Testimony of
Brad Spring, Vice President, Regulatory Affairs and Compliance, BD
before the U.S. Senate Committee on Health, Education, Labor and Pensions

Hearing on
"Laboratory Testing in the Era of Precision Medicine"
September 20, 2016

Introduction

Chairman Alexander, Ranking Member Murray and Members of the Committee:

I am Brad Spring, Vice President of Regulatory Affairs and Compliance for BD Life Sciences based in Sparks, Maryland. I am honored to have the opportunity to participate in today's panel on behalf of BD.

BD is a U.S. based global medical technology company that is advancing the world of health by improving medical discovery, diagnosis of disease and the delivery of care. The Company is a leader in patient and healthcare worker safety and technologies that enable medical research and clinical laboratory practices. We work in close collaboration with customers and partners to help enhance outcomes, lower healthcare delivery costs, increase efficiencies, improve healthcare safety and expand access to health.

Scientific advances arising from the nation's investment in biomedical research enable the development of new diagnostic tests that can prevent disease or detect it early when treatment is often more effective and less costly. Diagnostic tests play an important role in the diagnosis of disease, genetic disorders, infection or other conditions. Depending upon the type of test, it may be performed in a clinical laboratory, a healthcare professional setting such as a doctor's office or a hospital bedside, or at home.

The issue of how to best regulate diagnostic tests to ensure the public's health while allowing for innovation and rapid access to these tests has been debated for many years. BD is grateful to the Committee for taking the time to study this issue carefully, including holding today's hearing. During my remarks, I hope to shed light on the regulatory process under which BD currently brings tests to market and to share a set of principles that could help to guide future reforms.

Current Regulatory Process for Diagnostic Tests

Currently, the federal Food, Drug and Cosmetics Act directs the Food and Drug Administration (FDA) to regulate diagnostic tests developed by manufacturers, like BD. For a diagnostic test to receive FDA clearance or approval, manufacturers are required to provide data demonstrating how accurately and precisely a test measures an analyte and how well it works in leading to a correct diagnosis.

There is also a second route to market for diagnostic tests that are developed by clinical laboratories. The Centers for Medicare and Medicaid Services (CMS) provides oversight over laboratory developed tests (LDTs). CMS has authority to regulate laboratory operations through the Clinical Laboratory Improvement Amendments of 1988 (CLIA). Under CLIA, CMS seeks to ensure reliable test results by focusing on the quality of the laboratory procedures and competency of personnel.

Manufacturer Experience

Diagnostic tests developed by BD and other manufacturers are reviewed and either cleared or approved by the FDA before they can be provided to clinical labs, physician offices or directly to patients. The FDA regulates these tests as medical devices based on the level of risk to patients and public health posed by their intended use.

Class I tests are the lowest risk and exempt from pre-market review, but these tests are still subject to good manufacturing practices and other controls. Class II tests pose higher risks and require prospective clinical data and extensive analytical testing. Class III tests, most of which go through the premarket approval (PMA) process, require the greatest amount of clinical data and manufacturing information as part of a submission to the FDA.

Regulatory Reform is Needed to Improve Patient Care and Accelerate Clinician Access to New Tests

New insights from genomics and engineering fields such as optics and fluid dynamics have led to important advances in diagnostic test development. Determining the appropriate regulatory oversight for cutting edge diagnostic tests, whether they are produced by BD or another manufacturer or in a clinical laboratory, is critical for the future of medicine.

Over the past year, I have had the opportunity to collaborate with colleagues from the diagnostic industry, clinical laboratories, and academic institutions to gain consensus on a diagnostic regulatory construct that advances innovation, protects patients, provides a predictable and timely path to market, and ensures reasonable risk-based regulation.

While unresolved issues certainly remain and additional stakeholder input is needed, our efforts have gone considerably farther than prior attempts at bridging differences between the manufacturing and lab communities. Stakeholders, including BD, are beginning to coalescence around the following seven key principles of a comprehensive regulatory reform proposal:

1) A new regulatory framework must protect patients and ensure access to innovative diagnostic tests.

2) The framework needs to apply regulatory principles regardless of entity type.

The current structure, under which regulatory requirements are tied to the type of entity (i.e., a manufacturer or a laboratory), results in different standards for accuracy and reliability for the same test and other discrepancies between the types of oversight.

In an approach that applies regulatory principles regardless of entity type, diagnostic tests would be regulated the same way regardless of whether they are developed by a manufacturer or a lab. This would allow for clear, consistent lines of jurisdiction. As noted earlier, clinical laboratories are regulated by CMS through CLIA while manufacturers are regulated under FDA but the agencies regulate different aspects of the diagnostic test process.

3) Regulatory standards should be focused on test accuracy and reliability through analytical and clinical validity.

Any regulatory standard for a diagnostic test should focus on analytical and clinical validity to ensure that clinicians and patients are getting the most accurate result to make critical health care decisions.

Analytical validity considers the ability of the tests to identify measure or analyze one or more analytes, biomarkers, or substances.

Clinical validity evaluates the reliability and accuracy with which a test in a specific population identifies, measures, predicts, monitors, and/or assists in selecting treatment for a disease or condition, or characteristics related to an individual's clinical status.

4) The level of oversight should be based on level of risk to patients.

The higher the risk, the more evidence would be required to be reviewed and approved by FDA. All tests would be classified as high-risk, moderate-risk, or low-risk tests. The premarket, quality, and post-market requirements will vary by risk class.

High Risk: a clinically significant inaccurate result for the intended use would cause serious or irreversible harm, or death, to the patient or public based on failure to treat, incorrect treatment, invasive procedures, or prolonged disability if such inaccurate result were undetected when used as intended in medical practice.

Moderate risk: a clinically significant inaccurate result for the intended use would cause non-life-threatening injury, injury that is medically reversible, or delay in necessary treatment if such inaccurate result were undetected when used as intended in medical practice.

Low Risk: a clinically significant inaccurate result for the intended use would cause minimal or no harm, immediately reversible harm, or no disability if such inaccurate result were undetected when used as intended in medical practice.

There are other mitigating factors in risk classification. Among these are whether the technology and clinical use is well-characterized and whether there are other tests (confirmatory or adjunctive) used in the diagnosis.

5) There needs to be clear jurisdiction between FDA, CMS and States.

The following table illustrates a proposed jurisdiction of process activities by agency and level of government:

Test Development	Design, Development, Validation, Preparation of Reagents, Platform manufacturing	FDA
Laboratory Operations	Reagent Preparation, Run tests, Report results	CMS
Medical application	Practice of medicine (interpret and consult on results)	States

6) Improved transparency and predictability regarding approval requirements is needed.

7) Expedited pathways should be created for tests serving unmet needs.

Conclusion

We offer these principles as a road map to help guide the Committee's important work on diagnostic regulatory reform. While challenges remain, I firmly believe we can finally accomplish the mission of ensuring patients are getting accurate and reliable tests while still benefitting from the latest in innovative diagnostic technologies. I greatly appreciate your commitment to public health and look forward to answering your questions.