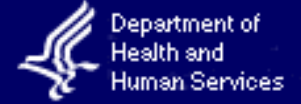




U.S. Food and Drug Administration



Center for Devices and Radiological Health



FDA Regulation of IVDs: Assuring Quality?

**Perspectives on Quality
AACC Annual Meeting**

July 28, 2008

Alberto Gutierrez, Ph.D.

Our Mission

Benefits



Risks

Getting safe and effective devices to market as quickly as possible...

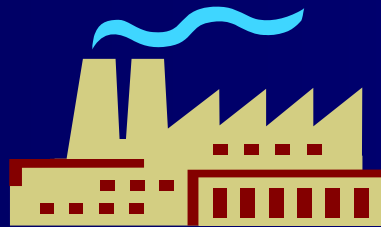
... while ensuring that devices currently on the market remain safe and effective.

IVD Definition

“reagents, instruments, and systems intended for use in the diagnosis of disease or other conditions, including a determination of the state of health, in order to cure, mitigate, treat, or prevent disease or its sequelae. ... for use in the collection, preparation, and examination of specimens from the human body.”

[21 CFR 809.3]

IVDs – Dual Regulation Paths



Distributed “Test kits” must undergo FDA review prior to marketing while lab developed tests enter the market without review

CLIA



lab



Regulation of *In Vitro* Diagnostics

Regulatory classifications for IVDs are based on the estimation of the risk to the patient from the likelihood of false results from the IVD.

Risk-Based Classification

- Class I: common, low risk devices
 - ♦ General controls
 - ♦ Most exempt from premarket submission
- Class II: more complex, higher risk
 - ♦ Special controls
 - ♦ Most require Premarket Notification [510(k)]
- Class III: most complex, highest risk
 - ♦ All require Premarket Application [PMA]
 - ♦ Require an inspection before approval

General Controls

- Register and list
- Follow good manufacturing practices
- Report device failures
- System for remedying device failures
- Labeling requirements

Medical Device Labeling

(21CFR Part 801, 809, 812, 820)

- Any label or written material on the device or material that accompanies the device
- Labeling must provide adequate directions for use
- Labeling must not be false or misleading
- Specific IVD Labeling 21 CFR 809.10

Special Controls

- Guidelines/guidances
- Design control
- Performance data
- Tracking requirements
- Postmarket surveillance

Quality System (QS) Regulation

(21 CFR Part 820)

- Design Control
 - ♦ Define input
 - ♦ Define outputs
 - ♦ Validate
 - ♦ Verify

Premarket Programs

- Investigational Device Exemption (IDE)
- Premarket Notification (510(k))
- Premarket Approval (PMA)

Analytical Performance

- Accuracy
- Precision (reproducibility)
- Analytical Sensitivity
- Analytical Specificity

Clinical Performance

- Clinical sensitivity
- Clinical specificity
- Predictive values

FDA Review

- Not outcome oriented
- Usually concurrent not prospective
- Least Burdensome
- Good science

Postmarket Programs

- Medical Device Adverse Event Reporting
- MedWatch
- MedSun including LabNet
- Other signals

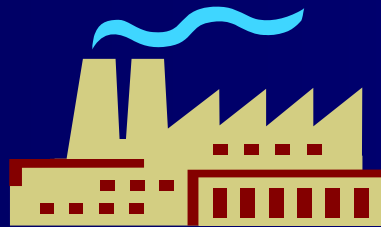
Compliance Programs

- GMP Inspections
- Bioresearch Monitoring Audits
- Enforcement Actions

Program Implementation

- **Premarket:** Collaborative process between Industry and FDA
- **Postmarket:** Industries responsibility, FDA monitors and provides guidance
- **Compliance:** FDA acts as policemen

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In-House Laboratory Tests

- Wide variety of tests
- Common practice in laboratories
- Medical devices
- FDA enforcement discretion
- Recognition of CLIA's role

Analyte Specific Reagents (ASR)

Antibodies, specific receptor proteins, nucleic acid sequences, and similar biological reagents which through chemical binding or reaction with substances in specimen are intended for identification and quantification of an individual chemical substance or ligand in biological specimens

ASR: Impact on Manufacturers

- Required to register and list
- Required to meet good manufacturing practices
- Required to report adverse events
- Restricted distribution, use, and labeling

ASR: Impact on Laboratories

- Restricted to high complexity laboratories
- CLIA requirements
- Report disclaimers

IVDs – Unequal Regulation

	CLIA	FDA
Research Phase	No	Yes
Analytical validation	Post hoc sampling	Yes
Clinical validation	No	Yes
Report Adverse Events	No requirement; no system	Yes
Transparent Results	No public information	Published review summary

OIVD's Goals

- Public health impact throughout the total product life cycle
- Consumer protection in a global marketplace

Thank You

Alberto Gutierrez

alberto.gutierrez@fda.hhs.gov

240-276-0450