

Summary of Workshop 6: Measuring the Impact of Change on Laboratory Testing

Facilitator: Daniel Baer, M.D.
Department of Pathology
VA Medical Center
Portland, Oregon

CDC Liaison: D. Joe Boone, Ph.D.

Key Questions

1. What data and information are needed to be able to measure the impact of change on laboratory medicine?
2. What methodologies could be applied?
3. What are some high priority research questions?

Conditions and Resources Necessary to be Able to Measure the Impact of Change

To conduct reliable studies, time series data bases must be established and maintained so that data will be comparable over time.

An inventory of data bases should be conducted including both private (e.g., ASCP Board of Registry, industrial, academic) and public (e.g. CLIA, state regulatory agencies, public health laboratories) sector data bases, especially those that contain time series data. An information clearinghouse should be established to allow investigators to locate these data bases.

Quantitative and qualitative data about laboratory practice should be collected over time, including: the number and type of personnel, distribution and tasks performed; locations of sites of testing, including types of laboratories, near patient testing, office testing, home testing, and testing in other kinds of sites. These data should also include an inventory of tests performed and

their volumes; turn-around-time data; and information about tests referred from one laboratory to another.

Data dictionaries are necessary to standardize the terms and details of data collection so that data collected by different organizations or at different times are comparable. An example stressing the need for this is our inability to compare workload data because of the lack of a standard for defining the unit, "test."

A consortium consisting of government, industry, academic, professional organizations, providers and the public is needed to develop a research agenda that speaks to issues that are of importance and will provide answers of value to the funding entities represented in the consortium.

Research methods

Valid research data collection is dependent on developing a standard data dictionary that clearly and precisely describes the terms used in collecting data.

For the benefit of researchers, a

clearinghouse having an inventory of time series data, should be established. It is necessary to conduct an inventory of such data sources.

Using laboratory test results, it is possible to measure population health outcomes.

Longitudinal surveillance of populations is a valuable public health tool.

Data relating to testing workloads should use relative values indexed to test complexity to standardize the scope of services performed in diverse kinds of laboratories. One such complexity relative value scheme is the CDC Complexity Model.

High priority research questions

1. Does the site of testing affect outcome?

Consider both patient outcome and process issues such as cost, convenience and organizational efficiency.

2. How do changes in the laboratory aspects of the health care delivery system affect: cost, staffing, productivity, availability of tests and results, and individual patient and population health outcomes?

3. How effective has laboratory regulation been? Consider patient health outcomes as well as process issues.

4. Have clinical practice guidelines affected testing volumes, costs or patient outcomes?