

ROUND-TABLE 2 - Health Economics: Transforming Laboratory Data into Value

HEALTH ECONOMICS: TRANSFORMING LABORATORY DATA INTO VALUE

T. Trenti¹

¹*Chief Scientific Officer, Bionalisi, Carate Brianza (MB), Italy*

Value-Based Healthcare emphasizes outcomes optimizing consequent costs where Value-Based Payment Models should promote reimbursement based on the value of care delivered rather than the volume of services provided. This view may be a strategic issue in laboratory medicine to highlight its central role encouraging more effective evaluations of the economic impact on patient laboratory outcomes. To promote patient outcomes and overall value of care rather than just the number of provided diagnostic tests healthcare payers are exploring new practices, such as bundled payments or Value-Based Reimbursement instead of the most common traditional reimbursement methods in health care, including diagnostic laboratory services, are Fee-for Service Model, Reference Pricing, Diagnosis-Related Groups. As reimbursement models significantly impact the behaviour of healthcare stakeholders and providers, consequently guiding the quality of care, it is essential to develop an agenda to promote Value-Based Healthcare and Value-Based Reimbursement in laboratory medicine in an integrated framework. The first step of this value-based frame is based on evidence-based laboratory medicine principles to define health outcomes based on robust evidence and methodology to estimate the effect of diagnostic tests. The effective diffusion of value-based approaches is accelerating worldwide with the application of interoperable information technology systems supporting value-based evaluation healthcare performance assessments. The second step is to support the link between test diagnostic accuracy and important outcomes in the downstream patient management, identifying the most effective performances associated with the correct economic value. The final step consists of the traditionally appraised areas, considering the overall production test costs, however, based on analytical performance specifications and quality indicators to guarantee the total diagnostic process as proposed by EFLM and IFCC. This is in line with the report by the European Commission, where value-based healthcare is structured into four value-pillars: care to achieve patients' personal goals, achievement of best possible outcomes, resource distribution across all patient groups and collective value.

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HEALTH ECONOMICS AND LABORATORY DATA

N. Polyzos¹

¹*Democritus University of Thrace*

Nikolaos Polyzos (Professor of Health Service) - Maria Kotsila (PhD Candidate)

The main goal of Health Economics is to control and evaluate health expenditures in a more efficient way. The main problems of the laboratory field are the increase of testing due to the rapid technological improvement as well as internal inefficiencies e.g. double testing etc.

We present data analysis of a recent research in Greece, both in-hospital and out-hospital.

Strategies to incorporate novel testing covered by insurers should be combined with economic evaluation in order to see consequences and benefits apart from costs.

Conclusion will include the impact of unnecessary overtesting to health care system and to patient outcomes. It will be taken into account the health care quality with advanced lab targets. Proposals on the development of programs that provide appropriate data can be used to minimize clinical variation in lab ordering. A value of findings of over prescription refers to the era of health economics (induced demand).

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CHALLENGES AND OPPORTUNITIES IN GENERATING HEALTH ECONOMIC EVIDENCE FOR THE IN-VITRO DIAGNOSTIC LABORATORY TESTS

J. Blanchet¹

¹*Director Medical and Scientific Affairs, Beckman Coulter Diagnostics*

The adoption of in-vitro diagnostic tests (IVDs) in clinical practice relies on demonstrating their clinical performance, benefits on patient outcomes, and health economic (HE) impact. However, manufacturers face numerous challenges in generating robust clinical and HE evidence, which is essential for reimbursement decisions, and widespread clinical implementation.

To assess the importance of health economic evidence generation for the IVD industry, a survey was conducted in February 2025 among 23 corporate members (CMs) of the IFCC. The findings reveal that 80% of IFCC CMs consider HE evidence to be very important for the adoption of IVDs. Despite this recognition, only 50% of respondents reported having adequate internal resources to conduct HE and outcomes studies. This is a significant gap, which may hinder the timely and effective generation of essential evidence.

A major challenge identified by CMs is the complexity of HE analyses and outcome studies, which require specialized expertise in health economics and data analytics. The diversity of clinical practices, healthcare systems, and reimbursement processes across European Union member states further complicates evidence development and engagement with healthcare authorities and payer organizations.

To address these challenges, IVD manufacturers rely on external collaborations with private consulting firms and academic institutions to gain the expertise needed for high-quality HE evidences. Fostering multidisciplinary partnerships among industry stakeholders, universities, scientific societies, healthcare authorities, and payers is essential to effectively demonstrate the clinical and economic value of IVDs, ensuring informed decision-making and improved patient care.

In conclusion, concerted efforts from industry stakeholders, healthcare professionals, laboratory medicine societies, and policymakers are essential to developing standardized methodologies and frameworks. Such collaboration will empower the IVD industry to generate robust evidence demonstrating the clinical and economic value of diagnostic innovations, ultimately enhancing patient outcomes and healthcare efficiency.

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HEALTH ECONOMIC EVALUATIONS FOR LABORATORY TESTS

P. Jülicher¹

¹*Medical Director Health Economics & Outcomes Research, Core Diagnostics, Abbott*

Health economic evaluations aim to assess the impact of new health services by quantifying their costs and consequences against a relevant comparator. The generation of health economic information is an established tool to inform decisions on adoption, budget allocation, and implementation of new health care services. The same applies to laboratory tests, and the demonstration of the consequences of testing is imperative to facilitate the adoption of tests into clinical guidelines, reimbursement schemes and clinical practice.

For diagnostic tests, direct assessment is complicated by the fact that the value of the test lies in the decisions and actions taken on the basis of the test results. In addition, translating laboratory information into value measures can be challenged by insufficient test-to-outcome data, the use of tests across a range of indications, or high variability in clinical decisions. As a result, a lack of robust information on the impact of testing often leads to delays in implementation.

International guidelines and value frameworks help to understand the criteria used for value assessments in healthcare decision-making. These frameworks also emphasize the importance of connecting laboratory information to specific patient pathways, to strategic hospital or policy goals, to the comparative effectiveness, and to financial and economic constraints.

In a field of missing data, a more intensive use of health economic modelling offers opportunities to assess the value of laboratory services by linking test results to consequences of testing. However, conducting a comprehensive health economic evaluation requires an understanding of the full context and input from many disciplines along the clinical pathway. Although laboratory professionals provide a unique expertise for exploring the value of biomarkers, a review of health economic studies revealed that laboratory experts are frequently underrepresented in health economic studies related to laboratory services. This implies that the specific laboratory expertise is frequently not considered in decision processes. To facilitate multidisciplinary collaboration, continuous efforts to educate laboratory professionals in health economic thought processes and requirements are highly desirable.