognosticators but that they were also successful in advancing a research agenda which enhanced the value of laboratory medicine to the patient and to public health.

In closing, I thank each of the plenary session speakers for an outstanding job of setting the stage for workshop discussions, the workshop facilitators for managing their workshops and their expert guidance and insight on how best to organize workshop topics, and the staff of the Division of Laboratory Systems, Public Health Practice Program Office, Centers for Disease Control and Prevention, who contributed in every way needed to hold the Institute. I would like to thank Mr. Phil Thompson for the editorial guidance he provided as this monograph was being compiled. I especially thank Ms. Lynne Smith who oversaw the Institute contract and Ms. Anne O'Connor and Dr. John M. Krolak who shared the day-to-day management of the Institute and worked so diligently to publish the proceedings.